# Appendix B: Risk species lists and recommended updates

## List B1 Current high-risk species list (specified species) – may only be imported head-off, de-gilled and eviscerated (gutted) when sourced from any country other than New Zealand

* All species of farmed finfish (fish that are grown and harvested in an aquaculture system)
* All species in the Family *Aulorhynchidae*
* All species in the Family *Embiotocidae*
* All species in the Family *Gadidae*
* All species in the Family *Gasterosteidae*
* All species in the Family *Lotidae*
* All species in the Family *Osmeridae*
* All species in the Family *Pleuronectidae*
* All species in the Family *Scophthalmidae*
* *Ambloplites* spp.
* *Ameiurus* spp.
* *Ammodytes* spp.
* *Anguilla* spp.
* *Anoplopoma* spp.
* *Apolodinotus* spp.
* *Argentina* spp.
* *Brevoortia* spp.
* *Clupea* spp. (includes herring and sprat; *Sprattus* spp. is synonymous with *Clupea* spp.; excludes *Sardinella* spp. and *Sardina*

spp.)

* *Dorosoma* spp.
* *Esox* spp.
* *Fundulus* spp.
* *Ictalurus* spp.
* *Lepomis* spp.
* *Merluccius* spp.
* *Micropterus* spp.
* *Morone* spp.
* *Moxostoma* spp.
* *Neogobius* spp.
* *Notropis* spp.
* *Paralichthys* spp.
* *Perca* spp.
* *Percopsis* spp.
* *Pimephales* spp.
* *Pomatoschistus* spp.
* *Pomoxis* spp.
* *Sander* spp.
* *Sardinops* spp.
* *Scomber* spp.
* *Sebastes* spp.
* *Stizostedion* spp.
* *Trichiurus* spp.

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## Table B1 Proposed update to the high-risk species list (specified species)

|  |  |  |  |
| --- | --- | --- | --- |
| **Genus** | **Action** | **Pathogen** | **Reference** |
| *Acanthopagrus* spp. | Add | VHSV | Isshiki, Nagano & Miyazaki (2003) |
| *Alosa* spp. | Add | VHSV | Ogut & Altuntas (2014) |
| *Anarhichas* spp. | Add | IPNV | Sommer et al. (2004) |
| *Belone* spp. | Add | VHSV | Ogut & Altuntas (2014) |
| *Centrolabrus* spp. | Add | VHSV | Munro et al. (2015) |
| *Ctenolabrus* spp. | Add | VHSV | Munro et al. (2015) |
| *Cyclopterus* spp. | Add | VHSV | Guðmundsdóttir et al. (2019) |
| *Dicentrarchus* spp. | Add | VHSV | OIE (2019) |
| *Engraulis* spp. | Add | VHSV | Ogut & Altuntas (2014) |
| *Epinephelus* spp. | Add | VHSV | Isshiki, Nagano & Miyazaki (2003) |
| *Eutrigla* spp. | Add | VHSV | Wallace et al. (2015) |
| *Labrus* spp. | Add | VHSV | Munro et al. (2015) |
| *Lampetra* spp. | Add | VHSV | OIE (2019) |
| *Mullus* spp. | Add | VHSV | Ogut & Altuntas (2014) |
| *Sardina* spp. | Add | VHSV | Ogut & Altuntas (2014) |
| *Scorpaena* spp. | Add | VHSV | Ogut & Altuntas (2014) |
| *Sparus* spp. | Add | VHSV | European Food Safety Authority (2008) |
| *Solea* spp. | Add | VHSV | European Food Safety Authority (2008) |
| *Symphodus* spp. | Add | VHSV | Munro et al. (2015) |
| *Trachurus* spp. | Add | VHSV | Ogut & Altuntas (2014) |

**IPNV** Infectious pancreatic necrosis virus. **VHSV** Viral haemorrhagic septicaemia virus.

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## List B2 Current medium-risk species list (approved specified species) – must be at least de-gilled and eviscerated (gutted) prior to importation when sourced from any country in, or island surrounding, Asia (including Japan)

* *Epinephelus* spp.
* *Evynnis* spp.
* *Lateolabrax* spp.
* *Lates calcarifer*
* *Lethrinus* spp.
* *Oplegnathus* spp.
* *Pagrus* spp.
* *Parapristipoma* spp.
* *Pseudocaranx* spp.
* *Seriola* spp.
* *Stephanolepi*s spp.
* *Takifugu* spp.
* *Thunnus* spp.

