

Appendix 1a: List of non-native ornamental freshwater fish species (referred to as 'risky' species in text) with native range matches climate of recipient region following the Köppen-Geiger climate classification (Beck et al., 2018). Asterisk denotes potential hybridisation and/or species complex.

Species name	Species native range K-G climate classes	Australia	Belgium (Flanders)	Canada (British Columbia)	China (Guangdong)	Philippines	Poland	Singapore	United Kingdom (England)	United States of America (Florida)	References
<i>Abramites hypselonotus</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018 Froese and Pauly, 2018; Ng and Tan, 2010 Witkowski and Grabowska, 2012
<i>Acarichthys heckelii</i>	A							✓			
<i>Acipenser baerii</i>	D, E						✓				
<i>Acipenser gueldenstaedtii</i>	B, C, D		✓				✓		✓		Witkowski and Grabowska, 2012; Britton et al., 2016; Verreycken et al. 2018; Carp Company, 2019
<i>Acipenser ruthenus</i>	B, C, D		✓				✓		✓		Copp et al., 2010; Witkowski and Grabowska, 2012; Britton et al., 2016; Verreycken et al. 2018; Carp Company, 2019
<i>Acipenser stellatus</i>	B, C, D								✓		
<i>Alestopetersius caudalis</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Amatitlania nigrofasciata</i>	A, C					✓				✓	Guerrero, 2014; Tuckett et al., 2017; Hill and Tuckett, 2018; USGS, 2018
<i>Ambassis ambassis</i>	A, B, C	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Ambassis buruensis</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Ambassis elongata</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Ambassis gymnocephalus</i>	A, B, C	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Ambassis interrupta</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Ambassis kopsii</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Ambassis macleayi</i>	A, B, C	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Ambassis nalu</i>	A, B, C, D	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Ambastia sidhimunki</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Ameiurus catus</i>	C, D								✓		Britton and Davies, 2006
<i>Ameiurus melas</i>	B, C, D								✓		Copp et al., 2016
<i>Amphilophus citrinellus</i>	A							✓		✓	Froese and Pauly, 2018; Ng and Tan, 2010
<i>Anabas testudineus</i>	A					✓					Guerrero, 2014

<i>Andinoacara pulcher</i>	A, C	✓				✓	Department of the Environment, 2014; Froese and Pauly, 2018; USGS, 2018
<i>Anostomus anostomus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Aphyocharax anisitsi</i>	A, C		✓			✓	Gertzen et al., 2008; DFO, 2018; Froese and Pauly, 2018; USGS, 2018
<i>Aphyocharax pusillus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Aphyosemion bivittatum</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Apistogramma agassizii</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Aplocheilichthys panchax</i>	A, B, C	✓			✓		Department of the Environment, 2014; Guerrero, 2014; Froese and Pauly, 2018
<i>Apteronotus albifrons</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Apteronotus leptorhynchus</i>	A, C	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Arapaima gigas</i>	A				✓		Guerrero, 2014
<i>Arnoldichthys spilopterus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Astatotilapia calliptera</i>	A, C					✓	USGS, 2018
<i>Astronotus ocellatus</i>	A, C	✓		✓		✓	Ng and Tan, 2010; Hu et al., 2013; Department of the Environment, 2014; Froese and Pauly, 2018; USGS, 2018
<i>Atractosteus spatula</i>	A, C			✓			Hu et al., 2015
<i>Aulonocara nyassae</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Bagrichthys hypselopterus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Balantiocheilos melanopterus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Barbodes everetti</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Barbodes lateristriga</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Barbodes semifasciolatus</i>	A, C	✓				✓	Ng and Tan, 2010; Department of the Environment, 2014; Froese and Pauly, 2018
<i>Barbonymus gonionotus</i>	A, C				✓		Guerrero, 2014; USGS, 2018
<i>Barbonymus schwanenfeldii</i>	A, C		✓			✓	Ng and Tan, 2010; Froese and Pauly, 2018; USGS, 2018

