

Revised forms for the submission of the Confidence-Building Measures

At the Third Review Conference it was agreed that all States Parties present the following declaration, later amended by the Seventh Review Conference:

Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

<i>Measure</i>	<i>Nothing to declare</i>	<i>Nothing new to declare</i>	<i>Year of last declaration if nothing new to declare</i>
A, part 1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2021
A, part 2 (i)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2021
A, part 2 (ii)	<input type="checkbox"/>	<input type="checkbox"/>	
A, part 2 (iii)	<input type="checkbox"/>	<input type="checkbox"/>	
B	<input type="checkbox"/>	<input type="checkbox"/>	
C	<input type="checkbox"/>	<input type="checkbox"/>	
E	<input type="checkbox"/>	<input type="checkbox"/>	
F	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2021
G	<input type="checkbox"/>	<input type="checkbox"/>	

(Please mark the appropriate box(es) for each measure with a tick, and fill in the year of last declaration in the last column where applicable.)

Date: Thursday, April 14, 2022

State Party to the Convention: Australia

Date of ratification/accession to the Convention: Wednesday, October 5, 1977

National point of contact:

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Active promotion of contacts

The Third Review Conference agreed that States parties continue to implement the following:

"Active promotion of contacts between scientists, other experts and facilities engaged in biological research directly related to the Convention, including exchanges and visits for joint research on a mutually agreed basis."

In order to actively promote professional contacts between scientists, joint research projects and other activities aimed at preventing or reducing the occurrence of ambiguities, doubts and suspicions and at improving international cooperation in the field of peaceful bacteriological (biological) activities, the Seventh Review Conference encouraged States parties to share forward looking information, to the extent possible,

- on planned international conferences, seminars, symposia and similar events dealing with biological research directly related to the Convention, and

- on other opportunities for exchange of scientists, joint research or other measures to promote contacts between scientists engaged in biological research directly related to the Convention,

including through the Implementation Support Unit (ISU) within the United Nations Office for Disarmament Affairs.

Confidence-Building Measure "A"

Part 1 Exchange of data on research centres and laboratories

At the Third Review Conference it was agreed that States Parties continue to implement the following:

"Exchange of data, including name, location, scope and general description of activities, on research centres and laboratories that meet very high national or international safety standards established for handling, for permitted purposes, biological materials that pose a high individual and community risk or specialize in permitted biological activities directly related to the Convention."

Modalities

The Third Review Conference agreed on the following, later amended by the Seventh Review Conference:

Data should be provided by States Parties on each facility, within their territory or under their jurisdiction or control anywhere, which has any maximum containment laboratories meeting those criteria for such maximum containment laboratories as specified in the latest edition of the WHO¹ Laboratory Biosafety Manual and/or OIE² Terrestrial Manual or other equivalent guidelines adopted by relevant international organisations, such as those designated as biosafety level 4 (BL4, BSL4 or P4) or equivalent standards.

States Parties that do not possess a facility meeting criteria for such maximum containment should continue to Form A, part 1 (ii).

Form A, part 1 (i)

*Exchange of data on research centres and laboratories*³

1. Name(s) of facility⁴:

Australian Centre for Disease Preparedness (ACDP)

2. Responsible public or private organization or company:

ACDP is managed by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) (Commonwealth Government).

3. Location and postal address:

Location: 5 Portarlington Road East Geelong VIC 3219 AUSTRALIA Postal Address: PMB Bag 24 Geelong VIC 3220 AUSTRALIA

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence:

ACDP is funded by the Australian Government, via CSIRO and the Department of Agriculture, Water and the Environment (DAWE). It is also funded by other government agencies, industry organisations and commercial companies for specific research and development programs and projects.

5. Number of maximum containment units⁵ within the research centre and/or laboratory, with an indication of their respective size (SqM):

BL 4: 350 SqM

There are four maximum containment (BSL/PC4) facilities. A laboratory of 90 m², two animal facilities of 127m² combined and a combined laboratory/animal facility/insectary of 350m².

6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate:

ACDP plays a vital role in maintaining and improving Australia's capability for timely diagnosis of new and emerging (terrestrial and aquatic) animal diseases, including exotic (foreign) and zoonotic diseases. This is achieved through a dedicated team providing routine and emergency diagnostic services and ongoing research programs to develop or improve diagnostic tests, which are critical to the success of any eradication and/or control campaign in the event of a disease outbreak.

ACDP also undertakes research on new and emerging diseases to better understand the disease process and drivers for their emergence and to develop new diagnostic tests and intervention methods, including vaccines and treatments, for animal diseases of national importance. ACDP is equipped with maximum biocontainment facilities that allow it to securely and safely undertake the above-mentioned diagnostic and research activities for animal diseases of national and international significance.

The laboratory is a World Organisation for Animal Health (OIE) reference laboratory for avian influenza, Newcastle disease, bluetongue, Hendra and Nipah virus infection, African Swine Fever, Classical Swine Fever, Abalone Herpes-like virus infection, ranavirus infection, Yellowhead virus (genotype 1) and epizootic haematopoietic necrosis virus infection. ACDP is also:

- an OIE Collaborating Centre for New and Emerging Diseases, for Laboratory Capacity Building and for Diagnostic Test Validation Science in the Asia-Pacific Region
- a Food and Agriculture Organization (FAO) Collaborating Centre for Animal Influenza, Newcastle Disease and Laboratory Biological Risk Management
- a member of World Health Organization (WHO) Network of Laboratories for Severe Acute Respiratory Syndrome (SARS)
- and a national reference laboratory for rabies and *Brucella spp.*

1. Name(s) of facility ⁴:

National High Security Quarantine Laboratory (NHSQL)

2. Responsible public or private organization or company:

The NHSQL is housed within the Victorian Infectious Diseases Reference Laboratory (VIDRL) of The Peter Doherty Institute of Infection and Immunity, a joint venture between the University of Melbourne and the Royal Melbourne Hospital.

3. Location and postal address:

Location: Victorian Infectious Diseases Reference Laboratory (VIDRL) 792 Elizabeth Street Melbourne VIC 3000 AUSTRALIA
Postal Address: National High Security Quarantine Laboratory c/o VIDRL Locked Bag 815 Carlton South VIC 3053 AUSTRALIA

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence:

This facility receives no funding from the Australian Department of Defence. It receives funding from the Commonwealth and State Departments of Health.

5. Number of maximum containment units ⁵ within the research centre and/or laboratory, with an indication of their respective size (SqM):

BL 4: 90 SqM

One high security laboratory (positive pressure suit laboratory). Total area 90m².

6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate:

The diagnosis of possible imported cases of viral haemorrhagic fever or other quarantinable diseases that present a significant danger to the Australian community and the development of laboratory tests and protocols for exotic respiratory viral diseases, including *influenzavirus* A/H5N1 ('bird flu') and SARS. In addition, VIDRL has

established and maintained the capability to perform diagnostic testing for the *variola* virus.

1. Name(s) of facility ⁴:

Queensland Health Forensic Scientific Services (QHFSS).

2. Responsible public or private organization or company:

Queensland Department of Health (State Government).

3. Location and postal address:

Location: 39 Kessels Road Coopers Plains QLD 4108 AUSTRALIA Postal Address: PO Box 594 Archerfield QLD 4108 AUSTRALIA

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence:

This facility receives no funding from the Australian Department of Defence. It receives funding from Queensland Department of Health.

5. Number of maximum containment units ⁵ within the research centre and/or laboratory, with an indication of their respective size (SqM):

BL 4: 150 SqM

Two laboratories with a total area 150m².

6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate:

The maximum containment facility at QHFSS, a state government public health virology laboratory, has both a diagnostic and a research function. The maximum containment facilities are used for the development and performance of diagnostic tests on patients with suspected exotic or endemic viral illness. This includes Henipah viruses or exotic haemorrhagic fever viruses. The only PC4 level pathogen that the laboratory has is Hendra virus, which is used for diagnostic purposes. The laboratory maintains the capacity to perform diagnostic testing for a number of exotic viral diseases including Ebola, Marburg, Lassa, Junin, Rift Valley fevers and Hantavirus among others. The reagents utilised for these purposes may consist of either inactivated diagnostic reagents, cloned viral subunits or live virus.

1. Name(s) of facility ⁴:

Emerging Infections and Biohazard Response Unit (EIBRU)

2. Responsible public or private organization or company:

Institute for Clinical Pathology and Medical Research, NSW Health Pathology – West, Regional and Rural.

3. Location and postal address:

Centre for Infectious Diseases and Microbiology Laboratory Services (CIDMLS) 3/F, ICPMR Building Institute Road. Westmead Hospital Westmead NSW 2145

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence:

This facility receives no funding from the Australian Department of Defence. It is funded by New South Wales Ministry of Health.

5. Number of maximum containment units ⁵ within the research centre and/or laboratory, with an indication of their respective size (SqM):

BL 4: 85.5 SqM

One maximum containment PC4 unit—Laboratory work area 85.5m².

6. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate:

Laboratory investigation of human specimens or substances suspected of containing an exotic agent, emerging infectious disease or bioterrorism agent such as pandemic influenza, anthrax, ricin toxin, *Brucella* and botulinum toxin for the state of New South Wales and referral from other Australian jurisdictions.

Form A, part 1 (ii)

If no BSL4 facility is declared in Form A, part 1 (i), indicate the highest biosafety level implemented in facilities handling biological agents⁶ on a State Party's territory:

Biosafety level 3 ⁷	N/A
Biosafety level 2 ⁸ (if applicable)	N/A

Any additional relevant information as appropriate:

N/A

Part 2 Exchange of information on national biological defence research and development programmes

At the Third Review Conference it was agreed that States Parties are to implement the following:

In the interest of increasing the transparency of national research and development programmes on biological defence, the States Parties will declare whether or not they conduct such programmes. States Parties agreed to provide, annually, detailed information on their biological defence research and development programmes including summaries of the objectives and costs of effort performed by contractors and in other facilities. If no biological defence research and development programme is being conducted, a null report will be provided.

States Parties will make declarations in accordance with the attached forms, which require the following information:

- (1) The objective and summary of the research and development activities under way indicating whether work is conducted in the following areas: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research;
- (2) Whether contractor or other non-defence facilities are utilized and the total funding provided to that portion of the programme;
- (3) The organizational structure of the programme and its reporting relationships; and
- (4) The following information concerning the defence and other governmental facilities in which the biological defence research and development programme is concentrated:
 - (a) location;
 - (b) the floor areas (sqM) of the facilities including that dedicated to each of BL2, BL3 and BL4 level laboratories;
 - (c) the total number of staff employed, including those contracted full time for more than six months;
 - (d) numbers of staff reported in (c) by the following categories: civilian, military, scientists, technicians, engineers, support and administrative staff;
 - (e) a list of the scientific disciplines of the scientific/engineering staff;
 - (f) the source and funding levels in the following three areas: research, development, and test and evaluation; and
 - (g) the policy regarding publication and a list of publicly-available papers and reports.

