**Explanatory Statement**

*Biosecurity Act 2015*

*Biosecurity (Suspended Goods—Uncooked Prawns) Amendment (Exceptions) Determination 2017*

**Legislative Authority**

Subsection 182(1) of the *Biosecurity Act 2015* (the Act) provides that the Director of Biosecurity may determine that specified goods, or a specified class of goods, (including conditionally non-prohibited goods) must not be brought into Australian territory for a specified period that is no longer than 6 months.

Under subsection 33(3) of the *Acts Interpretation Act 1901*, where an Act confers a power to make, grant or issue any instrument of a legislative or administrative character (including rules, regulations or by-laws), the power shall be construed as including a power exercisable in the like manner and subject to the like conditions (if any) to repeal, rescind, revoke, amend, or vary any such instrument.

**Purpose**

The *Biosecurity (Suspended Goods – Uncooked Prawns) Determination 2017* (Principal Determination) prohibits uncooked prawns and uncooked prawn meat from being brought into or imported to Australian territory. The purpose of the *Biosecurity (Suspended Goods—Uncooked Prawns) Amendment (Exceptions) Determination 2017* (Amendment Determination) is to exempt from the prohibition imposed by the Principal Determination:

* uncooked prawns sourced from the exclusive economic zone, or uncooked prawn meat sourced from such prawns; and
* uncooked prawns or uncooked prawn meat processed into dried prawns or a prawn-based food product that is shelf-stable; and
* uncooked prawns or uncooked prawn meat processed into bait for aquatic use, pet fish food or aquaculture feed.

**Background**

On 6 January 2017 the Director of Biosecurity made the Principal Determination to prohibit uncooked prawns and uncooked prawn meat from being brought into or imported to Australian territory for a period of 6 months. The purpose of the Principal Determination is to manage the biosecurity risk posed by imported uncooked prawns to an acceptably low level.

Assessments of the biosecurity risks associated with White Spot Syndrome Virus in relation to the following goods were undertaken:

* uncooked prawns sourced from the exclusive economic zone, or uncooked prawn meat sourced from such prawns
* uncooked prawns or uncooked prawn meat processed into dried prawns or a prawn-based food product that is shelf-stable
* uncooked prawns or uncooked prawn meat processed into bait for aquatic use, pet fish food or aquaculture feed.

The assessments show that those goods represent an acceptable level of biosecurity that meets Australia’s Appropriate Level of Protection (ALOP).

**Impact and Effect**

Under the Amendment Determination, uncooked prawns and uncooked prawn meat will not be allowed to be brought into or imported to Australian territory for the duration of the Principal Determination unless they are:

* from the exclusive economic zone, or uncooked prawn meat sourced from such prawns;
* processed into dried prawns or a prawn-based food product that is shelf-stable; or
* processed into bait for aquatic use, pet fish food or aquaculture feed.

**Consultation**

The department consulted with the Australian Fisheries Management Authority.

**Details/ Operation**

Details of the Amendment Determination are set out in the Attachment.

The Amendment Determination is a legislative instrument but, under section 182(6) of the Act, section 42 (disallowance) of the *Legislation Act 2003* does not apply to the Amendment Determination. Consequently, a Statement of Compatibility with Human Rights is not required.

**Attachment**

**Details of the *Biosecurity (Suspended Goods—Uncooked Prawns) Amendment (Exceptions) Determination 2017***

Section 1 – Name

This section provides that the name of the Amendment Determination is the *Biosecurity (Suspended Goods—Uncooked Prawns) Amendment (Exceptions) Determination 2017.*

Section 2 – Commencement

This section provides that the Amendment Determination commences on the day after registration.

Section 3 – Authority

This section provides that the Amendment Determination is made under section 182(1) of the *Biosecurity Act 2015*.

Section 4 – Definitions

This section sets out defined terms used in the Amendment Determination. It notes that a number of terms used in the Amendment Determination are defined in the Act.

Section 5 – Reasons for making this determination

This section provides the reasons for making the determination as required by section 182(5) of the *Biosecurity Act 2015.*

The reason explains why, having undertaken further assessment of the biosecurity risks associated with the proscribed class of goods, that it is possible to except further goods from the suspension under the Principal Determination. Detailed reasons are set out in Schedules 2 to 4.

Section 6 – Schedules

This section provides that the Amendment Determination is amended as set out in Schedule 1, and any other item in a Schedule has effect according to its terms.