Baryancistrus xanthellus	A, B, C				v					We i Luo, 2018 Department of the Environment, 2014; Froese and Pauly, 2018 Lawson et al., 2017; USGS, 2018
Bedotia geayi	A	v								
Belonesox belizanus	A, B								v	Department of the Environment, 2014; Froese and Pauly, 2018
Benthochromis tricoti	A	v								
Betta imbellis	A							v		Ng and Tan, 2010; Froese and Pauly, 2018
Betta splendens	A	v						v	v	Ng and Tan, 2010; Froese and Pauly, 2018; USGS, 2018
Boehlkea fredcochui	A	v								Department of the Environment, 2014; Froese and Pauly, 2018
Boraras maculatus	A	v								Department of the Environment, 2014; Froese and Pauly, 2018
Botia lohachata	A, B, C	v								Department of the Environment, 2014; Froese and Pauly, 2018
Brachygobius doriae	A	v								Department of the Environment, 2014; Froese and Pauly, 2018
Brachygobius sabanus	A							v		Ng and Tan, 2010; Froese and Pauly, 2018
Brevibora dorsiocellata	A	v								Department of the Environment, 2014; Froese and Pauly, 2018
Brycinus longipinnis	A	v								Department of the Environment, 2014; Froese and Pauly, 2018
Callichthys callichthys	A, C								v	USGS, 2018
Campylomormyrus cassaicus	A	v								Department of the Environment, 2014; Froese and Pauly, 2018
Campylomormyrus rhynchophorus	A	v								Department of the Environment, 2014; Froese and Pauly, 2018
Carassius auratus	B, C, D	v	v	v	v			v	v	Taylor, 2004; Verreycken et al., 2007; Witkowski and Grabowska, 2012; Hu et al., 2013; Copp, et al., 2015; Rixon et al., 2015; Froese and Pauly, 2018; USGS, 2018
Carnegiella strigata	A	v								Department of the Environment, 2014; Froese and Pauly, 2018
Chalinochromis brichardi	A	v								Department of the Environment, 2014; Froese and Pauly, 2018
Chanda nama	A, C	v								Department of the Environment, 2014; Froese and Pauly, 2018
Channa micropeltes	A							v		Ng and Tan, 2010; Guerrero 2014; Froese and Pauly, 2018
Characidium laterale	A	v								Department of the Environment, 2014; Froese and Pauly, 2018

<i>Chilodus punctatus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Chilotilapia rhoadesii</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Chitala chitala</i>	A, B, C		✓	✓			Hu et al., 2013; Guerrero, 2014
<i>Chitala ornata</i>	A			✓	✓	✓	Ng and Tan, 2010; Guerrero, 2014; Froese and Pauly, 2018; USGS, 2018
<i>Chromobotia macracanthus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Chrosomus neogaeus</i>	C, D		✓				Scott and Crossman, 1973; Mandrak et al. 2014; Ministry of Environment and Climate Change Strategy, 2017; Froese and Pauly, 2018
<i>Cichla ocellaris</i>	A			✓			Guerrero, 2014
<i>Cichla orinocensis</i>	A				✓		Ng and Tan, 2010; Froese and Pauly, 2018
<i>Cichla temensis</i>	A				✓		Liew et al., 2012; Froese and Pauly, 2018
<i>Cichlasoma bimaculatum</i>	A					✓	USGS, 2018
<i>Cichlasoma urophthalmum</i>	A				✓		Ng and Tan, 2010
<i>Clarias batrachus</i> *	A, C			✓		✓	Guerrero, 2014; USGS, 2018
<i>Clarias gariepinus</i>	A, B				✓		Ng and Tan, 2010; Froese and Pauly, 2018
<i>Cleithracara maronii</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Cobitis taenia</i>	B, C, D		✓				Mandrak et al., 2014; Froese and Pauly, 2018
<i>Colossoma macropomum</i>	A					✓	USGS, 2018
<i>Copeina guttata</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Copella arnoldi</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Coptodon zillii</i>	A, B, C					✓	USGS, 2018
<i>Corydoras aeneus</i> *	A, C		✓			✓	DFO, 2018; Froese and Pauly, 2018; USGS, 2018
<i>Corydoras geoffroy</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Corydoras paleatus</i>	C, E		✓				DFO, 2018; Froese and Pauly, 2018
<i>Corydoras splendens</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Corynopoma riisei</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Crossocheilus oblongus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Ctenopharyngodon idella</i>	C, D					✓	Copp et al., 2010; Carp Company, 2019

