



QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

April – June 2013

Published by the

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

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**Food and Agriculture
Organization of the United Nations**

Viale delle Terme di Caracalla
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October 2013

Network of Aquaculture Centres in Asia-Pacific and Food and Agriculture Organization of the United Nations. Oct. 2013. *Quarterly Aquatic Animal Disease Report (Asia and Pacific Region)*, 2013/2, April – June 2013. NACA: Bangkok, Thailand.

Contents

Foreword	iv
Reports Received by the NACA Secretariat	
Australia	1
China, PR	5
Hong Kong	7
India	9
Iran	11
Japan	13
Korea, Republic of	15
Lao PDR	17
Malaysia	19
Myanmar	22
Nepal	24
Philippines	26
Singapore	29
Sri Lanka	32
Thailand	35
List of Diseases under the Asia-Pacific Quarterly Aquatic Animal Disease Report	38
Recent related publications	39
List of National Coordinators	42
Instructions on how to fill in the <i>Quarterly Aquatic Animal Disease Report</i>	46

Foreword

Emergency Aquatic Animal Disease Response

The spread of emerging and transboundary aquatic animal diseases across the region, and the world, have ignited attention on how prepared the countries are in responding to disease emergencies. Example of which are the rapid spread of White spot disease (WSD), Koi herpesvirus disease (KHV), and more recently Acute hepatopancreatic necrosis syndrome (AHPNS) in cultured shrimps. Although emergency disease response of some countries in the region appeared to be adequate (e.g. Thailand and Australia), most countries do not have existing strategy on how to deal with devastating disease emergencies among aquacultured stocks.

Currently, the implementation of the Asia Regional Technical Guidelines (TG) on health management for the responsible movement of live aquatic animals in most NACA member countries lacks proper assessment to identify gaps and issues. This, in turn, has resulted in the less-efficient national strategies for aquatic animal health management. There should be better understanding on the capacities and capabilities of member countries in the implementation of the TG which is a recognized framework across the region. At individual country level, it is also important to determine up to what extent the implementation of TG can be assessed, which in turn could be used in developing programs/projects within the country.

In response to this, the World Organisation for Animal Health (OIE) through its Regional Representation in Asia and the Pacific and in collaboration with NACA will be holding a Regional Workshop on Emergency Aquatic Animal Disease Response in November 2013, with the following objectives:

- To identify the factors that constrain regional members' abilities to apply appropriate sanitary measures to protect aquatic animal health ;
- To raise awareness of OIE standards including standard setting procedures, OIE Aquatic PVS as well as FAO/NACA Asian Regional Technical Guidelines to support capacity building of members' effective application of those standards and guidelines ;
- To inform participants about the OIE/NACA regional core for better reporting and information sharing;
- To help improving national coordination between OIE Focal Point and NACA National Coordinator which are not necessarily the same.

The workshop will be participated by NACA member countries which require capacities for establishing emergency response in case of outbreak of aquatic animal diseases.

Reports Received by the NACA Secretariat

Country: **AUSTRALIA**Period: **April - June 2013**

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	-(2012)	-(2012)	-(2012)		1
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome	-(2012)	-(2012)	-(2012)		2
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	-(2013)	-(2013)	+	III	3
10. Enteric septicaemia of catfish	(2011)	(2011)	(2011)		4
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	-(2011)	+	-(2013)	III	5
3. Infection with abalone herpes-like virus	-(2011)	-(2011)	-(2011)		6
4. Infection with <i>Xenohaliotis californiensis</i>	0000	0000	0000		
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
6. Acute viral necrosis (in scallops)	***	***	***		
7. Akoya oyster disease	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	0000	0000	0000		
3. Yellowhead disease	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis	-(2008)	-(2008)	-(2008)		7
5. Infectious myonecrosis	0000	0000	0000		
6. White tail disease (MrNV)	-(2008)	-(2008)	-(2008)		8
7. Necrotising hepatopancreatitis	0000	0000	0000		
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	0000	0000	0000		
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
10. Acute hepatopancreatic necrosis syndrome (AHPNS)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	-(2008)	-(2008)	-(2008)		9
2. Infection with <i>Batrachochytrium dendrobatidis</i>	-(2012)	+	-(2013)	III	10
ANY OTHER DISEASES OF IMPORTANCE					
1. Virus isolated from Atlantic salmon	-(2012)	-(2012)	+	III	11
2.					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; 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>Occurrence limited to certain zones</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></td> <td>-</td> <td>Not reported (but disease is known to occur)</td> </tr> <tr> <td></td> <td></td> <td>(year)</td> <td>Year of last occurrence</td> </tr> </table>				+	Disease reported or known to be present	+()	Occurrence limited to certain zones	+?	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			-	Not reported (but disease is known to occur)			(year)	Year of last occurrence
+	Disease reported or known to be present	+()	Occurrence limited to certain zones																				
+?	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																				
		-	Not reported (but disease is known to occur)																				
		(year)	Year of last occurrence																				
<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>
2	<p>Epizootic ulcerative syndrome was not reported this period despite passive surveillance in New South Wales (last reported 2012), the Northern Territory (last reported 2012), Queensland (last reported 2012), Victoria (last reported 2012), Western Australia (last reported 2012) and South Australia (last reported 2008). Passive surveillance and never reported in Tasmania. No information available in the Australian Capital Territory.</p>
3	<p>Viral encephalopathy and retinopathy</p> <ol style="list-style-type: none"> 1. Reported in Western Australia in June, screening; 2. Species affected – Barramundi (<i>Lates calcarifer</i>) (150 g); 3. Clinical signs – No clinical signs observed, sub-clinical infection diagnosed following routine testing; 4. Pathogen – <i>Betanodavirus</i>; 5. Mortality rate – Nil, 6. Economic loss – Nil; 7. Geographic extent – Limited to one land-based tak on a single property; 8. Containment measures – Not applicable,; 9. Laboratory confirmation – Nodavirus qPCR; 10. Publications – None. <p>Viral encephalopathy and retinopathy is know to have occurred in the Northern Territory (last reported 2013), Queensland (last reported 2013), New South Wales (last reported 2010), South Australia (last reported 2010) and Tasmania (last reported 2000). Passive surveillance and never reported in Victoria. No information available in the Australian Capital Territory.</p>

