



QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

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Foreword

New Format of the Aquatic Animal Disease Reporting for Asia and the Pacific from January 2021

The new [OIE World Animal Health Information System](#) (OIE-WAHIS) was launched aiming to develop a modern and dynamic platform to ease the burden of Members to collect and report information on the global animal health situation to the OIE, as well as to make animal health information more easy-access and usable to the public. OIE-WAHIS has been developed to evolve and grow as new needs arise, and it will be released in several stages. In March 2021 release one of the new OIE WAHIS went live, which includes OIE WAHIS main core modules (immediate notifications, follow-up reports, six-monthly reports, public interface), basic interoperability, E-learning, and integration of historical data from 2005. In release 2, it will develop the annual report (including domestic animal and wildlife), as well as introduce more functions, such as additional core modules and integration of regional disease information system into new WAHIS.

In the future, OIE and NACA would like to avoid duplication between WAHIS and QAAD through the establishment of a Regional Core for on-line reporting system for non-OIE listed aquatic animal diseases of regional importance in Asia and the Pacific under the new OIE-WAHIS Six-Monthly Report (SMR) module. Under this system, disease status and epidemiological information will be reported following the format of OIE-WAHIS SMR, which will be compiled and stored at the Regional Core.

Before the launch of the OIE WAHIS release two, and in order to create a more user-friendly reporting system and adapt to the trends of on-line reporting, submitted data will be validated by OIE RRAP and NACA and published on the [dedicated page](#) of the OIE Regional website where anyone can access the disease information by Members in chronological order. Therefore, all Members are invited to first submit all the aquatic six-monthly reports pending to the OIE through the OIE-WAHIS and, to submit the monthly data as soon as available to OIE RRAP (rr.asiapacific@oie.int) and NACA (eduardo@enaca.org) with their OIE Delegate in copy to ensure the timeliness of the disease information. Data should be approved and validated by the OIE Delegate or the Focal Point for Disease Notification prior to submission. Please kindly note that submission of emerging aquatic animal disease information through OIE Immediate Notification is a legal obligation of OIE Members.

Reflecting on the new reporting format, updates were made on the disease reporting form for 2021, as per revision in the new OIE WAHIS, as follows:

From	To
Disease reported or known to be present	Disease present/+
Occurrence limited to certain zones	Disease limited to one or more zones/+()
Serological evidence and/or isolation of causative agent but no clinical diseases	Infection/infestation/+?

Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	Infection/infestation limited to one or more zones/+?()
Suspected by reporting officer but presence not confirmed	Disease suspected/?
Presence of the disease suspected but not confirmed in a zone	Disease suspected but not confirmed and limited to one or more zones/?()
Not reported (but disease is known to occur) Year of last occurrence	Disease absent/-
Never reported	Never reported/0000
No information available	No information/***

The above changes has been included in the revised reporting form in Excel format which was distributed to all National Focal Points for Aquatic Animals for use in disease reporting starting January 2021.

Reports Received by the NACA and OIE-RRAP

(Officially prepared by OIE National Focal Points for Aquatic Animals/NACA National Coordinator, and submitted by OIE Delegate)

Country: AUSTRALIA*Period: October - December 2020

Item	Disease status ^{at}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Infection with epizootic haematopoietic necrosis virus	-(2012)	-(2012)	-(2012)		1
2. Infection with infectious haematopoietic necrosis virus	000	000	000		
3. Infection with spring viremia of carp virus	000	000	000		
4. Infection with viral haemorrhagic septicaemia virus	000	000	000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	-(2017)	-(2017)	-(2017)		2
6. Infection with red sea bream iridovirus	000	000	000		
7. Infection with koi herpesvirus	000	000	000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	000	000	000		
9. Viral encephalopathy and retinopathy	-(2020)	-(2020)	-(2020)		3
10. Enteric septicaemia of catfish	-(2014)	-(2014)	-(2014)		4
11. Carp edema virus disease	***	***	***		
12. Tilapia lake virus (TiLV)	000	000	000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	-(2019)	-(2019)	-(2019)		5
2. Infection with <i>Perkinsus olseni</i>	-(2020)	-(2020)	-(2020)		6
3. Infection with abalone herpesvirus	-(2011)	-(2011)	-(2011)		7
4. Infection with <i>Xenohaliotis californiensis</i>	000	000	000		
5. Infection with <i>Bonamia ostreae</i>	000	000	000		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	000	000	000		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Infection with Taura syndrome virus	000	000	000		
2. Infection with white spot syndrome virus	-(2020)	-(2020)	-(2020)		8
3. Infection with yellow head virus genotype 1	000	000	000		
4. Infection with infectious hypodermal and haematopoietic necrosis virus	+(2020)	-(2020)	-(2020)		9
5. Infection with infectious myonecrosis virus	000	000	000		
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	-(2008)	-(2008)	-(2008)		10
7. Infection with <i>Hepatobacter penaei</i> (Necrotising hepatopancreatitis)	000	000	000		
8. Acute hepatopancreatic necrosis disease (AHPND)	000	000	000		
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	000	000	000		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	000	000	000		
11. Viral covert mortality disease (VCMD) of shrimps	***	***	***		

*Member of NACA's Asia Regional Aquatic Animal Health Programme

12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Decapod iridescent virus 1 (DIV1)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with <i>Ranavirus</i> species	-(2008)	-(2008)	-(2008)		11
2. Infection with <i>Batrachochytrium dendrobatidis</i>	-(2019)	+(2020)	-(2020)		12
3. Infection with <i>Batrachochytrium salamandrivorans</i>	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1. Hepatopancreatitis in prawns	-(2017)	-(2017)	-(2017)		13

**DISEASES PRESUMED EXOTIC TO THE REGION^b
LISTED BY THE OIE**

Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	?()	Presence of the disease suspected but not confirmed in a zone
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence

b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	Epizootic haematopoietic necrosis was not reported this period despite passive surveillance in Victoria (last reported 2012), the Australian Capital Territory (last reported 2011), New South Wales (last reported 2009) and South Australia (last reported 1992). Passive surveillance and never reported in the Northern Territory, Queensland, Tasmania and Western Australia. No information available this period in the Australian Capital Territory.
2	Infection with <i>Aphanomyces invadans</i> (EUS) was not reported this period despite passive surveillance in New South Wales (last reported 2017), the Northern Territory (last reported 2017), Queensland (last reported 2014), Western Australia (last reported 2013), Victoria (last reported 2012) and South Australia (last reported 2008). Passive surveillance and never reported in Tasmania. No information available this period in the Australian Capital Territory.

3	<p>Viral encephalopathy and retinopathy was not reported this period despite passive surveillance in Northern Territory (Last report September 2020), Queensland (last reported 2019), New South Wales (last reported 2018), Western Australia (last reported 2013), South Australia (last reported 2010) and Tasmania (last reported 2000). Never reported in Victoria, Tasmania and the Australian Capital Territory.</p>
4	<p>Enteric septicaemia of catfish (<i>E. ictaluri</i>) was not reported this period despite passive surveillance and never reported in New South Wales, South Australia, Victoria and Western Australia. No information available this period in the Australian Capital Territory. It was reported from clinically normal fish from a single river in Queensland (last reported 2014), the only occurrence of <i>E. ictaluri</i> in wild fish populations in Australia. Active surveillance throughout Northern Australia has found no evidence of <i>E. ictaluri</i> in any other wild fish populations. <i>E. ictaluri</i> has been detected previously in association with imported ornamental fish including; the Northern Territory in a closed aquarium (last reported 2011), and in PC2 containment facilities in Tasmania (last reported 2001) and Queensland (last reported 2008).</p>
5	<p>Infection with <i>Bonamia exitiosa</i> was not reported this period despite passive surveillance in South Australia (last reported 2019), Western Australia (last reported 2017) and Victoria (last reported 2016). Passive surveillance and never reported in Queensland, New South Wales, Tasmania and Northern Territory. No information available for the Australian Capital Territory (no marine water responsibility).</p>
6	<p>Infection with <i>Perkinsus olseni</i> was not reported this period despite passive surveillance in Western Australia (Last reported in September 2020), New South Wales (last reported 2005) and Queensland (last reported 2014). Passive surveillance and never reported in the Northern Territory and Tasmania. No surveillance South Australia (last reported 2019), Victoria (last reported 2015). No surveillance and never reported for the Australian Capital Territory (no marine waer responsibility)</p>
7	<p>Infection with abalone herpesvirus (abalone viral ganglioneuritis) was not reported this period despite active and passive surveillance in Tasmania (last reported 2011), New South Wales (last reported 2011 and eradicated following detection in contained commercial live-holding facilities) and Victoria (last reported 2010). Passive surveillance and never reported in the Northern Territory, Queensland, South Australia, Western Australia. No information available for the Australian Capital Territory (no marine water responsibility).</p>
8	<p>Infection with white spot syndrome virus (white spot disease) was not reported this period despite active and passive surveillance in Queensland (last reported in April/May 2020). Never reported despite active and passive surveillance in New South Wales, South Australia, Western Australia, Northern Territory and Victoria. Never reported in Tasmania despite passive surveillance. No information available for the Australian Capital Territory (no marine water responsibility).</p>

