



QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

July – September 2017



Published by

**Network of Aquaculture Centres
in Asia-Pacific**

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January 2018

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Foreword

10th Symposium on Diseases in Asian Aquaculture

The 10th Symposium on Diseases in Asian Aquaculture (DAA10) was successfully organised at the Anvaya Beach Resort, Kuta, Bali, Indonesia with the spirit of “Back to Bali: Surfing Science in the Sun” during August 28 to September 1, 2017, in the same country and city where the very first DAA Symposium (DAA1) was held way back in 1990. The theme of DAA10 was 'Enhancing Aquatic Animal Health Research and Services through Public-Private Sector Partnerships'. The event was jointly organised by FHS-AFS and Ministry of Marine Affairs and Fisheries, Indonesia and its Directorate General of Aquaculture.

The DAA10 National Organizing Committee was headed by Mr. Maskur (DGA-MMAF); Scientific Program Committee was headed by Dr Rohana Subasinghe (FutureFish); whereas, Dr. C. V. Mohan was the Chairman of Student Travel Award Committee. In addition, FHS Exe-com with Dr. Phan Thi Van (RIA1) as Chairperson, Dr. Agus Sunarto (CSIRO) as Vice-Chairperson and Dr. Eduardo Leano (NACA) as Secretary/Treasurer played pivotal roles in coordinating various activities for successful organisation of DAA10. The sponsors included Blue Aqua (Platinum); NutriAD (Silver); and Hinabiotech, Kinglab, Evergreen, CJ and publication sponsor World Aquaculture Society, Fishes (All Session).

A total of 402 participants from 29 countries attended the Symposium in Bali. There were 9 Keynote/ Invited presentations, 72 Oral presentations and 43 Elevator pitch presentations. In addition, there were 107 posters presented. On the sidelines of DAA10, four satellite workshops were also held including: NACA's 16th Meeting of the Asia Regional Advisory Group on Aquatic Animal Health (AGM 16); Tilapia Lake Virus meeting organized by WorldFish; OIE Koi Herpes Virus Twinning Program organized by National Research Institute of Aquaculture (Japan) and Centre for Freshwater Aquaculture (Indonesia); and a Shrimp Farmer Night hosted by Shrimp Club of Indonesia. To commemorate the excellent organization of DAA10, a gala dinner along with traditional cultural programme was arranged at Anvaya Beach, Bali on 31st August 2017.

11th Technical Group Meeting (TGM-11) and Election of New Executive Committee of FHS (2018-2020). The TGM-11 was held on 29 August 2017 at Anvaya Beach Resort, Bali, Indonesia. The meeting was attended by 33 FHS members, and was facilitated by the current Chairperson, Dr. Phan Thi Van. The Secretary's Report which summarizes the activities of the section from 2014 to 2017, as well as the Financial Report wherein FHS account is being maintained at NACA, were presented by the current Secretary/Treasurer Dr. Eduardo Leño. The 2018-2020 Executive Committee were also elected and selected during the meeting as follows:

Chairperson: Dr Agus Sunarto (Indonesia/Australia)

Vice-Chairperson: Dr Kua Beng Chu (Malaysia)

Secretary/Treasurer: Dr Eduardo Leño (Philippines/Thailand)

Members:

- Dr Phan Thi Van (Vietnam, Past Chair)
- Prof Motohiko Sano (Japan)
- Dr P.K. Pradhan (India)
- Prof Han-Ching Wang (Taiwan)
- Dr Liang Yan (P.R. China)
- Dr Siow-Foong Chang (Singapore)
- Ms Varinee Panyawachira (Thailand)
- Mr Gerald Misol Jr. (Malaysia)

Observers:

- Dr Dang Thi Lua (Vietnam)
- Dr Benjaporn Somridhivej (Thailand)
- Ms Imelda Rantty (Malaysia)
- Ms Dewi Syahidah (Indonesia)
- Mr Partho Pratim Debnath (Bangladesh)

FHS Electronic Newsletter Editors:

- Dr P.K. Pradhan
- Dr Neeraj Sood
- Ms Dewi Syahidah
- Dr Supranee Chinabut (Advisor)

FHS Recognition Awards. On the sidelines of DAA10, the Fish Health Section of the Asian Fisheries Society presented Recognition Award to the following senior members, for their unselfish support and guidance to the mission of the Fish Health Section:

- Celia R. Lavilla-Pitogo (Philippines)
- Chadag Vishnumurthy Mohan (India/Malaysia)
- Chu-Fang Lo (Taiwan)
- Donald V. Lightner (USA)
- Ikuo Hirono (Japan)
- Indrani Karunasagar (India)
- James Richard Arthur (Canada)
- Kamonporn Tonguthai (Thailand)
- Kishio Hatai (Japan)
- Leong Tak Seng (Malaysia)
- Melba Reantaso (Philippines/Italy)
- Mohd. Shariff (Malaysia)
- Rohana Subasinghe (Sri Lanka)
- Sandra Adams (Scotland)

- Supranee Chinabut (Thailand)
- Takashi Aoki (Japan)
- Timothy W. Flegel (Thailand)

Reports Received by the NACA and OIE-RRAP

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

Country: **AUSTRALIA***Period: **July - September 2017**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
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)	+	-(2017)	-(2017)	III	2
6. Red seabream iridoviral disease (RSID)	0000	0000	0000		
7. Koi herpesvirus disease (KHV)	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	-(2017)	-(2017)	+	III	3
10. Enteric septicaemia of catfish	-(2014)	-(2014)	-(2014)		4
11. Carp edema virus disease	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	+	-(2017)	-(2017)	III	5
2. Infection with <i>Perkinsus olseni</i>	+	+	-(2017)	I	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>	0000	0000	0000		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	-(2017)	?(2017)	-(2017)	III	8
3. Yellowhead disease (YHD)	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	-(2017)	-(2017)	-(2017)		9
5. Infectious myonecrosis (IMN)	0000	0000	0000		
6. White tail disease (MrNV)	-(2008)	-(2008)	-(2008)		10
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
9. Crayfish plague	0000	0000	0000		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000		
11. Viral covert mortality disease (VCMD) of shrimps	***	***	***		
12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Iridovirus in crayfish	***	***	***		

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

AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	-(2008)	-(2008)	-(2008)		11
2. Infection with <i>Batrachochytrium dendrobatidis</i>	-(2016)	-(2016)	-(2016)		12
ANY OTHER DISEASES OF IMPORTANCE					
1. <i>Hepatopancreatitis</i> in prawns	-(2017)	-(2017)	-(2017)		13
2. <i>Tenacibaculum dicentrarchi</i>					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>. Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>																							
<p>a/ Please use the following symbols:</p> <table border="0"> <tr> <td style="padding-right: 20px;">+</td> <td style="padding-right: 20px;">Disease reported or known to be present</td> <td style="padding-right: 20px;">?()</td> <td>Presence of the disease suspected but not confirmed in a zone</td> </tr> <tr> <td style="padding-right: 20px;">+?</td> <td style="padding-right: 20px;">Serological evidence and/or isolation of causative agent but no clinical diseases</td> <td style="padding-right: 20px;">***</td> <td>No information available</td> </tr> <tr> <td style="padding-right: 20px;">?</td> <td style="padding-right: 20px;">Suspected by reporting officer but presence not confirmed</td> <td style="padding-right: 20px;">0000</td> <td>Never reported</td> </tr> <tr> <td style="padding-right: 20px;">+()</td> <td style="padding-right: 20px;">Occurrence limited to certain zones</td> <td style="padding-right: 20px;">-</td> <td>Not reported (but disease is known to occur)</td> </tr> <tr> <td style="padding-right: 20px;">+?()</td> <td style="padding-right: 20px;">Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</td> <td style="padding-right: 20px;">(year)</td> <td>Year of last occurrence</td> </tr> </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>Epizootic haematopoietic necrosis was not reported this period despite passive surveillance in Victoria (last reported 2012), the Australian Capital Territory (last reported 2011), New South Wales (last reported 2009) and South Australia (last reported 1992). Passive surveillance and never reported in the Northern Territory, Queensland, Tasmania and Western Australia.</p>

<p>2</p>	<p>Infection with <i>Aphanomyces invadans</i> (EUS) 1. Reported in New South Wales in July 2017, passive surveillance; 2. Species affected – flathead (<i>Platycephalus</i> sp.); 3. Clinical signs – N/A; 4. Pathogen – <i>Aphanomyces invadans</i>; 5. Mortality rate – unknown; 6. Economic loss – N/A; 7. Geographic extent – two wild fish in the Richmond River; 8. Containment measures – N/A; 9. Laboratory confirmation – histopathology, PCR; 10. Publications – nil.</p> <p>Infection with <i>Aphanomyces invadans</i> (EUS) is known to have occurred previously in the Northern Territory (last reported May 2017), Queensland (last reported 2014), Western Australia (last reported 2013), Victoria (last reported 2012), and South Australia (last reported 2008). Passive surveillance and never reported in Tasmania. No information available this period in the Australian Capital Territory.</p>
<p>3</p>	<p>Viral encephalopathy and retinopathy (VER) 1. Reported in Queensland in September 2017, passive surveillance; 2. Species affected – giant grouper (<i>Epinephelus lanceolatus</i>), adult; 3. Clinical signs – gas accumulation in abdomen; 4. Pathogen – Betanodavirus; 5. Mortality rate – four fish from one tank; 6. Economic loss – N/A; 7. Geographic extent – one tank at a North Queensland hatchery; 8. Containment measures – N/A; 9. Laboratory confirmation – histopathology, IHCT; 10. Publications – nil.</p> <p>Viral encephalopathy and retinopathy is known to occur previously in the Northern Territory (last reported 2013), Western Australia (last reported 2013), South Australia (last reported 2010) and Tasmania (last reported 2000). Targeted surveillance and not reported this period in New South Wales (last reported 2016). Passive surveillance and never reported in Victoria. No information available this period in the Australian Capital Territory.</p>
<p>4</p>	<p>Enteric septicaemia of catfish (<i>E. ictaluri</i>) was not reported this period despite pasive surveillance. It was reported from clinically normal fish from a single river in Queensland (October 2014), the only occurrence of <i>E. ictaluri</i> in wild fish populations in Australia. Active surveillance throughout Northern Australia has found no evidence of <i>E. ictaluri</i> in any other wild fish populations. <i>E. ictaluri</i> has been detected previously in association with imported ornamental fish including: Northern Territory in a 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>

