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QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

October – December 2012

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Foreword

Disease Advisory: AHPNS (Acute hepatopancreatic necrosis syndrome) Update

Since the Asia Pacific Emergency Regional Consultation on EMS/AHPNS held in August 2012 in Bangkok, Thailand, many news reports have been widely circulated that have led to various baseless speculations and conclusions on the true nature of AHPNS. The disease, as previously reported, has been affecting shrimps in four Asia-Pacific countries (China, Vietnam, Malaysia and Thailand), with the greatest production losses reported in Vietnam. Given the uncertainty regarding the various causes of early mortality, Thai farmers have consulted with experts and government officials and agreed at a national meeting on 28 February 2013 to implement more stringent pond biosecurity and management measures, to focus on post larvae (PL) quality and to stock only PL10 or higher, until the causes are clarified

To this date, the case definition (both at farm and animal levels) developed by Prof. Donald Lightner is still the sole basis for proper diagnosis of the disease (refer to AHPNS Disease Card; http://www.enaca.org/modules/library/publication.php?publication_id=1060). It was also established in various expert investigations that the disease only affects younger shrimps, usually within the first 35 days after stocking in grow-out ponds. Thus, reports that the disease is also killing broodstock shrimp are baseless, and such reports should not be circulated unless scientific investigations have been done to prove that mortalities were caused by the same disease.

NACA has also received several reports on early mortality in shrimps from other countries in the region. These, however, were unconfirmed reports as confirmatory diagnosis (by histopathology) was not performed. In response to this, the Asia Regional Advisory Group on Aquatic Animal Health (AG) has decided to include AHPNS in the list of reportable diseases for QAAD (Quarterly Aquatic Animal Disease) Reporting in Asia-Pacific starting in the first quarter of 2013. This is for the sole purpose of gaining more information about the disease within the region (NACA, 2012. AGM 11: Report of the Meeting; http://www.enaca.org/modules/library/publication.php?tag_id=362&label_type=1&title=advisory-group-on-aquatic-animal-health).

Currently, scientific investigations on AHPNS are ongoing in several research institutions in the four affected countries, including a National TCP of FAO in Vietnam. As to the possibility that the causative agent(s) is infectious, the question is still open and experts (research teams from different agencies in Vietnam; Prof. Timothy Flegel of Mahidol University, Thailand; and Prof. Donald Lightner of University of Arizona, USA) are testing for transmission of the disease to healthy shrimps via bacteria, viruses, bacteriophages, fungi and parasites. They are also testing for environmental agents such as toxins (from both biotic and abiotic sources). So far, no causative agent has yet been found and the disease is still considered idiopathic.

The disease update/advisory was issued to address the many circulating false and baseless speculations on the effects and spread of AHPNS in the region. NACA encourages shrimp farmers and producers in the region to properly consult fish health authorities and experts in their country for proper disease diagnosis, when early mortality is observed among cultured shrimps.

Fish health authorities should then officially report confirmed cases of AHPNS to their respective national Competent Authority.

NACA will release another communication once new updates are received from the key experts working on this new shrimp disease.

Reports Received by the NACA Secretariat

Country: AUSTRALIA Period: October - December 2012

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	-(2012)	-(2012)	-(2012)		1
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome	-(2012)	-(2012)	+	II	2
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	+	-(2012)	-(2012)	II	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*	-(2011)	-(2011)	?	I	5
3. Infection with abalone herpes-like virus	-(2011)	-(2011)	-(2011)		6
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
5. Acute viral necrosis (in scallops)	***	***	***		
6. Akoya oyster disease	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	0000	0000	0000		
3. Yellowhead disease	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis	-(2008)	-(2008)	-(2008)		7
5. Infectious myonecrosis	0000	0000	0000		
6. White tail disease (MrNV)	-(2008)	-(2008)	-(2008)		8
7. Necrotising hepatopancreatitis	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	0000	0000	0000		
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	-(2008)	-(2008)	-(2008)		9
2. Infection with *Batrachochytrium dendrobatidis*	-(2011)	-(2011)	+	III	10
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	**Epizootic haematopoietic necrosis** was not reported this period despite passive surveillance but is known to have occurred previously 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 and Western Australia. Targeted surveillance and never reported in Tasmania.
2	**Epizootic ulcerative syndrome** 1. **Reported in Western Australia** in December, passive surveillance; 2. **Species affected** – Black bream (*Acanthopagrus butcheri)*, wild caught fish; 3. **Clinical Signs** – Lesions on flank; 4. **Pathogen** – *Aphanomyces invadans*; 5. **Mortality rate** – Information not available; 6. **Economic loss** – Information not available; 7. **Geographic Extent** – Information not available; 8. **Containment Measures** – Not applicable; 9. **Laboratory Confirmation** – Histopathology; 10. **Publications** – None. Epizootic ulcerative syndrome is known to have occurred previously in the Northern Territory (last reported 2012), Queensland (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 October, passive surveillance; 2. **Species affected** – Queensland groper (*Epinephelus lanceolatus*) fingerlings (87 days of age); 3. **Clinical signs** – Gasping at the surface of ponds and dark body colour; 4. **Pathogen** – *Betanodavirus*; 5. **Mortality rate** – Low level; 6. **Economic loss** – Information not available; 7. **Geographic extent** – Limited to one cage in an earthen seawater pond; 8. **Containment measures** – Not applicable; 9. **Laboratory confirmation** – Histopathology; 10. **Publications** – None. Viral encephalopathy and retinopathy is known to have occurred previously in the Northern Territory (last reported 2011), New South Wales (last reported 2010), South Australia (last reported 2010), Western Australia (last reported 2005) and Tasmania (last reported 2000). Never reported from Victoria despite passive surveillance. No information available this period in the Australian Capital Territory.
4	**Enteric septicaemia of catfish** was not reported this period despite passive surveillance but is known to have occurred previously in the Northern Territory [in a closed aquarium facility also holding imported ornamental fish] (last reported 2011). Reported previously in Queensland (last reported 2008) and Tasmania (last reported 2001) in zebrafish (*Brachydanio rerio*) held in PC2 containment facilities. Never reported in New South Wales, South Australia, Victoria or Western Australia despite passive surveillance. No information available this period in the Australian Capital Territory.
5	**Infection with *Perkinsus olseni*** 1. **Reported in South Australia** in December, passive surveillance; 2. **Species affected** – Blacklip abalone (*Haliotis rubra*); 3. **Clinical signs** – Lesions consistent with *Perkinsus olseni* infection; 4. **Pathogen** – *Perkinsus olseni*; 5. **Mortality rate** – Information not available; 6. **Economic loss** – Information not available; 7. **Geographic extent** – Information not available; 8. **Containment measures** – Not applicable, wild stocks; 9. **Laboratory confirmation** – Suspicion based on gross pathological signs; 10. **Publications** – None. Infection with *Perkinsus olseni* is known to have occurred previously in New South Wales (last reported 2005). Not reported despite targeted surveillance in Western Australia (last reported 2003). Passive surveillance and never reported in the Northern Territory, Queensland, Tasmania and Victoria. No information available for the Australian Capital Territory (no marine water responsibility).
6	**Infection with abalone herpesvirus (abalone viral ganglioneuritis)** was not reported this period despite passive surveillance but is known to have occurred previously in Tasmania (last reported 2011), New South Wales (last reported 2011 and eradicated following detection in contained commercial live-holding facilities), Victoria (last reported 2010). Active surveillance and never reported in South Australia. Passive surveillance and never reported in Queensland and Western Australia. No surveillance and never reported in Northern Territory. No information available for the Australian Capital Territory (no marine water responsibility).