Schedule 1 – Amendments

This Schedule amends the *Biosecurity (Suspended Goods – Uncooked Prawns) Determination 2017*.

**Item 1** inserts a note which states that section 5 of the Principal Determination sets out the reasons in its original form for making the Principal Determination. The reasons for making the Amendment Determination are set out in the Amendment Determination.

**Item 2** substitutes “Note” for “Note 1”.

**Item 3** inserts Note 2 which states that the “exclusive economic zone” is defined in the *Acts Interpretation Act 1901*. The exclusive economic zone extends from the baseline of Australia and its external territories to 200 nautical miles.

**Item 4** inserts the definition of shelf-stable: goods are shelf-stable if:

1. the goods have been commercially manufactured; and
2. the goods have bene packaged by the manufacturer; and
3. the goods are in that package; and
4. the package has not been open or broken; and
5. the goods are able to be stored in the package at room or ambient temperature; and
6. the goods do not require refrigeration or freezing before the package is opened.

**Item 5** inserts before paragraph 7(3)(a):

(aa) “uncooked prawns sourced from the exclusive economic zone, or uncooked prawn meat sourced from such prawns”.

**Item 6** inserts at the end of subsection 7(3):

(d) uncooked prawns or uncooked prawn meat processed into dried prawns or a prawn-based food product that is shelf-stable;

(e) uncooked prawns or uncooked prawn meat processed into bait for aquatic use, pet fish food or aquaculture feed.

‘Dried prawns’ and ‘prawn-based foods products’ are terms used in the *Biosecurity (Prohibited and Conditionally Non-prohibited Goods) Determination 2016* and are intended to have the same meaning in this Amendment Determination.

Schedule 2—Reasons—prawns sourced from exclusive economic zone

This Schedule sets out the statement of reasons for exempting uncooked prawns sourced from the exclusive economic zone, or uncooked prawn meat sourced from such prawns. The reasons are as follows:

* There is a very low risk that WSSV could enter the Australian territory with prawns sourced from within the exclusive economic zone (***EEZ***). This very low risk meets Australia’s ALOP.

• Prawns sourced from Australia’s EEZ are considered either to be free of WSSV or to have a very low prevalence of WSSV.

– Australia’s territorial waters are considered free of WSSV. Prawn populations in Australia’s territorial waters are often contiguous with prawn populations in the EEZ. It is reasonable to consider that prawns in the EEZ have an equivalent disease status to prawns in Australia’s territorial waters or at least a very low prevalence of WSSV. Recently, two consignments of wild prawns caught in Australia and exported to Thailand and China respectively for processing tested negative for WSSV DNA on return to Australia.

– WSSV is a notifiable disease in Australia and has not been reported in prawns from the EEZ. Catching prawns in the EEZ represents at least 17% of Australia’s total annual prawn catch (at least 3284 tonnes per annum).

• There have not been any reported outbreaks of WSSV in Australia linked to prawns from the EEZ.

• No evidence has been found linking the Logan River outbreak (see paragraph 5(d) of the principal determination) to prawns caught in the EEZ. The risk of WSSV being present in the EEZ has not increased as a result of the Logan River outbreak.

• In general, WSSV outbreaks are rarely observed in wild prawn populations. Prawns in the wild that are affected by WSSV are considered likely to be eaten by non-susceptible predators, which reduces the risk of spread of the disease. The prevalence of WSSV can vary due to seasonal factors but is generally considered low.

• The EEZ, to the extent that it surrounds Christmas Island extends to within close proximity of Indonesian waters where WSSV is endemic in the aquaculture industry. Prawns sourced from that portion of the EEZ are a potential risk for WSSV. However, the Australian Fisheries Management Authority (AFMA) has confirmed it has never issued a licence for prawning within the Australian Fishing Zone of Christmas Island.

Schedule 3—Reasons—dried prawns and shelf-stable prawn-based food products

This Schedule sets out the statement of reasons for exempting uncooked prawns or uncooked prawn meat processed into dried prawns or a prawn‑based food product that is shelf‑stable. The reasons are as follows:

**Summary of reasons**

• Various preparation methods for dried prawns and shelf-stable prawn-based food products are likely to reduce the amount of infective WSSV, if present in the fresh material.

• The 2009 Generic import risk analysis report for prawns and prawn products (the ***2009 IRA***) considered that shelf-stable food products containing prawns, such as canned prawns or condiments containing prawns as an ingredient (e.g. prawn balachan, shrimp paste) were unlikely to come into contact with live crustaceans in Australia.

