2014/2

QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

April – June 2014

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Contents

Foreword

9th Symposium on Diseases in Asian Aquaculture

The Fish Health Section (FHS) of the Asian Fisheries Society (AFS) and The Department of Animal Health (DAH) of Ministry of Agriculture and Rural Development (MARD) of Vietnam are very pleased to announce the 9th Symposium on Diseases in Asian Aquaculture (DAA9) in **Rex Hotel, Ho Chi Minh City, Vietnam on 24-28 November 2014.**

The Fish Health Section of the Asian Fisheries Society was founded in May 1989 with the goal to improve regional knowledge on fish health management and to develop awareness among Asian aquaculturists towards establishing a sustainable aquaculture industry. FHS strives to promote interaction by bringing together fish health researchers from around the world to share their knowledge and experience on investigation of diseases, enhancing protection strategies to prevent losses, use of biotechnological tools in health management and disseminating the knowledge and other relevant information on fish health by conducting training workshops and symposia from time to time. The FHS is credited with holding triennial symposia on "**Diseases in Asian Aquaculture**" (DAA) where members and aquatic animal health professionals meet to discuss broad issues and specific topics related to aquatic animal health.

FHS has conducted earlier symposia in Bali, Indonesia (1990); Phuket, Thailand (1993); Bangkok, Thailand (1996); Cebu, The Philippines (1999); Gold Coast, Australia (2002); Colombo, Sri Lanka (2005) Taipei, Taiwan (2008), and Mangalore, India (2011). Each of these symposia brought together more than 200 aquatic animal health scientists, students, government researchers and industry personnel from over 30 countries to discuss issues pertaining to aquatic animal disease, their diagnosis, prevention and control. For more detailed information on FHS please visit http://www.fhs-afs.net/.

The DAA9 scientific programme will discuss issues through paper presentations on the following themes:

- Biosecurity compliance
- Fish Parasitic Diseases
- Shrimp EMS/AHPND
- Fish Viral Diseases
- Shrimp White Spot Disease
- Fish Immunology
- Tilapia and Catfish Diseases
- Shrimp Immunology
- Marine and other Aquatic Diseases
- Diagnostics
- Husbandry and Management

A **Fish Disease Investigation Master Class** will also be conducted during the Symposium. This workshop will be focused on developing skills in fish disease investigations. Participants will work through real life case materials consisting of digitized histology slides and relevant case history. Three facilitators consisting of Drs. Susan Gibson-Kueh (Murdoch University), Supranee Chinabut (fish pathologist, Thailand) and Andy Shinn (FishVet Group Asia) will assist each small group of workshop participants as they work on unique sets of case materials each evening, which will then be presented for discussion to the class as a whole. Participants (limited to 30 pax) will develop skills on what samples and case information to collect, selection of diagnostic tests, how to analyse test results and how to translate this information into disease control strategies.

The **10th Triennial General Meeting (TGM)** will also be held on the evening of 26th November in conjunction with the symposium. All members of AFS-FHS are encouraged to attend this meeting and cooperate in completing the proceedings, including the election of new set of Executive Committee (2015-2018).

More information about the symposium can be viewed at www.daa9.org.

Reports Received by the NACA Secretariat

Country: AUSTRALIA **Period: April - June 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	-(2012)	-(2012)	-(2012)		1
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with *Aphanomyces invadans* (EUS)	-(2013)	-(2013)	-(2013)		2
6. Red seabream iridoviral disease (RSID)	0000	0000	0000		
7. Infection with Koi herpesvirus (KHV)	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	-(2014)	-(2014)	-(2014)		3
10.Enteric septicaemia of catfish	(2011)	(2011)	(2011)		4
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	-(2013)	-(2013)	+		5
3. Infection with abalone herpesvirus	-(2011)	-(2011)	-(2011)		6
4. Infection with *Xenohaliotis californiensis*	0000	0000	0000		
5. Infection with ostereid herpesvirus*	+	+	-(2014)		7
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	0000	0000	0000		
3. Yellowhead disease (YHD)	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	-(2014)	-(2014)	-(2014)		8
5. Infectious myonecrosis (IMN)	0000	0000	0000		
6. White tail disease (MrNV)	-(2008)	-(2008)	-(2008)		9
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	0000	0000	0000		
9. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	-(2008)	-(2008)	-(2008)		10
2. Infection with *Batrachochytrium dendrobatidis*	-(2013)	-(2013)	-(2013)		11
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

* listed as Emerging Disease

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	**Epizootic haematopoietic necrosis** was not reported this period despite passive surveillance in Victoria (last reported 2012), the Australian Capital Territory (last reported 2011), New South Wales (last reported 2009) and South Australia (last reported 1992). Passive surveillance and never reported in the Northern Territory, Queensland, Tasmania and Western Australia.
2	**Infection with *Aphanomyces invadans* (EUS)** was not reported this period despite passive surveillance in Western Australia (last reported 2013), Queensland (last reported 2013), New South Wales (last reported 2012), the Northern Territory (last reported 2012), Victoria (last reported 2012), and South Australia (last reported 2008). Passive surveillance and never reported in Tasmania. No information available in the Australian Capital Territory.
3	**Viral encephalopathy and retinopathy** was not reported this period but known to have occurred previously in Queensland (last reported 2014), Northern Territory (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.
4	**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). Passive surveillance and reported previously in Queensland (last reported 2008) and Tasmania (last reported 2001) in imported zebrafish (*Brachydanio rerio*) 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.

5	**Infection with *Perkinsus olseni*** 1. **Reported in Queensland** in June from samples collected in August 2013; 2. **Species affected** – *Anadora trapezia* (Ark cockle or Sydney cockle), clinically normal adults; 3. **Clinical signs** – none; 4. **Pathogen** – *Perkinsus olseni*; 5. **Mortality rate** – nil; 6. **Economic loss** – N/A; 7. **Geographic extent** – Wynnum, Moreton Bayr; 8. **Containment measures** – N/A; 9. **Laboratory confirmation** – PCR and sequencing; 10. **Publications** – None. **Infection with *Perkinsus olseni*** was not reported this quarter despite passive surveillance in South Australia (last reported 2013) and 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, Tasmania and Victoria. No information available for the Australian Capital Territory (suceptible species not present and no marine water responsibility).
6	**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).
7	**Infection wit Ostereid herpesvirus** was not reported this period but was last reported in New South Wales in 2014. Controls are in place to contain the virus to affected estuaries in New South Wales. Ostereid herpesvirus-1 µ variant has not been detected in any other jurisdiction in Australia. Targeted surveillance in 2011 in pacific oyster growing areas did return positive tests for the virus. Passive surveillance and never reported in Northern Territory, Queensland, Victoria, Tasmania, South Australia and Western Australia. No information available for Australian Capital Territory (no marine water responsibility).
8	**Infectious hypodermal and haematopoietic necrosis virus** is known to have previously occurred in Queensland (last reported 2014) and the Northern Territory (last reported 2003). Passive surveillance and never reported in New South Wales, South Australia, Victoria and Western Australia. No information available this period in the Australian Capital Territory (no marine responsibility) and Tasmania (susceptible species not present).
9	**White tail disease** was not reported this period despite passive surveillance in Queensland (last reported 2008). Passive surveillance and never reported from the Australian Capital Territory, New South Wales, the Northern Territory, South Australia, Victoria and Western Australia. No information available this period in Tasmania (susceptible species not present).
10	**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.

