2012/3

QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

July – September 2012

Published by the

Network of Aquaculture Centres in Asia-Pacific

Suraswadi Building, Department of Fisheries
Kasetsart University Campus, Ladyao, Jatujak
Bangkok 10900, Thailand

Food and Agriculture Organization of the United Nations

Viale delle Terme di Caracalla
Rome 00100
Italy

January 2013

Network of Aquaculture Centres in Asia-Pacific and Food and Agriculture Organization of the United Nations. Jan. 2013. *Quarterly Aquatic Animal Disease Report (Asia and Pacific Region)*, 2012/3, July – September 2012. NACA: Bangkok, Thailand.

Contents

Foreword

11th Meeting of the Asia Regional Advisory Group on Aquatic Animal Health: Commemorating its 10 years in the Asia-Pacific Region

The 11th Meeting of the Asia Regional Advisory Group on Aquatic Animal Health (AGM 11) was held at Maruay Garden Hotel, Bangkok, Thailand on 21-23 November 2012. The meeting marked a decade of existence of AG (officially established on November 2001) in the region, and was attended by the following members and co-opted members:

- Dr. Jie Huang (OIE, AAHSC; China);
- Dr. Simona Forcella (OIE, France)
- Dr. Hnin Thidar Myint (OIE Regional Representation for Asia and the Pacific, Tokyo, Japan)
- Dr. Weimin Miao (FAO-Regional Representation in Asia and the Pacific, Bangkok, Thailand);
- Dr. Ingo Ernst (DAFF Australia)
- Dr. Edgar Amar (SEAFDEC Aquaculture Department)
- Dr. Kjersti Gravningen (Private Sector; PHARMAQ Vietnam)
- Dr. Wensheng Lan (Shenzhen Exit & Entry Inspection and Quarantine Bureau, AQSIQ, China)
- Prof. Timothy Flegel (Centex Shrimp, Mahidol University)
- Dr. Supranee Chinabut (AAH Expert, Thailand)
- Dr. Somkiat Kanchanakhan (IAAHRI, Thailand)
- Dr. Eduardo Leano, Dr. CV Mohan, Mr. Simon Wilkinson and Dr. Ambekar Eknath (NACA)
- Dr. Siow Foong Chang (MSD Animal Health, Singapore)
- Dr. Temduong Somsiri (Director, IAAHRI, Thailand)

Dr. Ingo Ernst was re-appointed as the Chairperson of AG for 2012 and 2013, while Dr. Somkiat Kanchanakhan as Vice-Chairperson. Commemorating the completion of 10 years of AG, a brief history and highlights of accomplishments were presented in a short report by Dr. CV Mohan. The establishment of AG was an offshoot of an FAO TCP in the region on aquatic animal health management which was implemented by NACA in 1999-2001. The group was formally established in 2001 upon approval by NACA GC. The first provisional meeting of AG was held in November 2001 to develop TOR, set objectives, decide on team composition and agree on conduct of meetings. Since then, the group meets on annual basis. Presently, 10 AG meetings have been conducted and carried out yearly aquatic animal disease situation analysis, identification of emerging diseases, assessment of emerging diseases for QAAD listing, revision of QAAD list, review of the implementation of TG in the region and updates on OIE meetings, identification of RRCs, RRLs and RREs, and sending of reports to partner organizations (FAO, OIE, SEAFDEC, ASEAN).

Significant impacts of AG include its important contribution of standard setting bodies/processes based on the regional issues discussed and identified. It has also established strong collaboration with OIE (AAHSC), FAO and SEAFDEC, strong and efficient networking in the region, strong endorsement of NACA GC on the work/role played by AG in supporting AAH management in the region. Specific accomplishments include the following:

- QAAD listing of important aquatic animal diseases in the region which served as an early warning system especially for emerging diseases prior to listing in OIE;
- Identification of RRL for emerging diseases (e.g. for WTD) which eventually led to recognition by OIE (after listing) and identified as OIE Reference Laboratory/Expert;
- Two AG members is now serving on the OIE AAHSC (Drs. Jie Huang and Ingo Ernst); and members of OIE AAHSC have also served as members of AG (Drs. Eva Maria Bernoth, Frank Berthe and Barry Hill);
- Developed and published several disease cards for important aquatic animal diseases in the region;
- Played a significant role the listing and delisting of diseases in OIE list;

NACA has been facilitating AG mechanism for the past 10 years with full support from membership and associated organization which has paved way in its current self-sustaining status.

During the 3-day AGM 11, the group managed to accomplish the TOR set for the AG which includes reviewing the disease situation in Asia, considering the recent changes made to OIE global standards, revising the list of diseases for listing in the regional QAAD reporting system, assessing the progress made against the various elements contained in the Asia Regional Technical Guidelines on responsible movement of live aquatic animals, updating the regional resource centers, and developing recommendations and action points for the consideration of NACA and NACA Member Governments.

One of the highlights of the recent meeting was the inclusion of the new emerging shrimp disease Acute hepatopancreatic necrosis syndrome (AHPNS) in the QAAD list of diseases. This will require member governments to report any outbreak of the disease for the quarterly disease surveillance report commencing on the first quarter of 2013. Finalisation of the OIE-NACA WAHIS Regional Core was also discussed, and full implementation of this regional online reporting of aquatic animal diseases is targeted by January 2013 at the earliest.

Detailed meeting report will be prepared by the Secretary of the AG (NACA Aquatic Animal Health Program Coordinator) and will be made available to all governments, published on NACA website and formally submitted to regional and international organizations (e.g. OIE AAHSC, FAO, SEAFDEC, ASEAN).