4	<p>Enteric septicaemia of catfish was not reported this period and has never been reported from wild fish in Australia. Passive surveillance and reported previously in the Northern Territory [in a closed aquarium facility also holding imported ornamental fish] (last reported 2011), Queensland (last reported 2008) and Tasmania (last reported 2001) in zebrafish (<i>Brachydanio rerio</i>) held in PC2 containment facilities. Passive surveillance and never reported in New South Wales, South Australia, Victoria or Western Australia. No information available this period in the Australian Capital Territory.</p>
5	<p>Infection with <i>Perkinsus olseni</i></p> <ol style="list-style-type: none"> 1. Reported in South Australia in May, passive surveillance; 2. Species affected – Blacklip abalone (<i>Haliotis rubra</i>); 3. Clinical signs – Lesions were observed in the foot and mantle; 4. Pathogen – <i>Perkinsus olseni</i>; 5. Mortality rate – No mortalities, lesions observed following wild capture, 6. Economic loss – Nil; 7. Geographic extent – West coast abalone fishery; 8. Containment measures – Voluntary closure of the wild fishery; 9. Laboratory confirmation – PCR and ‘Ray’s Fluid Thioglycolate Medium’ technique (RFTM) confirmed infection in sampled abalone; 10. Publications – None. <p>Infection with <i>Perkinsus olseni</i> is known to have occurred previously in New South Wales (last reported 2005). Not reported despite targeted surveillance in Western Australia (last reported 2003). Passive surveillance and never reported in the Northern Territory, Queensland, South Australia and Western Australia. No information available for the Australian Capital Territory (susceptible species not present no marine water responsibility).</p>
6	<p>Infection with abalone herpesvirus (abalone viral ganglioneuritis) was not reported this period despite targeted surveillance in Tasmania (last reported 2011) and passive surveillance in New South Wales (last reported 2011 and eradicated following detection in contained commercial live-holding facilities), and Victoria (last reported 2010). Passive surveillance and never reported in the Northern Territory, Queensland, South Australia and Western Australia. No information available this period for the Australian Capital Territory (no marine water responsibility).</p>
7	<p>Infectious hypodermal and haematopoietic necrosis virus was not reported this period despite passive surveillance in Queensland (last reported 2008) and Northern Territory (last reported 2003). Passive surveillance and never reported in New South Wales, South Australia, Victoria and Western Australia. No information available this period in the Australian Capital Territory (no marine responsibility) and Tasmania (susceptible species not present).</p>
8	<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.</p>
9	<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. No information available this period in the Australian Capital Territory, New South Wales, South Australia, Victoria and Western Australia.</p>

<p>10</p>	<p>Infection with <i>Batrachochytrium dendrobatidis</i></p> <ol style="list-style-type: none"> 1. Reported in Tasmania in May, active surveillance; 2. Species affected – frogs; 3. Clinical signs – None; 4. Pathogen – <i>Batrachochytrium dendrobatidis</i>; 5. Mortality rate – No mortalities, 6. Economic loss – Nil; 7. Geographic extent – Not reported; 8. Containment measures – Not applicable,; 9. Laboratory confirmation – PCR confirmed infection in two of 72 samples; 10. Publications – None. <p>Infection with <i>Batrachochytrium dendrobatidis</i> is known to have occurred previously in Victoria (last reported 2011) and Western Australia (last reported 2008). Suspected but not confirmed through passive surveillance in Queensland. No information available this period in the Australian Capital Territory, New South Wales, the Northern Territory, and South Australia.</p>
<p>11</p>	<p>Virus isolated from Atlantic salmon. A novel virus has been detected in association with mortalities of cage-cultured Atlantic salmon in south eastern Tasmania. The virus was initially considered to be an incidental finding; however, some sporadic detections have been made in association with variable mortality of smolt. Viral ultrastructure resembles that of the Orthomyxoviridae. Further characterisation, including sequencing is pending. Infectious salmon anemia virus has been excluded through OIE recommended assays. Investigations are on-going to characterise the virus, better understand its epidemiology, and determine its significance as a pathogen of salmon.</p>

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

Country: CHINA, P.R.

Period: April - June 2013

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	+()	+()		
3. Spring viraemia of carp	+?()	+?()	+?()		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome	0000	0000	0000		
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	+()	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10. Enteric septicaemia of catfish	0000	0000	0000		
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 herpes-like virus	0000	0000	0000		
4. Infection with <i>Xenohaliotis californiensis</i>	0000	0000	0000		
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
6. Acute viral necrosis (in scallops)	0000	0000	0000		
7. Akoya oyster disease	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	+()	+()	+()		
2. White spot disease	+()	+()	+()	II,III	1
3. Yellowhead disease	+()	0000	0000	II,III	2
4. Infectious hypodermal and haematopoietic necrosis	+()	+()	+()		
5. Infectious myonecrosis	0000	0000	0000		
6. White tail disease (MrNV)	+()	0000	0000		
7. Necrotising hepatopancreatitis	0000	0000	0000		
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	0000	0000	0000		
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
10. Acute hepatopancreatic necrosis syndrome (AHPNS)	+()	0000	0000	I	2
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.					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; 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><u>a/</u> Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	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
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p><u>b/</u> If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	White spot syndrome virus was detected in broodstock <i>L. vannamei</i> from Guangdong Province in March 2013 by Mariculture Organism Diseases Control and Molecular Pathology (MODCAMPL) of Yellow Sea Fisheries Research Institute (YSFRI). PCR method based on OIE Aquatic Manual 2012 was used. Occurrence limited to certain zones.
2	Suspected Acute hepatopancreatic necrosis syndrome (AHPNS) was observed in juvenile <i>L. vannamei</i> from Fujian province in January 2013 and broodstock <i>L. vannamei</i> from Guangdong Province in March 2013. Mortality was reported from the farms affected. A new genotype of YHV was detected by MODCAMPL from these samples through nested RT-PCR and a new YHV it was developed in this regard.
3	

