



# QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

January – March 2016



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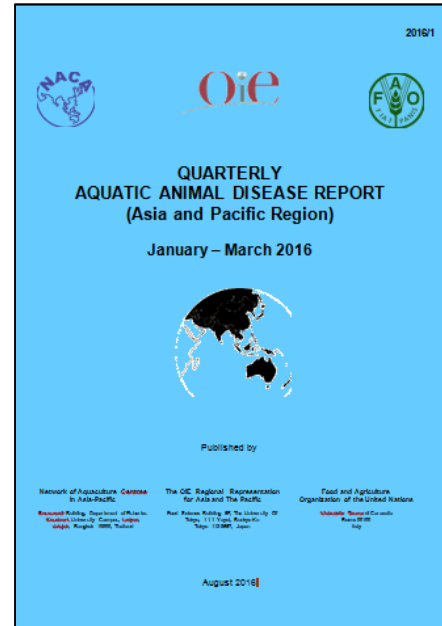
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## Foreword

### Changes in QAAD Asia-Pacific Report

Starting this quarter, and as announced during the last quarter of 2015, QAAD Report will not be printed as hard copy but will rather be available online ([www.enaca.org](http://www.enaca.org) and [www.rr-asia.oie.int](http://www.rr-asia.oie.int)) for free download. Also, this is the first issue wherein QAAD Reports by NACA and OIE Regional Representation for Asia and the Pacific (OIE-RRAP) has been merged into ONE report. Thus, the current report now covers all member governments participating in NACA's Asia Regional Aquatic Animal Health Programme as well as the rest of the OIE member countries in the Asia-Pacific region. Although the coverage is wider, compared to the previous NACA QAAD Report, not all participating countries are regularly submitting the quarterly reports. As such, we are eagerly requesting all participating countries to resume their disease reporting either to NACA or OIE-RRAP.



Three new diseases were added to the QAAD list for reporting, commencing in this first quarter of 2016.

These include two OIE-listed diseases (Infection with *Bonamia ostreae* and Crayfish plague) and one non-OIE listed disease (Hepatopancreatic microsporidiosis caused by *Enterocytozoon hepatopenaei* [HPM-EHP]). These diseases have been reported in some participating countries since last year. Moreover, the Acute hepatopancreatic necrosis disease (AHPND) which was listed under non-OIE diseases in 2015, is now listed under OIE diseases for Crustaceans. Listing of AHPND in OIE was approved and endorsed during the May 2015 General Session of OIE. We therefore encourage all NACA National Coordinators and OIE Aquatic Focal Points to use the most recent QAAD Reporting Form, which has been sent to you by OIE-RRAP since April 2016. Please contact NACA ([eduardo@enaca.org](mailto:eduardo@enaca.org)) or OIE-RRAP ([rr.asiapacific@oie.int](mailto:rr.asiapacific@oie.int)) if you want a copy of the form in Excel format.

Again, on behalf of NACA and OIE-RRAP, we would like to reiterate that it is crucial for OIE member countries to recognise their obligation of immediate notification as well as regular reports to the OIE World Animal Health Information System (WAHIS), apart from QAAD report.

## **Reports Received by the NACA and OIE-RRAP**

**(Officially prepared by OIE Aquatic Focal Point/NACA National Coordinator, and submitted by OIE Delegate)**

Country: **AUSTRALIA\***Period: **January - March 2016**

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	-(2012)	-(2012)	-(2012)		1
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	-(2014)	-(2014)	+	III	2
6. Red seabream iridoviral disease (RSID)	0000	0000	0000		
7. Koi herpesvirus disease (KHV)	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	-(2015)	+	+	III	3
10. Enteric septicaemia of catfish	-(2014)	(2014)	(2014)		4
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Infection with <i>Bonamia exitiosa</i>	+	-(2016)	-(2016)	III	5
2. Infection with <i>Perkinsus olseni</i>	+	-(2016)	+	III	6
3. Infection with abalone herpesvirus	-(2011)	-(2011)	-(2011)		7
4. Infection with <i>Xenohaliotis californiensis</i>	0000	0000	0000		
5. Infection with <i>Bonamia ostreae</i>					
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	***	***	***		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	0000	0000	0000		
3. Yellowhead disease (YHD)	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	-(2015)	-(2015)	-(2015)		8
5. Infectious myonecrosis (IMN)	0000	0000	0000		
6. White tail disease (MrNV)	-(2008)	-(2008)	-(2008)		9
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
9. Crayfish plague	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	***	***	***		

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

AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus	-(2008)	-(2008)	-(2008)		10
2. Infection with <i>Batrachochytrium dendrobatidis</i>	-(2013)	-(2013)	-(2013)		11
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1. Hepatopancreatitis in prawns	+	+	-(2016)	III	12

**DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup>  
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	<b>Epizootic haematopoietic necrosis</b> 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.

<p>2</p>	<p><b>Infection with <i>Aphanomyces invadans</i> (EUS)</b></p> <ol style="list-style-type: none"> <li>1. <b>Reported in New South Wales</b> in March; passive surveillance;</li> <li>2. <b>Species affected</b> – Murray cod (<i>Maccullochella peelii</i>);</li> <li>3. <b>Clinical signs</b> – ulceration consistent with <i>A. invadans</i> infection;</li> <li>4. <b>Pathogen</b> – <i>Aphanomyces invadans</i>;</li> <li>5. <b>Mortality rate</b> – chronic low mortality (5-20 fish per day);</li> <li>6. <b>Economic loss</b> – N/A;</li> <li>7. <b>Geographic extent</b> – one farm;</li> <li>8. <b>Containment measures</b> – quarantine; measures to ensure only healthy fish sold, no discharge of potentially infected water from farm;</li> <li>9. <b>Laboratory confirmation</b> – histopathology and PCR;</li> <li>10. <b>Publications</b> – None.</li> </ol> <p>Infection with <i>Aphanomyces invadans</i> (EUS) is known to have occurred previously in Queensland (last reported 2014), Western Australia (last reported 2013), the Northern Territory (last reported 2012), Victoria (last reported 2012), and South Australia (last reported 2008). Passive surveillance and never reported in Tasmania. No information available in the Australian Capital Territory.</p>
<p>3</p>	<p><b>Viral encephalopathy and retinopathy</b></p> <ol style="list-style-type: none"> <li>1. <b>Reported in Queensland</b> in February and March; passive surveillance;</li> <li>2. <b>Species affected</b> – Queensland grouper (<i>Epinephelus lanceolatus</i>) in February, jungle perch (<i>Kuhlia rupestris</i>) in March;</li> <li>3. <b>Clinical signs</b> – grouper moribund and rolling over at water surface; perch lethargic and anorexic;</li> <li>4. <b>Pathogen</b> – Betanodavirus;</li> <li>5. <b>Mortality rate</b> – 4% grouper; N/A perch;</li> <li>6. <b>Economic loss</b> – N/A;</li> <li>7. <b>Geographic extent</b> – one farm on each occasion;</li> <li>8. <b>Containment measures</b> – grouper N/A; on perch farm, pond water disinfected on discharge;</li> <li>9. <b>Laboratory confirmation</b> – histopathology and IHC;</li> <li>10. <b>Publications</b> – None.</li> </ol> <p>Viral encephalopathy and retinopathy is known to have occurred previously in the Northern Territory (last reported 2013), Western Australia (last reported 2013), New South Wales (last reported 2010), South Australia (last reported 2010) and Tasmania (last reported 2000). Passive surveillance and never reported in Victoria. No information available in the Australian Capital Territory.</p>
<p>4</p>	<p><b>Enteric septicaemia of catfish (<i>Edwardsiella ictaluri</i>)</b> has been reported from clinically normal fish from a single river in Queensland (October 2014). This is 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: Northern Territory in closed aquarium (last reported 2011) and in PC2 containment facilities in Tasmania (last reported 2001) and Queensland (last reported 2008). Passive surveillance and never reported in New South Wales, South Australia, Victoria or Western Australia. No information available this period in the Australian Capital Territory.</p>