<p>9</p>	<p>Infection with infectious hypodermal and haematopoietic necrosis virus 1. Reported in the Northern Territory in October 2020, active surveillance; 2. Species affected – Black tiger prawns (<i>Panaeus monodon</i>), wild caught mature broodstock caught from waters around the Tiwi Islands/ Van Diemen Gulf area; 3. Clinical signs – nil; 4. Pathogen – Infectious hypodermal and haematopoietic virus (IHHNV); 5. Mortality rate – nil; 6. Economic loss – no economic loss; 7. Geographic extent – 2 confirmed case out of 63 broodstock prawns that were caught around the Tiwi Islands/Van Diemen Gulf area and quarantined in their own tanks within a land-based hatchery; 8. Containment measures – the prawns were transferred directly to a quarantine facility in Western Australia and tested on entry to the facility. All positive animals were euthanased; 9. Laboratory confirmation – PCR and sequencing of amplicons; 10. Publications – nil.</p> <p>Infection with infectious hypodermal and haematopoietic necrosis virus was not reported this period in Queensland despite passive surveillance (last reported in April 2020). Passive surveillance and never reported in New South Wales, South Australia, Victoria and Western Australia. No information available for the Australian Capital Territory (no marine water responsibility) and Tasmania (susceptible species not present).</p>
<p>10</p>	<p>Infection with <i>Macrobrachium rosenbergii</i> nodavirus (white tail disease) was not reported this period despite passive surveillance in Queensland (last reported 2008). Passive surveillance and never reported in the Australian Capital Territory, New South Wales, the Northern Territory, South Australia, Victoria and Western Australia. No information available this period from Tasmania (susceptible species not present).</p>
<p>11</p>	<p>Infection with <i>Ranavirus</i> was not reported this period despite passive surveillance in the Northern Territory (last reported 2008, prior to official reporting for <i>Ranavirus</i>). Suspected but not confirmed through passive surveillance in Queensland. Passive surveillance and never reported in Tasmania and New South Wales. No information available this period in the Australian Capital Territory, South Australia, Victoria and Western Australia.</p>
<p>12</p>	<p>Infection with <i>Batrachochytrium dendrobatidis</i> 1. Reported in New South Wales in November 2020, targeted surveillance; 2. Species affected – 3 Green Tree Frog (<i>Litoria caerulea</i>), 2 Southern Barred Frog (<i>Mixophyes balbus</i>); 3. Clinical signs – Green tree frogs showed clinical signs including droopy face, lethargy, loss of appetite, lack of self preservation (not hiding) and blotchy skin. Southern barred frogs only exhibited lack of appetite; 4. Pathogen – <i>Batrachochytrium dendrobatidis</i>; 5. Mortality rate – Single green tree frog; 6. Economic loss – nil; 7. Geographic extent – Single captive population held in a wildlife park; 8. Containment measures – Treatment of affected population. However, B. dendrobatidis is considered to be endemic in many frog populations in NSW; 9. Laboratory confirmation – PCR; 10. Publications – nil.</p> <p>Infection with <i>Batrachochytrium dendrobatidis</i> was not reported this period despite passive surveillance in, South Australia (last reported in September 2020), Queensland (last reported 2018), Victoria (last reported 2016), Tasmania (last reported 2013) and Western Australia (last reported 2008). Passive surveillance and never reported in the Northern Territory and the Australian Capital Territory.</p>

13	Hepatopancreatitis in prawns was not reported this period despite passive surveillance in Queensland (last reported 2017). Passive surveillance and never reported in New South Wales. No information available in the Australian Capital Territory, Victoria, Northern Territory, South Australia, Western Australia and Tasmania.
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2. New aquatic animal health regulations introduced within past six months (with effective date):

Nil

Country: **BANGLADESH***Period: **October - December 2020**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Infection with epizootic haematopoietic necrosis virus	0000	0000	0000		
2. Infection with infectious haematopoietic necrosis virus	0000	0000	0000		
3. Infection with spring viremia of carp virus	0000	0000	0000		
4. Infection with viral haemorrhagic septicaemia virus	0000	0000	0000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	-	-	-	I	
6. Infection with red sea bream iridovirus	0000	0000	0000		
7. Infection with koi herpesvirus	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10. Enteric septicaemia of catfish	0000	0000	0000		
11. Carp edema virus disease	0000	0000	0000		
12. Tilapia lake virus (TiLV)	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
3. Infection with abalone herpesvirus	0000	0000	0000		
4. Infection with <i>Xenohaliotis californiensis</i>	0000	0000	0000		
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Infection with Taura syndrome virus	0000	0000	0000		
2. Infection with white spot syndrome virus	-(2008)	-(2008)	-(2008)		1
3. Infection with yellow head virus genotype 1	0000	0000	0000		
4. Infection with infectious hypodermal and haematopoietic necrosis virus	0000	0000	0000		
5. Infection with infectious myonecrosis virus	0000	0000	0000		
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	0000	0000	0000		
7. Infection with <i>Hepatobacter penaei</i> (Necrotising hepatopancreatitis)	0000	0000	0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	0000	0000	0000		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000		

*Member of NACA's Asia Regional Aquatic Animal Health Programme

11. Viral covert mortality disease (VCMD) of shrimps	0000	0000	0000		
12. <i>Spiroplasma eriocheiris</i> infection	0000	0000	0000		
13. Decapod iridescent virus 1 (DIV1)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with <i>Ranavirus</i> species	0000	0000	0000		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000		
3. Infection with <i>Batrachochytrium salamandrivorans</i>	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1. Infection with <i>Streptococcus</i> (<i>Oreochromis niloticus</i> and <i>Anabas testudineus</i>)	-	+()	+()	III	2
2. Infection with <i>Aeromonas</i> (<i>Anabas testudineus</i> and <i>Heteropneustes fossilis</i>)	-	+()	+()	III	3
3. Infection with <i>Staphylococcus</i> (<i>Oreochromis niloticus</i>)	-	+()	+()	II	4

DISEASES PRESUMED EXOTIC TO THE REGION^b
LISTED BY THE OIE

Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus; Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	?()	Presence of the disease suspected but not confirmed in a zone
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence

b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	Infection with White spot syndrome virus (White spot disease) was not reported this period despite passive surveillance in Khulna and Chattagram regions (last reported 2008).

2	<p>Infection with <i>Streptococcus</i> 1. Reported in Mymensingh and Chandpur; 2. Species affected – Climbing perch (<i>Anabas testudinius</i>) and tilapia (<i>Oreochromis niloticus</i>) 3. Clinical signs – loss of balance, unusual movement, opaque eye, enlargement and discoloration of liver, kidney, spleen and bile; 4. Pathogen – <i>Streptococcus agalactiae</i>; 5. Mortality rate – 30-40%; 6. Economic loss –; 7. Geographic extent – Mymensingh and Chandpur; 8. Containment measures – use of disinfectants and antibiotics (tetracycline); 9. Laboratory confirmation –; 10. Publications – nil</p>
3	<p>Infection with <i>Aeromonas</i> 1. Reported in Gazipur, Mymensingh and Bogura; 2. Species affected – Climbing perch (<i>Anabas testudinius</i>) and Shing catfish (<i>Heteropnuestes fossilis</i>); 3. Clinical signs – loss of balance, unusual movement, opaque eye, red lesion on body; 4. Pathogen – <i>Aeromonas</i> spp.; 5. Mortality rate – 5%; 6. Economic loss –; 7. Geographic extent – Gazipur, Mymensingh and Bogura; 8. Containment measures – use of disinfectants and antibiotics (tetracycline); 9. Laboratory confirmation –; 10. Publications – nil</p>
4	<p>Infection with <i>Staphylococcus</i> 1. Reported in Gazipur; 2. Species affected – Tilapia (<i>Oreochromis niloticus</i>) ; 3. Clinical signs – loss of balance, unusual movement; 4. Pathogen – <i>Staphylococcus</i> sp.; 5. Mortality rate – 5%; 6. Economic loss –; 7. Geographic extent – Mymensingh; 8. Containment measures – use of disinfectants and antibiotics (tetracycline); 9. Laboratory confirmation –; 10. Publications – nil</p>

2. New aquatic animal health regulations introduced within past six months (with effective date):

Country: BRUNEI DARUSSALAM
Period: October - December 2020

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Infection with epizootic haematopoietic necrosis virus	***	***	***		
2. Infection with infectious haematopoietic necrosis virus	***	***	***		
3. Infection with spring viremia of carp virus	***	***	***		
4. Infection with viral haemorrhagic septicaemia virus	***	***	***		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	***	***	***		
6. Infection with red sea bream iridovirus	0000	0000	0000	III	
7. Infection with koi herpesvirus	***	***	***		
Non OIE-listed diseases					
8. Grouper iridoviral disease	(2013)	(2013)	(2013)	III	
9. Viral encephalopathy and retinopathy	(2020)	(2020)	(2020)	I, III	
10. Enteric septicaemia of catfish	***	***	***		
11. Carp edema virus disease	***	***	***		
12. Tilapia lake virus (TiLV)	-	-	-		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Infection with abalone herpesvirus	***	***	***		
4. Infection with <i>Xenohalotus californiensis</i>	***	***	***		
5. Infection with <i>Bonamia ostreae</i>	***	***	***		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Infection with Taura syndrome virus	0000	0000	0000	III	
2. Infection with white spot syndrome virus	(2012)	(2012)	(2012)	III	
3. Infection with yellow head virus genotype 1	(2010)	(2010)	(2010)	III	
4. Infection with infectious hypodermal and haematopoietic necrosis virus	(2009)	(2009)	(2009)	III	
5. Infection with infectious myonecrosis virus	0000	0000	0000	III	
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	(2010)	(2010)	(2010)	III	
7. Infection with <i>Hepatobacter penaei</i> (Necrotising hepatopancreatitis)	***	***	***		
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000	III	
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	***	***	***		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	-	-	-	III	

