2014/3

QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

July – September 2014

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Contents

Foreword

13th Meeting of the Asia Regional Advisory Group on Aquatic Animal Health

The 13th Meeting of the Asia Regional Advisory Group on Aquatic Animal Health (AG) was held at Kim Do Royal Saigon Hotel in Ho Chi Minh City, Vietnam on 22-23 November 2014. The 13th AG is composed of Dr. Jie Huang (World Organisation for Animal Health (OIE)), Dr. Rohana Subasinghe (Food and Agriculture Organization of the United Nations (FAO)), Dr. Ingo Ernst (Department of Agriculture, Australia), Dr. Hnin Thidar Myint (OIE Regional Representation for Asia and the Pacific, Tokyo, Japan), Drs. Timothy Flegel and Supranee Chinabut (Thailand), Dr. Temdoung Somsiri (Aquatic Animal Health Research Institute (AAHRI), Thailand), Dr. Kjersti Gravningen (PHARMAQ, Norway), Dr. Rolando Pakingking, Jr. (SEAFDEC Aquaculture Department, Philippines), and Dr. Eduardo Leaño (NACA; Technical Secretary of AG). Attending as co-opted members were Dr. Siow-Foong Chang (MSD Animal Health), Dr. Andy Shinn (Fish Vet Group-Asia) and Dr. Hirofumi Kugita (OIE-RRAP, Tokyo).

During the two-day meeting, current concerns and issues on aquatic animal health in the region were presented. Progress made since the previous AGM 12 for the NACA's Regional Aquatic Animal Health Programme was presented by Dr. Leaño, while the outcome of recommendations from OIE General Session and the Aquatic Animal Health Standards Commission was presented by Dr. Huang. Updates on aquatic animal health in the region including some emerging threats were presented by Dr. Flegel (Crustaceans), Dr. Gravningen (Finfishes) and Dr. Shinn (Molluscs and Amphibians). One of the important issues discussed was thecurrent emerging disease threats for shrimps including infection with *Enterocytozoon hepatopenaei* (EHP; microsporidian) and Covert mortality nodavirus (CMNV). It was suggested that these two diseases be included in the QAAD list but decided that a Disease Advisory be released instead. This will be done as an awareness programme activity and to gather data from other countries if these two diseases are present or not. Disease advisories will be prepared by NACA with assistance from Dr. Flegel (for EHP) and Dr. Huang (for CMNV).

Progress reports from other partner agencies were also presented and these include programmes and activities on aquatic animal health of FAO (Dr. Subasinghe), Australian Department of Agriculture (Dr. Ernst), SEAFDEC Aquaculture Department (Dr. Pakingking), the Aquatic Animal Health Research Institute, Thailand (Dr. Somsiri), and the OIE Regional Representation for Asia and the Pacific (Dr. Myint). Review and updates on disease reporting in Asia-Pacific were presented by Dr. Leaño, while updates on OIE list of diseases was presented by Dr. Huang. Special presentations were also made by Dr. Shinn on *Gyrodactylus* and digital scanning of histology slides, by Dr. Abdulah on aquatic animal health management programmes of Malaysia, and open discussion related to aquatic animal health issues during the implementation of the ASEAN Economic Community.

The AG, established in 2001 by the Governing Council of NACA, provides advice to NACA members in the Asia-Pacific region on aquatic animal health management. Recommendations of the AG provide guidance to governments in coordinating the implementation of aquatic animal health management strategies. The detailed report with recommendations will be circulated to Competent Authorities and National Coordinators/Aquatic Focal Points in Asia Pacific and made available at NACA website for free download.

Reports Received by the NACA Secretariat

Country: AUSTRALIA Period: July - September 2014

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
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)		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*	-(2014)	-(2014)	-(2014)		5
3. Infection with abalone herpesvirus	-(2011)	-(2011)	-(2011)		6
4. Infection with *Xenohaliotis californiensis*	0000	0000	0000		
5. Infection with ostereid herpesvirus*	-(2014)	-(2014)	-(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)	+		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** 1. **Reported in Queensland** in July; targeted surveillance; 2. **Species affected** – Moses perch (*Lutjanus russelli*), estuary cod (*Epinephelus coioides*); 3. **Clinical signs** – sub-clinical infection of Moses perch and estuary cod; 4. **Pathogen** – *Betanodavirus*; 5. **Mortality rate** – N/A; 6. **Economic loss** – N/A; 7. **Geographic extent** – N/A; 8. **Containment measures** – N/A; 9. **Laboratory confirmation** – real time PCR; 10. **Publications** – None. VER is known to have occurred previously in the Northern Territory (last reported 2013), Western Australia (last reported 2013), New South Wales (last reported 2010), South Australia (last reported 2010) and Tasmania (last reported 2000). Passive surveillance and never reported in Victoria. No information available in the Australian Capital Territory.