Form A, part 2 (i)

National biological defence research and development programmes Declaration

Are there any national programmes to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such programmes would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

N/A

If the answer is Yes, complete Form A, part 2 (ii) which will provide a description of each programme.

Form A, part 2 (ii)

National biological defence research and development programmes

Description

Biological Defence Research, Land Division, Defence Science and Technology Group.

1. State the objectives and funding of each programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

The objective of the program is to provide the Australian Government with an appropriate understanding of the issues pertinent to protection against biological weapons. The program contributes to Defence support of civil authorities in the management of biological threats to the community. The program also assists in the provision of a defensive capability for the Australian Defence Force (ADF) by enhancing the ability of the ADF to operate in parts of the world where biological weapons might be used. It also enhances Australia's ability to contribute to biological arms control measures. The principal research activities are concerned with the detection, diagnosis and characterisation of biological species that have been identified as potential biological warfare agents. In addition, evaluations are performed into the cellular responses to those agents and candidate medical counter-measures. The program also covers toxins that are considered threats in terms of both the Biological and Chemical Weapons Conventions.

2. State the total funding for each programme and its source.

The program is funded solely by the Australian Department of Defence, with a funding allocation for the calendar year (1 January – 31 December 2021) of approximately AUD\$3,000,000.

Total Funding: \$3,000,000

Funding Currency: AUD

3. Are aspects of these programmes conducted under contract with industry, academic institutions, or in other non-defence facilities?

yes

4. If yes, what proportion of the total funds for each programme is expended in these contracted or other facilities?

For the calendar year 2021, the following payments were made:

- AUD\$40,000 to La Trobe University

5. Summarize the objectives and research areas of each programme performed by contractors and in other facilities with the funds identified under paragraph 4.

The contract with La Trobe University is to support a PhD student in a project to develop fieldable next generation sequencing methods for pathogen identification.

6. Provide a diagram of the organizaional structure of each programme and the reporting relationships (include individual facilities participating in the programme).

Defence Department

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Defence Science and Technology Group

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Land Division

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Chemical, Biological, Radiological and Nuclear Defence Branch

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to each national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

N/A

Attachments:

N/A

Form A, part 2 (iii)

National biological defence research and development programmes

Facilities

Complete a form for each facility declared in accordance with paragraph 7 in Form A, part 2 (ii).

In shared facilities, provide the following information for the biological defence research and development portion only.

1. What is the name of the facility?

Biological Defence Research, Land Division, Defence Science and Technology Group

2. Where is it located (include both address and geographical location)?

Chemical, and Biological, Radiological and Nuclear Defence LAND DIVISION 506 Lorimer Street Fishermans Bend VIC 3207 AUSTRALIA

506 Lorimer Street

Fishermans Bend VIC 3207

AUSTRALIA

3. Floor area of laboratory areas by containment level:

BL 2: 150 SqM

BL 3: 60 SqM

Total laboratory floor area (SqM):

210

4. The organizational structure of each facility.

(i) Total number of personnel: 25

(ii) Division of personnel:

Military: N/A

Civilian: 25

(iii) Division of personnel by category:

Scientists: 24

Engineers: N/A

Technicians: N/A

Administrative and support staff: 1

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Scientific disciplines represented are biochemistry, molecular biology, genomics, microbiology, immunology, chemistry, pharmacology, bioinformatics, mathematics and physics.

(v) Are contractor staff working in the facility? If so, provide an approximate number.

Three

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Research is currently wholly financed by the Department of Defence.

(vii) What are the funding levels for the following programme areas:

Research: AUD\$3,000,000

Development: N/A

Test and evaluation: N/A

(viii) Briefly describe the publication policy of the facility:

Publication in scientific journals is encouraged, as it is a mechanism for staff to maintain their professional status.

(ix) Provide a list of publicly-available papers and reports resulting from the work published during the previous 12 months. (To include authors, titles and full references)

Land Division, Defence Science and Technology (DST) Group

The policy of the Defence Science and Technology Group is to publish results of general scientific value in open literature. Information that is more specialised and relevant particularly to defence is published in laboratory reports, which are unclassified and available to the public, unless they contain information that might prejudice the security of Australia or information that is “commercial-in-confidence”. Most results of the biological research will be either unclassified or “commercial-in-confidence”.

Journal Papers

Nil in 2021

Conference papers/proceedings or book chapters

Nil in 2021

Notes:

N/A

Attachments:

N/A

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms [2](#) and/or toxins studied, as well as outdoor studies of biological aerosols.

Various types of work are undertaken, as outlined in the following sections:

(1) Detection of biological entities recognised as potential biological warfare agents

Immunological, bacteriophage, mass spectrometry and DNA-based techniques for rapid identification of BWA (Biological Warfare Agents) are being developed/assessed.

Current research focuses on the evaluation of platforms and reagents that enable rapid identification and characterisation of bacterial, viral and toxin agents, including microbial antibiotic resistance and genetically manipulated bacteria.

(2) Development of health monitoring systems for BWA

A virology program aims to provide environmental and ADF personnel immunological screening for known or poorly characterised endemic viruses, particular to Australia and the region such as Ross River Virus, Murray Valley Encephalitis Virus, bunya–viruses, rhabdo–viruses, Japanese encephalitis, dengue and filoviruses.

(3) Physical methods for rapid detection of bio-aerosols

Methods of particle characterisation for provision of rapid warning of a bio-aerosol are being assessed.

(4) Protection/Treatment/Toxicology

Neutralization and cytotoxicity assays have been developed to assess the usefulness of potential therapeutic agents such as antibodies and antimicrobial peptides.

Human and mouse lung cells have been used as a test bed for examining potential therapeutic compounds against toxin agents. Compounds for treatment of ricin intoxication are currently being examined.

A program of work developing Good Laboratory Practice (GLP) manufacturing processes for medical counter-measures has been completed with Monash University and Defence Research and Development Canada (DRDC). National Association of Testing Authorities (NATA) accreditation of this facility was granted in 2019.

(5) Detection of biological toxins using physico-chemical methods

Studies on detection of biological material using mass spectrometry and other physico-chemical methods are being conducted to determine their utility for field detection of biological toxins and BWC verification procedures. This work has included the analysis of ricin and crude extracts of ricin by matrix-assisted laser desorption/ionization (MALDI) and fourier transform ion cyclotron resonance (FT-ICR) mass spectrometry.

(6) Hollow-Fibre Infection model (HFIM) evaluation of therapeutics

DSTG is evaluating the use of the HFIM to predict bacterial responses to current, repurposed or novel therapeutics. The outcomes of this treatment (which will occur over a period of time) will act as a preliminary screening method to be used before clinical or animal trials.

(7) Strengthening the Biological Weapons Convention (BWC)

A number of BWC/Biosecurity Regional Workshops have been convened and/or supported by Australia since 2005, with scientific and technical support provided by DSTG. The objectives of these workshops have been to assist BWC States Parties in the Asia-Pacific region to become more engaged in the work of the BWC in Geneva. In doing so, the workshops reduce the possibility of bioterrorism in the region, and assists regional states to fulfil BWC obligations, including avoiding inadvertently assisting biological weapons programs being developed elsewhere. This outreach process has also led to regional countries conducting their own specialised workshops on biosafety and biosecurity. No workshops were conducted in 2021, however DSTG participated in the 2021 OPCW confidence-building exercise for the detection/analysis of ricin in complex samples.

Confidence-Building Measure "B"

Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins

At the Third Review Conference it was agreed that States Parties continue to implement the following:

Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins, and on all such events that seem to deviate from the normal pattern as regards type, development, place, or time of occurrence. The information provided on events that deviate from the norm will include, as soon as it is available, data on the type of disease, approximate area affected, and number of cases.

The Seventh Review Conference agreed the following:

No universal standards exist for what might constitute a deviation from the normal pattern.

Modalities

The Third Review Conference agreed on the following, later amended by the Seventh Review Conference:

1. Exchange of data on outbreaks that seem to deviate from the normal pattern is considered particularly important in the following cases:

- When the cause of the outbreak cannot be readily determined or the causative agent [10](#) is difficult to diagnose,
- When the disease may be caused by organisms which meet the criteria for risk groups III or IV, according to the classification in the latest edition of the WHO Laboratory Biosafety Manual,
- When the causative agent is exotic to a given geographical region,
- When the disease follows an unusual pattern of development,
- When the disease occurs in the vicinity of research centres and laboratories subject to exchange of data under item A,
- When suspicions arise of the possible occurrence of a new disease.

2. In order to enhance confidence, an initial report of an outbreak of an infectious disease or a similar occurrence that seems to deviate from the normal pattern should be given promptly after cognizance of the outbreak and should be followed up by annual reports. To enable States Parties to follow a standardized procedure, the Conference has agreed that Form B should be used, to the extent information is known and/or applicable, for the exchange of annual information.

3. The declaration of electronic links to national websites or to websites of international, regional or other organizations which provide information on disease outbreaks (notably outbreaks of infectious diseases and similar occurrences caused by toxins that seem to deviate from the normal pattern) may also satisfy the declaration requirement under Form B.

4. In order to improve international cooperation in the field of peaceful bacteriological (biological) activities and in order to prevent or reduce the occurrence of ambiguities, doubts and suspicions, States Parties are encouraged to invite experts from other States Parties to assist in the handling of an outbreak, and to respond favourably to such invitations, respecting applicable national legislation and relevant international instruments.

Form B

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern¹¹

Animal Diseases

1. Time of cognizance of the outbreak:

In 2021 Australia had no outbreaks of infectious diseases or similar occurrences caused by toxins that seemed to deviate from the normal pattern. Below is information on outbreaks of infectious disease and similar occurrences in animals.

Animal disease

The Australian Government Department of Agriculture, Water and the Environment is responsible for national coordination on animal health matters and for providing reports on Australia's animal health status, including regular reports to the World Organisation for Animal Health (OIE), the Food and Agriculture Organization (FAO) and the WHO.

The following sections contain information on significant animal disease events/issues in 2021. Australia publishes quarterly reports and biennial reports^[1] on animal health incidents and status, as well as providing emergency, six-monthly and annual reports to the OIE^[2]. Australia's status for OIE-listed diseases for 2021 is shown in the table that follows. Diseases specific to aquatic animals can be found on the Australian Government Department of Agriculture, Water and the Environment's website (<http://www.awe.gov.au/agriculture-land/animal/aquatic/reporting/reportab...>).

