



**QUARTERLY  
AQUATIC ANIMAL DISEASE REPORT  
(Asia and Pacific Region)**

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# Contents

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Foreword	v
<b>Reports Received by the NACA Secretariat</b>	
Australia	2
Bangladesh	6
Hong Kong SAR	8
Indonesia	10
Iran	14
Japan	16
Malaysia	18
Myanmar	22
Nepal	24
Philippines	26
Republic of Korea	29
Singapore	31
Sri Lanka	33
Thailand	35
Vietnam	38
List of Diseases under the Asia-Pacific Quarterly Aquatic Animal Disease Report	40
Recent related publications	41
List of National Coordinators	43
New Instructions on how to fill in the <i>Quarterly Aquatic Animal Disease Report</i>	46



## Foreword

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# Import requirements for live aquatic animals and their products for the European Union

During the 7<sup>th</sup> Asia Regional Advisory Group Meeting on Aquatic Animal Health held at the NACA Secretariat from 15-17 December 2008, Prof Barry Hill gave an overview of the forthcoming new certification requirements for imports of live aquatic animals (including ornamental fish) into the EU. The requirements arise from the new Council Directive 2006/88 published on 24 October 2006. The certification requirements and other conditions attached to imports into the EU are laid down in Commission Regulation (EC) 1251/2008 of 12 December 2008 “implementing Council Directive 2006/86/EC as regards conditions and certification requirements for placing on the market and importing into the Community of aquaculture animals and products thereof and laying down a list of vector species”. The Regulation was published in the Official Journal of the European Journal (L 337/41) on 16 December 2008.

The requirements that will have most impact on countries in the Asia-Pacific region exporting live fish to the EU are those for ornamental fish since this trade is by far the greatest proportion of all consignments. Different conditions and health requirements apply to ornamental fish intended for open ornamental facilities (i.e. all ornamental facilities other than closed ornamental facilities) and those intended for closed ornamental facilities. ‘Closed ornamental facility’ means pet shops, garden centres, garden ponds, commercial aquaria or wholesalers keeping ornamental aquatic animals:

- (i) without any direct contact with natural waters in the Community; or
- (ii) which are equipped with an effluent treatment system reducing the risk of transmitting diseases to the natural waters to an acceptable level.

For imports into the EU, the over-riding rule is that aquaculture animals intended for farming, relaying areas, put and take fisheries and open ornamental facilities shall only be imported into the Community from third countries, territories, zones or compartments listed in the Regulation. No consignments will be permitted entry if they originated from a country not listed. There are many Asian countries that are not listed.

The conditions and requirements for imports of ornamental fish are complex and are stipulated in Chapter IV (Articles 10 and 11). Those for aquaculture animals intended for open ornamental facilities, as laid down in Article 10, are that consignments must

- (a) be accompanied by an animal health certificate completed in accordance with the model set out in Part A of Annex IV and the explanatory notes in Annex V;
- (b) comply with the animal health requirements set out in the model certificate and explanatory notes, as referred to in point (a).

The requirements, as laid down in Article 11, for ornamental aquatic animals intended for closed ornamental facilities are:

1. Ornamental fish of species susceptible to one or more of the diseases listed in Part II of Annex IV to Directive 2006/88/EC and intended for closed ornamental facilities shall only be imported into the Community from third countries, territories, zones or compartments listed in Annex III to this Regulation.
2. Ornamental fish which are not of susceptible species to any of the diseases listed in Part II of Annex IV to Directive 2006/88/EC, and ornamental molluscs and ornamental crustaceans, intended for closed ornamental facilities, shall only be imported into the Community from third countries or territories that are members of the World Organisation for Animal Health (OIE).
3. Consignments of the animals referred to in paragraphs 1 and 2 shall:
  - (a) be accompanied by an animal health certificate completed in accordance with the model set out in Part B of Annex IV and the explanatory notes in Annex V; and
  - (b) comply with the animal health requirements set out in the model certificate and explanatory notes, as referred to in point (a).

The requirements apply not only to the fish species listed as susceptible to the diseases covered by Directive 2006/86 but also the vector species listed in Annex I of the Regulation.

Although the Regulation enters into force on 1 January 2009, Article 20 provides for derogations to delay the dates for full implementation of the new import requirements to give EU countries and third-countries a longer transitional period in order to avoid disruption of established trade. For example, for a transitional period until 31 December 2010, Member States may authorise the import of ornamental aquatic animals of species susceptible to epizootic ulcerative syndrome (EUS) intended solely for closed ornamental facilities from third countries or territories that are Members of the World Organisation for Animal Health (OIE). During that transitional period, the requirements concerning EUS set out in Part II.2 of the animal health certificate set out in Part B of Annex IV, shall not apply to ornamental aquatic animals intended solely for closed ornamental facilities.

Annex V of the Regulation provides useful explanatory notes to the general requirements but the model health certificates themselves in Annex IV are complex, multi-choice type, documents that require words and sentences not applicable to be struck out, and there are detailed notes to provide guidance. It is possible that this degree of complexity will cause some confusion with the exporters and the competent authorities responsible for signing the certificates.



## **Reports Received by the NACA Secretariat**



Country: **AUSTRALIA**

 Period: **October-December 2008**

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	October	November	December		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
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)	-(2008)	-(2008)	-(2008)		2
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	+	+	+	III	3
10. Enteric septicaemia of catfish	-(2008)	-(2008)	-(2008)		4
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
5. Acute viral necrosis (in scallops)	***	***	***		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	0000	0000	0000		
3. Yellowhead disease	0000	0000	0000		
4. Spherical baculovirus ( <i>Penaeus monodon</i> -type baculovirus)	-(2008)	+	-(2008)	II	6
5. Infectious hypodermal and haematopoietic necrosis	-(2008)	-(2008)	-(2008)		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
<b>Non OIE-listed diseases</b>					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
<b>UNKNOWN DISEASES OF A SERIOUS NATURE</b>					
1. Akoya oyster disease	0000	0000	0000		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1. Abalone viral ganglioneuritis	+	+	+	III	9