*Member of NACA's Asia Regional Aquatic Animal Health Programme

11. Viral covert mortality disease (VCMD) of shrimps	-	-	-	III	
12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Decapod iridescent virus 1 (DIV1)	-	-	-	III	
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with <i>Ranavirus</i> species	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	***	***	***		
3. Infection with <i>Batrachochytrium salamandrivorans</i>	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION^b

LISTED BY THE OIE

Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	?()	Presence of the disease suspected but not confirmed in a zone
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence

b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	
2	

2. New aquatic animal health regulations introduced within past six months (with effective date):

Country: **HONG KONG SAR, CHINA***

 Period: **October - December 2020**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	October	November	December		
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES					
OIE-listed diseases					
1. Infection with epizootic haematopoietic necrosis virus	0000	0000	0000	II	
2. Infection with infectious haematopoietic necrosis virus	0000	0000	0000	III	
3. Infection with spring viremia of carp virus	0000	0000	0000	III	
4. Infection with viral haemorrhagic septicaemia virus	0000	0000	0000	III	
5. Infection with <i>Aphanomyces invadans</i> (EUS)	0000	0000	0000	III	
6. Infection with red sea bream iridovirus	-	-	-	III	
7. Infection with koi herpesvirus	-	-	-	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-	III	
9. Viral encephalopathy and retinopathy	-	-	-	III	
10. Enteric septicaemia of catfish	0000	0000	0000	II	
11. Carp edema virus disease	***	***	***		
12. Tilapia lake virus (TiLV)	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	II	
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000	II	
3. Infection with abalone herpesvirus	0000	0000	0000	II	
4. Infection with <i>Xenohaliotis californiensis</i>	0000	0000	0000	II	
5. Infection with <i>Bonamia ostreae</i>	***	***	***		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	II	
7. Acute viral necrosis (in scallops)	0000	0000	0000	II	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Infection with Taura syndrome virus	0000	0000	0000	III	
2. Infection with white spot syndrome virus	-	-	-	III	
3. Infection with yellow head virus genotype 1	0000	0000	0000	III	
4. Infection with infectious hypodermal and haematopoietic necrosis virus	0000	0000	0000	II	
5. Infection with infectious myonecrosis virus	0000	0000	0000	II	
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	0000	0000	0000	II	
7. Infection with <i>Hepatobacter penaei</i> (Necrotising hepatopancreatitis)	***	***	***	II	
8. Acute hepatopancreatic necrosis disease (AHPND)	***	***	***	II	
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	0000	0000	0000	II	
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	***	***	***		
11. Viral covert mortality disease (VCMD) of shrimps	***	***	***		

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12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Decapod iridescent virus 1 (DIV1)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with <i>Ranavirus</i> species	(1 Apr 2017)	(1 Apr 2017)	(1 Apr 2017)	III	
2. Infection with <i>Batrachochytrium dendrobatidis</i>	***	***	***	III	
3. Infection with <i>Batrachochytrium salamandrivorans</i>	***	***	***	III	
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

**DISEASES PRESUMED EXOTIC TO THE REGION^b
LISTED BY THE OIE**

Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus; Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	?()	Presence of the disease suspected but not confirmed in a zone
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence

b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	

2. New aquatic animal health regulations introduced within past six months (with effective date):

Country: **INDIA***

 Period: **October - December 2020**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Infection with epizootic haematopoietic necrosis virus	0000	0000	0000		
2. Infection with infectious haematopoietic necrosis virus	0000	0000	0000		
3. Infection with spring viremia of carp virus	0000	0000	0000		
4. Infection with viral haemorrhagic septicaemia virus	0000	0000	0000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	-	-	+()	III	1
6. Infection with red sea bream iridovirus	(2018)	(2018)	(2018)		
7. Infection with koi herpesvirus	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	-	-	-		
10. Enteric septicaemia of catfish	0000	0000	0000		
11. Carp edema virus disease	-	-	-		
12. Tilapia lake virus (TiLV)	+()	+()	+()	III	2
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	-	+()	-	III	3
3. Infection with abalone herpesvirus	0000	0000	0000		
4. Infection with <i>Xenohalictis californiensis</i>	0000	0000	0000		
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Infection with Taura syndrome virus	0000	0000	0000		
2. Infection with white spot syndrome virus	+()	+()	+()	I,III	4
3. Infection with yellow head virus genotype 1	0000	0000	0000		
4. Infection with infectious hypodermal and haematopoietic necrosis virus	-	-	+?()	III	5
5. Infection with infectious myonecrosis virus	+()	+()	-	III	6
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	-	-	-		
7. Infection with <i>Hepatobacter penaei</i> (Necrotising hepatopancreatitis)	0000	0000	0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	0000	0000	0000		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	+()	+()	+()	III	7

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11. Viral covert mortality disease (VCMD) of shrimps	0000	0000	0000		
12. <i>Spiroplasma eriocheiris</i> infection	0000	0000	0000		
13. Decapod iridescent virus 1 (DIV1)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with <i>Ranavirus</i> species	0000	0000	0000		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	****	****	****		
3. Infection with <i>Batrachochytrium salamandrivorans</i>	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

**DISEASES PRESUMED EXOTIC TO THE REGION^b
LISTED BY THE OIE**

Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	?()	Presence of the disease suspected but not confirmed in a zone
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence

b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	<p>Infection with <i>Aphanomyces invadans</i> (EUS) was detected in <i>Cirrhinus mrigala</i>, <i>Labeo bata</i>, <i>L. rohita</i>, <i>Catla catla</i>, <i>Wallago attu</i> and <i>Puntius javanicus</i> from very limited areas of Nagaon district of Assam and Barabanki and Balrampur districts of Uttar Pradesh.</p> <p><i>Preventive/Control measures taken:</i> Liming followed by CIFAX application was suggested.</p>
2	<p>Tilapia lake virus (TiLV) was reported in <i>Oreochromis niloticus</i> from very limited areas of Alapuzha, Palakkad, Ernakulam and Kottayam districts of Kerala.</p> <p><i>Preventive/Control measures taken:</i> The farmers were advised to stock TiLV-free seeds in the next crop.</p>

3	<p>Infection with <i>Perkinsus olsenii</i> was detected in wild samples of <i>Paphia malabarica</i> collected from west coast along Kollam and Trivandrum districts of Kerala.</p> <p><i>Preventive/Control measures taken:</i> No control measures could be undertaken as the samples were from wild.</p>
4	<p>Infection with White spotsyndrome virus (WSSV) was reported on basis of clinical signs in <i>Litopenaeus vannamei</i> from very limited areas of East Godavari, West Godavari and Srikakulam districts of Andhra Pradesh; and Palghar district of Maharashtra. Infection with WSSV was also detected in <i>Litopenaeus vannamei</i> from very limited areas of Thiruvallur, Nagapattinam, Ramanathapuram and Kanchipuram districts of Tamil Nadu; Visakhapatnam district of Andhra Pradesh and Valsat district of Gujarat. Infection with WSSV was also detected in wild samples of <i>Penaeus monodon</i> from landing centre in South Andaman district of Andaman and Nicobar Islands.</p> <p><i>Preventive/Control measures taken:</i> The farmers were advised to disinfect the pond after harvest. Proper ploughing of the pond, drying and implementing strict biosecurity measures in the pond were suggested. The farmers were also asked to stock PCR-negative seeds in the next crop.</p> <p>No control measures could be suggested in South Andaman district of Andaman and Nicobar islands, as the samples were from wild.</p>
5	<p>Infection with infectious hypodermal and haematopietic necrosis virus was detected in wild samples of <i>P. monodon</i> from landing centre in South Andaman district of Andaman and Nicobar Islands in the month of December.</p> <p><i>Preventive/Control measures taken:</i> No control measures could be suggested in South Andaman district of Andaman and Nicobar islands, as the samples were from wild.</p>
6	<p>Infection with infectious myonecrosis virus was observed in <i>Litopenaeus vannamei</i> from very limited areas of Junagadh, Anand and Navsari districts of Gujarat; Churu district of Rajasthan; and Nagapattinam district of Tamil Nadu.</p> <p><i>Preventive/Control measures taken:</i> The farmers were advised to disinfect the pond with chlorination after harvest. The farmers were also advised to dry and plough the pond. Further, the farmers were asked to stock the pond with IMNV-free seeds in the next crop and to follow strict biosecurity measures.</p>
7	<p>Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> was detected in <i>Litopenaeus vannamei</i> from very limited areas of Junagadh, Porbandhar and Navsari districts of Gujarat; Ramanathapuram, Kanchipuram, Tituvannamali, Pudukkottai, Nagapattinam, Cuddalore, Thanjavur, Thoothukudi and Thiruvallur districts of Tamil Nadu; and Srikakulam, Visakhapatnam and West Godavari districts of Andhra Pradesh.</p> <p><i>Preventive/Control measures taken:</i> The farmers were advised to stock with EHP-free seeds and follow strict biosecurity measures in the farm. Drying of the ponds and disinfection after each harvest was also suggested. Treatment of pond sediment by the application of quick lime @ 6 ton per hectare was also recommended. Application of probiotics was also recommended to enhance immunity of the shrimps.</p>

