



QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

July-September 2008

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**Network of Aquaculture Centres
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Foreword

Emerging Crustacean Diseases

The 7th meeting of the Asia Regional Advisory Group (AG) on aquatic animal health was held at the NACA Secretariat in Bangkok, Thailand from 15-17 December 2008. The meeting attended by 10 Advisory Group and 2 co-opted Members, addressed key aquatic animal health issues in Asia, including:

- emerging crustacean, fish and mollusk diseases in the region
- outcomes from the OIE General Session (May 2008) and the Aquatic Animal Health Standards Commission meeting (October 2008)
- global issues of relevance to aquatic animal health
- import requirements for EU
- regional quarterly aquatic animal disease reporting system (QAAD)
- new OIE disease list for 2008 and proposed list for 2009
- list of diseases for 2009 QAAD reporting
- implementation of the Asia Regional Technical Guidelines on Health Management and the Responsible Movement of live aquatic animals
- functioning of the three tier regional resource base and
- ways to further strengthen regional and international cooperation in Asian aquatic animal health management.

The AG constituted by NACA governing council in 2001, has been providing advice to Asian governments and NACA on aquatic animal health management matters in the region. Members are experts from government and the private sector with representatives from FAO, the Aquatic Animal Health Standards Commission of the OIE, the OIE Regional Representation for Asia and the Pacific, SEAFDEC and NACA. The final report will be made available for free download through the NACA website (www.enaca.org) in January 2009.

Summary of emerging diseases in crustaceans in Asia-Pacific is provided below in order to assist member countries to strengthen their surveillance and disease reporting programs.

- Discrepancies in names of shrimp viruses commonly used and those accepted by ICTV. Two major examples include Hepatopancreatic parvoviruses in penaeid shrimp and Rod-shaped, intranuclear viruses of penaeid shrimp. It may be necessary to include both names for the interim and pointed to the possible confusions that would arise while listing diseases for global and regional reporting.
 - *Penaeus monodon polyhedrovirus* (PemoNPV). PemoNPV was formerly called monodon baculovirus (MBV) and is common in Thailand and elsewhere in Asia including Australia
 - *Penaeus vannamei polyhedrovirus* (PevaNPV). PevaNPV formerly called *Baculovirus penaei* or BP currently restricted to the Americas
- Yellowhead virus (YHV) and Whitespot syndrome virus (WSSV) are lethal to all cultivated shrimp in the region. WSSV still remains an important problem in the region. Six geographical types of YHV have been identified. YHV-1 found in Thailand is considered to be highly virulent followed by YHV-II (Gill associated virus - GAV) found

in Australia. All other types of YHV were considered to be non virulent and therefore not significant.

- Taura syndrome virus (TSV) is still an important problem of *P.vannamei*. Even though TSV is known to infect local species such as *P.monodon*, *M.rosenbergii* and *P.japonicus*, its effects were considered to be not significant. There has been no reported effect on cultivated Asian shrimp reported since 1998 (almost ten years). Most domesticated stocks of *P.vannamei* are highly tolerant. Thus, the impact on *P. vannamei* culture is relatively low. There is a possibility for the development of more virulent types as reported from elsewhere
- TSV outbreaks would appear to originate from postlarvae (PLs) that are not specific pathogen free (SPF), although carriers such as wild crabs, which have been shown to be susceptible to long-term infection, may play an important role.
- IMN was recognized as the most recent threat. IMN was reported for the first time in the region (Indonesia) in June 2006 and, for its close similarity (99.6%) with the Brazilian strain it would appear to have been associated with the movement of crustaceans from Brazil to the region. It is now reported from *P. vannamei* farms on both Java and Sumatra islands. PCR kits are now available in the region for screening PL for IMNV. IMNV is not reported from other leading white shrimp producing countries (e.g. Thailand, India, Vietnam and China)
- Muscle cramp syndrome, similar in pathology and clinical appearance to IMN, has been reported from many countries. This condition, for some unknown reason, is common in *P.vannamei*, but these shrimp test negative for IMNV infection
- Infection with *P.vannamei* nodavirus (*PvNV*), first reported from Belize (2004) is indistinguishable from IMN in gross signs and histopathology has not yet been reported from Asia.
- Abdominal segment deformity disease (ASDD) was reported from Thailand and Indonesia in *P.vannamei*. The appearance of affected shrimp is similar to some infections with Infectious hypodermal and haematopoietic necrosis virus (IHHNV) except there is no retarded growth and no bent rostra. PCR tests for IHHNV are negative as are PCR and Reverse transcriptase PCR (RT-PCR) tests for other viruses including IMNV, *PvNV* and Laem Singh necrosis virus (LSNV). Many viral-like particles are found in the muscle and ventral nerve cord and it appears to be caused by a new pathogen originating from natural Asian carrier species. Although not affecting survival, the occurrence of ASDD in *P.vannamei* farms in Thailand and Indonesia is associated with deformities that lead to a reduction in market prices of about 10 baht/kg, therefore leading to significant financial losses.
- For *P.monodon*, WSSV and YHV are still considered most serious pathogens. The next most serious problem in *P.monodon* is Monodon slow growth syndrome (MSGS). This is followed by HPV and Monodon baculovirus (MBV) that do not appear to cause mortality but retarded growth.
- MSGS is the most significant problem of shrimp in Thailand, and possibly in some other *P. monodon* culturing countries like India. Recent results have shown that small shrimp from MSGS ponds show retinopathy. They are positive by RT-PCR for LSNV and also show strong *in situ* hybridization reactions in necrotic retinas. Large shrimp from the same ponds are also positive for LSNV by RT-PCR but show no retinopathy. Shrimp from normal growth ponds may also be positive by RT-PCR but show no retinopathy. Therefore, LSNV appears to be associated with MSGS but the possibility of involvement of other factors (including pathogen(s)) is being studied. Further work in this direction

is underway. LSNV has also been reported from some other countries in the region. It is suggested include LSNV in the working case definition of MSGS. Non-pathogenic YHV “type-4” and an unknown, icosahedral, viral-like particle associated with tegumental glands (tentatively called tegumental gland associated virus) are being investigated for their role as potential partners of LSNV in causing MSGS.

- A new *Macrobrachium baculovirus* and HPV have been detected. They cannot be detected with MBV or HPV methods
- Milky lobster disease (MLD) has been reported recently from caged lobsters in Vietnam (10 million USD losses). It appears to be caused by a new rickettsial type bacterium. An intensive research programme is underway in Vietnam
- NHP is still exotic to the region and is considered a potential threat to shrimp farming in the region.
- *Macrobrachium rosenbergii* nodavirus (*MrNV*) was considered to be a serious problem in freshwater prawn farming in some countries of the region. *MrNV* is capable of infecting *P.monodon*, but till recently, there is no evidence of any disease. However, unconfirmed reports suggest the possibility of *MrNV* and XSV causing mortality in *P. indicus* and *P. Monodon*. Use of common hatchery facilities for both species and lack of strict biosecurity appears to be reason. It may be prudent to add *MrNV* to the list of viruses for penaeid shrimp screening