<p>5</p>	<p>Infection with <i>Bonamia exitiosa</i> 1. Reported in South Australia in July 2017, targeted surveillance; 2. Species affected – flat oyster (<i>Ostrea angasi</i>); 3. Clinical signs – none; 4. Pathogen – <i>Bonamia</i> spp.; 5. Mortality rate – none; 6. Economic loss – none; 7. Geographic extent – Coffin Bay, Streaky Bay, Cowell; 8. Containment measures – none; 9. Laboratory confirmation – qPCR; 10. Publications – nil.</p> <p><i>Bonamia exitiosa</i> is known to have occurred previously in Western Australia (last reported February 2017) and Victoria (last reported 2016). Passive surveillance and never reported in Queensland, New South Wales, Tasmania and Northern Territory. No information available for the Australian Capital Territory (no marine water responsibility).</p>
<p>6</p>	<p>Infection with <i>Perkinsus olseni</i> 1. Reported in Western Australia in July and August 2017, targeted surveillance; 2. Species affected – silver-lipped pearl oyster (<i>Pinctada maxima</i>) and greenlip abalone (<i>Haliotis laevis</i>); 3. Clinical signs – N/A; 4. Pathogen – <i>Perkinsus olseni</i>; 5. Mortality rate – N/A; 6. Economic loss – N/A; 7. Geographic extent – N/A; 8. Containment measures – N/A; 9. Laboratory confirmation – histopathology, RFTM; 10. Publications – nil.</p> <p><i>Perkinsus olseni</i> has known to occurred previously in South Australia (last reported in April 2017). Passive surveillance in Victoria (last reported 2015), Queensland (last reported 2014), 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 (no marine water responsibility).</p>
<p>7</p>	<p>Infection with abalone herpesvirus (abalone viral ganglioneuritis) was not reported this period despite passive surveillance in Tasmania (last reported 2011), New South Wales (last reported 2011 and eradicated following detection in contained commercial live-holding facilities) and Victoria (last reported 2010). Passive surveillance and never reported in the Northern Territory, Queensland, South Australia and Western Australia. No information available this period in the Australian Capital Territory (no marine water responsibility).</p>

8	<p>White spot disease</p> <ol style="list-style-type: none"> 1. Reported in Queensland in August 2017 in frozen bait prawns seized at a fishing bait shop in Warwick, collection date unknown, targeted surveillance; 2. Species affected – banana prawn (<i>Fenneropenaeus merguensis</i>); 3. Clinical signs – none; 4. Pathogen – white spot syndrome virus; 5. Mortality rate – none; 6. Economic loss – N/A; 7. Geographic extent – the precise location unable to be identified but caught by a commercial fisher in the Brisbane area (within the movement restricted area) in Queensland; 8. Containment measures – destruction of product; 9. Laboratory confirmation – qPCR, sequencing; 10. Publications – OIE notifications. <p>White spot disease was confirmed on a farm on 1 December 2016. By February 2017, seven properties, all along the Logan River in South East Queensland, were confirmed as being affected by white spot disease. Containment was immediately implemented for all affected farms. In May 2017, destruction of stock, disposal and decontamination of ponds on all affected farms were complete, and all ponds on the affected farms will lay fallow until May 2018 to assist with the eradication of WSSV. As a result of detection of WSSV in wild crustaceans, trade, movement and fishing restrictions in the Moreton Bay region have been in place to contain white spot disease and prevent new outbreaks. Surveillance outside of the movement restricted area in Queensland returned no positive test results for the last six months except for a positive case of frozen bait prawns (not live prawns) due to the movement through trade to a retail fishing bait establishment in Warwick. White spot disease has never been reported despite active and passive surveillance in New South Wales, South Australia, Western Australia and Northern Territory. Never reported in Victoria and Tasmania despite passive surveillance. No information available for the Australian Capital Territory (no marine water responsibility).</p>
9	<p>Infectious hypodermal and haematopoietic necrosis virus was not reported this periods despite passice surveillance in Queensland (last reported May 2017) and 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 water responsibility) and Tasmania (susceptible species not present).</p>
10	<p>White tail disease 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>
11	<p>Infection with ranavirus 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 and New South Wales. No information available this period in the Australian Capital Territory, South Australia, Victoria and Western Australia.</p>
12	<p>Infection with <i>Batrachochytrium dendrobatidis</i> was not reported this period despite passive surveillance in Victoria (last reported October 2016), Tasmania (last reported 2013), New South Wales (last reported 2012), Western Australia (last reported 2008) and Queensland (last reported 2004). Passive surveillance and never reported from the Northern Territory. No information available this period in the Australian Capital Territory and South Australia.</p>

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

Biosecurity Advice (2017/12) announced on 30 June 2017, under the Biosecurity Act 2015, trade in uncooked prawns (including marinated prawns and Australian prawns processed overseas in a non-Australian government audited supply chain) would resume under the enhanced import conditions from 7 July 2017. These prawns will be subject to strict testing requirements to ensure biosecurity risks are managed.

Queensland has implemented a new white spot biosecurity regulation that maintains movement restrictions for high-risk animals such as prawns, yabbies and marine worms out of the white spot movement restriction area. Under the new regulation an exemption now exists for low-risk species such as crabs, lobster and bugs. Fishing is also prohibited near land-based prawn farms and waterways within the movement restriction area.

Country: **CHINESE TAIPEI**

 Period: **July - September 2017**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
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)	+	-	-	LDCCs	1
7. Koi herpesvirus disease (KHV)	+	+	-	LDCCs	2
Non OIE-listed diseases					
8. Grouper iridoviral disease	+	+	+	LDCCs	3
9. Viral encephalopathy and retinopathy	+	+	+	LDCCs	4
10. Enteric septicaemia of catfish	***	***	***		
11. Carp edema virus disease	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Infection with abalone herpesvirus	-	-	-		
4. Infection with <i>Xenohalictis californiensis</i>	***	***	***		
5. Infection with <i>Bonamia ostreae</i>	***	***	***		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	-	-	-		
2. White spot disease (WSD)	-	+	+	LDCCs	5
3. Yellowhead disease (YHD)	+	+	-	LDCCs	6
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	+	+	-	LDCCs	7
5. Infectious myonecrosis (IMN)	***	***	***		
6. White tail disease (MrNV)	-	-	-		
7. Necrotising hepatopancreatitis (NHP)	***	***	***		
8. Acute hepatopancreatic necrosis disease (AHPND)	***	***	***		
9. Crayfish plague	-	-	-		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	***	***	***		
11. Viral covert mortality disease (VCMD) of shrimps	***	***	***		
12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Iridovirus in crayfish	***	***	***		

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

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>. Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: 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>Red seabream iridoviral disease (RSID) 1. Chiayi county. 7 outbreak reports from 6 farms. 2. Date: (1), (2), (3), (4), (5), (6), (7) Jul 7. 3. Species: (1), (2), (3), (4), (7) <i>Lates calcarifer</i>; (5), (6) <i>Lateolabrax japonicus</i>. 4. Mortality rate: low. 5. Total number of death: (1) 0/60000; (2), (3) 0/40000; (4) 0/43000; (5) 0/70000; (6) 0/33000; (7) 0/36000.</p>
2	<p>Koi herpesvirus disease (KHV) 1. Pingtung county, Yunlin county. 3 outbreak reports from 3 farms. 2. Date: (1) Jul 21; (2) Aug 4; (3) Aug 31. 3. Species: (1), (2), (3) <i>Cyprinus carpio</i>. 4. Mortality rate: low. 5. Total number of death: (1), (2) 0/1000; (3) 0/200000.</p>