[1] <https://www.animalhealthaustralia.com.au/supporting-market-access/>

[2] <https://wahis.oie.int/#/report-management>

Australia's status for OIE-listed diseases of terrestrial animals, 2021

<i>Disease</i>	<i>Status</i>	<i>Date of last occurrence and notes</i>
Multiple-species diseases		
Anthrax	Present	Limited distribution
Aujeszky's disease	Free	Never occurred
Bluetongue	Viruses present	Restricted to specific zones of Australia. Sentinel herd and vector monitoring programs are in place
Brucellosis (infection with <i>Brucella abortus</i>)	Free	Australia declared freedom in all terrestrial animal species in 1989

Disease	Status	Date of last occurrence and notes
Brucellosis (infection with <i>Brucella melitensis</i>)	Free	Never occurred in animals
Brucellosis (infection with <i>Brucella suis</i>)	Serological evidence	Maintained in feral pigs in parts of New South Wales and Queensland. Rare occurrence in domestic pigs. Sporadic detections in pig-hunting dogs (not OIE-notifiable occurrences)
Crimean haemorrhagic fever	Congo Free	Never occurred
Echinococcosis (infection with <i>Echinococcus granulosus</i>)	Present	
Echinococcosis (infection with <i>Echinococcus multilocularis</i>)	Free	Never occurred
Epizootic haemorrhagic disease	Virus present	Disease has not been reported
Equine encephalomyelitis (Eastern)	Free	Never occurred
Foot-and-mouth disease	Free	1872. Australia is officially recognised by the OIE as free without vaccination
Heartwater	Free	Never occurred
Japanese encephalitis	Serological evidence	Detected seasonally in Torres Strait, however no confirmed clinical cases since 2004
<i>Mycobacterium tuberculosis</i> complex (as defined by OIE Terrestrial Code)	Free	Australia declared freedom in 1997 from bovine tuberculosis; the last case in any species was reported in 2002.

Disease	Status	Date of last occurrence and notes
New World screw-worm (<i>Cochliomyia hominivorax</i>)	Free	Never occurred
Old World screw-worm (<i>Chrysomya bezziana</i>)	Free	Never occurred
Paratuberculosis	Present	National control and management programs are in place
Q fever	Present	
Rabies virus (infection with)	Free	1867
Rift Valley fever (infection with Rift Valley fever virus)	Free	Never occurred
Rinderpest	Free	1923. With the global eradication of rinderpest in 2011, all countries are free
Surra (infection with <i>Trypanosoma evansi</i>)	Free	1907 (a consignment of imported camels)
Trichinellosis (infection with <i>Trichinella</i> spp.)	Limited species present	<i>Trichinella spiralis</i> is not present. <i>T. pseudospiralis</i> is present in wildlife
Tularaemia	Present	Detected in archived samples (collected 2002) from Tasmanian ringtail possums
West Nile fever	Australian variants present	

<i>Disease</i>	<i>Status</i>	<i>Date of last occurrence and notes</i>
Cattle diseases		
Bovine anaplasmosis	Present	Transmission mainly in areas of northern Australia
Bovine babesiosis	Present	Transmission mainly in areas of northern Australia
Bovine genital campylobacteriosis	Present	
Bovine spongiform encephalopathy	Free	Never occurred. National Transmissible Spongiform Encephalopathies Freedom Assurance Program includes surveillance. Australia has official OIE 'negligible risk' status
Bovine viral diarrhoea	Present	Bovine viral diarrhoea virus 1 (BVDV-1) is present. BVDV-2 has never occurred
Contagious bovine pleuropneumonia (infection with <i>Mycoplasma mycoides</i> subsp. <i>mycoides</i> SC)	Free	1967. Australia declared freedom in 1973 and is officially recognised by the OIE as free
Enzootic leucosis	Free in dairy cattle. Very low prevalence in beef cattle	Australian dairy herd achieved freedom on 31 December 2012
Haemorrhagic septicaemia	Free	Never occurred. Strains of <i>Pasteurella multocida</i> are present, but not the 6b or 6e strains that cause haemorrhagic septicaemia
Infectious bovine rhinotracheitis/infectious pustular vulvovaginitis	Present	Bovine herpesvirus (BHV) 1.2b is present; BHV-1.1 and 1.2a have never occurred
Lumpy skin disease	Free	Never occurred

<i>Disease</i>	<i>Status</i>	<i>Date of last occurrence and notes</i>
Theileriosis	Free	<i>Theileria orientalis</i> is present in Australia but OIE-listed species <i>T. parva</i> and <i>T. Annulata</i> are not
Trichomonosis	Present	
Trypanosomosis (tsetse borne)	Free	Never occurred
Sheep and goat diseases		
Caprine arthritis-encephalitis	Present	Voluntary accreditation schemes exist
Contagious agalactia	Free	<i>Mycoplasma agalactiae</i> has been isolated, but Australian strains do not produce agalactia in sheep
Contagious caprine pleuropneumonia	Free	Never occurred
Enzootic abortion of ewes, ovine chlamydiosis (infection with <i>Chlamydophila abortus</i>)	Free	Never occurred
Maedi-visna	Free	Never occurred
Nairobi sheep disease	Free	Never occurred
Ovine epididymitis (infection with <i>Brucella ovis</i>)	Present	Voluntary accreditation schemes exist in all states

<i>Disease</i>	<i>Status</i>	<i>Date of last occurrence and notes</i>
Peste des petits ruminants (infection with small ruminant morbillivirus)	Free	Never occurred. Australia is officially recognised by OIE as free
Salmonellosis (<i>Salmonella</i> Abortusovis)	Free	Never occurred. Surveillance has shown no evidence of infection in sheep
Scrapie	Free	1952. National Transmissible Spongiform Encephalopathies Freedom Assurance Program includes surveillance. Atypical scrapie has been detected several times.
Sheep pox and goat pox	Free	Never occurred
Equine diseases		
African horse sickness	Free	Never occurred. Australia is officially recognised by OIE as free
Contagious metritis	equine Free	1980
Dourine	Free	Never occurred
Equine encephalomyelitis (Western)	Free	Never occurred
Equine anaemia	infectious Present	Limited distribution and sporadic occurrence
Equine influenza	Free	2007. Australia self-declared freedom according to OIE standards in 2008
Equine piroplasmiasis	Free	1976

Disease	Status	Date of last occurrence and notes
Equine rhinopneumonitis (infection with Equid herpesvirus-1)	Present	
Equine viral arteritis	Serological evidence	
Glanders (infection with <i>Burkholderia mallei</i>)	Free	1891
Venezuelan equine encephalomyelitis	Free	Never occurred
Swine diseases		
African swine fever	Free	Never occurred
Classical swine fever	Free	1962. Australia is officially recognised by OIE as free
Nipah virus encephalitis	Free	Never occurred
Porcine cysticercosis (infection with <i>Taenia solium</i>)	Free	Never occurred
Porcine reproductive and respiratory syndrome	Free	Never occurred
Transmissible gastroenteritis	Free	Never occurred
Avian diseases		
Avian chlamydiosis	Present	

<i>Disease</i>	<i>Status</i>	<i>Date of last occurrence and notes</i>
Avian infectious bronchitis	Present	
Avian infectious laryngotracheitis	Present	
Avian influenza (including infection with high pathogenicity avian influenza viruses) in 2021 poultry	Free from 26 February 2021	2020. Following an outbreak involving six properties and three different strains of avian influenza (H7N7 HPAI, H5N2 LPAI and H7N6 LPAI) in July–August 2020, Australia officially achieved HPAI disease freedom on 26 February 2021.
Influenza A viruses of high pathogenicity in birds other than poultry, including wild birds	Free	HPAI viruses have not been detected in Australian wild birds, other than a single detection of HPAI H7 virus in one feral Eurasian starling trapped inside an affected poultry shed during the 1985 HPAI H7 virus outbreak.
Avian mycoplasmosis (infection with <i>Mycoplasma gallisepticum</i>)	Present	
Avian mycoplasmosis (infection with <i>Mycoplasma synoviae</i>)	Present	
Duck virus hepatitis	Free	Never occurred
Fowl typhoid	Free	1952
Infectious bursal disease (Gumboro disease)	Present	Infectious bursal disease occurs in a mild form and was last reported in 2004. Very virulent strains are not present

Disease	Status	Date of last occurrence and notes
Newcastle disease in Lentogenic poultry (infection with viruses Newcastle disease virus) present		Virulent Newcastle disease last occurred in poultry in 2002. In August 2011, pigeon paramyxovirus not previously reported in Australia was detected in hobby pigeons in Victoria. Disease caused by this virus has not spread to poultry
Pullorum disease	Not reported	Last reported in 1992. <i>Salmonella Pullorum</i> has been eradicated from commercial chicken flocks
Turkey rhinotracheitis	Free	Never occurred

Lagomorph diseases

Myxomatosis	Present	Used as a biological control agent for wild rabbits
Rabbit haemorrhagic disease	Present	Used as a biological control agent for wild rabbits. A new strain was detected in 2015 and another released in 2017.

Bee diseases

American foulbrood (infection of honey bees with <i>Paenibacillus larvae</i>)	Present	
European foulbrood (infection of honey bees with <i>Melissococcus plutonius</i>)	Present	
Infestation of honey bees with <i>Acarapis woodi</i>	Free	Never occurred
Infestation of honey bees with <i>Tropilaelaps</i> spp	Free	Never occurred

Disease	Status	Date of last occurrence and notes
Infestation of small hive beetle with <i>Aethina tumida</i>	Present	Restricted distribution
Varroosis (infestation of honey bees with <i>Varroa</i> spp.)	Free	<i>Varroa destructor</i> has never been reported in Australia. Incursions of <i>V. jacobsoni</i> were identified and stamped out in June 2016 and April 2020. The response is currently in proof-of-freedom phase.
Other diseases		
Camel pox	Free	Never occurred
Leishmaniosis	Australian variant, present	Rare. Australian variant was first isolated in 2000 from macropods and occurs infrequently in a small region near Darwin. In 2017, it was isolated in a new species, captive Nabarlek (pygmy rock wallaby, <i>macropodum</i> , <i>Petrogale concinna</i>) in the Northern Territory. Occasional imported case of <i>L. infantum</i> with no known local transmission.

Comments on selected OIE-listed diseases

Anthrax

Anthrax is on the list of nationally notifiable diseases and is subject to compulsory government controls, including quarantine, disposal of carcasses, and vaccination and tracing of at-risk animals and their products. Incidents of anthrax in Australian livestock occur sporadically and generally in a defined geographical region confined to the northern and north-eastern districts of Victoria up to Central New South Wales. Anthrax is detected occasionally in southern Queensland. Anthrax has never been recorded in the Northern Territory. South Australia's and Tasmania's last recorded anthrax outbreaks were in 1914 and 1933 respectively. The last case in Western Australia was an isolated case in 1994. Anthrax is considered a Tier 1 Security Sensitive Biological Agent in Australia and is subject to requirements under the *National Health Security Act 2007*.