Reports Received by the NACA Secretariat

Country: **AUSTRALIA**Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	-(2004)	-(2004)	-(2004)		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 (EUS)	+	+	+	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	-(2008)	+	-(2008)	III	3
10. Enteric septicaemia of catfish	-(2008)	-(2008)	-(2008)		4
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	?	?	?		5
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
5. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	0000	0000	0000		
3. Yellowhead disease (YH virus, gill-associated virus)	0000	0000	0000		
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	-(2007)	-(2007)	+	II	6
5. Infectious hypodermal and haematopoietic necrosis	-(2008)	-(2008)	-(2008)	III	7
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000		
7. Infectious myonecrosis	0000	0000	0000		
8. White tail disease (MrNV)	-(2008)	-(2008)	-(2008)		8
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1. Abalone viral ganglioneuritis	+	+	+	III	9
2. Oyster oedema disease	+	+	+	II	10

DISEASES PRESUMED EXOTIC TO THE REGION^b			
LISTED BY THE OIE			
Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).			
Molluscs: Infection with <i>Bonamia ostreae</i> ; <i>Marteilia refringens</i> ; <i>Perkinsus marinus</i> ; <i>Xenohalictis californiensis</i> .			
Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>).			
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
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases			

1. Epidemiological comments:

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

Comment No:	
1	Epizootic haematopoietic necrosis was not reported this period despite passive surveillance, but is known to have occurred previously in Victoria (last year reported 2004), New South Wales (last year reported 2003) and South Australia (last year reported 1992). Targeted surveillance and never reported in Tasmania. Passive surveillance and never reported in the Northern Territory, Queensland or Western Australia. Annual occurrence of the disease in the Australian Capital Territory, but no laboratory confirmation.
2	<p>Epizootic Ulcerative Syndrome</p> <ol style="list-style-type: none"> Reported in New South Wales in July, August and September 2008. Targeted surveillance; In – multiple wild species; Clinical signs- gross lesions consistent with EUS; Pathogen- <i>Aphanomyces invadans</i>; Mortality rate- none reported; Economic loss- not known; Geographic extent-infection confirmed in sea mullet (<i>Mugil cephalus</i>) and sand whiting (<i>Sillago ciliata</i>) from Myall Lakes in September. Infection is also believed to be on-going in the Clarence, Richmond, Macleay, Hastings, Manning and Wallamba Rivers, the Wiseman’s Ferry area of the Hawkesbury River and the Darling River between Brewarrina and Bourke, although reports have not been confirmed; Containment measures- not applicable, endemic; Laboratory confirmation- diagnosed by gross lesions consistent with EUS; also confirmed by histopathology and PCR for samples from Myall Lakes in September; Publications- unpublished. <p>Epizootic ulcerative syndrome was not reported during this period despite active surveillance but is considered endemic to certain streams and rivers of the Northern Territory (last year reported 2006). Not reported despite passive surveillance, but is known to have occurred previously in South Australia where an-EUS suspicion in captive <i>Mogurnda adspersa</i> in 1st quarter 2008 has been confirmed, Queensland (last reported 1st quarter 2008), Western Australia where it is considered to be endemic (last year reported 2005) and Victoria (last year reported 2002). Passive surveillance and never reported in Tasmania. No information available in the Australian Capital Territory.</p>

3	<p>Viral Encephalopathy and Retinopathy</p> <ol style="list-style-type: none"> 1. Reported in the Northern Territory in August 2008. Active surveillance; 2. In - juvenile <i>Lates calcarifer</i>; 3. Clinical signs- not reported; 4. Pathogen- viral nervous necrosis virus; 5. Mortality rate- not reported; 6. Economic loss- not reported; 7. Geographic extent- nursery ponds; 8. Containment measures- all fish destroyed; 9. Laboratory confirmation- diagnosed by histopathology and PCR; 10. Publications- unpublished. <p>Not reported this period despite targeted surveillance from South Australia (last year reported 2004). Not reported this quarter despite passive surveillance from Queensland (last reported 2nd quarter 2008), New South Wales (last year reported 2006), Western Australia (last year reported 2005) and Tasmania (last year reported 2000). Never reported from Victoria despite passive surveillance. No information available in the Australian Capital Territory.</p>
4	<p>Enteric septicaemia of catfish was not reported this quarter despite passive surveillance but is known to have occurred previously in Queensland (last reported 1st quarter 2008) and in Tasmania in zebrafish (<i>Brachydanio rerio</i>) in PC2 containment (last year reported 2001). Never reported in New South Wales, Northern Territory, South Australia and Victoria despite passive surveillance. No information available in the Australian Capital Territory and Western Australia (susceptible species not present).</p>
5	<p>Infection with <i>Perkinsus olseni</i> was not reported this quarter from Western Australia despite targeted surveillance (last year reported 2003). While <i>Perkinsus</i> has been isolated previously by culture off the gills of a clinically normal abalone in 2003, clinical infection from <i>Perkinsus</i> has never been reported from Western Australia. Not confirmed this quarter from South Australia despite passive surveillance but considered enzootic in wild abalone (<i>Haliotis spp.</i>) in Spencer Gulf (last year reported 2007). Not reported this period despite passive surveillance from New South Wales (last year reported 2005). Passive surveillance and never reported in the Northern Territory, Queensland, Tasmania and Victoria. No information available in the Australian Capital Territory (no marine water responsibility).</p>
6	<p>Spherical baculovirus was</p> <ol style="list-style-type: none"> 1. Reported in Queensland in September 2008. Passive surveillance; 2. In - juvenile <i>Penaeus merguensis</i>; 3. Clinical signs- nil; 4. Pathogen- <i>Penaeus monodon</i> baculovirus; 5. Mortality rate- nil; 6. Economic loss- nil; 7. Geographic extent- single pond; 8. Containment measures- nil; 9. Laboratory confirmation- diagnosed by histopathology; 10. Publications- unpublished. <p>Not reported this period despite passive surveillance but is known to have occurred previously in New South Wales and Western Australia (last year reported 2002). Never reported despite passive surveillance in the Northern Territory, South Australia and Victoria. No information available in the Australian Capital Territory (no marine water responsibility) and Tasmania (susceptible species not present).</p>
7	<p>Infectious Hypodermal and Haematopoietic Necrosis virus was not reported this period despite targeted surveillance but is known to have occurred previously in Queensland (last reported 2nd quarter 2008). Not reported this period despite passive surveillance but is known to have occurred previously in the Northern Territory (last year reported 2003). No disease has been associated with the virus reported from the Northern Territory in 2003. Passive surveillance and never reported in New South Wales, South Australia, Victoria and Western Australia. No information available in Australian Capital Territory (no marine responsibility) and Tasmania (susceptible species not present).</p>
8	<p>White tail disease was not reported this period from Queensland despite targeted surveillance (last reported 1st quarter 2008). Passive surveillance and never reported from New South Wales and South Australia. No information available in the Australian Capital Territory (no marine water responsibility), Northern Territory, Tasmania (susceptible species not present), Western Australia and Victoria.</p>

9	<p>Victoria Abalone viral ganglioneuritis continues to be reported in wild abalone (<i>Haliotis spp.</i>) on reefs in western Victoria. The unconfirmed mortality rate in the wild is reported to be between 40 - 95%. The range of spread in the wild is from the east end of the 12 Apostles National Park to near Portland at White's Beach to the west. Containment measures include the promotion of biosecurity in all sectors of the industry, abalone farm audits and translocation policies.</p> <p>Tasmania Clinical infection detected in an isolated recirculation holding tank for live wild caught abalone (<i>Haliotis spp.</i>) located well away from the marine environment.</p> <p>Passive surveillance and never reported in Queensland, New South Wales, South Australia and Western Australia. No information available in the Australian Capital Territory (no marine water responsibility) and Northern Territory.</p>
10	<p><i>Pinctada maxima</i> mortalities have continued on pearl oyster leases in Western Australia. Investigations into the aetiology of the disease are on-going. Affected leases remain under quarantine.</p>

