

## 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.
- *Apododinus* 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.

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

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

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

**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.
- *Stephanolepis* spp.
- *Takifugu* spp.
- *Thunnus* spp.

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

Genus or species	Action	Pathogen	Reference
<i>Epinephelus</i> spp	Move to high-risk list	VHSV	Isshiki, Nagano & Miyazaki (2003)
<i>Girella</i> spp.	Add	A causative agent of RSIVD	OIE (2019)
<i>Larimichthys</i> spp.	Add	A causative agent of RSIVD	OIE (2019) Listed as <i>Pseudosciaena crocea</i>
<i>Lates calcarifer</i>	Replace with genus	A causative agent of RSIVD	OIE (2019)
<i>Oxyeleotris</i> spp.	Add	A causative agent of RSIVD	Ming-Hui et al. (2013)
<i>Plectorhinchus</i> spp.	Add	A causative agent of RSIVD	OIE (2019)
<i>Rachycentron</i> spp.	Add	A causative agent of RSIVD	OIE (2019)
<i>Scomberomorus</i> spp.	Add	A causative agent of RSIVD	OIE (2019)
<i>Trachinotus</i> spp.	Add	A causative agent of RSIVD	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).

**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
<i>Acanthopagrus</i> spp.	Move to high-risk species list	VHSV	Isshiki, Nagano & Miyazaki (2003)
<i>Dicentrarchus</i> spp.	Move to high-risk species list	VHSV	OIE (2019)
<i>Mugil</i> spp.	Remove as the biosecurity risk only needs to be managed for baitfish	<i>Photobacterium damsela</i> subsp. <i>piscicida</i>	(Kahn et al. 1999)
<i>Solea</i> spp.	Move to high-risk species list	VHSV	European Food Safety Authority (2008)
<i>Sparus</i> spp.	Move to high-risk species list	VHSV	European Food Safety Authority (2008)
<i>Trachinotus</i> spp.	Remove as the biosecurity risk only needs to be managed for baitfish	<i>Photobacterium damsela</i> subsp. <i>piscicida</i>	(Kahn et al. 1999)
<i>Thamnaconus</i> spp.	Remove as the biosecurity risk only needs to be managed for baitfish	<i>Photobacterium damsela</i> subsp. <i>piscicida</i>	(Kahn et al. 1999)

**VHSV** Viral haemorrhagic septicaemia virus.

**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	<p>All species of farmed bony fish (fish that are grown and harvested in an aquaculture system)</p> <p>All species in the Family <i>Aulorhynchidae</i></p> <p>All species in the Family <i>Embiotocidae</i></p> <p>All species in the Family <i>Gadidae</i></p> <p>All species in the Family <i>Gasterosteidae</i></p> <p>All species in the Family <i>Lotidae</i></p> <p>All species in the Family <i>Osmeridae</i></p> <p>All species in the Family <i>Pleuronectidae</i></p> <p>All species in the Family <i>Scophthalmidae</i></p> <p><i>Acanthopagrus</i> spp. (former name <i>Mylio</i> spp.)</p> <p><i>Ambloplites</i> spp.</p> <p><i>Ameiurus</i> spp.</p> <p><i>Ammodytes</i> spp.</p> <p><i>Anguilla</i> spp.</p> <p><i>Anoplopoma</i> spp.</p> <p><i>Aploidinotus</i> spp.</p> <p><i>Argentina</i> spp.</p> <p><i>Brevoortias</i> spp.</p> <p><i>Clupea</i> spp. Includes herring and sprat (<i>Sprattus</i> spp. is synonymous with <i>Clupea</i> spp.) but does not include <i>Sardinella</i> spp. or <i>Sardina</i> spp.</p> <p><i>Dicentrarchus</i> spp.</p> <p><i>Dorosoma</i> spp.</p> <p><i>Esox</i> spp.</p> <p><i>Eutrigla</i> spp.</p> <p><i>Fundulus</i> spp.</p> <p><i>Ictalurus</i> spp.</p> <p><i>Lampetra</i> spp.</p> <p><i>Lepomis</i> spp.</p> <p><i>Merluccius</i> spp.</p> <p><i>Micropterus</i> spp.</p> <p><i>Morone</i> spp.</p> <p><i>Moxostoma</i> spp.</p> <p><i>Mugil</i> spp.</p> <p><i>Neogobius</i> spp.</p> <p><i>Notropis</i> spp.</p> <p><i>Paralichthys</i> spp.</p> <p><i>Perca</i> spp.</p> <p><i>Percopsis</i> spp.</p>

Source country	Family or genus
	<i>Pimephales</i> spp.
	<i>Pomatoschistus</i> spp.
	<i>Pomoxis</i> spp.
	<i>Sander</i> spp. (former name <i>Stizostedion</i> spp.)
	<i>Sardinops</i> spp.
	<i>Scomber</i> spp.
	<i>Sebastes</i> spp.
	<i>Solea</i> spp.
	<i>Sparus</i> spp.
	<i>Thamnaconus</i> spp. (former name <i>Navodon</i> spp.)
	<i>Trachinotus</i> spp.
	<i>Trichiurus</i> spp.
When sourced from all countries in, and islands surrounding, Asia	<i>Epinephelus</i> spp.
	<i>Evynnis</i> spp.
	<i>Lateolabrax</i> spp.
	<i>Oplegnathus</i> spp.
	<i>Pagrus</i> spp.
	<i>Pseudocaranx</i> spp.
	<i>Seriola</i> spp.
	<i>Takifugu</i> spp.
	<i>Thunnus</i> spp.
When sourced from Japan	<i>Parapristipoma</i> spp.
	<i>Stephanolepis</i> spp.