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*** was not reported this period despite passive surveillance in Queensland (last reported 2014), South Australia (last reported 2013) New South Wales (last reported 2005) and Western Australia (last reported 2003). Passive surveillance and never reported in the Northern Territory, 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** 1. **Reported in Queensland** in September; passive surveillance; 2. **Species affected** – wild caught *Penaeus monodon* adults imported from Northern Territory and held in biosecure facilities; 3. **Clinical signs** – pos-transport ill-health; 4. **Pathogen** – Infectious hypodermal and haematopoietic necrosis virus; 5. **Mortality rate** – nil; 6. **Economic loss** – nil; 7. **Geographic extent** – N/A; 8. **Containment measures** – N/A; 9. **Laboratory confirmation** – real time PCR; 10. **Publications** – None. Infectious hypodermal and haematopoietic necrosis virus is known to have occurred previously in Queensland (last reported 2014). 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 passive surveillance in Tasmania (last reported 2013), Victoria (last reported 2011) and Western Australia (last reported 2008). Suspected but not confirmed through passive surveillance in Queensland. No information available this period in the Australian Capital Territory, New South Wales, the Northern Territory, and South Australia.

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

i) 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).

ii) On 8 September 2014, the Department of Agriculture advised stakeholders that import requirements for freshwater ornamental finfish entering Australia will change. From 1 March 2015, importation for ornamental purposed of cichlids, poeciliids and fish belonging to the sub-familes Luciocephalinae and Macropodusinae of the family Osphronemidae (gouramis, betas and paradise fish) will require official health certification attesting to the fish either being sourced from a megalocytivirus-free compartment, zone or country, or being batch-tested negarive for megalocytivirus. Further information is available at http://www.agriculture.gov.au/ba/ira/current-animal/ornamental-finfish/quarantine-policy-freshwater-ornamental-finfish-approved-countries.

Country: HONG KONG SAR, CHINA Period: July - September 2014

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
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	
2	
3	

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

Country: INDIA **Period: July - September 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
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		
2. White spot disease (WSD)	+( )	+( )	+( )	I,III	1
3. Yellowhead disease (YHD)	-	-	-		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	+( )	+( )	-	III	2
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	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):** WSSV was detected in *Penaeus monodon* and *Litopenaeus vannamei* samples from limited areas of West Godowari and Krishna Districts of Andhra Pradesh; Uttar Kannada of Karnataka; Thane District of Maharashtra; Thoothukudi districts of Tamil Nadu; Navsari and Surat Districts of Gujarat; Bhadak District of Odisha and Ernakulum; and Thissur and Kannur Districts of Kerala, during different months under the reporting period on the basis of level III diagnosis.
2	**Infectious hypodermal and hematopoietic necrosis (IHHN):** IHHNV was detected in *P. monodon* and *L. vannamei* from Kachipuram and Nagapattinam Districts of Tamil Nadu and Kannur District of Kerala on the basis of level III diagnosis.
3	

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: July - September 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
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)	+( )	+( )	***	III	2
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	+( )	+( )	III	3
9. Viral encephalopathy and retinopathy	+( )	+( )	+( )	II, III	4
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)	+( )	***	***	III	5
2. White spot disease (WSD)	+( )	+( )	+( )	III	6
3. Yellowhead disease (YHD)	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	***	***	***		
5. Infectious myonecrosis (IMN)	+( )	+( )	+( )	III	7
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:** Batam, Riau Island in July; 2. **Species affected:** (1) *Trachinotus blochii,* (2) *Epinephelus fuscoguttatus,* (3) *Lutjanus argentimaculatus,* (4) *Lates calcarifer*; 3. **Clinical signs:** 1) *Trachinotus blochii*: sluggish swimming, darker body color; (2) *Epinephelus fuscoguttatus*: no clinical signs; (3) *Lutjanus argentimaculatus*: sluggish swimming, loss of appetite (4) *Lates calcarifer*: sluggish swimming, darker body color, loss of appetite. 4. **Pathogen:** Iridovirus; 5. **Mortality rate:** <30%; 1) *Trachinotus blochii*: no mortality (2) *Epinephelus fuscoguttatus*: no information (3) *Lutjanus argentimaculatus*: 10 fish died (4) *Lates calcarifer*: 15 fish died. 6. **Economic loss:** 7. **Names of infected areas:** Batam, Riau Island Province; 8. **Preventive/control measures:** Vitamin C supplementation in feeds, water quality management; 9. **Laboratory confirmation:** Mariculture Development Center Batam Laboratory. 10. **Publications :** not published.