5	<p><b>Infection with <i>Bonamia exitiosa</i></b></p> <ol style="list-style-type: none"> <li>1. <b>Reported in Victoria and South Australia</b> in January; active surveillance;</li> <li>2. <b>Species affected</b> – native flat oysters (<i>Ostrea angasi</i>);</li> <li>3. <b>Clinical signs</b> – N/A;</li> <li>4. <b>Pathogen</b> – <i>Bonamia exitiosa</i>;</li> <li>5. <b>Mortality rate</b> – up to 80% in Victoria, subclinical infection in South Australia;</li> <li>6. <b>Economic loss</b> – N/A;</li> <li>7. <b>Geographic extent</b> – two farms in one aquaculture reserve in Victoria; multiple locations in South Australia;</li> <li>8. <b>Containment measures</b> – in Victoria, prohibition of oyster movements onto and off site (aside from for direct human consumption);</li> <li>9. <b>Laboratory confirmation</b> – histopathology and PCR (genus-specific Taqman qPCR followed by OIE <i>Bonamia</i> genus-specific conventional PCR and sequencing of PCR amplicons using OIE <i>Bonamia</i> sp. PCR test);</li> <li>10. <b>Publications</b> – OIE immediate notification reference number 19642 on 7 January 2016.</li> </ol> <p>Infection with <i>Bonamia exitiosa</i> has never been confirmed from Australia previously. Passive surveillance in Queensland, New South Wales, Tasmania, Northern Territory, and Western Australia. No information available for the Australian Capital Territory (no marine water responsibility).</p>
6	<p><b>Infection with <i>Perkinsus olseni</i></b></p> <ol style="list-style-type: none"> <li>1. <b>Reported in Western Australia</b> in January and March; targeted surveillance;</li> <li>2. <b>Species affected</b> – greenlip abalone (<i>Haliotis laevis</i>);</li> <li>3. <b>Clinical signs</b> – subclinical;</li> <li>4. <b>Pathogen</b> – <i>Perkinsus olseni</i>;</li> <li>5. <b>Mortality rate</b> – nil;</li> <li>6. <b>Economic loss</b> – N/A;</li> <li>7. <b>Geographic extent</b> – Western Australia;</li> <li>8. <b>Containment measures</b> – N/A;</li> <li>9. <b>Laboratory confirmation</b> – histopathology, RFTM and PCR;</li> <li>10. <b>Publications</b> – None.</li> </ol> <p><i>Perkinsus olseni</i> is known to have occurred previously in Victoria (last reported 2015), Queensland (last reported 2014), South Australia (last reported 2013), and New South Wales (last reported 2005). Passive surveillance and never reported in the Northern Territory and Tasmania. No information available for the Australian Capital Territory (susceptible species not present and no marine water responsibility).</p>
7	<p><b>Infection with abalone herpesvirus (abalone viral ganglioneuritis)</b> was not reported this period despite targeted surveillance in Tasmania (last reported 2011) and passive surveillance in 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 and Western Australia. No information available this period for the Australian Capital Territory (no marine water responsibility).</p>
8	<p><b>Infectious hypodermal and haematopoietic necrosis virus (IHHNV)</b> was not reported this period but is known to have occurred previously in the Northern Territory (last reported 2003). 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 (no marine responsibility) and Tasmania (susceptible species not present).</p>

9	<p><b>White tail disease</b> was not reported this period despite passive surveillance in Queensland (last reported 2008). Passive surveillance and never reported from the Australian Capital Territory, New South Wales, the Northern Territory, South Australia, Victoria and Western Australia. No information available this period in Tasmania (susceptible species not present).</p>
10	<p><b>Infection with ranavirus</b> was not reported this period despite passive surveillance in the Northern Territory (last reported 2008, prior to official reporting for ranavirus). Suspected but not confirmed through passive surveillance in Queensland. Passive surveillance and never reported in Tasmania. No information available this period in the Australian Capital Territory, New South Wales, South Australia, Victoria and Western Australia.</p>
11	<p><b>Infection with <i>Batrachochytrium dendrobatidis</i></b> was not reported this period despite passive surveillance in Tasmania (last reported 2013), Victoria (last reported 2011) and Western Australia (last reported 2008). Suspected but not confirmed through passive surveillance in Queensland. No information available this period in the Australian Capital Territory, New South Wales, the Northern Territory, and South Australia.</p>
12	<p><b>Hepatopancreatitis in Prawns</b></p> <ol style="list-style-type: none"> <li>1. <b>Reported in Queensland</b> in January and February; passive surveillance;</li> <li>2. <b>Species affected</b> – tiger prawns (<i>Penaeus monodon</i>);</li> <li>3. <b>Clinical signs</b> – hepatopancreas histopathology consistent with that described for acute hepatopancreatic necrosis disease (AHPND), however the disease does not meet the case definition provided for AHPND in the draft OIE Aquatic Manual chapter circulated to OIE members;</li> <li>4. <b>Pathogen</b> – <i>Vibrio</i> species isolated, tests were negative for <i>V. parahaemolyticus</i> and <i>V. harveyi</i>. PCR tests were positive for PirA and PirB genes;</li> <li>5. <b>Mortality rate</b> – N/A;</li> <li>6. <b>Economic loss</b> – N/A;</li> <li>7. <b>Geographic extent</b> – N/A;</li> <li>8. <b>Containment measures</b> – movement controls on water and animals;</li> <li>9. <b>Laboratory confirmation</b> – bacteriology, PCR, gene sequencing, histopathology;</li> <li>10. <b>Publications</b> – OIE immediate notification reference number 196665 on 2 February 2016.</li> </ol>

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

New controls on imported ornamental fish were implemented on 1 March 2016. These controls are aimed to reduce risks from iridoviruses. Information on these measures is available at <http://www.agriculture.gov.au/biosecurity/risk-analysis/ira/final-animal/ornamental-finfish>

Country: **BRUNEI DARUSSALAM**

 Period: **January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease (RSID)	0000	0000	0000		
7. Koi herpesvirus disease (KHV)	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	+	III	1
10. Enteric septicaemia of catfish	0000	0000	0000		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>					
7. Acute viral necrosis (in scallops)					
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	(2011)	0000	0000	III	
3. Yellowhead disease (YHD)	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis (IHNN)	0000	0000	0000		
5. Infectious myonecrosis (IMN)	0000	0000	0000		
6. White tail disease (MrNV)	0000	0000	0000		
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
9. Crayfish plague	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000		

AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus	0000	0000	0000		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1.					
2.					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>.  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>					
<p>a/ Please use the following symbols:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>+ Disease reported or known to be present                      +? Serological evidence and/or isolation of causative agent but no clinical diseases                      ? Suspected by reporting officer but presence not confirmed                      +( ) Occurrence limited to certain zones                      +?( ) Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</p> </td> <td style="width: 50%; vertical-align: top;"> <p>? ( ) Presence of the disease suspected but not confirmed in a zone                      *** No information available                      0000 Never reported                      - Not reported (but disease is known to occur)                      (year) Year of last occurrence</p> </td> </tr> </table>				<p>+ Disease reported or known to be present                      +? Serological evidence and/or isolation of causative agent but no clinical diseases                      ? Suspected by reporting officer but presence not confirmed                      +( ) Occurrence limited to certain zones                      +?( ) Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</p>	<p>? ( ) Presence of the disease suspected but not confirmed in a zone                      *** No information available                      0000 Never reported                      - Not reported (but disease is known to occur)                      (year) Year of last occurrence</p>
<p>+ Disease reported or known to be present                      +? Serological evidence and/or isolation of causative agent but no clinical diseases                      ? Suspected by reporting officer but presence not confirmed                      +( ) Occurrence limited to certain zones                      +?( ) Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</p>	<p>? ( ) Presence of the disease suspected but not confirmed in a zone                      *** No information available                      0000 Never reported                      - Not reported (but disease is known to occur)                      (year) Year of last occurrence</p>				
<p>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</p>					

**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	Viral encephalopathy and retinopathy (also known as viral nervous necrosis, VNN) was detected via RT-PCR in imported batches of mouse grouper and hybrid grouper.
2	
3	

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

**Country: FRENCH POLYNESIA**
**Period: January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp (SVC)	***	***	***		
4. Viral haemorrhagic septicaemia (VHS)	***	***	***		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	***	***	***		
6. Red seabream iridoviral disease (RSID)	0000	0000	0000	III	
7. Koi herpesvirus disease (KHV)	***	***	***		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	(2005)	(2005)	(2005)	III	1
10. Enteric septicaemia of catfish	***	***	***		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	III	2
2. Infection with <i>Perkinsus olseni</i>	+	+	+	III	3
3. Infection with abalone herpesvirus					4
4. Infection with <i>Xenohaliotis californiensis</i>	***	***	***		
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000	III	2
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	II	2
7. Acute viral necrosis (in scallops)					
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	0000	0000	0000	III	3
2. White spot disease (WSD)	0000	0000	0000	III	3
3. Yellowhead disease (YHD)	0000	0000	0000	III	3
4. Infectious hypodermal and haematopoietic necrosis (IHNN)	(2008)	(2008)	(2008)	III	3
5. Infectious myonecrosis (IMN)	0000	0000	0000	III	3
6. White tail disease (MrNV)	0000	0000	0000	III	3
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000	III	3
8. Acute hepatopancreatic necrosis disease (AHPND)	***	***	***		
9. Crayfish plague					4
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome					4
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)					4

AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus					4
2. Infection with <i>Batrachochytrium dendrobatidis</i>					4
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1.					
2.					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>.  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>																					
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**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><b>Viral encephalopathy and retinopathy</b> was first diagnosed in the breeders of <i>Lates calcarifer</i> (1989). In 2004, the disease caused mass mortality in <i>Platus orbicularis</i> and <i>Polydactylus sexifilis</i> breeders. Since 2005, the experimental hatchery of <i>P. orbicularis</i> is biosecured. Only broodstock (sourced from the wild) free of nodavirus are maintained. Annual check of all broodstok and larvae is made. Since 2005, no sample was found positive.</p>
2	<p>Bonamiosis and Marteiliosis: not reported since the start of active surveillance in 2003 in <i>Pinctada margaritifera</i>.</p> <p>Since January 2012, pearl oyster network has been extended to giant clam and <i>Perkinsus olseni</i> was detected by PCR in wild specimen of <i>Tridacna maxima</i> (PYF 06-12-12 OIE Alert). <i>P. olseni</i> was also detected in <i>Pinctada margaritifera</i> (OIE Report 13451, May 14<sup>th</sup> 2013).</p>

3	In 2008 and 2010, a survey of all production units was conducted and samples (30/unit) were sent out for analysis to Aquaculture Pathology Laboratory, University of Arizona (Prof. Lightner). None of the important shrimp viruses was detected. Positive isolation was last reported in 2001 in <i>Penaeus vannamei</i> , a non-indigenous species which is no longer cultivated in the country and considered extinct since 2005. Similar survey was done in 2011 and 2012. In 2013, detection for TS, WSD and IHNV were done in the country, and all results were negative. No mortality was observed in <i>Litopenaeus stylirostris</i> during this period.
4	Susceptible species are not present in the country.

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

Order No. 979 CM-24 July 2015 – Establishing the list of commodities likely to carry transmissible animal disease agents and the list of foodstuffs and animal feed likely not to meet food safety requirements. Effective date: 24 October 2015.

**Country: HONG KONG SAR, CHINA\***
**Period: January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	0000	0000	0000	II	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp (SVC)	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000	III	
5. Infection with <i>Aphanomyces invadans</i> (EUS)	0000	0000	0000	III	
6. Red seabream iridoviral disease (RSID)	-	-	-	III	
7. Koi herpesvirus disease (KHV)	-	-	-	III	
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	-	-	-	III	
9. Viral encephalopathy and retinopathy	-	-	-	III	
10. Enteric septicaemia of catfish	0000	0000	0000	II	
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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>					
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	II	
7. Acute viral necrosis (in scallops)	0000	0000	0000	II	
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	0000	0000	0000	III	
2. White spot disease (WSD)	-	-	-	III	
3. Yellowhead disease (YHD)	0000	0000	0000	III	
4. Infectious hypodermal and haematopoietic necrosis (IHNN)	0000	0000	0000	II	
5. Infectious myonecrosis (IMN)	0000	0000	0000	II	
6. White tail disease (MrNV)	0000	0000	0000	II	
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000	II	
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
9. Crayfish plague					
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)					

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



AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus	0000	0000	0000	II	
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000	II	
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1.					
2.					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>.  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>					
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<p>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</p>					

**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	
3	

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

Country: **INDIA\***

 Period: **January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	+	+	-	III	1
6. Red seabream iridoviral disease (RSID)	0000	0000	0000		
7. Koi herpesvirus disease (KHV)	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	-	-	-		
10. Enteric septicaemia of catfish	0000	0000	0000		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	+	+	+	II,III	2
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>					
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	+	+	+	III	3
3. Yellowhead disease (YHD)	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis (IHNN)	+	+	+	III	4
5. Infectious myonecrosis (IMN)	0000	0000	0000		
6. White tail disease (MrNV)	-	-	-		
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
9. Crayfish plague	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	-	-	-		
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	+	+	+	III	5

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

AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus	0000	0000	0000		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1.					
2.					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infection with HPR-deleted of HPR0 salmon anemia virus; Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>.  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>																							
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**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) reported from Indian major carps and <i>Wallago attu</i> in Ambala District of Haryana; Maharjganj District of Uttar Pradesh; and Sepahijala District of Tripura.
2	Infection with <i>Perkinsus olseni</i> reported in <i>Perna viridis</i> from Kamur, kasargod and Ernakulam Districts of Kerala; <i>Paphia malabarica</i> and <i>Saccostrea cucullata</i> from Kannur District; <i>Anadara granosa</i> from Kasargod Dstrict and <i>Meritirx casta</i> from Kozhikod District of Kerala.
3	WSSV was detected in <i>Penaeus monodon</i> North 24 Parganas District of West Bengal; Thrissur, Kannur and Kollam Districts of Kerala; Uttar Kannada and Dakshin Kannada Districts of Karnataka; Krishna, Guntur, Nellore and Prakasam Districts of Andhra Pradesh; and South Andaman and Nicobar Districts of the Union Territory of Andaman & Nicobar Islands. It was also reported in <i>P. vannamei</i> from Nagapattinam, Thanjavur, Villupuram, Thiruvallur, Cuddalore and Kanchipuram Districts of Tamil Nadu; East Godavari, Srikakulam, Krishna, Nellore and Prakasam Districts of Andhra Pradesh. Also in <i>P. indicus</i> from Kannur and Kollam Districts of Kerala.

4	IHHNV was reported from <i>Penaeus monodon</i> collected from South Andaman and Nicobar Districts of the Union Territory of Andaman & Nicobar Islands; and in <i>P. vannamei</i> from Ramnad and Pudukkottai Districts of Tamil Nadu; and Nellore, Krishna and Guntur Districts of Andhra Pradesh.
5	Infection with <i>Enterocytozoon hepatopanaei</i> reported from <i>Penaeus vannamei</i> in Nagapattinam, Ramnad, Pudukkottai, Thanjavur and Villupuram Districts of Tamil Nadu; and Nellore and Krishna Districts of Andhra Pradesh.

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

Country: **JAPAN\***Period: **January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	0000	0000	0000	I	
2. Infectious haematopoietic necrosis	+	+	+	I,III	1
3. Spring viraemia of carp (SVC)	0000	0000	0000	I	
4. Viral haemorrhagic septicaemia (VHS)	-(2015)	-(2015)	+	I,III	2
5. Infection with <i>Aphanomyces invadans</i> (EUS)	-(2015)	-(2015)	-(2015)	I	
6. Red seabream iridoviral disease (RSID)	+	-(2016)	-(2016)	III	3
7. Koi herpesvirus disease (KHV)	-(2015)	-(2015)	-(2015)	I	
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	0000	0000	0000	I	
9. Viral encephalopathy and retinopathy	-(2015)	-(2015)	-(2015)	I	
10. Enteric septicaemia of catfish	-(2010)	-(2010)	-(2010)	I	
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	I	
2. Infection with <i>Perkinsus olseni</i>	-(2007)	-(2007)	-(2007)	I	
3. Infection with abalone herpesvirus	0000	0000	0000	I	
4. Infection with <i>Xenohaliotis californiensis</i>	-(2015)	-(2015)	-(2015)	I	
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000	I	
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	-(2014)	-(2014)	-(2014)	I	
7. Acute viral necrosis (in scallops)	0000	0000	0000	I	
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	0000	0000	0000	I	
2. White spot disease (WSD)	-(2015)	-(2015)	-(2015)	I	
3. Yellowhead disease (YHD)	0000	0000	0000	I	
4. Infectious hypodermal and haematopoietic necrosis (IHNN)	0000	0000	0000	I	
5. Infectious myonecrosis (IMN)	0000	0000	0000	I	
6. White tail disease (MrNV)	0000	0000	0000	I	
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000	I	
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000	I	
9. Crayfish plague	0000	0000	0000	I	
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	0000	0000	0000	I	
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000	I	

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

AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus	-(2012)	-(2012)	-(2012)	I	
2. Infection with <i>Batrachochytrium dendrobatidis</i>	-(2009)	-(2009)	-(2009)	I	
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1.					
2.					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>.  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>																							
<p>a/ Please use the following symbols:</p> <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 15%; vertical-align: top;">+</td> <td style="width: 45%;">Disease reported or known to be present</td> <td style="width: 10%; vertical-align: top;">?( )</td> <td style="width: 30%;">Presence of the disease suspected but not confirmed in a zone</td> </tr> <tr> <td style="vertical-align: top;">+?</td> <td>Serological evidence and/or isolation of causative agent but no clinical diseases</td> <td style="vertical-align: top;">***</td> <td>No information available</td> </tr> <tr> <td style="vertical-align: top;">?</td> <td>Suspected by reporting officer but presence not confirmed</td> <td style="vertical-align: top;">0000</td> <td>Never reported</td> </tr> <tr> <td style="vertical-align: top;">+( )</td> <td>Occurrence limited to certain zones</td> <td style="vertical-align: top;">-</td> <td>Not reported (but disease is known to occur)</td> </tr> <tr> <td style="vertical-align: top;">+?( )</td> <td>Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</td> <td style="vertical-align: top;">(year)</td> <td>Year of last occurrence</td> </tr> </tbody> </table>				+	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
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<p>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</p>																							