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

Country: **HONG KONG SAR**

 Period: **April - June 2013**

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	II	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia	0000	0000	0000	III	
5. Epizootic ulcerative syndrome	0000	0000	0000	III	
6. Red seabream iridoviral disease	-	+	-	III	1
7. Koi herpesvirus disease	-	-	-	III	1
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-	III	
9. Viral encephalopathy and retinopathy	-	-	-	III	
10. Enteric septicaemia of catfish	0000	0000	0000	II	
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 herpes-like virus	0000	0000	0000	II	
4. Infection with <i>Xenohaliotis californiensis</i>					
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	II	
6. Acute viral necrosis (in scallops)	0000	0000	0000	II	
7. Akoya oyster disease	0000	0000	0000	II	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	III	
2. White spot disease	-	-	-	III	
3. Yellowhead disease	0000	0000	0000	III	
4. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	II	
5. Infectious myonecrosis	0000	0000	0000	II	
6. White tail disease (MrNV)	0000	0000	0000	II	
7. Necrotising hepatopancreatitis	0000	0000	0000	II	
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	0000	0000	0000	II	
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000	II	
10. Acute hepatopancreatic necrosis syndrome (AHPNS)					
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	0000	0000	0000	II	
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000	II	
ANY OTHER DISEASES OF IMPORTANCE					
1.					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; 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><u>a/</u> Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	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
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p><u>b/</u> If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	Red seabream iridovirus was detected in a group of giant groupers with reported 6% mortality and 50% morbidity.
2	
3	

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

Country: INDIA
Period: April - June 2013

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		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome	-	-	-		
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10. Enteric septicaemia of catfish	0000	0000	0000		
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 herpes-like virus	0000	0000	0000		
4. Infection with <i>Xenohaliotis californiensis</i>	0000	0000	0000		
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
6. Acute viral necrosis (in scallops)	0000	0000	0000		
7. Akoya oyster disease	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+()	+()	+()	I	1,2
3. Yellowhead disease	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis	***	***	***		
5. Infectious myonecrosis	0000	0000	0000		
6. White tail disease (MrNV)	-	-	-		
7. Necrotising hepatopancreatitis	0000	0000	0000		
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	0000	0000	0000		
9. <i>Monodon</i> slow growth syndrome	-	-	-		
10. Acute hepatopancreatic necrosis syndrome (AHPNS)	0000	0000	0000		
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.					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; 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><u>a/</u> Please use the following symbols:</p>			
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+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p><u>b/</u> If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	<p>White spot disease (WSD): Reported from very limited areas in Prakasam and Vijayiwada districts of Andhra Pradesh, Udupi and Uttar districts of Karnataka, Ernakulam district of Kerala, and Ganjam, Jagatsingpur, Kendrapada, Bhadrak and Balasore districts of Odisha, during different months under the reporting period.</p>
2	<p><i>P. monodon</i> and <i>L. vannamei</i> were affected by WSD</p>
3	

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

Country: **IRAN**

 Period: **April - June 2013**

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	-	-	-		
3. Spring viraemia of carp	-	-	-		
4. Viral haemorrhagic septicaemia	-	-	-		
5. Epizootic ulcerative syndrome	0000	0000	0000		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10. Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Infection with abalone herpes-like virus	***	***	***		
4. Infection with <i>Xenohaliotis californiensis</i>	***	***	***		
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
6. Acute viral necrosis (in scallops)	***	***	***		
7. Akoya oyster disease	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	-	-	+?	III	1
3. Yellowhead disease	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
5. Infectious myonecrosis	***	***	***		
6. White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis	***	***	***		
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	***	***	***		
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Acute hepatopancreatic necrosis syndrome (AHPNS)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; 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><u>a/</u> Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	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
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p><u>b/</u> If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	<p>White Spot Disease</p> <ol style="list-style-type: none"> 1. Reported in Choebdeh region (Abadan) in June 2013, origin unknown; 2. Species affected – <i>L. vannamei</i>; 3. Clinical signs – None; 4. Pathogen – White spot syndrome virus; 5. Mortality rate – undetermined, 6. Economic loss – 7. Geographic extent – Choebdeh in Khozestan Province; 8. Control measures – one pond was disinfected with 40 ppm Calcium Chloride; 9. Laboratory confirmation – nested-PCR; 10. Publications – None.

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

Country: JAPAN

Period: April - June 2013

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	I	
2. Infectious haematopoietic necrosis	+	+	+	III	
3. Spring viraemia of carp	0000	0000	0000	I	
4. Viral haemorrhagic septicaemia	+	-	-	III	
5. Epizootic ulcerative syndrome	-	+	-	II	
6. Red seabream iridoviral disease	-	-	+	III	
7. Koi herpesvirus disease	-	+	+	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000	I	
9. Viral encephalopathy and retinopathy	-	-	-	III	
10. Enteric septicaemia of catfish	-	-	-	I	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	I	
2. Infection with <i>Perkinsus olseni</i>	-	-	-	I	
3. Infection with abalone herpes-like virus	0000	0000	0000	I	
4. Infection with <i>Xenohaliotis californiensis</i>	+?()	+?()	-	III	1
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>	-	-	-	I	
6. Acute viral necrosis (in scallops)	0000	0000	0000	I	
7. Akoya oyster disease	-	-	-	I	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	I	
2. White spot disease	+	+	+	III	
3. Yellowhead disease	0000	0000	0000	I	
4. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	I	
5. Infectious myonecrosis	0000	0000	0000	I	
6. White tail disease (MrNV)	0000	0000	0000	I	
7. Necrotising hepatopancreatitis	0000	0000	0000	I	
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	0000	0000	0000	I	
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000	I	
10. Acute hepatopancreatic necrosis syndrome (AHPNS)					
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	-	-	-	I	
2. Infection with <i>Batrachochytrium dendrobatidis</i>	-	-	-	I	
ANY OTHER DISEASES OF IMPORTANCE					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; 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><u>a/</u> Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	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
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p><u>b/</u> If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	DNA of <i>Xenohaliotis californiensis</i> was detected by PCR from <i>Haliotis discus</i> (Aomori prefecture) and <i>H. diversicolor</i> (Kagoshima prefecture) without any clinical signs. Diagnosis was made by the National Research Institute of Aquaculture, Fishery Research Agency. Stamping out and disinfection of infected premises were implemented in response to the outbreak.
2	
3	