2	**KHV** 1. **Origin of the disease/pathogen:** (1) Sukabumi (in July) and (2) Sukamandi (in August), West Java Porvince; (3) Hulu Sungai Tengah District (in July), South Kalimantan. 2. **Species affected:** *Cyprinus carpio*; 3. **Clinical signs:** (1) Sukabumi: haemorrhage, lesions and gill necrosis; (2) Sukamandi: daily fish mortality; (3) Hulu Sungai Tengah: -; 4. **Pathogen:** KHV; 5. **Mortality rate:** 30-70% (Sukabumi); <30% (Sukamandi); <50% (Hulu Sungai Tengah); 6. **Economic loss:** (1) Sukabumi: Rp 6.7 million in July; (2) Sukamandi: -; (3) Hulu Sungai Tengah: >Rp 1 million; 7. **Names of infected areas:** Sukabumi, Sukamandi and Hulu Sungai Tengah Districts; 8. **Preventive/control measures:** Vitamin C supplementation, biosecurity; 9. **Laboratory confirmation:** Main Center Freshwater Aquaculture Development Sukabumi Laboratory, Freshwater Aquaculture Development Center Mandiangin Laboratory, Ceter of Fish Disease and Environment Investigation Serang-Banten Laboratory; 10. **Publications:** not published.
3	**GIV** 1. Origin of the disease/pathogen: (1) Hatchery in Lombok (West Nusa Tenggara Provice) in August; (2) Floating net cage in Batam (Riau Island Province) in September; (3) Teluk Harun (Lampung Province) in September; 2. **Species affected:** (1) Lombok: *Chromileptes altivelis*; (2) Batam: *Trachinotus blochii*, 2 in size; (3) Teluk Harun: *Lutjanus argentimaculatus, Lates calcarifer, Cromileptes altivelis, Epinephelus fuscoguttatus*; 3. **Clinical signs:** (1) Lombok: swimming on water surface, mortality, pale body color; (2) Batam: abnormal body color (partly blackish), loss of appetite, sluggish swimming, isolation of affected fish; (3) Teluk Harun: anatomical changes at macro- and microscopic pathology; 4. **Pathogen:** Iridovirus; 5. **Mortality rate:** (1) Lombok: <30%; (2) Batam: 30-70%; (3) Teluk Harun: 30-70%; 6. **Economic loss:** (1) Lombok: -; (2) Batam: Rp6 million; (3) Teluk Harun: unknown; 7. **Names of infected areas:** Sekotong West Lombok, West Nusa Tenggara Province, Tanjung Banon Kota Batam, Teluk Harun; 8. **Preventive/control measures:** Vitamin C supplementation, water quality and feed management strategies; 9. **Laboratory confirmation:** Mariculture Development Center Lombok Laboratory, Mariculture Development Center Batam Laboratory, Main Center of Mariculture Development Lampung. 10. **Publications:** not published.

4	**VER** 1. **Origin of the disease/pathogen:** (1) Sekotong (West Nusa Tenggara Province) in July; Batam (Riau Island Province) in August and September; Bali Provice in September; 2. **Species affected:** (1) Sekotong: *Lates calcarifer*; Batam: *Trachinotus blochii* (5 cm; August) and *Epinephelus fuscoguttatus* (7 cm; September); (3) Bali: seed of *T. blochii*; 3. **Clinical signs:** (1) Sekotong: pale body color, swimming near the water surface, hyperactivity, high mortality; Batam: no clinical sign, dark body color, loss of appetite; (3) Bali: circular swimming, very high mortality; 4. **Pathogen:** Viral encephalopathy and retinopathy nodavirus; 5. **Mortality rate:** (1) Sekotong: 50% in one month; Batam: *Trachinotus blochii* (<30% in August) and *Epinephelus fuscoguttatus* (30-70% in September); 6. **Economic loss:** Batam: Rp 80 million in August and Rp 4.8 million in September; 7. **Names of infected areas:** West Lombok Regency (West Nusa Tenggara Province), Batam (Riau Island Province); 8. **Preventive/control measures:** (1) Sekotong: Vitamin C supplementation in feeds, water quality control; Batam: eradication of fish seed, Vitamin C supplementation in feeds, water quality management; (3) Bali: water quality management; 9. **Laboratory confirmation:** Mariculture Development Center Batam Laboratory, Mariculture Development Center Lombok Laboratory, Aquaculture Business Development Center Laboratory Karawang; 10. **Publications:** not published.
5	**TS** 1. **Origin of the disease/pathogen:** Rembang (Central Java Province) in July; 2. **Species affected:** *Litopenaeus vannamei* 3. **Clinical signs:** red body color, mass mortality, empty digestive tract 4. **Pathogen:** TSV 5. **Mortality rate:** 85%; 6. **Economic loss:** Rp7.5 million (Central Java Province); 7. **Names of infected areas:** Rembang (Central Java Province); 8. **Preventive/control measures:** water quality management: use of probiotic, biofloc; sanitation: equipment and workers; use of immunostimulants; 9. **Laboratory confirmation:** Main Brackishwater Aquaculture Development Jepara Laboratory; 10. **Publications:** not published.