3	<p>Grouper iridoviral disease</p> <p>1. Kaohsiung city, Pingtung county. 27 outbreak reports from 21 farms.</p> <p>2. Date: (1), (2) Jul 3; (3) Jul 13; (4) Jul 17; (5) Jul 20; (6) Jul 21; (7), (8) Jul 25; (9) Jul 31; (10) Aug 1; (11) Aug 3; (12) Aug 4; (13) Aug 21; (14) Sep 7; (15) Sep 14; (16) Sep 16; (17), (18) Sep 23; (19), (20), (21), (22), (23), (24) Sep 25; (25) Sep 27; (26) Sep 28; (27) Sep 30.</p> <p>3. Species: (1), (3), (4), (6), (7), (10), (11), (13), (14), (15), (17), (18), (19), (20), (21), (26), (27) <i>Epinephelus malabaricus</i>; (2), (5), (8), (9), (16), (22), (23), (24) <i>Lates calcarifer</i>; (12) <i>Epinephelus coioides</i>; (25) <i>Epinephelus lanceolatus</i>.</p> <p>4. Mortality rate: low.</p> <p>5. Total number of death: (1) 0/12000; (2), (3), (5), (8), (22), (23), (24) 0/40000; (4), (6), (7), (10), (11), (12), (13), (14), (15), (19), (20), (27) 0/10000; (9) 0/38000; (16), (21) 0/20000; (17) 0/15000; (18) 0/11000; (25) 0/1000; (26) 0/13000.</p>
4	<p>Viral encephalopathy and retinopathy</p> <p>1. Kaohsiung city, Pingtung county. 33 outbreak reports from 25 farms.</p> <p>2. Date: (1), (2) Jul 11; (3) Jul 17; (4) Jul 18; (5), (6), (7), (8) Jul 21; (9), (10) Aug 1; (11) Aug 3; (12), (13), (14) Aug 20; (15) Aug 21; (16), (17), (18) Aug 23; (19) Aug 25; (20), (21) Aug 30; (22), (23), (24) Sep 1; (25) Sep 2; (26) Sep 3; (27) Sep 22; (28) Sep 23; (29) Sep 25; (30), (31), (32) Sep 27; (33) Sep 30.</p> <p>3. Species: (1), (2), (6), (8), (10), (11), (22), (28) <i>Epinephelus fuscoguttatus</i> x <i>Epinephelus lanceolatus</i>; (3), (7), (9), (12), (13), (17), (18), (19), (20), (21), (23), (24), (25), (29), (30), (31), (32), (33) <i>Epinephelus malabaricus</i>; (4), (5), (14), (15), (16), (26) <i>Epinephelus lanceolatus</i>; (27) <i>Epinephelus coioides</i>.</p> <p>4. Mortality rate: low.</p> <p>5. Total number of death: (1), (2), (3), (6), (7), (8), (9), (10), (11), (12), (13), (17), (18), (19), (20), (21), (22), (23), (24), (25), (30), (31), (32), (33) 0/10000; (4), (5), (15) 0/1000; (14) 0/3000; (16) 0/500; (26) 0/5000; (27) 0/30000; (28) 0/2000; (29) 0/20000.</p>
5	<p>White spot disease (WSD)</p> <p>1. Chiayi county, Pingtung county. 7 outbreak reports from 6 farms.</p> <p>2. Date: (1) Aug 30; (2), (3) Sep 6; (4) Sep 18; (5), (6) Sep 22; (7) Sep 29.</p> <p>3. Species: (1) <i>Litopenaeus vannamei</i>; (2), (6) <i>Neocaridina denticulata sinensis</i>; (3), (5), (7) <i>Caridina multidentata</i>; (4) <i>Ornamental shrimps</i>.</p> <p>4. Mortality rate: low.</p> <p>5. Total number of death: (1) 0/400000; (2) 0/80000; (3), (5), (7) 0/50000; (4) 0/30000; (6) 0/300000.</p>
6	<p>Yellowhead disease (YHD)</p> <p>1. Pingtung county. 3 outbreak reports from 3 farms.</p> <p>2. Date: (1) Jul 21; (2) Jul 26; (3) Aug 4.</p> <p>3. Species: (1), (2), (3) <i>Neocaridina denticulata sinensis</i>.</p> <p>4. Mortality rate: low.</p> <p>5. Total number of death: (1), (2), (3) 0/10000.</p>
7	<p>Infectious hypodermal and haematopoietic necrosis (IHHN)</p> <p>1. Pingtung county, Taitung county. 4 outbreak reports from 3 farms.</p> <p>2. Date: (1) Jul 21; (2) Aug 4, (3) Aug 11; (4) Aug 16.</p> <p>3. Species: (1) Ornamental shrimps; (2), (3) <i>Caridina multidentata</i>; (4) <i>Litopenaeus vannamei</i>.</p> <p>4. Mortality rate: low.</p> <p>5. Total number of death: (1), (2), (3) 0/10000; (4) 0/5400000.</p>

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

A. Quarantine Requirements for the Importation of Live Fish and Their Gametes and Fertilized Eggs (Amendments enter into force on June 22, 2017)

B. The stipulation in regard to the suspension of the importation of live tilapia from Colombia, Ecuador, Israel, Egypt, Thailand and P.R. China to prevent the introduction of Tilapia Lake Virus into Taiwan (stipulation has been effective since June 22, 2017)

Country: HONG KONG SAR, CHINA*
Period: July - September 2017

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
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	
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-	III	
9. Viral encephalopathy and retinopathy	-	-	-	III	
10. Enteric septicaemia of catfish	0000	0000	0000	II	
11. Carp edema virus disease	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	II	
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000	II	
3. Infection with abalone herpesvirus	0000	0000	0000	II	
4. Infection with <i>Xenohalotis californiensis</i>	0000	0000	0000	II	
5. Infection with <i>Bonamia ostreae</i>	***	***	***		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	II	
7. Acute viral necrosis (in scallops)	0000	0000	0000	II	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. 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 (IHHN)	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)	***	***	***	II	
8. Acute hepatopancreatic necrosis disease (AHPND)	***	***	***	II	
9. Crayfish plague	0000	0000	0000	II	
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	***	***	***		
11. Viral covert mortality disease (VCMD) of shrimps	***	***	***		
12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Iridovirus in crayfish	***	***	***		

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AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	+()	(1 Apr 2017)	(1 Apr 2017)	III	
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000	III	
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION^b			
LISTED BY THE OIE			
Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i> .			
Molluscs: Infection with <i>Bonamia ostreae</i> ; <i>Marteilia refringens</i> ; <i>Perkinsus marinus</i> .			
Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>).			
NOT LISTED BY THE OIE			
Finfish: Channel catfish virus disease			
a/ Please use the following symbols:			
		?()	Presence of the disease suspected but not confirmed in a zone
+	Disease reported or known to be present	***	No information available
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
+()	Occurrence limited to certain zones	(year)	Year of last occurrence
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease		
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	Seized giant salamander from suspected illegal trade developed signs of the disease while under quarantine. There is no evidence of spread of the disease inside or outside the quarantine facility. Samples were sent to Australian Animal Health Laboratory for confirmation.
2	
3	

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

Country: INDIA*
Period: July - September 2017

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
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		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	-	-	-		
10. Enteric septicaemia of catfish	0000	0000	0000		
11. Carp edema virus disease	-	-	-		
MOLLUSC DISEASES					
OIE-listed diseases					
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>Xenohalictis californiensis</i>	0000	0000	0000		
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	+	+	+	III	3
3. Yellowhead disease (YHD)	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	+	+	+	III	4
5. Infectious myonecrosis (IMN)	-	-	-		
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		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	+	+	+	III	5
11. Viral covert mortality disease (VCMD) of shrimps	0000	0000	0000		
12. <i>Spiroplasma eriocheiris</i> infection	0000	0000	0000		
13. Iridovirus in crayfish	0000	0000	0000		

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AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	0000	0000	0000		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1. Infection with Tilapia Lake Virus	+	+	+	III	6
2.					

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

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

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

Crustaceans: Crayfish plague (*Aphanomyces astaci*).

NOT LISTED BY THE OIE

Finfish: Channel catfish virus disease

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	Infection with <i>Aphanomyces invadans</i> was reported in <i>Channa</i> species from Ernakulam, Kerala
2	Infection with <i>Perkinsus olseni</i> reported in wild samples of <i>Perna viridis</i> from Kozhikode, Kannur, Thrissur and Ernakulam districts of Kerala; wild samples of <i>Paphila malabarica</i> from Kozhikode, Kannur, Thrissur, Kollam, Thiruvananthapuram and Ernakulam districts of Kerala.
3	White spot disease was reported in <i>Litopenaeus vannamei</i> from Nagapattinam, Thoothukudi, Kanchipuram and Thiruvallur districts of Tamil Nadu; Srikakulam, Vizianagram, Visakhapatnam, East Godavari and West Godavari districts of Andhra Pradesh; and Raigad district of Maharashtra. WSSV was also detected in <i>L. Vannamei</i> from Udipi and Uttara Kannada districts of Karnataka

4	IHHN was reported in <i>Litopenaeus vannamei</i> from Kanchipuram and Nagapattinam districts of Tamil Nadu and Vizianagram, Visakhapatnam, East Godavari and West Godavari districts of Andhra Pradesh. IHHNV was detected from Udupi and Uttara Kannada districts of Karnataka
5	Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopanaei</i> was reported in <i>Litopenaeus vannamei</i> from East Godavari, West Godavari, Vizianagram and Visakhapatnam districts of Andhra Pradesh; Nagapattinam, Kanchipuram, Thiruvallur, Villupuram, Thoothukudi and Pudukkottai districts of Tamil Nadu. EHP was also detected from Raigad and Thane districts of Maharashtra; Surat and Navsari districts of Gujarat; and Udupi, Dakshina Kannada and Uttara Kannada districts of Karnataka.
6	Infection with Tilapia lake virus was reported from Ernakulam Palakkad Kollam, Pathanamthitta and Alapuzha districts of Kerala, and North 24 Parganas and South 24 Parganas districts of West Bengal.