2. Location and approximate area affected:

N/A

N/A

3. Type of disease/intoxication:

N/A

4. Suspected source of disease/intoxication:

N/A

5. Possible causative agent(s):

N/A

6. Main characteristics of systems:

N/A

7. Detailed symptoms, when applicable

N/A

- Respiratory:

N/A

- Circulatory:

N/A

- Neurological/behavioural:

N/A

- Intestinal:

N/A

- Dermatological:

N/A

- Nephrological:

N/A

- Other:

N/A

8. Deviation(s) from the normal pattern as regards

- Type:

N/A

- Development:

N/A

- Place of occurrence:

N/A

- Time of occurrence:

- Symptoms:

N/A

- Virulence pattern:

N/A

- Drug resistance pattern:

N/A

- Agent(s) difficult to diagnose:

N/A

- Presence of unusual vectors:

N/A

- Other:

N/A

9. Approximate number of primary cases:

N/A

10. Approximate number of total cases:

N/A

11. Number of deaths:

12. Development of the outbreak:

13. Measures taken:

N/A

Notes:

N/A

Attachments:

N/A

Plant Diseases

1. Time of cognizance of the outbreak:

In 2021 Australia had no outbreaks of infectious diseases or similar occurrences caused by toxins that seemed to deviate from the normal pattern. Below is information on outbreaks of infectious disease and similar occurrences in plants.

Plant pests and diseases [1]

The Australian Government Department of Agriculture, Water and the Environment, through the Australian Chief Plant Protection Officer and the Australian Chief Environmental Biosecurity Officer, is the peak organisation responsible for gathering information on pests of plants. The Department is notified of exotic incursions through State and Territory government agricultural, forestry and natural resource agencies. It provides national leadership in responding to incursions of exotic pests and diseases of plants of agricultural and environmental biosecurity concern.

[1] Websites that regularly report plant pests and diseases are: <http://www.planthealthaustralia.com.au/go/phau/strategies-and-policy/nat...>, and <http://www.outbreak.gov.au/>.

Australia exotic plant pest notifications for 2021

Australia exotic plant pest notifications for 2021

Scientific name	Common name	State/Territory	Pest/disease type	Host/commodity detected in	Notification date
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New Detections

<i>Aerva lanata</i>	Mountain knotgrass		Cwth (Christmas Island)	Weed	Not associated with a host when collected	October 2021
<i>Apis florea</i>	Red dwarf honeybee		WA	Insect	Detected on a container	17/12/2021
<i>Apharknessia eucalyptorum</i>	Leaf spot fungus		NSW	Fungus	<i>Eucalyptus agglomerata</i> (blue-leaved stringybark)	08/07/2021
<i>Barypeithes pellucidus</i>	Hairy weevil	spider	TAS	Insect	Detected at a residential premise and gardens	03/06/2021
<i>Boerhavia repens</i>	Spreading hogweed		Cwth (Christmas Island)	Weed	Not associated with a host when collected	October 2021
<i>Brunia antica</i>	Moth		Cwth (Christmas Island)	Insect	<i>Citrus maxima</i> (pomelo)	18/10/2021
<i>Calonectria colhounii</i> sp. complex (novel)	No common name		QLD	Fungus	<i>Eucalyptus cloeziana</i>	25/02/2021
<i>Ceratocystiopsis</i> species 1	Blue stain fungus		NSW	Fungus	<i>Ips grandicollis</i> (beetles)	17/03/2021
<i>Citrus leprosis virus C2</i>	CiLV - C2H		QLD	Virus	<i>Hoya macgillivrayi</i> (native hoye)	25/01/2021
<i>Coleosoma floridanum</i>	Cobweb spider		Cwth (Christmas Island)	Invertebrate	Malaise trap	October 2021
<i>Cryptomyzus ribis</i>	Red currant aphid		QLD	Insect	<i>Stachys arvensis</i> (stagger weed)	18/10/2021

<i>Cytospora brevispora</i>	Fungi	Cwth (Christmas Island)	Fungus	<i>Mangifera indica</i> (mango)	18/10/2021
<i>Dactylonectria alcacerensis</i>	Black foot rot	QLD	Fungus	<i>Cryptocarya</i> sp. (Laurel)	20/07/2021
<i>Dactylonectria estremocensis</i>	Black foot rot	VIC	Fungus	<i>Pinus radiata</i> (radiata pine)	30/04/2021
<i>Dactylonectria palmicola</i>	Black foot rot	QLD	Fungus	Hybrid <i>Pinus</i> species	20/07/2021
<i>Dactylonectria pinicola</i>	Black foot rot	VIC	Fungus	<i>Pinus radiata</i> (radiata pine)	30/04/2021
<i>Delta pyriforme</i>	Potter wasp	Cwth (Christmas Island)	Insect	Not associated with a October host when collected	2021
<i>Epuraea luteola</i>	Sap beetle	Cwth (Cocos Keeling Islands)	Insect	<i>Psidium guajava</i> (guava); <i>Saccharum</i> sp. (sugarcane)	18/10/2021
<i>Erionota thrax</i>	Banana skipper butterfly	QLD (Torres Strait)	Insect	<i>Musa</i> sp. (banana)	21/05/2021
<i>Eutypella</i> sp. 1 (novel)	No common name	QLD	Fungus	<i>Gossypium hirsutum</i> (cotton)	09/08/2021
<i>Eutypella</i> sp. 2 (novel)	No common name	QLD	Fungus	<i>Gossypium hirsutum</i> (cotton)	09/09/2021
<i>Eutypella</i> sp. 3 (novel)	No common name	NSW	Fungus	<i>Gossypium hirsutum</i> (cotton)	01/10/2021
<i>Eutypella</i> sp. 4 (novel)	No common name	NSW	Fungus	<i>Gossypium hirsutum</i> (cotton)	01/10/2021

<i>Euwallacea fornicatus</i>	Polyphagous shot hole borer, PSHB	WA	Insect	<i>Acer negundo</i> (box elder maple tree)	09/09/2021
<i>Freesia sneak virus</i>	FReSV	VIC	Virus	<i>Freesia</i> sp.	02/03/2021
<i>Fusarium commune</i>	Fusarium wilt	NSW	Fungus	<i>Pinus radiata</i> (pine seedlings)	23/02/2021
<i>Garlic virus E</i>	GarVE	QLD	Virus	Garlic germplasm collection	04/01/2021
<i>Grapevine cabernet sauvignon reovirus</i>	GCSV	SA	Virus	<i>Vitis vinifera</i> (grapevine)	14/07/2021
<i>Grapevine geminivirus A</i>	GGVA	SA	Virus	<i>Vitis vinifera</i> (grapevine)	14/07/2021
<i>Grapevine red globe virus</i>	GRGV	SA	Virus	<i>Vitis vinifera</i> (grapevine)	14/07/2021
<i>Grapevine syrah virus 1</i>	GSyV-1	SA	Virus	<i>Vitis vinifera</i> (grapevine)	14/07/2021
<i>Grapevine virus F</i>	GVF	SA	Virus	<i>Vitis vinifera</i> (grapevine)	14/07/2021
<i>Graphilbum cf. rectangulosporium</i>	Blue stain fungus	NSW	Fungus	<i>Pinus radiata</i> (radiata pine)	17/03/2021
<i>Graphilbum fragrans</i>	Blue stain fungus	NSW	Fungus	<i>Pinus radiata</i> (radiata pine)	17/03/2021
<i>Graphilbum ipis- grandicollis</i> sp. nov.	Blue stain fungus	NSW	Fungus	<i>Pinus radiata</i> (radiata pine)	17/03/2021
<i>Graphilbum</i> sp.	Blue stain fungus	NSW	Fungus	<i>Pinus radiata</i> (radiata pine)	17/03/2021

<i>Halyomorpha halys</i>	Brown marmorated stink bug, BMSB	VIC	Insect	Detected on imported truck parts	27/01/2021
<i>Heterodera mani</i>	Ryegrass nematode cyst	TAS	Insect	<i>Solanum tuberosum</i> (potato)	01/11/2021
<i>Ilyonectria capensis</i>	No common name	VIC	Fungus	<i>Pinus radiata</i> (radiata pine)	16/02/2021
<i>Jasmine mosaic virus</i>	JMaV	QLD	Virus	<i>Jasminum nitidum</i> (angelwing jasmine)	26/02/2021
<i>Jasmine virus H</i>	JaVH	QLD	Virus	<i>Jasminum nitidum</i> (angelwing jasmine)	26/02/2021
<i>Jasmine yellow mosaic virus</i>	JYMV	Cwth (Christmas Island)	Virus	<i>Jasminum sambac</i> (jasmine)	18/10/2021
<i>Lepidosaphes laterochitinsa</i>	Scale	Cwth (Christmas Island)	Insect	<i>Capsicum annum</i> (chilli)	18/10/2021
<i>Limnocharis flava</i>	Yellow burrhead	NT	Weed	Not associated with a host when collected	November 2021
<i>Liriomyza trifolii</i>	American serpentine leafminer	QLD, WA	Insect	<i>Synadrella nodiflora</i> (Cinderella weed), <i>Tridax procumbens</i>	30/06/2021
<i>Megabruchidius tonkineus</i>	Honey locust seed beetle; Asian seed beetle	VIC	Insect	<i>Cassia</i> sp.	31/08/2021
<i>Monomorium luteum/M. indicum</i>	Monomorium ants	WA	Insect	Not associated with a host when collected	January 2021
<i>Mume virus A</i>	MuVA	TAS	Virus	<i>Prunus avium</i> (sweet cherry)	25/05/2021

<i>Myrmarachne formicaria</i>	c.f. Ant mimic spider	Cwth (Christmas Island)	Invertebrate	Ipomoea (sweet potato)	batatas	October 2021
<i>Neodolichodorus leiocephalus</i>	No common name	WA	Nematode	<i>Cenchrus clandestinus</i> (kikuyu grass)		19/11/2021
<i>Nigrospora osmanthi</i>	No common name	NT	Fungus	<i>Senna siamea</i>		25/05/2021
<i>Odonaspis serrata</i>	Scale	Cwth (Christmas Island)	Insect	Bambusiodeae (bamboo)		18/10/2021
<i>Ophiostoma fasciatum</i>	Blue stain fungus	NSW	Fungus	<i>Pinus caribaea</i> x <i>elliottii</i> hybrid		17/03/2021
<i>Pantoea stewartii</i> subsp. <i>indolgenes</i>	No common name	NT	Bacteria	<i>Musa</i> sp. (banana)		22/11/2021
<i>Pectis elongata</i>	Tropical cinchweed	Cwth (Cocos (Keeling) Islands)	Weed	Not associated with a host when collected		October 2021
<i>Pectobacterium versatile</i>	Soft rot/ blackleg	SA	Bacteria	<i>Solanum tuberosum</i> (potato)		02/03/2021
<i>Perixera illepidaria</i>	Mango shoot looper	QLD	Insect	<i>Mangifera</i> (mango)	<i>indica</i>	06/10/2021
<i>Phytophthora acerina</i>	No common name	NSW	Fungus	<i>Prunus</i> (almond)	<i>dulcis</i>	15/10/2021
<i>Phytophthora</i> sp. Clade 2 (undescribed)	No common name	QLD	Fungus	<i>Syngonium podophyllum</i>		21/01/2021
<i>Phytophthora tropicalis</i>	No common name	QLD	Fungus	<i>Mandevilla</i> sp.		04/01/2021
<i>Podosphaera cunningtonii</i>	No common name	VIC	Fungus	<i>Prunus</i> hybrid (<i>Pr. dulcis</i> X <i>Pr. persica</i>) cv 'Garnem'		25/05/2021