6	**WSD** 1. **Origin of the disease/pathogen:** (1) Ace Besar (Aceh Province) in July; (2) Padang Cermin (Lampung Province) in July; (3) Tanggamus (Lampung province) in September; (4) Pekalongan (Central Java) in July; (5) Brackishwater pond in West Lombok (West Nusa Tenggara Province) in July; (6) Cipucuk Karawang (West Java Province) in August and September; (7) Ciamis (West Java Province) in September; 2. **Species affected:** *P. monodon* (Aceh) and *L. vannamei*; 3. **Clinical signs:** (1) Ace Besar: shrimp swimming at the edge of the pond, red body color; (2) Padang Cermin: - ; (3) Tanggamus: no specific sign; (4) Pekalongan: acute infection, white spot on carapace, swimming on the water surface, high mortality (up to 100% in 3-10 days); (5) West Nusa Tenggara Province: sudden reduction in feeding, lethargic shrimps red discoloration, white spot (0.5-2 mm) under the cuticle; (6) Cipucuk Karawang: red body coloration, swimming on pond side; (7) Ciamis: -; 4. **Pathogen:** White spot baculovirus complex; WSSV; 5. **Mortality rate:** (1) Ace Besar: 85%; (2) Padang Cermin: <30%; (3) Tanggamus: unknown; (4) Pekalongan: 85%; (5) Lombok: 30%; (6) Cipucuk Karawang: 1% (August), 10% (September); (7) Ciamis: 30-60%; 6. **Economic loss:** (1) around Rp 2 million; (2) Padang Cermin: -; (3) Tanggamus: -; (4) Pekalongan: -; (5) Lombok: -; (6) Cipucuk Karawang: Rp 3 million (August), Rp 1.5 million (September); (7) Ciamis: -; 7. **Names of infected areas:** (1) Aceh Besar Province: Lhoknga; (2) Lampung Province: Tanggamus and Padang Cermin; (3) Pekalongan, Central Java: Rembang; (4) West Nusa Tenggara: West Lombok; (5) West Java Province: Cipucuk Karawang and Ciamis; 8. **Preventive/control measures:** Water quality management, sanitation of equipment and workers in the production process, biosecurity using virus-free stocks, stress and contamination reduction, Vitamin C supplementation, early harvest, pond disinfection after harvest; 9. **Laboratory confirmation:** Mariculture Development Center Ujung Batee Laboratory,Main Center of Mariculture Development Lampung, Disease and Environment Investigation Banten Laboraotry, Main Center Brackishwater Aquaculture Development Jepara Laboratory, Mariculture Development Center Lombok Laboratory, Aquaculture Business Development Center Karawang Laboratory; 10. **Publications:** not published.
7	**IMN** 1. **Origin of the disease/pathogen:** (1) Padang Cermin (Lampung Province) in July; (2) Pati and Rembang (Central Java Province) in July; (3) Serang (West Java Province) in August; (4) Jepara (Central Java Province) in August; (5) Pati and Kendal (Central Java) in September; (6) Ciamis and Pandeglang (West Java) in September; 2. **Species affected:** *Litopenaeus vannamei* 3. **Clinical signs:** necrosis, white necrotic areas in striated (skeletal) muscles, especially in abdominal segment, loss of appetite, increased mortality rate;; 4. **Pathogen:** IMNV 5. **Mortality rate:** (1) Padang Cermin: <30%; (2) Pati: 60%; (3) Rembang: 85% in July and August; (3) (4) Pati: 50% in September; (5) Jepara: 60%; (6) Serang, Ciamis and Pandeglang: <30%; 6. **Economic loss: -** 7. **Names of infected areas:** (1) Lampung Province: Padang Cermin; (2) Central Java Province: Pati, Rembang, Jepara and Kendal; (3) West Java Province: Cerang, Ciamis and Pandeglang; 8. **Preventive/control measures:** Biosecurity, stress reduction, vitamin C, probiotics, sanitation on equipment and workers in the production process, biofloc; 9. **Laboratory confirmation:** Center of Fish Disease and Environment Investigation Banten Laboratory, Main Center Brackishwater Aquaculture Development Jepara Laboratory; 10. **Publications:** not published.

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

Country: I.R. IRAN **Period: July - September 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
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)	-	+	-	III	2
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 Chaharmahal Bakhtiari and 1 in West Azarbaijan:. 1. **Origin of the disease:** unknown, case is under investigation; 2. **Species affected** – *Onchorrhyncus mykiss* (Rainbow trout), 4-5 months old; 3. **Clinical signs** –pinpoint haemorrhages in visceral organs, pale gills, ascites, exophthalmia, bleeding under the skin around the base of pectoral and pelvic fins; 4. **Pathogen** – VHSV; 5. **Mortality rate** – around 20%, 6. **Economic loss** – 7. **Geographic extent** – Chaharmahal Bakhtiari and West Azarbaijan; 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.