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

Country: **CAMBODIA**

 Period: **April-June 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	April	May	June		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis					
2. Infectious haematopoietic necrosis					
3. Spring viraemia of carp	0000	0000	0000	III	1,2
4. Viral haemorrhagic septicaemia					
5. Epizootic ulcerative syndrome (EUS)	-	-	-	I & II	
6. Red seabream iridoviral disease					
7. Koi herpesvirus disease	0000	0000	0000	III	3
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000	III	4
9. Viral encephalopathy and retinopathy	0000	0000	0000	III	4
10. Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>					
2. Infection with <i>Perkinsus olseni</i>					
3. Abalone viral mortality					
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>					
5. Acute viral necrosis (in scallops)					
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	***	***	***		
2. White spot disease	***	***	***		
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	***	***	***		
5. Infectious hypodermal and haematopoietic necrosis					
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)					
7. Infectious myonecrosis					
8. White tail disease (MrNV)	***	***	***		
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease					
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease					
ANY OTHER DISEASES OF IMPORTANCE					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalictis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	15 samples of each carp species (i.e. common carp, grass carp, bighead carp, and silver carp) weighing from 10 to 420 grams/individual from five fish hatcheries/farms (Chrang Cham Res public hatchery, Tang farm, NGO farm, public school, and Hathuy hatchery) were collected in Cambodia and screened using PCR (nested-step), cell culture in FHM cells (passage 1, 2, & 3) and bioassay tests by Dr. Gilda D. Lio-Po and her colleagues at SEAFDEC AQD Fish Disease Laboratory in the Philippines. All carp species are negative for SVCV with all tests.
2	13 samples of grass carp, weighing from 5 to 490 grams/individual, from fish hatcheries and farms (public school, Tang farm, NGO farm, and Hathuy hatchery) were collected in Cambodia and screended using PCR (nested-step), cell culture in CO cells (passage 1,2,& 3) and bioassay tests by Dr. Gilda D. Lio-Po and her colleagues at SEAFDEC AQD Fish Disease Laboratory in the Philippines. This species is negative for GCHV with all tests
3	23 samples of common carp, weighing from 10 to 420 grams/individual, from four fish hatcheries/farms (Chrang Cham Res public hatchery, Tang farm, NGO farm, and Hathuy hatchery) were collected in Cambodia and screened using PCR (nested-step), cell culture in KF-1 cells (passage 1, 2, & 3) and bioassay tests by Dr. Gilda D. Lio-Po and her colleagues at SEAFDEC AQD Fish Disease Laboratory in the Philippines. This species is negative for KHV with all tests
4	30 samples of each of the fish species (seabass, snapper, grouper) weighing from 10 to 400g/individual from fish farms and wild in the coastal area were collected and screened using bioassay test by DR Gilda Lio Po, Dr Rolando Parkingking, Dr So Nam and trainees at Marine Aquaculture Reserarch and Development Center (MARDeC), Sihanoukville. These species were negative for VNN and Iridovirus

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

Country: **CAMBODIA**Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	July	August	September		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis					
2. Infectious haematopoietic necrosis					
3. Spring viraemia of carp	***	***	***		
4. Viral haemorrhagic septicaemia					
5. Epizootic ulcerative syndrome (EUS)	-	-	-	I & II	
6. Red seabream iridoviral disease					
7. Koi herpesvirus disease	***	***	***		
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>					
2. Infection with <i>Perkinsus olseni</i>					
3. Abalone viral mortality					
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>					
5. Acute viral necrosis (in scallops)					
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	***	***	***		
2. White spot disease	***	***	***		
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	***	***	***		
5. Infectious hypodermal and haematopoietic necrosis					
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)					
7. Infectious myonecrosis					
8. White tail disease (MrNV)	***	***	***		
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease					
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease					
ANY OTHER DISEASES OF IMPORTANCE					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalotis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	
2	
3	
4	

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

Country: **HONG KONG SAR**Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	II	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia	0000	0000	0000	III	
5. Epizootic ulcerative syndrome (EUS)	0000	0000	0000	II	
6. Red seabream iridoviral disease	-	-	-	III	
7. Koi herpesvirus disease	-	-	-	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	+	-	-	III	1
9. Viral encephalopathy and retinopathy	+	-	-	III	2
10. Enteric septicaemia of catfish	0000	0000	000	II	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	II	
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000	II	
3. Abalone viral mortality	0000	0000	0000	II	
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	II	
5. Acute viral necrosis (in scallops)	0000	0000	0000	II	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	III	
2. White spot disease	-	-	+	III	3
3. Yellowhead disease (YH virus, gill-associated virus)	0000	0000	0000	III	
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	0000	0000	0000	II	
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	II	
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000	II	
7. Infectious myonecrosis	0000	0000	0000	II	
8. White tail disease (MrNV)	0000	0000	0000	II	
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000	II	
10. Milky lobster disease	0000	0000	0000	II	
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000	II	
ANY OTHER DISEASES OF IMPORTANCE					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalictis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent But no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	One case of Grouper iridoviral disease was seen in July. One group of green groupers (GG) showed signs of skin ulcers, oral ulcerations, rotten tail fin and exophthalmos and eye-cloudiness. Mortality was 5% with 10% morbidity. Iridovirus and VNN were detected by PCR. Source of infection is not identified.
2	Please refer to comment No. (1)
3	One case of white spot disease was seen in September. One of red lobster was submitted by an aquatic farm in routine health monitoring exercise. No external lesion was found and WSSV was detected by PCR

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

Country: **INDIA**

 Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome (EUS)	-	-	-		
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10. Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
5. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+()	-	-	I	1
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	-	-	-		
5. Infectious hypodermal and haematopoietic necrosis	***	***	***		
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000		
7. Infectious myonecrosis	0000	0000	0000		
8. White tail disease (MrNV)	-	-	-		
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
10. Milky lobster disease	0000	0000	0000		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	Reported from very limited areas in North and South Goa during July, 2008

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

Country: **INDONESIA**Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	***	***	***		
4. Viral haemorrhagic septicaemia	***	***	***		
5. Epizootic ulcerative syndrome (EUS)	***	***	***		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	+	-	+	III	1
Non OIE-listed diseases					
8. Grouper iridoviral disease	+	+	+	III	2
9. Viral encephalopathy and retinopathy	+	+	+	III	3
10. Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Abalone viral mortality	***	***	***		
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
5. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	III	4
2. White spot disease	+	+	+	III	5
3. Yellowhead disease (YH virus, gill-associated virus)	0000	0000	0000		
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	***	***	***		
5. Infectious hypodermal and haematopoietic necrosis	+	+	+	III	6
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	***	***	***		
7. Infectious myonecrosis	0000	0000	0000	III	7
8. White tail disease (MrNV)	***	***	***		
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Infection with <i>Aeromonas hydrophilla</i>	+	+	+	II	8
2. Infection with <i>Ichthyophthirius multifiliis</i>	+	+	+	II	9
3. Infection with <i>Edwardsiella</i> sp and <i>E. ictaluri</i>	+	0000	+	II	10
4. Infection with <i>Mycobacterium</i> sp	0000	0000	0000		
5. Infection with <i>Pseudomonas</i> sp	0000	0000	0000		
6. Infection with <i>Staphylococcus</i> sp	0000	0000	0000		
7. Infection with <i>Vibrio</i> sp	+	+	+	II	11