<i>Cyathopharynx furcifer</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Cyphotilapia frontosa</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Cyprichromis leptosoma</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Cyprinella lutrensis</i>	B, C, D			✓				✓			Mandrak et al., 2014; Froese and Pauly, 2018
<i>Cyprinus carpio</i>	B, C, D		✓	✓	✓		✓		✓	✓	Taylor, 2004; Copp et al., 2007; Verreycken et al., 2007; Witkowski and Grabowska, 2012; Hu et al., 2013; Rixon et al., 2015; USGS, 2018
<i>Cyrtocara moorii</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Danio albolineatus</i>	A, C	✓						✓			Ng and Tan, 2010; Froese and Pauly, 2018
<i>Danio kerri</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Danio nigrofasciatus</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Danio rerio</i>	A, B, C	✓			✓	✓				✓	Hu et al., 2013; Guerrero, 2014; Tuckett et al., 2017; Froese and Pauly, 2018;
<i>Danio roseus</i>	A, C									✓	USGS, 2018
<i>Dasylicarica filamentosa</i>	A	✓									Tuckett et al., 2017
<i>Dawkinsia arulius</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Dawkinsia filamentosa</i>	A, B, C	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Dekeyseria pulchra</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Dermogenys pusilla</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Desmopuntius hexazona</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Desmopuntius pentazona</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Devatio aequipinnatus</i>	A, C									✓	Tuckett et al., 2017; Hill and Tuckett, 2018
<i>Devatio devatio</i>	A, C	✓									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Devatio malabaricus</i>	A	✓								✓	Froese and Pauly, 2018; USGS, 2018
<i>Dianema urostriatum</i>	A	✓									Department of the Environment, 2014; Froese and Pauly, 2018

<i>Dicrossus filamentosus</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Dicrossus maculatus</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Ectreopopterus uruguayensis</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Epalzeorhynchus bicolor</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Epalzeorhynchus frenatus</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Epalzeorhynchus kalopterus</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Epalzeorhynchus munense</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Epiplatys sexfasciatus</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Eretmodus cyanostictus</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Esomus malayensis</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Esomus metallicus</i>	A				✓	Ng and Tan, 2010; Froese and Pauly, 2018
<i>Etroplus suratensis</i>	A				✓	Ng and Tan, 2010; Froese and Pauly, 2018
<i>Farlowella acus</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Farlowella vittata</i>	A, C					USGS, 2018
<i>Fundulus cingulatus</i>	C			✓		Hu et al., 2013
<i>Gambusia affinis</i>	A, B, C, D			✓	✓	Ng and Tan, 2010; Guerrero, 2014; Froese and Pauly, 2018; USGS, 2018
<i>Garra rufa</i>	B, C, D			✓		DFO, 2018; Froese and Pauly, 2018
<i>Gasteropelecus sternicla</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Geophagus altifrons</i>	A				✓	Ng and Tan, 2010; Froese and Pauly, 2018
<i>Geophagus surinamensis</i>	A					USGS, 2018
<i>Glossolepis incisus</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Gnathochromis permaxillaris</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Gnathonemus petersii</i>	A, B	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Gymnocorymbus bondi</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018

<i>Gymnocorymbus ternetzi</i>	A, B, C	✓	✓	✓	✓	Rixon et al., 2005; Hu et al., 2013; Tuckett et al., 2017; DFO, 2018; Froese and Pauly, 2018; USGS, 2018
<i>Gymnocorymbus thayeri</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Gymnogeophagus balzanii</i>	A, B, C		✓			DFO, 2018; Froese and Pauler, 2018
<i>Gyrinocheilus aymonieri</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Haludaria fasciata</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Hasemania nana</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Helostoma temminckii</i>	A	✓			✓	Guerrero, 2014; Tuckett et al., 2017; Froese and Pauly, 2018; USGS, 2018
<i>Hemichromis bimaculatus</i>	A				✓	Guerrero, 2014
<i>Hemichromis letourneuxi</i>	A, B					USGS, 2018
<i>Hemigrammus unilineatus</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Hemiodus sterni</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Herichthys carpintis</i>	A, B, C			✓		✓ Hu et al., 2013; USGS, 2018
<i>Herichthys cyanoguttatus</i>	A, B, C					✓ USGS, 2018
<i>Heros severus</i>	A					✓ USGS, 2018
<i>Heterotilapia buttikoferi</i>	A					✓ USGS, 2018
<i>Homaloptera orthogoniata</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Hoplias malabaricus</i>	A, C					✓ USGS, 2018
<i>Hoplosternum littorale</i>	A, C					✓ USGS, 2018
<i>Hyphessobrycon anisitsi</i>	A, B, C		✓			DFO, 2018; Froese and Pauler, 2018
<i>Hyphessobrycon compressus</i>	A, B, C	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Hyphessobrycon eques*</i>	A, C					✓ Tuckett et al., 2017; USGS, 2018
<i>Hypostomus punctatus</i>	A, C			✓		Li et al., 2013
<i>Hypsophrys nicaraguensis</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Ictalurus punctatus</i>	B, C, D		✓		✓	Zięba et al., 2010; Mandrak et al., 2014; Froese and Pauler, 2018; USGS, 2018
<i>Ictiobus cyprinellus</i>	B, C, D		✓			Mandrak et al., 2014; Froese and Pauler, 2018
<i>Inpaichthys kerri</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Iodotropheus sprengerae</i>	A	✓				Department of the Environment, 2014; Froese and Pauly, 2018