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

Source country	Genus	Action	Pathogen	Reference
When sourced from all countries other than New Zealand	<i>Alosa</i> spp.	Add	VHSV	Ogut & Altuntas (2014)
	<i>Anarhichas</i> spp.	Add	IPNV	Sommer et al. (2004)
	<i>Belone</i> spp.	Add	VHSV	Ogut & Altuntas (2014)
	<i>Centrolabrus</i> spp.	Add	VHSV	Munro et al. (2015)
	<i>Ctenolabrus</i> spp.	Add	VHSV	Munro et al. (2015)
	<i>Cyclopterus</i> spp.	Add	VHSV	Guðmundsdóttir et al. (2019)
	<i>Engraulis</i> spp.	Add	VHSV	Ogut & Altuntas (2014)
	<i>Epinephelus</i> spp.	Add	VHSV	Isshiki, Nagano & Miyazaki (2003)
	<i>Labrus</i> spp.	Add	VHSV	Munro et al. (2015)
	<i>Lates</i> spp.	Add	A causative agent of RSIVD and <i>Photobacterium damselae</i> subsp. <i>piscicida</i>	OIE (2019); Pham et al. (2020)
	<i>Mullus</i> spp.	Add	VHSV	Ogut & Altuntas (2014)
	<i>Pagellus</i> spp.	Add	<i>Photobacterium damselae</i> subsp. <i>piscicida</i>	Yiagnis & Athanasopoulou (2011)
	<i>Rachycentron</i> spp.	Add	A causative agent of RSIVD and <i>Photobacterium damselae</i> subsp. <i>piscicida</i>	OIE (2019); Pham et al. (2020)
	<i>Sardina</i> spp.	Add	VHSV	Ogut & Altuntas (2014)
	<i>Scorpaena</i> spp.	Add	VHSV	Ogut & Altuntas (2014)
	<i>Symphodus</i> spp.	Add	VHSV	Munro et al. (2015)
	<i>Trachurus</i> spp.	Add	VHSV	Ogut & Altuntas (2014)
	<i>Thunnus</i> spp.	Add	<i>Photobacterium damselae</i> subsp. <i>piscicida</i>	Mladineo, Miletić & Bočina (2006)
Sourced from all countries in, and islands surrounding Asia	<i>Epinephelus</i> spp.	Remove and add to baitfish list 'When sourced from all countries other than New Zealand'	VHSV	Isshiki, Nagano & Miyazaki (2003)
	<i>Girella</i> spp.	Add	A causative agent of RSIVD	OIE (2019)
	<i>Larimichthys</i> spp.	Add	A causative agent of RSIVD	OIE (2019) Listed as <i>Pseudosciaena crocea</i>
	<i>Lethrinus</i> spp.	Add	A causative agent of RSIVD	OIE (2019)
	<i>Oxyeleotris</i> spp.	Add	A causative agent of RSIVD	Ming-Hui et al. (2013)
	<i>Parapristipoma</i> spp.	Add	A causative agent of RSIVD	Kahn et al. (1999)

Source country	Genus	Action	Pathogen	Reference
	<i>Plectorhinchus</i> spp.	Add	A causative agent of RSIVD	OIE (2019)
	<i>Stephanolepis</i> spp.	Add	A causative agent of RSIVD	Kahn et al. (1999)
	<i>Scomberomorus</i> spp.	Add	A causative agent of RSIVD	OIE (2019)
	<i>Thunnus</i> spp.	Remove and add to baitfish list 'When sourced from all countries other than New Zealand'	<i>Photobacterium damselae</i> subsp. <i>piscicida</i>	Mladineo, Miletic & Bočina (2006)
When sourced from Japan	<i>Parapristipoma</i> spp.	Remove and add to baitfish list 'when sourced from all countries in, and islands surrounding Asia'	A causative agent of RSIVD	Kahn et al. (1999)
	<i>Stephanolepis</i> spp.	Remove and add to baitfish list 'when sourced from all countries in, and islands surrounding Asia'	A causative agent of RSIVD	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).



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

Genus or species	Action	Pathogen	Reference
<i>Lethrinus</i> spp.	Added to medium-risk species list 'when sourced from all countries in, and islands surrounding Asia'	A causative agent of RSIVD	OIE (2019)
<i>Lates calcarifer</i>	Added to medium-risk species list 'when sourced from all countries in, and islands surrounding Asia'	A causative agent of RSIVD	OIE (2019)
<i>Scomber</i> 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.

## References

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