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

Country: **JAPAN***

 Period: **July - September 2017**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	<input type="checkbox"/>	
2. Infectious haematopoietic necrosis	+	+	+	III	1
3. Spring viraemia of carp (SVC)	0000	0000	0000	<input type="checkbox"/>	
4. Viral haemorrhagic septicaemia (VHS)	-(2017)	-(2017)	-(2017)	<input type="checkbox"/>	
5. Infection with <i>Aphanomyces invadans</i> (EUS)	-(2015)	-(2015)	-(2015)	<input type="checkbox"/>	
6. Red seabream iridoviral disease (RSID)	+	+	+	II III	2
7. Koi herpesvirus disease (KHV)	+	+	+	III	3
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000	<input type="checkbox"/>	
9. Viral encephalopathy and retinopathy	+	+	+	III	4
10. Enteric septicaemia of catfish	-(2010)	-(2010)	-(2010)	<input type="checkbox"/>	
11. Carp edema virus disease	0000	0000	0000	<input type="checkbox"/>	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	<input type="checkbox"/>	
2. Infection with <i>Perkinsus olseni</i>	-(2007)	-(2007)	-(2007)	<input type="checkbox"/>	
3. Infection with abalone herpesvirus	0000	0000	0000	<input type="checkbox"/>	
4. Infection with <i>Xenohalictis californiensis</i>	-(2015)	-(2015)	-(2015)	<input type="checkbox"/>	
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000	<input type="checkbox"/>	
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	-(2014)	-(2014)	-(2014)	<input type="checkbox"/>	
7. Acute viral necrosis (in scallops)	0000	0000	0000	<input type="checkbox"/>	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000	<input type="checkbox"/>	
2. White spot disease (WSD)	+	+	+	III	5
3. Yellowhead disease (YHD)	0000	0000	0000	<input type="checkbox"/>	
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	0000	0000	0000	<input type="checkbox"/>	
5. Infectious myonecrosis (IMN)	0000	0000	0000	<input type="checkbox"/>	
6. White tail disease (MrNV)	0000	0000	0000	<input type="checkbox"/>	
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000	<input type="checkbox"/>	
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000	<input type="checkbox"/>	
9. Crayfish plague	0000	0000	0000	<input type="checkbox"/>	
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000	<input type="checkbox"/>	
11. Viral covert mortality disease (VCMD) of shrimps	0000	0000	0000	<input type="checkbox"/>	
12. <i>Spiroplasma eriocheiris</i> infection	0000	0000	0000	<input type="checkbox"/>	
13. Iridovirus in crayfish	0000	0000	0000	<input type="checkbox"/>	

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

DISEASES PRESUMED EXOTIC TO THE REGION^b			
LISTED BY THE OIE			
Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i> .			
Molluscs: Infection with <i>Bonamia ostreae</i> ; <i>Marteilia refringens</i> ; <i>Perkinsus marinus</i> .			
Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>).			
NOT LISTED BY THE OIE			
Finfish: Channel catfish virus disease			
a/ Please use the following symbols:			
		?()	Presence of the disease suspected but not confirmed in a zone
+	Disease reported or known to be present	***	No information available
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
+()	Occurrence limited to certain zones	(year)	Year of last occurrence
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease		
b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases			

1. Epidemiological comments:

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

Comment No.	
1	<p>Infectious haematopoietic necrosis (IHN)</p> <p>1) Reported in 10 prefectures</p> <p>2) Species affected: Yamame (<i>O. masou</i>), Amago (<i>O. masou ishikawae</i>), Rainbow trout (<i>O. mykiss</i>), Biwa trout (<i>O. masou</i> subsp), Hybrid of Rainbow trout</p> <p>3) Disease characteristics: Mortality, Anemia, Bleeding, Exophthalmos, Anemia of gills and kidney, Anemia of viscera, Threadbare fins, Petechial haemorrhages, Unusual swimming</p> <p>4) Pathogen: Infectious haematopoietic necrosis virus</p> <p>5) Mortality rate: 1-85%</p> <p>6) Economic loss: –</p> <p>7) Names of infected areas: Honshu, Hokkaido</p> <p>8) Preventive/control measures taken: Feed restriction, Disinfection of facilities and tools, Notification to concerns, Culling of infected fish, Movement control.</p> <p>9) Laboratories for confirmation: Cell culture, PCR, Isolation of the virus by prefectural research laboratories</p> <p>10) Publications: None</p>

<p>2</p>	<p>Red seabream iridoviral disease (RSIVD)</p> <p>1) Reported in 11 prefectures 2) Species affected: Red seabream (<i>Pagrus major</i>), Great amberjack (<i>Seriola dumerili</i>), Amberjack (<i>Seriola quinqueradiata</i>), Yellow tail amberjack (<i>Seriola lalandi Valenciennes</i>), Bluefin tuna (<i>Thunnus orientalis</i>), Barred knifejaw (<i>Oplegnathus fasciatus</i>), Globefish (<i>Takifugu rubripes</i>) Sardine (<i>Sardinops melanostictus</i>) 3) Disease characteristics: Mortality, Enlargement of the spleen, Erosion, Black spot on the gills 4) Pathogen: Red seabream iridovirus 5) Mortality rate: 1-77% 6) Economic loss: – 7) Names of infected areas: Shikoku, Kyushu, Honsyu, Okinawa 8) Preventive/control measures taken: Feed restriction, Removing dead fish, Movement control, Notification to concerns. 9) Laboratory confirmation: PCR by the prefectural research laboratory, Indirect immunofluorescence, Histopathological observation 10) Publications: None</p>
<p>3</p>	<p>Koi herpesvirus disease (KHV)</p> <p>1) Reported in 7 prefectures 2) Species affected: Koi carp (<i>Cyprinus carpio</i>) 3) Disease characteristics: Mortality, Unusual swimming, Enophthalmus 4) Pathogen: Koi herpesvirus 5) Mortality rate: 14-88% 6) Economic loss: – 7) Names of infected areas: Honshu 8) Preventive/control measures taken: Movement control, Culling of infected fish, Disinfection of ponds, Notification to concerns 9) Laboratory confirmation: PCR by National Research Institute of Aquaculture 10) Publications: Website of Ministry of Agriculture, Forestry and Fisheries (MAFF) and prefectures</p>
<p>4</p>	<p>Viral encephalopathy and retinopathy (VER)</p> <p>1) Reported in 3 prefectures 2) Species affected: Malabar grouper (<i>Epinephelus malabaricus</i>), Grouper (<i>E. septemfasciatus</i>), Redspotted Grouper (<i>E. akaara</i>), Longtooth grouper (<i>E. bruneus</i>) 3) Disease characteristics: Mortality, Unusual swimming 4) Pathogen: Betanodavirus 5) Mortality rate: 0-6% 6) Economic loss: – 7) Names of infected areas: Honshu, Okinawa 8) Preventive/control measures taken: Notification to concerns, Culling of infected fish 9) Laboratory confirmation: PCR by the prefectural research laboratory 10) Publications: None</p>

5	<p>White spot disease (WSD)</p> <p>1) Reported in 4 prefectures</p> <p>2) Species affected: Kuruma prawn (<i>Marsupenaeus japonicus</i>)</p> <p>3) Disease characteristics: Mortality, White spots on carapace</p> <p>4) Pathogen: White spot syndrome virus</p> <p>5) Mortality rate: 0-99 %</p> <p>6) Economic loss: –</p> <p>7) Names of infected areas: Honsyu, Kyusyu, Okinawa</p> <p>8) Preventive/control measures taken: Disinfection of facilities and tools, Notification to concerns, Culling, Movement control.</p> <p>9) Laboratory confirmation: PCR by prefectural research laboratory</p> <p>10) Publications: None</p>
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2. New aquatic animal health regulations introduced within past six months (with effective date):

Country: **MALAYSIA***

 Period: **April - June 2017**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	April	May	June		
FINFISH DISEASES					
OIE-listed diseases					
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
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-		4
9. Viral encephalopathy and retinopathy	-	-	-		5
10. Enteric septicaemia of catfish	0000	0000	0000		
11. Carp edema virus disease	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	?()	?()	?()		6
3. Infection with abalone herpesvirus	0000	0000	0000		
4. Infection with <i>Xenohaliotis californiensis</i>	0000	0000	0000		
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	-	-	-		7
2. White spot disease (WSD)	-	-	-		8
3. Yellowhead disease (YHD)	-	-	-		9
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	-	-	-		10
5. Infectious myonecrosis (IMN)	-	-	-		11
6. White tail disease (MrNV)	-	-	-		12
7. Necrotising hepatopancreatitis (NHP)	-	-	-		13
8. Acute hepatopancreatic necrosis disease (AHPND)	?	?	?		14
9. Crayfish plague	0000	0000	0000		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	?	?	?		15
11. Viral covert mortality disease (VCMD) of shrimps	0000	0000	0000		
12. <i>Spiroplasma eriocheiris</i> infection	0000	0000	0000		
13. Iridovirus in crayfish	0000	0000	0000		

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

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

DISEASES PRESUMED EXOTIC TO THE REGION^b			
LISTED BY THE OIE			
Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i> .			
Molluscs: Infection with <i>Bonamia ostreae</i> ; <i>Marteilia refringens</i> ; <i>Perkinsus marinus</i> .			
Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>).			
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	Spring viraemia of carp (SVC) No positive case was detected (PCR) during DoF active surveillance programme.
2	Red seabream iridoviral disease (RSID) No positive case was detected (PCR) during DoF active surveillance programme.