### 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><b>Infectious haematopoietic necrosis (IHN)</b></p> <ol style="list-style-type: none"> <li>1. <b>Reported in</b> 9 prefectures;</li> <li>2. <b>Species affected</b> – Amago (<i>Onchorynchus rhodorus</i>), masou (<i>O. masou</i>), rainbow trout (<i>O. mykiss</i>), Iwana (<i>Salvelinus leucomaensis</i>);</li> <li>3. <b>Disease characteristics</b> – mortality; pale gills, liver and kidney (anemia); threadbare fins; ascites; exophthalmia; petechial haemorrhages internally and in the gills; enlargement of the spleen;</li> <li>4. <b>Pathogen</b> – Infectious haematopoietic necrosis virus;</li> <li>5. <b>Mortality rate</b> – 0.15-100%;</li> <li>6. <b>Economic loss</b> –;</li> <li>7. <b>Geographic extent</b> – Honshu;</li> <li>8. <b>Preventive/control measures</b> – culling of infected fish; disinfection of equipment; feed restriction; isolation of infected fish;</li> <li>9. <b>Laboratory confirmation</b> – gross clinical observation, PCR, cell culture and/or isolation of the virus by prefectural research laboratories;</li> <li>10. <b>Publications</b> – None.</li> </ol>

2	<p><b>Viral haemorrhagic septicaemia (VHS)</b></p> <ol style="list-style-type: none"> <li>1. <b>Reported in</b> 2 prefectures;</li> <li>2. <b>Species affected</b> – Olive flounder (<i>Paralichthys olivaceus</i>), red seabream (<i>Pagrus major</i>);</li> <li>3. <b>Disease characteristics</b> – mortality;</li> <li>4. <b>Pathogen</b> – Viral haemorrhagic septicaemia virus;</li> <li>5. <b>Mortality rate</b> – 1.5-51%;</li> <li>6. <b>Economic loss</b> –;</li> <li>7. <b>Geographic extent</b> – Shikoku;</li> <li>8. <b>Preventive/control measures</b> – feed restriction, removal of dead fish;</li> <li>9. <b>Laboratory confirmation</b> – gross clinical observation or PCR by prefectural research laboratories;</li> <li>10. <b>Publications</b> – None.</li> </ol>
3	<p><b>Red seabream iridoviral disease (RSID)</b></p> <ol style="list-style-type: none"> <li>1. <b>Reported in</b> 1 prefecture;</li> <li>2. <b>Species affected</b> – red sea bream (<i>Pagrus major</i>);</li> <li>3. <b>Disease characteristics</b> – mortality; anemia;</li> <li>4. <b>Pathogen</b> – Red seabream iridovirus;</li> <li>5. <b>Mortality rate</b> – 5%;</li> <li>6. <b>Economic loss</b> –;</li> <li>7. <b>Geographic extent</b> – Kyushu;</li> <li>8. <b>Preventive/control measures</b> – movement control;</li> <li>9. <b>Laboratory confirmation</b> – PCR by prefectural or fisheries cooperative research laboratories;</li> <li>10. <b>Publications</b> – None.</li> </ol>

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

Country: **MALAYSIA\***

 Period: **January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000	I,II,III	1
3. Spring viraemia of carp (SVC)	0000	0000	0000	I,II,III	
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000	I,II,III	
5. Infection with <i>Aphanomyces invadans</i> (EUS)	(1986)	(1986)	(1986)	I,II	
6. Red seabream iridoviral disease (RSID)	-	-	-	I,II,III	2
7. Koi herpesvirus disease (KHV)	-	-	-	I,II,III	3
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	-	-	-	III	4
9. Viral encephalopathy and retinopathy	-	-	-	III	5
10. Enteric septicaemia of catfish	0000	0000	0000		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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>					
5. Infection with <i>Bonamia ostreae</i>					
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	-	-	-	I,III	6
2. White spot disease (WSD)	-	-	-	I,III	7
3. Yellowhead disease (YHD)	-	-	-	I,III	8
4. Infectious hypodermal and haematopoietic necrosis (IHNN)	-	-	-	I,III	9
5. Infectious myonecrosis (IMN)	-	-	-	I,III	10
6. White tail disease (MrNV)	-	-	-	I,III	11
7. Necrotising hepatopancreatitis (NHP)	-	-	-	I,III	12
8. Acute hepatopancreatic necrosis disease (AHPND)	-	-	-		
9. Crayfish plague	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000		

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



AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus	-	-	-		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1.					
2.					

**DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup>  
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	<b>Spring viraemia of carp (SVC)</b> No positive case was detected (PCR) during DoF active surveillance programme.
2	<b>Red seabream iridoviral disease (RSID)</b> No positive case was detected (PCR) during DoF active surveillance programme.
3	<b>Koi herpesvirus disease (KHV)</b> No positive case was detected (PCR) during DoF active surveillance programme.
4	<b>Grouper iridoviral disease (GIV)</b> No positive case was detected (PCR) during DoF active surveillance programme.
5	<b>Viral encephalopathy and retinopathy</b> No positive case was detected (PCR) during DoF active surveillance programme.
6	<b>Taura syndrome virus (TSV)</b> ( <i>Penaeus monodon</i> and <i>P.vannamei</i> ) No positive case was detected (PCR) during DoF active surveillance programme.

7	<b>White spot disease (WSD)</b> No positive case was detected (PCR) during DoF active surveillance programme.
8	<b>Yellow head disease (YHV)</b> ( <i>Penaeus monodon</i> and <i>P.vannamei</i> ) No positive case was detected (PCR) during DoF active surveillance programme.
9	<b>Infectious hypodermal and haematopoietic virus (IHHNV)</b> ( <i>Macrobrachium rosenbergii</i> , <i>Penaeus monodon</i> and <i>P.vannamei</i> ) No positive case was detected (PCR) during DoF active surveillance programme.
10	<b>Infectious myonecrosis (IMNV)</b> No positive case was detected (PCR) during DoF active surveillance programme.
11	<b><i>Macrobrachium rosenbergii</i> nodavirs (MrNV)</b> No samples were tested.
12	<b>Necrotising hepatopancreatitis (NHP)</b> No samples were tested.

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

Country: **MALDIVES\***

 Period: **January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	*** / 0000	*** / 0000	*** / 0000		
2. Infectious haematopoietic necrosis	*** / 0000	*** / 0000	*** / 0000		
3. Spring viraemia of carp (SVC)	*** / 0000	*** / 0000	*** / 0000		
4. Viral haemorrhagic septicaemia (VHS)	*** / 0000	*** / 0000	*** / 0000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	*** / 0000	*** / 0000	*** / 0000		
6. Red seabream iridoviral disease (RSID)	*** / 0000	*** / 0000	*** / 0000		
7. Koi herpesvirus disease (KHV)	*** / 0000	*** / 0000	*** / 0000		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	*** / 0000	*** / 0000	*** / 0000		
9. Viral encephalopathy and retinopathy	*** / 0000	*** / 0000	*** / 0000		
10. Enteric septicaemia of catfish	*** / 0000	*** / 0000	*** / 0000		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	*** / 0000	*** / 0000	*** / 0000		
7. Acute viral necrosis (in scallops)	*** / 0000	*** / 0000	*** / 0000		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	*** / 0000	*** / 0000	*** / 0000		
2. White spot disease (WSD)	*** / 0000	*** / 0000	*** / 0000		
3. Yellowhead disease (YHD)	*** / 0000	*** / 0000	*** / 0000		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	*** / 0000	*** / 0000	*** / 0000		
5. Infectious myonecrosis (IMN)	*** / 0000	*** / 0000	*** / 0000		
6. White tail disease (MrNV)	*** / 0000	*** / 0000	*** / 0000		
7. Necrotising hepatopancreatitis (NHP)	*** / 0000	*** / 0000	*** / 0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	*** / 0000	*** / 0000	*** / 0000		
9. Crayfish plague					
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	*** / 0000	*** / 0000	*** / 0000		
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	*** / 0000	*** / 0000	*** / 0000		

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

AMPHIBIAN DISEASES						
<b>OIE-listed diseases</b>						
1. Infection with Ranavirus	***	/0000	***	/0000	***	/0000
2. Infection with <i>Batrachochytrium dendrobatidis</i>	***	/0000	***	/0000	***	/0000
<b>ANY OTHER DISEASES OF IMPORTANCE</b>						
1.						
2.						