2. New aquatic animal health regulations introduced within past six months (with effective date):

Country: **MYANMAR***

 Period: **October - December 2020**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Infection with epizootic haematopoietic necrosis virus	***	***	***		
2. Infection with infectious haematopoietic necrosis virus	***	***	***		
3. Infection with spring viremia of carp virus	***	***	***		
4. Infection with viral haemorrhagic septicaemia virus	***	***	***		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	***	***	***		
6. Infection with red sea bream iridovirus	***	***	***		
7. Infection with koi herpesvirus					
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
11. Carp edema virus disease	***	***	***		
12. Tilapia lake virus (TiLV)	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	/	/	/		
2. Infection with <i>Perkinsus olseni</i>	/	/	/		
3. Infection with abalone herpesvirus	/	/	/		
4. Infection with <i>Xenohaliotis californiensis</i>	/	/	/		
5. Infection with <i>Bonamia ostreae</i>					
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	/	/	/		
7. Acute viral necrosis (in scallops)	/	/	/		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Infection with Taura syndrome virus	-	-	-	III	1
2. Infection with white spot syndrome virus	-	-	-	III	1
3. Infection with yellow head virus genotype 1	-	-	-	III	1
4. Infection with infectious hypodermal and haematopoietic necrosis virus	***	***	***	III	
5. Infection with infectious myonecrosis virus	-	-	-	III	1
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	-	-	-	III	1
7. Infection with <i>Hepatobacter penaei</i> (Necrotising hepatopancreatitis)	***	***	***		
8. Acute hepatopancreatic necrosis disease (AHPND)	-	-	-	III	1
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	***	***	***		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	***	***	***		
11. Viral covert mortality disease (VCMD) of shrimps	***	***	***		

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12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Decapod iridescent virus 1 (DIV1)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	/	/	/		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	/	/	/		
3. Infection with <i>Batrachochytrium salamandrivorans</i>	/	/	/		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

**DISEASES PRESUMED EXOTIC TO THE REGION^b
LISTED BY THE OIE**

Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus; Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	?()	Presence of the disease suspected but not confirmed in a zone
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence

b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	During this period, we have received 102 samples of crustaceans (31 frozen shrimp and 21 soft shell crab for export), live PLs of <i>P. vannamei</i> (8 samples) and <i>M. rosenbergii</i> (7 samples), 4 samples crab (<i>Scylla serrata</i>), 1 sample slipper lobster (<i>Thunus orientalis</i>), 1 sample lobster (<i>Panulurus ornatus</i>), and 20 frozen samples of <i>M. rosenbergii</i> for import and local testing, and found that all samples were negative for WSSV, YHV, MrNV, IMNV, AHPND and TSV.
2	

2. New aquatic animal health regulations introduced within past six months (with effective date):

Country: **NEW CALEDONIA**

 Period: **October - December 2020**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Infection with epizootic haematopoietic necrosis virus	***	***	***		
2. Infection with infectious haematopoietic necrosis virus	***	***	***		
3. Infection with spring viremia of carp virus	***	***	***		
4. Infection with viral haemorrhagic septicaemia virus	***	***	***		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	***	***	***		
6. Infection with red sea bream iridovirus	***	***	***		
7. Infection with koi herpesvirus	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	+	+	+		
10. Enteric septicaemia of catfish	***	***	***		
11. Carp edema virus disease	+	+	+		
12. Tilapia lake virus (TiLV)	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	II	
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000	II	
3. Infection with abalone herpesvirus	0000	0000	0000	II	
4. Infection with <i>Xenohaliotis californiensis</i>	0000	0000	0000	II	
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000	II	
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	II	
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Infection with Taura syndrome virus	0000	0000	0000	III	
2. Infection with white spot syndrome virus	0000	0000	0000	III	
3. Infection with yellow head virus genotype 1	0000	0000	0000	III	
4. Infection with infectious hypodermal and haematopoietic	2013	2013	2013	III	
5. Infection with infectious myonecrosis virus	0000	0000	0000	III	
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	0000	0000	0000	III	
7. Infection with <i>Hepatobacter penaei</i> (Necrotising	0000	0000	0000	III	
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000	III	
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	0000	0000	0000	III	
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000	III	
11. Viral covert mortality disease (VCMD) of shrimps	***	***	***		

12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Decapod iridescent virus 1 (DIV1)	0000	0000	0000	III	
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with <i>Ranavirus</i> species	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	+?	+?	+?		
3. Infection with <i>Batrachochytrium salamandrivorans</i>	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

**DISEASES PRESUMED EXOTIC TO THE REGION^b
LISTED BY THE OIE**

Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus; Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	?()	Presence of the disease suspected but not confirmed in a zone
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence

b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	

2. New aquatic animal health regulations introduced within past six months (with effective date):

A new decree (N° 2020-1225/GNC) was voted by the government of New Caledonia on 11th August 2020. It establishes the list of notifiable diseases for terrestrial and aquatic animals. All the OIE listed diseases are notifiable diseases in New Caledonia, and also other diseases considered as important in NC (such as EHP, DIV1, VCMD for crustaceans).

Country: **NEW ZEALAND**Period: **October - December 2020**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Infection with epizootic haematopoietic necrosis virus	0000	0000	0000	III	
2. Infection with infectious haematopoietic necrosis virus	0000	0000	0000	III	
3. Infection with spring viremia of carp virus	0000	0000	0000	III	
4. Infection with viral haemorrhagic septicaemia virus	0000	0000	0000	III	
5. Infection with <i>Aphanomyces invadans</i> (EUS)	0000	0000	0000	III	
6. Infection with red sea bream iridovirus	0000	0000	0000	III	
7. Infection with koi herpesvirus	0000	0000	0000	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000	III	
9. Viral encephalopathy and retinopathy	0000	0000	0000	III	
10. Enteric septicaemia of catfish	0000	0000	0000	III	
11. Carp edema virus disease	0000	0000	0000	III	
12. Tilapia lake virus (TiLV)	0000	0000	0000	III	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	-(2020)	-(2020)	-(2020)	III	1
2. Infection with <i>Perkinsus olseni</i>	-(2020)	-(2020)	-(2020)	III	2
3. Infection with abalone herpesvirus	0000	0000	0000	III	
4. Infection with <i>Xenohaliotis californiensis</i>	0000	0000	0000	III	
5. Infection with <i>Bonamia ostreae</i>	+	-(2020)	-(2020)	III	3
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	III	
7. Acute viral necrosis (in scallops)	0000	0000	0000	III	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Infection with Taura syndrome virus	0000	0000	0000	III	
2. Infection with white spot syndrome virus	0000	0000	0000	III	
3. Infection with yellow head virus genotype 1	0000	0000	0000	III	
4. Infection with infectious hypodermal and haematopoietic	0000	0000	0000	III	
5. Infection with infectious myonecrosis virus	0000	0000	0000	III	
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	0000	0000	0000	III	
7. Infection with <i>Hepatobacter penaei</i> (Necrotising	0000	0000	0000	III	
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000	III	
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	0000	0000	0000	III	
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000	III	
11. Viral covert mortality disease (VCMD) of shrimps	0000	0000	0000	III	

12. <i>Spiroplasma eriocheiris</i> infection	0000	0000	0000	III	
13. Decapod iridescent virus 1 (DIV1)	0000	0000	0000	III	
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with <i>Ranavirus</i> species	0000	0000	0000	III	
2. Infection with <i>Batrachochytrium dendrobatidis</i>	-(2019)	-(2019)	-(2019)	III	4
3. Infection with <i>Batrachochytrium salamandrivorans</i>	0000	0000	0000	III	
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

**DISEASES PRESUMED EXOTIC TO THE REGION^b
LISTED BY THE OIE**

Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus; Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