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalictis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1 KHV	<ol style="list-style-type: none"> 1. Disease occur at pond or cage culture; Temperature fluctuation in the beginning of rainy season is predicted to stimulate of the outbreak; 2. Species affected: Common carp (<i>Cyprinus carpio</i>); 3. Clinical sign: low irritation on gill, fin and part of body, haemorrhage; no clinical sign on some samples 4. Pathogen: Koi Herpesvirus; All samples have been analysed by PCR; 5. Mortality rate: low to high (30 to >70%) in West Java; (<10-70%) in South Kalimantan; (30-40%) in East Kalimantan; 6. Economic loss: low to high 7. Names of infected areas: District of Sukabumi, Tangerang and Cianjur (East Java province); District of Banjar, Kutai and Tapin (South Kalimantan Province; District Kutai Kertanegara (East Kalimantan); 8. Prventive/control measures: Adding vitamin C on fish food 9. Samples have been analysed at Laboratory of Main Centre for Freshwater Aquaculture Development at Sukabumi (West Java); Laboratory of Centre for Freshwater Aquaculture Development at Mandiangin (South Kalimantan) 10. Publication: Unpublished
2. Grouper iridoviral disease	<ol style="list-style-type: none"> 1. Size of fish infected approximately 50 to 400 gr; Disease occur at marine cage culture; 2. Species affected: Polkadot grouper (<i>Cromileptes altivelis</i>), (<i>Ephinephilus fuscoguttatus</i>) and Snubnose pompano (<i>Trachinotus blochii</i>) 3. Clinical sign: abnormally swim at surface, no response, irritation at part of body, finding the giant cell at kidney, no clinical sign on some samples; 4. Pathogen: Grouper iridoviral disease; All samples have been analysed by PCR 5. Mortality rate: low to medium (20-50%) 6. Economic loss: low to high 7. Names of infected areas: Puhawang Island, District of Tanjung Putus and Hurun Bay (Lampung); 8. Prventive/control measures: - 9. Samples have been analysed at Laboratory of Main Centre for Mariculture Development at Lampung; 11. Publication: Unpublished

3. VNN	<ol style="list-style-type: none"> 1. Size of fish infected approximately 50 to 350 gr, larval stage; Disease occur at marine cage culture; 2. Species affected: Polkadot grouper (<i>Cromileptis altivelis</i>), <i>Epinephelus fuscoguttatus</i>) 3. Clinical sign: abnormally swim at surface, no response, no specific change on some samples; 4. Pathogen: Viral Nervous Necrosis Virus, All samples have been analysed by PCR 5. Mortality rate: 40-100% 6. Economic loss: low to high 7. Names of infected areas: Puhawang Island, District of Tanjung Putus and Hurun Bay (Lampung) 8. Prventive/control measures: - 9. Samples have been analysed at Laboratory of Main Centre for Mariculture Development at Lampung 10. Publication: Unpublished
4.TSV	<ol style="list-style-type: none"> 1. The samples were taken by CBAD Situbondo 2. Species affected: White shrimp (<i>Litopenaeus vanamei</i>) 3. Clinical signs: mass mortality at the moulting shrimp 4. Pathogen: Taura syndrome virus 5. Mortality rate: - 6. Economic loss: - 7. Names of infected areas: District of Situbondo 8. Prventive/control measures: - 9. Sample sent to the laboratory Centre Brackish water Aquaculture Development at Situbondo (East Java) 10. Publication: Unpublished
5. WSSV	<ol style="list-style-type: none"> 1. Number of samples diagnose with PCR technique 2. Species affected: Tiger shrimp (<i>Penaeus monodon</i>), white shrimp (<i>Litopenaeus vanamei</i>), 3. Clinical sign: White spot skin surface of shrimp head, shrimp becoming weak and swimming on the surface, all samples have been detected by PCR analyse 4. Pathogen: White Spot Syndrome Virus 5. Mortality rate: high ($\pm 70\%$) 6. Economic loss: high 7. Infected area: District of Jepara and Demak (Central Java); Situbondo, Banyuwangi and Pati (East Java) 8. Preventive/control measures: - 9. Laboratory confirmation: diagnosed by PCR in Main Centre for Brackishwater Aquaculture Development at Jepara (Central Java); Center for Brackishwater Aquaculture Development at Situbondo (East Java) 10. Publication: Unpublished
6. IHHNV	<ol style="list-style-type: none"> 1. The positive samples were found in Post Larvae of <i>Litopenaeus vannamei</i> 2. Species affected: White shrimp (<i>Litopenaeus vannamei</i>) 3. Clinical sign: low growth (very small size/dwarf) 4. Pathogen: Infectious Hypodermal and Haematophatic Necrosis Virus 5. Mortality rate: low - high 6. Economic loss: high 7. Prventive/control measures: - 8. Names of infected areas: Banyuwangi District (East Java) 9. Laboratory confirmation: diagnosed by PCR at Main Centre for Brackishwater Aquaculture Development at Jepara (Central Java); Center for Brackishwater Aquaculture Development at Situbondo (East Java) 10. Publication: Unpublished
7. Infectious myonecrosis virus (IMNV)	<ol style="list-style-type: none"> 1. The sample were taken by CBAD Situbondo 2. Species affected: white shrimp (<i>Litopenaeus vannamei</i>) 3. Clinical sign: Broken at shrimp meat with with sign, specially at abdomen and telson, result of positive have been detected by PCR method 4. Pathogen: Infectious Myonecrosis virus 5. Mortality rate: - 6. Economic loss: - 7. Prventive/control measures: - 8. Infected areas: District of Situbondo (East Java) 9. Sample sent to the Laboratory Centre for Brackishwater Aquaculture Development at Situbondo (East Java) 10. Publication: Unpublished

<p>8 <i>Aeromonas hydrophila</i></p>	<ol style="list-style-type: none"> 1. Disease occur at freshwater pond in consumption size 2. Species affected: common carp (<i>Cyprinus carpio</i>), gouramy, tilapia, and eel (<i>Anguilla mamoraa</i>) 3. Clinical sign: irritation, haemorrhage, broken in gill and ulcer 4. Pathogen: <i>Aeromonas hydrophila</i> 5. Mortality rate: low to medium (West Java); 50-70% (South Kalimantan); medium to high (Jambi) 6. Economic loss: - 7. Infected area: Tangerang city (Bantan); District of Sukabumi (West Java); District of Banjar and Tapin (South Kalimantan); District of Muaro Jambi, Batang Hari and Jambi (Jambi) 8. Prventive/control measures: Decreasing of feed amount, give vitamin Cwith dosage 500 mg/kg/day and 300 mg/kg/day of vitamin E 9. Sample sent to laboratory: Main Centre for Freshwater Aquaculture Development at Sukabumi (West Java); Centre for Freshwater Aquaculture Development at Mandiangin (South Kalimantan); Fish Quarantine Station Jambi (Jambi) 10. Publication: Unpublished
<p>9. <i>Icthyophth yrius multifillis</i></p>	<ol style="list-style-type: none"> 1. This disease usually called white spot disease because it makes fish surface body was get much white spot and usually infected in freshwater fish 2. Species affected: Common carp (<i>Cyprinus carpio</i>), tilapia, botia (<i>Botia macracantha</i>) 3. Clinical sign: white spot on body surface, irritation, haemorrhage, no clinical sigh on some samples 4. Pathogen: <i>Icthyophthyrius multifillis</i> 5. Mortality: low to medium 6. Economic loss: - 7. Infected areas: Tangerang city (Banten); District of Sukabumi (West Java); District of Muaro Jambi, Jambi 8. Preventive/control measurement taken by water exchange every day, maintain water temperature on 30°C 9. Sample sent to laboratory Main Centre for Freshwater Aquaculture Development at Mandiangin; Fish Quarantine Station Jambi 10. Publication: Unpublished
<p>10. <i>Edwardsiella ictaluri</i></p>	<ol style="list-style-type: none"> 1. Size of infected fish approximately 3 inch in reared pond 2. Species affected: Asian catfish (<i>Pangasius hypothalamus</i>) 3. Clinical sign: low to high damage in gill, haemorrhage and irritation on part of body 4. Pathogen: <i>Edwardsiella ictaluri</i> 5. Mortality rate: low to medium 6. Economic loss: - 7. Names of infected areas: Muaro Jambi District (Jambi) 8. Prventive/control measures: - 9. Samples have been sent to Centre for Freshwater Aquaculture Development at Jambi (Jambi) 10. Publication: Unpublished
<p>11. <i>Vibrio</i></p>	<ol style="list-style-type: none"> 1. Reported in Jambi Province at May 2008-11-12 2. Species affected: Eel (<i>Anguilla mamorata</i>) 3. Clinical sign: haemorrhage on skin, low to high damage in gill 4. Pathogen: <i>Vibrio</i> sp. 5. Mortality rate: low to medium 6. Economic loss: - 7. Names of infected areas: Muaro Jambi District (Jambi) 8. Prventive/control measures is increasing water exchange, decreasing of feed amount, enrofloxacin 9. Samples have been sent to Centre for Freshwater Aquaculture Development at Jambi (Jambi) 10. Publication: Unpublished