7	**Infectious hypodermal and haematopoietic necrosis** virus was not reported this period despite passive surveillance but is known to have occurred previously in Queensland (last reported 2008) and Northern Territory (last reported 2003). Passive surveillance and never reported in New South Wales, South Australia, Victoria and Western Australia. No information available this period in the Australian Capital Territory (no marine responsibility) and Tasmania (susceptible species not present).
8	**White tail disease** was not reported this period from Queensland despite passive surveillance (last reported 2008). Passive surveillance and never reported from New South Wales and South Australia. No information available this period in the Australian Capital Territory, Northern Territory, Tasmania, Victoria and Western Australia.
9	**Infection with ranavirus** was not reported this period despite passive surveillance but is known to have occurred previously 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.
10	**Infection with *Batrachochytrium dendrobatidis*** 1. **Reported in Tasmania** in December, active surveillance; 2. **Species affected** – Brown tree frog (*Litoria ewingii*), Tasmanian tree frog (*Litoria burrowsae*); 3. **Clinical signs** – No clinical signs observed; 4. **Pathogen** – *Batrachochytrium dendrobatidis*; 5. **Mortality rate** – Information not available; 6. **Economic loss** – Information not available; 7. **Geographic extent** – Information not available; 8. **Containment measures** – Wild populations, biosecurity measures are in development; 9. **Laboratory confirmation** – PCR, molecular biology; 10. **Publications** – None. Infection with *Batrachochytrium dendrobatidis* is known to have occurred previously in Victoria (last reported 2011). Not reported this period despite passive surveillance in Western Australia (last reported 2008). Suspected but not confirmed through passive surveillance in Queensland. No information available this period in the Australian Capital Territory, South Australia, New South Wales and Northern Territory.

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

Country: HONG KONG SAR Period: October - December 2012

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	II	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia	0000	0000	0000	III	
5. Epizootic ulcerative syndrome	0000	0000	0000	II	
6. Red seabream iridoviral disease	-	-	-	III	
7. Koi herpesvirus disease	-	-	-	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-	III	
9. Viral encephalopathy and retinopathy	-	-	-	III	
10.Enteric septicaemia of catfish	0000	0000	0000	II	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000	II	
2. Infection with *Perkinsus olseni*	0000	0000	0000	II	
3. Infection with abalone herpes-like virus	0000	0000	0000	II	
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	0000	0000	0000	II	
5. Acute viral necrosis (in scallops)	0000	0000	0000	II	
6. Akoya oyster disease	0000	0000	0000	II	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	III	
2. White spot disease	-	-	-	III	
3. Yellowhead disease	0000	0000	0000	III	
4. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	II	
5. Infectious myonecrosis	0000	0000	0000	II	
6.White tail disease (MrNV)	0000	0000	0000	II	
7. Necrotising hepatopancreatitis	0000	0000	0000	II	
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	0000	0000	0000	II	
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	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.					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	
2	
3	

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

Country: INDIA **Period: October - December 2012**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome	-	-	-		
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10.Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	-	-	-		
3. Infection with abalone herpes-like virus	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
5. Acute viral necrosis (in scallops)	0000	0000	0000		
6. Akoya oyster disease	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+( )	+( )	+( )	I	1,2
3. Yellowhead disease	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis	***	***	***		
5. Infectious myonecrosis	0000	0000	0000		
6.White tail disease (MrNV)	-	-	-		
7. Necrotising hepatopancreatitis	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	-	-	-		
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	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.					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	**White spot disease:** Reported in *Penaeus monodon* from very limited areas in Vijayawada district of Andhra Pradesh; Uttara Kanada district of Karnataka; Kannur district of Kerala; Nagapattitam and Thanjavur dostricts of Tamil Nadu during different months under the reporting period.
2	**White spot disease:** Also reported in *L. vannamei* from Bhimawaram and Vijayawada districts of Andhra Pradesh; Nagapattinam and Thanjavur districts of Tamil Nadu during different months under the reporting period.
3	