		?()	Presence of the disease suspected but not confirmed in a zone
+	Disease reported or known to be present		
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence

b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc), and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	<p>Infection with <i>Bonamia exitiosa</i> 1. Reported in Foveaux Strait, New Zealand via targeted surveillance; 2. Species affected – wild flat oysters (<i>Ostrea chilensis</i>) 3. Clinical signs – low level 4. Pathogen – <i>Bonamia exitiosa</i> 5. Mortality rate – up to 3.5% 6. Economic loss – n/a 7. Geographic extent – Foveaux Strait, Southland 8. Containment measures – n/a; 9. Laboratory confirmation – histopathology and ddPCR (National Institute Water and Atmospheric Research) 10. Publications – None.</p> <p><i>Bonamia exitiosa</i> occurs in commercial oyster beds in Foveaux Strait, Southland where it is highly prevalent and associated with mortalities in mid to late summer. It occurs intermittently around the South Island and in Wellington Harbour (southern end of the North Island) and the North Island. Previous reports of detection in <i>Ostrea chilensis</i> have been from Hauraki Gulf (Auckland region), Tauranga (Bay of Plenty region), the Marlborough Sounds and Wellington Harbour. Annual monitoring of the presence of <i>B. exitiosa</i> infection is undertaken in the flat oyster (<i>O. chilensis</i>) population in the Foveaux Strait, and in February 2020 3.5% of surveyed flat oysters were positive.</p>
2	<p>Infection with <i>Perkinsus olseni</i> was first detected in New Zealand in 1999, in wild wedge shells (<i>Macomona liliana</i>). It was then found in wild populations of New Zealand cockles (<i>Austrovenus stutchburyi</i>), ark shells (<i>Barbatia novaezelandiae</i>) and pipi (<i>Paphies australis</i>) in 2000-2001. In July 2013, <i>P. olseni</i> was detected for the first time in farmed black foot pāua (<i>Haliotis iris</i>), an abalone species native to New Zealand. Further detections were made in wild <i>H. iris</i> populations in 2014. These mollusc species occur widely around the coast of New Zealand, but to date <i>P. olseni</i> has only been detected in these species from the Auckland region northwards. <i>Perkinsus olseni</i> was found for the first time on the South Island in New Zealand green lipped mussels (<i>Perna canaliculus</i>) in a land based aquaculture facility in September 2014, and then in wild New Zealand scallops (<i>Pecten novaezelandiae</i>) in November 2014. Both of these findings were in the Marlborough region, and were incidental and not associated with mortality events. In November 2017, passive surveillance detected <i>P. olseni</i> from New Zealand scallops in two sites within Kaipara harbour, Auckland region, and again was thought to be incidental and not associated with significant pathology in scallops. In August 2018, there was another incidental finding of <i>P. olseni</i> in farmed green lipped mussels (<i>Perna canaliculus</i>) in the Coromandel region (North Island), that was not associated with mortalities. In October 2019, <i>P. olseni</i> was detected in <i>P. canaliculus</i> in a land based aquaculture facility in Nelson that was experiencing low level mortalities. It remains unknown if <i>P. olseni</i> was related to the mortalities in <i>P. canaliculus</i> in this case. In June 2020, <i>P. olseni</i> has been detected in green lipped mussels (<i>P. canaliculus</i>) during routine surveillance in a land based aquaculture facility in Nelson, and it was not associated with unusual mortalities.</p>

<p>3</p>	<p>Infection with <i>Bonamia ostreae</i> 1. Reported in Big Glory Bay, New Zealand via targeted surveillance; 2. Species affected – wild flat oysters (<i>Ostrea chilensis</i>) 3. Clinical signs – n/a 4. Pathogen – <i>Bonamia ostreae</i> 5. Mortality rate – n/a 6. Economic loss – n/a 7. Geographic extent – Big Glory Bay, Stewart Island (Southland) 8. Containment measures – n/a; 9. Laboratory confirmation – ddPCR (National Institute Water and Atmospheric Research), qPCR and nucleotide sequencing (Investigation and Diagnostic Centre - Wallaceville); 10. Publications – None.</p> <p>Infection with <i>Bonamia ostreae</i> was detected for the first time in New Zealand flat oysters (<i>Ostrea chilensis</i>) in January 2015. It was found in two regions in the northern part of the South Island: on one land-based aquaculture facility in the Nelson region, and on two marine farms in the Marlborough region. Since that time, movement controls have been in place to regulate the movement of susceptible shellfish from the northern regions of the South Island and active surveillance has been conducted for the purposes of early detection of spread. In 2016, <i>B. ostreae</i> was detected in both farmed and wild flat oysters within the Marlborough region (the same region as initially reported), and was associated with pathology and mortality in the farmed population. In May 2017 surveillance detected <i>B. ostreae</i> in marine flat oyster farms in Big Glory Bay, Stewart Island (situated in the Southland region, at the southern end of the South Island). No clinical signs or elevated mortality was observed in association with <i>B. ostreae</i> in farmed flat oysters in Big Glory Bay. Following this detection, movement controls to manage risk movements from Stewart Island were issued, and depopulation of all flat oyster farms within areas where <i>B. ostreae</i> had been detected commenced. Depopulation of farms in Big Glory Bay commenced on the 19 June 2017 and was completed September 2017. Depopulation of farms in Marlborough Sounds commenced on the 11 July and was completed in December 2017. In October 2020, surveillance detected <i>B. ostreae</i> in 7/150 wild flat oysters collected from Big Glory Bay, Stewart Island. This detection was not associated with mortality.</p>
<p>4</p>	<p>The first isolation of <i>Batrachochytrium dendrobatidis</i> was made in 1999 in New Zealand. Since then the fungus has been detected both on the North and South Islands in both native and introduced frog species.</p>

2. New aquatic animal health regulations introduced within past six months (with effective date):

Country: **PHILIPPINES***Period: **October - December 2020**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Infection with epizootic haematopoietic necrosis virus	0000	0000	0000		
2. Infection with infectious haematopoietic necrosis virus	0000	0000	0000		
3. Infection with spring viremia of carp virus	0000	0000	0000		
4. Infection with viral haemorrhagic septicaemia virus	0000	0000	0000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	-	-	-	I	1
6. Infection with red sea bream iridovirus	0000	0000	0000	I, III	2
7. Infection with koi herpesvirus	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	(2008)	(2008)	(2008)		
9. Viral encephalopathy and retinopathy	-	-	-	I, III	3
10. Enteric septicaemia of catfish	***	***	***		
11. Carp edema virus disease	0000	0000	0000		
12. Tilapia lake virus (TiLV)	+	+	+	I, III	4
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
3. Infection with abalone herpesvirus	***	***	***		
4. Infection with <i>Xenohaliotis californiensis</i>	***	***	***		
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Infection with Taura syndrome virus	0000	0000	0000	I, III	5
2. Infection with white spot syndrome virus	+	+	+	I, III	6
3. Infection with yellow head virus genotype 1	0000	0000	0000	I, III	7
4. Infection with infectious hypodermal and haematopoietic	+	-	-	I, III	8
5. Infection with infectious myonecrosis virus	0000	0000	0000	I, III	9
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	0000	0000	0000	I, III	
7. Infection with <i>Hepatobacter penaei</i> (Necrotising hepatopancreatitis)	0000	0000	0000	I, III	10
8. Acute hepatopancreatic necrosis disease (AHPND)	+	+	-	I, III	11
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	0000	0000	0000		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	+	+	+	I, III	12
11. Viral covert mortality disease (VCMD) of shrimps	0000	0000	0000		

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12. <i>Spiroplasma eriocheiris</i> infection	0000	0000	0000		
13. Decapod iridescent virus 1 (DIV1)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with <i>Ranavirus</i> species	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	***	***	***		
3. Infection with <i>Batrachochytrium salamandrivorans</i>	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

**DISEASES PRESUMED EXOTIC TO THE REGION^b
LISTED BY THE OIE**

Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus; Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	?()	Presence of the disease suspected but not confirmed in a zone
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence

b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	Infection with <i>Aphanomyces invadans</i> (EUS) EUS was not detected by gross morphological examination in <i>Anguilla bicolor</i> (elver) from Batangas, Bulacan and Zambales. Examination was conducted by BFAR Central Fish Health Laboratory.
2	Red Seabream Iridoviral Disease (RSID) Catfish (grow-out), milkfish (grow-out) and tilapia (fry and juveniles) analyzed using PCR test showed negative results for RSID. Samples were collected from Davao de Oro, Davao del Sur and Nueva Ecija. Examination was conducted by BFAR Central Fish Health Laboratory.

3	<p>Viral Encephalopathy and Retinopathy (VER) Catfish (grow-out), milkfish (grow-out) and tilapia (fry, juveniles and grow-out) analyzed using PCR test showed negative results for VER. Samples were collected from Bukidnon, Cagayan de Oro, Davao de Oro, Davao del Sur and Nueva Ecija. Examination was conducted by BFAR Central Fish Health Laboratory.</p>
4	<p>Tilapia Lake Virus (TiLV) Origin of the disease or pathogen (history of the disease) - detected in 7 farms; Species affected: Tilapia (fry and fingerlings) Pathogen: Tilapia Lake Virus Size of infected areas or names of infected areas: Laguna, Pampanga, Nueva Ecija and Sorsogon; Samples sent to national or international laboratories for confirmation (indicate the name of laboratories): Polymerase Chain Reaction Test (PCR) / BFAR Regional Fish Health Laboratories.</p>
5	<p>Taura Syndrome (TS) <i>P. monodon</i> (grow-out) and <i>P. vannamei</i> (post-larvae, juvenile, adult, grow-out and spawners) analyzed using PCR test showed negative for Taura Syndrome. Samples were collected from Bulacan, Bohol, Cebu, Davao del Sur, Negros Oriental, Pampanga and Zambales. Examinations were conducted by BFAR Central and BFAR Regional Fish Health Laboratories.</p>
6	<p>White Spot Disease (WSD) Origin of the disease or pathogen (history of the disease) - detected in 12 farms Species affected: Mud crab (adult), <i>P. monodon</i> (post-larvae, juvenile, adult, grow-out and spawner), <i>P. vannamei</i> (juvenile, adult and grow-out); Pathogen: White Spot Syndrome Virus Size of infected areas or names of infected areas: Agusan del Norte, Cagayan, Camarines Sur, Iloilo, Occidental Mindoro, Oriental Mindoro, Pangasinan, Negros Occidental, and Surigao del Sur and Sorsogon; Samples sent to national or international laboratories for confirmation (indicate the name of laboratories): Polymerase Chain Reaction Test (PCR)/ BFAR Regional and SEAFDEC Fish Health Laboratories.</p>
7	<p>Yellow Head Virus (YHV) <i>P. monodon</i> and <i>P. vannamei</i> analyzed using PCR test showed negative result for Yellow Head Virus. Samples were collected from Bulacan, Bohol, Cebu, Davao del Sur and Negros Oriental. Examinations were conducted by BFAR Central and BFAR Regional Fish Health Laboratories.</p>
8	<p>Infectious Hypodermal and Hematopoietic Necrosis (IHHNV) Origin of the disease or pathogen (history of the disease) – detected in 2 farms Species affected: <i>P. monodon</i> (post-larvae) and <i>P. vannamei</i> (adult) Pathogen: Infectious Hypodermal and Hematopoietic Virus Size of infected areas or names of infected areas: Pangasinan and Iloilo; Samples sent to national or international laboratories for confirmation (indicate the name of laboratories): Polymerase Chain Reaction Test (PCR) / BFAR Regional and SEAFDEC Fish Health Laboratories.</p>