11	**Infection with *Batrachochytrium dendrobatidis*** was not reported this period despite targeted surveillance in Tasmania (last reported 2013), passive surveillance 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.

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

The AQUAVETPLAN disease strategy manual – abalone viral ganglioneuritis was published on the Department of Agriculture website in August 2014 (http://www.daff.gov.u/aquavetplan).

Country: CHINA P.R. **Period: January - March 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	+( )	+( )	+( )	II/III	
3. Spring viraemia of carp (SVC)	0000	0000	+?( )	II/III	
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with *Aphanomyces invadans* (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease (RSID)	0000	0000	0000		
7. Infection with Koi herpesvirus (KHV)	***	***	***		1
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 *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Infection with abalone herpesvirus	0000	0000	0000		
4. Infection with *Xenohaliotis californiensis*	0000	0000	0000		
5. Infection with ostereid herpesvirus*					
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	***	***	***		
2. White spot disease (WSD)	0000	0000	+( )	II/III	
3. Yellowhead disease (YHD)	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	***	***	***		
5. Infectious myonecrosis (IMN)	0000	0000	0000		
6. White tail disease (MrNV)	0000	0000	0000		
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	0000	0000	0000		
9. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	0000	0000	0000		
2. Infection with *Batrachochytrium dendrobatidis*	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

* listed as Emerging Disease

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	
2	
3	

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

Country: CHINA P.R. **Period: April - June 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	+?( )	0000	II/III	
3. Spring viraemia of carp (SVC)	+?( )	+?( )	0000	II/III	
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with *Aphanomyces invadans* (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease (RSID)	0000	0000	0000		
7. Infection with Koi herpesvirus (KHV)	***	***	***		1
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 *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Infection with abalone herpesvirus	0000	0000	0000		
4. Infection with *Xenohaliotis californiensis*	0000	0000	0000		
5. Infection with ostereid herpesvirus*					
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	***	***	***		
2. White spot disease (WSD)	+( )	+( )	+( )	II/III	
3. Yellowhead disease (YHD)	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	***	***	***		
5. Infectious myonecrosis (IMN)	0000	0000	0000		
6. White tail disease (MrNV)	0000	0000	0000		
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	0000	0000	0000		
9. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	0000	0000	0000		
2. Infection with *Batrachochytrium dendrobatidis*	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

* listed as Emerging Disease

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	
2	
3	

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

Country: HONG KONG SAR, CHINA Period: April - June 2014

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	II	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp (SVC)	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000	III	
5. Infection with *Aphanomyces invadans* (EUS)	0000	0000	0000	III	
6. Red seabream iridoviral disease (RSID)	-	-	-	III	
7. Infection with Koi herpesvirus (KHV)	+	-	-	III	1,2
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 *Bonamia exitiosa*	0000	0000	0000	II	
2. Infection with *Perkinsus olseni*	0000	0000	0000	II	
3. Infection with abalone herpesvirus	0000	0000	0000	II	
4. Infection with *Xenohaliotis californiensis*	0000	0000	0000	II	
5. Infection with ostereid herpesvirus*	***	***	***		
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*	0000	0000	0000	II	
7. Acute viral necrosis (in scallops)	0000	0000	0000	II	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000	III	
2. White spot disease (WSD)	-	-	-	III	
3. Yellowhead disease (YHD)	0000	0000	0000	III	
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	0000	0000	0000	II	
5. Infectious myonecrosis (IMN)	0000	0000	0000	II	
6. White tail disease (MrNV)	0000	0000	0000	II	
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000	II	
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	0000	0000	0000	II	
9. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000	II	
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	0000	0000	0000	II	
2. Infection with *Batrachochytrium dendrobatidis*	0000	0000	0000	II	
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

* listed as Emerging Disease

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	Koi herpesvirus was detected from tissue samples of koi fish submitted from a public park.
2	Koi herpesvirus was detected from a group of koi fish submitted for health certification screening.
3	

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

Country: INDIA **Period: April - June 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with *Aphanomyces invadans* (EUS)	-	-	-		
6. Red seabream iridoviral disease (RSID)	0000	0000	0000		
7. Infection with Koi herpesvirus (KHV)	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	-	-	-		
10.Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	-	-	-		
3. Infection with abalone herpesvirus	0000	0000	0000		
4. Infection with *Xenohaliotis californiensis*	0000	0000	0000		
5. Infection with ostereid herpesvirus*	0000	0000	0000		
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000		3
2. White spot disease (WSD)	+( )	+( )	+( )	I,III	1
3. Yellowhead disease (YHD)	-	-	-	III	3
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	+( )	+( )	+( )	III	2
5. Infectious myonecrosis (IMN)	0000	0000	0000	III	3
6. White tail disease (MrNV)	-	-	-		
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	-	-	-		
9. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		4
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	0000	0000	0000		
2. Infection with *Batrachochytrium dendrobatidis*	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

* listed as Emerging Disease

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	**White spot disease (WSD):** 1. **Area affected:** reported from Thiruvarur, Nagapattinam, Pudukkottai and Thanjavur districts of Tamil Nadu, Krishna district f Andhra Pradesh, Kanur district of Kerala, and Balasore district of Odisha; 2. **Species affected:** *Litopenaeus vanammei* (15-50 DOC), *Penaeus monodon*; 3. **Clinical signs:** lethargic shrimps were seen, some were dead, floating on the surface of the pond; 4. **Pathogen**: White spot syndrome virus (WSSV); 5. **Mortality**: medium to high; 6. **Control measures**: farmers were advised to improve biosecurity of farms.
2	**Infectious hypodermal and hematopoietic necrosis (IHHN):** 1. **Area affected:** reported from Kanchipuran, Thiruvallur amd Thanjavur districts of Tamil Nadu, and Gudur and Krishna districts of Andra Pradesh; 2. **Species affected:** *Litopenaeus vanammei*; 3. **Clinical signs:** reduced feed consumption, slow growth, no mortality; 4. **Pathogen**: IHHNV; 5. **Mortality**: no mortality among shrimps which are IHHNV positive 6. **Economic loss**: nil 7. **Laboratory diagnosis**: PCR

3	**Taura Syndrome, Yellow Head Disease, Infectious Myonecrosis** TSV, YHV and IMNV were not detected in the samples of *L. vannamei* collected from shrimp farms in Nagapattinam, Thanjavur and Thiruvarur districts of Tamil Nadu, which were tested using PCR.
4	**Acute hepatopancreatic necrosis disease (AHPND)** AHPND was not detected in samples collected from the region of Nagapattinam, Thanjavur and Thiruvarur districts of Tamil Nadu.