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalotis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>																							
<p>a/ Please use the following symbols:</p> <table border="0"> <tr> <td style="padding-right: 20px;">+</td> <td style="padding-right: 20px;">Disease reported or known to be present</td> <td style="padding-right: 20px;">+()</td> <td>Occurrence limited to certain zones</td> </tr> <tr> <td style="padding-right: 20px;">+?</td> <td style="padding-right: 20px;">Serological evidence and/or isolation of causative agent but no clinical diseases</td> <td style="padding-right: 20px;">***</td> <td>No information available</td> </tr> <tr> <td style="padding-right: 20px;">?</td> <td style="padding-right: 20px;">Suspected by reporting officer but presence not confirmed</td> <td style="padding-right: 20px;">0000</td> <td>Never reported</td> </tr> <tr> <td></td> <td></td> <td style="padding-right: 20px;">-</td> <td>Not reported (but disease is known to occur)</td> </tr> <tr> <td></td> <td></td> <td style="padding-right: 20px;">(year)</td> <td>Year of last occurrence</td> </tr> </table>				+	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
+	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	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	Epizootic ulcerative syndrome was not reported during this period despite targeted surveillance but is known to have occurred previously in South Australia (last reported 1 <sup>st</sup> quarter 2008). Not reported despite passive surveillance in New South Wales (last reported 3 <sup>rd</sup> quarter 2008), Northern Territory (last year reported 2006), Queensland (last reported 1 <sup>st</sup> quarter 2008), Western Australia (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>	<p><b>Viral Encephalopathy and Retinopathy</b></p> <ol style="list-style-type: none"> <li>1. <b>Reported in New South Wales</b> in November 2008. Targeted surveillance;</li> <li>2. <b>In</b> juvenile Australian bass (<i>Macquaria novemaculeata</i>);</li> <li>3. <b>Clinical signs-</b> nil;</li> <li>4. <b>Pathogen-</b> Australian bass nervous necrosis virus- betanodavirus;</li> <li>5. <b>Mortality rate-</b> nil;</li> <li>6. <b>Economic loss-</b> approximately \$50 000 in stock destroyed;</li> <li>7. <b>Geographic extent-</b> single hatchery, single spawning event;</li> <li>8. <b>Containment measures-</b> destruction of affected fry (parent broodstock no longer used for production of larvae); disinfection and 12 month drying of affected ponds;</li> <li>9. <b>Laboratory confirmation-</b> diagnosed by histology and PCR;</li> <li>10. <b>Publications-</b> unpublished.</li> </ol> <ol style="list-style-type: none"> <li>1. <b>Reported in Queensland</b> in a) October, b) November and c) December 2008. Targeted surveillance;</li> <li>2. <b>In</b> a) i. &amp; ii. <i>Epinephelus fuscoguttatus</i> 60 day old fingerlings, iii. <i>Lates calcarifer</i> 35 day old fry, b) i. <i>Epinephelus fuscoguttatus</i> 33 day old, ii. 21 day old, iii. <i>Lates calcarifer</i> 42 day old, iv. 14 day old, v. 30 day old, vi. 42 day old, c) <i>Epinephelus fuscoguttatus</i> 62 day old;</li> <li>3. <b>Clinical signs-</b> a) i. &amp; ii. dark body, lying on tank bottom, iii. pinched abdomen, b) i. dark body, lying on tank bottom and anorexia, ii. rolling on tank bottom, iii. white ‘fluffy’ growth around mouth, iv. abnormal swimming and red spot on abdomen, v. swimming vertically and spinal deformity, vi. abnormal swimming at surface, c) low level mortality;</li> <li>4. <b>Pathogen-</b> betanodavirus;</li> <li>5. <b>Mortality rate-</b> a) i. 50%, ii. 0.01%, iii. 1%, b) i. nil, ii. 80% ,iii. nil, iv. nil, v. low, vi. low, c) low;</li> <li>6. <b>Economic loss-</b> unknown;</li> <li>7. <b>Geographic extent-</b> a) i. 1 tank, ii. 1 tank, iii. 4 tanks, b) i. unreported, ii. 1 batch, iii. 2 of 3 tanks, iv. single rearing pond, v. 1 sea cage, vi. 8 tanks, c) single tank;</li> <li>8. <b>Containment measures-</b> none, endemic to area. Targeted surveillance of all barramundi hatcheries in Queensland is on-going;</li> <li>9. <b>Laboratory confirmation-</b> all cases were diagnosed by histopathology, b) ii. histopathology and immunohistochemistry (IHCT);</li> <li>10. <b>Publications-</b> unpublished.</li> </ol> <p>Not reported this period despite targeted surveillance from South Australia (last year reported 2004). Not reported this quarter despite passive surveillance from Northern Territory (last reported 3<sup>rd</sup> quarter 2008), Western Australia (last year reported 2005) and Tasmania (last year reported 2000). Never reported from Victoria despite passive surveillance. No information available from the Australian Capital Territory.</p>
<p>4</p>	<p>Enteric septicaemia of catfish was not reported this quarter despite passive surveillance but is known to have occurred previously in Queensland (last reported 1<sup>st</sup> 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.</p>
<p>5</p>	<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><b>Spherical baculovirus</b></p> <ol style="list-style-type: none"> <li>1. <b>Reported in Queensland</b> in November 2008. Passive surveillance;</li> <li>2. <b>In - <i>Penaeus monodon</i></b>-post larvae;</li> <li>3. <b>Clinical signs</b>- nil;</li> <li>4. <b>Pathogen- <i>Penaeus monodon</i></b> baculovirus;</li> <li>5. <b>Mortality rate</b>- nil;</li> <li>6. <b>Economic loss</b>- nil;</li> <li>7. <b>Geographic extent</b>- single hatchery tank;</li> <li>8. <b>Containment measures</b>- nil;</li> <li>9. <b>Laboratory confirmation</b>- diagnosed by histopathology;</li> <li>10. <b>Publications</b>- unpublished.</li> </ol> <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 from Queensland despite targeted surveillance but is known to have occurred previously (last reported 2<sup>nd</sup> 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), Tasmania (susceptible species not present).</p>
8	<p>White tail disease was not reported this period from Queensland despite targeted surveillance (last reported 1<sup>st</sup> quarter 2008). Passive surveillance and never reported from New South Wales and South Australia. No information available in the Australian Capital Territory, Northern Territory, Tasmania (susceptible species not present), Victoria and Western Australia.</p>
9	<p><b>Abalone viral ganglioneuritis</b></p> <p><b>Victoria</b> Abalone viral ganglioneuritis remains present in wild abalone (<i>Haliotis spp.</i>) in the south west of Victoria. There is no evidence of AVG on farms.</p> <p><b>Tasmania</b> An extensive active surveillance program has not detected any further AVG positive animals using PCR testing. There were no cases of clinical disease reported during this period.</p>

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

Erratum

Australia reports its status with respect to yellowhead disease (YHD) consistent with the OIE’s definition for YHD in the tenth (2007), and now eleventh (2008) edition of the OIE *Aquatic Animal Health Code* (the *Aquatic Code*). From the 2007 edition of the *Aquatic Code*, YHD is defined as “infection with yellow head virus (YHV)”. Earlier editions of the *Aquatic Code* have considered the causative agents of YHD as “yellowhead virus and related strains of the virus (e.g. gill-associated virus)”.