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

Country: INDONESIA **Period: October - December 2012**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome	0000	0000	0000		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	***	+( )	+( )	III	1
Non OIE-listed diseases					
8. Grouper iridoviral disease	+( )	+( )	+( )	II,III	2
9. Viral encephalopathy and retinopathy	+( )	***	***	III	3
10.Enteric septicaemia of catfish	***	+( )	***	II	4
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 herpes-like virus	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
5. Acute viral necrosis (in scallops)	0000	0000	0000		
6. Akoya oyster disease	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	***	***	***		
2. White spot disease	+( )	+( )	***	III	5
3. Yellowhead disease	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis	***	0000	0000	II,III	6
5. Infectious myonecrosis	***	+( )	***	III	7
6.White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	0000	0000	0000		
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	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.					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
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?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	**KHV** 1. **Origin of the disease/pathogen: -** 2. **Species affected:** *Cyprinus carpio* 3. **Clinical signs:** haemorrhage, gill rot, pale gills 4. **Pathogen:** Cyprinid herpesvirus 5. **Mortality rate:** medium to high 6. **Economic loss:** - 7. **Names of infected areas:** Clanjur (West Java) on October and November; Purwakarta (West Java) on November, and Sukabumi (West Java) on November and December. 8. **Preventive/control measures:** vaccination; vitamin supplementation 9. **Laboratory confirmation:** Main Center Freshwater Aquaculture Development Sukabumi Laboratory 10. **Publications :** not published.
2	**GIV** 1. **Origin of the disease/pathogen:** Sekotong (West Lombok); Teluk Ekas (East Lombok); Kalianda and Teluk Harun (Lampung Province) 2. **Species affected:** *Trachinotus blochii, Epinephelus* sp*., Epinephelus fuscoguttatus, Cromileptes altivelis* (10 cm), *Rachycentron canadum* 3. **Clinical signs:** eye lesion, tail rot, loss of appetite, pale liver and swollen spleen (observed in *E. fuscoguttatus*); 4. **Pathogen:** Iridovirus 5. **Mortality rate:** >60% in Lombok 6. **Economic loss:** - 7. **Names of infected areas:** Bandar Lampung (South Sumatra), Cipucuk Kerawang (West Java), and Sekotong (West Lombok) 8. **Preventive/control measures:** immunostimulant (Vitamin C), fish health management, feed and water quality management; 9. **Laboratory confirmation:** Main Center Mariculture Development Lampung Laboratory, Aquaculture Business Development Center Kerawang Laboratory, Mariculture Development Center Lombok Laboratory; 10. **Publications:** not published.

3	**VER** 1. **Origin of the disease/pathogen:** Teluk Harun (Lampung province); 2. **Species affected:** *Rachycentron canadum* 3. **Clinical signs:** none 4. **Pathogen:** Iridovirus; 5. **Mortality rate:** - 6. **Economic loss:** - 7. **Names of infected areas:** Teluk Harun (East Sumatra); 8. **Preventive/control measures:** Quarantine measures; 9. **Laboratory confirmation:** Main Center Mariculture Development Lampung Laboratory; 10. **Publications:** not published.
4	**Enteric Septicaemia of Catfish** 1. **Origin of the disease/pathogen:** Jambi 2. **Species affected:** catfish 3. **Clinical signs:** fish swim to the edge of the pond, loss of appetite, pale gills, petechiae around the mouth, abdomen and fins, white necrotic foci in the liver, kidney and other organs; 4. **Pathogen:** *Edwardsiella ictaluri*; 5. **Mortality rate:** 70%; 6. **Economic loss:** - 7. **Names of infected areas:** Desa Kuak, Kecamatan Permayung, Kubupaten Batanghari (Jambi province); 8. **Preventive/control measures:** probiotics and immunustimulant (Vitamin C) for one week; 9. **Laboratory confirmation:** Freshwater Aquaculture Development Center Jambi Laboratory; 10. **Publications:** not published.
5	**WSSV** 1. **Origin of the disease/pathogen:** hatchery in Kerawang, Situbondo, Carita Pandeglang 2. **Species affected:** *Litopenaeus vannamei* 3. **Clinical signs:** affected shrimps swim on the water surface and at the pond edges; loss their appetite and become weak; 4. **Pathogen:** White spot syndrome virus; 5. **Mortality rate:** Kerawang – 70-100% (co-infection with IMNV); 6. **Economic loss:** approximately 30,000,000 pieces in Kerawang 7. **Names of infected areas:** Kerawang Cipucuk and Kerawang Pendeglang (West Java), East Lampung, Sumenep (East Java); 8. **Preventive/control measures:** biosecurity, partial harvest, eradication, early harvest (8g shrimps); 9. **Laboratory confirmation:** Aquaculture Business Development Center Kerawang Laboratory, Center of Fish Disease and Environment Investigation Serang Laboraotry, Main Center Mariculture Development Lampung Laboratory, Brackishwater Aquaculture Development Situbondo Laboratory; 10. **Publications:** not published.

6	**IHHNV** 1. **Origin of the disease/pathogen:** Mayo Utara Sumbawa (West Nuasa Tenggara), Carita Pandeglang (West Java), Kolaka (Southeast Sulawesi) 2. **Species affected:** *Penaeus monodon* (2 months), *Litopenaeus vannamei* 3. **Clinical signs:** *P. monodon* (no symptoms); *L. vannamei* (slow growth); 4. **Pathogen:** Infectious hypodermal and haematopoietic necrosis virus; 5. **Mortality rate:** *P. monodon* in Kolaka, Southeat Sulawesi – 10%; *L. vannamei* in Carita, West Java - <30%; 6. **Economic loss:** - 7. **Names of infected areas:** Kolaka (Southeast Sulawesi province), Carita (West Java province) 8. **Preventive/control measures:** GAP, biosecurity; 9. **Laboratory confirmation:** Brackishwater Development Center Takalaar Laboraotry, Center of Fish Disease and Environmental Investigation Serang Laboraotry, Brackishwater Aquaculture Development Center Situbondo Laboratory.; 10. **Publications:** not published.
7	**IMNV** 1. **Origin of the disease/pathogen:** hatchery in Jepara (Central Java), Kerawang (West Java), Kalianda, East Lampung, Puduh Pidada Lampung (Lampung province) 2. **Species affected:** *Litopenaeus vannamei* 3. **Clinical signs:** reduced appetite, gradual mortality, whitish muscle on the third segment 4. **Pathogen:** Infectious myonecrosis virus, Totiviridae 5. **Mortality rate:** *L. vannamei* hatchery in Jepara – 50%; *L. vannamei* in Kerawang – 100% co-infection with WSSV; *L. vannamei* in Puduh Pidada Lampung - <30% 6. **Economic loss:** approximately 30,000,000 pcs in Kerawang 7. **Names of infected areas:** Mauk (West Java), Pontianak (West Kalimantan); 8. **Preventive/control measures:** GAP, eradication, biosecurity; 9. **Laboratory confirmation:** Main Center Brackishwater Development Jepara Laboratory, Aquaculture Business Development Center Kerawang Laboratory, Center if Fish Disease and Environmental Investigation Serang Laboratory, Main Center Mariculture Development Lampung Laboratory; 10. **Publications:** not published.