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

The Prevention and Control of Infectious and Contagious Diseases in Animals Act 2009 has been suitably amended to cover aquatic animal diseases vide the Government of India Notifications No. S.O. 995(E) and No. S.O. 996(E) dated 1 April 2014.

Country: INDONESIA **Period: April - June 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with *Aphanomyces invadans* (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease (RSID)	***	***	+( )	II	1
7. Infection with Koi herpesvirus (KHV)	***	***	***		
Non OIE-listed diseases					
8. Grouper iridoviral disease	+( )	+( )	***	III	2
9. Viral encephalopathy and retinopathy	+( )	***	+( )	III	3
10.Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Infection with abalone herpesvirus	0000	0000	0000		
4. Infection with *Xenohaliotis californiensis*	0000	0000	0000		
5. Infection with ostereid herpesvirus*	0000	0000	0000		
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	***	+( )	+( )	III	4
3. Yellowhead disease (YHD)	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	***	***	***		
5. Infectious myonecrosis (IMN)	***	+( )	+( )	III	5
6. White tail disease (MrNV)	0000	0000	0000		
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	0000	0000	0000		
9. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	0000	0000	0000		
2. Infection with *Batrachochytrium dendrobatidis*	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

* listed as Emerging Disease

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	**RSID** 1. **Origin of the disease/pathogen:** Ambon (Maluku Province in June); 2. **Species affected:** *Cromileptes altivelis*; 7-10 cm and 600 g; 3. **Clinical signs:** weak fish, severe anemia in internal organs; 4. **Pathogen:** Iridovirus; 5. **Mortality rate:** <30%; 6. **Economic loss:** Rp 1 million; 7. **Names of infected areas:** West Seram District; 8. **Preventive/control measures:** Vitamin C supplementation, reduced feeding, reduced stocking density; 9. **Laboratory confirmation:** Mariculture Development Center Ambon Laboratory. 10. **Publications :** not published.
2	**GIV** 1. **Origin of the disease/pathogen:** Ambon (Maluku Province in April), Bali Province and Central Lombok (West Nusatenggara Province in June); 2. **Species affected:** *Chromileptes altivelis*; 3. **Clinical signs:** bleeding gills, enlarged spleen (Maluku Province), sporadic protrusion on the head (West Nusatenggara); 4. **Pathogen:** Iridovirus; 5. **Mortality rate:** 30-60% (West Nusatenggara); 6. **Economic loss:** Rp 1 million (Maluku Province), Rp 6.5 million (West Nusatenggara); 7. **Names of infected areas:** floating net cages (Saparua-Maluku Province), East Lombok (West Nusatenggara Province); 8. **Preventive/control measures:** Vitamin C supplementation, Imunovit, water quality control; 9. **Laboratory confirmation:** Mariculture Development Center Ambon Laboratory; 10. **Publications:** not published.

3	**VER** 1. **Origin of the disease/pathogen:** Nursery (Maluku Province in April), hatchery (Marine Culture Development Center Lombok; West Nusatenggara Province in April), Yogyakarta Province in June; 2. **Species affected:** *Chromileptes altivelis* (Maluku Province), *Lates calcarifer* (West Nusatenggara Province), *Epinephelus fuscoguttatus* juveniles (Yogyakarta Province); 3. **Clinical signs:** dark body coloration, weak swimming (Maluku Province), lethargy, sporadic protrusion of head above the water (West Nusatenggara province), weak swimming, vacuoloation of the central nervous tissue and nuclear layer of the retina (Yogyakarta Province); 4. **Pathogen:** VNN; 5. **Mortality rate:** <30% (Maluku Province), 30-50% (West Nusatenggara Province), 50-70% (Yogyakarta Province); 6. **Economic loss:** Rp 5million (Maluku Province); 7. **Names of infected areas:** Nursery (Mariculture Development Center Maluku Province), Sekotong Sub-district, West Lombok (West Nusatenggara Province), Yogyakarta province; 8. **Preventive/control measures:** Vitamin C and inroflox (Maluku Province), Vitamin C, immunostimulant, and application of formalin in the water (Yogyakarta Province); 9. **Laboratory confirmation:** Mariculture Development Center Ambon Laboratory, Main Center Brackishwater Aquaculture Development Jepara Laboratory, Mariculture Development Center Lombok Laboratory; 10. **Publications:** not published.
4	**WSD** 1. **Origin of the disease/pathogen:** Jepara, Pati, Kendal (Central Java Province in June), Cipucuk Karawang (West Java Province in May and June); 2. **Species affected:** *Litopenaeus vannamei, Penaeus monodon* (Central Java Province), *L. vannamei* (West Java Province) 3. **Clinical signs:** white spots on carapace, weak shrimps, shrimps swimming on the water surface (Central Java province), reddish body discoloration, reduced feed consumption (West Java Province) 4. **Pathogen:** WSSV 5. **Mortality rate:** 80-100% (Central Java Province), >40% (West Java Province); 6. **Economic loss:** Rp7.5 million (Central Java Province); 7. **Names of infected areas:** Jepara, Pati, Kendal (Central Java Province), Karawang (West Java Province); 8. **Preventive/control measures:** Biosecurity, Vitamin C supplementation, immunostimulants, biofloc, probiotics, grinting grass (Cynodon dactylon) extracts (Central Java Province), early harvest, pond disinfection (West Java Province); 9. **Laboratory confirmation:** Brackishwater Aquaculture Development Jepara Laboratory, Aquaculture Business Development Center Karawang Laboratory; 10. **Publications:** not published.