<i>Julidochromis ornatus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Kryptopterus bicirrhis</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Kryptopterus macrocephalus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Labeo chrysophekadion</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Labeo cyclorhynchus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Laetacara curviceps</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Laetacara dorsigera</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Lamprologus ocellatus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Laubuka laubuca</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Leiarius marmoratus</i>	A					✓	USGS, 2018
<i>Lepidarchus adonis</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Lepidolamprologus meeli</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Lepidocephalichthys lorentzi</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Lepisosteus oculatus</i>	B, C, D			✓			Mandrak et al., 2014; Froese and Pauler, 2018
<i>Lepisosteus osseus</i>	B, C, D			✓	✓		Scott and Crossman, 1973; Mandrak et al., 2014; Hu et al., 2015; Froese and Pauler, 2018; USGS, 2018
<i>Lepomis gibbosus</i>	B, C, D		✓			✓	Copp and Fox, 2007; Verreycken et al., 2007; Witkowski and Grabowska, 2012
<i>Lepomis macrochirus</i>	B, C, D			✓			Mandrak et al., 2014; Ministry of Environment and Climate Change Strategy, 2017; Froese and Pauler, 2018
<i>Lepomis megalotis</i>	B, C, D			✓			Mandrak et al., 2014; Froese and Pauler, 2018; USGS, 2018
<i>Leporinus arcus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Leporinus fasciatus</i>	A	✓				✓	Department of the Environment, 2014; Froese and Pauly, 2018; USGS, 2018



<i>Leporinus maculatus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Leporinus multifasciatus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Lestradea stappersii</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Leuciscus idus</i>	B, C, D		✓			✓	Copp et al., 2007; Mandrak et al., 2014; Froese and Pauler, 2018
<i>Macrogathus aculeatus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Macrogathus siamensis</i>	A					✓	USGS, 2018
<i>Macropodus opercularis</i>	A, C, D	✓				✓	Department of the Environment, 2014; Froese and Pauly, 2018
<i>Marcusenius macrolepidotus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Marosatherina ladigesii</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Mayaheros urophthalmus</i>	A					✓	Lawson et al., 2017; USGS, 2018
<i>Melanochromis auratus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Melanochromis simulans</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Melanotaenia fluviatilis</i>	B, C					✓	Tuckett et al., 2017; Hill and Tuckett, 2018
<i>Mesonauta festivus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Metynnis hypsauchen</i>	A, C			✓			Hu et al., 2013
<i>Metynnis luna</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Metynnis sp.*</i>	A, C					✓	USGS, 2018
<i>Micropterus salmoides</i>	C, D		✓				Mandrak et al., 2014; Ministry of Environment and Climate Change Strategy, 2017; Froese and Pauler, 2018
<i>Mikrogeophagus altispinosus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Mikrogeophagus ramirezi</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Mimagoniates microlepis</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Misgurnus anguillicaudatus</i>	A, C, D		✓		✓	✓	Mandrak et al., 2014; Ministry of Environment and Climate Change Strategy, 2017; DFO, 2018; Froese and Pauler, 2018
<i>Misgurnus fossilis</i>	B, C, D		✓				Mandrak et al., 2014; Froese and Pauler, 2018