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

Country: JAPAN **Period: October - December 2012**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	I	
2. Infectious haematopoietic necrosis	+	+	+	III	
3. Spring viraemia of carp	0000	0000	0000	I	
4. Viral haemorrhagic septicaemia	-	-	-	I	
5. Epizootic ulcerative syndrome	-	-	-	II	
6. Red seabream iridoviral disease	+	+	+	II,III	
7. Koi herpesvirus disease	+	+	-	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000	I	
9. Viral encephalopathy and retinopathy	-	+	-	III	
10.Enteric septicaemia of catfish	-	-	-	I	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000	I	
2. Infection with *Perkinsus olseni*	-	-	-	I	
3. Infection with abalone herpes-like virus	0000	0000	0000	I	
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	+	+	+	II	
5. Acute viral necrosis (in scallops)	0000	0000	0000	I	
6. Akoya oyster disease	+	+	-	II	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	I	
2. White spot disease	+	-	-	III	
3. Yellowhead disease	0000	0000	0000	I	
4. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	I	
5. Infectious myonecrosis	0000	0000	0000	I	
6.White tail disease (MrNV)	0000	0000	0000	I	
7. Necrotising hepatopancreatitis	0000	0000	0000	I	
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	0000	0000	0000	I	
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	0000	0000	0000	I	
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	-	-	-	I	
2. Infection with *Batrachochytrium dendrobatidis*	-	-	-	I	
ANY OTHER DISEASES OF IMPORTANCE					
1. Infection with *Xenohaliotis californiensis*	+?	+?	+?	III	1
2.					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	DNA of *Xenohaliotis californiensis* was isolated from *Haliotis discus discus* (domestic) and *Sulculus diversicolor diversicolor* (wild) without any clinical symptom.
2	
3	

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

Country: KOREA, REPUBLIC OF Period: July - September 2012

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

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	Red seabream iridovirus (RSIV) was detected from a moribund parrot fish (*Oplegnathus fasciatus*), red seabream (*Pagrus major*), rockfish (*Sebastes schlegeli*), seabass (*Lateolabrax japonicus*) from the floating fish cages in southeast sea. The confirmative diagnosis was performed by the National Fisheries Research and Development Institute, Aqua-life Disease Control Division. The standstill of RSIV-detected fish was declared for control.
2	White spot disease virus (WSSV) was detected from fleshy prawn (*Fenneropenaeus chinensis*) from a hatchery in Boryeoung Chungnam. No clinical signs and mortality were observed. The confirmative diagnosis was performed by the National Fisheries Research and Development Institute, Aqua-life Disease Control Division. The standstill of WSSV-detected fleshy prawns was declared for control.
3	

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

Country: KOREA, REPUBLIC OF **Period: October - December 2012**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	-	-	-	III	
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	-	+	+	III	1
5. Epizootic ulcerative syndrome	0000	0000	0000		
6. Red seabream iridoviral disease	+	-	-	III	2
7. Koi herpesvirus disease	-	-	-	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	-	-	-	III	
10.Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Infection with abalone herpes-like virus	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	-	-	-	III	
5. Acute viral necrosis (in scallops)	0000	0000	0000		
6. Akoya oyster disease	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+	-	-	III	
3. Yellowhead disease	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis	-	-	-	III	
5. Infectious myonecrosis	0000	0000	0000		
6.White tail disease (MrNV)	0000	0000	0000		
7. Necrotising hepatopancreatitis	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	0000	0000	0000		
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	0000	0000	0000		
2. Infection with *Batrachochytrium dendrobatidis*	?	?	?		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	Viral haemorrhagic septicaemia virus (VHSV) was detected from juvenile olive flounder (Paralichthys olivaceus) from a hatchery in Jeju. No clinical signs and mortality was observed. The confirmative diagnosis was performed by the National Fisheries Research and Development Institute, Aqua-life Disease Control Division. The standstill of VHSV-detected fish was declared for control.
2	Red seabream iridovirus (RSIV) was detected from a moribund parrot fish (*Oplegnathus fasciatus*) from the floating fish cages in Yeosu. The confirmative diagnosis was performed by the National Fisheries Research and Development Institute, Aqua-life Disease Control Division. The standstill of RSIV-detected fish was declared for control.
3	

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

Country: LAO PDR **Period: October - December 2012**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	***	***	***		
4. Viral haemorrhagic septicaemia	***	***	***		
5. Epizootic ulcerative syndrome	***	***	***		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	***	***	***		
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10.Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	***	***	***		
2. Infection with *Perkinsus olseni*	***	***	***		
3. Infection with abalone herpes-like virus	***	***	***		
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	***	***	***		
5. Acute viral necrosis (in scallops)	***	***	***		
6. Akoya oyster disease	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	***	***	***		
2. White spot disease	***	***	***		
3. Yellowhead disease	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis	***	***	***		
5. Infectious myonecrosis	***	***	***		
6.White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis	***	***	***		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	***	***	***		
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with *Batrachochytrium dendrobatidis*	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not confirmed	(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: MALAYSIA **Period: October - December 2012**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000	I,II,III	
3. Spring viraemia of carp	0000	0000	0000	I,II,III	1
4. Viral haemorrhagic septicaemia	0000	0000	0000	I,II,III	
5. Epizootic ulcerative syndrome	(1986)	(1986)	(1986)	I.II	
6. Red seabream iridoviral disease	-	-	-	I,II,III	
7. Koi herpesvirus disease	-	-	-	I,II,III	2
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-	III	3
9. Viral encephalopathy and retinopathy	-	-	-	III	4
10.Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000	III	
3. Infection with abalone herpes-like virus	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
5. Acute viral necrosis (in scallops)	0000	0000	0000		
6. Akoya oyster disease	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	-	-	-	I,III	5
2. White spot disease	-	+	+	I,III	6
3. Yellowhead disease	-	-	-	I,III	7
4. Infectious hypodermal and haematopoietic necrosis	+	+	-	I,III	8
5. Infectious myonecrosis	-	-	-	III	9
6.White tail disease (MrNV)	-	-	-	III	10
7. Necrotising hepatopancreatitis	-	-	-	III	11
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	-	-	-		
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	0000	0000	0000		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	-	-	-		
2. Infection with *Batrachochytrium dendrobatidis*	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1. Hepatopancreatic parvo virus disease	-	+	+	III	12

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	**Spring viraemia of carp** 1. No positive cases detected (PCR) during DoF active surveillance programme
2	**Koi herpesvirus disease** 1. No positive cases detected (PCR) during DoF active surveillance programme
3	**Grouper Iridoviral disease (GIV)** 1. Grouper samples from Kedah were negative for GIV tested in Fisheries Research Institute (FRI) Pulau Sayak, Kedah for diagnostic cases. 2. Baramundi samples from Penang were negative for GIV tested in National Fish Disease Research Station (NaFisH) Penang for diagnostic cases.
4	**Viral encephalopathy and retinopathy** 1. All fish samples from Kedah were negative for VNN, tested in NaFisH for diagnostic cases. .
5	**Taura syndrome virus (TSV)** (*Penaeus monodon, Litopenaeus vannamei*) 1. TSV was not detected in all the samples sent to Lab Industrial Resources laboratory (LIR) for routine and monitoring purposes. 2. No positive on reported cases detected by PCR although active surveillance was conducted by DoF in West and East Malaysia.