Reports Received by the NACA Secretariat

Country: AUSTRALIA **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	-(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)	III	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)	-(2012)		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)	-(2011)		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)	-(2011)		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** 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 the Northern Territory** in July 2012, passive surveillance; 2. **Species affected** – Sleepy cod (*Oxyeleotris lineolatus*), one 34cm adult female; 3. **Clinical signs** – Ulcerative skin lesions; 4. **Pathogen** – *Aphanomyces invadans*; 5. **Mortality rate** – One wild fish submitted for laboratory diagnosis during a fisheries survey; 6. **Economic loss** – Not applicable, wild fish; 7. **Geographic extent** – Mary River Bridge Lagoon; 8. **Containment measures** – Not applicable. EUS is considered endemic in certain streams and rivers in the Northern Territory; 9. **Laboratory confirmation –** Histopathology and *Aphanomyces invadans* PCR; 10. **Publications** – None.

2	**Epizootic ulcerative syndrome** 1. **Reported in Queensland** in August 2012, passive surveillance; 2. **Species affected** – Spangled perch (*Leiopotherapon unicolor*) and bony bream (*Nematalosa erebi*); 3. **Clinical signs** – Extensive white skin lesions on the dorsal abdomen of both fish; 4. **Pathogen** – *Aphanomyces invadans*; 5. **Mortality rate** – Two fish with lesions were examined; 6. **Economic loss** – Not applicable, wild fish collected during an environmental assessment survey; 7. **Geographic extent** – Affected fish were collected live from dry season pools in the Dugald river, Carpentaria; 8. **Containment measures** – Not applicable; 9. **Laboratory confirmation** – Histopathology; 10. **Publications** – None. Epizootic ulcerative syndrome is known to have occurred previously in Victoria (last reported 2012), Western Australia (last reported 2009) and South Australia (last reported 2008). Passive surveillance and never reported in Tasmania. No information available in the Australian Capital Territory.
3	**Viral encephalopathy and retinopathy** was not reported this period despite passive surveillance but is known to have occurred previously in Queensland (last reported 2012), 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*** was not reported this period despite passive surveillance but is known to have occurred previously in South Australia (last reported 2011) and New South Wales (last reported 2005). Not reported despite targeted surveillance in Western Australia (last reported 2003). Passive surveillance and never reported in the Northern Territory, Queensland, Tasmania and Victoria. No information available for the Australian Capital Territory (no marine water responsibility).
6	**Infection with abalone herpes-like virus (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), 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*** was not reported this period but is known to have occurred previously in Victoria (last reported 2011) and Tasmania (last reported 2010). 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: 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	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	1
7. Koi herpesvirus disease	+	-	-	III	2
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-	III	
9. Viral encephalopathy and retinopathy	+	-	-	III	3
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	4,5
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	Red seabream iridovirus (Red seabream iridoviral disease) was detected in a group of green groupers which were observed to have abnormal behavior and darkened body coloration. There were 50% mortality and 80% morbidity reported.
2	Infection with Koi herpesvirus was detected from a group of assorted kois that have been submitted for health certification.
3	Viral encephalopathy and retinopathy or viral nervous necrosis was detected in a group of hybrid groupers which were observed to have abnormal behavior and darkened bodies. There were 50% mortality and 80% morbidity reported.
4	White spot syndrome virus (white spot disease) was detected in group of red lobsters which have been submitted for health certification.
5	White spot syndrome virus (white spot disease) was detected in groups of red lobsters, red-claw crayfish and watermelon crabs which have been submitted for health certification.

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

Country: INDIA **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	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; Surat, Navasari, Amravati and Junagarh districts of Gujarat; Kannur district of Kerala; Tahne district of Maharashtra; Jagatsingphur, Kendrapada, Bhadrak and Balasore districts of Odisha; and Nagapattinam district of Tamil Nadu, during different months under the reporting period.
2	**White spot disease:** Also reported in *L. vannamei* from Bhimawaram district of Andhra Pradesh; Udupi district of Karnataka; Thane district of Maharashtra; and Nagapattinam district 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: 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	0000	0000	0000		
6. Red seabream iridoviral disease	0000	+( )	+( )	III	1
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	+( )	+( )	+( )	III	2
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10.Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Infection with abalone 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	III	3
2. White spot disease	+( )	+( )	+( )	III	4
3. Yellowhead disease	0000	0000	0000		
4. Infectious hypodermal and haematopoietic necrosis	+( )	0000	0000	III	5
5. Infectious myonecrosis	+( )	+( )	0000	III	6
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*	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:

		+( )	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	**Red Seabream Iridoviral Disease** 1. - 2. **Species affected:** *Cromileptis altivelis* 3. **Clinical signs: -** 4. **Pathogen:** Iridovirus; 5. **Mortality rate: -** 6. **Economic loss: -** 7. **Names of infected areas:** Teluk Mendeh (West Sumatra); 8. **Preventive/control measures: -** 9. **Laboratory confirmation:** Center of Fish Diseases and Environment Investigation 10. **Publications :** not published.
2	**GIV** 1. - 2. **Species affected:** *Cromileptis altivelis, Epinephelus fuscoguttatus,* Asian seabass larvae cultured in West Sumatra province; 3. **Clinical signs:** melanosis, reduced appetite, exophthalmos, necrosis, weak swimming, mucus excretion in the body, dead fish lying on the bottom of the net; 4. **Pathogen:** Iridovirus; VNN virus mild positive; 5. **Mortality rate:** 10-50%; 6. **Economic loss:** - 7. **Names of infected areas:** Kalianda (South Sumatra), Jepara (Central Java), Bahan Island Karinum (Batam Province); 8. **Preventive/control measures:** infected fish subjected to quarantine, Vitamin C supplementation, improved fish health management, regular monitoring of water quality, immersion treatment with acriflavine; 9. **Laboratory confirmation:** Main Center Mariculture Development Lampung Laboratory, Mariculture Development Center Batam Laboratory; 10. **Publications:** not published.