Consistent with the changed OIE definition for YHD (from the 2007 *Aquatic Code*), Australia now reports its YHD status to OIE Central Office via the World Animal Health Information System (WAHIS) as “never reported” and reports to NACA and OIE Regional Representation for Asia and the Pacific via the QAAD reporting program on this basis also.

In the first, second and third QAAD reports published by NACA and FAO for 2008, YHD was incorrectly presented as “yellowhead disease (YH virus, gill-associated virus)”; however, Australia’s reports refer only to the presence of YH virus. YHV has never been reported from Australia.

This error has not occurred in the equivalent QAAD reports published by OIE Regional Representation in Tokyo.

Country: **BANGLADESH**

Period: **October-December 2008**

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
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)	-	-	+	II	1
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10. Enteric septicaemia of catfish	0000	0000	0000		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
5. Acute viral necrosis (in scallops)	0000	0000	0000		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	-	-	-		
3. Yellowhead disease	0000	0000	0000		
4. Spherical baculovirosis ( <i>Penaeus monodon</i> -type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
6. Tetrahedral baculovirosis ( <i>Baculovirus penaei</i> )	0000	0000	0000		
7. Infectious myonecrosis	0000	0000	0000		
8. White tail disease (MrNV)	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
10. Milky lobster disease	0000	0000	0000		
<b>UNKNOWN DISEASES OF A SERIOUS NATURE</b>					
1. Akoya oyster disease	0000	0000	0000		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
		+( )	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
<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	EUS was reported in <i>Anabas testudineus</i> (Thai variety) fingerlings during December in greater Mymensingh district. External signs recorded were less appetite, tail and fin rot, lesion both in the ventral and dorsal region. Mortality rate was 80%.

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

Country: **HONG KONG SAR**

Period: **October-December 2008**

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
<b>DISEASES PREVALENT IN THE REGION</b>	October	November	December		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
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		
6. Red seabream iridoviral disease	-	-	-	III	
7. Koi herpesvirus disease	-	-	-	III	
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	-	-	-	III	
9. Viral encephalopathy and retinopathy	-	-	-	III	
10. Enteric septicaemia of catfish	0000	0000	000		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
5. Acute viral necrosis (in scallops)	0000	0000	0000		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+	+	-	III	1
3. Yellowhead disease	0000	0000	0000		
4. Spherical baculovirus ( <i>Penaeus 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)	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
10. Milky lobster disease	0000	0000	0000		
<b>UNKNOWN DISEASES OF A SERIOUS NATURE</b>					
1. Akoya oyster disease	0000	0000	0000		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> 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	Two cases of white spot disease were seen in October and November respectively. Red lobsters were submitted by two different aquatic farms 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: **INDONESIA**

 Period: **October-December 2008**

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
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
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	+	+	+	III	2
9. Viral encephalopathy and retinopathy	+	+	+	III	3
10. Enteric septicaemia of catfish	***	***	***		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Abalone viral mortality	***	***	***		
<b>Non OIE-listed diseases</b>					
4. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
5. Acute viral necrosis (in scallops)	***	***	***		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome	0000	0000	0000	III	4
2. White spot disease	+	+	+	III	5
3. Yellowhead disease	0000	0000	0000		
4. Spherical baculovirus ( <i>Penaeus monodon</i> -type baculovirus)	***	***	***		
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	III	6
6. Tetrahedral baculovirus ( <i>Baculovirus penaei</i> )	***	***	***		
7. Infectious myonecrosis	0000	0000	0000	III	7
8. White tail disease (MrNV)	***	***	***		
<b>Non OIE-listed diseases</b>					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
<b>UNKNOWN DISEASES OF A SERIOUS NATURE</b>					
1. Akoya oyster disease	***	***	***		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1. Infection with <i>Aeromonas hydrophilla</i>	-	+	+		8
2. Infection with <i>Ichthyophthirius multifiliis</i>	-	+	-		9

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalotis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> 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	<ul style="list-style-type: none"> <li>) Species affected : <i>Cyprinus carpio</i></li> <li>) Clinical sign : low irritation on gill, fin and part of body, gill damage</li> <li>) Pathogen : Koi herpesvirus ; All amples have been analyzed by PCR;</li> <li>) Mortality rate : low</li> <li>) Economic loss : -</li> <li>) Names of infected areas : Center Jakarta</li> <li>) Preventive/control measures : Adding vitamin C on fish food</li> <li>) Samples have been analyzed at Laboratory of Main Centre for Freshwater Aquaculture Development at Sukabumi (West Java) .</li> <li>) Not Published</li> </ul>
2	<ul style="list-style-type: none"> <li>) Disease occur at marine cage and size of fish infected are fry and consumption (approximately 50 to 400 gr)</li> <li>) Species affected : Polkadot grouper (<i>Cromileptes altivelis</i>), Brown – marbled grouper (<i>Ephinephelus fuscoguttatus</i>) and Snubnose pompano (<i>Trachinotus blochii</i> Lacepede)</li> <li>) Clinical sign : abnormally swim at surface, no response in the botttom of net, irritation at part of body, finding the giant cell at kidney and thymus, no clinical sign on some samples;</li> <li>) Pathogen : Grouper iridoviral disease; All amples have been analyzed by PCR</li> <li>) Mortality rate : low to high (20 to 100%);</li> <li>) Economic loss : low to high;</li> <li>) Names of infected areas : Lampung Province (Puhawang Island, Tanjung Putus, Ringgung and Hurun Bay )</li> <li>) Preventive/control measures:</li> <li>) Samples have been analyzed at Laboratory of Main Centre for Mariculture Development at Lampung Province</li> <li>) Not Published</li> </ul>