• No new information has come to light since the publication of the 2009 IRA to challenge this assessment.

• Because exposure of susceptible species in Australia through dried prawns and shelf‑stable prawn-based food products is unlikely, the biosecurity risk posed by WSSV associated with these products meets Australia’s ALOP.

Dried and shelf-stable prawn-based food products

Prior to the *Biosecurity (Suspended Goods – Uncooked Prawns) Determination 2017*, dried prawns and shelf-stable prawn-based food products were approved for import. An import permit was not required for commercial or personal use consignments.

The only intervention was that products may have been subject to physical inspection upon arrival to ensure the goods were dry or shelf-stable and free from other animal or plant material and soil.

Likelihood of entry of WSSV with dried prawns and shelf-stable prawn‑based food products

Shelf-stable and dried prawn products are considered to have lower likelihood of contamination with WSSV compared to raw prawn products.

• The preparation of dried or shelf-stable products exposes the prawn material to conditions that are expected, at least partially, to incapacitate the virus. Processes that subject prawn meat to heat, pressure, or chemical treatments such as acidity (pickling), result in denaturing/coagulation of the meat protein. Prawns that are subjected to such processes, or their combinations, are likely to have reduced viral titres compared to their fresh state.

• There are no specific studies on the prevalence or infectivity of WSSV in dried prawns or shelf-stable prawns for human consumption. Various studies assessed the sensitivity of WSSV to thermal, ultraviolet or pH exposure (Chang 1998, Balasubramanian 2006, Kumar 2013).

– These investigations indicate that WSSV is susceptible to these physical and chemical conditions. For example, WSSV in prawn tissue homogenates was completely inactivated (based on infectivity studies) with 20 minutes heating to 60°C or UV irradiation at 3.1 × 105 μW s/cm2 (Balasubramanian 2006).

• Persistent infectivity of WSSV in deceased prawns has been demonstrated:

– Whole carcases: retain infectivity for six days at 25.5 – 28.8°C (Wang et al. 2002);

– Heads: retain infectivity for at least 14 days at 27°C (Prior and Browdy 2002);

– Tails: retain infectivity for at least 28 days at 27°C (Prior and Browdy 2002).

Likelihood of exposure of WSSV with dried prawns and shelf-stable prawn-based food products

The 2009 IRA considered that shelf-stable products and dried prawns, had a sufficiently low likelihood of exposure to susceptible hosts compared to raw prawn products:

“Shelf-stable food products containing prawns such as dried prawns, canned prawns or condiments containing prawns as an ingredient (e.g. prawn balachan, shrimp paste) are considered to pose a negligible risk because they are highly unlikely to come into contact with live crustaceans in Australia.” (p 176)

• Since the publication of this statement in the 2009 IRA, which underwent both peer review by an eminent scientists group and public consultation opportunities, no new information has come to light to contradict this assessment.

• Preparing prawns for human consumption in a dried or shelf-stable form is considered an effective risk mitigation measure, rendering them highly unlikely to come into contact with live crustaceans. Consequently, dried and shelf-stable prawn preparations are unlikely to represent a direct pathway for the introduction of aquatic animal pathogens into an aquatic environment. No specific studies were identified investigating the potential pathway for shelf-stable products or dried prawns to access exposure groups of concern.

– Two national surveys of Australian recreational fishermen (Kewagama reports, 2002 and 2007) investigated the use of uncooked aquatic animals (or parts thereof) as bait or berley. ‘Uncooked’ products investigated in the survey included dried or salted preparations, but neither survey identified such products for human consumption as being used by recreational fishers.

• Several online fishing forums indicate that dried prawns are considered unsuitable for bait. Ornamental fish keepers do report feeding dried shrimp to aquarium fish. Prawns are bottom feeders and while commercial feeds are specifically designed to sink, dried prawns for human consumption do not, so are considered unsuitable for crustacean feed. Furthermore, were they to be used in the aquatic environment, their propensity to float means they would be very unlikely to be targeted by and exposed to susceptible species.

• Dried and shelf-stable prawns present a lower biosecurity risk compared with uncooked fresh or frozen prawns, regardless of how shelf-stability has been achieved (likelihood of entry). The longevity of such products enables their storage for periods in excess of those explored in the infectivity studies outlined above. If viable virus is present in dried prawns, its ability to persist for the shelf life of the product is unknown. Any viable virus that remains is considered unlikely to enter exposure pathways.

• Because exposure of susceptible species in Australia through dried prawns and shelf‑stable prawn-based food products is unlikely, the biosecurity risk posed by WSSV associated with these products meets Australia’s ALOP.