## Table B2 Proposed update to the medium-risk species list (approved specified species)

**Genus or species Action Pathogen Reference**

*Epinephelus* spp Move to high-risk list VHSV Isshiki, Nagano & Miyazaki (2003)

*Girella* spp. Add A causative agent of

RSIVD

*Larimichthys* spp. Add A causative agent of

RSIVD

*Lates calcarifer* Replace with genus A causative agent of

RSIVD

*Oxyeleotris* spp. Add A causative agent of

RSIVD

*Plectorhinchus* spp. Add A causative agent of

RSIVD

*Rachycentron* spp. Add A causative agent of

RSIVD

*Scomberomorus* spp. Add A causative agent of

RSIVD

*Trachinotus* spp. Add A causative agent of

RSIVD

OIE (2019)

OIE (2019) Listed as *Pseudosciaena crocea*

OIE (2019)

Ming-Hui et al. (2013)

OIE (2019)

OIE (2019)

OIE (2019)

OIE (2019)

**VHSV** Viral haemorrhagic septicaemia virus. **RSIVD** Red sea bream iridoviral disease.

Note: A causative agent of RSIVD is defined here as either red sea bream iridovirus (RSIV) or infectious spleen and kidney necrosis

virus (ISKNV) (OIE 2019).

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## List B3 Medium-risk species list (approved specified species) – must be eviscerated (gutted) prior to importation when sourced from all countries other than New Zealand

* *Acanthopagrus* spp. (former name *Mylio* spp.)
* *Dicentrarchus* spp.
* *Mugil* spp.
* *Solea* spp.
* *Sparus* spp.
* *Trachinotus* spp.
* *Thamnaconus* spp. (former name *Navodon* spp.)

**Table B3 Proposed updates to the medium-risk species list (approved specified species)**

**Genus Action Pathogen Reference**

*Acanthopagrus* spp. Move to high-risk species list VHSV Isshiki, Nagano & Miyazaki

(2003)

*Dicentrarchus* spp. Move to high-risk species list VHSV OIE (2019)

*Mugil* spp. Remove as the biosecurity risk *Photobacterium damselae* (Kahn et al. 1999)

only needs to be managed for subsp. *piscicida*baitfish

*Solea* spp. Move to high-risk species list VHSV European Food Safety

Authority (2008)

*Sparus* spp. Move to high-risk species list VHSV European Food Safety

Authority (2008)

|  |  |  |
| --- | --- | --- |
| *Trachinotus* spp. Remove as the biosecurity riskonly needs to be managed for baitfish*Thamnaconus* spp. Remove as the biosecurity riskonly needs to be managed for baitfish | *Photobacterium damselae* subsp. *piscicida**Photobacterium damselae* subsp. *piscicida* | (Kahn et al. 1999)(Kahn et al. 1999) |

**VHSV** Viral haemorrhagic septicaemia virus.

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**Table B4 Current 'Specified bony fish species other than from the family Salmonidae and genus Plecoglossus' or 'baitfish list' – cannot be imported whole for use as baitfish**

**Source country Family or genus**

When sourced from all countries other than New Zealand All species of farmed bony fish (fish that are grown and harvested in an

aquaculture system)

All species in the Family *Aulorhynchidae*

All species in the Family *Embiotocidae*

All species in the Family *Gadidae*

All species in the Family *Gasterosteidae*

All species in the Family *Lotidae*

All species in the Family *Osmeridae*

All species in the Family *Pleuronectidae*

All species in the Family *Scophthalmidae*

*Acanthopagrus* spp. (former name *Mylio* spp.)

*Ambloplites* spp.

*Ameiurus* spp.

*Ammodytes* spp.

*Anguilla* spp.

*Anoplopoma* spp.

*Aplodinotus* spp.

*Argentina* spp.

*Brevoortia*s spp.

*Clupea* spp. Includes herring and sprat (*Sprattus* spp. is synonymous

with *Clupea* spp*.*) but does not include *Sardinella* spp. or *Sardina* spp.

*Dicentrarchus* spp.

*Dorosoma* spp.

*Esox* spp.

*Eutrigla* spp.

*Fundulus* spp.

*Ictalurus* spp.

*Lampetra* spp.

*Lepomis* spp.

*Merluccius* spp.

*Micropterus* spp.

*Morone* spp.

*Moxostoma* spp.

*Mugil* spp.

*Neogobius* spp.

*Notropis* spp.

*Paralichthys* spp.

*Perca* spp.

*Percopsis* spp.

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**Source country Family or genus**

*Pimephales* spp.

*Pomatoschistus* spp.

*Pomoxis* spp.

*Sander* spp. (former name *Stizostedion* spp.)

*Sardinops* spp.

*Scomber* spp.

*Sebastes* spp.

*Solea* spp.

*Sparus* spp.

*Thamnaconus* spp. (former name *Navodon* spp.)

*Trachinotus* spp.

*Trichiurus* spp.

|  |  |
| --- | --- |
| When sourced from all countries in, and islands surrounding, Asia | *Epinephelus* spp. *Evynnis* spp. *Lateolabrax* spp. *Oplegnathus* spp. *Pagrus* spp. *Pseudocaranx* spp. *Seriola* spp. *Takifugu* spp. *Thunnus* spp. |

When sourced from Japan *Parapristipoma* spp.

*Stephanolepis* spp.