3	<ol style="list-style-type: none"> <li>1) Disease occur at marine cage culture and size of fish infected are larvae and consumption</li> <li>2) Species affected : Polkadot grouper (<i>Cromileptis altivelis</i>), Brown – marbled grouper <i>Ephinephilus fuscoguttatus</i></li> <li>3) Clinical sign : abnormally swim at surface, no response at tey bottom of net no specific change on some samples;</li> <li>4) Pathogen : Viral Nervous Necrosis Virus, All samples have been alanlyzed by PCR</li> <li>5) Mortality rate : medium to high (40 – 100 %)</li> <li>6) Economic loss : low to high</li> <li>7) Names of infected areas : Lampung Province (Puhawang Island, Tanjung Putus, Ringgung and Hurun Bay)</li> <li>8) Preventive/Control measures:</li> <li>9) Samples have been analyzed at Laboratory of Main Centre for Mariculture Development at Lampung Province</li> <li>10) Not Published</li> </ol>
4	<ol style="list-style-type: none"> <li>1) The sample were taken by CBAD Situbondo</li> <li>2) Species affected :White shrimp (<i>Liptopenaeus vanamei</i>)</li> <li>3) Clinical signs: mass mortality at the moulting shrimp</li> <li>4) Pathogen : Taura Syndrome Virus</li> <li>5) Economic loss : -</li> <li>6) Mortality rate : -</li> <li>7) Name of infected area: District of Situbondo</li> <li>8) Preventive/control measures: -</li> <li>9) Sample sent to the laboratory Center Brackish water Aquaculture Development at Situbondo(East Java)</li> <li>10) not published</li> </ol>
5	<ol style="list-style-type: none"> <li>1) Number of samples : 110 samples</li> <li>2) Species affected: Tiger shrimp (<i>Penaeus monodon</i>), White shrimp (<i>Liptopenaeus vannamei</i>)</li> <li>3) Clinical sign: White spot skin surface of shrimp head, shrimp becoming weak and swimming on the surface</li> <li>4) Pathogen : White Spot Syndrome Virus</li> <li>5) Mortality rate : high (<math>\pm</math> 70%)</li> <li>6) Economis loss : high</li> <li>7) Infected area: District of Jepara and Demak (Central Java) for <i>P. monodon</i>; Rembang hatchery (Central Java) fot <i>L. vannamei</i>.</li> <li>8) Preventive/Control measurement : -</li> <li>9) Laboratorium confirmation: all saples have been analyzed by PCR at Main Center for Brackishwater Aquaculture Development at Jepara (Central Java); Center for Brackishwater Aquaculture Development at Situbondo (East Java).</li> <li>10) Not published</li> </ol>
6	<ol style="list-style-type: none"> <li>1) The positive samples were found in Post Larvae of <i>Liptopenaeus vannamei</i></li> <li>2) Species affected : White shrimp (<i>Liptopenaeus vannamei</i>)</li> <li>3) Clinical sign : Low growth (very small size/dwarf)</li> <li>4) Pathogen : Infectious Hypodermal and Haematophatic Necrosis Virus</li> <li>5) Mortality rate : low – high</li> <li>6) Economic loss : high</li> <li>7) Preventive / control measurement : -</li> <li>8) Name of infected area : Banyuwangi District (East Java)</li> <li>9) Laboratorium confirmation: diagnosed by PCR at Main Center for Brackishwater Aquaculture Development at Jepara (Central Java); Center for Brackishwater Aquaculture Development at Situbondo (East Java).</li> <li>10) Not published</li> </ol>
7	<ol style="list-style-type: none"> <li>1) The sample were taken by CBAD Situbondo</li> <li>2) Species affected :White shrimp (<i>Liptopenaeus vanamei</i>)</li> <li>3) Clinical sign : broken at shrimp meat with white sign, specially at abdomen and telson, result of positive have been detected by PCR method</li> <li>4) Pathogen : Infectious Myonecrosis Virus</li> <li>5) Mortality rate : -</li> <li>6) Economic loss : -</li> <li>7) Prevetive/ Controlmeasures taken : -</li> <li>8) Infected area : District of Situbondo (East Java)</li> <li>9) Sample sent to the laboratory Center for Brackishwater Aquaculture Development at Situbondo (East Java)</li> <li>10) Publication paper : not published</li> </ol>

8	<ol style="list-style-type: none"> <li>1) Sampel taken by Main Centre for Freshwater Aquaculture Development at Sukabumi (West Java)</li> <li>2) Species affected : <i>Cyprinus carpio</i>, Koi and Gouramy</li> <li>3) Clinical sign : Common carp/<i>Cyprinus carpio</i> (hemorrhage and ulcer); Koi ( low irritation on fin and part of body, gill damage); Gouramy (hemorrhage and ulcer).</li> <li>4) Phatogen : <i>Aeromonas hydrophila</i></li> <li>5) Mortality rate : low to medium</li> <li>6) Economic loss : -</li> <li>7) Names of infected areas : Center Jakarta and Sukabumi (West Java)</li> <li>8) Preventive/control measures : Adding vitamin C on fish food</li> <li>9) Samples have been analyzed at Laboratory of Main Centre for Freshwater Aquaculture Development at Sukabumi (West Java) .</li> <li>10) Not Published</li> </ol>
9	<ol style="list-style-type: none"> <li>1) Sampel taken by Main Centre for Freshwater Aquaculture Development at Sukabumi (West Java)</li> <li>2) Species affected : Koi, Eel and Gouramy.</li> <li>3) Clinical sign : Koi (hemorrhage and ulcer), Eel (irritation and hemorrhage); Gouramy (hemorrhage and ulcer)</li> <li>4) Phatogen : <i>Ichthyophthirius multifiliis</i></li> <li>5) Mortality rate : low to medium</li> <li>6) Economic loss : -</li> <li>7) Names of infected areas : Center Jakarta and Sukabumi (West Java)</li> <li>8) Preventive/control measures : -</li> <li>9) Samples have been analyzed at Laboratory of Main Centre for Freshwater Aquaculture Development</li> <li>10) Not Published</li> </ol>