5	**IMN** 1. **Origin of the disease/pathogen:** Pati, Kendal (Central Java Province); 2. **Species affected:** *Litopenaeus vannamei* 3. **Clinical signs:** shrimps in the acute phase of IMN disease will present focal to extensive white necrotic areas in striated (skeletal) muscles, especially in the distal abdominal segments and tail, which can become necrotic and reddened in some shrimps; 4. **Pathogen:** IMNV 5. **Mortality rate:** 60%; 6. **Economic loss:** - 7. **Names of infected areas:** Pati, Kendal (Central Java Province); 8. **Preventive/control measures:** Biosecurity, vitamin C, probiotics, biofloc; 9. **Laboratory confirmation:** Main Center Brackishwater Aquaculture Development Jepara Labortory; 10. **Publications:** not published.

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

Country: I.R. IRAN **Period: April - June 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	-	-	-		
3. Spring viraemia of carp (SVC)	-	-	-		
4. Viral haemorrhagic septicaemia (VHS)	+	-	-	III	1
5. Infection with *Aphanomyces invadans* (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease (RSID)	0000	0000	0000		
7. Infection with Koi herpesvirus (KHV)	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10.Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	***	***	***		
2. Infection with *Perkinsus olseni*	***	***	***		
3. Infection with abalone herpesvirus	***	***	***		
4. Infection with *Xenohaliotis californiensis*	***	***	***		
5. Infection with ostereid herpesvirus*					
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*	***	***	***		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	-	-	-		
3. Yellowhead disease (YHD)	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	0000	0000	0000		
5. Infectious myonecrosis (IMN)	***	***	***		
6. White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis (NHP)	***	***	***		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	***	***	***		
9. Acute hepatopancreatic necrosis disease (AHPND)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with *Batrachochytrium dendrobatidis*	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

* listed as Emerging Disease

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	**VHS** reported in two provinces, 1 fish farm in Hamadan and 1 in Esfahan:. 1. **Origin of the disease:** unknown, case is under investigation; 2. **Species affected** – *Onchorrhyncus mykiss* (Rainbow trout), 2-3 months old; 3. **Clinical signs** –pinpoint haemorrhages in fatty tissue, pale gills, swollen abdomen, exophthalmia, bleeding under the skin around the base of pectoral and pelvic fins; 4. **Pathogen** – VHSV; 5. **Mortality rate** – >70% (morbidity rate unknown), 6. **Economic loss** – 7. **Geographic extent** – Hamadan and Esfahan; 8. **Control measures** – emergency harvest, stamping out of juveniles, fallowing; 9. **Laboratory confirmation** – Real-time and nested PCR, ELISA, histopathology; confirmed by Centre of Veterinary Laboratory (CVL) and Mashhad PCR Lab; 10. **Publications** – None.

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

Country: JAPAN **Period: April - June 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	I	
2. Infectious haematopoietic necrosis	+	+	+	I,III	1
3. Spring viraemia of carp (SVC)	0000	0000	0000	I	
4. Viral haemorrhagic septicaemia (VHS)	+	+	+	III	2
5. Infection with *Aphanomyces invadans* (EUS)	-(2013)	+( )	-(2014)	II	3
6. Red seabream iridoviral disease (RSID)	-(2013)	+	+	III	4
7. Infection with Koi herpesvirus (KHV)	-(2013)	+	+	III	5
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000	I	
9. Viral encephalopathy and retinopathy	-(2014)	-(2014)	+?( )	III	6
10.Enteric septicaemia of catfish	- (2010)	-(2010)	-(2010)	I	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000	I	
2. Infection with *Perkinsus olseni*	- (2007)	-(2007)	-(2007)	I	
3. Infection with abalone herpesvirus	0000	0000	0000	I	
4. Infection with *Xenohaliotis californiensis*	-(2013)	-(2013)	+?	III	7
5. Infection with ostereid herpesvirus*	0000	0000	0000	I	
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*	-(2014)	-(2014)	-(2014)	I	
7. Acute viral necrosis (in scallops)	0000	0000	0000	I	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000	I	
2. White spot disease (WSD)	-(2013)	+?	-(2014)	III	8
3. Yellowhead disease (YHD)	0000	0000	0000	I	
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	0000	0000	0000	I	
5. Infectious myonecrosis (IMN)	0000	0000	0000	I	
6. White tail disease (MrNV)	0000	0000	0000	I	
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000	I	
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	0000	0000	0000	I	
9. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000	I	
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	-(2012)	-(2012)	-(2012)	I	
2. Infection with *Batrachochytrium dendrobatidis*	-(2009)	-(2009)	-(2009)	I	
ANY OTHER DISEASES OF IMPORTANCE					
1. Crayfish plague (*Aphanomyces astaci*)	0000	+?( )	-(2014)	III	9
2.					

* listed as Emerging Disease

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	**Infectious haematopoietic necrosis (IHN)** 1. **Reported in** 14 prefectures; 2. **Species affected** – Amago (*Onchorynchus rhodorus*), masou (*O. masou*), rainbow trout (*O. mykiss*), hybrid of rainbow trout and brown trout (*O. mykiss* x *O. trutta*), biwamasu (*O. masou rhodurus*); 3. **Disease characteristics** – mortality; lethargy; pale gills, liver and kidney (anemia); threadbare gills; darkening of the skin; exophthalmia; petechial haemorrhages internally and externally; ascites; distended abdomen; 4. **Pathogen** – Infectious haematopoietic necrosis virus; 5. **Mortality rate** – 0.3-100%; 6. **Economic loss** –; 7. **Geographic extent** – Honshu, Kyushu; 8. **Preventive/control measures** – disinfection of rearing water, equipment and tanks; use of virus-free juveniles; culling of infected fish; movement control; feed restriction; early harvest; 9. **Laboratory confirmation** – gross clinical observation, PCR and/or isolation of the virus by prefectural research laboratories; 10. **Publications** – None.

2	**Viral haemorrhagic septicaemia (VHS)** 1. **Reported in** 2 prefectures; 2. **Species affected** – Olive flounder (*Paralichthys olivaceus*); 3. **Disease characteristics** – mortality; abnormal swimming; haemorrhages in the gills; ascites; 4. **Pathogen** – Viral haemorrhagic septicaemia virus; 5. **Mortality rate** – 0.07-90%; 6. **Economic loss** –; 7. **Geographic extent** – Kyushu; 8. **Preventive/control measures** – culling of infected fish; improvement of rearing condition; 9. **Laboratory confirmation** – PCR by National Research Institute of Aquaculture or prefectural research laboratories; 10. **Publications** – None.
3	**Infection with *Aphanomyces invadans* (EUS)** 1. **Reported in** 1 prefecture; 2. **Species affected** – Ayu (*Plecoglossus altivelis*); 3. **Disease characteristics** – mortality; red spots on the body; 4. **Pathogen** – *Aphanomyces invadans*; 5. **Mortality rate** – 10 fish/day; 6. **Economic loss** –; 7. **Geographic extent** –Kyushu; 8. **Preventive/control measures** – removal of dead fish; 9. **Laboratory confirmation** – gross clinical observation and histopathology by prefectural research laboratory; 10. **Publications** – None.
4	**Red seabream iridoviral disease (RSIVD)** 1. **Reported in** 3 prefectures; 2. **Species affected** – Japanese amberjack (*Seriola quinqueradiata*), greater amberjack (*S. dumerili*), yellowtail amberjack (*S. lalandi*); 3. **Disease characteristics** – mortality; enlarged kidney and spleen; oale gills; petechiae on the gills; 4. **Pathogen** – Red seabream iridovirus; 5. **Mortality rate** – 0-0.6 %; 6. **Economic loss** –; 7. **Geographic extent** –Kyushu; 8. **Preventive/control measures** – removal of dead fish; 9. **Laboratory confirmation** – FAT, IFAT or PCR by prefectural research laboratories; 10. **Publications** – None.