<i>Podothrips sasacola</i>	Predatory thrips	Cwth (Christmas Island)	Insect	Bambusioideae (bamboo)	October 2021
<i>Prococcus acutissimua</i>	Banana-shaped scale	QLD	Insect	<i>Litchi</i> (lychee)	<i>chinensis</i> 09/11/2021
<i>Prunus virus F</i>	PrVF	TAS	Virus	<i>Prunus avium</i> (sweet cherry)	25/05/2021
<i>Pseudocercospora pini- densiflorae</i>	Needle blight of pine	QLD	Fungus	<i>Pinus radiata</i> (radiata pine)	13/10/2021
<i>Pseudocercospora</i> sp. (novel)	No common name	QLD	Fungus	<i>Huperzia</i> spp. (tassel fern)	25/02/2021
<i>Pseudocercospora</i> sp. (novel)	No common name	QLD	Fungus	<i>Persea american</i> (avocado)	20/10/2021
<i>Pseudodoniella typica</i>	Cocoa mirid	QLD	Insect	<i>Persea american</i> (avocado)	19/08/2021
<i>Pseudomonas syringae</i> pv. <i>allii</i> fistulosi	No common name	QLD	Bacteria	<i>Allium cepa</i> (onion)	09/11/2021
<i>Psylliodes marcidia</i>	European flea beetle; sea kale flea beetle	TAS	Insect	<i>Cakile</i> sp. (sea-rocket)	16/03/2021
<i>Puccinia striiformis</i> f. sp. <i>tritici</i> 134 E16 A+ 17+ 33+	Wheat stripe rust	NSW	Fungus	<i>Triticum</i> (wheat)	<i>aestivum</i> 24/11/2021
<i>Puccinia striiformis</i> f. sp. <i>tritici</i> 238 E191 A+ J+ 17+ 33+	Wheat stripe rust	NSW	Fungus	<i>Triticum</i> (wheat)	<i>aestivum</i> 24/11/2021
<i>Puccinia striiformis</i> f. sp. <i>tritici</i> 238 E191 A+ J+ T+ 17+	Wheat stripe rust	NSW	Fungus	<i>Triticum</i> (wheat)	<i>aestivum</i> 24/11/2021

<i>Raffaella cf. deltoideospora</i>	Blue stain fungus	NSW	Fungus	<i>Pinus caribaea</i> x <i>elliottii</i> (Caribbean slash pine hybrid)	17/03/2021
<i>Red clover vein mosaic virus</i>	RCVMV	TAS	Virus	<i>Trifolium repens</i> (white clover)	05/11/2021
<i>Rhipiphorothrips cruenatus</i>	Grapevine thrips	Cwth (Christmas Island)	Insect	<i>Mangifera indica</i> (mango); <i>Punica granatum</i> (pomegranate)	18/10/2021
<i>Seimatosporium viniferae</i>	<i>vitis</i> - Grapevine trunk disease	NSW	Fungus	<i>Vitis vinifera</i> (grapevine)	14/07/2021
<i>Solenopsis invicta</i>	Red imported fire ant	QLD	Insect	Not associated with a host when collected	January 2021
<i>Sporotrich cf. nigrograna</i>	Blue stain fungus	NSW	Fungus	<i>Pinus radiata</i> (radiata pine)	17/03/2021
<i>Sporothrix euskadiensis</i>	Blue stain fungus	NSW	Fungus	<i>Pinus radiata</i> (radiata pine)	17/03/2021
<i>Sporothrix pseudoabietina</i>	Blue stain fungus	NSW	Fungus	<i>Pinus radiata</i> (radiata pine)	17/03/2021
<i>Steneotarsonemus konoii</i>	No common name	VIC, QLD	Mite	<i>Cynodon dactylon</i> (couch grass)	29/09/2021
<i>Stephanitis typica</i>	Banana lace-wing bug	Cwth (Cocos Keeling Islands)	Insect	<i>Musa</i> sp. (banana)	18/10/2021
<i>Stephanitis typica</i>	Lace bug	QLD (Torres Strait)	Insect	<i>Cocos nucifera</i> (coconut)	18/06/2021
<i>Stephanorhynchus crassus</i>	Weevil	TAS	Insect	<i>Pittosporum</i> sp.	16/03/2021

<i>Tetranychus amicus</i>	Spider mite	Cwth (Cocos Keeling Islands)	Mite	<i>Solanum melongena</i> (eggplant)	18/10/2021
<i>Tobamovirus</i> (novel)	No common name	NT	Virus	<i>Trichosanthes cucumerina</i> (snake gourd)	15/03/2021
<i>Tuckerella knorri</i>	Peacock mite	WA	Mite	<i>Mangifera indica</i> (mango)	17/09/2021
<i>Urocerus gigas</i>	Giant wood wasp	SA	Insect	Detected in a timber crate	05/07/2021
<i>Verticillium isaacii</i>	No common name	SA	Fungus	<i>Solanum lycopersicum</i> var. <i>cerasiforme</i> (cherry tomato)	09/11/2021
<i>Xystrocera globosa</i>	Monkeypod round-headed borer	VIC	Insect	Detected on the wall of a factory	05/01/2021

2. Location and approximate area affected:

N/A

N/A

3. Type of disease/intoxication:

N/A

4. Suspected source of disease/intoxication:

N/A

5. Possible causative agent(s):

N/A

6. Main characteristics of systems:

N/A

7. Detailed symptoms, when applicable

N/A

- Respiratory:

N/A

- Circulatory:

N/A

- Neurological/behavioural:

N/A

- Intestinal:

N/A

- Dermatological:

N/A

- Nephrological:

N/A

- Other:

N/A

8. Deviation(s) from the normal pattern as regards

- Type:

N/A

- Development:

N/A

- Place of occurrence:

N/A

- Time of occurrence:

- Symptoms:

N/A

- Virulence pattern:

N/A

- Drug resistance pattern:

N/A

- Agent(s) difficult to diagnose:

N/A

- Presence of unusual vectors:

N/A

- Other:

N/A

9. Approximate number of primary cases:

N/A

10. Approximate number of total cases:

N/A

11. Number of deaths:

12. Development of the outbreak:

13. Measures taken:

N/A

Notes:

N/A

Attachments:

N/A

Human Diseases

1. Time of cognizance of the outbreak:

In 2021 Australia had no outbreaks of infectious diseases or similar occurrences caused by toxins that seemed to deviate from the normal pattern. Below is information on outbreaks of infectious disease and similar occurrences in humans.

Human diseases

The Australian Government Department of Health (Health), through the Office of Health Protection and Response, has overall responsibility for national communicable disease surveillance. State and territory health departments collect notifications of communicable diseases from doctors, hospitals and/or laboratories under their public health legislation.

In September 2007, the *National Health Security Act 2007* received Royal Assent. This Act provides a legislative basis for, and authorises the exchange of information, including personal information, between states and territories and the Australian Government. The Act provides for the establishment of the National Notifiable Diseases List (NNDL), which specifies the diseases about which personal information can be provided. There are approximately 60 diseases on the NNDL which can be found at: <http://www.health.gov.au/casedefinitions>. The *National Health Security Agreement*, which was drafted in 2007 and signed by Health Ministers in 2008, establishes operational arrangements to formalise and enhance existing surveillance and reporting systems. Under the Agreement states and territories forward de-identified data on the nationally agreed set of communicable diseases to the Department's National Notifiable Diseases System database at http://www9.health.gov.au/cda/source/rpt_2_sel.cfm for the purposes of national communicable disease surveillance. HIV and CJD are reported through different mechanisms.

Further information is collected from other national, jurisdictional and sentinel surveillance systems to supplement notifications data for some diseases. This includes data on syndromes, severity, strains and risk factors.

The Department of Health is responsible for timely and accurate intelligence-gathering and the analysis and reporting of communicable diseases data, for both current and emerging diseases. The Department also coordinates the provision of fortnightly summary reports through the Communicable Diseases Network Australia (CDNA), which can be found at <http://www.health.gov.au/cdnareport>. Quarterly data summaries and annual reports are published in *Communicable Diseases Intelligence* which is published on the department's website at <http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-pubs-c...>

The Department of Health also manages the OzFoodNet network. OzFoodNet is a collaborative initiative with States and Territories to detect and investigate outbreaks of foodborne and potentially foodborne disease, to provide better understanding of the causes and incidence of foodborne disease in the community, and to provide an evidence base for policy formulation. OzFoodNet reports on a fortnightly basis to CDNA and quarterly and annual reports are published in *Communicable Diseases Intelligence*.

CDNA provides national public health co-ordination on communicable disease surveillance, prevention and control. It offers strategic advice to governments and other key bodies on public health actions to minimise the impact of communicable diseases in Australia and the region. Its members include representatives from the Australian commonwealth, state and territory governments, New Zealand, key organisations in the communicable diseases field, and others with relevant expertise. CDNA holds fortnightly teleconferences to share and evaluate the latest information and developments in communicable diseases surveillance and enables commonwealth and state health authorities to cooperate in taking prompt action to control outbreaks. CDNA also meets face-to-face three times per year.

The Public Health Laboratory Network (PHLN) is a collaborative group of laboratories, which have expertise and provide services in public health microbiology. PHLN's vision is to be an action-oriented national public health microbiology network, providing advice and services that add value and form a foundation of the broader Australian public health system. The central purpose and role of PHLN is defined as the provision of leadership and consultation in all aspects of public health microbiology and communicable disease control. This is achieved through the continued development of a proactive network of public health laboratories to protect and improve the health of people of Australia.

PHLN is comprised of state and territory, expert, national and observer members. Each Australian state or territory is represented on PHLN from one or two organisations, as appropriate. Larger organisations with separate bacteriology and virology expertise may nominate a representative from each. National members include representatives from the Australian Centre for Disease Preparedness (ACDP) and CDNA. There is an expert member from the World Health Organization (WHO) Collaborating Centre for Reference and Research on Influenza. Observer members include representatives from Private Pathology, Forensic and Technical Intelligence - Australian Federal Police and New Zealand Jurisdictions.