6	**White Spot Syndrome Virus (WSSV)** 1. Two (2) cases of WSSV were detected in the samples sent to private laboratory for routine and monitoring purposes. It involved post larvae of *Penaeus monodon* and juveniles of *Litopenaeus vannamei.*
7	**Yellow head disease (YHV)** (*P. monodon, Litopenaeus vannamei*) 1. YHV was not detected in all the samples sent to private laboraotry for routine and monitoring purposes. 2. No positive cases detected (PCR) although active surveillance was conducted by DoF in East Malaysia
8	**Infectious hypodermal and haematopoietic necrosis virus (IHHNV)** (*P. monodon, Litopenaeus vannamei*) 1. IHHNV was detected in two (2) *L. vannamei* samples sent to private laboratory for routine and monitoring purposes. 2. No positive cases detected by PCR although active surveillance was conducted by DoF in West and East Malaysia.
9	**Infectious Myonecrosis (IMNV)** 1. IMNV was not detected in all the samples of *Penaeus monodon* and *Litopenaeus vannamei* sent to private laboratory for routine and monitoring purposes. 2. No positive on reported cases detected by PCR, although active surveillance was conducted by DoF in West and East Malaysia.
10	***Macrobrachium rosenbergii* Nodavirus (MrNV)** 1. MrNV was not detected in all M. rosenbergii samples sent to Fisheries Research Institute Pulau Sayak, Kedah for routine and monitoring purposes.
11	**Necrotising hepatopancreatitis (NHPB)** 1. NO samples were tested for NHPB.
12	**Hepatopancreatic parvo virus disease (HPV)** (*P. monodon, Litopenaeus vannamei*) 1. 20 out of 39 samples were tested positive for HPV by private laboratory for routine and monitoring purposes.

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

Country: MYANMAR **Period: October - December 2012**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	***	***	***		
4. Viral haemorrhagic septicaemia	***	***	***		
5. Epizootic ulcerative syndrome	***	***	***		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease					
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10.Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*					
2. Infection with *Perkinsus olseni*					
3. Infection with abalone herpes-like virus					
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*					
5. Acute viral necrosis (in scallops)					
6. Akoya oyster disease					
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	-	-	-	III	1
2. White spot disease	-	-	-	III	1
3. Yellowhead disease	-	-	-	III	
4. Infectious hypodermal and haematopoietic necrosis	-	-	-	III	1
5. Infectious myonecrosis	***	***	***		
6.White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis	***	***	***		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	***	***	***		
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus					
2. Infection with *Batrachochytrium dendrobatidis*					
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	During this period, we have received 3 samples of shrimps (2 frozen and 1 live shrimps for export) for testing for TSV, WSSV and IHHNV. All samples were found negative for the viruses.
2	Additional Note: Visited some fish farms in Nay Pyi Taw, Yangon, Ayeyarwaddy and Bago regions during this period. Parasitic diseases were observed in some farms due to water quality problems. Disseminated pamphlets about aquatic animal diseases regarding control and prevention measures.
3	

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

Country: NEPAL **Period: October - December 2012**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome	-	-	-	I	1
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8.Grouper iridoviral disease					
9.Viral encephalopathy and retinopathy					
10.Enteric septicaemia of catfish					
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	***	***	***		
2. Infection with *Perkinsus olseni*	***	***	***		
3. Infection with abalone herpes-like virus	***	***	***		
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	***	***	***		
5. Acute viral necrosis (in scallops)	***	***	***		
6.Akoya oyster disease	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	***	***	***		
2. White spot disease	***	***	***		
3. Yellowhead disease	***	***	***		
4. Infectious hypodermal and haematopoietic necrosis	***	***	***		
5. Infectious myonecrosis	***	***	***		
6.White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis	***	***	***		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	***	***	***		
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with *Batrachochytrium dendrobatidis*	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	**Epizootic ulcerative syndrome (EUS)** Seen in Bara and Chitawan districts during November and December. Species affected: mostly *Labeo rohita*, *Cirrhinus mrigala* and catfishes; 200-500 g size; 10 ha ponds. Disease signs: red spots and ulcer wounds on the body. Economic loss: around 500 kg. Control Measures: liming at 500 kg/ha; some ponds used Toximar Publications: None
2	
3	