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

Country: **IRAN**

 Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	July	August	September		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	-	-	-		
3. Spring viraemia of carp	-	-	-		
4. Viral haemorrhagic septicaemia	-	-	-		
5. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Abalone viral mortality	***	***	***		
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
5. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	-	+	+	I and III	1
3. Yellowhead disease (YH virus, gill-associated virus)	0000	0000	0000		
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000		
7. Infectious myonecrosis	***	***	***		
8. White tail disease (MrNV)	***	***	***		
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	<p>By implementation of active surveillance system, WSD has been recognized in 2 sites of 2 provinces.</p> <p>1-the origin of disease still was unknown, but it is under study</p> <p>2-species affected were <i>L.vannamei</i> in Khozestan province and <i>P.indicus</i> in Systan-Balochestan province</p> <p>3-the disease occurred in August and September</p> <p>4-Name of infected areas: Goatr in Chabahr (Systan-Balochestan province) and Choebdeh in Khozestan province</p> <p>5-clinical signs were sudden decrease in feeding, swimming near the edges of the pond, reddish body and white spots on the cephalothorax</p> <p>6-the pathogen was detected by nested-PCR and confirmed by national shrimp disease laboratory in Boushehe</p> <p>7-Its sequence was unknown but we would send samples to international laboratory for sequencing</p> <p>8-morbidity rate was near to 100%</p> <p>9-mortality rate was more than 70%</p> <p>10-economic loss was high</p> <p>11-all of the farms and ponds in the 2 sites were disinfected with 40ppm calcium chloride and all of infected shrimps were eradicated and the disease controlled</p>

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

Country: **JAPAN**

 Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	July	August	September		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	I	
2. Infectious haematopoietic necrosis	+	+	+	III	
3. Spring viraemia of carp	0000	0000	0000	I	
4. Viral haemorrhagic septicaemia	-	-	-	I	
5. Epizootic ulcerative syndrome (EUS)	-	-	-	I	
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	-	-	-	I	
10. Enteric septicaemia of catfish	0000	0000	+?	III	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	I	
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000	I	
3. Abalone viral mortality	0000	0000	0000	I	
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	+	+	+	II	
5. Acute viral necrosis (in scallops)	0000	0000	0000	I	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	I	
2. White spot disease	-	+	+	III	
3. Yellowhead disease (YH virus, gill-associated virus)	0000	0000	0000	I	
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	0000	0000	0000	I	
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	I	
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000	I	
7. Infectious myonecrosis	0000	0000	0000	I	
8. White tail disease (MrNV)	0000	0000	0000	I	
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000	I	
10. Milky lobster disease	0000	0000	0000	I	
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	-	+	+	III	
ANY OTHER DISEASES OF IMPORTANCE					
1. Infection with <i>Edwardsiella ictaluri</i>	+?	+	+	III	

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	

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

Country: **LAO PDR**

Period: **January-March 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	January	February	March		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
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 (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease					
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease					
9. Viral encephalopathy and retinopathy					
10. Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>					
2. Infection with <i>Perkinsus olseni</i>					
3. Abalone viral mortality					
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>					
5. Acute viral necrosis (in scallops)					
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome					
2. White spot disease					
3. Yellowhead disease (YH virus, gill-associated virus)					
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)					
5. Infectious hypodermal and haematopoietic necrosis					
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)					
7. Infectious myonecrosis					
8. White tail disease (MrNV)					
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome					
10. Milky lobster disease					
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease					
ANY OTHER DISEASES OF IMPORTANCE					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	

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

Country: **LAO PDR**

 Period: **April-June 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	April	May	June		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease					
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Grouper iridoviral disease					
9. Viral encephalopathy and retinopathy					
10. Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>					
2. Infection with <i>Perkinsus olseni</i>					
3. Abalone viral mortality					
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>					
5. Acute viral necrosis (in scallops)					
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome					
2. White spot disease					
3. Yellowhead disease (YH virus, gill-associated virus)					
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)					
5. Infectious hypodermal and haematopoietic necrosis					
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)					
7. Infectious myonecrosis					
8. White tail disease (MrNV)					
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome					
10. Milky lobster disease					
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease					
ANY OTHER DISEASES OF IMPORTANCE					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	

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

Country: **MALAYSIA**

 Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	July	August	September		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome (EUS)	-	-	-		
6. Red seabream iridoviral disease	+	+	+	I,II,III	1
7. Koi herpesvirus disease	-	+	-	I,II,III	2
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-		
9. Viral encephalopathy and retinopathy	+	+	+	I,II,III	3
10. Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
5. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	-	-	-		
2. White spot disease	-	-	-		
3. Yellowhead disease (YH virus, gill-associated virus)	-	-	-		
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	+?	-	+?	III	4
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000		
7. Infectious myonecrosis	0000	0000	0000		
8. White tail disease (MrNV)	0000	0000	0000		
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
10. Milky lobster disease	0000	0000	0000		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1. Streptococcus infection	+	+	+	I, II	5

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalictis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent	***	No information available
	But no clinical diseases	0000	Never reported
?	Suspected by reporting officer but presence not confirmed	-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	<p>Red Sea Bream Iridoviral Disease Active surveillance is being conducted to check the occurrence of this disease at i) Bukit Tambun aquaculture area P. Pinang; ii) deep sea cages Langkawi, Kedah; and iii) one government hatchery, Kehah. All surveyed areas were located in northern part of Malaysia. A total of 41% of the samples surveyed were detected positive with PCR detection kit (IQ2000 Iridovirus detection kit). No clinical signs were observed except at (iii) whereby there are series of high mortality detected since March 2008. Broodstocks was also detected to carry this virus in (ii) and the owner was advised to eradicate the fish.</p>
2	<p>Koi herpesvirus disease One sample taken from the active surveillance KHV program in Perak in June 2008 was detected positive in August 2008 using TK primers. No clinical signs and mortality was reported. The farmer concerned was advised not to move and trade the fish for export.</p>
3	<p>Viral Nervous Necrosis Active surveillance is being conducted to check the occurrence of this disease at i) Bukit Tambun aquaculture area, P. Pinang; ii) deep sea cages Langkawi, Kedah; and iii) one government hatchery, Kedah. All surveyed areas were located in northern part of Malaysia. A total part of 15% of the samples surveyed were detected positive with PCR detection kit (IQ2000 VNN detection kit). No clinical signs were observed in all the positive infection.</p>