Number of notifications of communicable diseases in humans reported to the National Notifiable Diseases Surveillance System, 2017 to 2021 (as of 4 April 2022)

Disease	2017	2018	2019	2020	2021
Bloodborne diseases					
Hepatitis B (newly acquired)	147	137	164	123	80
Hepatitis B (unspecified)	5,841	5,816	5,633	4,971	4,905
Hepatitis C (newly acquired)	623	613	792	676	728
Hepatitis C (unspecified)	9,829	9,883	8,386	7,328	6,906
Hepatitis D	66	79	68	70	84
Gastrointestinal diseases					
Botulism	2		2	1	5

Campylobacteriosis	28,699	33,143	36,132	31,956	37,480
Cholera	2		2		1
Cryptosporidiosis	4,701	3,012	2,677	2,443	1,836
Haemolytic uraemic syndrome (HUS)	14	13	19	14	7
Hepatitis A	217	434	246	85	26
Hepatitis E	48	39	55	31	10
Listeriosis	71	73	52	44	44
Paratyphoid	68	81	116	38	5
Shiga Toxin-producing E. Coli (STEC)	497	563	654	570	624
Salmonellosis	16,382	14,130	14,692	12,040	10,731
Shigellosis	1,750	2,505	3,154	1,602	476
Typhoid Fever	144	176	202	88	16
Listed human diseases					
COVID-19 [△]	-	-	-	28,723	470,871
Highly pathogenic avian influenza (human)	-	-	-	-	-
Plague	-	-	-	-	-
Severe Acute Respiratory Syndrome (SARS)	-	-	-	-	-
Smallpox	-	-	-	-	-
Viral haemorrhagic fever (NEC)	-	-	-	-	-

Yellow fever	-	-	-	-	-
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Sexually transmissible infections

Chlamydial infection	101,107	104,730	107,108	91,263	86,941
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Donovanosis

Gonococcal infection	28,358	30,841	34,739	29,838	26,853
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Syphilis - congenital	8	9	4	17	15
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Syphilis – less than 2 years duration	4,415	5,093	5,926	5,370	5,652
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Syphilis – greater than 2 years or unspecified duration	1,997	2,262	2,509	2,074	1,926
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Vaccine preventable diseases

Diphtheria	8	11	7	9	6
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Haemophilus influenzae type b	16	18	22	19	19
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Influenza (laboratory confirmed)	251,305	58,878	313,490	21,364	627
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Measles	81	103	284	25	
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Meningococcal disease – invasive	380	281	206	90	74
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Mumps	811	634	172	153	20
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Pertussis	12,237	12,578	12,028	3,458	548
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Pneumococcal disease – invasive	2,051	2,024	2,134	1,115	1,331
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Rubella	10	9	20	3	3
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Rubella – congenital

Tetanus	4	3	3	7	3
Varicella zoster infection – Chickenpox	3,171	4,601	4,438	2,937	2,082
Varicella zoster infection – Shingles	9,249	14,136	15,244	16,319	11,134
Varicella zoster infection – Unspecified	15,789	12,845	13,130	12,345	19,969

Vector-borne diseases

Flavivirus infection (unspecified)	17	8	10	13	3
Barmah Forest virus infection	447	330	241	731	382
Chikungunya virus infection	99	41	84	34	2
Dengue virus infection	1,135	932	1,465	224	10
Japanese encephalitis virus infection	1		3	1	2
West Nile/Kunjin virus infection	5		1		
Malaria	365	408	379	159	56
Murray Valley encephalitis virus infection		1			1
Ross River virus infection	6,957	3,107	2,967	6,309	3,113

Zoonoses

Anthrax

Australian bat lyssavirus

Brucellosis	19	28	9	19	17
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Leptospirosis	146	142	82	97	249
Lyssavirus (NEC)					
Ornithosis (otherwise known as Psittacosis)	21	9	23	64	36
Q fever	478	516	568	452	497
Tularaemia				2	
Other notifiable diseases					
Invasive Group A streptococcal@					228
Legionellosis	384	447	440	527	578
Leprosy	10	6	10	6	13
Respiratory syncytial virus@					1,510
Tuberculosis	1,437	1,439	1,511	1,612	1,445

Notes:

NEC – not elsewhere classified

^ COVID-19 became nationally notifiable in 2020.

@ Invasive Group A streptococcal disease and respiratory syncytial virus became nationally notifiable on 1 July 2021.

2. Location and approximate area affected:

N/A

N/A

3. Type of disease/intoxication:

N/A

4. Suspected source of disease/intoxication:

N/A

5. Possible causative agent(s):

N/A

6. Main characteristics of systems:

N/A

7. Detailed symptoms, when applicable

N/A

- Respiratory:

N/A

- Circulatory:

N/A

- Neurological/behavioural:

N/A

- Intestinal:

N/A

- Dermatological:

N/A

- Nephrological:

N/A

- Other:

N/A

8. Deviation(s) from the normal pattern as regards

- Type:

N/A

- Development:

N/A

- Place of occurrence:

N/A

- Time of occurrence:

- Symptoms:

N/A

- Virulence pattern:

N/A

- Drug resistance pattern:

N/A

- Agent(s) difficult to diagnose:

N/A

- Presence of unusual vectors:

N/A

- Other:

N/A

9. Approximate number of primary cases:

N/A

10. Approximate number of total cases:

N/A

11. Number of deaths:

12. Development of the outbreak:

13. Measures taken:

N/A

Notes:

N/A

Attachments:

N/A

Confidence-Building Measure "C"

Encouragement of publication of results and promotion of use of knowledge

At the Third Review Conference it was agreed that States parties continue to implement the following:

Encouragement of publication of results of biological research directly related to the Convention, in scientific journals generally available to States parties, as well as promotion of use for permitted purposes of knowledge gained in this research.

Modalities

The Third Review Conference agreed on the following:

1. It is recommended that basic research in biosciences, and particularly that directly related to the Convention should generally be unclassified and that applied research to the extent possible, without infringing on national and commercial interests, should also be unclassified.
2. States parties are encouraged to provide information on their policy as regards publication of results of biological research, indicating, inter alia, their policies as regards publication of results of research carried out in research centres and laboratories subject to exchange of information under item A and publication of research on outbreaks of diseases covered by item B, and to provide information on relevant scientific journals and other relevant scientific publications generally available to States parties.
3. The Third Review Conference discussed the question of cooperation and assistance as regards the safe handling of biological material covered by the Convention. It concluded that other international forums were engaged in this field and expressed its support for efforts aimed at enhancing such cooperation.

Comments:

Australian Centre for Disease Preparedness (ACDP)

Consistent with the goal of encouraging publication of results and promotion of use of knowledge, ACDP has compiled the following list of relevant contributions for 2021:

Journal Papers

Bowden, T., Crowther, J. & Wang, J., (2021) Review of critical factors affecting analytical characteristics of serological and molecular assays. *Revue Scientifique et Technique*, 40 (1), 53-73.

Colling, A. & Gardner, I.A., (eds), (2021) In Diagnostic test validation science: a key element for effective detection and control of infectious animal diseases. *Rev. Sci. Tech. Off. Int. Epiz.*, 40 (1).

Gardner, I.A., Colling, A., Caraguel, C.G., Crowther, J.R., Jones, G., Firestone, S.M. & Heuer C., (2021) Introduction - Validation of test for OIE-listed diseases as fit-for-purpose in a world of evolving diagnostic technologies and pathogens. In Diagnostic test validation science: a key element for effective detection and control of infectious animal diseases. *Rev. Sci. Tech. Off. Int. Epiz.*, 40 (1), 19–28.

Colling, A. & Gardner, I.A., (2021) Conclusions - Validation of test for OIE-listed diseases as fit-for-purpose in a world of evolving diagnostic technologies and pathogens. In Diagnostic test validation science: a key element for effective detection and control of infectious animal diseases. *Rev. Sci. Tech. Off. Int. Epiz.*, 40 (1).

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Gifford, G., Szabó, M., Hibbard, R., Mateo, D., Colling A., Gardner I. & Erlacher-Vindel, E., (2021) Validation, certification and registration of certified tests and regulatory control of veterinary diagnostic test kits. In *Diagnostic test validation science: a key element for effective detection and control of infectious animal diseases*. *Rev. Sci. Tech. Off. Int. Epiz.*, 40 (1), 173–188. doi:10.20506/rst.40.1.3216.

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Shan, S., Bruce, K., Stevens, V., Wong, F.Y.K., Wang, J., Johnson, D., Middleton, D., O’Riley, K., McCullough, S., Williams, D.T., & Bergfeld, J., (2021) In Vitro and In Vivo Characterization of a Pigeon Paramyxovirus Type 1 Isolated from Domestic Pigeons in Victoria, Australia 2011. *Viruses*, 13, 429.

Samsing, F., Hopf, J., Davis, S., Wynne, J.W. & Durr, P.A., (2021) Will Australia's common carp (*Cyprinus carpio*) populations develop resistance to Cyprinid herpesvirus 3 (CyHV-3) if released as a biocontrol agent? Identification of pathways and knowledge gaps. *Biological Control*, 157 104571.

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Conference presentations

- Williams DT. ASF Diagnostic and Research Support at the Australian Centre for Disease Preparedness and ASF Vaccine Update. Virtual Meeting of the OIE Standing Group of Experts on African Swine Fever for Asia; 5th February 2021. Webinar.

Drew T. Implications of use of unauthorised ASF vaccines in the region. Regional Consultation Workshop on ASF Preparedness and Response, Virtual Workshop based in Bangkok, Thailand; 9-10 March 2021.

Colling, A. Validation of diagnostic tests for infectious diseases: challenges and opportunities. International Symposium on Sustainable Animal Production and Health - Current Status and Way Forward, 28 June to 2 July 2021.

Eagles, Debbie; Paradkar, Prasad. Vector-borne diseases - gaps and opportunities. Joint Chinese Academy Agricultural Sciences (CAAS) and CSIRO Animal Sciences and Veterinary Medicine Theme Workshop. CAAS-CSIRO, 07/05/2021 Webinar.

Williams, David. ASF research at ACDP. Joint Chinese Academy Agricultural Sciences (CAAS) and CSIRO Animal Sciences and Veterinary Medicine Theme Workshop. CAAS-CSIRO, 07/05/2021 Webinar.

Wong, Frank. One Health animal influenza surveillance through the WHO/OIE/FAO tripartite global networked approach. Joint Chinese Academy Agricultural Sciences (CAAS) and CSIRO Animal Sciences and Veterinary Medicine Theme Workshop. CAAS-CSIRO, 07/05/2021 Webinar.