3	<p>Koi herpesvirus disease (KHV)</p> <p>1. Origin of the disease or pathogen (history of the disease); 2. Species affected – <i>Cyprinus carpio</i> 3. Disease characteristics – none, positive during the first cycle surveillance; 4. Pathogen –; 5. Mortality rate – ; 6. Economic loss – RM10,700; 7. Size of infected area or names of infected areas – Koi farms San Sui Tropical Fish and Koi Plus at Rawang, Selangor; 8. Preventive/control measures taken – movement restriction, contingency, culling; 9. Samples sent to national or international laboratories for confirmation (indicate names of laboratories) – Fisheries Biosecurity Laboratory, KLIA; 10. Published paper (articles in journals/webistes, etc.) – None; 11. Unknown disease (describe details as much as possible) –</p>
4	<p>Grouper iridoviral disease (GIV) No positive case was detected (PCR) during DoF active surveillance programme.</p>
5	<p>Viral encephalopathy and retinopathy No positive case was detected (PCR) during DoF active surveillance programme.</p>
6	<p>Infection with <i>Perkinsus olseni</i> Presence of the disease suspected but not confirmed in a zone</p>
7	<p>Taura syndrome virus (TSV) No positive case was detected (PCR) during DoF active surveillance programme.</p>
8	<p>White spot disease (WSD) No positive case was detected (PCR) during DoF active surveillance programme.</p>
9	<p>Yellow head disease (YHV) (<i>Penaeus monodon</i> and <i>P. vannamei</i>) No positive case was detected (PCR) during DoF active surveillance programme.</p>
10	<p>Infectious hypodermal and haematopoietic virus (IHHNV) (<i>Macrobrachium rosenbergii</i>, <i>Penaeus monodon</i> and <i>P.vannamei</i>) No positive case was detected (PCR) during DoF active surveillance programme.</p>
11	<p>Infectious myonecrosis (IMNV) No positive case was detected (PCR) during DoF active surveillance programme.</p>
12	<p><i>Macrobrachium rosenbergii</i> nodavir (MrNV) No positive case was detected (PCR) during DoF active surveillance programme.</p>
13	<p>Necrotising hepatopancreatitis (NHP) No samples were tested.</p>

14	<p>Acute hepatopancreatic necrosis disease (AHPND) Suspected by reporting officer but presence not confirmed. Surveillance programme has been planned to be carried out in 2017.</p>
15	<p>Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP) Suspected by reporting officer but presence not confirmed. Surveillance programme has been planned to be carried out in 2017.</p>

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

Fisheries (inland fisheries aquaculture)(Federal Territory of Kuala Lumpur and Federal Territory of Labuan) Rules 2017, Effective date: 28 February 2017.

Country: **MYANMAR***

 Period: **July - September 2017**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
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)					
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
11. Carp edema virus disease					
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	/	/	/		
2. Infection with <i>Perkinsus olseni</i>	/	/	/		
3. Infection with abalone herpesvirus	/	/	/		
4. Infection with <i>Xenohaliotis californiensis</i>	/	/	/		
5. Infection with <i>Bonamia ostreae</i>					
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	/	/	/		
7. Acute viral necrosis (in scallops)	/	/	/		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	-	-	-	III	1
2. White spot disease (WSD)	-	-	-	III	
3. Yellowhead disease (YHD)	-	-	-	III	
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	-	-	-	III	
5. Infectious myonecrosis (IMN)	-	-	-	III	
6. White tail disease (MrNV)	-	+()	-	III	
7. Necrotising hepatopancreatitis (NHP)	***	***	***		
8. Acute hepatopancreatic necrosis disease (AHPND)	-	-	-	III	
9. Crayfish plague	***	***	***		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	***	***	***		
11. Viral covert mortality disease (VCMD) of shrimps	***	***	***		
12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Iridovirus in crayfish	***	***	***		

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

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

DISEASES PRESUMED EXOTIC TO THE REGION^b			
LISTED BY THE OIE			
Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i> .			
Molluscs: Infection with <i>Bonamia ostreae</i> ; <i>Marteilia refringens</i> ; <i>Perkinsus marinus</i> .			
Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>).			
NOT LISTED BY THE OIE			
Finfish: Channel catfish virus disease			
a/ Please use the following symbols:			
+	Disease reported or known to be present	?()	Presence of the disease suspected but not confirmed in a zone
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+ ()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence
b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases			

1. Epidemiological comments:

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

Comment No.	
1	During this period, we have received 33 samples of crustaceans (7 frozen shrimp and 3 soft shell crab for export, and live PL samples of <i>P. vannamei</i> (14 samples), <i>P. monodon</i> (2 samples), live broodstock of <i>P. monodon</i> (6 samples), <i>M. rosenbergii</i> (5 live PL samples) and 10 red swamp crayfish (live fry samples) for import and local use) for testing, and found that all samples were negative for WSSV, IHNV, MrNV, YHV, IMN, AHPND and TSV.
2	Visited some fish farms in Yangon, Mandalay and Ayeyarwaddy regions during this period. Parasitic infestations (<i>Dactylogyrus</i> spp and <i>Trichodina</i> spp.) 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: **July - September 2017**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
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)	***	***	***		
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
11. Carp edema virus disease	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	II	
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000	II	
3. Infection with abalone herpesvirus	0000	0000	0000	II	
4. Infection with <i>Xenohalictis californiensis</i>	0000	0000	0000	II	
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000	II	
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
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 (IHHN)	2013	2013	2013	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	0000	0000	0000	III	
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000	III	
11. Viral covert mortality disease (VCMD) of shrimps	0000	0000	0000	III	
12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Iridovirus in crayfish	***	***	***		

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

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus; Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>. Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>																											
<p>a/ Please use the following symbols:</p> <table style="width: 100%; border: none;"> <tbody> <tr> <td style="width: 15%;"></td> <td style="width: 45%;"></td> <td style="width: 15%; text-align: center;">?()</td> <td style="width: 25%;">Presence of the disease suspected but not confirmed in a zone</td> </tr> <tr> <td>+</td> <td>Disease reported or known to be present</td> <td style="text-align: center;">***</td> <td>No information available</td> </tr> <tr> <td>+?</td> <td>Serological evidence and/or isolation of causative agent but no clinical diseases</td> <td style="text-align: center;">0000</td> <td>Never reported</td> </tr> <tr> <td>?</td> <td>Suspected by reporting officer but presence not confirmed</td> <td style="text-align: center;">-</td> <td>Not reported (but disease is known to occur)</td> </tr> <tr> <td>+()</td> <td>Occurrence limited to certain zones</td> <td style="text-align: center;">(year)</td> <td>Year of last occurrence</td> </tr> <tr> <td>+?()</td> <td>Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</td> <td></td> <td></td> </tr> </tbody> </table>						?()	Presence of the disease suspected but not confirmed in a zone	+	Disease reported or known to be present	***	No information available	+?	Serological evidence and/or isolation of causative agent but no clinical diseases	0000	Never reported	?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)	+()	Occurrence limited to certain zones	(year)	Year of last occurrence	+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease		
		?()	Presence of the disease suspected but not confirmed in a zone																								
+	Disease reported or known to be present	***	No information available																								
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+()	Occurrence limited to certain zones	(year)	Year of last occurrence																								
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease																										
<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: **NEW ZEALAND**Period: **July - September 2017**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
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	
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000	III	
9. Viral encephalopathy and retinopathy	0000	0000	0000	III	
10. Enteric septicaemia of catfish	0000	0000	0000	III	
11. Carp edema virus disease	0000	0000	0000	III	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	- (2017)	- (2017)	- (2017)	III	1
2. Infection with <i>Perkinsus olseni</i>	- (2017)	- (2017)	- (2017)	III	2
3. Infection with abalone herpesvirus	0000	0000	0000	III	
4. Infection with <i>Xenohalictis californiensis</i>	0000	0000	0000	III	
5. Infection with <i>Bonamia ostreae</i>	- (2017)	- (2017)	- (2017)	III	3
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	III	
7. Acute viral necrosis (in scallops)	0000	0000	0000	III	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. 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 (IHHN)	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	0000	0000	0000	III	
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000	III	
11. Viral covert mortality disease (VCMD) of shrimps	0000	0000	0000	III	
12. <i>Spiroplasma eriocheiris</i> infection	0000	0000	0000	III	
13. Iridovirus in crayfish	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>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus; Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>. Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>																					
<p>a/ Please use the following symbols:</p> <table border="0"> <tbody> <tr> <td style="padding-right: 20px;">+</td> <td>Disease reported or known to be present</td> <td style="padding-right: 20px;">?()</td> <td>Presence of the disease suspected but not confirmed in a zone</td> </tr> <tr> <td style="padding-right: 20px;">+?</td> <td>Serological evidence and/or isolation of causative agent but no clinical diseases</td> <td style="padding-right: 20px;">***</td> <td>No information available</td> </tr> <tr> <td style="padding-right: 20px;">?</td> <td>Suspected by reporting officer but presence not confirmed</td> <td style="padding-right: 20px;">0000</td> <td>Never reported</td> </tr> <tr> <td style="padding-right: 20px;">+()</td> <td>Occurrence limited to certain zones</td> <td style="padding-right: 20px;">-</td> <td>Not reported (but disease is known to occur)</td> </tr> <tr> <td style="padding-right: 20px;">+?()</td> <td>Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</td> <td style="padding-right: 20px;">(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	<p><i>Bonamia exitiosa</i> occurs in commercial oyster beds in Foveaux Strait, Southland where it is highly prevalent and associated with mortalities in mid to late summer. It occurs intermittently around the South Island and in Wellington Harbour (southern end of the North Island), and has been previously reported in <i>Ostrea chilensis</i> from Hauraki Gulf (Auckland region), Tauranga (Bay of Plenty region), the Marlborough Sounds and Wellington Harbour. Annual monitoring of the presence of <i>B. exitiosa</i> infection is undertaken in the flat oyster (<i>O. chilensis</i>) population in the Foveaux Strait.</p>
2	<p><i>Perkinsus olseni</i> was first detected in New Zealand in 1999, in wild wedge shells (<i>Macomona liliana</i>). It was then found in wild populations of New Zealand cockles (<i>Austrovenus stutchburyi</i>), ark shells (<i>Barbatia novaezelandiae</i>) and pipi (<i>Paphies australis</i>) in 2000-2001. In July 2013, <i>P. olseni</i> was detected for the first time in farmed black foot pāua (<i>Haliotis iris</i>), a type of abalone native to New Zealand. Further detections were made in wild <i>H. iris</i> populations in 2014. While these aforementioned mollusc species occur widely around the coast of New Zealand, <i>P. olseni</i> has only been found in them from the Auckland region northwards, on the North Island.</p> <p>In 2014, <i>P. olseni</i> was found for the first time on the South Island: firstly in September 2014 in New Zealand green lipped mussels (<i>Perna canaliculus</i>) in a land-based aquaculture facility in the Nelson region, and then in November 2014 in wild New Zealand scallops (<i>Pecten novaezelandiae</i>) in the Marlborough region. Both of these findings were incidental and not associated with mortality events</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. It was found on one land-based aquaculture facility in the Nelson region, and on two marine farms in the Marlborough region, both regions being in northern part of the South Island. Since that time, movement controls have been in place to regulate the movement of susceptible shellfish from the northern regions of the South Island and active surveillance has been conducted for the purposes of early detection of spread. In 2016, <i>B. ostreae</i> was detected in both farmed and wild flat oysters within the Marlborough region (the same region as initially reported), and was associated with pathology and mortality in the farmed population. In May 2017 surveillance detected <i>B. ostreae</i> in marine flat oyster farms in Big Glory Bay, Stewart Island (situated in the Southland region, at the southern end of the South Island). Following this detection, movement controls to manage risk movements from Stewart Island were issued, and depopulation of all flat oyster farms within areas where <i>B. ostreae</i> had been detected commenced. Depopulation of farms in Big Glory Bay commenced on the 19 June 2017 and was completed September 2017. Depopulation of farms in Marlborough Sounds commenced on the 11 July and is continuing. Active surveillance continues for the purposes of early detection of spread, with no <i>B. ostreae</i> detected in wild oysters in Big Glory Bay in the September 2017. No clinical signs or elevated mortality was observed in association with <i>B. ostreae</i> in farmed flat oysters in Big Glory Bay.</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):