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

Country: PHILIPPINES Period: October - December 2012

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome	- (2002)	- (2002)	- (2002)	I	
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	- (2008)	- (2008)	- (2008)	III	
9. Viral encephalopathy and retinopathy	- (2007)	- (2007)	- (2007)	III	
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 herpes-like virus	***	***	***		
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
5. Acute viral necrosis (in scallops)	***	***	***		
6. Akoya oyster disease	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	III	1
2. White spot disease	+	+	+	III	2
3. Yellowhead disease	- (1999)	- (1999)	- (1999)	III	
4. Infectious hypodermal and haematopoietic necrosis	-	-	+	III	3
5. Infectious myonecrosis	0000	0000	0000	III	4
6.White tail disease (MrNV)	0000	0000	0000		
7. Necrotising hepatopancreatitis	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	***	***	***		
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with *Batrachochytrium dendrobatidis*	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	Thirty-five (35) samples of *Penaeus vannamei* of different stages (broodstock and adult) were analyzed using the PCR test. All 35 samples showed a negative result for **Taura Syndrome Virus**. The samples were collected from Carcar Cebu, Oriental Mindoro, Cebu and Agusan del Sur. Examinations/tests were conducted by the BFAR Central Office Fish Health Laboratory and Southeast Asian Fisheries Development Center-Aquaculture Department (SEAFDEC-AQD) Fish Health Laboratory.
2	Two Hundred Forty-Seven (247) shrimp samples of different stages (fry, juvenile, broodstock, grow-out, post-larval and adult) and eighteen (18) *S. serrata* were analyzed using the PCR test. Sixty-six (66) shrimp samples and four (4) *S. Serrata* showed a positive result for **White Spot Disease Virus** out of the total 265 samples. The samples for analysis were collected from Zambales, Carcar Cebu, Oriental Mindoro, Mingianilla Cebu, Davao del Sur, Zamboanga City, Pampanga, Bohol, Negros Oriental, Rizal, Negros Occidental, Leyte, Sorsogon, Davao del Sur, Batangas, Sarangani, Iloilo Agusan del Sur, South Cotabato, Roxas, Masbate, Capiz, Aklan, and Ragay. Examinations/tests were conducted by the BFAR Central Office Fish Health Laboratory, SEAFDEC-AQD Fish Health Laboratory and Negros Prawn Producers Cooperative.
3	One Hundred two (102) samples (27 *Penaeus monodon* and 75 *Penaeus vannamei*) of different stages (fry, juvenile, broodstock) were analyzed using the PCR test. Twenty-nine (29) samples showed a positive result for the **Infectious Hypodermal and Haematopoietic Necrosis Virus**. The samples were collected from Cebu, Iloilo, Pampanga, Bohol, Camarines Sur, Negros Occidental, Negros Oriental, Sarangani Province, Batangas, South Cotabato, Roxas, Masbate and Sorsogon. Examinations/tests were conducted by the BFAR Central Office Fish Health Laboratory and SEAFDEC-AQD Fish Health Laboratory.

4	Thirty-nine (39) samples of *Penaeus vannamei* of different stages (fry, post-larval, juvenile, grow-out, broodstock and adult) were analyzed using the PCR test. All 39 samples showed a negative result for **Infectious Myonecrosis Virus**. The samples were collected from Rizal, Bohol, Camarines Sur, Negros Oriental, Cebu and Agusan del Sur. Examinations/tests were conducted by the BFAR Central Office Fish Health Laboratory and SEAFDEC-AQD Fish Health Laboratory.

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

Country: SINGAPORE Period: October - December 2012

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome	0000	0000	0000		
6. Red seabream iridoviral disease	(2012)	(2012)	(2012)	III	
7. Koi herpesvirus disease	(2012)	(2012)	(2012)	III	1
Non OIE-listed diseases					
8. Grouper iridoviral disease	(2012)	(2012)	(2012)	III	
9. Viral encephalopathy and retinopathy	+	(2012)	(2012)	III	2
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 herpes-like virus	***	***	***		
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	***	***	***		
5. Acute viral necrosis (in scallops)	***	***	***		
6. Akoya oyster disease	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	(2012)	(2012)	(2012)	III	5
3. Yellowhead disease	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
5. Infectious myonecrosis	0000	0000	0000		
6.White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	***	***	***		
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with *Batrachochytrium dendrobatidis*	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Infectious spleen and kidney necrosis virus (ISKNV) (marine and ornamental fish)	+	(2012)	(2012)	III	3
2. *Aeromonas salmonicida* (in goldfish)	0000	0000	0000	III	4

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

		+( )	Occurrence limited to certain zones
+	Disease reported or known to be present	***	No information available
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	0000	Never reported
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not confirmed	(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	Two batches of KHV positive koi were detected by real-time PCR from on-going investigations on a local koi breeder where KHV was detected in August. All KHV positive koi were culled and the farm is not allowed to export to countries requiring KHV freedom. The farm is still under isolation order for koi and regularly inspected.
2	Viral encephalopathy and retinopathy or Viral nervous necrosis virus (VNNV) was detected in 2 batches of giant grouper and 1 batch of tiger grouper fingerlings from a landbased nursery using a recirculating aquaculture system. The farmer was advised to remove moribund fish from tanks, and was advised that naive fish in adjacent tanks sharing the same water with diseased tanks could be infected as well.
3	Infectious spleen and kidney necrosis virus (ISKNV) was detected in one batch of diseased, locally bred pompano from a floating netcage farm in October. *Vibrio alginolyticus* and *Nocardia* sp. were also isolated from these fish. The farmer was advised to cull and remove the batch of fish.
4	*Aeromonas salmonicida* was not detected this quarter in all 6 batches of goldfish submitted under a targeted surveillance program for goldfish exported to Australia.
5	There were no positive detections of White spot syndrome virus (WSSV) in 46 batches of crustaceans submitted this quarter, from targeted surveillance and voluntary samples.

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

Country: SRI LANKA **Period: October - December 2012**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	III	8
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	0000	0000	0000	III	1
4. Viral haemorrhagic septicaemia	0000	0000	0000	III	8
5. Epizootic ulcerative syndrome	***	***	***		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	***	***	***	III	7
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 herpes-like virus	***	***	***		
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	***	***	***		
5. Acute viral necrosis (in scallops)	***	***	***		
6.Akoya oyster disease	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	***	***	***		
2. White spot disease	+( )	+( )	+( )	III	2
3. Yellowhead disease	-	-	-	III	3
4. Infectious hypodermal and haematopoietic necrosis	+( )	-	-	III	4
5. Infectious myonecrosis	***	***	***		
6.White tail disease (MrNV)	***	***	***		
7. Necrotising hepatopancreatitis	***	***	***		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	***	***	***		
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	***	***	***		
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	***	***	***		
2. Infection with *Batrachochytrium dendrobatidis*	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Laem Singh virus (LSV)	-	-	-	III	5
2. Monodon Baculovirus (MBV)	+( )	+( )	+( )	III	6

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	300 samples of goldfish from 2 fish breeding centres (150 samples from Eastern province and 150 samples from North Western province) were tested by PCR (semi-nested) for SVC detection, and all samples gave negative results. No clinical signs were observed among the samples. Tests were carried out at the laboratory of Central Veterinary Investigation Centre (CVIC) of Veterinary Research Institute.
2	A total of 190 *Penaeus monodon* samples from North Western province were tested for WSSV by PCR method. 175 samples gave positive results. Tests were carried out at the laboratories of National Aquatic Resources and Development Agency (NARA) and National Aquaculture Development Authority (NAQDA).
3	24 samples of *P. monodon* were tested for YHD; none of the samples were positive.
4	24 samples of *P. monodon* were tested for IHHNV by PCR in the laboratory of NARA during the month of October; 3 samples gave positive results.
5	24 samples of *P. monodon* were tested for LSV by PCR in the laboratory of NARA; no sample gave positive results.
6	46 samples of *P. monodon* were tested for MBV by PCR in the laboratories of NAQDA and NARA; 22 samples were found positive.