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Confidence-Building Measure "D"

(Deleted)

Confidence-Building Measure "E"

Declaration of legislation, regulations and other measures

At the Third Review Conference the States parties agreed to implement the following, later amended by the Seventh Review Conference:

As an indication of the measures which they have taken to implement the Convention, States parties shall declare whether they have legislation, regulations or other measures:

- (a) To prohibit and prevent the development, production, stockpiling, acquisition or retention of the agents, toxins, weapons, equipment and means of delivery specified in Article I of the Convention, within their territory or anywhere under their jurisdiction or under their control anywhere;
- (b) In relation to the export or import of micro-organisms pathogenic to man, animals and plants or of toxins in accordance with the Convention;
- (c) In relation to biosafety and biosecurity.

States parties shall complete the attached form (Form E) and shall be prepared to submit copies of the legislation or regulations, or written details of other measures on request to the Implementation Support Unit (ISU) within the United Nations Office for Disarmament Affairs or to an individual State party. On an annual basis States parties shall indicate, also on the attached form, whether or not there has been any amendment to their legislation, regulations or other measures.

Form E

Declaration of legislation, regulations and other measures

<i>Relating to</i>	<i>Legislation</i>	<i>Regulations</i>	<i>Other measures¹²</i>	<i>Amended since last year</i>
(a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	yes	yes	no	no
(b) Exports of micro-organisms ¹³ and toxins	yes	yes	yes	yes
(c) Imports of micro-organisms ¹³ and toxins	yes	yes	no	no
(d) Biosafety ¹⁴ and biosecurity ¹⁵	yes	yes	yes	yes

Additional information to Form E:

In addition to the above summary, an overview of key Australian Government legislation relevant to the BWC is provided below:

Background

The following Australian Government legislation, regulations and other measures are relevant to this confidence-building measure. The Australian Government has a range of legislative and executive measures that ensure compliance with UN Security Council Resolution 1540 (2004).

Australia is fully committed to the work of the 1540 Committee in ensuring global implementation of this resolution. As well as legislation dedicated to Weapons of Mass Destruction (WMD), there is a considerable amount of health, safety and environmental legislation that controls access to hazardous biological materials.

National Health Security Act 2007

The *National Health Security Act 2007* (NHS Act) was passed by the Australian Parliament in September 2007. It has two main operative parts: Part 2 of the Act enacts Australia's responsibilities under the International Health Regulations 2005 and formalises surveillance systems in Australia, while Part 3 establishes a regulatory scheme for biological agents of security concern.

Part 3 of the NHS Act enables the Department of Health to regulate the handling of Security Sensitive Biological Agents (SSBAs). The NHS Act establishes a two tiered list of SSBAs, a National Register that is informed by mandatory reporting, the purposes for which SSBAs may be handled, security standards (physical, personnel, information management, disposal and transport) that must be met, exemptions from regulation, and an inspection scheme to monitor compliance. The regulatory scheme monitors both known SSBAs and biological agents suspected of being SSBAs.

Security Sensitive Biological Agent Standards

The SSBA Standards set out minimum requirements relating to physical security, personnel, information management, decontamination and inactivation, disposal and transport of SSBAs and biological agents suspected of being SSBAs. They include specific directions for dealing with biosecurity risks and establish a systematic approach to the management of the security of SSBAs. The SSBA Standards are comprised of normative requirements that are mandatory and informative statements to assist in meeting the normative requirements.

The SSBA Regulatory Scheme is further strengthened through a background checking scheme for personnel who handle SSBAs. Background checks, known as National Health Security Checks, consist of a national criminal history check against a list of disqualifying offences and a security assessment.

The SSBA Regulatory Scheme has a comprehensive inspection scheme for facilities handling SSBAs. Registered facilities that handle Tier 1 SSBAs are inspected every 18 months. Registered facilities that handle Tier 2 SSBAs are inspected every two years. Inspections of non-registered facilities handling suspected SSBAs and spot checks are undertaken as required. Inspections continue to show a high level of compliance.

Chemical Weapons (Prohibition) Act 1994 and associated regulations

This Act is administered by the Minister for Foreign Affairs, and statutory responsibilities are held by the Australian Safeguards and Non-Proliferation Office. The Act gives effect to Australia's obligations under the *Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction*. The Act controls certain chemicals which may be used as weapons, including the natural toxins ricin and saxitoxin. The Act's general purpose criterion also applies to the hostile use of any chemical, including other toxins. The Act extends to the acts of Australian citizens outside Australia. Contravention of the Act is an indictable offence.

Crimes (Biological Weapons) Act 1976

This Act, which is administered by the Attorney-General, makes it unlawful for Australians to develop, produce, stockpile or otherwise acquire or retain microbial or other biological agents or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes; or weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict. The Act extends to the acts of Australian citizens outside Australia. Contravention of the Act is an indictable offence.

Crimes (Biological Weapons) Regulations 1980

These Regulations specify the way in which substances acquired under the Crimes (Biological Weapons) Act 1976 should be stored, disposed of and analysed.

Customs Act 1901 and Customs (Prohibited Exports) Regulations 1958

The Act controls the export of tangible defence and strategic dual-use goods and technologies and is administered by the Minister for Immigration and Border Protection and the Minister for Defence. Controls are executed through Regulation 13E of the *Customs (Prohibited Exports) Regulations 1958* which allows the Minister for Defence, or a delegate to grant permission to export goods or technology listed in the Defence and Strategic Goods List (DSGL).

The DSGL specifies the goods, software or technologies that are regulated when exported, supplied, brokered or published. The list comprises two parts:

- Part 1 of the DSGL lists munitions (or military) items, which are those goods and technologies designed or adapted for use by armed forces or goods that are inherently lethal;
- Part 2 lists dual-use items, that is, items that may be used for commercial purposes, but may be used in military systems or for weapons of mass destruction purposes. As such, Part 2 includes human pathogens and toxins, animal pathogens, plant pathogens and equipment capable of being used to develop biological weapons.

The DSGL was updated in August 2021, following changes made to the control lists of the export control regimes of which Australia is a member. The DSGL update included a new control for the Middle East respiratory syndrome-related coronavirus, which was recently added to the Australia Group control lists.

The Act also includes a prohibition power that allows the Minister for Defence to prohibit the export of any uncontrolled goods when the Minister believes or suspects the export may be for a military end-use that would prejudice the security, defence or international relations of Australia.

Applications to export goods listed in the DSGL are considered on a case-by-case basis against criteria specified in the *Customs (Prohibited Exports) Regulations 1958* to ensure exports of military and dual-use goods are consistent with Australia's broader national interests and international obligations.

Australia's export control policies and procedures are reviewed regularly to reflect shifts in strategic priorities and reflect changes in the various international counter-proliferation multilateral and export control regimes of which Australia is a member, including the Australia Group (AG), Proliferation Security Initiative (PSI) as well as enforcing United Nations Security Council Resolutions (UNSCRs).

The Biosecurity Act 2015 and associated regulations

The *Biosecurity Act 2015* commenced on 16 June 2016 (fully replacing the *Quarantine Act 1908*) and is jointly administered by the Minister for Agriculture, and the Minister for Health. The Act is designed to manage the risks associated with the introduction, establishment and spread of pests and diseases affecting humans, plants, animals and the environment. Accordingly, in conjunction with the *Biological Control Act* (see below), it controls the import into Australia of all biological material and may prohibit the import in some circumstances.

Those aspects of the Act that relate to human biosecurity are administered by the Minister for Health and Aged Care (Department of Health). Those aspects of the Act that relate to plant and animal biosecurity are administered by the Minister for Agriculture. All biological agents require prior permission to import.

As per the Act, the Director of Biosecurity at the Department of Agriculture, Water and the Environment and the Director of Human Biosecurity at the Department of Health may jointly determine that specified classes of goods must not be brought or imported into Australian territory unless specified conditions (including conditions for administrative purposes) are complied with. The relevant Determination listing the specified classes of goods is the Biosecurity (Conditionally Non-prohibited Goods) Determination 2021. Goods of biological origin, including human pathogenic microorganisms and toxins, may only be imported into Australia if approval has been given by a Director of Biosecurity. In giving approval, the Director may require that the importer adhere to certain conditions or requirements, including, but not limited to, the storage, transportation, distribution and disposal of the goods, the use to which the goods may be put, and the personnel authorised to handle or use the goods.

Import conditions vary depending on the nature of the organisms, and on the risks involved. High risk organisms such as serious pathogens of humans, animals and plants which might be considered as potential biological weapons would only be permitted under the most stringent, high security conditions. Very few such imports are approved, and generally those would be for diagnostic research in preparation for emergency responses to specific serious exotic disease incursions.

Penalties for the importation of prohibited or conditionally non-prohibited goods without a permit, and for breaches of permit requirements, are severe and may include a fine, imprisonment or both.

Biological Control Act 1984 and associated regulations

This Act is administered by the Minister for Agriculture. It provides powers additional to those of the Biosecurity Act in order to regulate the release of biological agents for the control of pests, diseases and weeds. It primarily covers issues of compensation for the release of a biological control agent.

Gene Technology Act 2000 and associated regulations

The Minister for Health is the commonwealth minister responsible for gene technology regulation, including the *Gene Technology Act 2000* which regulates dealings with genetically modified organisms (GMOs) to protect the health and safety of people and the environment. The legislation is administered by an independent statutory office holder, the Gene Technology Regulator, and provides a risk-based system for regulation of GMOs. There are also legislative provisions for accreditation of organisations, certification of physical containment facilities and extensive monitoring and enforcement powers.

All dealings with GMOs must be licensed by the Regulator, unless otherwise authorised under the legislation. Dealings include production, import, transport and conducting experiments with GMOs. All licence applications are subject to case-by-case scientific risk assessment and risk management.

The legislation requires licensing for 'higher risk' GMOs, which would include those that could potentially be used as biological weapons or for other malicious purposes, including those that involve: modifications that may alter pathogenicity, virulence, host range or treatment of a microorganism; cloning or high expression of toxin genes; or animals, plants or fungi that are capable of secreting infectious agents as a result of the genetic modification. Work with such 'higher risk' GMOs is typically for medical, veterinary or agricultural research purposes and licence conditions include requirements that dealings be conducted in facilities certified by the Regulator to the appropriate physical containment (PC) level.

There are significant penalties for dealing with GMOs without a licence, and for breaches of licence conditions, which may include a fine, imprisonment or both.

Therapeutic Goods Act 1989 and associated regulations

The Therapeutic Goods Administration (TGA) is part of the Health Products Regulation Group of the Australian Government Department of Health and regulates therapeutic goods for human use under this Act. The Act covers the import, manufacture, supply and export of therapeutic goods, and includes pathogenic micro-organisms where these are included in vaccines for human use.

Prior to initial supply for human use, products must be entered in the Australian Register of Therapeutic Goods (the Register). Vaccines are registrable products and undergo evaluation by the TGA prior to entry in the Register.