Following the detection of *Bonamia ostreae* in Big Glory Bay, Stewart Island in May 2017, the Controlled Area Notice issued under s131 of the Biosecurity Act 1993, that has been in place since 2015, was reissued to manage risk movements from Stewart Island by creating a Stewart Island Zone. Under s122 of the Biosecurity Act 1993, Notices of Direction to depopulate were also served on flat oyster farms within areas where *B. ostreae* had been detected. Depopulation of farms in Big Glory Bay commenced on the 19 June 2017 and was completed September 2017. Depopulation of farms in Marlborough Sounds commenced on the 11 July and is continuing.

Country: **PHILIPPINES***

 Period: **July - September 2017**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases	0000	0000	0000		
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)	-(2002)	-(2002)	-(2002)	I	1
5. Infection with <i>Aphanomyces invadans</i> (EUS)	0000	0000	0000	I, III	2
6. Red seabream iridoviral disease (RSID)	0000	0000	0000	I, III	
7. Koi herpesvirus disease (KHV)					
Non OIE-listed diseases	-(2008)	-(2008)	-(2008)	I, III	
8. Grouper iridoviral disease	-	-	+	I, III	3
9. Viral encephalopathy and retinopathy	****	****	****		
10. Enteric septicaemia of catfish	0000	0000	0000		
11. Carp edema virus disease					
MOLLUSC DISEASES					
OIE-listed diseases	0000	0000	0000		
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	****	****	****		
3. Infection with abalone herpesvirus	****	****	****		
4. Infection with <i>Xenohalictis californiensis</i>	0000	0000	0000		
5. Infection with <i>Bonamia ostreae</i>					
Non OIE-listed diseases	0000	0000	0000		
6. Infection with <i>Marteilioides chungmuensis</i>	****	****	****		
7. Acute viral necrosis (in scallops)					
CRUSTACEAN DISEASES					
OIE-listed diseases	0000	0000	0000	I, III	4
1. Taura syndrome (TS)	+	+	+	I, III	5
2. White spot disease (WSD)	-(1999)	-(1999)	-(1999)	I, III	6
3. Yellowhead disease (YHD)	+	+	+	I, III	7
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	0000	0000	0000	I, III	8
5. Infectious myonecrosis (IMN)	0000	0000	0000	I, III	
6. White tail disease (MrNV)	0000	0000	0000	I, III	9
7. Necrotising hepatopancreatitis (NHP)	+	+	+	I, III	10
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
9. Crayfish plague					
Non OIE-listed diseases	+	+	+	I, III	11
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000		
11. Viral covert mortality disease (VCMD) of shrimps	0000	0000	0000		
12. <i>Spiroplasma eriocheiris</i> infection	0000	0000	0000		
13. Iridovirus in crayfish	0000	0000	0000		

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

AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	****	****	****		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	****	****	****		
ANY OTHER DISEASES OF IMPORTANCE					
1 Tilapia Lake Virus (TiLV)	+	-	-	I, III	12
2.					

DISEASES PRESUMED EXOTIC TO THE REGION^b	
LISTED BY THE OIE	
Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i> .	
Molluscs: Infection with <i>Bonamia ostreae</i> ; <i>Marteilia refringens</i> ; <i>Perkinsus marinus</i> .	
Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>).	
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	<i>Aphanomyces invadans</i> (EUS) EUS was not detected in <i>Anguilla</i> spp. samples by gross morphological examination from the provinces of Agusan del Norte, Laguna and Zambales, Examinations were conducted by Bureau of Fisheries and Aquatic Resources (BFAR) Central Fish Health Laboratory.
2	Red Seabream Iridoviral Disease (RSID) Analyses of Panther grouper, blue cod and grouper were done using PCR test and showed negative for Red seabream iridoviral disease. The samples were collected from Palawan and Cebu. Examination was conducted by BFAR Central Fish Health Laboratory.

3	<p>Viral Encephalopathy and Retinopathy (VER) Origin of the disease or pathogen (history of the disease)- 1 farm Species affected: <i>L.calcarifer</i> Pathogen: Viral Encephalopathy and Retinopathy Size of infected areas or names of infected areas: Iloilo Samples sent to national or international laboratories for confirmation (indicate the name of laboratories): Nested Polymerase Chain Reaction Test (PCR) / Southeast Asian Fisheries Development Center (SEAFDEC) Fish Health Laboratory.</p>
4	<p>Taura Syndrome (TS) Taura Syndrome was not detected in the samples of <i>P.vannamei</i>, <i>P.monodon</i> and <i>P.merguensis</i> of different stages (broodstock, adult, fry and juvenile) that were analyzed using the PCR test from the provinces of Ilocos Sur, Pangasinan, Zambales, Pampanga, Quezon, Batangas, Camarines Norte, Negros Occidental, Negros Oriental, Cebu, Bohol, Palawan, Leyte, Davao Oriental, Agusan del Norte, Cagayan. Examinations were conducted by BFAR Central and Regional Fish Health Laboratories.</p>
5	<p>White Spot Disease (WSD) Origin of the disease or pathogen (history of the disease)-9 farms affected Species affected: <i>P. vannamei</i>, <i>P.monodon</i>, and crab Pathogen: White Spot Virus Size of infected areas or names of infected areas: Palawan, Cebu, Zamboanga del Norte, Butuan City, Zambales, Aklan Samples sent to national or international laboratories for confirmation (indicate the name of laboratories): Polymerase Chain Reaction Test (PCR) / BFAR Central, Regional and SEAFDEC Fish Health Laboratories</p>
6	<p>Yellow Head Virus (YHV) Yellow Head Virus was not detected in the samples of <i>P. vannamei</i>, <i>P.monodon</i> and <i>P.merguensis</i> that were analyzed using PCR test from the provinces of Camarines Sur, Camarines Norte, Negros Oriental, Pangasinan, Zamboanga del Norte, Palawan, Leyte, Cagayan, Agusan del Norte, Batangas, Bohol, Cebu, Davao Oriental, Oriental Mindoro, Lanao del Norte. Examinations were conducted by BFAR Central Fish Health Laboratory.</p>
7	<p>Infectious Hypodermal and Hematopoietic Necrosis (IHHNV) Origin of the disease or pathogen (history of the disease)-19 farms Species affected: <i>P.vannamei</i>, <i>P.merguensis</i> and <i>P.monodon</i> Pathogen: Infectious Hypodermal and Hematopoietic Virus Size of infected areas or names of infected areas: Zambales, Quezon, Butuan, Surigao del Sur, Palawan, Agusan del Norte, Oriental Mindoro, Iloilo, Roxas, Negros, Bulacan and Masbate Samples sent to national or international laboratories for confirmation (indicate the name of laboratories): Polymerase Chain Reaction Test (PCR) / BFAR Central, Regional and SEAFDEC Fish Health Laboratories.</p>
8	<p>Infectious Myonecrosis (IMN) Infectious myonecrosis was not detected in the sample of <i>P. vannamei</i>, <i>P.monodon</i> and <i>P.merguensis</i> of different stages (broodstock, adult, fry and juvenile) that were analyzed using the PCR test from the provinces of Quezon, Batangas, Negros Occidental, Negros Oriental, Cebu, Bohol, Agusan del Norte, Agusan del Sur, Butuan City, Pangasinan, Zamboanga del Norte, Leyte, Palawan, Davao Oriental, Oriental Mindoro, Occidental Mindoro, Zambales, Lanao del Norte and Cagayan. Examinations were conducted by BFAR Central and Regional Fish Health Laboratories.</p>