9	<p>Infectious Myonecrosis (IMN) <i>P. monodon</i> (grow-out), <i>P. vannamei</i> (juvenile, adult, grow-out and broodstock) and hermit crab analyzed using PCR test showed negative for Infectious Myonecrosis. Samples were collected from Bulacan, Bohol, Cebu, Davao del Sur and Negros Oriental. Examinations were conducted by BFAR Central and BFAR Regional Fish Health Laboratories.</p>
10	<p>Necrotising Hepatopancreatitis (NHP) <i>P. vannamei</i> (juvenile, adult, grow-out and broodstock) analyzed using PCR test showed negative for Necrotising hepatopancreatitis. Samples were collected from Cebu, Davo del Sur and Negros Oriental. Examinations were conducted by BFAR Central and BFAR Regional Fish Health Laboratories.</p>
11	<p>Acute Hepatopancreatic Necrosis Disease (AHPND) Origin of the disease or pathogen (history of the disease) – detected in 7 farms Species affected: <i>P. monodon</i> (post-larvae, adult and grow-out) and <i>P. vannamei</i> (adult and grow-out) Pathogen: AHPND <i>Vibrio parahaemolyticus</i> Size of infected areas or names of infected areas: Camarines Sur, Iloilo, Occidental Mindoro and Pangasinan; Samples sent to national or international laboratories for confirmation (indicate the name of laboratories): Polymerase Chain Reaction Test (PCR)/ BFAR Regional and SEAFDEC Fish Health Laboratories.</p>
12	<p>Hepatopancreatic Microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP) Origin of the disease or pathogen (history of the disease) – detected in 3 farms Species affected: <i>P. monodon</i> (post-larvae and grow-out) and <i>P. vannamei</i> (post-larvae and grow-out) Pathogen: <i>Enterocytozoon hepatopenaei</i> Size of infected areas or names of infected areas: Davao del Sur and Iloilo; Samples sent to national or international laboratories for confirmation (indicate the name of laboratories): Polymerase Chain Reaction Test (PCR) / BFAR Regional and SEAFDEC Fish Health Laboratories.</p>

2. New aquatic animal health regulations introduced within past six months (with effective date):

Country: **SINGAPORE***

Period: **October - December 2020**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Infection with epizootic haematopoietic necrosis virus	0000	0000	0000		
2. Infection with infectious haematopoietic necrosis virus	0000	0000	0000		
3. Infection with spring viremia of carp virus	0000	0000	0000		
4. Infection with viral haemorrhagic septicaemia virus	0000	0000	0000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	0000	0000	0000		
6. Infection with red sea bream iridovirus	(2019)	(2019)	(2019)		
7. Infection with koi herpesvirus	(2019)	(2019)	(2019)		
Non OIE-listed diseases					
8. Grouper iridoviral disease	(2014)	(2014)	(2014)		
9. Viral encephalopathy and retinopathy	(2020)	(2020)	(2020)		
10. Enteric septicaemia of catfish	****	****	****		
11. Carp edema virus disease	****	****	****		
12. Tilapia lake virus (TiLV)	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	****	****	****		
2. Infection with <i>Perkinsus olseni</i>	****	****	****		
3. Infection with abalone herpesvirus	****	****	****		
4. Infection with <i>Xenohaliotis californiensis</i>	****	****	****		
5. Infection with <i>Bonamia ostreae</i>	****	****	****		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	****	****	****		
7. Acute viral necrosis (in scallops)	****	****	****		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Infection with Taura syndrome virus	0000	0000	0000		
2. Infection with white spot syndrome virus	(2018)	(2018)	(2018)		
3. Infection with yellow head virus genotype 1	0000	0000	0000		
4. Infection with infectious hypodermal and haematopoietic necrosis virus	0000	0000	0000		
5. Infection with infectious myonecrosis virus	0000	0000	0000		
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	****	****	****		
7. Infection with <i>Hepatobacter penaei</i> (Necrotising hepatopancreatitis)	0000	0000	0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	****	****	****		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	****	****	****		
11. Viral covert mortality disease (VCMD) of shrimps	****	****	****		

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12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Decapod iridescent virus 1 (DIV1)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with <i>Ranavirus</i> species	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	(2020)	(2020)	(2020)		
3. Infection with <i>Batrachochytrium salamandrivorans</i>	(2018)	(2018)	(2018)		
ANY OTHER DISEASES OF IMPORTANCE					
1. Scale Drop Disease Virus	+	(2020)	+	III	1
2. <i>Streptococcus iniae</i>	(2020)	(2020)	+	III	1
3. <i>Streptococcus agalactiae</i>	+	(2020)	(2020)	III	2

DISEASES PRESUMED EXOTIC TO THE REGION^b
LISTED BY THE OIE

Finfish: Infection with HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	?()	Presence of the disease suspected but not confirmed in a zone
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence

b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	<p>In October 2020, Scale Drop Disease Virus (SDDV) infection was diagnosed through a combination of PCR and histopathology in a batch of diseased Asian seabass submitted from an offshore commercial fish farm. The farm's fish health manager was informed of the detection and advised to carry out heat treatment for affected tanks.</p> <p>In December 2020, <i>Streptococcus iniae</i> was detected through bacterial isolation and PCR and histopathology in a batch of diseased Asian seabass submitted from another offshore floating netcage farm. SDDV was also detected from organ samples of the same specimens of fish by PCR. The on-site fish health manager was advised that prior SDDV infection probably weakened immunity leading to secondary <i>Streptococcus</i> infection. Antibiotic sensitivity test results for the <i>Streptococcus</i> were provided to the manager to consider in their potential use of antimicrobial treatment.</p>

2	<p><i>Streptococcus agalactiae</i> (serotype Ia) was diagnosed by a combination of bacterial culture, PCR and histopathology in a batch of diseased freshwater tilapia from a pond located within a recreational sporting facility. The submitter promptly removed dead and moribund fish as a short-term mitigation measure to reduce further transmission. The submitter was also advised to consider reducing stocking density as a longer-term measure.</p>
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2. New aquatic animal health regulations introduced within past six months (with effective date):

Country: **SRI LANKA***

 Period: **October - December 2020**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Infection with epizootic haematopoietic necrosis virus	***	***	***		
2. Infection with infectious haematopoietic necrosis virus	***	***	***		
3. Infection with spring viremia of carp virus	000	000	000	111	1
4. Infection with viral haemorrhagic septicaemia virus	***	***	***		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	000	000	000	11	
6. Infection with red sea bream iridovirus	000	000	000	111	1
7. Infection with koi herpesvirus	000	000	000	111	1
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	000	000	000	111	1
10. Enteric septicaemia of catfish	***	***	***		
11. Carp edema virus disease	***	***	***		
12. Tilapia lake virus (TiLV)	000	000	000	111	1
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Infection with abalone herpesvirus	***	***	***		
4. Infection with <i>Xenohaliotis californiensis</i>	***	***	***		
5. Infection with <i>Bonamia ostreae</i>	***	***	***		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Infection with Taura syndrome virus	000	000	000	111	1
2. Infection with white spot syndrome virus	+	+	+	111	2
3. Infection with yellow head virus genotype 1	000	000	000	111	1
4. Infection with infectious hypodermal and haematopoietic necrosis virus	000	000	000	111	1
5. Infection with infectious myonecrosis virus	000	000	000	111	1
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	***	***	***		
7. Infection with <i>Hepatobacter penaei</i> (Necrotising hepatopancreatitis)	000	000	000	111	1
8. Acute hepatopancreatic necrosis disease (AHPND)	000	000	000	111	1
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	***	***	***		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	***	***	***		
11. Viral covert mortality disease (VCMD) of shrimps	***	***	***		

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12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Decapod iridescent virus 1 (DIV1)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with <i>Ranavirus</i> species	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	***	***	***		
3. Infection with <i>Batrachochytrium salamandrivorans</i>	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION^b