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>.  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>+ Disease reported or known to be present</p> <p>+? Serological evidence and/or isolation of causative agent but no clinical diseases</p> <p>? Suspected by reporting officer but presence not confirmed</p> <p>+() Occurrence limited to certain zones</p> <p>+?() Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</p> </td> <td style="width: 50%; vertical-align: top;"> <p>?() Presence of the disease suspected but not confirmed in a zone</p> <p>*** No information available</p> <p>0000 Never reported</p> <p>- Not reported (but disease is known to occur)</p> <p>(year) Year of last occurrence</p> </td> </tr> </table>		<p>+ Disease reported or known to be present</p> <p>+? Serological evidence and/or isolation of causative agent but no clinical diseases</p> <p>? Suspected by reporting officer but presence not confirmed</p> <p>+() Occurrence limited to certain zones</p> <p>+?() Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</p>	<p>?() Presence of the disease suspected but not confirmed in a zone</p> <p>*** No information available</p> <p>0000 Never reported</p> <p>- Not reported (but disease is known to occur)</p> <p>(year) Year of last occurrence</p>
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<p>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</p>			

**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	
3	

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

**Country: MONGOLIA**
**Period: January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease (RSID)	0000	0000	0000		
7. Koi herpesvirus disease (KHV)	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10. Enteric septicaemia of catfish	0000	0000	0000		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	0000	0000	0000		
3. Yellowhead disease (YHD)	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	0000	0000	0000		
5. Infectious myonecrosis (IMN)	0000	0000	0000		
6. White tail disease (MrNV)	0000	0000	0000		
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
9. Crayfish plague					
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000		

AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus	0000	0000	0000		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1.					
2.					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>.  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>					
<p>a/ Please use the following symbols:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>+ Disease reported or known to be present</p> <p>+? Serological evidence and/or isolation of causative agent but no clinical diseases</p> <p>? Suspected by reporting officer but presence not confirmed</p> <p>+() Occurrence limited to certain zones</p> <p>+?( ) Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</p> </td> <td style="width: 50%; vertical-align: top;"> <p>?( ) Presence of the disease suspected but not confirmed in a zone</p> <p>*** No information available</p> <p>0000 Never reported</p> <p>- Not reported (but disease is known to occur)</p> <p>(year) Year of last occurrence</p> </td> </tr> </table>				<p>+ Disease reported or known to be present</p> <p>+? Serological evidence and/or isolation of causative agent but no clinical diseases</p> <p>? Suspected by reporting officer but presence not confirmed</p> <p>+() Occurrence limited to certain zones</p> <p>+?( ) Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</p>	<p>?( ) Presence of the disease suspected but not confirmed in a zone</p> <p>*** No information available</p> <p>0000 Never reported</p> <p>- Not reported (but disease is known to occur)</p> <p>(year) Year of last occurrence</p>
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<p>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</p>					

**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	
3	

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

Country: **MYANMAR\***

 Period: **January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp (SVC)	***	***	***		
4. Viral haemorrhagic septicaemia (VHS)	***	***	***		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	***	***	***		
6. Red seabream iridoviral disease (RSID)	***	***	***		
7. Koi herpesvirus disease (KHV)					
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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>					
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	/	/	/		
7. Acute viral necrosis (in scallops)	/	/	/		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	-	-	-	III	1
2. White spot disease (WSD)	-	-	-	III	
3. Yellowhead disease (YHD)	-	-	-	III	
4. Infectious hypodermal and haematopoietic necrosis (IHNN)	***	***	***		
5. Infectious myonecrosis (IMN)	***	***	***		
6. White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis (NHP)	***	***	***		
8. Acute hepatopancreatic necrosis disease (AHPND)	***	***	***		
9. Crayfish plague					
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	***	***	***		
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)					

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

AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus					
2. Infection with <i>Batrachochytrium dendrobatidis</i>					
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1. Parasitic disease					2
2. Bacterial disease					2

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>.  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>																							
<p><u>a/</u> Please use the following symbols:</p> <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 15%; text-align: center;">+</td> <td style="width: 45%;">Disease reported or known to be present</td> <td style="width: 10%; text-align: center;">?( )</td> <td style="width: 30%;">Presence of the disease suspected but not confirmed in a zone</td> </tr> <tr> <td style="text-align: center;">+?</td> <td>Serological evidence and/or isolation of causative agent but no clinical diseases</td> <td style="text-align: center;">***</td> <td>No information available</td> </tr> <tr> <td style="text-align: center;">?</td> <td>Suspected by reporting officer but presence not confirmed</td> <td style="text-align: center;">0000</td> <td>Never reported</td> </tr> <tr> <td style="text-align: center;">+( )</td> <td>Occurrence limited to certain zones</td> <td style="text-align: center;">-</td> <td>Not reported (but disease is known to occur)</td> </tr> <tr> <td style="text-align: center;">+?( )</td> <td>Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</td> <td style="text-align: center;">(year)</td> <td>Year of last occurrence</td> </tr> </tbody> </table>				+	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
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?	Suspected by reporting officer but presence not confirmed	0000	Never reported																				
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<p><u>b/</u> 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</p>																							

### 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 19 samples of crustaceans (5 frozen shrimp and 13 soft shell crab for export, and 1 live <i>P. vannamei</i> (PL) for import) for testing, and found that all samples were negative for WSSV, YHV and TSV.
2	Visited some fish farms in Yangon, Mandalay and Ayeyarwaddy regions during this period. Parasitic infestations ( <i>Dactylogyrus</i> spp; <i>Ergasilus</i> spp., and <i>Sporozoa</i> .) and bacterial disease ( <i>Streptococcus</i> sp.) were found in some farms due to poor water quality.
3	

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



Country: **NEW CALEDONIA**

 Period: **January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp (SVC)	***	***	***		
4. Viral haemorrhagic septicaemia (VHS)	***	***	***		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	***	***	***		
6. Red seabream iridoviral disease (RSID)	***	***	***		
7. Koi herpesvirus disease (KHV)	***	***	***		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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	
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
7. Acute viral necrosis (in scallops)	***	***	***		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	0000	0000	0000	III	
2. White spot disease (WSD)	0000	0000	0000	III	
3. Yellowhead disease (YHD)	0000	0000	0000	III	
4. Infectious hypodermal and haematopoietic necrosis (IHNN)	(2013)	(2013)	(2013)	III	1
5. Infectious myonecrosis (IMN)	0000	0000	0000	III	
6. White tail disease (MrNV)	0000	0000	0000	III	
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000	III	
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000	III	
9. Crayfish plague	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	0000	0000	0000	III	
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000		

AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	***	***	***		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1.					
2.					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>.  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>					
<p>a/ Please use the following symbols:</p> <table border="0"> <tr> <td style="vertical-align: top;"> <p>+ Disease reported or known to be present                      +? Serological evidence and/or isolation of causative agent but no clinical diseases                      ? Suspected by reporting officer but presence not confirmed                      +( ) Occurrence limited to certain zones                      +?( ) Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</p> </td> <td style="vertical-align: top; padding-left: 20px;"> <p>?( ) Presence of the disease suspected but not confirmed in a zone                      *** No information available                      0000 Never reported                      - Not reported (but disease is known to occur)                      (year) Year of last occurrence</p> </td> </tr> </table>				<p>+ Disease reported or known to be present                      +? Serological evidence and/or isolation of causative agent but no clinical diseases                      ? Suspected by reporting officer but presence not confirmed                      +( ) Occurrence limited to certain zones                      +?( ) Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</p>	<p>?( ) Presence of the disease suspected but not confirmed in a zone                      *** No information available                      0000 Never reported                      - Not reported (but disease is known to occur)                      (year) Year of last occurrence</p>
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<p>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</p>					

**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	New Caledonia transmitted to OIE in March 2016 a self-declaration of free status from IHHNV. It was validated and will be published in the next OIE Bulletin (July-August).
2	
3	

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

Country: **NEW ZEALAND**

 Period: **January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	0000	0000	0000	III	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp (SVC)	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000	III	
5. Infection with <i>Aphanomyces invadans</i> (EUS)	0000	0000	0000	III	
6. Red seabream iridoviral disease (RSID)	0000	0000	0000	III	
7. Koi herpesvirus disease (KHV)	0000	0000	0000	III	
<b>Non OIE-listed diseases</b>					
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	
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Infection with <i>Bonamia exitiosa</i>	-(2015)	-(2015)	-(2015)	III	1
2. Infection with <i>Perkinsus olseni</i>	-(2015)	-(2015)	-(2015)	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>	-(2015)	+?	-(2016)	III	3
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	III	
7. Acute viral necrosis (in scallops)	0000	0000	0000	III	
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	0000	0000	0000	III	
2. White spot disease (WSD)	0000	0000	0000	III	
3. Yellowhead disease (YHD)	0000	0000	0000	III	
4. Infectious hypodermal and haematopoietic necrosis (IHNN)	0000	0000	0000	III	
5. Infectious myonecrosis (IMN)	0000	0000	0000	III	
6. White tail disease (MrNV)	0000	0000	0000	III	
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000	III	
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000	III	
9. Crayfish plague					
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	0000	0000	0000	III	
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000	III	

AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	0000	0000	0000	III	
2. Infection with <i>Batrachochytrium dendrobatidis</i>	-(2010)	-(2010)	-(2010)	III	4
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infection with HPR-deleted of HPR0 salmon anemia virus; Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>.  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>																				
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+?	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																	
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<p>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</p>																				

**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><i>Bonamia exitiosa</i> occurs in commercial oyster beds in Foveaux Strait, 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 (bottom of the North Island), and has been previously reported in <i>Ostrea chilensis</i> from Hauraki Gulf, Tauranga, the Marlborough Sounds and Wellington Harbour. Annual monitoring of the presence of <i>B. exitiosa</i> infection is undertaken in the dredge oyster (<i>O. chilensis</i>) population in the Foveaux Strait.</p>
2	<p><i>Perkinsus olseni</i> was detected in wild New Zealand Scallops (<i>Pecten Novaezealandiae</i>) in November 2014. This was the first report of <i>P. olseni</i> in this host species. <i>Perkinsus olseni</i> was also detected in New Zealand green lipped mussels (<i>Perna canaliculus</i>) in a land based aquaculture facility in September 2014. Both of these findings were in the Marlborough region, and were incidental and not associated with mortality events. <i>P. olseni</i> was detected in healthy wild abalone (<i>Haliotis iris</i>) in 2014 and detected in farmed abalone in July 2013. Both these detections were in Northern New Zealand. <i>P. olseni</i> is known to occur in populations of four other wild bivalve species: New Zealand cockles, <i>Austrovenus stutchburyi</i> (Veneridae), <i>Macomona liliana</i> (Tellinidae), <i>Barbatia novae-zelandiae</i> (Arcidae), and <i>Paphies australis</i> (Mesodesmatidae). 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 Auckland and northwards.</p>

3	<p><i>Bonamia ostreae</i> was detected for the first time in New Zealand flat oysters (<i>Ostrea chilensis</i>) in January 2015 on one land based aquaculture facility in the upper South Island and on two marine oyster farms in the Marlborough Sounds (in the northern part of the South Island). New Zealand initiated a response with the objectives of restricting the spread and determining the geographical extent of the infection. Movement controls have been established to regulate the movement of susceptible shellfish species from the upper South Island to the key flat oyster areas of Southland, Otago and the Chatham Islands.</p>
4	<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. It is not certain what level of population decline if any, is associated with the presence of the fungus in native frogs.</p>

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

Country: **PHILIPPINES\***

 Period: **January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	-(2002)	-(2002)	-(2002)	I	1
6. Red seabream iridoviral disease (RSID)	0000	0000	0000	I, III	2
7. Koi herpesvirus disease (KHV)	0000	0000	0000	I,III	
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	-(2008)	-(2008)	-(2008)	I, III	
9. Viral encephalopathy and retinopathy	-	-	-	I, III	3
10. Enteric septicaemia of catfish	***	***	***		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	***	***	***		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	0000	0000	0000	I, III	4
2. White spot disease (WSD)	+	+	+	I, III	5
3. Yellowhead disease (YHD)	-(1999)	-(1999)	-(1999)	I, III	6
4. Infectious hypodermal and haematopoietic necrosis (IHNN)	+	+	+	I, III	7
5. Infectious myonecrosis (IMN)	0000	0000	0000	I, III	8
6. White tail disease (MrNV)	0000	0000	0000	I, III	
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000	I, III	9
8. Acute hepatopancreatic necrosis disease (AHPND)	-	+	-	I, III	10
9. Crayfish plague	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	***	***	***		
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000	III	11

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

AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	***	***	***		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1.					
2.					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>.  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>																				
<p><u>a/</u> Please use the following symbols:</p> <table style="width: 100%; border: none;"> <tbody> <tr> <td style="width: 15%; vertical-align: top;">+</td> <td style="width: 45%;">Disease reported or known to be present</td> <td style="width: 10%; vertical-align: top;">?( )</td> <td style="width: 30%;">Presence of the disease suspected but not confirmed in a zone</td> </tr> <tr> <td style="vertical-align: top;">+?</td> <td>Serological evidence and/or isolation of causative agent but no clinical diseases</td> <td style="vertical-align: top;">***</td> <td>No information available</td> </tr> <tr> <td style="vertical-align: top;">?</td> <td>Suspected by reporting officer but presence not confirmed</td> <td style="vertical-align: top;">0000</td> <td>Never reported</td> </tr> <tr> <td style="vertical-align: top;">+()</td> <td>Occurrence limited to certain zones</td> <td style="vertical-align: top;">-</td> <td>Not reported (but disease is known to occur)</td> </tr> <tr> <td style="vertical-align: top;">+?( )</td> <td>Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</td> <td style="vertical-align: top;">(year)</td> <td>Year of last occurrence</td> </tr> </tbody> </table>	+	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
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### 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	Two hundred seventy (270) samples <i>Anguilla</i> spp. were negative for <b>Infection with <i>Aphanomyces invadans</i> (EUS)</b> by gross morphological examination. Samples were from General Santos City, Antipolo, Butuan City and Rizal. Examination was conducted by BFAR Central Office Laboratory.
2	Nine (7) samples- (6 <i>S.guttatus</i> , 1 <i>Epinephelus</i> spp. ) were analyzed using PCR test. All samples showed negative results for <b>Red seabream iridoviral disease (RSID)</b> . The samples were collected from Maguindanao, Sarangani and Pangasinan. Examination was conducted by BFAR Central Office and Southeast Asian Fisheries Development Center/ Aquaculture Department (SEAFDEC/AQD) Laboratories.
3	Seventeen (17) samples of <i>Epinephelus</i> spp., <i>E.coioides</i> , siganid, pompano and tilapia were analyzed using PCR test. All samples showed negative results for <b>Viral encephalopathy and retinopathy</b> . The samples were collected from Maguindanao, Samar, Camarines Norte, Quezon Province, Iloilo and Sarangani. Examination was conducted by BFAR Central Office and SEAFDEC/AQD Laboratories.

4	Forty eight (48) samples- (33 <i>P.vannamei</i> , 1 <i>P.indicus</i> and 14 <i>P. monodon</i> ) of different stages (broodstock, adult, fry and juvenile) were analyzed using PCR test. All samples showed negative results for <b>Taura Syndrome</b> . Examination was conducted by BFAR Central Office Laboratory.
5	Three hundred twenty five (325) samples of <i>P.vannamei</i> , <i>P.indicus</i> , <i>S.serrata</i> and <i>P. monodon</i> of different stages (broodstock, adult, fry and juvenile) were analyzed using PCR test. Twenty (9 <i>P.monodon</i> , 10 <i>P.vannamei</i> and 1 <i>P.indicus</i> ) showed positive results for <b>White spot disease (WSD)</b> . The samples were collected from Agusan del Norte, General Santos, Zambales, Durigao del Sur, Pagadian City, Zamboanga del Sur, Sorsogon, Masbate, Negros, Camarines Norte and Camarines Sur. Examination was conducted by BFAR Central Office, BFAR Region 3, BFAR Region 4-A, BFAR 4-B, BFAR Region 5, BFAR Region 6, BFAR Region 7, CARAGA Region and SEAFDEC/AQD Laboratories.
6	Nine (9) samples- (5 <i>P.vannamei</i> , 1 <i>P.indicus</i> and 3 <i>P. monodon</i> ) of different stages (broodstock, adult, fry and juvenile) were analyzed using PCR test. All samples showed negative results for <b>Yellowhead Virus (YHV)</b> . The samples were collected from Negros Occidental, Sorsogon, Iloilo and Camarines Sur. Examination was conducted by BFAR Central Office Laboratory.
7	Two hundred fifty three (253), <i>P.vannamei</i> , <i>P.indicus</i> and <i>P. monodon</i> of different stages (broodstock, adult, fry and juvenile) were analyzed using PCR test. Forty seven (12 <i>P.monodon</i> , 32 <i>P.vannamei</i> , 1 <i>S.serrata</i> and 2 <i>P.indicus</i> ) showed positive results for <b>Infectious hypodermal and haematopoietic necrosis (IHHN)</b> . The samples were collected from Pampanga, Aklan, Sorsogon, Bohol, Cebu, Zambales, Camarines Sur, Leyte, Pangasinan, Iloilo, Camarines Norte and Negros Occidental. Examination was conducted by BFAR Central Office, BFAR Region 4-A, BFAR Region 6, BFAR Region 7 and SEAFDEC/AQD Laboratories.
8	Ninety six (96) samples- (62 <i>P.vannamei</i> , 2 <i>P.indicus</i> and 32 <i>P. monodon</i> ) of different stages (broodstock, adult, fry and juvenile) were analyzed using PCR test. All samples showed negative results for <b>Infectious myonecrosis (IMN)</b> . The samples were collected from Iloilo, Aklan, Sorsogon, Pangasinan, Camarines Sur, Agusan del Norte, Zambales, Sarangani Province, Negros Occidental, Cebu, Zamboanga del Sur, Zamboanga del Norte and Dapitan City. Examination was conducted by BFAR Central Office, BFAR Region 4-A, BFAR Region 6, BFAR Region 7 and CARAGA Region Laboratories.
9	Twenty three (23) samples- (21 <i>P.vannamei</i> and 2 <i>P. monodon</i> ) of different stages (broodstock, adult, fry and juvenile) were analyzed using PCR test. All samples showed negative results for <b>Necrotising hepatopancreatitis (NHP)</b> . The samples were collected from Bohol, Cebu, Pangasinan and Negros Occidental. Examination was conducted by BFAR Central Office and BFAR Region 7 Laboratories.
10	Two hundred twenty nine (229) samples of <i>P.vannamei</i> , <i>P.indicus</i> and <i>P. monodon</i> of different stages (broodstock, adult, fry and juvenile) were analyzed using PCR test. Eight samples ( <i>P.vannamei</i> ) showed positive results for <b>Acute hepatopancreatic necrosis disease (AHPND)</b> . The samples were collected from Bataan, Cebu and Cagayan. Examination was conducted by BFAR Central Office, BFAR Region 7, CARAGA Region, BFAR Region 3 and SEAFDEC/AQD Laboratories.
11	Eleven (11) samples- (7 <i>P.vannamei</i> and 4 <i>P. monodon</i> ) of different stages (broodstock, adult, fry and juvenile) were analyzed using PCR test. All samples showed negative results for <b>Enterocytozoon hepatopenaei (HPM-EHP)</b> . The samples were collected from Bohol, Davao del Sur, Cebu, Lanao del Sur and Lanao del Norte. Examination was conducted by BFAR Central Office Laboratory.