<i>Misgurnus mizolepis</i>	C, D				v		Britton et al., 2010; Zięba et al., 2010
<i>Moenkhausia sanctaefilomenae</i>	A, C					v	USGS, 2018
<i>Moenkhausia xinguensis</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Monodactylus argenteus</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Monodactylus sebae</i>	A, C	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Monopterus albus</i>	A, B, C, D					v	Tuckett et al., 2017; USGS, 2018
<i>Myloplus rubripinnis</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Nannacara anomala</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Nannacara aureocephalus</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Nannacara taenia</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Nannostomus beckfordi</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Nematobrycon palmeri</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Neolamprologus brichardi</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Neolamprologus cylindricus</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Neolamprologus leleupi</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Neolamprologus mustax</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Nothobranchius rachovii</i>	A, C			v			Hu et al., 2013
<i>Notopterus notopterus</i>	A					v	Ng and Tan, 2010; Froese and Pauly, 2018
<i>Oliotius oligolepis</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Ophthalmotilapia boops</i>	A	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Oreochromis andersonii</i>	A, B, C			v			Chen and Ye, 1994
<i>Oreochromis aureus</i>	A					v	Froese and Pauly, 2018
<i>Oreochromis mossambicus</i>	A, B, C					v	Ng and Tan, 2010; Froese and Pauly, 2018; USGS, 2018
<i>Oryzias latipes</i>	A, C	v					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Osphronemus goramy</i>	A				v	v	Ng and Tan, 2010; Guerrero, 2014; Froese and Pauly, 2018

<i>Osteochilus vittatus</i>	A	✓	✓	Ng and Tan, 2010; Froese and Pauly, 2018
<i>Osteoglossum bicirrhosum</i>	A		✓	Guerrero, 2014; Froese and Pauly, 2018; USGS, 2018
<i>Otocinclus arnoldi</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Oxydoras niger</i>	A		✓	USGS, 2018
<i>Pangasianodon hypophthalmus</i>	A		✓	Ng and Tan, 2010; Froese and Pauly, 2018
<i>Pangio agma</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio anguillaris</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio borneensis</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio cuneovirgata</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio goaensis</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio kuhlii</i>	A, B, C, D	✓	✓	Department of the Environment, 2014; Froese and Pauly, 2018; USGS, 2018
<i>Pangio longipinnis</i>	A, B, C	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio malayana</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio mariarum</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio muraeniformis</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio myersi</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio oblonga</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio pangia</i>	A, B, C	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio robiginosa</i>	A, B, C, D	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio semicincta</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pangio shelfordii</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pantodon buchholzi</i>	A	✓		Department of the Environment, 2014; Froese and Pauly, 2018

<i>Paracheirodon axelrodi</i>	A	✓						Department of the Environment, 2014; Froese and Pauly, 2018 Ng and Tan, 2010; Department of the Environment, 2014; Froese and Pauly, 2018
<i>Paracheirodon innesi</i>	A	✓				✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Parachela oxygastroides</i>	A	✓						Department of the Environment, 2014; Froese and Pauly, 2018
<i>Parachromis managuensis</i>	A			✓		✓	✓	Ng and Tan, 2010; Guerrero, 2014; Froese and Pauly, 2018; USGS, 2018
<i>Paracyprichromis nigripinnis</i>	A	✓						Department of the Environment, 2014; Froese and Pauly, 2018
<i>Parambassis apogonoides</i>	A	✓						Department of the Environment, 2014; Froese and Pauly, 2018
<i>Parambassis baculis</i>	A, C	✓						Department of the Environment, 2014; Froese and Pauly, 2018
<i>Parambassis lala</i>	A, B, C	✓						Department of the Environment, 2014; Froese and Pauly, 2018
<i>Parambassis macrolepis</i>	A	✓						Department of the Environment, 2014; Froese and Pauly, 2018
<i>Parambassis ranga</i>	A, B, C	✓		✓				Department of the Environment, 2014; Froese and Pauly, 2018; Wei and Luo, 2018
<i>Parambassis siamensis</i>	A	✓						Department of the Environment, 2014; Froese and Pauly, 2018
<i>Paraneetroplus melanurus</i>	A					✓		Ng and Tan, 2010; McMahan et al., 2011
<i>Parosphromenus deissneri</i>	A	✓						Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pelmatolapia mariae</i>	A						✓	USGS, 2018
<i>Pelvicachromis pulcher</i>	A	✓						Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pelvicachromis subocellatus</i>	A	✓						Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pelvicachromis taeniatus</i>	A	✓						Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pethia conchonius</i>	A, B, C	✓		✓	✓		✓	Rixon et al., 2005; Ng and Tan, 2010; Hu et al., 2013; Tuckett et al., 2017; DFO, 2018; Froese and Pauly, 2018; USGS, 2018
<i>Pethia cumingii</i>	A	✓						Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pethia gelius</i>	A, C						✓	USGS, 2018
<i>Pethia nigrofasciata</i>	A	✓						Department of the Environment, 2014; Froese and Pauly, 2018