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

Country: **IRAN**

Period: **October-December 2008**

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Abalone viral mortality	***	***	***		
<b>Non OIE-listed diseases</b>					
4. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
5. Acute viral necrosis (in scallops)	***	***	***		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	-	-	-		
3. Yellowhead disease	0000	0000	0000		
4. Spherical baculovirus ( <i>Penaeus 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)	***	***	***		
<b>Non OIE-listed diseases</b>					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
<b>UNKNOWN DISEASES OF A SERIOUS NATURE</b>					
1. Akoya oyster disease	***	***	***		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> 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: **JAPAN**

 Period: **October-December 2008**

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
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	
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	0000	0000	0000	I	
9. Viral encephalopathy and retinopathy	-	+	-	III	
10. Enteric septicaemia of catfish	-	-	-	I	
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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	
<b>Non OIE-listed diseases</b>					
4. Infection with <i>Marteilioides chungmuensis</i>	+	+	+	II	
5. Acute viral necrosis (in scallops)	0000	0000	0000	I	
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome	0000	0000	0000	I	
2. White spot disease	-	+	-	III	
3. Yellowhead disease	0000	0000	0000	I	
4. Spherical baculovirus ( <i>Penaeus 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	
<b>Non OIE-listed diseases</b>					
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000	I	
10. Milky lobster disease	0000	0000	0000	I	
<b>UNKNOWN DISEASES OF A SERIOUS NATURE</b>					
1. Akoya oyster disease	+	-	-	III	
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1. Infection with <i>Edwardsiella ictaluri</i> (ayu)	+	+	-	III	

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> 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: **October-December 2008**

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
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)	(1986)	(1986)	(1986)		
6. Red seabream iridoviral disease	+	+	+	I,II,III	1
7. Koi herpesvirus disease	+	+	-	I,II,III	2
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	-	-	-		
9. Viral encephalopathy and retinopathy	+	-	+	I,II,III	3
10. Enteric septicaemia of catfish	0000	0000	0000		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
5. Acute viral necrosis (in scallops)	0000	0000	0000		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome	-	-	-	I, III	
2. White spot disease	+?	+	-	I, III	4
3. Yellowhead disease	-	-	-		
4. Spherical baculovirus ( <i>Penaeus monodon</i> -type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	+?	-	+?	III	5
6. Tetrahedral baculovirus ( <i>Baculovirus penaei</i> )	0000	0000	0000		
7. Infectious myonecrosis	0000	0000	0000		
8. White tail disease (MrNV)	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
10. Milky lobster disease	0000	0000	0000		
<b>UNKNOWN DISEASES OF A SERIOUS NATURE</b>					
1. Akoya oyster disease	0000	0000	0000		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1. Streptococcal infection	+	+	+	I, II	6

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> 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><b>Red Sea Bream Iridoviral Disease</b>                      1. Reported in Penang during passive and active surveillance                      (a) Active Surveillance: 28% of the samples were detected positive but fish did not show any obvious clinical signs                      (b) Passive surveillance: one batch of fish samples size 8-10 cm were sent to NaFish Lab and reported to cause high mortality in 2 of 3 ponds. 6 from 8 samples were detected positive for iridovirus                      2. Species affected- (a) sea bass and lutjanus sp (b) sea bass                      3. Disease characteristic-(a) No clinical signs observed (b) body ulceration, cloudy eyes, 12% enlarged spleen, 38% pale liver                      4. Pathogen-Iridovirus                      5. Mortality rate-(a) none (b) &gt;50 fish/day for a month                      6. Death toll-None reported                      7. Size of infected area-2 ponds in 1 farm and 1 farm at the cage culture area                      8.Prevention/control measures taken-farmer were advised to cull all the fish                      9.Laboratory confirmation: PCR by national Fish Health Research Centre, Penang                      10. Publications-None</p>
2	<p><b>Koi herpesvirus disease</b>                      (a) Disease was not reported during these periods despite active and passive surveillance in Perak farms and Penang by National Fish Health Research Centre, Penang                      (b) One out of 90 samples of koi fish in October was detected positive from 2 farms in Selangor. The sample was from a monitoring program by Biosecurity Division in Department of Fisheries (DOF) malayisa, for the purpose of farm registration. In November, under the same program, 4 out of 7 premises in Selangor were detected positive to KHV. However, there were no outbreaks reported during this monitoring program. All the farms and premises were informed of the results for further action</p>