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



Country: **SINGAPORE\***

 Period: **January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease (RSID)	(2015)	(2015)	(2015)		
7. Koi herpesvirus disease (KHV)	(2015)	(2015)	(2015)		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	(2014)	(2104)	(2104)		
9. Viral encephalopathy and retinopathy	+	(2016)	(2016)	III	1
10. Enteric septicaemia of catfish	***	***	***		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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>	***	***	***		
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
7. Acute viral necrosis (in scallops)	***	***	***		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	(2015)	(2015)	+	II,III	2,3
3. Yellowhead disease (YHD)	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis (IHNN)	0000	0000	0000		
5. Infectious myonecrosis (IMN)	0000	0000	0000		
6. White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
9. Crayfish plague	***	***	***		
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	***	***	***		
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	***	***	***		

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

AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	+	(2016)	(2016)	III	4
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1. Infection with spleen and kidney necrosis virus (ISKNV) (marine and ornamental fish)	(2015)	+	+	III	5,6
2. <i>Aeromonas salmonicida</i> (in goldfish)	0000	0000	0000		

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infection with HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>.  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>			
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<p>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</p>			

### 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><b>Viral nervous necrosis virus (VNNV)</b> was detected via real-time RT-PCR in a batch of clinically healthy Hybrid Grouper fingerling from a farm on RAS that was carrying out screening. The farm did not report mortalities.</p>
2	<p><b>WSSV</b> was detected by real-time PCR and histopathology in diseased <i>Litopenaeus vannamei</i> in a local hatchery submitted for disease diagnosis. The shrimp were reared in a marine aquarium system which was shared by elasmobranchs. There was increasing high mortality (200 out of 600) of the shrimp. The hatchery voluntarily destroyed the batch of diseased shrimp to prevent transmission. Shrimp commodity that was being fed to the elasmobranch had WSSV detected in them; the most likely introduction of WSSV into the system was via shrimp commodities being used as feed.</p>

3	<p><b>WSSV</b> was detected by real-time PCR in ornamental shrimp from an exporter's premise. ~50,000 shrimp were imported from Taiwan on 23 March 2016, and were clinically healthy. Crustaceans from the infected consignment and those housed in the same compartment were destroyed, and the tanks cleaned, disinfected and fallowed. The Taiwanese CA was notified.</p>
4	<p><b><i>Batrachochytrium dendrobatidis (Bd)</i></b> was detected by real-time PCR in skin swabs of native and introduced species of wild frogs as part of a joint wildlife chytrid study with the National Parks Board. The samples were collected from peri-urban parks as well as nature reserves. The frogs all appeared clinically healthy during sampling.</p>
5	<p><b>Megalocytiavirus</b> was detected by real-time PCR in healthy ornamental fish (Platy and Molly) from exporters' premises. The virus was identified as Infectious spleen and kidney necrosis virus (ISKNV) by conventional PCR using OIE primer set 1 (Kurita et al., 1998).</p>
6	<p>a) <b>Megalocytiavirus</b> was detected by real-time PCR in diseased ornamental fish (Platy) from a research facility. There was increasing high mortality reported (~300 out of 900). The virus was identified as Infectious spleen and kidney necrosis virus (ISKNV) by conventional PCR using OIE primer set 1 (Kurita et al., 1998). The diseased batch of fish was destroyed by the facility.</p> <p>b) <b>Megalocytiavirus</b> was detected by real-time PCR in healthy ornamental fish (Discus) from an exporter's premise. ISKNV was <b>not</b> detected by conventional PCR using OIE primer set 1 (Kurita et al., 1998).</p>

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

Country: **TAIPEI CHINA**

 Period: **January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp (SVC)	***	***	***		
4. Viral haemorrhagic septicaemia (VHS)	***	***	***		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	-	-	-		
6. Red seabream iridoviral disease (RSID)	-	-	-		
7. Koi herpesvirus disease (KHV)	-	-	-		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	+	+	+	LDCCs	1
9. Viral encephalopathy and retinopathy	+	+	+	LDCCs	2
10. Enteric septicaemia of catfish	***	***	***		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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>	***	***	***		
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
7. Acute viral necrosis (in scallops)	***	***	***		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	-	+	-	LDCCs	3
2. White spot disease (WSD)	-	-	-		
3. Yellowhead disease (YHD)	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis (IHNN)	-	-	+	LDCCs	4
5. Infectious myonecrosis (IMN)	***	***	***		
6. White tail disease (MrNV)	-	-	-		
7. Necrotising hepatopancreatitis (NHP)	***	***	***		
8. Acute hepatopancreatic necrosis disease (AHPND)	-	-	-		
9. Crayfish plague	-	-	-		
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	***	***	***		
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	***	***	***		

AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus	-	-	-		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	***	***	***		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infection with HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>.  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>																									
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<p>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</p>																									

**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><b>Grouper iridoviral disease (GIV)</b></p> <p>1. Kaohsiung City; 7 outbreak reports from 6 farms.                  2. Date: (1) Jan 6; (2) Jan 20; (3) Feb 15; (4) Feb 22; (5) Mar 7; (6), (7) Mar 9.                  3. Species: (1), (2), (6), (7) <i>Lates calcarifer</i> ; (3) <i>Bidyanus bidyanus</i>; (4) <i>Epinephelus lanceolatus</i>; (5) <i>Epinephelus malabaricus</i>.                  4. Mortality rate: Low.                  5. Total number of death: (1) 1200/22000; (2), (7) 0/40000; (3)0/45000; (4)0/1000; (5)0/10000; (6) 0/12000.</p>

2	<p><b>Viral encephalopathy and retinopathy</b></p> <p>1. Kaohsiung City and Tainan City; 26 outbreak reports from 22 farms.                  2. Date: (1), (2) Jan 6; (3), (4), (5), (6) Jan 8; (7) Jan 11; (8) Jan 13; (9) Jan 14; (10), (11) Jan 18; (12) Jan 26; (13), (14) Feb 5; (15) Feb 22; (16) Feb 26; (17) Mar 2; (18) Mar 4; (19) Mar 7; (20), (21), (22), (23) Mar 9; (24), (25) Mar 16; (26) Mar 21.                  3. Species: (1), (10), (15) <i>Epinephelus lanceolatus</i>; (2), (3), (4), (5), (6), (11), (12), (13), (14), (16), (17), (19), (20), (21), (22), (23), (25), (26) <i>Epinephelus malabaricus</i>; (7), (8), (9), (18), (24) <i>Epinephelus fuscoguttatus</i>.                  4. Mortality rate: Low.                  5. Total number of death: (1), (6) 200/10000; (2) 300/10000; (3) 150/10000; (4) 250/10000; (5) 100/10000; (7), (8), (9), (11), (12), (13), (14), (16), (17), (18), (19), (20), (21), (22), (23), (25), (26) 0/10000; (10), (15) 0/1000; (24) 0/12000.</p>
3	<p><b>White spot disease (WSD)</b></p> <p>1. Kaohsiung City. 1 outbreak report from 1 farm.                  2. Date: (1) Feb 2.                  3. Species: (1) <i>Litopenaeus vannamei</i>.                  4. Mortality rate: Low.                  5. Total number of death: (1) 0/150000.</p>
4	<p><b>Infectious hypodermal and haematopoietic necrosis (IHHN)</b></p> <p>1. Taitung County. 1 outbreak report from 1 farm.                  2. Date: (1) Mar 24.                  3. Species: (1) <i>Litopenaeus vannamei</i>.                  4. Mortality rate: Low.                  5. Total number of death: (1) 0/400000.</p>