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**Table B5.Proposed updates to the 'Specified bony fish species other than from the family Salmonidae and genus Plecoglossu*s*' or 'baitfish list'**

**Source country Genus Action Pathogen Reference**

|  |  |
| --- | --- |
| When sourced from all countries other than New Zealand | *Alosa* spp. Add VHSV Ogut & Altuntas (2014)*Anarhichas* spp. Add IPNV Sommer et al. (2004)*Belone* spp. Add VHSV Ogut & Altuntas (2014)*Centrolabrus* spp. Add VHSV Munro et al. (2015)*Ctenolabrus* spp. Add VHSV Munro et al. (2015)*Cyclopterus* spp. Add VHSV Guðmundsdóttir et al. (2019)*Engraulis* spp. Add VHSV Ogut & Altuntas (2014)*Epinephelus* spp. Add VHSV Isshiki, Nagano & Miyazaki (2003)*Labrus* spp. Add VHSV Munro et al. (2015) |

|  |  |
| --- | --- |
| *Lates* spp. Add A causative agent ofRSIVD and *Photobacterium damselae* subsp. *piscicida* | OIE (2019); Pham et al. (2020) |

*Mullus* spp. Add VHSV Ogut & Altuntas (2014)

|  |  |
| --- | --- |
| *Pagellus* spp. Add *Photobacterium**damselae* subsp. *piscicida**Rachycentron* spp. Add A causative agent ofRSIVD and *Photobacterium damselae* subsp. *piscicida* | Yiagnisis & Athanasopoulou (2011)OIE (2019); Pham et al. (2020) |

*Sardina* spp. Add VHSV Ogut & Altuntas (2014)

*Scorpaena* spp. Add VHSV Ogut & Altuntas (2014)

*Symphodus* spp. Add VHSV Munro et al. (2015)

*Trachurus* spp. Add VHSV Ogut & Altuntas (2014)

*Thunnus* spp. Add *Photobacterium* Mladineo, Miletić & Bočina

*damselae* subsp. (2006) *piscicida*

|  |  |  |
| --- | --- | --- |
| Sourced from all countries in, and islands surrounding Asia | *Epinephelus* spp. Remove and add to baitfish list 'When sourced from all countries other than New Zealand' | VHSV Isshiki, Nagano & Miyazaki (2003) |

|  |  |
| --- | --- |
| *Girella* spp. Add A causative agent ofRSIVD*Larimichthys* spp. Add A causative agent ofRSIVD*Lethrinus* spp. Add A causative agent ofRSIVD*Oxyeleotris* spp. Add A causative agent ofRSIVD*Parapristipoma* spp. Add A causative agent ofRSIVDDepartment of Agriculture, Water and the Environment7 | OIE (2019)OIE (2019) Listed as *Pseudosciaena crocea*OIE (2019)Ming-Hui et al. (2013)Kahn et al. (1999) |

**Source country Genus Action Pathogen Reference**

|  |  |
| --- | --- |
| *Plectorhinchus* spp. Add A causative agent ofRSIVD*Stephanolepis* spp. Add A causative agent ofRSIVD*Scomberomorus* spp. Add A causative agent ofRSIVD | OIE (2019)Kahn et al. (1999)OIE (2019) |

|  |  |  |
| --- | --- | --- |
| *Thunnus* spp. Remove and add to baitfish list 'When sourced from all countries other than New Zealand' | *Photobacterium damselae* subsp*. piscicida* | Mladineo, Miletić & Bočina (2006) |

|  |  |  |
| --- | --- | --- |
| When sourced from Japan *Parapristipoma* spp. Remove andadd to baitfish list 'when sourced from all countries in, and islands surrounding Asia'*Stephanolepis* spp. Remove and add to baitfish list 'when sourced from all countries in, and islands surrounding Asia' | A causative agent of RSIVDA causative agent of RSIVD | Kahn et al. (1999)Kahn et al. (1999) |

**VHSV** Viral haemorrhagic septicaemia virus. **IPNV** Infectious pancreatic necrosis virus. **RSIVD** Red sea bream iridoviral disease. Note: A causative agent of RSIVD is defined here as either red sea bream iridovirus (RSIV) or infectious spleen and kidney necrosis virus (ISKNV) (OIE 2019).

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**Table B6 Changes that have already been made**

**Genus or species Action Pathogen Reference**

|  |  |
| --- | --- |
| *Lethrinus* spp. Added to medium-risk species list 'when sourced from all countries in, and islands surrounding Asia'*Lates calcarifer* Added to medium-risk species list 'when sourced from all countries in, and islands surrounding Asia' | A causative agent of RSIVD OIE (2019)A causative agent of RSIVD OIE (2019) |

*Scomber* spp. Recognised as susceptible A causative agent of RSIVD OIE (2019)

**RSIVD** Red sea bream iridoviral disease.

Note: A causative agent of RSIVD is defined here as either red sea bream iridovirus (RSIV) or infectious spleen and kidney necrosis virus (ISKNV) (OIE 2019). Recognising *Scomber* spp. as susceptible to a causative agent of RSIVD impacts baitfish imports. This is withstanding the fact that the recognition doesn't require any change to a risk species list, as the genus already appears on the high-risk species list (specified species) and the baitfish list as susceptible to VHSV.

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