3	**TSV** 1. - 2. **Species affected:** *Litopenaeus vannamei* (PL, juveniles) 3. **Clinical signs:** - 4. **Pathogen:** Taura syndrome virus; 5. **Mortality rate:** - 6. **Economic loss:** - 7. **Names of infected areas:** Jepara, Kendal (Central Java); 8. **Preventive/control measures:** - 9. **Laboratory confirmation:** Main Center Brackishwater Development Jepara Laboratory; 10. **Publications:** not published.
4	**WSSV** 1. - 2. **Species affected:** *Penaeus monodon*, *Litopenaeus vannamei* (PL, juveniles) 3. **Clinical signs:** White spot on carapace of infected shrimps, reddish shrimps, reduced appetite, swimming on the edge of the pond; 4. **Pathogen:** White spot baculovirus complex; 5. **Mortality rate:** 30-100%; 6. **Economic loss:** - 7. **Names of infected areas:** Kerawang, Pandeglang (West Java), Demak (Central Java); 8. **Preventive/control measures:** biosecurity, improved water quality management, Vitamin C supplementation, application of probiotics; 9. **Laboratory confirmation:** Aquaculture Business Development Center Laboratory Kerawang, Main Center Brackishwater Development Jepara Laboratory; 10. **Publications:** not published.
5	**IHHNV** 1. - 2. **Species affected:** *Penaeus monodon* 3. **Clinical signs:** - 4. **Pathogen:** Infectious hypodermal and haematopoietic necrosis virus; 5. **Mortality rate:** - 6. **Economic loss:** - 7. **Names of infected areas:** - 8. **Preventive/control measures:** - 9. **Laboratory confirmation:** Main Center Brackishwater Development Jepara Laboratory; 10. **Publications:** not published.
6	**IMNV** 1. - 2. **Species affected:** *Litopenaeus vannamei* 3. **Clinical signs:** reduced appetite, gradual mortality, whitish muscle on the third segment 4. **Pathogen:** Infectious myonecrosis virus; 5. **Mortality rate:** 60% 6. **Economic loss:** - 7. **Names of infected areas:** Mauk (West Java), Pontianak (West Kalimantan); 8. **Preventive/control measures:** - 9. **Laboratory confirmation:** Main Center Brackishwater Development Jepara Laboratory; 10. **Publications:** not published.

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

Country: JAPAN **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	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	+	+	+	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	1
2. Infection with *Batrachochytrium dendrobatidis*	-	-	-	I	
ANY OTHER DISEASES OF IMPORTANCE					
1. Infection with *Xenohaliotis californiensis*	+?	+?	+?	III	2
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 Ranavirus was isolated from *Fejervarya limnocharis* and *Rana catesbeiana* without any clinical symptoms in August.
2	DNA of *Xenohaliotis californiensis* was isolated from *Haliotis discus hannai* (domestic), *Haliotis gigantea* (domestic) and *Sulculus diversicolor diversicolor* (domestic) without any clinical symptom.
3	

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

Country: LAO PDR **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	***	***	***		
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: 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	I,II,III	
3. Spring viraemia of carp	-	-	-	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	0000	0000	-	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		
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) although active surveillance was conducted by DOF
2	**Koi herpesvirus disease** 1. One (1) positive cases detected (PCR) during DOF active surveillance programme.
3	**Grouper Iridoviral disease (GIV)** 1. All fish samples from Kedah were negative for Iridovirus tested in Fisheries Research Institute (FRI),Pulau Sayak for diagnostic cases.
4	**Viral encephalopathy and retinopathy** 1. All fish samples from Kedah were negative for VNN, tested in Fisheries Research Institute (FRI),Pulau Sayak for diagnostic cases. .
5	**Taura syndrome virus (TSV)** (*Penaeus monodon, Litopenaeus vannamei*) 1. TSV was not detected in all the samples 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.

6	**White Spot Syndrome Virus (WSSV)** 1. No positive case was reported.
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 one (1) sample (*P. monodon*) 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.
9	**Infectious Myonecrosis (IMNV)** 1. IMNV was not detected in all the samples of *Litopenaeus vannamei* sent to private laboraotry 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. 14 samples in July were found positive for MrNV by FRI, Pulau Sayak. Samples were taken from Teluk Intan River, Perak (12 out of 59 samples) and FRI Pulau Sayak (2 out of 12 samples)
11	**Necrotising hepatopancreatitis (NHPB)** 1. NHPB was not detected in all the samples of *P. monodon* and *Litopenaeus vannamei* sent to Lab Industrial Resources laboratory (LIR) for routine and monitoring purposes.
12	**Hepatopancreatic parvo virus disease (HPV)** 1. No screening were done for HPV.