7	PCR method was used to detect KHV in 24 samples of carps during this period, all were found negative. Tests were carried out at the Center for Aquatic Disease Diagnosis and Research (CADDAR). Samples were taken mainly from exports and imports, clinical signs were not observed in the samples.
8	PCR method has been developed for VHS and EHN at CVIC. No samples were tested during this reporting period.

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

Country: THAILAND Period: October - December 2012

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	III	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia	0000	0000	0000	III	
5. Epizootic ulcerative syndrome	(2009)	(2009)	(2009)	II	
6. Red seabream iridoviral disease	0000	0000	0000	III	
7. Koi herpesvirus disease	(05/2011)	(05/2011)	(05/2011)	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-	III	
9. Viral encephalopathy and retinopathy	-	-	-	III	
10.Enteric septicaemia of catfish	0000	0000	0000	II	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000	II	
2. Infection with *Perkinsus olseni*	0000	0000	0000	II	
3. Infection with abalone herpes-like virus	0000	0000	0000	II	
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	0000	0000	0000	II	
5. Acute viral necrosis (in scallops)	***	***	***		
6. Akoya oyster disease	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	-	-	-	III	
2. White spot disease	-	-	+( )	III	1
3. Yellowhead disease	-	-	+( )	III	2
4. Infectious hypodermal and haematopoietic necrosis	+( )	+( )	+( )	III	3
5. Infectious myonecrosis	0000	0000	0000	III	
6.White tail disease (MrNV)	-	+( )	+( )	III	4
7. Necrotising hepatopancreatitis	***	***	***		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	***	***	***		
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	0000	0000	0000	II	
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus	(07/2011)	(07/2011)	(07/2011)	III	
2. Infection with *Batrachochytrium dendrobatidis*	0000	0000	0000	II	
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	A total of 193 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 5 specimens or 2.59 % recorded as PCR positive or carrying WSSV genes. Shrimp farm with positive testing results is subjected to health improvement, movement control, eradication and/or farm dis-infection.
2	A total of 199 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 15 specimens or 7.54 % recorded as RT-PCR positive or carrying YHV genes. Shrimp farms with positive testing results are subjected to health improvement, movement control, eradication and/or farm dis-infection.
3	A total of 312 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 15 specimens or 4.81 % recorded as PCR positive or carrying IHHNV genes. Shrimp farms with positive testing results will be subjected to health improvement, movement control, eradication and/or farm dis-infection.
4	A total of 3 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 100 % recorded as PCR positive or carrying MrNV genes. Shrimp farms with positive testing results will be subjected to health improvement, movement control, eradication and/or farm dis-infection.

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

Country: VIETNAM **Period: July - September 2012**

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

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	**Pathogen**: *Edwardsiella ictaluri* Infected catfish were found in intensive ponds (*Pangasius micronema, P. hypophthalmus*), but not in a wide range, scattered in certain areas in Hua Giang and Can Tho provinces.
2	**Pathogen**: *Perkinsus* spp. **Species affected:** *Lutraria ryhynchaena* **Total affected animals:** 200,000,000 animals **Name of affected area:** Van Don and Dam Ha districts, Quang Ninh province **Control measures:** early harvest, change of culture species, movement control and treatment of culture environment.
3	**Pathogen**: White spot syndrome virus (WSSV) **Species affected:** *Penaeus monodon* and *Litopenaeus vannamei* **Name of affected area:** reported in 14 provinces including Ha Tinh, Quang Tri, Quang Binh, Binh Dinh, Phu Yen, Khanh Hoa, Ninh Thuan, Ho Chi Minh City, Long An, Ben Tre, Kien Giang, Soc Trang, Bac Lieu and Ca Mau. **Mortality rate:** medium to high **Clinical signs:** lethargic or moribund shrimps accumulated 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, especially in the removed carapace held to light after scraping off attached tissue (not always seen) **Control measures:** early harvest, strict isolation of infected ponds with movement and transport controls, disinfection of infected ponds using Calcium hypochlorite (chlorine).

4	**Pathogen**: samples were sent to the provincial laboratory for testing but results were still uncertain between Gill-associated virus (GAV) and Yellowhead virus (YHV) **Species affected:** *Litopenaeus vannamei* **Name of affected area:** two outbreaks were reported in Trung Giang commune, Gio Linh district, Quang Tri province, and Quang Yen district, Quang Ninh province at 50-75 days after stocking. Total infected area is about one hectare. **Mortality rate:** high **Control measures:** treatment of affected water with Calcium hypochlorite (chlorine).
5	**Unknown Shrimp Disease** The disease is still affecting the Mekong Delta area (Ho Chi Minh City: 30 ha; Tien Gang: 100 ha; Tra vinh: 821 ha; Ben Tre: 355 ha; Soc Trang: 6,500 ha; Bac Lieu: 3,200 ha; and Ca Mau: 90 ha) and in the South Central coast (Nghe An: 8 ha; Ha Tinh: 20 ha; Khanh Hoa: 19.5 ha; Ninh Thuan: 200 ha; and Binh Thuan: 128 ha). Mortality recorded at 20-80 days post stocking in both *P. monodon* and *L. vannamei* under intensive and semi-intensive farming systems with up to 95% mortality. Pathogen(s) have not been confirmed. Initial findings suggested that primary cause of mortality might be due to accumulated toxicity from chemicals used in aquaculture and/or microorganisms (bacteria). Histological examination showed various stages of acute hepatopancreatic necrosis syndrome (AHPNS).