Weapons of Mass Destruction (Prevention of Proliferation) Act 1995 and associated regulations

The Act is administered by the Minister for Defence and complements the existing controls contained in the *Customs Act 1901* and *Customs (Prohibited Exports) Regulations 1958*. The Act and the associated Regulations provide the legislative basis for controlling the movement of goods and provision of services where there is reason to believe or suspect that the goods or services may be used in, or assist a weapons of mass destruction (WMD) program. The WMD Act defines a WMD program as a plan or program for the development, production, acquisition or stockpiling of nuclear, biological or chemical weapons or missiles capable of delivering such weapons.

The Minister for Defence may prohibit the export or supply of goods, or the provision of services if the Minister has reason to believe or suspect that it may contribute to a WMD program, including a biological weapons program. Penalties for conducting a transaction that has been prohibited by the Minister for Defence or failing to comply with conditions specified in a notice are severe and may include imprisonment.

The Act applies to Australian citizens and persons normally resident in Australia (including foreigners but only applies to their activities that take place within Australia) and bodies incorporated in Australia or an external Territory. The Act provides a mechanism for exporters to obtain written guidance from the Minister on whether he or she has reason to suspect that the goods may be used in a WMD program.

Defence Trade Controls Act 2012 and associated regulations

The Act is administered by the Minister for Defence and introduced controls on the supply and publishing of technology and the brokering of goods and technology listed in the Defence and Strategic Goods list (DSGL). The offence provisions of the Act came into force on 2 April 2016.

The Act regulates the:

- intangible supply (such as transfer by electronic means) of technology listed in the DSGL
- arranging the supply (brokering) of goods and technology that are either: listed in Part 1 of the DSGL, or are listed in Part 2 where they may be for a military or WMD end use
- publication of technology listed in Part 1 of the DSGL.

The Act also includes prohibition powers that allow the Minister for Defence to prohibit the supply, brokering or publication of goods and technology on the DSGL when the Minister believes the activity would prejudice the security, defence or international relations of Australia.

Australian course on the United Nations Secretary-General's Mechanism (UNSGM)

In October 2016, Australia hosted the first Southern Hemisphere UNSGM training course, with a focus on investigating the alleged use of biological weapons. The UNSGM was developed in the late 1980s to carry out prompt investigations in response to allegations brought to the UN Secretary-General's attention concerning the possible use of chemical and biological and toxin weapons. The Australian course included participants from Australia, Canada, China, New Zealand, Philippines, Republic of Korea, Russia, South Africa and Thailand. The training program, developed with the UN Office of Disarmament Affairs (UNODA), strengthened the response capacity in the Asia-Pacific, encouraged greater interoperability and sharing of expertise and skills between members of the UNODA roster of qualified experts, increased awareness of issues related to the alleged use of biological weapons, and increased regional awareness of the UNSGM. In 2020, Australia continued to support the UNSGM through nominating qualified experts and expert consultants for the roster, providing expert advice and assisting in the preparation training materials.

Confidence-Building Measure "F"

Declaration of past activities in offensive and/or defensive biological research and development programmes

In the interest of increasing transparency and openness, States parties shall declare whether or not they conducted any offensive and/or defensive biological research and development programmes since 1 January 1946.

If so, States parties shall provide information on such programmes, in accordance with Form F.

Form F

Declaration of past activities in offensive and/or defensive biological research and development programmes

1. Date of entry into force of the Convention for the State Party.

Wednesday, October 5, 1977

2. Past offensive biological research and development programmes:

- no

- Period(s) of activities

Not applicable

- Summary of the research and development activities indicating whether work was performed concerning production, test and evaluation, weaponization, stockpiling of biological agents, the destruction programme of such agents and weapons, and other related research.

Not applicable (see Explanatory Statement).

3. Past defensive biological research and development programmes:

- yes

- Period(s) of activities

Since 1994 Australia commenced a modest program of research into defence against toxins as warfare agents (see Explanatory Statement).

- Summary of the research and development activities indicating whether or not work was conducted in the following areas: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination, and other related research, with location if possible.

EXPLANATORY STATEMENT RESEARCH AND DEVELOPMENT PROGRAMS RELATED TO BIOLOGICAL WARFARE AND DEFENCE IN AUSTRALIA SINCE 1 JANUARY 1946

Between 1946 and 1994, Australia had no research and development program specifically aimed at defence against biological and toxin weapons. However, some methods for protection against chemical warfare agents could also be used to protect against biological agents. As Australia has had a longstanding research and development program to develop protection against chemical agents, it had, though only incidentally, also been involved in the development of means capable of offering some protection from biological weapons.

The position at the end of World War II

During World War II, Australia acquired a protective capability against chemical and biological warfare (CBW), which included the equipping of military units with protective clothing, respirators, detection apparatus and decontamination equipment. This capability was associated with the threat of chemical warfare, as almost all of the major combatants possessed chemical weapons.

Australia had no biological weapons and knew little about them. While a need for some defence against them was generally perceived, no major specific steps were taken to achieve this. The tendency was to regard chemical and biological weapons as a single category of threat, with biological weapons treated as the lesser element.

The situation from 1945 to the 1970s

In the late 1940s and 1950s, Defence committees assessed the need for defence against biological agents. The view adopted was that if biological threats arose, Defence authorities would co-opt staff from public health facilities that were trained in microbiology and biological sciences.

Australia also received limited information on biological defence from the United States of America, the United Kingdom and Canada through the Technical Cooperation Program (TTCP). Under the TTCP, there is provision for collaborative research on biological defence, but Australia did not participate in that research.

During the 1960s and 1970s, some research was conducted in an Australian Defence laboratory on toxins and venoms from Australian animals and plants. The research had no biological warfare focus, and was undertaken solely for the purpose of developing expertise in toxicology. The results of the research were published in scientific journals, contributing to the open scientific literature.

1970 to 1994

During this period, the policy was to maintain a watching brief on developments in biological warfare defence research so that a competency could be maintained to advise on policy and to give direction to training for the Australian Defence Force (ADF). This competency was derived from open literature and from Australia's partners under the TTCP. No research on defence against toxins (or other biological warfare agents) was undertaken during this period. Australia did, however, maintain a research and development program into chemical defence, and the protective aspects of this program had some incidental common utility in biological defence.

1994 – Present

In 1994, it was recognised that Australia's knowledge of toxins as warfare agents needed to be strengthened if appropriate advice on defensive measures was to be given to the ADF and in support of the country's arms control objectives. Consequently, the Government gave approval to commence a modest program of research into defence against toxins as warfare agents.

It was also recognised that the Government needed advice on defence against biological weapons if it was to pursue its aims of strengthening the Biological Weapons Convention. Consequently, the policy of maintaining a watching brief on BW defence research was modified to allow research in BW defence that did not involve pathogenic reproducing organisms. This policy allowed research to include activities such as epidemiological studies, computer simulations and studies of the detection of toxins.

In 1998, government approval was given for Defence, Science and Technology Organisation (now Defence Science and Technology Group) to undertake biological defence work with reproducing organisms up to Risk Group 3. The subsequent program of work aims to mitigate the risk of use of biological weapons against Australian Defence personnel or civilians, and is in accordance with Australia's obligations under the BWC. Australia still maintains its active program into researching protective aspects of defence against chemical agents and has expanded the scope to include defence against biological weapons (e.g. incorporation of antibacterials in carbon absorbents).

Confidence-Building Measure "G"

Declaration of vaccine production facilities

To further increase the transparency of biological research and development related to the Convention and to broaden scientific and technical knowledge as agreed in Article X, each State party will declare all facilities, both governmental and non-governmental, within its territory or under its jurisdiction or control anywhere, producing vaccines licensed by the State party for the protection of humans. Information shall be provided on Form G attached.

Form G

Declaration of vaccine production facilities

1. Name of facility:

Seqirus (Australia) Pty Ltd

2. Location (mailing address):

i) 39-79 Poplar Road Licence Number: MI-2013-LI-05688-1 Parkville VIC 3052 AUSTRALIA ii) Q Fever Manufacturing Facility Licence Number: MI-2013-LI-05721-1 Building 8 189-209 Camp Road Broadmeadows VIC 3047 AUSTRALIA

3. General description of the types of diseases covered:

Seqirus (Australia) Pty Ltd is the primary manufacturer licensed by the Australian Government pursuant to the *Therapeutic Goods Act 1989* to manufacture vaccines for human use. The licence requires the manufacturer to comply with the principles of Good Manufacturing Practice.

Vaccine products must be entered in the Australian Register of Therapeutic Goods (ARTG) prior to supply of the products for human use. The ARTG identifies the following vaccines as being manufactured by Seqirus (Australia) (not all of these vaccines were necessarily manufactured in 2021):

Influenza Vaccine

Q fever Vaccine

Note: In regard to *Section 3, General Description of the Types of Diseases Covered*, Seqirus (Australia) Pty Ltd sponsors a wide range of bacterial vaccines and viral vaccines that are manufactured overseas and imported into Australia for supply in Australia.

There are other manufacturers in Australia with a GMP licence issued by the TGA to produce biological goods – this category includes, but is not limited to, vaccines. The list of these facilities may be accessed from the TGA on-line services home page at www.tga.gov.au and by selecting the links to “Industry”, “Manufacturing therapeutic goods” followed by the Quick Link to “eBusiness Services” and then “Australian Manufacturers”.

A search of “Australian Manufacturers” identifies the following manufacturers licensed to manufacture vaccines for human use (additional to Seqirus (Australia) Pty Ltd):

- GlaxoSmithKline Australia Pty Ltd, 1061 Mountain Highway Boronia VIC has been issued with a licence (MI-15082005-LI-000773-2) that authorises the manufacture of Rotarix vaccine for pooling, filling, packaging and labelling of final bulk batches manufactured by GlaxoSmithKline Biologicals S.A Belgium.

GlaxoSmithKline Australia Pty Ltd is also listed on the ARTG as a sponsor of vaccines (i.e. responsible for the commercial supply).

Notes

1. World Health Organization
2. World Organization for Animal Health.
3. The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.
4. For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".
5. In accordance with the latest edition of the WHO Laboratory Biosafety Manual, or equivalent.
6. Microorganisms pathogenic to humans and/or animals
7. In accordance with the latest edition of the WHO Laboratory Biosafety Manual and/or the OIE Terrestrial Manual or other equivalent internationally accepted guidelines.
8. In accordance with the latest edition of the WHO Laboratory Biosafety Manual and/or the OIE Terrestrial Manual or other equivalent internationally accepted guidelines.
9. Including viruses and prions.
10. It is understood that this may include organisms made pathogenic by molecular biology techniques, such as genetic engineering.
11. See paragraph 2 of the chapeau to Confidence-Building Measure B.
12. Including guidelines.
13. Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.
14. In accordance with the latest version of the WHO Laboratory Biosafety Manual or equivalent national or international guidance.
15. In accordance with the latest version of the WHO Laboratory Biosecurity Guidance or equivalent national or international guidance.