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

Country: MYANMAR **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	***	***	***		
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 and tested WSSV, IHHNV and TSV of 4 samples (1 frozen and 2 live shrimps for export, and 1 adult shrimps). All samples were found negative for the viruses.
2	Additional Note: Farm visits in Yangon, Ayeyarwaddy and Bago regions during this period showed parasitic infestations on some farms due to poor water quality. 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: 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	-	-	-	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 Sunsari district in July. Species affected: mostly *Labeo rohita* and *Cirrhinus mrigala*; 400-500 g size; 1 ha ponds. Disease signs: red spots and ulcer wounds on the body. Mortality and loss not reported. Control Measures: liming at 500 kg/ha. Publications: None
2	
3	

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

Country: PHILIPPINES 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	- (2002)	- (2002)	- (2002)		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-	III	1
9. Viral encephalopathy and retinopathy	-	-	-	III	2
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	3
2. White spot disease	+	+	+	III	4
3. Yellowhead disease	- (1999)	- (1999)	- (1999)	III	5
4. Infectious hypodermal and haematopoietic necrosis	-	-	-	III	6
5. Infectious myonecrosis	0000	0000	0000	III	7
6.White tail disease (MrNV)	0000	0000	0000	III	8
7. Necrotising hepatopancreatitis	0000	0000	0000	III	9
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	Six (6) samples of grouper (*Epinephelus spp.*) were analyzed for **Iridovirus** using the PCR test and all samples showed a negative result. The samples analyzed were collected from Calauan, Laguna (2) and Alaminos, Pangasinan (4). Examinations/tests were conducted by the BFAR Central Office Fish Health Laboratory.
2	Six (6) samples of Asian Seabass (*Lates calcarifer*) were analyzed using the PCR test and all showed a positive result for **Viral Encephalopathy and Retinopathy**. The samples analyzed were collected from Iloilo (5) and Sarangani (1). Examinations/tests were conducted by the Southeast Asian Fisheries Development Center/ Aquaculture Department. Six (6) samples of grouper (*Epinephelus spp*.) were analyzed using the PCR test and all showed a negative result for **Viral Encephalopathy and Retinopathy**. The samples analyzed were collected from Alaminos, Pangasinan (4) and Calauan, Laguna (2). Examinations/tests were conducted by the BFAR Central Office Fish Health Laboratory.
3	Eighty-three (83) samples (69 *Penaeus vannamei*, 13 *Penaeus monodon* and 1 *Macrobrachium rosenbergii*) of different stages (fry, nauplii, post-larval, broodstock and adult) were analyzed using the PCR test. All 83 samples showed a negative result for **Taura Syndrome Virus**. The samples were collected from Maguindanao, Davao City, Batangas, Rizal Province, Zambales, Agusan del Norte, Butuan City, Samar, Iloilo City, Misamis Occidental, Occidental Mindoro, Bohol, Cebu and Pangasinan. Examinations/tests were conducted by the BFAR Central Office Fish Health Laboratory.

4	Three hundred seventy-nine (379) shrimp samples of different stages (fry, juvenile, broodstock, grow-out, post-larval and adult) were analyzed using the PCR test. Twenty-six (26) samples showed a positive result for **White Spot Disease Virus** out of the total 379 samples. The samples for analysis were collected from Batangas, Davao City, Samar, Agusan del Norte, Butuan City, Maguindanao, Cotabato City, Misamis Occidental, Camarines Norte, Occidental Mindoro, Zambales, Rizal Province, Pampanga, Iloilo City, Cebu, Pangasinan and Bohol. Examinations/tests were conducted by the BFAR Central Office Fish Health Laboratory, Southeast Asian Fisheries Development Center/ Aquaculture Department and Negros Prawn Producers Cooperative.
5	Thirty-four (34) samples (9 *Penaeus vannamei* and 25 *Penaeus monodon*) of different stages (fry, juvenile, broodstock and adult) were analyzed using the PCR test. All 34 samples showed a negative result for **Yellowhead Virus**. The samples were collected from Cotabato City, Misamis Occidental, Maguindanao, Agusan del Norte, Samar, Iloilo City, Bohol, Cebu and Zamboanga. Examinations/tests were conducted by the BFAR Central Office Fish Health Laboratory.
6	Seven (7) samples (*Penaeus monodon*) of juvenile stage were analyzed using the PCR test. All 7 samples showed a positive result for the Infectious Hypodermal and Haematopoietic Necrosis Virus. The positive samples were seven (7) juvenile *P. monodon* from Iloilo. Examinations/tests were conducted by the Southeast Asian Fisheries Development Center/ Aquaculture Department.
7	One hundred and eight (108) samples (87 *Penaeus vannamei* and 21 *Penaeus monodon*) of different stages (nauplii, post-larval, juvenile, grow-out, broodstock and adult) were analyzed using the PCR test. All 108 samples showed a negative result for **Infectious Myonecrosis Virus**. The samples were collected from Batangas, Davao City, Misamis Occidental, Maguindanao, Cotabato City, Agusan del Norte, Butuan City, Samar, Batangas, Zambales, Iloilo City, Occidental Mindoro, Bohol, Cebu, Pangasinan and Zamboanga. Examinations/tests were conducted by the BFAR Central Office Fish Health Laboratory.
8	Thirty-one (31) samples of post-larval *Macrobrachium rosenbergii* were collected from Binangonan, Rizal and all samples showed a negative result for ***Macrobrachium rosenbergii*** **Nodavirus**. Examinations/tests were conducted by the BFAR Central Office Fish Health Laboratory.
9	Eighty-three (83) samples (57 *Penaeus vannamei* and 26 *Penaeus monodon*) of different stages (juvenile, broodstock, grow-out, post-larval and adult) were analyzed using the PCR test and all samples showed a negative result for **Necrotising Hepatopancreatitis**. The samples were collected from Batangas, Davao City, Agusan del Norte, Butuan City, Samar, Cotabato City, Maguindanao, Iloilo City, Batangas, Zambales, Bohol, Cebu, Pangasinan, Misamis Occidental, Occidental Mindoro, Bataan and Pampanga. Examinations/tests were conducted by the BFAR Central Office Fish Health Laboratory.