<i>Pethia ticto</i>	A	✓																	Department of the Environment, 2014; Froese and Pauly, 2018
<i>Petitella georgiae</i>	A	✓																	Department of the Environment, 2014; Froese and Pauly, 2018
<i>Petrochromis trewavasae</i>	A	✓																	Department of the Environment, 2014; Froese and Pauly, 2018
<i>Phenacogrammus interruptus</i>	A	✓																	Department of the Environment, 2014; Froese and Pauly, 2018
<i>Phractocephalus hemiliopterus</i>	A																	✓	USGS, 2018
<i>Piaractus brachypomus</i>	A						✓											✓	Guerrero, 2014; Froese and Pauly, 2018; USGS, 2018
<i>Piaractus mesopotamicus</i>	A, C																	✓	USGS, 2018
<i>Pimelodus ornatus</i>	A	✓																	Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pimelodus pictus</i>	A	✓																	Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pimephales promelas</i>	B, C, D			✓		✓							✓					✓	Scott and Crossman, 1973; Copp et al., 2007; Verreycken et al., 2007; Godard et al., 2013; Mandrak et al., 2014; Ministry of Environment and Climate Change Strategy, 2017; Froese and Pauler, 2018; USGS, 2018
<i>Poecilia latipinna</i>	A, B, C	✓				✓		✓				✓						✓	Rixon et al., 2005; Ng and Tan, 2010; Hu et al., 2013; Guerrero, 2014; DFO, 2018; Froese and Pauly, 2018; USGS, 2018
<i>Poecilia latipunctata</i>	A, C																	✓	USGS, 2018
<i>Poecilia reticulata</i>	A	✓						✓				✓						✓	Ng and Tan, 2010; Tuckett et al., 2017; Froese and Pauly, 2018; Hill and Tuckett, 2018
<i>Poecilia sphenops</i>	A, C	✓						✓				✓						✓	Ng and Tan, 2010; Tuckett et al., 2017; Froese and Pauly, 2018; Hill and Tuckett, 2018
<i>Poecilia velifera</i>	A	✓										✓							Ng and Tan, 2010; Department of the Environment, 2014; Froese and Pauly, 2018
<i>Poecilocharax weitzmani</i>	A	✓																	Department of the Environment, 2014; Froese and Pauly, 2018
<i>Polypterus delhezi</i>	A																	✓	USGS, 2018
<i>Pomoxis nigromaculatus</i>	A, C, D						✓												Scott and Crossman, 1973; Mandrak et al., 2014; Ministry of Environment and Climate Change Strategy, 2017; Froese and Pauler, 2018; USGS, 2018