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

Country: **KOREA, REPUBLIC OF**

 Period: **April - June 2013**

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	-	-	-	III	
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	-	+	+	III	1
5. Epizootic ulcerative syndrome	0000	0000	0000		
6. Red seabream iridoviral disease	-	-	-	III	
7. Koi herpesvirus disease	-	-	-	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	-	-	-	III	
10. Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
3. Infection with abalone herpes-like virus	0000	0000	0000		
4. Infection with <i>Xenohaliotis californiensis</i>					
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>	-	-	-	III	
6. Acute viral necrosis (in scallops)	0000	0000	0000		
7. Akoya oyster disease	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	-	+	-	III	2
3. Yellowhead disease	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis	-	-	-	III	
5. Infectious myonecrosis	0000	0000	0000		
6. White tail disease (MrNV)	0000	0000	0000		
7. Necrotising hepatopancreatitis	0000	0000	0000		
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	0000	0000	0000		
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
10. Acute hepatopancreatic necrosis syndrome (AHPNS)					
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	0000	0000	0000		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	?	?	?		
ANY OTHER DISEASES OF IMPORTANCE					
1.					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; 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><u>a/</u> Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	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
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p><u>b/</u> If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	Viral haemorrhagic septicaemia virus (VHSV) was detected in cultured olive flounder (<i>Paralichthys olivaceus</i>) from 7 culture facilities in Jeju during 2 months (May and June). The confirmative diagnosis was performed by the National Fisheries Research and Development Institute, Aqua-life Disease Control Division. The standstill of VHSV-detected fish was declared for control.
2	White spot disease virus was detected from fleshy supertexta (<i>Sulculus diversicolor supertexta</i>) in a hatchery from Jeju. No clinical signs and mortality were observed. The confirmative diagnosis was performed by the National Fisheries Research and Development Institute, Aqua-life Disease Control Division. The standstill of WSDV-detected fleshy supertexta was declared for control.
3	

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

Country: **LAO PDR**Period: **April - June 2013**

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	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	***	***	***		
4. Viral haemorrhagic septicaemia	***	***	***		
5. Epizootic ulcerative syndrome	***	***	***		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	***	***	***		
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Infection with abalone herpes-like virus	***	***	***		
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
5. Acute viral necrosis (in scallops)	***	***	***		
6. Akoya oyster disease	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	***	***	***		
2. White spot disease	***	***	***		
3. Yellowhead disease	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis	***	***	***		
5. Infectious myonecrosis	***	***	***		
6. White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis	***	***	***		
Non OIE-listed diseases					
8. <i>Monodon</i> slow growth syndrome	***	***	***		
9. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	***	***	***		
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: Infectious salmon anaemia; Infection with <i>Gyrodactylus salaris</i>. Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</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>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	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
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<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: **MALAYSIA**

 Period: **April - June 2013**

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	
3. Spring viraemia of carp	0000	0000	0000	I,II,III	1
4. Viral haemorrhagic septicaemia	0000	0000	0000	I,II,III	
5. Epizootic ulcerative syndrome	(1986)	(1986)	(1986)	I,II	
6. Red seabream iridoviral disease	-	-	-	I,II,III	
7. Koi herpesvirus disease	-	-	-	I,II,III	2
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-	III	3
9. Viral encephalopathy and retinopathy	-	-	-	III	4
10. Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000	III	
3. Infection with abalone herpes-like virus	0000	0000	0000		
4. Infection with <i>Xenohaliotis californiensis</i>					
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
6. Acute viral necrosis (in scallops)	0000	0000	0000		
7. Akoya oyster disease	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	-	-	-	I,III	5
2. White spot disease	-	+	+	I,III	6
3. Yellowhead disease	-	-	-	I,III	7
4. Infectious hypodermal and haematopoietic necrosis	+	+	-	I,III	8
5. Infectious myonecrosis	-	-	-	III	9
6. White tail disease (MrNV)	-	-	-	III	10
7. Necrotising hepatopancreatitis	-	-	-	III	11
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	0000	0000	0000		
9. <i>Monodon</i> slow growth syndrome	-	-	-		
10. Acute hepatopancreatic necrosis syndrome (AHPNS)					
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	-	-	-		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1. Hepatopancreatic parvo virus disease	-	+	+	III	12

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; 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>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	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
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<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>Spring viraemia of carp</p> <p>1. No positive cases detected (PCR) during DoF active surveillance programme</p>
2	<p>Koi herpesvirus disease</p> <p>1. One positive case was detected (PCR) during DoF active surveillance programme</p>
3	<p>Grouper Iridoviral disease (GIV)</p> <p>1. Baramundi samples from Penang were positive for GIV tested in Fisheries Biosecurity Penang for disease surveillance.</p>
4	<p>Viral encephalopathy and retinopathy</p> <p>1. All fish samples from Kedah were negative for VNN, tested in NaFisH for diagnostic cases.</p>
5	<p>Taura syndrome virus (TSV) (<i>Penaeus monodon</i>, <i>Litopenaeus vannamei</i>)</p> <p>1. TSV was not detected in all the 28 samples of postlarvae sent to private laboratory for routine and monitoring purposes.</p> <p>2. No positive on reported cases detected by PCR although active surveillance was conducted by DoF in West and East Malaysia.</p>