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Schedule 4—Reasons—bait for aquatic use, pet fish food and aquaculture feed

This Schedule sets out the statement of reasons for exempting uncooked prawns or uncooked prawn meat processed into bait for aquatic use, pet fish food or aquaculture feed. The reasons are as follows:

Summary

• Imported bait for aquatic use, pet fish food and aquaculture feed products, containing uncooked prawns and uncooked prawn meat, are subject to physical treatments that eliminate, or considerably reduce, the prevalence of viable WSSV.

• Many products are irradiated on-arrival with a 50kGy dose of gamma radiation at an approved irradiation facility.

• The current dose of radiation administered to these products is considerably higher than the dose required to inactivate WSSV.

• Irradiation significantly reduces the likelihood of entry of WSSV in imported bait for aquatic use, pet fish food and aquaculture feed, containing uncooked prawns and uncooked prawn meat. Therefore, the level of risk associated with these goods falls within Australia’s ALOP.

Bait for aquatic use, pet fish food and aquaculture feed

Prior to the *Biosecurity (Suspended Goods – Uncooked Prawns) Determination 2017*, Australia imported bait for aquatic use, pet fish food and aquaculture feed, containing uncooked prawns and uncooked prawn meat. This included whole or partial prawns, and processed prawn products such as extruded pellets and flakes.

Bait and feed composition and potential for WSSV infection

• Prawns are not commonly included as pet fish or aquaculture feed ingredients. However, uncooked prawn meat can be imported for bait for aquatic use.

• Bait for aquatic use, pet fish food and aquaculture feed, containing uncooked prawns and uncooked prawn meat, are considered susceptible to WSSV.

– Uncooked prawns and uncooked prawn meat for pet fish food and aquaculture feed may be prepared by freezing with a small amount of fresh or salt water. Freezing is not known to be effective in mitigating WSSV. Sufficient viable virus remains in frozen prawns to infect and cause mortalities in exposed *Penaeus vannamei* (Hasson et al. (2006) and Durand et al. (2000)).

• Extruded pellets and flakes for pet fish food and aquaculture feed are subject to intense heat as part of their production processes. These temperatures are well above what is required to inactivate WSSV (AQUAVETPLAN, Whitespot Disease strategy, P41). As such, these feeds do not pose a risk of introducing WSSV and would fall within Australia’s ALOP.

Note: In 2017, the AQUAVETPLAN Whitespot Disease strategy could be viewed on http://www.agriculture.gov.au/SiteCollectionDocuments/animal-plant/aquatic/aquavetplan/white-spot.pdf.

Irradiation treatment of bait for aquatic use, pet fish food and aquaculture feed

• The Department’s 2014 gamma irradiation policy review identified gamma irradiation as an effective method of treatment for imported products that are not heat treated and not intended for human consumption.

• The import policy for bait for aquatic use, pet fish food and aquaculture feed products, containing uncooked prawns and uncooked prawn meat, requires gamma irradiation to a level of 50kGy at an on-shore facility approved by the Department. This is a requirement even for product that has been irradiated prior to export at an overseas facility.

– On arrival irradiation at 50kGy is suitable in meeting Australia’s ALOP for a wide range of animal biosecurity concerns. It is well above the necessary dose to mitigate risk of WSSV.

– The D10 value (the dose required to inactivate 90 per cent of relevant organisms) for WSSV is between 1.85 and 2.56kGy. Motamedi-Sedeh et al. (2015) and (2017) recommended a radiation dose of 13-15kGy to ensure that the vast majority of viral bodies are inactivated.

• On-shore Class 4.2 facilities approved for gamma irradiation treatment of imported goods by the department are located in New South Wales, Queensland, Victoria, and Western Australia. These facilities operate under an Approved Arrangement and the goods are considered to be under biosecurity control until they have been treated. Auditing is regularly performed at each of the facilities to ensure that there are current standard operating procedures for the calibration and maintenance of instruments and equipment. Auditing also includes verifying that all equipment associated with the irradiation of goods is fitted with a measuring device (e.g. a dosimeter) which can record the level of irradiation applied to a product and the storage of goods subject to quarantine is appropriate.

• Irradiation significantly reduces the likelihood of entry of WSSV in imported bait for aquatic use, pet fish food and aquaculture feed, containing uncooked prawns and uncooked prawn meat. Therefore, the level of risk associated with these goods falls within Australia’s ALOP.

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