5	**Infection with Koi herpesvirus (KHV)** 1. **Reported in** 7 prefectures; 2. **Species affected** – Koi carp (*Cyprinus carpio*); 3. **Disease characteristics** – mortality; pale gills; 4. **Pathogen** – Koi herpesvirus; 5. **Mortality rate** – 0-90 %; 6. **Economic loss** –; 7. **Geographic extent** –Honshu, Kyushu; 8. **Preventive/control measures** – prohibition of fish transfer from infected ponds; culling of infected groups of fish; disinfection of rearing water, equipment and ponds; suspension of the release of rearing water; 9. **Laboratory confirmation** – PCR by National Research Institute of Aquaculture and prefectural research laboratories; 10. **Publications** – website of Ministry of Agriculture, Forestry and Fisheries (MAFF) and prefectures.
6	**Viral encephalopathy and retinopathy** 1. **Reported in** 1 prefecture; 2. **Species affected** – kelp grouper (*Epinephelus moara*); 3. **Disease characteristics** – none; 4. **Pathogen** – Betanodavirus; 5. **Mortality rate** – 0%; 6. **Economic loss** –; 7. **Geographic extent** –Honshu; 8. **Preventive/control measures** – isolation of broodstock; disinfection of eggs from infected broodstock; 9. **Laboratory confirmation** –PCR by prefectural research laboratory; 10. **Publications** – None.
7	**Infection with *Xenohalitos californiensis*** 1. **Reported in** 1 prefecture; 2. **Species affected** – *Haliotis diversicolor diversicolor*; 3. **Disease characteristics** – none; 4. **Pathogen** – *Xenohaliotis californiensis*; 5. **Mortality rate** – 0%; 6. **Economic loss** –; 7. **Geographic extent** –Honshu; 8. **Preventive/control measures** – disinfection of infected broodstock (not for human consumption) with OTC (oxytetracycline); 9. **Laboratory confirmation** –PCR by prefectural research laboratory; sequencing by National Reserch Institute of Aquaculture; 10. **Publications** – None.

8	**White spot disease (WSD)** 1. **Reported in** 2 prefectures; 2. **Species affected** – Kuruma prawn (*Penaeus japonicus*); 3. **Disease characteristics** – none; 4. **Pathogen** – White spot syndrome virus; 5. **Mortality rate** – 0%; 6. **Economic loss** –; 7. **Geographic extent** –Honshu; 8. **Preventive/control measures** – culling of infected broodstock; disinfection of equipment and facilities; 9. **Laboratory confirmation** – LAMP and PCR by prefectural research laboratories; 10. **Publications** – None.
9	**Crayfish plague (*Aphanomyces astaci*) was first reported in Japan** 1. **Origin of the disease or pathogen:** Unknown; however, considering the situation, the pathogen might have existed in Japan for a long time with the Louisiana swamp crayfish (*Procambarus clarkii*) since the time when crayfish was introduced from the United States; 2. **Species affected** – Lousiana swamp crayfish (*Procambarus clarkii*); 3. **Disease characteristics** – no crayfish shwoin any clinical signs was found. It is considered that the population of *P. clarkii* harbours the pathogen without clinical disease, which is consistent with the OIE manual for crayfish plague; 4. **Pathogen** – *Aphanomyces astaci*; 5. **Mortality rate** – 0%; 6. **Economic loss** – none. Although there are few small farms of crayfish in Japan, there has not been any report of outbreak of the diseases until now. The cultured crayfish is not exported abroad and the pathogen is not considered to be a major threat; 7. **Geographic extent** –Hokkaido; 8. **Preventive/control measures** – not applicable; 9. **Laboratory confirmation** –30 specimens of *P. clarkii* were sampled from the creek and 4 specimens were positive for *A. astaci* by PCR protocol based on the OIE Manual. The test was done by the National Research Institute of Aquaculture; 10. **Publications** – None.

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

Country: MYANMAR **Period: April - June 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp (SVC)	***	***	***		
4. Viral haemorrhagic septicaemia (VHS)	***	***	***		
5. Infection with *Aphanomyces invadans* (EUS)	***	***	***		
6. Red seabream iridoviral disease (RSID)	***	***	***		
7. Infection with Koi herpesvirus (KHV)					
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 *Bonamia exitiosa*					
2. Infection with *Perkinsus olseni*					
3. Infection with abalone herpesvirus					
4. Infection with *Xenohaliotis californiensis*					
5. Infection with ostereid herpesvirus*					
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*					
7. Acute viral necrosis (in scallops)					
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	-	-	-	III	1
2. White spot disease (WSD)	-	-	-	III	
3. Yellowhead disease (YHD)	-	-	-	III	
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	-	-	-	III	
5. Infectious myonecrosis (IMN)	***	***	***		
6. White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis (NHP)	***	***	***		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	***	***	***		
9. Acute hepatopancreatic necrosis disease (AHPND)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus					
2. Infection with *Batrachochytrium dendrobatidis*					
ANY OTHER DISEASES OF IMPORTANCE					
1. Parasitic disease					2
2.					