<i>Potamotrygon motoro</i>	A, B, C		✓		✓		Ng and Tan, 2010; Hu et al., 2013; Froese and Pauly, 2018
<i>Prionobrama filigera</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pristella maxillaris</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Protopterus annectens</i>	A, C		✓				Hu et al., 2013
<i>Pseudogastromyzon myersi</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pseudomystus siamensis</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Pterodoras granulosus</i>	A, C					✓	USGS, 2018
<i>Pterophyllum scalare</i>	A	✓				✓	Department of the Environment, 2014; Froese and Pauly, 2018; USGS, 2018
<i>Pterygoplichthys anisitsi</i>	C					✓	USGS, 2018
<i>Pterygoplichthys disjunctivus</i>	A, C		✓	✓		✓	Ng and Tan, 2010; Guerrero 2014; Wei. et al., 2017; Froese and Pauly, 2018; USGS, 2018
<i>Pterygoplichthys joselimaianus</i>	A					✓	Froese and Pauly, 2018
<i>Pterygoplichthys multiradiatus</i>	A, C		✓			✓	Ng and Tan, 2010; Froese and Pauly, 2018
<i>Pterygoplichthys pardalis</i>	A			✓		✓	Li et al., 2013; Wei et al., 2017; USGS, 2018
<i>Puntigrus partipentazona</i>	A	✓				✓	Ng and Tan, 2010; Guerrero, 2014; Froese and Pauly, 2018; USGS, 2018
<i>Puntigrus tetrazona</i>	A	✓		✓		✓	Froese and Pauly, 2018
<i>Puntius bimaculatus</i>	A, B, C	✓					Ng and Tan, 2010; Froese and Pauly, 2018
<i>Puntius titteya</i>	A	✓					Froese and Pauly, 2018
<i>Puntius vittatus</i>	A	✓					Guerrero, 2014; Tuckett et al., 2017; Froese and Pauly, 2018; Hill and Tuckett, 2018; USGS, 2018
<i>Pygocentrus nattereri</i>	A, C		✓	✓	✓	✓	Department of the Environment, 2014; Froese and Pauly, 2018
<i>Rasbora argyrotaenia</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Rasbora borapetensis</i>	A	✓				✓	Department of the Environment, 2014; Froese and Pauly, 2018

<i>Rasbora caudimaculata</i>	A	✓							Department of the Environment, 2014; Froese and Pauly, 2018
<i>Rasbora dusonensis</i>	A	✓							Department of the Environment, 2014; Froese and Pauly, 2018
<i>Rasbora einthovenii</i>	A	✓							Department of the Environment, 2014; Froese and Pauly, 2018
<i>Rasbora elegans</i>	A	✓							Department of the Environment, 2014; Froese and Pauly, 2018
<i>Rasbora kalochroma</i>	A	✓							Department of the Environment, 2014; Froese and Pauly, 2018
<i>Rasbora leptosoma</i>	A	✓							Department of the Environment, 2014; Froese and Pauly, 2018
<i>Rasbora sarawakensis</i>	A	✓							Department of the Environment, 2014; Froese and Pauly, 2018
<i>Rasbora steineri</i>	A	✓							Department of the Environment, 2014; Froese and Pauly, 2018
									Ng and Tan, 2010;
<i>Rasbora trilineata</i>	A	✓					✓		Department of the Environment, 2014; Froese and Pauly, 2018
<i>Rasboroides vaterifloris</i>	A	✓							Department of the Environment, 2014; Froese and Pauly, 2018
<i>Rhamdia quelen</i>	A, B, C							✓	USGS, 2018
<i>Rhodeus amarus</i>	C, D	✓						✓	Copp et al., 2007; Froese and Pauly, 2018
<i>Rhodeus sericeus</i>	D	✓							Department of the Environment, 2014; Froese and Pauly, 2018
<i>Rocio octofasciata</i>	A							✓	Lawson et al., 2017; Tuckett et al., 2017; USGS, 2018
<i>Sahyadria denisonii</i>	A, B, C, D			✓	✓				Hu et al., 2013; DFO, 2018;
<i>Sarotherodon melanotheron</i>	A, B							✓	Froese and Pauly, 2018
									USGS, 2018
<i>Satanoperca jurupari</i>	A						✓		Ng and Tan, 2010; Froese and Pauly, 2018
<i>Sawbwa resplendens</i>	A	✓							Froese and Pauly, 2018
									Department of the Environment, 2014; Froese and Pauly, 2018
<i>Scleropages formosus</i>	A					✓		✓	Ng and Tan, 2010; Guerrero, 2014; Froese and Pauly, 2018
<i>Scleropages leichardti</i>	B, C				✓				2018
<i>Scobinancistrus sp.</i>	A, C				✓				Lou, 2000; Hu et al., 2013
									Wei and Luo, 2018
<i>Secutor ruconius</i>	A, B, C	✓							Department of the Environment, 2014; Froese and Pauly, 2018
<i>Semaprochilodus insignis</i>	A	✓							Department of the Environment, 2014; Froese and Pauly, 2018
<i>Semaprochilodus taeniurus</i>	A	✓							Department of the Environment, 2014; Froese and Pauly, 2018