	WSSV was detected through active surveillance in one farm in Goatr region (Chabahar City – Sistan and Balochestan Province) in August. 1. **Origin of the disease:** unknown, case is under study; 2. **Species affected** – *Litopenaeus vannamei*; 3. **Clinical signs** – sudded decrease in feeding, swimming near the edge of pond, reddish body, white spot on the cephalothorax, sudden death; 4. **Pathogen** – WSSV; 5. **Mortality rate** – undetermined; Morbidity: 51%, 6. **Economic loss** – 7. **Geographic extent** – Chabahar City; 8. **Control measures** – 9 affected ponds were disinfected wth 40 ppm calcium chloride; all other ponds were immediately harvested; 9. **Laboratory confirmation** – nested PCR, confirmed by National Shrimp Laboratory in Bushehr; 10. **Publications** – None.

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

Country: JAPAN **Period: July - September 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
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)	-(2014)	-(2014)	-(2014)	III	
5. Infection with *Aphanomyces invadans* (EUS)	+	+(2014)	-(2014)	II	2
6. Red seabream iridoviral disease (RSID)	+	+	+	II,III	3
7. Infection with Koi herpesvirus (KHV)	+	+	+	III	4
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000	I	
9. Viral encephalopathy and retinopathy	+	-(2014)	+	III	5
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*	-(2014)	+?	+?	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)	+?	+	+	III	7
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*)	-(2014)	-(2014)	-(2014)	I	
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** 12 prefectures; 2. **Species affected** – Amago (*Onchorynchus rhodorus*), masou (*O. masou*), rainbow trout (*O. mykiss*), iwana (*Salvelinus leucomaensis*); 3. **Disease characteristics** – mortality; lethargy; pale gills, liver and kidney (anemia); threadbare gills; darkening of the skin; exophthalmia; petechial haemorrhages internally and externally; ascites; 4. **Pathogen** – Infectious haematopoietic necrosis virus; 5. **Mortality rate** – 0.8-80%; 6. **Economic loss** –; 7. **Geographic extent** – Hokkaido, Honshu; 8. **Preventive/control measures** – disinfection of equipment and tanks; use of disinfected eggs; culling of infected eggs and 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	**Infection with *Aphanomyces invadans* (EUS)** 1. **Reported in** 1 prefecture; 2. **Species affected** – Ayu (*Plecoglossus altivelis*); 3. **Disease characteristics** – mortality; ulcers on the body; 4. **Pathogen** – *Aphanomyces invadans*; 5. **Mortality rate** – 14 kg/day; 6. **Economic loss** –; 7. **Geographic extent** –Honshu; 8. **Preventive/control measures** – removal of dead fish; 9. **Laboratory confirmation** –histopathology by prefectural research laboratory; 10. **Publications** – None.
3	**Red seabream iridoviral disease (RSIVD)** 1. **Reported in** 9 prefectures; 2. **Species affected** – Japanese amberjack (*Seriola quinqueradiata*), greater amberjack (*S. dumerili*), yellowtail amberjack (*S. lalandi*), red sea bream (*Pagrus major*), Japanese parrotfish (*Oplegnathus fasciatus*), Malabar grouper (*Epinephelus malabaricus*), chicken grunt (*Parapristipoma trilineatum*); 3. **Disease characteristics** – mortality; enlarged kidney and spleen; pale gills; petechiae on the gills; 4. **Pathogen** – Red seabream iridovirus; 5. **Mortality rate** – 0.2-15 %; 6. **Economic loss** –; 7. **Geographic extent** – Honshu, Shikoku and Kyushu; 8. **Preventive/control measures** – vaccine, feed restriction, removal of dead fish, prohibition of fish transfer from infected cages, culling of infected fish; 9. **Laboratory confirmation** – histopathology by prefectural research laboratory, IFAT or PCR by the fisheries cooperative and prefectural research laboratories; 10. **Publications** – None.
4	**Infection with Koi herpesvirus (KHV)** 1. **Reported in** 8 prefectures; 2. **Species affected** – Koi carp and common carp (*Cyprinus carpio*); 3. **Disease characteristics** – mortality; pale gills; exophthalmia; 4. **Pathogen** – Koi herpesvirus; 5. **Mortality rate** – 0-90 %; 6. **Economic loss** –; 7. **Geographic extent** –Honshu; 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.