* listed as Emerging Disease

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	During this period, we have received 6 samples of shrimps and crabs (4 frozen shrimps and soft-shelled crabs; and 2 live shrimps for export) for testing for TSV, WSSV and IHHNV. All samples were found negative for the viruses.
2	Visited some fish farms in Yangon and Bago regions during this period. Parasitic infestations (*Dactylogyrus* spp. and *Trichodina* spp.) were found in some farms due to poor water quality.
3	

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

Country: NEPAL **Period: April - June 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with *Aphanomyces invadans* (EUS)	-	-	-	I	
6. Red seabream iridoviral disease (RSID)	0000	0000	0000		
7. Infection with Koi herpesvirus (KHV)	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10.Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	***	***	***		
2. Infection with *Perkinsus olseni*	***	***	***		
3. Infection with abalone herpesvirus	***	***	***		
4. Infection with *Xenohaliotis californiensis*	***	***	***		
5. Infection with ostereid herpesvirus*					
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*	***	***	***		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	***	***	***		
2. White spot disease (WSD)	***	***	***		
3. Yellowhead disease (YHD)	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	***	***	***		
5. Infectious myonecrosis (IMN)	***	***	***		
6. White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis (NHP)	***	***	***		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	***	***	***		
9. Acute hepatopancreatic necrosis disease (AHPND)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with *Batrachochytrium dendrobatidis*	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

* listed as Emerging Disease

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	
2	
3	

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

Country: PHILIPPINES Period: April - June 2014

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with *Aphanomyces invadans* (EUS)	-(2002)	-(2002)	-(2002)	I	1
6. Red seabream iridoviral disease (RSID)	****	****	****		
7. Infection with Koi herpesvirus (KHV)	0000	0000	0000	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	-(2008)	-(2008)	-(2008)	III	2
9. Viral encephalopathy and retinopathy	+	+	+	III	3
10.Enteric septicaemia of catfish	****	****	****		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Infection with abalone herpesvirus	****	****	****		
4. Infection with *Xenohaliotis californiensis*	****	****	****		
5. Infection with ostereid herpesvirus*					
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
7. Acute viral necrosis (in scallops)	****	****	****		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000	III	4
2. White spot disease (WSD)	+	+	+	III	5
3. Yellowhead disease (YHD)	-(1999)	-(1999)	-(1999)	III	6
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	+	+	+	III	7
5. Infectious myonecrosis (IMN)	0000	0000	0000	III	8
6. White tail disease (MrNV)	0000	0000	0000	III	
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000	III	
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	****	****	****		
9. Acute hepatopancreatic necrosis disease (AHPND)	?	?	?	II	
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	****	****	****		
2. Infection with *Batrachochytrium dendrobatidis*	****	****	****		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

* listed as Emerging Disease

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	One hundred fifty (150) samples of *Anguilla spp.* were negative for Infection with *Aphanomyces invadans* (EUS) by gross morphological examination. Samples were from Pila, Laguna. Examination was conducted by the Bureau of Fisheries and Aquatic Resources (BFAR) Central Office Fish Health Laboratory.
2	Two (2) samples of grouper (*Epinephelus spp.*) were analyzed using PCR test. All samples showed negative results for Grouper Iridovirus. Samples were collected from Matnog, Sorsogon. Examination was conducted by BFAR Central Office Laboratory.
3	Twenty nine (29) samples (8 *Epinephelus spp,* 5 *L.calcarifer,* 5 *T.blochii,* 3 *L.argentimaculatus,* 4 *E.coioides* and 4 *S.guttatus*) were analyzed using PCR test. Twelve (1 *L.calcarifer,* 2 *T.blochii,* 2 *L.argentimaculatus,* 3 *E.coioides* and 4 *S.guttatus)* showed positive results for Viral Encephalopathy and Retinopathy. The positive samples were collected from Sarangani Province and Iloilo. Examination was conducted by BFAR Central Office and SEAFDEC/AQD Laboratories.
4	Forty eight (48) samples-(47 *P.*vannamei and 1 *P.monodon*) of different stages (broodstock, adult, fry and juvenile) were analyzed using PCR test. All samples showed negative results for Taura Syndrome. The samples were collected from Negros Occidental, Bohol and Cebu. Examination was conducted by SEAFDEC/AQD Laboratory.

5	Three hundred fourteen (314) samples of *P.vannamei, P.monodon P.indicus, S.serrata, M.rosenbergii,* wild shrimp and crabs, of different stages (fry, juvenile, adult and brood stock) were tested using PCR. Fifty seven (18 *P.*vannamei, 36 *P.monodon*, 2 *M.rosenbergii* and 1 wild shrimp) were positive for White Spot Syndrome Virus. The positive samples were from Davao del Sur, Sorsogon, Negros Occidental, Negros Oriental, Sarangani, Tacloban City, Rizal, Iloilo, Aklan, Masbate, Cebu, Misamis Occidental, Bataan and Zamboanga. Examinations were conducted by BFAR Central Office SEAFDEC/AQD Laboratories.
6	Two (2) samples (1 *P.vannamei* and 1 *P.monodon*) in juvenile stage were analyzed using PCR test. All samples showed negative results for Yellowhead Disease. The samples were collected from Bohol and Cebu. Examination was conducted by SEAFDEC/AQD Laboratory.
7	One hundred thirty one (131) samples of *P.vannamei, P.monodon, P. indicus* and *M.rosenbergii* of different stages (broodstock, adult, fry and juvenile) were analyzed using PCR test. Twenty seven (14 *P.vannamei,* 11 *P.monodon* and 2 *M.rosenbergii*) samples showed positive results for Infectious hypodermal and haematopoietic necrosis (IHHN). The samples were collected from Sorsgon, Misamis Oriental, Rizal, Iloilo, Aklan, Argao, Cebu, Lanao del Norte, Batangas, Pangasinan and Zamboanga City. Examination was conducted by BFAR Central Office and SEAFDEC/AQD Laboratories.
8	Forty eight (48) samples (47 *P.*vannamei and 1 *P.monodon*) of different stages (post larvae and juvenile) were analyzed using PCR test. All samples showed negative results for Infectious myonecrosis (IMNV). The samples were collected from Bohol and Cebu and Negros Occidental. Examination was conducted by SEAFDEC/AQD Laboratory.

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

Country: SINGAPORE **Period: April - June 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with *Aphanomyces invadans* (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease (RSID)	(2014)	(2014)	(2014)	III	
7. Infection with Koi herpesvirus (KHV)	(2012)	(2012)	(2012)	III	1
Non OIE-listed diseases					
8. Grouper iridoviral disease	(2014)	(2014)	(2014)	III	2
9. Viral encephalopathy and retinopathy	+	+	(2014)	III	3
10.Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	***	***	***		
2. Infection with *Perkinsus olseni*	***	***	***		
3. Infection with abalone herpesvirus	***	***	***		
4. Infection with *Xenohaliotis californiensis*	***	***	***		
5. Infection with ostereid herpesvirus*					
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*	***	***	***		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	(2013)	(2013)	(2013)	III	4
3. Yellowhead disease (YHD)	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	0000	0000	0000		
5. Infectious myonecrosis (IMN)	0000	0000	0000		
6. White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	***	***	***		
9. Acute hepatopancreatic necrosis disease (AHPND)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with *Batrachochytrium dendrobatidis*	+	(2014)	(2014)	III	5
ANY OTHER DISEASES OF IMPORTANCE					
1. Infectious spleen and kidney necrosis virus (ISKNV) (marine and ornamental fish)	+	+	+	III	2
2. *Aeromonas salmonicida* (in goldfish)	0000	0000	0000	III	6