4	<p>IHHNV Passive surveillance</p> <ol style="list-style-type: none"> 1. Reported in processed samples (shell off frozen) send by shrimp processing factory located in Kuching, Sarawak (July) and Sabah (September) 2. In: <i>Litopenaeus vannamei</i> 3. Clinical signs: Pathogen detected but no clinical signs presence and no mortality reported 4. Pathogen: Infectious hypodermal and hematopoietic necrosis virus 5. Mortality rate: No mortality reported 6. Economic loss: N/A 7. Geographic extent: 1 farm culturing L. vannamei in Santubong, Kuching, whereas the exact location in Sabah is not known 8. Containment measures: N/A 9. Laboratory confirmation: diagnosed with PCR method 10. Publication: unpublished
5	<p>Streptococcal Infection in tilapia Active surveillance</p> <ol style="list-style-type: none"> 1. Reported in a) Kedah b) Terengganu 2. Clinical Signs – erratic, exophthalmia or other abnormal clinical signs of the eye, inflamed at ventral region 3. Pathogen – <i>Streptococcus agalactiae</i> 4. Mortality rate - ± 30-40% 5. Economic loss – n/a 6. Geographic extent – in most floating cages, lakes and rivers 7. Laboratory confirmation – API 20E STREP 8. Publications : unpublished

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

Country: **MYANMAR**

 Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	July	August	September		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	***	***	***		
4. Viral haemorrhagic septicaemia	***	***	***		
5. Epizootic ulcerative syndrome (EUS)	***	***	***		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	***	***	***		
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>					
2. Infection with <i>Perkinsus olseni</i>					
3. Abalone viral mortality					
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>					
5. Acute viral necrosis (in scallops)					
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	-	-	-		
2. White spot disease	+()	+()	-	III	1
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	***	***	***		
5. Infectious hypodermal and haematopoietic necrosis	+()	+()	-	III	2
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	***	***	***		
7. Infectious myonecrosis	***	***	***		
8. White tail disease (MrNV)	***	***	***		
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent But no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	A total of 20 samples of <i>P. monodon</i> have been tested at PCR Lab of Department of Fisheries (DoF), of which 6 samples (30%) were recorded as WSSV positive.
2	A total of 20 samples of <i>P. monodon</i> have been tested at PCR Lab of Department of Fisheries (DoF), of which 2 samples (10%) were recorded as IHNV positive.

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

Country: **PHILIPPINES**

 Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	July	August	September		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome (EUS)	-	-	-	I	
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000	III	1
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	+	-	III	2
9. Viral encephalopathy and retinopathy	-	-	-	III	3
10. Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
5. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	III	4
2. White spot disease	+	-	-	III	5
3. Yellowhead disease (YH virus, gill-associated virus)	-	-	-		
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	-	-	-		
5. Infectious hypodermal and haematopoietic necrosis	-	-	-	III	6
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000		
7. Infectious myonecrosis	0000	0000	0000	III	7
8. White tail disease (MrNV)	0000	0000	0000		
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalictis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	A total of 230 pieces of koi carp (<i>Cyprinus carpio</i>) collected from koi farms in Bulacan, Quezon City, Laguna and Batangas examined by PCR showed negative results for KHV. Examinations/tests conducted by BFAR Fish Health laboratory.
2	Out of 39 samples (<i>Epinephelus</i> spp.), 5 samples showed positive results for grouper iridovirus. Examinations/tests conducted by BFAR Fish Health laboratory.
3	A total of 39 samples (<i>Epinephelus</i> spp.) from General Santos and Samar examined by PCR showed negative results for VNN. Examinations/tests conducted by BFAR Fish Health laboratory.
4	A total of 44 samples (<i>P. vannamei</i> , 36 samples) of different stages (imported broodstock, juvenile, larval and post larval stages) and <i>P. monodon</i> (8 samples) post-larvae and juvenile examined by PCR showed negative results for TSV. Examination conducted by BFAR Fish Health laboratories.
5	Out of 101 samples (<i>P. vannamei</i> - 50 samples) of different stages (imported broodstock, juvenile, post larval stages) and (<i>P. monodon</i> - 51 samples, post larva and juvenile stages) from hatchery and grow-out farms in Cebu, Batangas, Mindoro, Iloilo, Pangasinan, Camarines Sur, Leyte, Quezon and CARAGA, 2 samples (<i>P. monodon</i> from CARAGA) showed positive results for WSV. Examinations conducted by BFAR Fish Health laboratories
6	A total of 44 samples (<i>P. monodon</i> – 15 samples) post larval and juvenile stages and (<i>P. vannamei</i> – 29 samples), broodstock (imported) post larva and juvenile stages from hatchery and grow-out farms in Cebu, Camarines Sur, Batangas, and Quezon showed negative results for IHNV by PCR test. Examinations conducted by BFAR Fish Health laboratories.
7	A total of 21 samples (<i>P. vannamei</i> – 13 samples), broodstock (imported) and juvenile stage and (<i>P. monodon</i> - 8 samples) grow-out stages from shrimp farms in Cebu and Batangas showed negative results for IMNV. Examinations conducted by BFAR Fish Health laboratories.

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

Country: **REPUBLIC OF KOREA**Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
	July	August	September		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	+?	+?	+?	III	
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	+	+	+	III	1
5. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease	+	+	+	III	2
7. Koi herpesvirus disease	(1998)	(1998)	(1998)	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	+	+	+	III	3
10. Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	?	?	?	II & III	
5. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	+?	+?	+?	III	
2. White spot disease	+	+	+	III	
3. Yellowhead disease (YH virus, gill-associated virus)	0000	0000	0000		
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	***	***	***	III	
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000		
7. Infectious myonecrosis	0000	0000	0000		
8. White tail disease (MrNV)	0000	0000	0000		
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome					
10. Milky lobster disease					
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalictis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	Viral haemorrhagic septicaemia was detected in flounder in Pohang
2	RSIV was detected in rock fish in Tongyoung
3	Viral encephalopathy and retinopathy was detected in flounder in Wando, Ulsan, and Pohang but in Tongyoung, Jeju and Goje are by RT-PCR during active surveillance

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

Aquatic animal disease control act was signed on December 21, 2007. The act will be in effect on 22 December 2008

Country: **SINGAPORE**

 Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
	July	August	September		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	(2007)	(2007)	(2007)		
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-		
9. Viral encephalopathy and retinopathy	-	-	-		
10. Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Abalone viral mortality	***	***	***		
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
5. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	***	***	***		
2. White spot disease	-	-	-		
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	-	-	-		
5. Infectious hypodermal and haematopoietic necrosis	***	***	***		
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	***	***	***		
7. Infectious myonecrosis	***	***	***		
8. White tail disease (MrNV)	***	***	***		
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Mullet systemic iridoviral disease	(2008)	(2008)	(2008)		

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	

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

Country: **SRI LANKA**

 Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	July	August	September		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	?	?	?		
4. Viral haemorrhagic septicaemia	***	***	***		
5. Epizootic ulcerative syndrome (EUS)	-	-	-		
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	?	?	?		
Non OIE-listed diseases					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Abalone viral mortality	***	***	***		
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
5. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+	+	+	III	1
3. Yellowhead disease (YH virus, gill-associated virus)	?	?	?		
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	+	+	+	III	2
5. Infectious hypodermal and haematopoietic necrosis	?	?	?		
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	***	***	***		
7. Infectious myonecrosis	***	***	***		
8. White tail disease (MrNV)	***	***	***		
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalictis californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	WSSV- Disease was reported from the Northwestern province in the month of July, but the prevalence gradually decreased during the months August –September.
2	MBV- Occurrences were reported from <i>P. monodon</i> post larvae from shrimp hatcheries and the prevalence was low to moderate during this period. Post larvae samples were checked using malachite green staining method and also PCR was used for confirmation. The PL detected with MBV will not be recommended for stocking.