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

Country: **VIETNAM\***

 Period: **January - March 2016**

Item	Disease status <sup>al</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	January	February	March		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with <i>Aphanomyces invadans</i> (EUS)	-	-	-		
6. Red seabream iridoviral disease (RSID)	0000	0000	0000		
7. Koi herpesvirus disease (KHV)	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10. Enteric septicaemia of catfish	+	+	+	I, II	1
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	-	-	-		
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		
<b>Non OIE-listed diseases</b>					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	+	+	+	I, III	2
3. Yellowhead disease (YHD)	-	-	-		
4. Infectious hypodermal and haematopoietic necrosis (IHNN)	0000	0000	0000		
5. Infectious myonecrosis (IMN)	0000	0000	0000		
6. White tail disease (MrNV)	-	-	-		
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	+	+	+	I,III	3
9. Crayfish plague	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
10. <i>Monodon</i> slow growth syndrome	-	-	-		
11. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000		

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

AMPHIBIAN DISEASES					
<b>OIE-listed diseases</b>					
1. Infection with Ranavirus	0000	0000	0000		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					

<b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>			
<b>LISTED BY THE OIE</b>			
<b>Finfish:</b> Infection with HPR-deleted of HPR0 salmon anemia virus; Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i> .			
<b>Molluscs:</b> Infection with <i>Bonamia ostreae</i> ; <i>Marteilia refringens</i> ; <i>Perkinsus marinus</i> .			
<b>Crustaceans:</b> Crayfish plague ( <i>Aphanomyces astaci</i> ).			
<b>NOT LISTED BY THE OIE</b>			
<b>Finfish:</b> Channel catfish virus disease			
<u>a/</u> 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
<u>b/</u> 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><b>Enteric Septicaemia of Catfish (<i>Edwardsiella ictaluri</i>)</b></p> <p>Infection found in intensive catfish (<i>Pangasius micronema</i>, <i>P. hypophthalmus</i>) farms. The disease occurred in Dong Thap provinces.</p>
2	<p><b>White Spot Disease (WSD)</b></p> <p><b>Pathogen:</b> White spot syndrome virus (WSSV)  <b>Species affected:</b> <i>Penaeus monodon</i> and <i>Litopenaeus vannamei</i> (10-100 DOC)  <b>Name of affected area:</b> reported in 17 provinces (total area 666.1 ha) including Quang Binh, Quang Nam, Thua Thien Hue, Quang Ngai, Binh Dinh, Phu Yen, Ho Chi Minh, Ninh Thuan, Ba Ria-Vung Tau, Long An, Tien Giang, Ben Tre, Tra Vinh, Kien Giang, Soc Trang, Bac Lieu and Ca Mau.  <b>Mortality rate:</b> average to high, 100% in some cases within 10 d.  <b>Clinical signs:</b> 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;  <b>Control measures:</b> early harvest, strict isolation of infected ponds from movement, strengthened control of transportation, disinfection of infected ponds using Calcium hypochlorite (chlorine).</p>



3	<p><b>Acute Hepatopancreatic Necrosis Disease (AHPND)</b></p> <p><b>Pathogen:</b> <i>Vibrio parahaemolyticus</i> with Phage A3</p> <p><b>Species affected:</b> <i>Penaeus monodon</i> and <i>Litopenaeus vannamei</i> (10-45 DOC)</p> <p><b>Name of affected area:</b> reported in 14 provinces and caused losses in total shrimp culture area of 446 ha. Affected provinces include Quang Nam, Binh Dinh, Phu Yen, Ho Chi Minh, Ba Ria-Vung Tau, Ninh Thuan, Long An, Tien Giang, Tra Vinh, Ben Tre, Kien Giang, Soc Trang, Bac Lieu and Ca Mau.</p> <p><b>Mortality rate:</b> could reach 95% in intensive and semi-intensive farms;</p> <p><b>Clinical signs:</b> shrimps become lethargic with soft, darkened shells, mottling of the carapace. Pathology is limited to hepatopancreas.</p> <p><b>Control measures:</b> strict isolation of infected ponds from movement and transport controls, disinfection of infected ponds using Calcium hypochlorite (chlorine).</p>
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**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 2016)

1. DISEASES PREVALENT IN THE REGION	
<b>1.1 FINFISH DISEASES</b>	
<b>OIE-listed diseases</b>	<b>Non OIE-listed diseases</b>
1. Epizootic haematopoietic necrosis	1. Grouper iridoviral disease
2. Infectious haematopoietic necrosis	2. Viral encephalopathy and retinopathy
3. Spring viraemia of carp (SVC)	3. Enteric septicaemia of catfish
4. Viral haemorrhagic septicaemia (VHS)	
5. Infection with <i>Aphanomyces invadans</i> (EUS)	
6. Red seabream iridoviral disease (RSID)	
7. Koi herpesvirus disease (KHV)	
<b>1.2 MOLLUSC DISEASES</b>	
<b>OIE-listed diseases</b>	<b>Non OIE-listed diseases</b>
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>Xenohalotis californiensis</i>	
5. Infection with <i>Bonamia ostreae</i>	
<b>1.3 CRUSTACEAN DISEASES</b>	
<b>OIE-listed diseases</b>	<b>Non OIE-listed diseases</b>
1. Taura syndrome (TS)	1. Monodon slow growth syndrome
2. White spot disease (WSD)	2. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)
3. Yellowhead disease (YHD)	
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	
5. Infectious myonecrosis (IMN)	
6. White tail disease (MrNV)	
7. Necrotising hepatopancreatitis (NHP)	
8. Acute hepatopancreatic necrosis disease (AHPND)	
9. Crayfish plague	
<b>1.4 AMPHIBIAN DISEASES</b>	
<b>OIE-listed diseases</b>	<b>Non OIE-listed diseases</b>
1. Infection with Ranavirus	
2. Infection with <i>Bachtracochytrium dendrobatidis</i>	
2. DISEASES PRESUMED EXOTIC TO THE REGION	
<b>2.1 Finfish</b>	
<b>OIE-listed diseases</b>	<b>Non OIE-listed diseases</b>
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>	
<b>2.2 Molluscs</b>	
<b>OIE-listed diseases</b>	<b>Non OIE-listed diseases</b>
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, 19<sup>th</sup> Edition, 2016.** The OIE Aquatic Animal Health Code (the Aquatic Code) sets out standards for the improvement of aquatic animal health and welfare of farmed fish worldwide, and for safe international trade in aquatic animals (amphibians, crustaceans, fish and molluscs) and their products. The health measures in the Aquatic Code should be used by the Competent Authorities of importing and exporting countries for early detection, reporting and control of agents pathogenic to aquatic animals and to prevent their transfer 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 19th edition incorporates modifications to the Aquatic Code agreed at the 84th General Session in May 2016. It includes updates of the table of contents and glossary, and revised text included in Chapter 1.1. Notification of diseases and provision of epidemiological information and Chapter 5.1. General obligations related to certification. Chapter 4.3. Disinfection of aquaculture establishments and equipment has been extensively revised and the title amended accordingly. Chapter 9.2. Infection with yellow head virus genotype 1 has been amended to clarify the scope of this chapter and the title revised accordingly. In addition, some minor consequential amendments have been made in Articles 1.4.3., 1.5.2., 2.1.4., 4.2.3. and 4.6.3. to ensure that the use of 'vector' is consistent with the new definition of 'vector'. The Aquatic Animal Health Code is available for free download <http://www.oie.int/international-standard-setting/aquatic-code/access-online/>

**OIE Manual of Diagnostic Tests for Aquatic Animals, 2016.** The purpose of this Manual of Diagnostic Tests for Aquatic Animals (Aquatic Manual) is to provide a uniform approach to the detection of the diseases listed in the OIE Aquatic Code, so that the requirements for health certification in connection with disease prevention and control programmes, and trade in aquatic animals and aquatic animal products can be met. Although many publications exist on the detection and control of aquatic animal diseases, the Aquatic Manual is a key and unique document describing the methods that should be applied to the OIE-listed diseases in aquatic animal health laboratories all over the world, thus increasing efficiency and promoting improvements in aquatic animal health world-wide. The requirements published in this Aquatic Manual are recognised as international standards by the WTO. The manual is available for free download at <http://www.oie.int/international-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 AG<sup>1</sup>, 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.

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<sup>1</sup> 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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