5	**Viral encephalopathy and retinopathy** 1. **Reported in** 3 prefectures; 2. **Species affected** – kelp grouper (*Epinephelus moara*), Malabar grouper (*E. malabaricus*); 3. **Disease characteristics** – none; 4. **Pathogen** – Betanodavirus; 5. **Mortality rate** – 0.3-95%; 6. **Economic loss** –; 7. **Geographic extent** –Honshu, Kyushu; 8. **Preventive/control measures** – prohibition of fish transfer from infected tanks and cages, culling of infected fish; 9. **Laboratory confirmation** –PCR or RT-PCR by prefectural research laboratories; 10. **Publications** – None.
6	**Infection with *Xenohalitos californiensis*** 1. **Reported in** 2 prefectures; 2. **Species affected** – *Haliotis diversicolor diversicolor, H. gigantea*; 3. **Disease characteristics** – none; 4. **Pathogen** – *Xenohaliotis californiensis*; 5. **Mortality rate** – 0%; 6. **Economic loss** –; 7. **Geographic extent** –Honshu; 8. **Preventive/control measures** – culling of infected juveniles and broodstock, disinfection of infected broodstock with OTC; 9. **Laboratory confirmation** –PCR by prefectural research laboratories and National Research Institute of Aquaculture; 10. **Publications** – None.
7	**White spot disease (WSD)** 1. **Reported in** 4 prefectures; 2. **Species affected** – Kuruma prawn (*Penaeus japonicus*), greasy back shrimp (*Metapenaeus ensis*); 3. **Disease characteristics** – none; 4. **Pathogen** – White spot syndrome virus; 5. **Mortality rate** – 0.4-70%; 6. **Economic loss** –; 7. **Geographic extent** –Honshu, Kyushu; 8. **Preventive/control measures** – culling of infected eggs and broodstock; disinfection of equipment and facilities; 9. **Laboratory confirmation** –PCR by prefectural research laboratories; 10. **Publications** – None.

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

Country: MALDIVES **Period: July - September 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
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)	***/0000	***/0000	***/0000		
7. Infection with Koi herpesvirus (KHV)					
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*	***/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)	***/0000	***/0000	***/0000		
3. Yellowhead disease (YHD)	***/0000	***/0000	***/0000		
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	***/0000	***/0000	***/0000		
5. Infectious myonecrosis (IMN)	***/0000	***/0000	***/0000		
6. White tail disease (MrNV)	***/0000	***/0000	***/0000		
7. Necrotising hepatopancreatitis (NHP)	***/0000	***/0000	***/0000		
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. Parasitic disease					
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: MYANMAR **Period: July - September 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
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 11 samples of shrimps, (9 Frozen shrimp, soft shell crab and 2 Alive shrimp for export) for testing, WSSV, YHV and TSV and found that 9 samples are negative and 2 samples are positive for WSSV and YHV.
2	Visited some fish farms in Yangon and Bago regions during this period. Parasitic infestations (*Dactylogyrus* spp. and *Ergasilus* 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: July - September 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
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: July - September 2014

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
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	III	
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)	****	****	****	III	2
7. Infection with Koi herpesvirus (KHV)	0000	0000	0000	III	3
Non OIE-listed diseases					
8. Grouper iridoviral disease	-(2008)	-(2008)	-(2008)	III	
9. Viral encephalopathy and retinopathy	+	+	+	III	4
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*	0000	0000	0000		
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	5
2. White spot disease (WSD)	+	+	+	III	6
3. Yellowhead disease (YHD)	-(1999)	-(1999)	-(1999)	III	7
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	+	+	+	III	8
5. Infectious myonecrosis (IMN)	0000	0000	0000	III	9
6. White tail disease (MrNV)	0000	0000	0000	III	
7. Necrotising hepatopancreatitis (NHP)	0000	0000	0000	III	10
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	****	****	****		
9. Acute hepatopancreatic necrosis disease (AHPND)	? ( )	+ ( )	+ ( )	III	11
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	Eighty eight (88) samples of *Anguilla spp.* from Pila, Laguna were negative for EUS by gross morphological examination
2	Thirty one (31) samples (4 *L.argentimaculatus,* 2 *T.blochii,* 20 grouper and 5 blue cod) were analyzed using PCR test. All samples showed negative results for RSID. Samples were collected from Sorsogon, Sarangani Province and Palawan. Examination was conducted by BFAR Central Office and SEAFDEC/AQD Laboratories.
3	Four samples of common carp (*Cyprinus carpio*) collected from Agusan del Sur showed negative results for KHV. Examination conducted by BFAR Central Office Laboratory.
4	Thirty six (36) samples (1 *L.calcarifer,* 5 *L.argentimaculatus,*5 *T.blochii,* 20 grouper and 5 blue cod) were analyzed using PCR test. Six (1 grouper, 1 *L.argentimaculatus,* 3 *T.blochii,* 1 *L.calcarifer*) showed positive results for VER. The positive samples were collected from Palawan and Iloilo. Examination was conducted by BFAR Central Office and SEAFDEC/AQD Laboratories.
5	Seventy nine (79) samples-(55 *P.*vannamei, 18 *P.monodon,* 2 *S.serrata* and 4 shrimp) 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 Bohol, Zamboanga City, Cebu, Negros Occidental, Capiz and General Santos City. Examination was conducted by BFAR Central Office and SEAFDEC/AQD Laboratories.