6	<p>White Spot Syndrome Virus (WSSV)</p> <ol style="list-style-type: none"> 1. One case of WSSV was detected in the samples sent to private laboratory for routine and monitoring purposes. It involved one juvenile <i>Penaeus monodon</i>.
7	<p>Yellow head disease (YHV) (<i>P. monodon</i>, <i>Litopenaeus vannamei</i>)</p> <ol style="list-style-type: none"> 1. YHV was not detected in all the 24 samples sent to private laboratory for routine and monitoring purposes. 2. No positive cases detected (PCR) although active surveillance was conducted by DoF in East Malaysia
8	<p>Infectious hypodermal and haematopoietic necrosis virus (IHHNV) (<i>Macrobrachium rosenbergii</i>, <i>P. monodon</i>, <i>Litopenaeus vannamei</i>)</p> <ol style="list-style-type: none"> 1. IHHNV was detected in three (3) <i>L. vannamei</i> postlarval samples sent to private laboratory for routine and monitoring purposes. 2. No positive cases detected by PCR although active surveillance was conducted by DoF in West and East Malaysia.
9	<p>Infectious Myonecrosis (IMNV)</p> <ol style="list-style-type: none"> 1. IMNV was not detected in all 43 samples of <i>Penaeus monodon</i> and <i>Litopenaeus vannamei</i> postlarvae and juveniles sent to private laboratory for routine and monitoring purposes. 2. No positive on reported cases detected by PCR, although active surveillance was conducted by DoF in West and East Malaysia.
10	<p><i>Macrobrachium rosenbergii</i> Nodavirus (MrNV)</p> <ol style="list-style-type: none"> 1. No samples were tested for MrNV.
11	<p>Necrotising hepatopancreatitis (NHPB)</p> <ol style="list-style-type: none"> 1. No samples were tested for NHPB.
12	<p>Hepatopancreatic parvo virus disease (HPV) (<i>P. monodon</i>, <i>Litopenaeus vannamei</i>)</p> <ol style="list-style-type: none"> 1. 5 out of 46 postlarval samples (<i>P. monodon</i>) were tested positive for HPV by private laboratory for routine and monitoring purposes.

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

Country: **MYANMAR**

 Period: **April - June 2013**

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	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	***	***	***		
4. Viral haemorrhagic septicaemia	***	***	***		
5. Epizootic ulcerative syndrome	***	***	***		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease					
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>					
2. Infection with <i>Perkinsus olseni</i>					
3. Infection with abalone herpes-like virus					
4. Infection with <i>Xenohaliotis californiensis</i>					
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>					
6. Acute viral necrosis (in scallops)					
7. Akoya oyster disease					
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	-	-	-	III	1
2. White spot disease	-	-	-	III	1
3. Yellowhead disease	-	-	-	III	
4. Infectious hypodermal and haematopoietic necrosis	-	-	-	III	1
5. Infectious myonecrosis	***	***	***		
6. White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis	***	***	***		
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	***	***	***		
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Acute hepatopancreatic necrosis syndrome (AHPNS)					
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus					
2. Infection with <i>Batrachochytrium dendrobatidis</i>					
ANY OTHER DISEASES OF IMPORTANCE					
1.					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; 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><u>a/</u> Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	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
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p><u>b/</u> If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	During this period, we have received 4 samples of shrimps (2 frozen and 2 live shrimps for export) for testing for TSV, WSSV and IHHNV. All samples were found negative for the viruses.
2	<p>Additional Note:</p> <p>The Ministry of Livestock and Fisheries have received a report of mortalities in freshwater prawn hatcheries from the local fisheries authority in Twantay and Kyauktan townships, Yangon region during this period. The clinical signs observed were changes in coloration at larval stage 4-5 (10 days old) followed by non-uniformity in growth among survivors.</p> <p>Laboratory test identified poor water quality and isolated <i>Vibrio</i> spp. from some water samples.</p>
3	

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

Country: **NEPAL**

 Period: **April - June 2013**

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		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome	-	-	-		1
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease					
9. Viral encephalopathy and retinopathy					
10. Enteric septicaemia of catfish					
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Infection with abalone herpes-like virus	***	***	***		
4. Infection with <i>Xenohaliotis californiensis</i>					
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
6. Acute viral necrosis (in scallops)	***	***	***		
7. Akoya oyster disease	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	***	***	***		
2. White spot disease	***	***	***		
3. Yellowhead disease	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis	***	***	***		
5. Infectious myonecrosis	***	***	***		
6. White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis	***	***	***		
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	***	***	***		
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Acute hepatopancreatic necrosis syndrome (AHPNS)					
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; 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>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	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
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<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 ulcerative syndrome</p> <ol style="list-style-type: none"> 1. Seen in Chitawan, Rupandehi and Kathmandu districts in April and June; 2. Species affected – mostly Indian carps and catfishes; 3. Clinical signs – Wounds like ulcers on body and brownish patches on different parts of the body; 4. Pathogen –; 5. Mortality rate –, 6. Economic loss – 1 ton Indian carps and 200 kg catfishes 7. Geographic extent – 200-700 g size of Indian carps in 25 ha. Ponds; 75-200 g catfishes in 100 small kitchen ponds; 8. Control measures – Liming at 500kg/ha and Toximar at 20-40kg/ha; both cases presently controlled; 9. Laboratory confirmation – level I diagnosis; 10. Publications – None.
2	
3	

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

Country: **PHILIPPINES**Period: **April - June 2013**

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		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome	- (2002)	- (2002)	- (2002)	I	1
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	0000	0000	0000	III	2
Non OIE-listed diseases					
8. Grouper iridoviral disease	- (2008)	- (2008)	- (2008)	III	
9. Viral encephalopathy and retinopathy	+	+	+	III	3
10. Enteric septicaemia of catfish	***	***	***		
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 herpes-like virus	***	***	***		
4. Infection with <i>Xenohaliotis californiensis</i>	***	***	***		
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
6. Acute viral necrosis (in scallops)	***	***	***		
7. Akoya oyster disease	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	III	4
2. White spot disease	+	+	+	III	5
3. Yellowhead disease	- (1999)	- (1999)	- (1999)	III	6
4. Infectious hypodermal and haematopoietic necrosis	+	-	+	III	7
5. Infectious myonecrosis	0000	0000	0000	III	8
6. White tail disease (MrNV)	0000	0000	0000	III	
7. Necrotising hepatopancreatitis	0000	0000	0000	III	9
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	***	***	***		
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Acute hepatopancreatic necrosis syndrome (AHPNS)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. <i>Monodon</i> baculovirus (MBV)	+	-	-	III	10

