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

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Foreword

Towards Harmonization

International trade in live aquatic animals and their products is growing at a phenomenal rate. This is in fact very essential to support the development of sustainable and profitable aquaculture. However, with trade comes the risk of introduction and spread of pathogens. Various global and regional instruments and standards provide guidance to trading partners to minimize the risk of introduction and spread of dangerous aquatic animal pathogens. Developing operational strategies to effectively implement the guidelines is very important. In this direction, ASEAN has taken a small step forward. In order to enhance the bio-security of food finfish industries, ASEAN Member Countries have come together under an AusAid supported project to develop standard operating procedures (SOPs) for health certification and quarantine measures for responsible movement of live food finfish (LFF) within ASEAN. These SOPs have been developed under the AADCP:RPS project 370-018, *Operationalise Guidelines on Responsible Movement of Live Food Finfish*. This project is coordinated by ASEC, NACA and AusVet for Cardno ACIL who manage the AADCP:RPS program for ASEC and AusAID.

A goal of the Vientiane Action Program (VAP) is to develop, harmonise and adopt quality standards and regulations for food, agriculture and forestry products. The workplan for this goal further specifies the need to collect and compile national fisheries SPS measures and regulations; harmonisation of national sanitary measures into an ASEAN sanitary measure and publication of the harmonised ASEAN sanitary fisheries measures. The ASEAN Sectoral Working Group on Fisheries (ASWGFi) and the Senior Official Meeting for ASEAN Ministers on Agriculture and Forestry (SOM-AMAF) are responsible for this initiative.

A Regional Seminar on *Harmonisation of Quarantine Procedures for Live Fish among ASEAN Member Countries* in February 2003 in Penang, Malaysia resulted in draft guidelines for the international movement of live fish. The draft guidelines was presented and agreed at the 11th Meeting of ASWGFi in May 2003 in Vientiane, Lao PDR. The Meeting agreed that the scope and title of the guidelines be changed to *General Guidelines on Responsible Movement of Live Food Fin Fish* and that comprehensive procedures for implementation of the *Guidelines* at the operational level should be developed. The SOPs have built on the recommendations of the *Guidelines*.

They also are consistent with the Asia regional technical guidelines on health management for the responsible movement of live aquatic animals and the Beijing consensus and implementation strategy, 2000 (TG) and the Manual of procedures for the implementation of the TG (2001). The OIE Aquatic Animal Health Code (Ninth Edition, 2006) and Manual of Diagnostic Tests for Aquatic Animals (Fifth Edition, 2006) have been used in the development of the SOPs. The SOPs complement national responsibilities under existing international standards for management of food safety and residues (for instance, *Codex Alimentarius*) and other environmental considerations (for instance, *CITES*).

The first step in developing the SOPs was to develop an inventory of countries' current practices in early 2006 and to hold a First Policy Workshop in Bangkok, Thailand in April 2006 at which all 10 ASEAN countries were represented. The workshop developed a draft Table of Contents for the SOPs and allocated tasks and selected the leaders and members of four working groups. ASEC and NACA briefed ASWGFi on progress at its meeting in Manila, the Philippines in June 2006. The leaders communicated with their group members to prepare for a leaders' workshop in Johor Bahru in September 2006 at which the first draft of the SOPs were developed. This draft was circulated to members of the work groups for consideration and comment and members of ASWGFi for information before a second policy workshop which was held in the Philippines in February 2007 and agreed on the Final Draft SOPs. It is expected that the ASEC will place it before the ASWGFi for formal review and endorsement.

These SOPs are a set of documents for health certification and quarantine measures to be used by CA for the responsible movement of LFF by land, sea and air among ASEAN Member Countries. The SOPs recognise the existing variation in capacity among ASEAN Member Countries but the SOPs have been designed so that they can be adopted and implemented within the specific policy and legal framework of each country. These SOPs have been written to help manage the movement of LFF for immediate consumption as human food.

Reports Received by the NACA Secretariat

Country: **AUSTRALIA**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	-(2004)	-(2004)	-(2004)		1
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Infectious pancreatic necrosis	0000	0000	0000		
6. Epizootic ulcerative syndrome (EUS)	+	+	+	II	2
7. Bacterial kidney disease	0000	0000	0000		
8. Red seabream iridoviral disease	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	0000	0000	0000		
10. Viral encephalopathy and retinopathy	+	+	+	III	3
11. Enteric septicaemia of catfish	-(2001)	-(2001)	-(2001)		4
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	+	+	+	II	5
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>	-(2006)	-(2006)	-(2006)		6
4. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	0000	0000	0000		
3. Yellowhead disease (YH virus, gill-associated virus)	0000/ -(2006)	0000/ +	0000/ -(2006)	III	7
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	-(2005)	-(2005)	-(2005)		8
5. Infectious hypodermal and haematopoietic necrosis	-(2004)	-(2004)	-(2004)		9
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	0000	0000	0000		
8. Baculoviral midgut gland necrosis	0000	0000	0000		
9. White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Ganglioneuritis in abalone	+	+	+	III	10
2. Mortalities in pearl oysters	+	+	+	III	11