6	A total of 648 samples of *P.vannamei, P.monodon, S.serrata* wild shrimp and crabs, of different stages (fry, juvenile, adult and brood stock) were tested using PCR. One hundred nine (30 *P.*vannamei, 66 *P.monodon*, 2 *S.serrata,* 6 hermit crab and 5 wild shrimp) were positive for WSD. The positive samples were from Zamboanga City, Bohol, Dapitan, Camarines Sur, Misamis Occidental, Davao del Sur, Bacolod City, Maguindanao, Leyte, Tacloban City, Pangasinan, Daguapan, Iloilo, Negros Occidental, Capiz and Batangas. Examinations were conducted by BFAR Central Office SEAFDEC/AQD and NPPC Laboratories.
7	Fifty six (56) samples (27 *P.vannamei*, 23 *P.monodon,* 2 *S.serrata* and 4 wild shrimp) in different stages were analyzed using PCR test. All samples showed negative results. The samples were collected from Zamboanga City, Bohol,Cebu, Iloilo, Capiz and General Santos City. Examination was conducted by BFAR Central Office and SEAFDEC/AQD Laboratories.
8	A total of 118 samples of *P.vannamei, P.monodon, S.serrata,* wild shrimp of different stages (broodstock, adult, fry and juvenile) from Zamboanga City, Iloilo and Dapitan were analyzed using PCR test. Fourteen (12 *P.monodon* and 2 wild shrimp) samples showed positive results. Examination was conducted by BFAR Central Office and SEAFDEC/AQD Laboratories.
9	A total of 76 samples (55 *P.vannamei*, 14 *P.monodon,* 1 *P.indicus,* 2 *S.serrata* and 4 shrimp) of different stages from Zamboanga City, Zamboanga Sibugay, Cebu, General Santos City, Negros Occidental, Iloilo and Bohol were analyzed using PCR test. All samples showed negative results... Examination was conducted by BFAR Central Office and SEAFDEC/AQD Laboratories.
10	Forty six (46) samples (23 *P.*vannamei, 19 *P.monodon* and 4 shrimp) of different stages were analyzed using PCR test. All samples showed negative results. The samples were collected from Zamboanga City, Zamboanga del Sur, Batangas, Pangasinan, Bohol, Zambales and Camarines Sur. Examination was conducted by BFAR Central Office and SEAFDEC/AQD Laboratory.
11	*P. vannamei* samples taken from grow-out pond in Bohol with clinical signs observed such as inappetence, rapid mortality, empty hepatopancreas and white feces showed positive results for AHPND in the PCR test conducted by BFAR VII Fish Health lab. The affected pond was disinfected after emergency harvest. Some *P. vannamei* and *P. monodon* samples collected in selected sites in the province of Bataan. Bulacan and Pampanga in Central Luzon were detected PCR positive for AHPND in the examination conducted by the Department of Biological Science, College of Science, University of Santo Tomas, Manila. Samples sent to other laboratory (Tokyo University of Marine Science and Technology, Japan) for confirmation also showed positive for AHPND. No samples were examined for histology.

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

Country: SINGAPORE Period: July - September 2014

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
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	1
7. Infection with Koi herpesvirus (KHV)	(2012)	(2012)	(2012)	III	2
Non OIE-listed diseases					
8. Grouper iridoviral disease	(2014)	(2014)	(2014)	III	
9. Viral encephalopathy and retinopathy	+	(2014)	(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*				III	5
ANY OTHER DISEASES OF IMPORTANCE					
1. Infectious spleen and kidney necrosis virus (ISKNV) (marine and ornamental fish)	(2014)	(2014)	(2014)	III	1
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	?( )	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	**Red seabream iridovirus (RSIV) and Infectious Spleen and Kidney Necrosis Virus (ISKNV)** was not detected in 17 batches of diseased marine food fish this quarter by PCR. Megalocytovirus inclusion bodies were not seen on histopathological examination of organs from these fish. There were no ornamental fish submitted for disease investigation this quarter.
2	**Koi herpesvirus (KHV)** was not detected in 38 batches of ornamental koi his quarter by qPCR. Fish tested were from surveillance programs on imported and locally farmed ornamental fish. There has been no detection of KHV in all consignments of imported koi and locally farmed koi since September 2012.
3	**Viral nervous necrosis virus (VNNV)** was detected in a batch of imported coral grouper from a landbased farm 6 days post-arrival via PCR and histopathology. The fish were clinically healthy and no significant abnormalities were observed on post-mortem examination of the fish. The virus was not detected in 22 batches of diseased marine food fish this quarter.
4	**White spot syndrome virus (WSSV)** was not detected by qPCR in 14 batches of ornamental crustaceans (shrimps and crayfish) submitted from targeted surveillance program, and in approximately 320 *L. vannamei* submitted from a local broodstock farm this quarter.
5	***Batrachochytrium dendrobatidis* (Bd)** was not detected by qPCR in all 3 batches of imported ornamental frogs and 1 batch of local food frogs from landbased farm this quarter.