3	<p><b>Viral Nervous Necrosis</b></p> <p>1. Reported in Penang during passive and active surveillance. (a) Active surveillance in Penang: 10% of the samples were detected positive but fish did not show any obvious clinical signs. (b) Passive surveillance in Penang: One batch of fish samples size 8-10 cm were sent to NaFish lab and reported to have high mortality in 2 of 3 ponds. 4 out of 8 samples were detected positive to VNN</p> <p>2. Species affected- (a) sea bass and Lutjanus sp (b) Sea bass</p> <p>3. Disease characteristic-(a) no clinical signs observed (b) body ulceration, cloudy eyes, 12% enlarged spleen, 38% pale liver</p> <p>4. Pathogen-VNN</p> <p>5. Mortality rate-(a) no mortality (b) &gt;50fish/day for a month</p> <p>6. Death toll-not reported</p> <p>7. Size of infected area-(a) 1 farm at the cage culture area (b) 2 ponds in 1 farm</p> <p>8. Preventive/control measures taken-farmers were advised to cull all the fish</p> <p>9. Laboratory confirmation-PCR by National Fish Health Research centre, Penang</p> <p>10. Publications-None</p>
4	<p><b>White spot syndrome virus (WSSV)</b></p> <p>A. (i) a) Reported in Sambir, Kuching in October 2008. Samples from aquaculture farm were sent to laboratory for screening (b) Detected in shrimp samples sent to FRIS in November 2008 by a local shrimp processing company in Kuching, Sarawak (ii) routine screening in broodstock and PL, whereby th samples were sent to a private lab (iii) clinical signs detected in samples of <i>P.vannamei</i> in 1 pond from a farm in Penang with high mortalities</p> <p>1. Species affected-White shrimp <i>Litopenaeus vannamei</i></p> <p>2. Disease Characteristic (ia) No clinical signs observed (ib) No clinical signs observed. Shrimp in processed form (frozen shell on) (ii) No clinical signs observed (iii) white spot appearance on the carapace</p> <p>3. Pathogen-White spot syndrome virus was detected using PCR (iii) negative by PCR. Result might be due to degraded DNA</p> <p>4. Mortality rate-(i-ii) None reported shrimp were already harvested when samples were sent to the laboratory (iii) 30-40% mortality. Farmers applied emergency harvest</p> <p>5. Death toll-None reported</p> <p>6. Size of infected area-Not known (iii) 1 pond</p> <p>7. Preventive/control measures taken-none taken</p> <p>8. Laboratory confirmation diagnosis by (i) Fisheries Research Institute, Sarawak (ii) private lab</p> <p>9. Publications (ia &amp; b) will be published in FRIS 2008 annual report</p> <p>B. White spot syndrome virus detected using PCR analysis in the broodstocks cultured for SPF program at Brackishwater aquaculture Research Centre (BARC)</p> <p>1. Species affected-Tiger shrimp, <i>Penaeus monodon</i></p> <p>2. Disease characterisitic- no clinical signs</p> <p>3. preventive/control measures taken-shrimp disposed with chlorine and buried</p> <p>4. Laboratory confirmation diagnosis by BARC, Gelang Patah</p>
5	<p><b>IHHNV</b></p> <p>Passive surveillance</p> <p>1. IHHNV was detected from samples send from processing company in Sabah in December 2008 during passive surveillance. It was reported that this shrimp is cultured in Tawau, Sabha. IHHNV was also detected from samples of broodstock in BARC in the SPF program</p> <p>2. Species affected-Tiger prawn, <i>P.monodon</i></p> <p>3. No clinical signs detected as samples received were already in processed from (shell on frozen). No clinical signs found in broodstock</p> <p>4. Pathogen (isolated/serotyped): Infectious hypodermal and hematopoietic necrosis virus was decetded from processed product send by a local processing company</p> <p>5. Mortality rate: Not known</p> <p>6. Death toll: Not known</p> <p>7. Size of infected area: not known</p> <p>8. Preventive/control measures taken: Not reported. Shrimp disposed with chlorine and buried</p> <p>9. Laboratory confirmation diagnosis by Fisheries Research Institute, Sarawak (FRIS) and BARC Laboratory, Gelang Patch</p> <p>10. Publication: Will be published in FRIS 2008 Annual report</p>

6	<p><b>Streptococcal Infection in tilapia</b> Active surveillance</p> <ol style="list-style-type: none"> <li>1. <b>Reported in</b> a) Kedah b) Terengganu</li> <li>2. <b>Clinical Signs</b> – erratic, exophthalmia or other abnormal clinical signs of the eye, inflamed at ventral region</li> <li>3. <b>Pathogen</b> – <i>Streptococcus agalactiae</i></li> <li>4. <b>Mortality rate</b> - ± 20-30%</li> <li>5. <b>Economic loss</b> – n/a</li> <li>6. <b>Geographic extent</b> – in most floating cages, lakes and rivers</li> <li>7. <b>Laboratory confirmation</b> – API 20E STREP</li> <li>8. <b>Publications</b> : unpublished</li> </ol>
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**2. New aquatic animal health regulations introduced within past six months (with effective date):**

Country: **MYANMAR**

Period: **October-December 2008**

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

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> 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: **NEPAL**

Period: **October-December 2008**

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
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	***	***	***		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	***	***	***		
9. Viral encephalopathy and retinopathy	***	***	***		
10. Enteric septicaemia of catfish	***	***	***		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
5. Acute viral necrosis (in scallops)	0000	0000	0000		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	0000	0000	0000		
3. Yellowhead disease	0000	0000	0000		
4. Spherical baculovirus ( <i>Penaeus 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)	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
10. Milky lobster disease	0000	0000	0000		
<b>UNKNOWN DISEASES OF A SERIOUS NATURE</b>					
1. Akoya oyster disease	0000	0000	0000		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> 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: **PHILIPPINES**

 Period: **October-December 2008**

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
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	III	1
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	-	-	-	III	2
9. Viral encephalopathy and retinopathy	-	-	-	III	3
10. Enteric septicaemia of catfish	0000	0000	0000		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
5. Acute viral necrosis (in scallops)	***	***	***		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome	0000	0000	0000	III	4
2. White spot disease	+	-	-	III	5
3. Yellowhead disease	-	-	-		
4. Spherical baculovirus ( <i>Penaeus 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		
<b>Non OIE-listed diseases</b>					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
<b>UNKNOWN DISEASES OF A SERIOUS NATURE</b>					
1. Akoya oyster disease	***	***	***		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalictis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> 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 55 pieces of koi carp ( <i>Cyprinus carpio</i> ) collected from koi farms in Batangas were examined using PCR test and showed negative results for KHV. Examinations/tests were conducted by the BFAR Fish Health Laboratory.
2	Three (3) samples of grouper ( <i>Epinephelus</i> spp.) collected from Cebu examined using PCR test showed negative results for Grouper Iridovirus. Examinations/tests were conducted by the BFAR Fish Health Laboratory.
3	A total of 25 samples (3 grouper, 1 snapper, 17 sea bass, and 4 milkfish) collected from Cebu were analyzed using PCR test and all showed negative results for VER. Examinations/tests were conducted by the BFAR Fish Health Laboratory.
4	All eleven (11) samples of <i>P. vannamei</i> of different stages (juvenile, zoea, post larval and adult) from Bulacan, Pangasinan, Batangas, Zambales and Mindoro examined by PCR test showed negative results for TSV. Examination/tests were conducted by the BFAR Fish Health Laboratory.
5	From a total of twenty-three (23) samples from Bulacan, Pangasinan, Batangas, Quezon, Zambales, Mindoro, Tacloban, Leyte and Bicol Region which include eleven (11) samples of <i>P. vannamei</i> of different stages (juvenile, zoea, post larval and adult); ten (10) samples of <i>P. monodon</i> of different stages (juvenile, fry, post larval and adult) and two (2) samples of <i>M. rosenbergii</i> , four (4) samples (1 <i>P. vannamei</i> , 2 <i>P. vannamei</i> zoea and 1 <i>P. monodon</i> juvenile) showed positive results for WSV. Examinations/tests were conducted by the BFAR Fish Health Laboratory.