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

Country: SINGAPORE **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	0000	0000	0000		
6. Red seabream iridoviral disease	(2012)	(2012)	(2012)	III	
7. Koi herpesvirus disease	+ ( )	+	(2012)	III	1
Non OIE-listed diseases					
8. Grouper iridoviral disease	(2012)	(2012)	(2012)		
9. Viral encephalopathy and retinopathy	+	+	(2012)	I, II & 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)	III	3
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. Iridoviral disease (ornamental fish)	(2011)	(2011)	+	I, II & III	4
2. *Aeromonas salmonicida* (in goldfish)	0000	0000	0000	II & III	5

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *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	Koi herpesvirus (KHV) was detected by real-time PCR in a batch of sentinel koi from Malaysia submitted under the routine Koi Import Surveillance programme in July 2012. All koi in the affected batch were culled, along with those in adjacent ponds in the same quarantine area as biosecurity on the farm was deemed poor. KHV was detected by real-time pCR from 2 local koi breeders. Infected batches on both premises were culled. The remaining batches from those compartments were tested for KHV and culled if found to be infected.
2	Viral encephalopathy and retinopathy or Viral nervous necrosis virus (VNNV) was detected in 2 batches of grouper fingerlings from a landbased nursery, 1 batch of seabass from a floating netcage farm and 1 batch of scad from an aquarium in July. VNNV was detected in 1 batch of seabass submitted from a floating netcage farm in August. The farmer was advised to remove moribund fish from tanks in the landbased hatchery and netcages of the floating fish farm.
3	White spot syndrome virus (WSSV) was detected in imported ornamental crayfish from Indonesia in July. This was part of an investigation conducted following a DEFRA notification of WSSV in diseased crayfish exported from Singapore. All crustacean species on the importer's premise were culled, and the facilities thoroughly disinfected. A new surveillance program for WSSV in crayfish and other crustaceans imported from Indonesia commenced in September 2012.
4	Infectious spleen and kidney necrosis virus (ISKNV) was detected in one batch of diseased angelfish imported from Malaysia by a local ornamental fish farm. The farmer was advised to cull the diseased fish, and to keep them separate from other species on his farm.

5	*Aeromonas salmonicida* was not detected this quarter in all 12 batches of goldfish submitted under a targeted surveillance program for goldfish exported to Australia.

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

Country: SRI LANKA **Period: 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	III	7
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	0000	0000	0000	III	6
4. Viral haemorrhagic septicaemia	0000	0000	0000	III	7
5. Epizootic ulcerative syndrome	***	***	***		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	***	***	***	III	8
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	1
3. Yellowhead disease	-	-	-	III	2
4. Infectious hypodermal and haematopoietic necrosis	-	+( )	-	III	3
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	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:

+	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	WSSV was reported in the months of July, August and September in *P. monodon* in the coastal area of Northwestern province. 149 samples were tested by PCR and 142 samples gave positive results. The tests were carried out in NAQDA (National Aquaculture Development Authority) and NARA (National Aquatic Resource and Research Agency) laboratories.
2	A total of 20 *P. monodon* samples have been tested for YHD and none of the samples gave positive results. YHV was detected in the first quarter of 2012 in *P. monodon*. Tests were carried out in the laboratories of NAQDA and NARA.
3	For IHHN, one out of 7 samples of *P. monodon* tested by PCR gave positive result during the month of August. In July and September, 20 samples of *P. monodon* have been tested by PCR. Tests were carried out in the laboratories of NAQDA and NARA.
4	MBV screering was carried out at NARA laboratory in the months of July, August and September. 25 samples of *P. monodon* were tested and 5 samples were found positive for MBV. .
5	20 samples of *P. monodon* were tested for LSV by PCR, no sample gave positive results.
6	2 samples of koi carp were received in the month of September from an export premises in the Western province. The fish are held in a closed aquarium system. Testing has been carried out by PCR at Central Veterinary Investigation Centre (CVIC) at Veterinary Research Institute. The two samples were found negative for SVC.

7	PCR method is being developed for VHS and EHN at CVIC. This has been carried out for the samples taken from export premises prior to certification; results were negative. No samples were received for the month of July to September.
8	18 samples of Koi carp from export premises were tested for KHV by PCR, and there was not positive results obtained. The test has been carried out at the Centre for Aquatic Disease Diagnosis and Research (CADDAR). No clinical signs were also observed in these fish samples.

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

Country: THAILAND **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	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	1
2. White spot disease	-	+( )	+( )	III	2
3. Yellowhead disease	+( )	-	-	III	3
4. Infectious hypodermal and haematopoietic necrosis	+( )	+( )	+( )	III	4
5. Infectious myonecrosis	0000	0000	0000	III	
6.White tail disease (MrNV)	-	-	-	III	
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 200 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 1 specimen or 0.5 % recorded as PCR positive or carrying TSV genes. Shrimp farm with positive testing results is subjected to health improvement, movement control, eradication and/or farm dis-infection.
2	A total of 200 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 4 specimen or 2 % 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.
3	A total of 200 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 1 specimens or 0.5 % 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.
4	A total of 200 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 4 specimens or 2 % recorded as PCR positive or carrying IHHNV genes. Shrimp farms with positive testing results will subject 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):

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.