LISTED BY THE OIE

Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	?()	Presence of the disease suspected but not confirmed in a zone
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence

b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	<p>There are four labs operated in Sri Lanka for aquatic animal diseases diagnosis. Central Veterinary Investigation Center (CVIC) of Veterinary Research Institute (VRI) is under Department of Animal Production and Health. National Aquatic Resources Research and Development Agency (NARA), National Aquaculture Development Authority (NAQDA) and Center for Aquatic Animal Disease Diagnosis and Research (CADDAR) are the other major laboratories.</p> <p>The PCR test for Spring viraemia of carp (SVC) , Koi herpesvirus disease (KHV) ,Red seabream iridoviral disease (RSID), Viral encephalopathy and retinopathy (VNN) , Megalocytivirus and Tilapia lake virus (TiLV) are conducted by CVIC according to OIE manual or reputed scientific literature for import and export susceptible fish species on countries requirements.</p> <p>CVIC/VRI conducted PCR test for Taura syndrome virus, white spot syndrome virus, yellow head virus genotype 1, infectious hypodermal and haematopoietic necrosis virus, infectious myonecrosis virus according to OIE manual. PCR test for <i>Hepatobacter penaei</i> (Necrotising hepatopancreatitis) and Acute hepatopancreatic necrosis disease were conducted using IQ2000 kits. The PCR test for above shrimp diseases were conducted by CVIC for imported brood stocks with NAQDA laboratory. Other laboratories routinely (NARA, NAQDA and CADDAR) conduct PCR test for mainly for WSSV in farmed shrimps.</p> <p>CVIC is involved in proficiency testing (PT) for WSSV,IHHNV, Vp-AHPND, YHV-1, TSV, IMNV,RSIV, KHV (CyHV-3),VNN and SVCV with CSIRO Australia. NAQDA and NARA were conducted PT testing for WSSV. The CADDAR was conducted PT for RSIV and KHV (CyHV-3).</p>
2	<p>The first occurrence of WSSV was in 1996. The main species was <i>Penaeus monodon</i>. <i>Penaeus vannamei</i> is recently introduced in 2018-2019. At present WSSV incidence is low due to best management practices and crop calendar implemented by NAQDA. The affected shrimp farms are mainly located in North Western and eastern Provinces. PCR test for WSSV was conducted by PCR Laboratory of Central Veterinary Investigation Center (CVIC) of Veterinary Research Institute (VRI), National Aquatic Resource Research Development Agency (NARA), National Aquaculture Development Authority of Sri Lanka (NAQDA), PCR Laboratory of Center for Aquatic Animal Diseases Diagnosis and Research (CADDAR) and few private labs.</p>

2. New aquatic animal health regulations introduced within past six months (with effective date):

Country: **THAILAND***Period: **October - December 2020**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Infection with epizootic haematopoietic necrosis virus	0000	0000	0000	III	
2. Infection with infectious haematopoietic necrosis virus	0000	0000	0000	III	
3. Infection with spring viremia of carp virus	0000	0000	0000	III	
4. Infection with viral haemorrhagic septicaemia virus	0000	0000	0000	III	
5. Infection with <i>Aphanomyces invadans</i> (EUS)	(2009)	(2009)	(2009)	II	
6. Infection with red sea bream iridovirus	0000	0000	0000	III	
7. Infection with koi herpesvirus	(2011)	(2011)	(2011)	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-		
9. Viral encephalopathy and retinopathy	(2019)	(2019)	(2019)	III	
10. Enteric septicaemia of catfish	0000	0000	0000	II	
11. Carp edema virus disease	0000	0000	0000		
12. Tilapia lake virus (TiLV)	-	-	-	III	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000	III	
3. Infection with abalone herpesvirus	0000	0000	0000		
4. Infection with <i>Xenohaliotis californiensis</i>	0000	0000	0000		
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Infection with Taura syndrome virus	(2019)	(2019)	(2019)	III	
2. Infection with white spot syndrome virus	-	-	-	III	
3. Infection with yellow head virus genotype 1	-	-	-	III	
4. Infection with infectious hypodermal and haematopoietic necrosis virus	-	-	-	III	
5. Infection with infectious myonecrosis virus	0000	0000	0000	III	
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	-	-	-	III	
7. Infection with <i>Hepatobacter penaei</i> (Necrotising hepatopancreatitis)	(2005)	(2005)	(2005)	III	
8. Acute hepatopancreatic necrosis disease (AHPND)	+?()	+?()	-	III	1
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	0000	0000	0000	III	
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	+?()	+?()	+?()	III	2

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11. Viral covert mortality disease (VCMD) of shrimps	(2014)	(2014)	(2014)	III	
12. <i>Spiroplasma eriocheiris</i> infection	0000	0000	0000		
13. Decapod iridescent virus 1 (DIV1)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with <i>Ranavirus</i> species	(2018)	(2018)	(2018)	III	
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000		
3. Infection with <i>Batrachochytrium salamandrivorans</i>	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION^b

LISTED BY THE OIE

Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus; Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	?()	Presence of the disease suspected but not confirmed in a zone
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence

b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	A total of 1,858 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 31 specimens or 1.67% recorded as PCR positive for AHPND . Shrimp farms with positive testing results have been subjected to shrimp health management control and pond improvement.
2	A total of 2,365 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 166 specimens or 7.02% recorded as PCR positive for EHP . Shrimp farms with positive testing results have been subjected to shrimp health management control and pond improvement.

2. New aquatic animal health regulations introduced within past six months (with effective date):

Country: **VIETNAM***

 Period: **October - December 2020**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Infection with epizootic haematopoietic necrosis virus	0000	0000	0000		
2. Infection with infectious haematopoietic necrosis virus	0000	0000	0000		
3. Infection with spring viremia of carp virus	0000	0000	0000		
4. Infection with viral haemorrhagic septicaemia virus	0000	0000	0000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	-	-	-		
6. Infection with red sea bream iridovirus	0000	0000	0000		
7. Infection with koi herpesvirus	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10. Enteric septicaemia of catfish	+	+	+	I, III	1
11. Carp edema virus disease	0000	0000	0000		
12. Tilapia lake virus (TiLV)	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	(2013)	(2013)	(2013)		
3. Infection with abalone herpesvirus	0000	0000	0000		
4. Infection with <i>Xenohaliotis californiensis</i>	0000	0000	0000		
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Infection with Taura syndrome virus	0000	0000	0000		
2. Infection with white spot syndrome virus	+	+	+	I, III	2
3. Infection with yellow head virus genotype 1	0000	0000	0000		
4. Infection with infectious hypodermal and haematopoietic necrosis virus	0000	0000	0000		
5. Infection with infectious myonecrosis virus	0000	0000	0000		
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	-	-	-		
7. Infection with <i>Hepatobacter penaei</i> (Necrotising hepatopancreatitis)	0000	0000	0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	+	+	+	I, III	3
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	0000	0000	0000		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000		

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11. Viral covert mortality disease (VCMD) of shrimps	0000	0000	0000		
12. <i>Spiroplasma eriocheiris</i> infection	0000	0000	0000		
13. Decapod iridescent virus 1 (DIV1)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with <i>Ranavirus</i> species	0000	0000	0000		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000		
3. Infection with <i>Batrachochytrium salamandrivorans</i>	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					

**DISEASES PRESUMED EXOTIC TO THE REGION^b
LISTED BY THE OIE**

Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	?()	Presence of the disease suspected but not confirmed in a zone
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence

b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases

1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

Comment No.	
1	<p>Enteric Septicaemia of Catfish (<i>Edwardsiella ictaluri</i>)</p> <p>Infection found in some small scale catfish (<i>Pangasius micronema</i>, <i>P. hypophthalmus</i>) farms.</p>

<p>2</p>	<p>Infection with white spot syndrome virus (White Spot Disease; WSD) Pathogen: White spot syndrome virus (WSSV) Species affected: <i>Penaeus monodon</i> and <i>Litopenaeus vannamei</i>; Name of affected area: reported and limited in some small scale farms with low biosecurity control. Shrimps were affected at 10-100 days after stocking; Mortality rate: average to high; Clinical signs: lethargic or moribund shrimps aggregated at pond surface and edges, slow to erratic swimming behavior, overall body color often reddish, minute to large (0.5-2.0 mm diameter) white inclusions embedded in the cuticle; Control measures: early harvest, strict isolation of infected ponds from movement, strengthened control of transportation, cleaning and disinfection of infected ponds and farming tools using Calcium hypochlorite (chlorine).</p>
<p>3</p>	<p>Acute Hepatopancreatic Necrosis Disease (AHPND) Pathogen: <i>Vibrio parahaemolyticus</i> with Phage A3 Species affected: <i>Penaeus monodon</i> and <i>Litopenaeus vannamei</i> (10-45 DOC) Name of affected area: reported and limited to some small-scale farms with low biosecurity control. Mortality rate: ; Clinical signs: shrimps become lethargic with soft, darkened shells, mottling of the carapace. Pathology is limited to hepatopancreas. Control measures: early harvest, strict isolation of infected ponds from movement and transport controls, cleaning and disinfection of infected ponds and farming tools using Calcium hypochlorite (chlorine).</p>

2. New aquatic animal health regulations introduced within past six months (with effective date): None

List of Diseases in the Asia-Pacific Quarterly Aquatic Animal Disease Report (Beginning 2020)