<i>Serrasalmus rhombeus</i>	A				v	USGS, 2018
<i>Sicyopus zosterophorus</i>	A, C		v			Wei and Luo, 2018
<i>Silurus glanis</i>	B, C, D		v			Mandrak et al., 2014; Froese and Pauly, 2018
<i>Siniperca chuatsi</i>	A, B, C, D		v			Mandrak et al., 2014; Froese and Pauly, 2018
<i>Spathodus erythron</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Sphaerichthys osphromenoides</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Striuntius lineatus</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Sturisomatichthys panamense</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Symphysodon discus</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Synodontis decorus</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Synodontis multipunctatus</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Synodontis nigriventris</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Systemus asoka</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Tanganicodus irsacae</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Tanichthys albonubes</i>	A, B, C, D	v		v		Rixon et al., 2005; Gertzen et al., 2008; DFO, 2018; Froese and Pauly, 2018
<i>Tateurndina ocellicauda</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Tetragonopterus rarus</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Thayeria obliqua</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Theriodes sandakanensis</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Thoracocharax securis</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Thoracocharax stellatus</i>	A	v				Department of the Environment, 2014; Froese and Pauly, 2018
<i>Thorichthys meeki</i>	A				v	Ng and Tan, 2010; Froese and Pauly, 2018; USGS, 2018
<i>Tilapia sparrmanii</i>	A, B, C				v	Froese and Pauly, 2018
						USGS, 2018



<i>Toxotes jaculatrix</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Trachelyopterus fisheri</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Trichogaster chuna</i>	A, B, C	✓				✓	Department of the Environment, 2014; Tuckett et al., 2017; Froese and Pauly, 2018
<i>Trichogaster fasciata</i>	A, B, C	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Trichogaster labiosa</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Trichogaster lalius</i>	A, B, C	✓	✓			✓	Hu et al., 2013; Department of the Environment, 2014; Tuckett et al., 2017; Froese and Pauly, 2018; USGS, 2018
<i>Trichogaster microlepis</i>	A	✓				✓	Ng and Tan, 2010; Froese and Pauly, 2018
<i>Trichopodus leerii</i>	A	✓			✓		Froese and Pauly, 2018
<i>Trichopodus pectoralis</i>	A				✓	✓	Department of the Environment, 2014; Guerrero, 2014; Froese and Pauly, 2018; USGS, 2018
<i>Trichopodus trichopterus</i>	A, C	✓	✓	✓		✓	Ng and Tan, 2010; Guerrero, 2014; Froese and Pauly, 2018
<i>Trichopsis pumila</i>	A	✓					Hu et al., 2013; Guerrero, 2014; Tuckett et al., 2017; Froese and Pauly, 2018; USGS, 2018
<i>Trichopsis vittata</i>	A	✓				✓	Department of the Environment, 2014; Froese and Pauly, 2018
<i>Trichromis salvini</i>	A					✓	Department of the Environment, 2014; Froese and Pauly, 2018; USGS, 2018
<i>Trigonopoma pauciperforatum</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Trigonostigma hengeli</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Trigonostigma heteromorpha</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Trinectes maculatus</i>	A, C	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Triporthus albus</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Tropheus moorii</i>	A	✓					Department of the Environment, 2014; Froese and Pauly, 2018
<i>Umbra krameri</i>	C, D					✓	Department of the Environment, 2014; Froese and Pauly, 2018

<i>Umbra pygmaea</i>	C, D		✓		✓		Witkowski and Grabowska, 2012; Verreycken et al., 2010
<i>Vieja melanura</i>	A					✓	USGS, 2018
							Huang et al., 2002; Ng and Tan, 2010; Lawson et al., 2017; Tuckett et al., 2017; Froese and Pauly, 2018; Hill and Tuckett, 2018; USGS, 2018
<i>Xiphophorus hellerii</i>	A, C	✓		✓		✓	
							Kang, 2004; Ng and Tan, 2010; Lawson et al., 2017; Tuckett et al., 2017; Froese and Pauly, 2018; Hill and Tuckett, 2018; USGS, 2018
<i>Xiphophorus maculatus</i>	A, C	✓		✓		✓	Ng and Tan, 2010; Lawson et al., 2017; Tuckett et al., 2017; DFO, 2018; Froese and Pauly, 2018; Hill and Tuckett, 2018; USGS, 2018
<i>Xiphophorus variatus</i>	A, B, C	✓		✓		✓	