NACA, 2012. Final Report. Asia Pacific Regional Consultation on the Emerging Shrimp Disease – Early Mortality Syndrome (EMS)/Acute Hepatopancreatic Necrosis Syndrome (AHPNS). Network of Aquaculture Centres in Asia-Pacific, Bangkok, Thailand. http://www.enaca.org/modules/library/publication.php?publication_id=1059

Senapin, S., Phiwsaiya, K., Gangnonngiw, W., Flegel, T., 2011. **False rumours of disease outbreaks caused by infectious myonecrosis virus (IMNV) in the whiteleg shrimp in Asia.** Journal of Negative Results in BioMedicine, 10:10.

Rodgers, C.J., Mohan, C.V., Peeler, E.J., 2011. **The spread of pathogens through trade in aquatic animals and their products.** Rev. Sci. Tech, Off. Int. Epiz., 30: 241-256.

Jithendran, K.P., Shekar, M.S., Kannapan, S., Azad, I.S., 2011. **Nodavirus infection in freshwater ornamental fishes in India: diagnostic histopathology and nested PCR.** Asian Fisheries Science, 24:12-19.

Alday-Sanz, V., 2010. Chapter 24: **Designing a biosecurity plan at the facility level: criteria, steps and obstacles.** In: V. Alday-Sanz (ed), The Shrimp Book, Nottingham University Press. p. 655-678.

Benitez, J., Juarez, L., 2010. Chapter 30: **The State Committees for Aquaculture Health: a success story from Mexico.** In: V. Alday-Sanz (ed), The Shrimp Book, Nottingham University Press. p. 821-833

Chen, S., Santos, M.D., Cowley, J., 2010. Chapter 28: **What will PCR bring to shrimp farming: contribution, compromise or conflict.** In: V. Alday-Sanz (ed), The Shrimp Book, Nottingham University Press. p. 751-772.

Corsin, F., de Blas, N., 2010. Chapter 27: **Shrimp epidemiology: applying population-based methods to shrimp health management.** In: V. Alday-Sanz (ed), The Shrimp Book, Nottingham University Press. p. 713-749.

Cuellar-Anjel, J., Corteel, M., Galli, L., Alday-Sanz, V., Hasson, K.W., 2010. Chapter 22: **Principal shrimp infectious diseases, diagnosis and management**. In: V. Alday-Sanz (ed), The Shrimp Book, Nottingham University Press. p. 517-621

Flegel, T.W., 2010. Chapter 23: **Importance of host-viral interactions in the control of shrimp disease outbreaks.** In: V. Alday-Sanz (ed), The Shrimp Book, Nottingham University Press. p. 623-654.

Karunasagar, In., Karunasagar, Id., Alday-Sanz, V., 2010. Chapter 26: **Immunostimulants, probiotics and phage therapy: alternatives to antibiotics.** In: V. Alday-Sanz (ed), The Shrimp Book, Nottingham University Press. p. 695-711.

Lotz, J.M., 2010. Chapter 25: **Evolutionary principles applied to disease control and health management in shrimp aquaculture.** In: V. Alday-Sanz (ed), The Shrimp Book, Nottingham University Press. p. 679-694.

Smith, P., 2010. Chapter 29: **An economic framework for discussing antimicrobial agent use in shrimp farming.** In: V. Alday-Sanz (ed), The Shrimp Book, Nottingham University Press. p. 773-820.

Lightner, D.V., Redman, R.M., 2010. **The global status of significant infectious diseases of farmed shrimp.** Asian Fisheries Science, 23:383-426.

Kono, T., Fall, J., Korenaga, H., Takayama, H., Iizasa, T., Mekata, T., Itami, T., Sakai, M., 2010. **Immunomodulation by DNA vaccination against white spot syndrome virus (WSSV).** Asian Fisheries Science, 23:435-446.

Sudhakaran, R., Mekata, T., Inada, M., Okugawa, S., Kono, T., Supamattaya, K., Yoshida, T., Sakai, M., Itami, T., 2010. **Development of rapid, simple and sensitive real-time reverse transcriptase loop-mediated isothermal amplification method (RT-LAMP) to detect viral diseases (PRDV, YHV, IHHNV and TSV) of penaeid shrimp.** Asian Fisheries Science, 23:561-575.

SEAFDEC AQD, 2010. **Prevention and Control of Parasites in Groupers** (Flyer). SEAFDEC Aquaculture Department, Tigbauan, Iloilo, Philippines. Available for free download at http://www.seafdec.org.ph/publications_downloadable.html

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.

Bondad-Reantaso, M.G., Arthur, J.R., Subasinghe, R.P. (eds), 2009. **Strengthening Aquaculture Health Management in Bosnia and Herzegovina**. FAO Fisheries and Aquaculture Technical Paper No. 524, Food an Agriculture Organization of the United Nation, Rome, Italy. 83 pp.

FAO, 2009. **Report of the International Disease Investigation Task Force on a Serious Finfish Disease in Southern Africa**. Food and Agriculture Organization of the United Nations, Rome, Italy. 70 pp.

FAO, 2009. **What You Need to Know about Epizootic Ulcerative Syndrome: An Extension Brochure**. Food and Agriculture Organization of the United Nations, Rome, Italy. 33 pp.