1. DISEASES PREVALENT IN THE REGION	
1.1 FINFISH DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with epizootic haematopoietic necrosis virus	1. Grouper iridoviral disease
2. Infection with infectious haematopoietic necrosis virus	2. Viral encephalopathy and retinopathy
3. Infection with spring viremia of carp virus	3. Enteric septicaemia of catfish
4. Infection with viral haemorrhagic septicaemia virus	4. Carp edema virus disease
5. Infection with <i>Aphanomyces invadans</i> (EUS)	5. Tilapia lake virus (TiLV)
6. Infection with red sea bream iridovirus	
7. Infection with koi herpesvirus	
1.2 MOLLUSC DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with <i>Bonamia exitiosa</i>	1. Infection with <i>Marteilioides chungmuensis</i>
2. Infection with <i>Perkinsus olseni</i>	2. Acute viral necrosis (in scallops)
3. Infection with abalone herpesvirus	
4. Infection with <i>Xenohaliotis californiensis</i>	
5. Infection with <i>Bonamia ostreae</i>	
1.3 CRUSTACEAN DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with Taura syndrome virus	1. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)
2. Infection with white spot syndrome virus	2. Viral covert mortality disease (VCMD) of shrimps
3. Infection with yellow head virus genotype 1	3. <i>Spiroplasma eriocheiris</i> infection
4. Infection with infectious hypodermal and haematopoietic necrosis	4. Decapod iridescent virus 1 (DIV1)
5. Infection with infectious myonecrosis virus	
6. Infection with <i>Macrobrachium rosenbergii</i> nodavirus (White Tail disease)	
7. Infection with <i>Hepatobacter penaei</i> (Necrotising hepatopancreatitis)	
8. Acute hepatopancreatic necrosis disease (AHPND)	
9. Infection with <i>Aphanomyces astaci</i> (Crayfish plague)	
1.4 AMPHIBIAN DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with <i>Ranavirus</i> species	
2. Infection with <i>Bachtracochytrium dendrobatidis</i>	
3. Infection with <i>Batrachocytrium salamandrivorans</i>	
2. DISEASES PRESUMED EXOTIC TO THE REGION	
2.1 Finfish	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with HPRdeleted or HPR0 salmon anaemia virus	1. Channel catfish virus disease
2. Infection with salmon pancreas disease virus	
3. Infection with <i>Gyrodactylus salaris</i>	
2.2 Molluscs	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with <i>Marteilia refringens</i>	
2. Infection with <i>Perkinsus marinus</i>	

Recent Aquatic Animal Health Related Publications

OIE Aquatic Animal Health Code, 22nd Edition, 2019. The OIE Aquatic Animal Health Code (the Aquatic Code) provides standards for the improvement of aquatic animal health worldwide. It also includes standards for the welfare of farmed fish and use of antimicrobial agents in aquatic animals. The sanitary measures in the Aquatic Code should be used by the Competent Authorities of importing and exporting countries for early detection, reporting and control of pathogenic agents in aquatic animals (amphibians, crustaceans, fish and molluscs) and to prevent their spread via international trade in aquatic animals and their products, while avoiding unjustified sanitary barriers to trade. The standards in the Aquatic Code have been formally adopted by the World Assembly of OIE Delegates, which constitutes the organisation's highest decision-making body. This 22nd edition incorporates modifications to the Aquatic Code agreed at the 87th General Session in May 2019. This edition includes the following updates: Glossary: revised definition for 'basic biosecurity conditions'; Chapter 1.5. 'Criteria for listing species as susceptible to infection with a specific pathogen'; Chapter 8.3. 'Infection with Ranavirus'; Chapter 9.1. 'Acute hepatopancreatic necrosis disease'; Articles 10.2.1. and 10.2.2. of Chapter 10.2. 'Infection with *Aphanomyces invadans*'; Article 10.5.2. of Chapter 10.5. 'Infection with salmonid alphavirus'; Articles 10.6.1., 10.6.2. and 10.6.8. of Chapter 10.6. 'Infection with infectious haematopoietic necrosis virus'; Article 10.7.2. of Chapter 10.7. 'Infection with koi herpesvirus'; Article 10.9.2. of Chapter 10.9. 'Infection with spring viraemia of carp virus'; Article X.X.8. of all disease-specific chapters (except for Article 10.3.8. of Chapter 10.3. 'Infection with *Gyrodactylus salaris*' due to the nature of the pathogenic agent) and Article 10.4.12. of Chapter 10.4. 'Infection with infectious salmon anaemia virus'. The Aquatic Animal Health Code is available for free download <http://www.oie.int/en/standard-setting/aquatic-code/access-online/>

OIE Manual of Diagnostic Tests for Aquatic Animals, 2019. The purpose of the Manual of Diagnostic Tests for Aquatic Animals (the Aquatic Manual) is to provide a standardised approach to the diagnosis of the diseases listed in the Aquatic Code, to facilitate health certification for trade in aquatic animals and aquatic animal products. Although there are many publications on the diagnosis and control of aquatic animal diseases, the Aquatic Manual is a key reference document describing the methods relevant to the OIE-listed diseases and other important diseases for use by aquatic animal health laboratories around the world. Adoption of the specified methods will help to increase efficiency of laboratories and to promote improvements in aquatic animal health world-wide. The manual is available for free download at <http://www.oie.int/en/standard-setting/aquatic-manual/access-online/>

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**Instructions on how to fill in the
QUARTERLY AQUATIC ANIMAL DISEASE REPORT**

(Revised during the Provisional Meeting of the AG¹, Bangkok, Thailand, November 7-9, 2001)

Symbols used in the report are similar to those used by FAO, OIE and WHO for the *Animal Health Yearbook*. Please read these instructions carefully before you fill in the forms.

Under the heading 'Country', please enter your country.

Under the heading 'Period', please enter the reporting quarter (months) and year, e.g. January to March 2002.

Under the heading "Month", please enter months of a quarter in question, e.g. January, February, March.

In "Level of Diagnosis", please enter the Level of Diagnosis used, e.g., I, II, or III. See Section C below.

In "Epidemiological Comment Numbers", please enter the serial numbers, and write your corresponding epidemiological comments on page 2. See Section D below for guidance on the subjects to be covered under Epidemiological Comments.

If an unknown disease of serious nature appears, please fill in the last line of the form, with additional information on "Level of Diagnosis" and "Epidemiological Comment Numbers" as above.

Please do not fail to enter "****" or "-" as appropriate against each disease, which is essential to incorporate your information on the *Quarterly Aquatic Animal Disease Report (Asia and Pacific Region.)*

If you have new aquatic animal health regulations introduced within the past six months, please describe them under Section 2 on page 2.

Please use the following symbols to fill in the forms.

A. Symbols used for negative occurrence are as follows:

*** This symbol means that no information on a disease in question is available due to reasons such as lack of surveillance systems or expertise.

- This symbol is used when a disease is not reported during a reporting period. However the disease is known to be present in the country (date of last outbreak is not always known).

0000 This symbol is used when disease surveillance is in place and a disease has never been reported.

(year) Year of last occurrence (a disease has been absent since then).

B. Symbols used for positive occurrence are shown below.

+ This symbol means that the disease in question is reported or known to be present.

+? This symbol is used when the presence of a disease is suspected but there is no recognised occurrence of clinical signs of the disease in the country. Serological evidence and isolation of the causal agent may indicate the presence of the disease, but no confirmed report is available. **It is important that the species of animals to which it applies is indicated in the "Comments" on page 2 of the form if you use this symbol.**

+() These symbols mean that a disease is present in a very limited zone or zones as exceptional cases. It may also include the occurrence of a disease in a quarantine area.

? This symbol is used only when a disease is suspected by the reporting officer, but the presence of the disease has not been confirmed.

+?() These symbols mean that confirmed infection/infestation is limited to one of more zones of the country, but no clinical disease.

?() These symbols mean the presence of the disease suspected but not confirmed in a zone.

¹ Regional Advisory Group on Aquatic Animal Health (AG)

C. Levels of Diagnosis

LEVEL	SITE	ACTIVITY
I	Field	Observation of animal and the environment Clinical examination
II	Laboratory	Parasitology Bacteriology Mycology Histopathology
III	Laboratory	Virology Electron microscopy Molecular biology Immunology

D. Subjects to be covered in the Epidemiological Comments

1. Origin of the disease or pathogen (history of the disease);
2. Mortality rate (high/low or decreasing/increasing);
3. Size of infected areas or names of infected areas;
4. Death toll (economic loss, etc.);
5. Preventive/control measures taken;
6. Disease characteristics (unusual clinical signs or lesions);
7. Pathogen (isolated/sero-typed);
8. Unknown diseases (describe details as much as possible);
9. Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); and
10. Published paper (articles in journals)/web site, etc.

IMPORTANT

Please send the **original report** or the best photocopy thereof to the OIE and/or NACA **by fax** and **registered airmail**. Faxed reports are needed to check whether or not the reports are all right. The deadline for submission of the reports is **two and a half months (75 days)** after the end of the quarterly period.

If you require further explanation, please write to the OIE (Tokyo), NACA (Bangkok) or FAO (Rome) at the following addresses, respectively:

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Notes

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