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

Country: **THAILAND**

 Period: **July-September 2008**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	July	August	September		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	III	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia	0000	0000	0000	III	
5. Epizootic ulcerative syndrome (EUS)	-	-	-	II	
6. Red seabream iridoviral disease	0000	0000	0000	III	
7. Koi herpesvirus disease	-	-	-	III	
Non OIE-listed diseases					
8. Grouper iridoviral disease	-	-	-	III	
9. Viral encephalopathy and retinopathy	-	-	-	III	
10. Enteric septicaemia of catfish	0000	0000	0000	II	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	II	
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000	II	
3. Abalone viral mortality	***	***	***		
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	II	
5. Acute viral necrosis (in scallops)	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	-	+	-	III	1
2. White spot disease	-	-	-	III	2
3. Yellowhead disease (YH virus, gill-associated virus)	+	+	+	III	3
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	-	-	-		
5. Infectious hypodermal and haematopoietic necrosis	+	+	+	III	4
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	***	***	***		
7. Infectious myonecrosis	0000	0000	0000		
8. White tail disease (MrNV)	+	-	+		5
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Ranavirus	-	-	-	III	

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalotius californiensis</i>. Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>). NOT LISTED BY THE OIE Finfish: Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
<p>b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases</p>			

1. Epidemiological comments:

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

Comment No.	
1	A total of 576 shrimp PL samples had been tested at PCR Laboratories of the DOF before stocking in culture ponds under the health management and disease control strategies. 3 specimens or 0.52% recorded as RT-PCR positive or carrying TSV genes that advised to be destroyed.
2	A total of 938 shrimp PL samples had been tested at PCR Laboratories of the DOF before stocking in culture ponds under the health management and disease control strategies. All specimens were negative using PCR test.
3	A total of 277 shrimp PL samples had been tested at PCR Laboratories of the DOF before stocking in culture ponds under the health management and disease control strategies. 14 specimen or 5.05% recorded PCR positive or carrying YHV genes that advised to be destroyed.
4	A total of 856 shrimp PL samples had been tested at PCR Laboratories of the DOF before stocking in culture ponds under the health management and disease control strategies. 98 specimens or 11.45% recorded as PCR positive or carrying IHNV genes that advised to be destroyed. The tested specimens did not show disease clinical signs and there was no outbreak due to IHNV infection in the hatcheries.
5	92 giant prawn specimens from wild stock and hatchery brooders were sampled under the MrNV surveillance program using RT-PCR technique. The MrNV RT-PCR results were positive only in mature giant prawn group at 16/92 specimens. Another 10 post larvae specimens obtained from prawn hatcheries and found to be RT-PCR negative. However no disease clinical signs in all prawns. Concepts in bio-security for disease prevention had been advised to hatchery owners, operators or farmers.

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

Notification of the Department of Fisheries; Requirement for Obtaining an Import Permit for Marine Shrimp / Prawn

Post Larvae Importation

Effective date: 28 August 2008

Reason for notification: There is a need to import marine shrimp / prawn for quality and genetic development and improvement. The DOF placed control measures to prevent the possible trans-boundary diseases from marine shrimp / prawn importation.

Country: VIETNAM

Period: July-September 2008

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome (EUS)	+	+	+	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	0000	0000	0000		
9. Viral encephalopathy and retinopathy	+	+	+	I,II	2
10. Enteric septicaemia of catfish	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
5. Acute viral necrosis (in scallops)	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+	+	+	I,II,III	3
3. Yellowhead disease (YH virus, gill-associated virus)	+	+	+	I,II,III	4
4. Spherical baculovirus (<i>Penaes monodon</i> -type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000		
7. Infectious myonecrosis	0000	0000	0000		
8. White tail disease (MrNV)	***	***	***		
Non OIE-listed diseases					
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
10. Milky lobster disease	+	+	+	I	5
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					

DISEASES PRESUMED EXOTIC TO THE REGION^b			
LISTED BY THE OIE			
Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).			
Molluscs: Infection with <i>Bonamia ostreae</i> ; <i>Marteilia refringens</i> ; <i>Perkinsus marinus</i> ; <i>Xenohalictis californiensis</i> .			
Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>).			
NOT LISTED BY THE OIE			
Finfish: Channel catfish virus disease			
a/ Please use the following symbols:			
+	Disease reported or known to be present	+()	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
?	Suspected by reporting officer but presence not confirmed	0000	Never reported
		-	Not reported (but disease is known to occur)
		(year)	Year of last occurrence
b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases			

1. Epidemiological comments:

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

Comment No.	
1	The disease occurred in catfish (<i>Pangasius micronema</i> , <i>P. hypophthalmus</i>) cultures with high density in zone in the South (Dong Thap, Soc Trang, Can Tho). Some freshwater fish (grass carp, <i>Ctenopharyngodon idellus</i> cultured in zone in the north. Mortality rate: low, scattered
2	Pathogen: <i>Edwardsiella ictaluri</i> Infection occurred in catfish (<i>Pangasius micronema</i> , <i>P. hypophthalmus</i>) intensive cultured ponds. This disease scattered in Dong Thap, Can Tho, Vinh Long, Ben Tre.
3	Pathogen: White Spot Syndrome Virus WSSV Infection occurred in black tiger shrimp (<i>Penaeus monodon</i>) and white leg shrimp (<i>P. vannamei</i>) This disease scattered in Soc Trang, Ben Tre, Bac Lieu, Kien Giang, Quang Ninh, Nghe An, Quang Tri, Ninh Thuan, Quang Ngai, Nam Dinh, Phu Yen, Khanh Hoa
4	Pathogen: Gill-Associated Virus GAV Infection occurred in black tiger shrimp (<i>Penaeus monodon</i>) This disease scattered in Soc Trang, Bac Lieu, Quang Ngai, Binh Thuan
5	Pathogen: Rickettsia-like bacteria Infection occurred in Lobsters <i>Panulirus ornatus</i> , <i>P. homarus</i> cultured in floating cages on the sea in the growing out stage Disease characteristic: Labsters have black gill, uncovered head, and milky colored abdomen traces The disease scattered in Khanh Hoa, Phu Yen, Binh Thuan

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 2008)