RECOFI. 2009. Proposal for a Regional Programme for Improving Aquatic Animal Health in RECOFI Member Countries. FAO Fisheries and Aquaculture Report No. 876, Food and Agriculture Organization of the United Nations, Rome, Italy. p. 101-118

Bondad-Reantaso, M.G., Arthur, J.R. and Subasinghe, R.P. (eds.). 2008. **Understanding and applying risk analysis in aquaculture.** *FAO Fisheries and Aquaculture Technical Paper. No. 519.* Rome, FAO. 2008. 304p. Risk analysis is an objective, systematic, standardized and defensible method of assessing the likelihood of negative consequences occurring due to a proposed action or activity and the likely magnitude of those consequences, or, simply put, it is "science-based decision-making"

FAO. Report of FAO **Workshop on Information Requirements for Maintaining Aquatic Animal Biosecurity.** Cebu City, Philippines, 15−17 February 2007. *FAO Fisheries and Aquaculture Report*. No. 877. Rome, FAO. 2008. 27p.

FAO Regional Commission for Fisheries. **Report of the Regional Technical Workshop on Aquatic Animal Health.** Jeddah. Kingdom of Saudi Arabia, 6-10 April 2008. FAO Fisheries and Aquaculture Report. No. 831. Rome, FAO. 2008. 120 pp**.**

FAO. 2009. **Report of the International Emergency Disease Investigation Task Force on a Serious Finfish Disease in Southern Africa, 18-26 May 2007.** Rome, FAO. 2009.

Arthur, J.R., Bondad-Reantaso, M.G. and Subasinghe, R.P. 2008. **Procedures for the quarantine of live aquatic animals: a manual**. FAO Fisheries Technical Paper No. 502. Rome, FAO. 2008. 74p.

Bondad-Reantaso, M.G., Mohan, C.V., Crumlish, M. and Subasinghe, R.P. (eds.) 2008. **Proceedings of the Sixth Symposium on Diseases in Asian Aquaculture (DAA VI)**. 25-28 October 2005, Colombo, Sri Lanka. Fish Health Section. 505 pp.

Bernoth, E.-M. (Coordinator). 2008. **Changing Trends in Managing Aquatic Animal Disease Emergencies.** OIE Scientific and Technical Review, Volume 27(1), April 2008. 281p.

Bondad-Reantaso, M.G., McGladdery, S.E. and Berthe, F.C.J. 2007. **Pearl oyster health management: a manual.** FAO Fisheries Technical Paper. No. 503. Rome, FAO. 2007. 120p.

Kirjusina, M. and Vismanis, K. 2007. **Checklist of the parasites of fishes of Latvia. FAO Fisheries Technical Paper. 369/3.** Rome, FAO. 113p.

List of National Coordinators*

Country	Name and Address
Australia	Dr. Ingo Ernst Aquatic Animal Health Unit Office of the Chief Veterinary Officer Department of Agriculture, Fisheries and Forestry GPO Box 858, Canberra ACT 2601, Australia Fax: +61-2-6272 3150; Tel: +61-2-6272 4328 Email: ingo.ernst@daff.gov.au Dr. Herbert Brett Aquatic Animal Health Unit , Office of the Chief Veterinary Officer Department of Agriculture, Fisheries and Forestry GPO Box 858, Canberra ACT 2601, Australia Fax: +61 2 6272 3150; tel: +61 2 6272 4009 E-mail: brett.herbert@daff.gov.au
Bangladesh	Dr. M. G. Hussain Director General, Bangladesh Fisheries Research Institute (BFRI) Mymensingh 2201, Bangladesh Fax: +880-91-66559, Tel: +880-91-65874 E-mail: hussain.bfri@gmail.com; dg@fri.gov.bd; dgbfri@gmail.com
Cambodia	Dr. So Nam Deputy Director Inland Fisheries Research and Development Institute (IFReDI) 186, Norodom Blvd, Phnom Penh, Cambodia Telephone +855 23 220 417 Fax. +855 23 220 417 E-mail: so_nam@hotmail.com
China	Mr. Zhuzewen Disease Prevention and Control Division National Fisheries Technique Extension Center (NFTEC) Ministry of Agriculture Mai Zi Dian Street No 18 Chanyang District, Beijing 100026, China Fax: +86-10-65074250; Tel: +86-10-64195073 E-mail:zewenzhu@sina.com
DPR Korea	Mr. Chong Yong Ho Director of Fish Farming Technical Department, Bureau of Freshwater Culture Sochangdong Central District, P.O.Box. 95 , Pyongyong, DPR Korea Fax: +850-2-814416; Tel: 3816001, 3816121
Hong Kong China	Ms. Situ Ying-yi Fisheries Officer (Aquaculture Management) 2 Agriculture, Fisheries and Conservation Department 8/F, Cheung Sha Wan Government Offices 303 Cheung Sha Wan Road, Kowloon, Hong Kong SAR Fax: +852 21520383; Tel: +852 21526808 E-mail: anna_yy_situ@afcd.gov.hk

* The matrix provides a list of National Coordinators and focal points nominated by governments for the *Asia-Pacific Quarterly Aquatic Animal Disease Reports*.