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Mikrocytos mackini</i> ; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>; Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>); NOT LISTED BY THE OIE, BUT OF POTENTIAL RELEVANCE Finfish: Channel catfish virus disease; Piscirickettsiosis. Crustaceans: Infectious myonecrosis.</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>Epizootic haematopoietic necrosis was not reported this period despite passive surveillance, but is known to have previously occurred 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.</p>
2	<p>Epizootic ulcerative syndrome</p> <ol style="list-style-type: none"> 1. Reported in New South Wales in October, November and December 2006. Passive surveillance; 2. In adult sliver perch (<i>Bidyanus bidyanus</i>)-marketable size. 3. Clinical signs- red skin lesions and ulcers typical of EUS infection; 4. Pathogen- <i>Aphanomyces invadans</i>; 5. Mortality rate- unknown 6. Economic loss- unknown; 7. Geographic extent- single commercial facility; 8. Containment measures- quarantine of affected facility; 9. Laboratory confirmation- diagnosed by histology; 10. Publications- unpublished. <p>Not reported during this period despite active surveillance but is known to have previously occurred in Northern Territory (last reported third quarter 2006). Considered endemic to certain streams and rivers of the Northern Territory.</p> <p>Not reported despite passive surveillance, but is known to have previously occurred in Queensland (last year reported 2005) and Victoria (last year reported 2002). Passive surveillance and never reported in South Australia and Tasmania. Not reported this quarter but considered to be endemic in Western Australia. No information available in the Australian Capital Territory.</p>
3	<p>Viral encephalopathy and retinopathy</p> <ol style="list-style-type: none"> 1. Reported in New South Wales in December 2006. Passive surveillance. 2. In Australian bass (<i>Macquaria novemaculeata</i>) fry. 3. Clinical signs- nil; 4. Pathogen- Australian bass nervous necrosis virus; 5. Mortality rate- nil; 6. Economic loss- not reported; 7. Geographic extent- single government hatchery, single spawning event; 8. Containment measures- destruction of affected fry and parent broodstock (as well as all other in-contact broodstock); disinfection of facility; 9. Laboratory confirmation- diagnosed by PCR and viral isolation in cell culture;

	<p>10. Publications- unpublished.</p> <ol style="list-style-type: none"> Reported in Queensland in a) October, b) November and c) December 2006. Targeted surveillance In a) <i>Epinephelus fuscoguttatus</i> 85 day old fingerlings, b) <i>Epinephelus coioides</i> 61 day old fingerlings, c) <i>Epinephelus coioides</i> i.16 day old, ii.51 and 72 day old, iii. 55 days old; Clinical signs- a) lethargy, swimming on side and gasping respiration, b) mass mortality, c) i. abnormal swimming with porpoising and spiralling, mass mortality, ii. lethargy, low level chronic mortality, fin rot and skin ulcers, iii. nil; Pathogen- betanodavirus; Mortality rate- a) 10/20,000, b) 50% (of 10,700), c) i. 100%, ii. <1%, iii. nil; Economic loss- not reported; Geographic extent- a) 4 tanks, b) 4 tanks, c) i. 1 tank, ii. 4 tanks, iii. 2 tanks; Containment measures- none, endemic to area. Targeted surveillance of all barramundi hatcheries in Queensland is on-going; Laboratory confirmation- diagnosed by histopathology; c)iii. histopathology and immunohistochemistry (IHC); Publications- unpublished. <p>Not reported this period despite targeted surveillance South Australia (last year reported 2004). Not reported this period despite active surveillance from Northern Territory (last year reported 2005). Not reported this period despite passive surveillance from Western Australia (last year reported 2005) and Tasmania (last year reported 2000). Never reported from Victoria despite passive surveillance. No information available in the Australian Capital Territory.</p>
4	<p>Enteric septicaemia of catfish was not reported this quarter but is known to have occurred in zebrafish (<i>Brachydanio rerio</i>) in PC2 containment in Tasmania (last year reported 2001). Never reported in New South Wales, Northern Territory, Queensland, South Australia and Victoria despite passive surveillance. No information available in the Australian Capital Territory and Western Australia.</p>
5	<p>Perkinsus olseni</p> <ol style="list-style-type: none"> Reported in South Australia in October, November and December 2006. Targeted surveillance: In wild (but not cultured) blacklip abalone (<i>Haliotis rubra</i>) and greenlip abalone (<i>Haliotis laevigata</i>). Clinical signs- pustules on epipodium (normal clinical signs of perkinsosis in abalone); Pathogen- <i>Perkinsus olseni</i>; Mortality rate- no mortalities observed, some morbidity associated with infection. Infections are ongoing; Economic loss- unknown; Geographic extent- open system. Lower Eyre and Yorke Peninsulas; Containment measures- none. Open system; Laboratory confirmation- diagnosed by histology; Publications- unpublished. <p>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. Passive surveillance and never reported in the Northern Territory, Queensland, Tasmania and Victoria. Presence suspected but not confirmed from New South Wales (last year reported 2005). No information available in the Australian Capital Territory (no marine water responsibility).</p>
6	<p><i>Marteilia sydneyi</i> was not reported this period despite passive surveillance but is known to have previously occurred in New South Wales and Queensland (last reported 3rd quarter 2006) and Western Australia (last year reported 1994). Passive surveillance and never reported in the Northern Territory, South Australia, Tasmania or Victoria. No information available in the Australian Capital Territory (no marine water responsibility).</p>
7	<p>Yellowhead virus: Active surveillance and never reported in the Northern Territory. Passive surveillance and never reported in New South Wales, Queensland, South Australia, Victoria and Western Australia. No information available from the Australian Capital Territory (no marine water responsibility) and Tasmania (susceptible species not present).</p> <p>Gill-associated virus</p> <ol style="list-style-type: none"> Reported in the Northern Territory in November 2006. Active surveillance: In <i>Penaeus monodon</i>; Clinical signs- nil; Pathogen- gill associated virus; Mortality rate- nil; Economic loss- nil; Geographic extent- multiple ponds-no disease; Containment measures- n/a - endemic in region; Laboratory confirmation- diagnosis made by PCR;