* listed as Emerging Disease

DISEASES PRESUMED EXOTIC TO THE REGION[b] **LISTED BY THE OIE** **Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*. **Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*. **Crustaceans:** Crayfish plague (*Aphanomyces astaci*). **NOT LISTED BY THE OIE** **Finfish**: Channel catfish virus disease
a/ Please use the following symbols: + Disease reported or known to be present +? Serological evidence and/or isolation of causative agent but no clinical diseases ? Suspected by reporting officer but presence not confirmed +( ) Occurrence limited to certain zones +?( ) Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease ?( ) Presence of the disease suspected but not confirmed in a zone *** No information available 0000 Never reported - Not reported (but disease is known to occur) (year) Year of last occurrence
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	**Koi herpesvirus (KHV)** was not detected in 52 batches of ornamental koi his quarter by qPCR. Fish tested were from surveillance programs on imported and locally farmed ornamental fish.
2	**Infectious Spleen and Kidney Necrosis Virus (ISKNV)** was detected by qPCR and histopathology in a batch of diseased black grouper fingerlings from a floating netcage farm with pale gills and no other overt clinical signs. ISKNV was also detected in a batch of diseased mullet and pompano from 2 grow-out farms in March and June, and a batch of pompano fingerlings from a landbased farm in April. There was co-infection with VNNV in these pompano fingerlings, which had darkened bodies and abnormal swimming. Co-infection with *Streptococcus agalactiae* was observed in the pompano on the grow-out farm, which exhibited abnormal swimming behabiour and no other clinical signs.
3	**Viral nervous necrosis virus (VNNV)** was detected in diseased hybrid grouper and pompano from a landbased farm in April and May, respectively, via PCR and histopathology. Both batches of fish had abnormal swimming behavior (spiraling) and darkened bodies.
4	**White spot syndrome virus (WSSV)** was not detected by qPCR in 9 batches of ornamental crustaceans submitted from targeted surveillance program, 1 batch of crabs from a disease investigation, and in approximately 190 *L. vannamei* submitted from a local broodstock farm this quarter.

5	***Batrachochytrium dendrobatidis* (Bd)** was detected by qPCR in 1 out of 2 batches of imported bullfrogs, but not in 1 batch of locally farmed bullfrogs, from samples submitted in April as part of the validation process for the qPCR as reported in the previous quarter. There were no swab samples submitted for Bd qPCR in May and June.
6	***Aeromonas salmonicida*** was not detected this quarter in 3 batches of goldfish submitted under a targeted surveillance program for goldfish exported to Australia.

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

Country: SRI LANKA **Period: April - June 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp (SVC)	0000	0000	0000	III	1
4. Viral haemorrhagic septicaemia (VHS)	***	***	***		
5. Infection with *Aphanomyces invadans* (EUS)	***	***	***		
6. Red seabream iridoviral disease (RSID)	***	***	***		
7. Infection with Koi herpesvirus (KHV)	0000	0000	0000	III	2
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 *Bonamia exitiosa*	***	***	***		
2. Infection with *Perkinsus olseni*	***	***	***		
3. Infection with abalone herpesvirus	***	***	***		
4. Infection with *Xenohaliotis californiensis*	***	***	***		
5. Infection with ostereid herpesvirus*	***	***	***		
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*	***	***	***		
7. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	***	***	***		
2. White spot disease (WSD)	+( )	+( )	+( )	III	3
3. Yellowhead disease (YHD)	?( )	?( )	?( )	III	4
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	?( )	?( )	?( )	III	5
5. Infectious myonecrosis (IMN)	***	***	***		
6. White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis (NHP)	***	***	***		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	***	***	***		
9. Acute hepatopancreatic necrosis disease (AHPND)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with *Batrachochytrium dendrobatidis*	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Laem Singh virus (LSV)	?( )	?( )	?( )	III	6
2. Monodon Baculovirus (MBV)	?( )	?( )	?( )	III	7

* listed as Emerging Disease

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	A total of 54 (32 guppy, 10 Koi carp, 6 carp, and 2 goldfish) export and import samples from Western, North Western and Central provinces, were tested at Veterinary Research Institute (VRI) for SVC, and all the samples gave negative results.
2	Testing for KHV among export and import samples (6 carps, 20 Koi carp, 4 sword tail and 10 goldfish) have been carried out in VRI and Center for Aquatic Disease Diagnosis and Research (CADDAR); all samples were found negative. The samples were received from Western, North Western and Central provinces.
3	During this quarter, a total of 530 out of 998 samples of *P. monodon* gave positive results for WSSV by PCR. Testing has been carried out in the laboratories of NARA, NAQDA and CADDAR. Samples came from North Western province.
4	30 samples of *P. monodon* have been tested for YHV in the laboratory of NARA, and all samples gave negative results.
5	30 samples of *P. monodon* have been tested for IHHNV in the laboratory of NARA, and all samples gave negative results.
6	30 samples of *P. monodon* have been tested for LSV in the laboratory of NARA, and all samples gave negative results.

7	34 samples of *P. monodon* have been tested for MBV in the laboratory of NARA and NAQDA, and only one sample from the month of April gave positive result.

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

Country: VIETNAM **Period: April - June 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp (SVC)	0000	0000	0000		
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000		
5. Infection with *Aphanomyces invadans* (EUS)	-	-	-		
6. Red seabream iridoviral disease (RSID)	0000	0000	0000		
7. Infection with Koi herpesvirus (KHV)	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10.Enteric septicaemia of catfish	-	-	-		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	-	-	-		
3. Infection with abalone herpesvirus	0000	0000	0000		
4. Infection with *Xenohaliotis californiensis*	0000	0000	0000		
5. Infection with ostereid herpesvirus*					
Non OIE-listed diseases					
6. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
7. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	0000	0000	0000		
2. White spot disease (WSD)	+	+	+	I,III	1
3. Yellowhead disease (YHD)	+	+	+	I,III	2
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	0000	0000	0000		
5. Infectious myonecrosis (IMN)	0000	0000	0000		
6. White tail disease (MrNV)	-	-	-		
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	-	-	-		
9. Acute hepatopancreatic necrosis disease (AHPND)	+	+	+	I,II	3
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	0000	0000	0000		
2. Infection with *Batrachochytrium dendrobatidis*	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					