India	Mr. Intisar Anees Siddiqui Fisheries Research & Investigation Officer Department of Animal Husbandry, Dairying and Fisheries Ministry of Agriculture, Krishi Bhawan, New Delhi 110114, India Tel: +91-11-23389419/23097013 Fax: +91-11-23070370/23384030 E-mail: intisarsiddiqui@yahoo.co.in
Indonesia	Dr. Muhammad Murdjani Director, Fish Health and Environment Ministry of Marine Affairs and Fisheries Directorate General of Aquaculture Jl. Harsono RM No. 3, Gedung Ps. Minggu Jakarta Selatan Indonesia 12550 Fax: +62-21-78835853; Tel: +62-21-7890552 E-mail: anna_murdjani@yahoo.com.id
Iran	Dr. Kazem Abdi Khazineh Jadid Director General, Aquatic Animal Health Department Iran Veterinary Organization Ministry of Jihad-E-Agriculture Seyed Jamaledin Asad-Abadi St., Vali-Asr Ave. P.O.Box 14155-6349, Tehran, Iran Tel: +98-21-88966877; Fax: +98-21-88957252 E-mail: kazemabdy@yahoo.com
Japan	Mr. Mahito Masuda Fish and Fishery Products Safety Office Food Safety and Consumer Affairs Bureau Ministry of Agriculture, Forestry and Fisheries 1-2-1, Kasumigaseki Chiyoda-ku, Tokyo 100-8950, Japan Fax: +813-3502-8275; Tel: +813-3502-8098 E-mail: mahito_masuda@nm.maff.go.jp
Lao PDR	Mrs. Thongphoun Theungphachanh Quality Control Animal Product Department of Livestock and Fisheries DLF PO Box 811, Lao PDR Fax : +856 21 216380; Tel: +856 21 216380 or Mobile: +856 20 772 1115 Email: theungphachan@yahoo.com Dr. Bounthong Saphakdy Director of Fisheries Division Department of Livestock and Fisheries DLF P.O. Box 811, Lao PDR E-mail: saphakdy@yahoo.com
Malaysia	Dr. Siti Zahrah Abdullah National Fish Health Research Centre 11960 Batu Maung Penang, Malaysia Fax: +60 4 6263977; Tel: +60 4 6263922 E-mail: siti.zahrah.abd@gmail.com
Myanmar	Mr. U Saw Lah Pah Wah Department of Fisheries, Ministry of Livestock and Fisheries Sin Minn Road, Alone Township, Yangon, Myanmar Fax: +95 01 228-253; Tel: +95 01 283-304/705-547 E-mail: dof@mptmail.net.mm
Nepal	Mr. Jay Kishore Mandal Senior Fisheries Development Officer

	Central Fisheries Laboratory Central Fisheries Building, Balaju, Kathmandu. Nepal. E-mail: mandaljaykishore@yahoo.com
Pakistan	Mr. Anser Mahmood Chatta Deputy Fisheries Development Commissioner Livestock Division, Ministry of Food, Agriculture and Livestock 10th Floor, Shaheed-e-Millat Secretariat (Livestock Wing) I Islamabad, Pakistan Fax: +9251 9212630; Tel: +9251 9208267, ansermchatta@yahoo.com
Philippines	Dr. Joselito R. Somga Aquaculturist II, Fish Health Section, BFAR 860 Arcadia Building, Quezon Avenue, Quezon City 1003 Fax: +63 2 3725055/4109987; Tel: +63 2 3723878 loc206 or 4109988 to 89 E-mail: jsomga@bfar.da.gov.ph
Republic of Korea	Dr. Myoung Ae Park Director, Pathology Division National Fisheries Research and Development Institute 152-1, Haeanro, Gijang-up Gijang-gun, Busan 619-705 Korea Tel: +82-51-7202470 E-mail: mapark@nfrdi.go.kr
Singapore	Mr. Hanif Loo Jang Jing Programme Executive (Aquaculture) Aquaculture Branch Food Supply & Technology Department Agri-Food & Veterinary Authority of Singapore 5 Maxwell Road, #01-00, Tower Block, MND Complex, Singapore 069110 Fax: +65 63257677; Tel: +65 63257636; Email: loo_jang_jing@ava.gov.sg Ms. Diana Chee Aquatic Animal Health Branch Animal and Plant Health Laboratories 6 Perahu Road, Singapore 718827 Fax: +65 63161090; Tel: +65 63165140 E-mail: Diana_Chee@AVA.gov.sg
Sri Lanka	Dr. Rajapaksa Arachilage Geetha Ramani Veterinary Investigation Officer Veterinary Investigation Center Department of Animal Production and Health Welisara, Sri Lanka Tel: +94-112-9258213; +94-714-932169 E-mail: vic_welisara@yahoo.com
Thailand	Dr. Somkiat Kanchanakhan Fish Virologist, Aquatic Animal Health Research Institute (AAHRI) Department of Fisheries , Kasetsart University Campus Jatujak, Bangkok 10900, Thailand Fax: +66 2 5613993; Tel: +66 2 5794122, 5796977 E-mail: somkiatkc@fisheries.go.th
Vietnam	Dr. Le Van Khoa Deputy Chief Aquatic Animal Health Unit Department of Animal Health (DAH) 15/78 Giai Phong Street, Dpng Da Hanoi, Vietnam Fax: +84 4 38685961; Tel: +84 4 38693605 E-mail: lvkhoa@dah.gov.vn

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:

OIE Regional Representation for Asia and the Pacific
Food Science Building 5F
The University of Tokyo
1-1-1 Yayoi, Bunkyo-ku
Tokyo, 113-8657, Japan
Tel. +81 3 5805 1931; Fax +81 3 5805 1934
E-Mail: rr.asiapacific@oie.int

NACA
P. O. Box 1040, Kasetsart Post Office, Bangkok 10903, Thailand
Tel: 66-2-561-1728/9 (ext. 117); Fax: 66-2-561-1727
Dr. E.M. Leaño
E-mail: eduardo@enaca.org

FAO
Fishery Resources Division, Fisheries Department
FAO of the United Nations
Viale delle Terme di Caracalla, 00100 Rome
Tel. +39 06 570 56473; Fax + 39 06 570 530 20
E-mail: Rohana.Subasinghe@fao.org

Notes

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

ISSN 1513-6558