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. Koi herpes virus disease	
1.2 MOLLUSC DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with <i>Bonamia exitiosa</i>	1. Infection with <i>Marteilioides chungmuensis</i>
2. Infection with <i>Perkinsus olseni</i>	2. Acute viral necrosis (in scallops)
3. Abalone viral mortality	
1.3 CRUSTACEAN DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Taura syndrome	1. Monodon slow growth syndrome
2. White spot disease	2. Milky lobster syndrome
3. Yellowhead disease (YH virus, gill-associated virus)	
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	
5. Infectious hypodermal and haematopoietic necrosis	
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	
7. Infectious myonecrosis	
8. White tail disease (MrNV)	
1.4 UNKNOWN DISEASES OF A SERIOUS NATURE	
OIE-listed diseases	Non OIE-listed diseases
	1. Akoya oyster disease
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. Gyrodactylosis (<i>Gyrodactylus salaris</i>)	
2.2 Molluscs	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with <i>Bonamia ostreae</i>	
2. Infection with <i>Marteilia refringens</i>	
3. Infection with <i>Perkinsus marinus</i>	
4. Infection with <i>Xenohalotis californiensis</i>	
2.3 Crustaceans	
OIE-listed diseases	Non OIE-listed diseases
1. Crayfish plague (<i>Aphanomyces astaci</i>)	

Recent Aquatic Animal Health Related Publications

OIE Aquatic Animal Health Code, 11th Edition, 2008 and OIE Manual of Diagnostic Tests for Aquatic Animals, 5th Edition, 2006 http://www.oie.int/eng/publicat/en_aqua.htm. The aim of the aquatic animal health code is to assure the sanitary safety of international trade in aquatic animals and their products. This is achieved through the detailing of health measures to be used by the competent authorities of importing and exporting countries to avoid the transfer of agents pathogenic for animals or humans, while avoiding unjustified sanitary barriers. The health measures in the aquatic animal health code (in the form of standards, guidelines and recommendations) have been formally adopted by the OIE international committee, the general assembly of all delegates of OIE Member Countries. The Aquatic Animal Health Code is available on http://www.oie.int/eng/normes/fcode/A_00003.htm. The book may be ordered from pub.sales@oie.int

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.

Dodet, B., the OIE Scientific and Technical Department (eds.). **The OIE Global Conference on Aquatic Animal Health**. *Dev Biol (Basel)*, Basel, Karger, Volume 29. 193p.

Aquatic Animal Diseases Significant to Asia-Pacific: Identification Field Guide: NACA and the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) have recently produced this field guide to support aquatic animal health surveillance, early response and reporting in the region. The field guide drew extensively from the experiences and previous and ongoing research activities in health management in Australia and other countries in Asia and thus joins the growing body of practical knowledge published for Asia-Pacific aquaculture and fisheries. The regional field guide covers all diseases listed in the Quarterly Aquatic Animal Disease (QAAD) reporting system, which includes all OIE listed diseases plus diseases of regional concern. The

field guide is available for free download at <http://www.enaca.org/modules/news/article.php?storyid=1003>

FAO. 2007. Aquaculture development 2. **Health management for the responsible movement of live aquatic animals**. FAO Technical Guidelines for Responsible Fisheries. No. 5, Suppl. 2. Rome, FAO. 2007. 31p. Further information: Rohana.Subasinghe@fao.org

Color Atlas of Fish Histopathology, Volume 2 (2007) by Teruo Miyazaki. The only book on fish histopathology. Highly recommended for private library, institutional libraries, laboratories for studies and education on fish disease. The volume contains 13 RNA viruses, 16 DNA viruses, 7 fungal diseases and 50 parasitic diseases. Downloadable at URL <http://briefcase.yahoo.co.jp/yappon1978>. Further details from miyazaki@bio.mie-u.ac.jp

Arthur, J.R. & Te, B.Q. 2006. **Checklist of the parasites of fishes of Viet Nam**. FAO Fisheries Technical Paper No. 369/2. Rome, FAO. 133 pp.

Aquaculture Biosecurity: Prevention, Control and Eradication of Aquatic Animal Disease. 2006. A. David Scarfe, Cheng-Sheng Lee and Patricia O'Bryen (editors). Blackwell Publishing. 182 pp.

Regional Workshop on Preparedness and Response to Aquatic Animal Health Emergencies in Asia, Jakarta, Indonesia, 21-23 September 2004. Subasinghe, R.P. and JR Arthur (editors). FAO Fisheries Proceedings No. 4, Rome, FAO. 2005. 178p.

Responsible use of antibiotics in aquaculture. Hernandez Serrano, P. 2005. FAO Fisheries Technical Paper. No. 469. Rome, FAO. 2005. 97p.

Pathogen and ecological risk analysis for the introduction of blue shrimp, *Litopenaeus stylirostris*, from Brunei Darussalam to Fiji. Bondad-Reantaso, M.G., Lovell, E.R., Arthur, J.R., Hurwood, D. & Mather, P.B. 2005. Secretariat of the Pacific Community, New Caledonia. 80 pp.
http://www.spc.org.nc/aquaculture/site/publications/documents/Stylirostris_BruneiFiji.pdf

Pathogen and ecological risk analysis for the introduction of giant river prawn, *Macrobrachium rosenbergii* from Fiji to the Cooks Islands. Arthur, J.R., Hurwood, D., Lovell, E.R., Bondad-Reantaso, M.G., & Mather, P.B. 2005. Secretariat of the Pacific Community, New Caledonia.
<http://www.biosecurity.govt.nz/files/pests-diseases/plants/risk/prawns-ra.pdf>

A Colour Atlas of Diseases of Yellowtail (Seriola) Fish: Written by Dr. Mark Sheppard, Canadian veterinarian, a new publication (in Japanese and originally in English) "A Colour Atlas of Diseases of Yellowtail (Seriola) Fish" is now available. A useful diagnostic field guide for fish farmers, fish health professionals, laboratory technicians and students, this book contains 30 pages of high resolution, detailed pathology photomicrographs of most commonly found diseases of yellowtail. More details can be found at http://oberon.ark.com/~svs/index_files/svsindexfile5.html

Histological Techniques for Marine Bivalve Molluscs and Crustaceans: A new publication by DW Howard, EJ Lewis, BJ Keller and CS Smith of the Cooperative Oxford Laboratory, Center for Coastal Environmental Health and Biomolecular Research, National Centers for Coastal Ocean Science, National Ocean Service, NOAA. This is an invaluable guide to histological techniques of shellfish, principally molluscs and crustaceans which every aquatic animal health researcher should have. Those interested to receive copies, please write to the Librarian, Ms Susie Hines at Susie.Hines@noaa.gov

Surveillance and Zoning for Aquatic Animal Diseases.

Subasinghe, R.P., McGladdery, S.E. and Hill, B.J. (eds.). FAO Fisheries Technical Paper. No. 451. Rome, FAO. 2004. 73p. This document contains the recommendations and conclusions of an Expert Consultation on Surveillance and Zoning for Aquatic Animal Diseases' jointly organized by FAO, the Federal Department of Fisheries and Oceans Canada (DFO-Canada) and OIE held in October 2002 at the FAO Headquarters in Rome, Italy. The objective of the consultation was to determine what surveillance options can best support scientifically valid zonation frameworks. Contact: Rohana.Subasinghe@fao.org

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**New Instructions on how to fill in the
QUARTERLY AQUATIC ANIMAL DISEASE REPORT**

(Revised during the Provisional Meeting of the AG¹, Bangkok, Thailand, November 7-9, 2001)

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

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

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

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

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

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

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

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

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

Please use the following symbols to fill in the forms.

A. Symbols used for negative occurrence are as follows:

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

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

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

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

B. Symbols used for positive occurrence are shown below.

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

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

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

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

¹ Regional Advisory Group on Aquatic Animal Health (AG)

C. Levels of Diagnosis

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

D. Subjects to be covered in the Epidemiological Comments

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

IMPORTANT

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

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

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