6	Out of twenty (20) samples which include ten (10) samples of <i>P. vannamei</i> of different stages (zoea, post larval, juvenile and adult); eight (8) samples of <i>P. monodon</i> (juvenile and adult) and two (2) samples of <i>M. rosenbergii</i> (broodstock) from Pangasinan, Batangas, Tacloban, Zambales, Mindoro and Bicol Region; four (4) samples of <i>P. vannamei</i> (zoea and post larva) showed positive results for IHNV using PCR test. Examinations/tests were conducted by the BFAR Fish Health Laboratory.
7	All twenty-two (22) samples of <i>P.vannamei</i> of different stages (juvenile, broodstock, post larval and adult stages) from Batangas, Zambales, Tacloban, Iloilo and Mindoro showed negative results for IMNV. Examinations/tests were conducted by the BFAR Fish Health Laboratory.

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

Country: **REPUBLIC OF KOREA**

 Period: **October-December 2008**

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
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	?	?	?	III	
5. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease	?	?	?	III	
7. Koi herpesvirus disease	(1998)	(1998)	(1998)	III	
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	?	?	?	III	
10. Enteric septicaemia of catfish	0000	0000	0000		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
5. Acute viral necrosis (in scallops)	0000	0000	0000		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome	-	-	-		
2. White spot disease	-	-	-		
3. Yellowhead disease	0000	0000	0000		
4. Spherical baculovirus ( <i>Penaeus 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)	0000	0000	0000		
<b>Non OIE-listed diseases</b>					
9. <i>Monodon</i> slow growth syndrome					
10. Milky lobster disease					
<b>UNKNOWN DISEASES OF A SERIOUS NATURE</b>					
1. Akoya oyster disease	0000	0000	0000		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> Channel catfish virus disease</p>			
<p>a/ Please use the following symbols:</p>			
		+( )	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
<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: **SINGAPORE**

 Period: **October-December 2008**

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
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)		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	-	-	-		
9. Viral encephalopathy and retinopathy	-	-	-		
10. Enteric septicaemia of catfish	0000	0000	0000		
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
3. Abalone viral mortality	***	***	***		
<b>Non OIE-listed diseases</b>					
4. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
5. Acute viral necrosis (in scallops)	***	***	***		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome	***	***	***		
2. White spot disease	-	-	-		
3. Yellowhead disease	***	***	***		
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)	***	***	***		
<b>Non OIE-listed diseases</b>					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
<b>UNKNOWN DISEASES OF A SERIOUS NATURE</b>					
1. Akoya oyster disease	***	***	***		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1. Mullet systemic iridoviral disease	(2008)	(2008)	(2008)		

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> 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: **October-December 2008**

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



<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> 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 incidences were reported during this quarter in <i>P. monodon</i> brooders, postlarvae and sub-adults. However the prevalence was low. Other shrimp such as <i>P. dobsoni</i> and <i>P. semisulcatus</i> were positive for WSSV by PCR. Some of the sea crab species and ( <i>Portunus sanguinolentus</i> , <i>Portunus pelagicus</i> ) <i>Sesarma species</i> were found infected with WSSV using PCR.
2	MBV- Occurrences of MBV in brooders (wild) and in postlarvae of <i>P. monodon</i> was high. Post larvae samples were checked using malachite green staining method and also PCR was used for confirmation. The PL stocks with very high levels of infection were not recommended for stocking.
3	IHHNV/ or IHHNV-related type was reported for the first time in Sri Lanka, and it's presence was confirmed using PCR. The virus was detected in brooders (collected from wild), postlarvae and sub-adults collected from shrimp grow-outs located in the North-western province. Further studies are required to confirm whether it's the infectious IHHNV or the related IHHNV sequence from the shrimp genome. The shrimp which were PCR positive did not show any disease symptoms that were earlier reported with IHHNV infection. In all three life-stages of <i>P. monodon</i> the prevalence of the detected type (IHHNV) was quite high.

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

Country: **THAILAND**

 Period: **October-December 2008**

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	July	August	September		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
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	1
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	-	-	-	III	
9. Viral encephalopathy and retinopathy	-	-	-	III	
10. Enteric septicaemia of catfish	0000	0000	0000	II	
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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	***	***	***		
<b>Non OIE-listed diseases</b>					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	II	
5. Acute viral necrosis (in scallops)	***	***	***		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome	+	+	+	III	2
2. White spot disease	+	+	+	III	3
3. Yellowhead disease	-	+	+	III	4
4. Spherical baculovirus ( <i>Penaeus monodon</i> -type baculovirus)	-	-	-		
5. Infectious hypodermal and haematopoietic necrosis	+	+	+	III	5
6. Tetrahedral baculovirus ( <i>Baculovirus penaei</i> )	***	***	***		
7. Infectious myonecrosis	0000	0000	0000		
8. White tail disease (MrNV)	+	+	+		6
<b>Non OIE-listed diseases</b>					
9. <i>Monodon</i> slow growth syndrome	***	***	***		
10. Milky lobster disease	***	***	***		
<b>UNKNOWN DISEASES OF A SERIOUS NATURE</b>					
1. Akoya oyster disease	***	***	***		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					
1. Ranavirus	-	-	-	III	

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalictis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> 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 koi shipment, 211 kois (fancy carp), from Japan found to be infected by KHV in a quarantine house of an importing company in Bangkok. The KHV was diagnosed in the Inland Aquatic Animal Health Research Institute (AAHRI), Department of Fisheries. The disease was limited only in the quarantine house and all kois were destroyed. The quarantine house were disinfected and cleaned. Under active surveillance in the koi production farms and exporting premises are still free from KHV.
2	A total of 869 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 23 specimens or 2.65% recorded as RT-PCR positive or carrying TSV genes. Shrimp farms with positive testing results will subject to health improvement, movement control, eradication and/or farm dis-infection.
3	A total of 869 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 10 specimens or 1.15% recorded as PCR positive or carrying WSSV genes. Shrimp farms with positive testing results will subject to health improvement, movement control, eradication and/or farm dis-infection.
4	A total of 869 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 9 specimens or 1.04% recorded as RT-PCR positive or carrying YHV genes. Shrimp farms with positive testing results will subject to health improvement, movement control, eradication and/or farm dis-infection.
5	A total of 685 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 29 specimens or 4.23% recorded as PCR positive or carrying IHNV genes. Shrimp farms with positive testing results will subject to health improvement, movement control, eradication and/or farm dis-infection.