<p>9</p>	<p>Necrotising Hepatopancreatitis (NHP) Necrotising Hepatopancreatitis was not detected in the samples of <i>P. vannamei</i>, and <i>P.monodon</i> of different stages (broodstock, adult, juvenile and nauplii) that were analyzed using the PCR test from the provinces of Camarines Sur, Camarines Norte, Negros Oriental, Cebu and Pangasinan. Examinations were conducted by BFAR Central and Regional Fish Health Laboratories.</p>
<p>10</p>	<p>Acute Hepatopancreatic Necrosis Disease (AHPND) Origin of the disease or pathogen (history of the disease)-12 farms affected Species affected: <i>P. vannamei</i>, <i>P.monodon</i>, Pathogen: AHPND <i>Vibrio parahaemolyticus</i> Size of infected areas or names of infected areas: Batangas, Oriental Mindoro, Palawan, Negros Oriental, Cebu and Iloilo Samples sent to national or international laboratories for confirmation (indicate the name of laboratories): Polymerase Chain Reaction Test (PCR) / BFAR Central, Regional and SEAFDEC Fish Health Laboratories.</p>
<p>11</p>	<p>Hepatopancreatic Microsporidiosis caused by Enterocytozoon hepatopenaei (HPM-EHP) Origin of the disease or pathogen (history of the disease)-13 farms affected Species affected: <i>P.monodon</i>, <i>P.vannamei</i> Pathogen: <i>Enterocytozoon hepatopenaei</i> Size of infected areas or names of infected areas: Quezon, Palawan, Cebu, Zambales, Agusan del Norte, Samples sent to national or international laboratories for confirmation (indicate the name of laboratories): Polymerase Chain Reaction Test (PCR) / BFAR Central and Regional Fish Health laboratories.</p>
<p>12</p>	<p>Tilapia Lake Virus (TiLV) Origin of the disease or pathogen (history of the disease)- 1 farm affected Species affected: <i>Oreochromis niloticus</i> Pathogen: Tilapia Lake Virus Size of infected areas or names of infected area: Bulacan Samples sent to national or international laboratories for confirmation (indicate the name of laboratories): Examinations on the samples collected from the same pond on August and September using PCR by BFAR Central Fish Health laboratory showed negative results.</p>

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

Country: **SINGAPORE***

 Period: **July - September 2017**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
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)	(2016)	+	(2017)	III	1
7. Koi herpesvirus disease (KHV)	(2015)	(2015)	(2015)		
Non OIE-listed diseases					
8. Grouper iridoviral disease	(2014)	(2014)	(2014)		
9. Viral encephalopathy and retinopathy	(2017)	(2017)	+	III	4
10. Enteric septicaemia of catfish	***	***	***		
11. Carp edema virus disease	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Infection with abalone herpesvirus	***	***	***		
4. Infection with <i>Xenohalictis californiensis</i>	***	***	***		
5. Infection with <i>Bonamia ostreae</i>	***	***	***		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	(2016)	(2016)	(2016)		
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)	***	***	***		
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
8. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
9. Crayfish plague	***	***	***		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	***	***	***		
11. Viral covert mortality disease (VCMD) of shrimps	***	***	***		
12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Iridovirus in crayfish	***	***	***		

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

AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	+	(2017)	(2017)	III	2
ANY OTHER DISEASES OF IMPORTANCE					
1 Megalocytivirus (marine & ornamental fish)	(2017)	+	+	III	3,4
2 <i>Aeromonas salmonicida</i> (in goldfish)	0000	0000	0000		
3 <i>Mycobacterium</i> sp. infection (Coral trout)	0000	+	(2017)	II	5
4 <i>Nocardia</i> sp. (threadfin)	0000	0000	+	II	6

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>. Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: 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	Red Seabream Iridovirus (RSIV) was detected by PCR from a batch of diseased Asian seabass fish from a local commercial fish farm. Lesions indicative of ongoing RSIV infection was also detected from multiple organs by histopathology analysis. The farm removed affected fish, and stopped the movement of these fish.
2	Batrachochytrium dendrobatidis (Bd) was detected by real-time PCR in skin swabs 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.
3	Megalocytivirus was detected by real-time PCR in clinically healthy batches of ornamental fish from exporters' premises in August 2017.

4	<p>Megalocytivirus and Viral Nervous Necrosis Virus (VNNV) was detected by real-time PCR and real-time RT-PCR respectively, in a batch of diseased threadfin fish from both the land-based and seacage properties of the same commercial fish farm. 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 fish also had a significant <i>Cryptocaryon irritans</i> infection. The farm undertook ectoparasite control, isolated clinically affected fish and would subject future batches of fish to disease screening.</p>
5	<p>Bacteria with morphology compatible with <i>Mycobacterium</i> sp. was detected by histopathology and histochemical staining of granulomatous lesions detected on post-mortem examination of a batch of diseased coral trout from a commercial land-based farm. The farm isolated the clinically affected fish.</p>
6	<p>Bacterial entities with morphology compatible with <i>Nocardia</i> sp. was detected by histopathology and histochemical staining of granulomatous lesions detected from post-mortem examination of a batch of diseased threadfin from a commercial netcage farm. The farm isolated the clinically affected fish and identified potential predisposing environmental causes for the infection to prevent future occurrences.</p>

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

Country: **THAILAND***

 Period: **July - September 2017**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
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)	(2009)	(2009)	(2009)	II	
6. Red seabream iridoviral disease (RSID)	0000	0000	0000	III	
7. Koi herpesvirus disease (KHV)	(2011)	(2011)	(2011)	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	(2017)	(2017)	(2017)	III	
10. Enteric septicaemia of catfish	0000	0000	0000	II	
11. Carp edema virus disease	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
3. Infection with abalone herpesvirus	0000	0000	0000		
4. Infection with <i>Xenohalictis californiensis</i>	0000	0000	0000		
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	(2015)	(2015)	(2015)	III	
2. White spot disease (WSD)	-	-	+()	III	1
3. Yellowhead disease (YHD)	+()	+()	-	III	2
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	-	-	-	III	
5. Infectious myonecrosis (IMN)	0000	0000	0000	III	
6. White tail disease (MrNV)	(2017)	(2017)	(2017)	III	
7. Necrotising hepatopancreatitis (NHP)	-	-	-	III	
8. Acute hepatopancreatic necrosis disease (AHPND)	+()	+()	+()	III	3
9. Crayfish plague	0000	0000	0000	III	
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	+()	+()	+()	III	4
11. Viral covert mortality disease (VCMD) of shrimps	-	-	-	III	
12. <i>Spiroplasma eriocheiris</i> infection	***	***	***		
13. Iridovirus in crayfish	***	***	***		

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

AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	(2016)	(2016)	(2016)	III	
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					

DISEASES PRESUMED EXOTIC TO THE REGION^b			
LISTED BY THE OIE			
Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i> .			
Molluscs: Infection with <i>Bonamia ostreae</i> ; <i>Marteilia refringens</i> ; <i>Perkinsus marinus</i> .			
Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>).			
NOT LISTED BY THE OIE			
Finfish: Channel catfish virus disease			
a/ Please use the following symbols:			
		?()	Presence of the disease suspected but not confirmed in a zone
+	Disease reported or known to be present		
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
+()	Occurrence limited to certain zones	-	Not reported (but disease is known to occur)
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease	(year)	Year of last occurrence
b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases			

1. Epidemiological comments:

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

Comment No.	
1	A total of 912 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance, 24 specimens or 2.63% recorded as PCR positive or carrying WSSV genes. Shrimp farm with positive testing results is subjected to health improvement, movement control, eradication and/or farm disinfection.
2	A total of 912 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance, 32 specimens or 3.51% recorded as PCR positive or carrying YHV genes. Shrimp farm with positive testing results is subjected to health improvement, movement control, eradication and/or farm disinfection.
3	A total of 912 shrimp samples from shrimp farms had been tested by PCR assay at the DOF's laboratories under active surveillance, 49 specimens or 5.37% recorded as PCR positive for AHPND . Shrimp farms with positive testing results have been subjected to shrimp health management control and pond improvement.