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

Country: VIETNAM **Period: October - December 2012**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome	-	-	-		
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10.Enteric septicaemia of catfish	-	-	-		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	-	-	-		
3. Infection with abalone herpes-like virus	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
5. Acute viral necrosis (in scallops)	0000	0000	0000		
6. Akoya oyster disease	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+	+	+	I,II,III	1
3. Yellowhead disease	?	-	-	I,II,III	2
4. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
5. Infectious myonecrosis	0000	0000	0000		
6.White tail disease (MrNV)	-	-	-		
7. Necrotising hepatopancreatitis	0000	0000	0000		
Non OIE-listed diseases					
8. *Monodon* slow growth syndrome	-	-	-		
9. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)	-	-	-		
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. Unknown shrimp disease					3
2.					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
Crustaceans: Crayfish plague (*Aphanomyces astaci*).
NOT LISTED BY THE OIE
Finfish: Channel catfish virus disease

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No.	
1	**Pathogen**: White spot syndrome virus (WSSV) **Species affected:** *Penaeus monodon* and *Litopenaeus vannamei* **Name of affected area:** reported in 6 provinces including Quang Tri, Ho Chi Minh City, Ben Tre, Soc Trang, Bac Lieu and Ca Mau. Shrimps were affected from 20-65 days after stocking. **Mortality rate:** medium to high; 100% in some cases within 10 days. **Clinical signs:** lethargic or moribund shrimps accumulated 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, especially in the removed carapace held to light after scraping off attached tissue (not always seen) **Control measures:** early harvest, strict isolation of infected ponds with movement and transport controls, disinfection of infected ponds using Calcium hypochlorite (chlorine).
2	**Pathogen**: samples were sent to the provincial laboratory for testing but results were still uncertain between Gill-associated virus (GAV) and Yellowhead virus (YHV) **Species affected:** *Litopenaeus vannamei* **Name of affected area:** four outbreaks were reported in Trung Giang commune, Gio Linh district, and Quang Tri province at 50-75 days after stocking. Total infected area is about 13,000 m^2. **Mortality rate:** high **Control measures:** treatment of affected water with Calcium hypochlorite (chlorine).

3	**Unknown Shrimp Disease** The disease is still affecting the Mekong Delta area (Ben Tre: 133 ha; Soc Trang: 2,100 ha; Bac Lieu: 2,000 ha; and Ca Mau) and in the South Central coast (Nghe An: 1.2 ha; Quang Binh: 1.35 ha; Khanh Hoa: 10.7 ha; and Ninh Thuan: 82.6 ha). Mortality recorded at 20-80 days post stocking in both *P. monodon* and *L. vannamei* under intensive and semi-intensive farming systems with up to 95% mortality. Pathogen(s) have not been confirmed. Initial findings suggested that primary cause of mortality might be due to accumulated toxicity from chemicals used in aquaculture and/or microorganisms (bacteria). Histological examination showed various stages of acute hepatopancreatic necrosis syndrome (AHPNS).

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

List of Diseases in the Asia-Pacific
Quarterly Aquatic Animal Disease Report (Beginning 2012)

1. DISEASES PREVALENT IN THE REGION	
1.1 FINFISH DISEASES	
OIE-listed diseases	**Non OIE-listed diseases**
1. Epizootic haematopoietic necrosis	1.Grouper iridoviral disease
2. Infectious haematopoietic necrosis	2.Viral encephalopathy and retinopathy
3. Spring viraemia of carp	3.Enteric septicaemia of catfish
4. Viral haemorrhagic septicaemia	
5. Epizootic ulcerative syndrome	
6. Red seabream iridoviral disease	
7. Infection with koi herpesvirus	
1.2 MOLLUSC DISEASES	
OIE-listed diseases	**Non OIE-listed diseases**
1. Infection with *Bonamia exitiosa*	1. Infection with *Marteilioides chungmuensis*
2. Infection with *Perkinsus olseni*	2. Akoya oyster disease
3. Infection with abalone herpes-like virus	3. Acute viral necrosis (in scallops)
1.3 CRUSTACEAN DISEASES	
OIE-listed diseases	**Non OIE-listed diseases**
1. Taura syndrome	1. Monodon slow growth syndrome
2. White spot disease	3. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)
3. Yellowhead disease	
4. Infectious hypodermal and haematopoietic necrosis	
5. Infectious myonecrosis	
6. White tail disease (MrNV)	
7. Necrotising hepatopancreatitis	
1.4 AMPHIBIAN DISEASES	
OIE-listed diseases	**Non OIE-listed diseases**
1. Infection with Ranavirus	
2. Infection with *Bachtracochytrium dendrobatidis*	
2. DISEASES PRESUMED EXOTIC TO THE REGION	
2.1 Finfish	
OIE-listed diseases	**Non OIE-listed diseases**
1. Infectious salmon anaemia	1. Channel catfish virus disease
2. Infection with 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*	
4. Infection with *Xenohaliotis californiensis*	
2.3 Crustaceans	
OIE-listed diseases	**Non OIE-listed diseases**
1. Crayfish plague (*Aphanomyces astaci*)	

Recent Aquatic Animal Health Related Publications

OIE Aquatic Animal Health Code, 14th Edition, 2011. The Aquatic Animal Health Code (hereafter referred to as 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 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. The14th edition incorporates the modifications to the *Aquatic Code* agreed during the 79th General Session in May 2011. It includes revised information on the following subjects: glossary; diseases listed by the OIE; criteria to assess the safety of aquatic animal commodities; quality of Aquatic Animal Health Services; criteria for listing aquatic animal disease; control of hazards in aquatic animal feeds; introduction to the recommendations for controlling antimicrobial resistance; welfare of farmed fish during transport; welfare aspects of stunning and killing of farmed fish for human consumption; disinfection of salmonid eggs for infectious haematopoietic necrosis, infectious salmon anaemia and viral haemorrhagic septicaemia; epizootic haematopoietic necrosis; Taura syndrome and aquatic animal products listed in in Articles X.X.3. and X.X.11. (amphibians and fish chapters) / X.X.12. (crustaceans and molluscs chapters) all disease chapters (except epizootic haematopoietic necrosis, Taura syndrome, *B. ostreae*). The Aquatic Animal Health Code is available for free download http://www.oie.int/international-standard-setting/aquatic-code/access-online/. The book may be also be ordered from OIE online bookshop at http://www.oie.int/boutique/index.php?lang=en.

OIE Manual of Diagnostic Tests for Aquatic Animals, 2011. 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/international-standard-setting/aquatic-manual/access-online/ and can be ordered at http://www.oie.int/boutique/index.php?lang=en.

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

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

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Instructions on how to fill in the
QUARTERLY AQUATIC ANIMAL DISEASE REPORT
(Revised during the Provisional Meeting of the 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.

[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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