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; 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><u>a/</u> Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	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
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p><u>b/</u> If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	Three hundred eight (308) pieces of eels (<i>Anguilla spp.</i> and <i>Monopterus albus</i>) were negative for Epizootic Ulcerative Syndrome by gross morphological examination. Samples were from Pila Laguna, Parañaque City and General Santos City. Examination was conducted by the Bureau of Fisheries and Aquatic Resources (BFAR) Central Office Fish Health Laboratory.
2	One sample of common koi (<i>Cyprinus carpio koi</i>) was tested for Koi Herpes Virus using PCR. The result of the test was negative. The sample was from General Trias Cavite. Examination was conducted by BFAR Central Office Fish Health Laboratory.
3	Seven (7) samples - (3 grouper, 2 seabass, 1 pompano, 1 mangrove jack) were analyzed using PCR test. Four (3 grouper, 1 seabass) showed positive result for Viral Encephalopathy and Retinopathy. The positive samples were collected from Iloilo, Sarangani Province and Guimaras. Examination was conducted by the SEAFDEC-AQD Fish Health Laboratory.
4	One hundred twenty five (125) samples - (109 <i>Penaeus vannamei</i> , 16 <i>Penaeus monodon</i>) of different stages (brood stock, adult, fry, juvenile) were analyzed using PCR test. All samples showed negative results for Taura Syndrome. The samples were collected from Iloilo, Davao, Negros Occidental, Aklan, Pampanga, Zambales, Bohol, Lapu-lapu City Cebu, Sarangani Province, General Santos City, Tacloban City, Zamboanga del Sur, Dapitan City, Bulacan, Villareal Samar, Pangasinan and Bataan. Other samples tested were imported from Hawaii, USA. Examinations were conducted by BFAR Central Office, BFAR Region III and SEAFDEC-AQD Fish Health Laboratories.

5	Five hundred forty-four (544) samples of <i>P.vannamei</i> , <i>P.monodon</i> , and crabs of different stages (fry, juvenile, adult and brood stock) were tested using PCR. Thirty-nine - (6 <i>P.vannamei</i> , 11 <i>P.monodon</i> , 22 crabs) were positive for White Spot Syndrome Virus. The positive samples were from Iloilo, Negros Oriental, Bohol, Batangas, Bacolod, General Santos City, Camarines Sur, Samar and Davao del Sur. Examinations were conducted by BFAR Central Office, BFAR Region III, BFAR Region VI, Negros Prawn Producers Cooperative and SEAFDEC-AQD Fish Health Laboratories.
6	Fifty seven (57) samples - (48 <i>P.vannamei</i> , 9 <i>P.monodon</i>) of different stages (fry, juvenile, grow out, adult and brood stock) were tested using PCR. All samples showed negative results for Yellowhead Disease. The samples were collected from Bohol, Tacloban City, Camarines Sur, Sarangani Province, Iloilo City, Batangas, Bulacan, Samar, Pangasinan and Bataan. Other samples were imported from Hawaii, USA. . Examinations were conducted by BFAR Central Office and SEAFDEC-AQD Fish Health Laboratories.
7	One hundred thirty-one (131) samples - (35 <i>P.monodon</i> , 94 <i>P.vannamei</i> , 2 <i>P.indicus</i>) of different stages (fry, juvenile, adult, brood stock) were analyzed using the PCR Test. Six (3 <i>P.vannamei</i> , 3 <i>P.monodon</i> ,) showed positive result for Infectious Hypodermal and Haematopoietic Necrosis Virus. The positive samples were collected from Bohol, Tacloban City, Sarangani Province, Camarines Sur, Bulacan and Pangasinan. Examinations were conducted by BFAR Central Office and SEAFDEC-AQD Fish Health Laboratories.
8	Eighty four (84) samples - (58 <i>P.vannamei</i> , 26 <i>P.monodon</i>) of different stages (fry, juvenile, adult and bloodstock) were tested using PCR. All samples showed negative results for Infectious Myonecrosis. The samples were collected from Bohol, Lapu-lapu Cebu, Davao del Sur, Davao City, Batangas, Iloilo City, Zambales, Camarines Sur, Sarangani Province, General Santos City, Batangas, Tacloban City, Zamboanga del Sur, Dapitan, Bulacan and Samar. Other samples were imported from Hawaii, USA. Examinations were conducted by BFAR Central Office and SEAFDEC-AQD Fish Health Laboratories.
9	Eighty three (83) samples - (73 <i>P.vannamei</i> , 10 <i>P.monodon</i>) of various stages (fry, juvenile, adult and brood stock) were tested using PCR. All samples showed negative results for Necrotising Hepatopancreatitis. The samples were collected from Bohol, Lapu-lapu Cty, Cebu, Davao del Sur, Davao City, Sarangani Province, Camarines Sur, Batangas, Quezon, General Santos City, Tacloban City, Zamboanga del Sur, Dapitan City, Bulacan and Samar. Other samples were imported from Hawaii, USA. Examination was conducted by BFAR Central Office Fish Health Laboratory.
10	Twenty (20) samples of <i>P.monodon</i> of different stages (fry, grow-out and adult) were tested using PCR. Six (6) were positive for Monodon Baculovirus. The positive samples were from Tacloban City, Bohol. Examination was conducted by BFAR Central Office Fish Health Laboratory.

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

Country: **SINGAPORE**

 Period: **April - June 2013**

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		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome	0000	0000	0000		
6. Red seabream iridoviral disease	(2012)	(2012)	+	III	1
7. Koi herpesvirus disease	(2012)	(2012)	(2012)	III	2
Non OIE-listed diseases					
8. Grouper iridoviral disease	(2012)	(2012)	+	III	1
9. Viral encephalopathy and retinopathy	(2012)	+	+	III	3
10. Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Infection with abalone herpes-like virus	***	***	***		
4. Infection with <i>Xenohaliotis californiensis</i>	***	***	***		
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
6. Acute viral necrosis (in scallops)	***	***	***		
7. Akoya oyster disease	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	(2012)	(2012)	+	III	4
3. Yellowhead disease	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
5. Infectious myonecrosis	0000	0000	0000		
6. White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis	0000	0000	0000		
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	***	***	***		
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Acute hepatopancreatic necrosis syndrome (AHPNS)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	(2011)	(2011)	(2011)		

ANY OTHER DISEASES OF IMPORTANCE					
1. Infectious spleen and kidney necrosis virus (ISKNV) (marine and ornamental fish)	(2012)	(2012)	+	III	1
2. <i>Aeromonas salmonicida</i> (in goldfish)	0000	0000	0000	III	5