4	A total of 912 shrimp samples from shrimp farms had been tested by PCR assay at the DOF's laboratories under active surveillance, 276 specimens or 30.26% recorded as PCR positive for EHP . Shrimp farms with positive testing results have been subjected to shrimp health management control and pond improvement.
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2. New aquatic animal health regulations introduced within past six months (with effective date):

Country: VIETNAM*

Period: July - September 2017

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
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		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10. Enteric septicaemia of catfish	+	+	+	I, III	1
11. Carp edema virus disease	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
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		
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	+	+	+	I, III	2
3. Yellowhead disease (YHD)	-	-	-		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	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		
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)	0000	0000	0000		
11. Viral covert mortality disease (VCMD) of shrimps	0000	0000	0000		
12. <i>Spiroplasma eriocheiris</i> infection	0000	0000	0000		
13. Iridovirus in crayfish	0000	0000	0000		

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

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

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i>. Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>																				
<p>a/ Please use the following symbols:</p> <table> <tbody> <tr> <td>+</td> <td>Disease reported or known to be present</td> <td>?()</td> <td>Presence of the disease suspected but not confirmed in a zone</td> </tr> <tr> <td>+?</td> <td>Serological evidence and/or isolation of causative agent but no clinical diseases</td> <td>***</td> <td>No information available</td> </tr> <tr> <td>?</td> <td>Suspected by reporting officer but presence not confirmed</td> <td>0000</td> <td>Never reported</td> </tr> <tr> <td>+ ()</td> <td>Occurrence limited to certain zones</td> <td>-</td> <td>Not reported (but disease is known to occur)</td> </tr> <tr> <td>+?()</td> <td>Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease</td> <td>(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>Enteric Septicaemia of Catfish (<i>Edwardsiella ictaluri</i>)</p> <p>Infection found in intensive catfish (<i>Pangasius micronema</i>, <i>P. hypophthalmus</i>) farms. The disease occurred in An Giang, Dong Thap and Hau Giang province (25.05 ha).</p>
2	<p>White Spot Disease (WSD)</p> <p>Pathogen: White spot syndrome virus (WSSV) Species affected: <i>Penaeus monodon</i> and <i>Litopenaeus vannamei</i> (10-100 DOC) Name of affected area: reported in 17 provinces (total area 1,618 ha) including Nghe An, Quang Tri, Thua Thien Hue, Phu Yen, Binh Dinh, Khanh Hoa, Ho Chi Minh, Ninh Thuan, Dong Nai, Long An, Tien Giang, Ben Tre, Tra Vinh, Kien Giang, Soc Trang, Bac Lieu and Ca Mau; Mortality rate: average to high, 100% in some cases within 10 d. Clinical signs: lethargic or moribund shrimps aggregated at pond surface and edges, slow to erratic swimming behavior, overall body color often reddish, minute to large (0.5-2.0 mm diameter) white inclusions embedded in the cuticle; Control measures: early harvest, strict isolation of infected ponds from movement, strengthened control of transportation, disinfection of infected ponds using Calcium hypochlorite (chlorine).</p>

3	<p>Acute Hepatopancreatic Necrosis Disease (AHPND)</p> <p>Pathogen: <i>Vibrio parahaemolyticus</i> with Phage A3</p> <p>Species affected: <i>Penaeus monodon</i> and <i>Litopenaeus vannamei</i> (10-45 DOC)</p> <p>Name of affected area: reported in 16 provinces and caused losses in total shrimp culture area of 2,416 ha. Affected provinces include Quang Ninh, Nghe An, Quang Tri, Phu Yen, Khanh Hoa, Binh Dinh, Ho Chi Minh, Ninh Thuan, Long An, Tien Giang, Ben Tre, Tra Vinh, Kien Giang, Soc Trang, Bac Lieu and Ca Mau.</p> <p>Mortality rate: could reach 95% in intensive and semi-intensive farms;</p> <p>Clinical signs: shrimps become lethargic with soft, darkened shells, mottling of the carapace. Pathology is limited to hepatopancreas.</p> <p>Control measures: 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

Country: FRENCH POLYNESIA
Period: July - September 2017

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
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)	***	***	***	III	
7. Koi herpesvirus disease (KHV)	***	***	***		
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	(2005)	(2005)	(2005)	III	1
10. Enteric septicaemia of catfish	***	***	***		
11. Carp edema virus disease	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	III	2
2. Infection with <i>Perkinsus olseni</i>	+	+	+	III	2
3. Infection with abalone herpesvirus					4
4. Infection with <i>Xenohalictis californiensis</i>	***	***	***		
5. Infection with <i>Bonamia ostreae</i>	0000	0000	0000	III	2
Non OIE-listed diseases					
6. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	II	2
7. Acute viral necrosis (in scallops)					
CRUSTACEAN DISEASES					
OIE-listed diseases					
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 (IHHN)	(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
Non OIE-listed diseases					
10. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)					4
11. Viral covert mortality disease (VCMD) of shrimps	***	***	***		
12. <i>Spiroplasma eriocheiris</i> infection					4
13. Iridovirus in crayfish	***	***	***		

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

DISEASES PRESUMED EXOTIC TO THE REGION^b			
LISTED BY THE OIE			
Finfish: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with <i>Gyrodactylus salaris</i> .			
Molluscs: Infection with <i>Bonamia ostreae</i> ; <i>Marteilia refringens</i> ; <i>Perkinsus marinus</i> .			
Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>).			
NOT LISTED BY THE OIE			
Finfish: Channel catfish virus disease			
a/ Please use the following symbols:			
		?()	Presence of the disease suspected but not confirmed in a zone
+	Disease reported or known to be present	***	No information available
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
+ ()	Occurrence limited to certain zones	(year)	Year of last occurrence
+?()	Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease		
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	Viral encephalopathy and retinopathy 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 broodstock and larvae is made. Since 2005, no sample was found positive.
2	Bonamiosis and Marteiliosis: not reported since the start of active surveillance in 2003 in <i>Pinctada margaritifera</i> . 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 th 2013).

3	<p>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 IHHN were done in the country, and all results were negative. No mortality was observed in <i>Litopenaeus stylirostris</i> during this period.</p>
4	<p>Susceptible species are not present in the country.</p>

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

List of Diseases in the Asia-Pacific Quarterly Aquatic Animal Disease Report (Beginning 2017)

1. DISEASES PREVALENT IN THE REGION	
1.1 FINFISH DISEASES	
OIE-listed diseases	Non OIE-listed diseases
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)	4. Carp edema virus disease
5. Infection with <i>Aphanomyces invadans</i> (EUS)	
6. Red seabream iridoviral disease (RSID)	
7. Koi herpesvirus disease (KHV)	
1.2 MOLLUSC DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with <i>Bonamia exitiosa</i>	1. Infection with <i>Marteilioides chungmuensis</i>
2. Infection with <i>Perkinsus olseni</i>	2. Acute viral necrosis (in scallops)
3. Infection with abalone herpesvirus	
4. Infection with <i>Xenohalotis californiensis</i>	
5. Infection with <i>Bonamia ostreae</i>	
1.3 CRUSTACEAN DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Taura syndrome (TS)	1. Hepatopancreatic microsporidiosis caused by <i>Enterocytozoon hepatopenaei</i> (HPM-EHP)
2. White spot disease (WSD)	2. Viral covert mortality disease (VCMD) of shrimps
3. Yellowhead disease (YHD)	3. <i>Spiroplasma eriocheiris</i> infection
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	4. Iridovirus in crayfish
5. Infectious myonecrosis (IMN)	
6. White tail disease (MrNV)	
7. Necrotising hepatopancreatitis (NHP)	
8. Acute hepatopancreatic necrosis disease (AHPND)	
9. Crayfish plague	
1.4 AMPHIBIAN DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with Ranavirus	
2. Infection with <i>Bachtracochytrium dendrobatidis</i>	
2. DISEASES PRESUMED EXOTIC TO THE REGION	
2.1 Finfish	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with HPRdeleted or HPR0 salmon anaemia virus	1. Channel catfish virus disease
2. Infection with salmon pancreas disease virus	
3. Infection with <i>Gyrodactylus salaris</i>	
2.2 Molluscs	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with <i>Marteilia refringens</i>	
2. Infection with <i>Perkinsus marinus</i>	

Recent Aquatic Animal Health Related Publications

OIE Aquatic Animal Health Code, 20th Edition, 2017. 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 20th edition incorporates modifications to the Aquatic Code agreed at the 85th General Session in May 2017. It includes: revisions to several definitions in the glossary; Chapter 1.2. 'Criteria for listing aquatic animal diseases' has been extensively amended to align with the corresponding chapter in the OIE Terrestrial Animal Health Code; a new disease, *Batrachochytrium salamandrivorans*, has been added to Chapter 1.3. 'Diseases listed by the OIE' and some disease names have been amended; minor amendments have been made in Chapters 4.3. 'Disinfection of aquaculture establishments and equipment', 4.4. 'Recommendations for surface disinfection of salmonid eggs' and 5.1. 'General obligations related to certification'; a number of horizontal amendments were made in all crustacean disease-specific chapters, to improve readability. In addition, the list of susceptible species in Article X.X.2. in Chapters 9.2., 9.3., 9.4., 9.5., 9.6. and 9.8. was reviewed and amended, where relevant, after consideration of the application of the 'Criteria for listing species as susceptible to infection with a specific pathogen' (Chapter 1.5.); a new chapter on acute hepatopancreatic necrosis disease (Chapter 9.1.) has been added; Article X.X.8. in all disease-specific chapters was revised to more adequately describe the requirements for the importation of aquatic animals for aquaculture from a country, zone or compartment not declared free from disease X; the year that a chapter was first adopted and the year of last revision are noted at the end of each chapter. In this regard the OIE has made every endeavour to ensure the accuracy of this information based on our historical records. The Aquatic Animal Health Code is available for free download <http://www.oie.int/en/international-standard-setting/aquatic-code/access-online/>

OIE Manual of Diagnostic Tests for Aquatic Animals, 2017. 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/>

NACA, 2017. **Disease Advisory: Tilapia Lake Virus – an Emerging Threat to Farmed Tilapia in the Asia-Pacific Region.** Network of Aquaculture Centres in Asia-Pacific, Bangkok, Thailand.

Jansen, M.D. and Mohan, C.V., 2017. **Tilapia Lake Virus (TiLV): Literature Review.** Penang, Malaysia: CGIAR Research Program on Fish Agri-Food Systems. Working Paper: FISH-2017-04.

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

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

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

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

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

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

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

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

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

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

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

Please use the following symbols to fill in the forms.

A. Symbols used for negative occurrence are as follows:

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

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

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

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

B. Symbols used for positive occurrence are shown below.

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

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

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

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

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

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

¹ Regional Advisory Group on Aquatic Animal Health (AG)

C. Levels of Diagnosis

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

D. Subjects to be covered in the Epidemiological Comments

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

IMPORTANT

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

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

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