6	76 giant prawn specimens from wild stock and hatchery brooders were sampled under the MrNV surveillance program using RT-PCR technique. 5 specimens or 6.6% recorded as PCR positive or carrying MrNV gene. However no disease clinical signs in all prawns. Concepts in bio-security for disease prevention had been advised to hatchery owners or operators.
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**2. New aquatic animal health regulations introduced within past six months (with effective date):**

Country: VIETNAM

Period: October-December 2008

Item	Disease status <sup>a/</sup>			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
<b>FINFISH DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
8. Grouper iridoviral disease	0000	0000	0000		
9. Viral encephalopathy and retinopathy	0000	0000	0000		
10. Enteric septicaemia of catfish	+	+	+	I,II	2
<b>MOLLUSC DISEASES</b>					
<b>OIE-listed diseases</b>					
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		
<b>Non OIE-listed diseases</b>					
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
5. Acute viral necrosis (in scallops)	0000	0000	0000		
<b>CRUSTACEAN DISEASES</b>					
<b>OIE-listed diseases</b>					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+	+	+	I,II,III	3
3. Yellowhead disease	+	+	+	I,II,III	4
4. Spherical baculovirus ( <i>Penaeus 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)	***	***	***		
<b>Non OIE-listed diseases</b>					
9. <i>Monodon</i> slow growth syndrome	0000	0000	0000		
10. Milky lobster disease	+	+	+	I	5
<b>UNKNOWN DISEASES OF A SERIOUS NATURE</b>					
1. Akoya oyster disease	0000	0000	0000		
<b>ANY OTHER DISEASES OF IMPORTANCE</b>					

<p><b>DISEASES PRESUMED EXOTIC TO THE REGION<sup>b</sup></b>  <b>LISTED BY THE OIE</b>  <b>Finfish:</b> Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>).  <b>Molluscs:</b> Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Perkinsus marinus</i>; <i>Xenohalictis californiensis</i>.  <b>Crustaceans:</b> Crayfish plague (<i>Aphanomyces astaci</i>).  <b>NOT LISTED BY THE OIE</b>  <b>Finfish:</b> 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	The disease occurred in catfish ( <i>Pangasius micronema</i> , <i>P. hypophthalmus</i> ) cultures with high density in zone in the South (Kien Giang Dong Thap). 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 Tien Giang, Dong Thap
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 Bac Lieu, Tien Giang, Kien Giang, Binh Thuan, Ninh Thuan, Thua Thien Hue
4	Pathogen: Gill-Associated Virus GAV Infection occurred in black tiger shrimp ( <i>Penaeus monodon</i> ) This disease scattered in Soc Trang, Bac Lieu, 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 Binh Thuan, Ninh 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 2009)

1. DISEASES PREVALENT IN THE REGION	
<b>1.1 FINFISH DISEASES</b>	
<b>OIE-listed diseases</b>	<b>Non OIE-listed diseases</b>
1. Epizootic haematopoietic necrosis	1. Grouper iridoviral disease
2. Infectious haematopoietic necrosis	2. Viral encephalopathy and retinopathy
3. Spring viraemia of carp	3. Enteric septicaemia of catfish
4. Viral haemorrhagic septicaemia	
5. Epizootic ulcerative syndrome	
6. Red seabream iridoviral disease	
7. Infection with koi herpesvirus	
<b>1.2 MOLLUSC DISEASES</b>	
<b>OIE-listed diseases</b>	<b>Non OIE-listed diseases</b>
1. Infection with <i>Bonamia exitiosa</i>	1. Infection with <i>Marteilioides chungmuensis</i>
2. Infection with <i>Perkinsus olseni</i>	2. Akoya oyster disease
3. Abalone viral mortality	3. Acute viral necrosis (in scallops)
<b>1.3 CRUSTACEAN DISEASES</b>	
<b>OIE-listed diseases</b>	<b>Non OIE-listed diseases</b>
1. Taura syndrome	1. Monodon slow growth syndrome
2. White spot disease	2. Milky lobster syndrome
3. Yellowhead disease	
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)	
9. Necrotising hepatopancreatitis	
10. Hepatopancreatic parvo virus disease	
11. Mourilyan virus disease	
<b>1.4 AMPHIBIAN DISEASES</b>	
<b>OIE-listed diseases</b>	<b>Non OIE-listed diseases</b>
1. Infection with Ranavirus	
2. Infection with <i>Bachtracochytrium dendrobatidis</i>	
2. DISEASES PRESUMED EXOTIC TO THE REGION	
<b>2.1 Finfish</b>	
<b>OIE-listed diseases</b>	<b>Non OIE-listed diseases</b>
1. Infectious salmon anaemia	1. Channel catfish virus disease
2. Gyrodactylosis ( <i>Gyrodactylus salaris</i> )	
<b>2.2 Molluscs</b>	
<b>OIE-listed diseases</b>	<b>Non OIE-listed diseases</b>
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>Xenohaliotis californiensis</i>	
<b>2.3 Crustaceans</b>	
<b>OIE-listed diseases</b>	<b>Non OIE-listed diseases</b>
1. Crayfish plague ( <i>Aphanomyces astaci</i> )	

## Recent Aquatic Animal Health Related Publications

**OIE Aquatic Animal Health Code, 11<sup>th</sup> Edition, 2008 and OIE Manual of Diagnostic Tests for Aquatic Animals, 5<sup>th</sup> Edition, 2006** [http://www.oie.int/eng/publicat/en\\_aqua.htm](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](http://www.oie.int/eng/normes/fcode/A_00003.htm). The book may be ordered from [pub.sales@oie.int](mailto: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](mailto: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](mailto: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.  
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**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](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](mailto: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](mailto: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 AG<sup>1</sup>, 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.

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<sup>1</sup> Regional Advisory Group on Aquatic Animal Health (AG)

### C. Levels of Diagnosis

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

### D. Subjects to be covered in the Epidemiological Comments

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

### IMPORTANT

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

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

#### OIE Regional Representation for Asia and the Pacific

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## Notes

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