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

Finfish: Infectious salmon anaemia; 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	+()	Occurrence limited to certain zones
+?	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
		-	Not reported (but disease is known to occur)
		(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	Infectious spleen and kidney necrosis virus (ISKNV) was detected in a batch of diseased threadfin and 3 batches of diseased gourami in June. Red seabream iridovirus (RSIV) was detected in a batch of seabass fingerlings this quarter from a landbased seabass nursery, which had been experiencing low-grade mortality in their own stock. RSIV was not detected in the other batch of seabass on the farm. The farm has since culled all diseased fish and vaccinated the clinically health ones to control the spread of the disease.
2	Koi herpesvirus (KHV) was not detected in 46 batches of ornamental koi this quarter by real-time PCR. Fish tested were from surveillance programs on imported and locally farmed ornamental fish, and voluntary submissions.
3	Viral nervous necrosis virus (VNNV) was detected in a batch of diseased giant grouper submitted in May. The fish weighed more than 300 g and had hyperinflated swim bladders. They were also infested with leeches, lice and monogenean parasites. The farmer was advised to treat the parasites on the fish and remove moribund fish from the nets to decrease the spread of the virus to naïve fish. VNNV was also detected in imported hybrid grouper fry and imported pompano in June.

4	<p>White spot syndrome virus (WSSV) was detected in a batch of imported <i>P. monodon</i> during grow-out culture in earthen pond of a local farm. The farm had poor biosecurity and husbandry practices, and used unfiltered and untreated seawater in their ponds. It was possible that the virus was present in wild crabs introduced via this route. As the farm experienced 100% mortality in all 4 batches of shrimps, there were no suitable samples for confirmatory tests. Pond water was treated with bleach for 3 days, then drained and left to dry under the sun. the farm has since ceased operations. WSSV was not detected in 31 batches of ornamental crustaceans submitted from targeted surveillance program, and voluntary submission of 165 shrimps from a local farm.</p>
5	<p><i>Aeromonas salmonicida</i> was not detected this quarter in all 4 batches of goldfish submitted under a targeted surveillance program for goldfish exported to Australia.</p>

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

Country: **SRI LANKA**

 Period: **April - June 2013**

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	III	1
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	0000	0000	0000	III	2
4. Viral haemorrhagic septicaemia	0000	0000	0000	III	3
5. Epizootic ulcerative syndrome	***	***	***		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	0000	0000	0000	III	4
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Infection with abalone herpes-like virus	***	***	***		
4. Infection with <i>Xenohaliotis californiensis</i>					
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
6. Acute viral necrosis (in scallops)	***	***	***		
7. Akoya oyster disease	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	***	***	***		
2. White spot disease	+()	+()	+()	III	5
3. Yellowhead disease	?()	?()	?()	III	6
4. Infectious hypodermal and haematopoietic necrosis	+()	+()	+()	III	7
5. Infectious myonecrosis	***	***	***		
6. White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis	***	***	***		
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	***	***	***		
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Acute hepatopancreatic necrosis syndrome (AHPNS)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with <i>Batrachochytrium dendrobatidis</i>	***	***	***		

ANY OTHER DISEASES OF IMPORTANCE					
1. Laem Singh virus (LSV)	?()	?()	?()	III	8
2. Monodon Baculovirus (MBV)	+()	?()	?()	III	9

DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; 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	+()	Occurrence limited to certain zones
+?	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
		-	Not reported (but disease is known to occur)
		(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	At the Central Veterinary Investigation Centre (CVIC), PCR has been developed for EHN. Samples were not tested for this reporting period
2	28 samples (13 carps and 15 guppies) were tested by PCR for SVC at CVIC in the months of April and May. Samples were not tested in the month of June. All the samples gave negative result. The samples were taken from aquarium from western, central and north western provinces, and these were from export samples.
3	PCR has been developed for VHS at CVIC, and no samples were tested during this reporting period.
4	A total of 20 carp samples from 7 batches have been tested for koi herpesvirus by PCR method at the Centre for Aquatic Disease Diagnosis and Research (CADDAR). These samples were received from the quarantine station, North western, Central and Eastern provinces and all the samples were negative.
5	112 samples of <i>P. monodon</i> were tested by PCR for WSSV, and 99 samples were found positive. The testing has been carried out in the Laboratories of National Aquatic Research Agency (NARA) and National Aquatic Development Authority (NAQDA).
6	15 samples of <i>P. monodon</i> were tested by PCR for YHV in the laboratory of NARA during this reporting period. All samples gave negative result.

7	15 samples of <i>P. monodon</i> were tested by PCR for IHNV during this reporting period, and 4 samples were found positive. Test was carried out in the laboratory of NARA.
8	15 samples of <i>P. monodon</i> were tested by PCR for LSV during this reporting period. All samples gave negative result. Test was carried out in the laboratory of NARA.
9	16 of 28 samples of <i>P. monodon</i> gave positive result for MBV during this reporting period. PCR method was used for testing at the laboratories of NARA and NAQDA.

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

Country: **THAILAND**

 Period: **April - June 2013**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	January	February	March		
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	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia	0000	0000	0000	III	
5. Epizootic ulcerative syndrome	(2009)	(2009)	(2009)	II	
6. Red seabream iridoviral disease	0000	0000	0000	III	
7. Koi herpesvirus disease	(2011)	(2011)	(2011)	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	
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 herpes-like virus	0000	0000	0000	II	
4. Infection with <i>Xenohaliotis californiensis</i>	0000	0000	0000	II	
Non OIE-listed diseases					
5. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	II	
6. Acute viral necrosis (in scallops)	***	***	***		
7. Akoya oyster disease	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	+()	-	-	III	1
2. White spot disease	+()	+()	+()	III	2
3. Yellowhead disease	+()	+()	+()	III	3
4. Infectious hypodermal and haematopoietic necrosis	+()	+()	+()	III	4
5. Infectious myonecrosis	0000	0000	0000	III	
6. White tail disease (MrNV)	+()	-	+()	III	5
7. Necrotising hepatopancreatitis	***	***	***		
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)	***	***	***		
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Acute hepatopancreatic necrosis syndrome (AHPNS)	+()	+()	+()	II	6
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	(2011)	(2011)	(2011)	III	
2. Infection with <i>Batrachochytrium dendrobatidis</i>	0000	0000	0000	II	
ANY OTHER DISEASES OF IMPORTANCE					
1.					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; 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><u>a/</u> Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	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
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p><u>b/</u> If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	A total of 2,230 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 6 specimens or 0.27 % recorded as PCR positive or carrying TSV genes. Shrimp farm with positive testing results was subjected to health improvement, movement control, eradication and/or farm disinfection.
2	A total of 2,151 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 98 specimens or 4.56 % recorded as PCR positive or carrying WSSV genes. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection.
3	A total of 2,224 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 41 specimens or 1.84 % recorded as RT-PCR positive or carrying YHV genes. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection.
4	A total of 2,337 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 50 specimens or 2.14 % recorded as PCR positive or carrying IHNV genes. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection.
5	A total of 189 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 62 specimens or 32.8 % recorded positive or carrying MrNV genes. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection

6	A total of 1,259 shrimp samples from shrimp farms had been tested at Histopathology Laboratories of the DOF under passive surveillance. 23 specimens or 1.83 % recorded as AHPNS positive. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection
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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 2013)

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	3. Enteric septicaemia of catfish
4. Viral haemorrhagic septicaemia	
5. Epizootic ulcerative syndrome	
6. Red seabream iridoviral disease	
7. Infection with koi herpesvirus	
1.2 MOLLUSC DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with <i>Bonamia exitiosa</i>	1. Infection with <i>Marteilioides chungmuensis</i>
2. Infection with <i>Perkinsus olseni</i>	2. Akoya oyster disease
3. Infection with abalone herpes-like virus	3. Acute viral necrosis (in scallops)
4. Infection with <i>Xenohaliotis californiensis</i>	
1.3 CRUSTACEAN DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Taura syndrome	1. Monodon slow growth syndrome
2. White spot disease	2. Milky haemolymph disease of spiny lobster (<i>Panulirus</i> spp.)
3. Yellowhead disease	3. Acute hepatopancreatic necrosis syndrome (AHPNS)
4. Infectious hypodermal and haematopoietic necrosis	
5. Infectious myonecrosis	
6. White tail disease (MrNV)	
7. Necrotising hepatopancreatitis	
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. Infectious salmon anaemia	1. Channel catfish virus disease
2. Infection with <i>Gyrodactylus salaris</i>	
2.2 Molluscs	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with <i>Bonamia ostreae</i>	
2. Infection with <i>Marteilia refringens</i>	
3. Infection with <i>Perkinsus marinus</i>	
2.3 Crustaceans	
OIE-listed diseases	Non OIE-listed diseases
1. Crayfish plague (<i>Aphanomyces astaci</i>)	

Recent Aquatic Animal Health Related Publications

OIE Aquatic Animal Health Code, 15th Edition, 2012. The OIE Aquatic Animal Health Code (the Aquatic Code) sets out standards for the improvement of aquatic animal health and welfare and veterinary public health worldwide, including through standards 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 veterinary authorities of importing and exporting countries to provide for early detection, reporting and control of agents pathogenic to aquatic animals and, in the case of zoonotic diseases, for humans, and to prevent their transfer via international trade in aquatic animals and aquatic animal products, while avoiding unjustified sanitary barriers to trade. The health measures 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 15th edition incorporates modifications to the Aquatic Code agreed at the 80th General Session in May 2012. The 2012 edition includes revised information on the following subjects: glossary; notification of diseases and epidemiological information; criteria for listing aquatic animal diseases; diseases listed by the OIE; import risk analysis; welfare of farmed fish during transport; welfare aspects of stunning and killing of farmed fish for human consumption; and disinfection of salmonid eggs for infectious haematopoietic necrosis, infectious salmon anaemia and viral haemorrhagic septicaemia. This edition includes four new chapters on communication; monitoring of the quantities and usage patterns of antimicrobial agents used in aquatic animals; development and harmonisation of national antimicrobial resistance surveillance and monitoring programmes for aquatic animals; and killing of farmed fish for disease control purposes. 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, 2013. The purpose of this manual is to provide a uniform approach to the detection of the diseases listed in the OIE *Aquatic Animal Health Code*, so that the requirements for health certification in connection with trade in aquatic animals and aquatic animal products can be met. It includes bibliographical references and a list of the OIE Reference Laboratories for amphibian, crustacean, fish and mollusc diseases. The manual is available for free download at <http://www.oie.int/en/international-standard-setting/aquatic-manual/access-online/>.

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Corsin, F., Georgiadis, M., Larry Hammel, K. and Hill, B., 2009. **Guide for Aquatic Animal Health Surveillance**. World Organization for Animal Health (OIE), Paris, France. 114 pp. Efficient and reliable surveillance systems generate sound evidence for disease incidence, prevalence and distribution, or for demonstrating disease absence. Science-based decisions regarding the health of aquatic animals rely on the information generated by surveillance programs. This practical handbook about surveillance is intended to be used mainly by Veterinary Services or other Competent Authorities, their staff and experts, for designing, implementing, and evaluating surveillance systems for diseases of relevance for aquatic animals in their country. The book can be ordered at <http://www.oie.int/boutique/index.php?lang=en>.

WHO-FAO Food Hygiene (Basic Texts), 4th Edition, 2009. World Health Organization and Food and Agriculture Organization of the United Nation, Rome, Italy. The Codex basic texts on food hygiene promote understanding of how rules and regulations on food hygiene are developed and applied. The General Principles of food hygiene cover hygiene practices from primary production through to final consumption, highlighting the key hygiene controls at each stage. This publication also contains the most internationally used description of the Hazard Analysis and Critical Control Point (HACCP) system and guidelines for its application. This fourth edition includes texts adopted by the Codex Alimentarius Commission up to 2009. The texts will be of use to government authorities, food industries, food handlers and consumers, as well as teachers and students of food hygiene.

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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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Published by the Network of Aquaculture Centres in Asia-Pacific and the Food and Agriculture Organization of the United Nations. For inquiries regarding editorial or technical content, please write to NACA, P.O. Box 1040, Kasetsart P.O. , Bangkok 10903, Thailand; Tel. (662) 561- 1728 to 9; Fax: (662) 561-1727; e-mail: info@enaca.org or eduardo@enaca.org.
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ISSN 1513-6558