* listed as Emerging Disease

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	**White Spot Disease (WSD)** **Pathogen**: White spot syndrome virus (WSSV) **Species affected:** *Penaeus monodon* and *Litopenaeus vannamei* (10-85 DOC) **Name of affected area:** reported in 18 provinces (total area 7,279 ha) including Hai Phong, Quang Ninh, Nghe An, Ha Tinh, Quang Tri, Quang Binh, Quang Ngai, Thua Tien Hue, Phu Yen, Binh Dinh, Ho Chi Minh, Long An, Tien Gang, Ben Tre, Tra Vinh, Soc Trang, Bac Lieu and Ca Mau. **Mortality rate:** average to high, 100% in some cases within 10 d. **Clinical signs:** lethargic or moribund shrimps aggregated at pond surface and edges, slow to erratic swimming behavior, overall body color often reddish, minute to large (0.5-2.0 mm diameter) white inclusions embedded in the cuticle; **Control measures:** early harvest, strict isolation of infected ponds from movement, strengthened control of transportation, disinfection of infected ponds using Calcium hypochlorite (chlorine).
2	**Yellowhead Disease (YHD)** **Pathogen**: Yellowhead virus (YHV) **Species affected:** *Litopenaeus vannamei* **Name of affected area:** reported in Quang Tri, Thua Thien Hue and Bac Lieu provinces with 35.67 ha affected. **Mortality rate:** could reach 100% in 2-5 days after infection. **Clinical signs:** Affected shrimps showed sudden increase in feeding activity and abnormal growth, then loss of appetite; aggregated near the pond surface or at the edge of the ponds followed by mortalities. Body is discolored, cephalothorax/hepatopancreas swollen and turned to color yellow or brown. Tissues of most organs (gills, hepatopancreas, gut epidermis) were necrotic with degenerated cell nuclei. Shrimps were most sucsceptible at the age of 20-70 DOC (no infection in shrimps under 15 DOC). Fastest transmission of the disease was observed in shrimps at 20-30 DOC when mortality could reach 100% over 2-5 days of infection. **Control measures:** Disinfection and discharge of contaminated water; movement and transportation control,.

3	**Acute Hepatopancreatic Necrosis Diseae (AHPND)** **Pathogen**: *Vibrio parahaemolyticus* with Phage A3 **Species affected:** *Penaeus monodon* and *Litopenaeus vannamei* (10-45 DOC) **Name of affected area:** reported in 18 provinces and caused losses in total shrimp culture area of 2,125 ha. Affected provinces include Nam Dinh, Hai Phong, Quang Ninh, Nghe An, Ha Tinh, Quang Tri, Quang Binh, Phu Yen, Khanh Hoa, Ho Chi Minh, Dong Nai, Long An, Tien Giang, Ben Tre, Tra Vinh, Soc Trang, Bac Lieu and Ca Mau. **Mortality rate:** could reach 95% in intensive and semi-intensive farms; **Clinical signs:** shrimps become lethargic with soft, darkened shells, mottling of the carapace. Pathology appears to be limited to hepatopancreas. **Control measures:** strict isolation of infected ponds from movement and transport controls, disinfection of infected ponds using Calcium hypochlorite (chlorine).

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

List of Diseases in the Asia-Pacific
Quarterly Aquatic Animal Disease Report (Beginning 2014)

1. DISEASES PREVALENT IN THE REGION	
1.1 FINFISH DISEASES	
OIE-listed diseases	**Non OIE-listed diseases**
1. Epizootic haematopoietic necrosis	1.Grouper iridoviral disease
2. Infectious haematopoietic necrosis	2.Viral encephalopathy and retinopathy
3. Spring viraemia of carp (SVC)	3.Enteric septicaemia of catfish
4. Viral haemorrhagic septicaemia (VHS)	
5. Infection with *Aphanomyces invadans* (EUS)	
6. Red seabream iridoviral disease (RSID)	
7. Infection with koi herpesvirus (KHV)	
1.2 MOLLUSC DISEASES	
OIE-listed diseases	**Non OIE-listed diseases**
1. Infection with *Bonamia exitiosa*	1. Infection with *Marteilioides chungmuensis*
2. Infection with *Perkinsus olseni*	2. Acute viral necrosis (in scallops)
3. Infection with abalone herpesvirus	
4. Infection with *Xenohaliotis californiensis*	
5. Infection with ostereid herpesvirus*	
1.3 CRUSTACEAN DISEASES	
OIE-listed diseases	**Non OIE-listed diseases**
1. Taura syndrome (TS)	1. Monodon slow growth syndrome
2. White spot disease (WSD)	2. Acute hepatopancreatic necrosis disease (AHPND)
3. Yellowhead disease (YHD)	
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	
5. Infectious myonecrosis (IMN)	
6. White tail disease (MrNV)	
7. Necrotising hepatopancreatitis (NHP)	
1.4 AMPHIBIAN DISEASES	
OIE-listed diseases	**Non OIE-listed diseases**
1. Infection with Ranavirus	
2. Infection with *Bachtracochytrium dendrobatidis*	
2. DISEASES PRESUMED EXOTIC TO THE REGION	
2.1 Finfish	
OIE-listed diseases	**Non OIE-listed diseases**
1. Infection with HPRdeleted or HPR0 salmon anaemia virus	1. Channel catfish virus disease
2. Infection with salmon pancreas disease virus	
3. Infection with *Gyrodactylus salaris*	
2.2 Molluscs	
OIE-listed diseases	**Non OIE-listed diseases**
1. Infection with *Bonamia ostreae*	
2. Infection with *Marteilia refringens*	
3. Infection with *Perkinsus marinus*	
2.3 Crustaceans	
OIE-listed diseases	**Non OIE-listed diseases**
1. Crayfish plague (*Aphanomyces astaci*)	

*** Listed as Emerging Disease**

Recent Aquatic Animal Health Related Publications

OIE Aquatic Animal Health Code, 16th Edition, 2013. 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/international-standard-setting/aquatic-code/access-online/

OIE Manual of Diagnostic Tests for Aquatic Animals, 2014. 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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Instructions on how to fill in the
QUARTERLY AQUATIC ANIMAL DISEASE REPORT
(Revised during the Provisional Meeting of the AG[1], Bangkok, Thailand, November 7-9, 2001)

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

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

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

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

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

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

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

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

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

Please use the following symbols to fill in the forms.

A. Symbols used for negative occurrence are as follows:

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

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

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

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

B. Symbols used for positive occurrence are shown below.

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

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

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

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

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

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

[1] Regional Advisory Group on Aquatic Animal Health (AG)

C. Levels of Diagnosis

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

D. Subjects to be covered in the Epidemiological Comments

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

IMPORTANT

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

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

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Notes

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