6	***Aeromonas salmonicida*** was not detected this quarter in 15 batches of goldfish submitted under a targeted surveillance program to meet Australia's export requirements. As A. salmonicida has not been detected in 149 batches of goldfish since surveillance for this pathogen started in 2010, sampling numbers for this pathogen will be reduced from 60 to 30 goldfish per batch at an assumed prevalence of 10%, as of December 2014.

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

Country: THAILAND 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	III	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp (SVC)	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000	III	
5. Infection with *Aphanomyces invadans* (EUS)	(2009)	(2009)	(2009)	II	
6. Red seabream iridoviral disease (RSID)	0000	0000	0000	III	
7. Infection with Koi herpesvirus (KHV)	(2011)	(2011)	(2011)	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
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		
2. Infection with *Perkinsus olseni*	0000	0000	0000	III	
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)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	-	-	-	III	
2. White spot disease (WSD)	-	+()	-	III	1
3. Yellowhead disease (YHD)	-	+()	-	III	2
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	+()	+()	-	III	3
5. Infectious myonecrosis (IMN)	0000	0000	0000	III	
6. White tail disease (MrNV)	-	-	-	III	
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	(2011)	(2011)	(2011)	III	
2. Infection with *Batrachochytrium dendrobatidis*	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					

* 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 623 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 5 specimens or 0.8 % recorded as PCR positive or carrying WSSV genes. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection.
2	A total of 678 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 9 specimens or 1.33 % recorded as RT-PCR positive or carrying YHV genes. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection.
3	A total of 819 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 6 specimens or 0.73 % recorded as PCR positive or carrying IHHNV genes. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection.

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

Country: THAILAND **Period: July - September 2014**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	III	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp (SVC)	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia (VHS)	0000	0000	0000	III	
5. Infection with *Aphanomyces invadans* (EUS)	(2009)	(2009)	(2009)	II	
6. Red seabream iridoviral disease (RSID)	0000	0000	0000	III	
7. Infection with Koi herpesvirus (KHV)	(2011)	(2011)	(2011)	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
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		
2. Infection with *Perkinsus olseni*	0000	0000	0000	III	
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)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome (TS)	-	-	-	III	
2. White spot disease (WSD)	-	-	-	III	
3. Yellowhead disease (YHD)	-	-	-	III	
4. Infectious hypodermal and haematopoietic necrosis (IHHN)	-	-	-	III	
5. Infectious myonecrosis (IMN)	0000	0000	0000	III	
6. White tail disease (MrNV)	-	+( )	+( )	III	1
7. Necrotising hepatopancreatitis (NHP)	***	***	***		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	***	***	***		
9. Acute hepatopancreatic necrosis disease (AHPND)	+( )	+()	+()	III	2
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	(2011)	(2011)	(2011)	III	
2. Infection with *Batrachochytrium dendrobatidis*	0000	0000	0000	II	
ANY OTHER DISEASES OF IMPORTANCE					
1.					

* 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 175 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 62 specimens or 35.43 % recorded as PCR positive or carrying MrNV genes. Shrimp farm with positive testing results was subjected to health improvement, movement control, eradication and/or farm disinfection.
2	A total of 3,593 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 358 specimens or 9.96 % recorded as PCR positive for AHPND. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection.

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

Country: VIETNAM **Period: July - September 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* (10-100 DOC) **Name of affected area:** reported in 15 provinces (total area 5,638 ha) including Quang Ninh, Nghe An, Quang Binh, Phu Yen, Khanh Hia, Binh Dinh, Ho Chi Minh, Long An, Tien Gang, Ben Tre, Tra Vinh, Kien Gang, 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 Ho Chi Minh and Bac Lieu provinces with 19.3 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 1,569 ha. Affected provinces include Hai Phong, Quang Ninh, Nghe An, Ba Ria-Vung Tau, Phu Yen, Khanh Hoa, Ho Chi Minh, Ninh Thuan, Binh Thuan, Dong Nai, Long An, Tien Giang, Ben Tre, Tra Vinh, Kien Gang, 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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