	<p>10. Publications- unpublished.</p> <p>Not reported this period despite active surveillance but known to have occurred previously in Western Australia (last year reported 2005). Not reported this period despite passive surveillance but known to have occurred previously in New South Wales (last year reported 2003). Gill-associated virus is considered endemic in Queensland where the lack of a clear case definition, of readily available detection tests and an apparent role for mixed virus infections make any conclusion about the incidence of GAV-related epizootics impossible. Passive surveillance and never reported in South Australia and Victoria. No information available in Australian Capital Territory (no marine water responsibility) and Tasmania (susceptible species not present).</p>
8	<p>Spherical baculovirus was not reported this period despite targeted surveillance but is known to have occurred previously in Queensland (last year reported 2005). Not reported this period despite passive surveillance, but 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>
9	<p>Infectious hypodermal and haematopoietic necrosis virus was not reported this period despite passive surveillance. This virus is known to have previously occurred in Queensland (last year reported 2004) and in the Northern Territory (last year reported 2003). No disease has been associated with the virus. The Australian virus is considered to be closest to the avirulent Madagascar strain. Passive surveillance and never reported in New South Wales, South Australia, Victoria and Western Australia. No information available in Australian Capital Territory (no marine responsibility) and Tasmania (susceptible species not present).</p>
10	<p>The viral disease of abalone, ganglioneuritis, continues to be reported in wild stocks on reefs near Port Fairy, where the Victorian government has set up a control zone extending between 200m and 700m offshore along 10km of coast. No mortalities were reported in farmed abalone in this quarter. The Victorian Government is working in close collaboration with industry sectors on the response to the disease. A reference group of animal bio-security and fishery managers, farmers, wild-harvest license holders and operators, processors and scientists has been established. Priorities for immediate research and bio-security measures have been identified. Other states are also examining bio-security in recognition of the interstate exchange of abalone.</p>
11	<p>There have been mortalities affecting a limited number of pearl oyster leases in parts of northern Western Australia. Affected oysters show oedema, mantle retraction and death approximately 3-4 days after the onset of signs. Only farmed <i>Pinctada maxima</i> are affected - wild <i>P. maxima</i> and other farmed and wild oyster species in the vicinity do not appear affected. The aetiology of the disease is under investigation. As a precaution, the event is being managed as an infectious disease outbreak, with the affected leases placed under quarantine.</p>

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

Country: **BANGLADESH**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
	October	November	December		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	***	***	***		
4. Viral haemorrhagic septicaemia	***	***	***		
5. Infectious pancreatic necrosis	***	***	***		
6. Epizootic ulcerative syndrome (EUS)	-	-	-		
7. Bacterial kidney disease	***	***	***		
8. Red seabream iridoviral disease	***	***	***		
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	***	***	***		
10. Viral encephalopathy and retinopathy	***	***	***		
11. Enteric septicaemia of catfish	***	***	***		
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>	***	***	***		
4. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	***	***	***		
2. White spot disease	-	-	-		
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	***	***	***		
5. Infectious hypodermal and haematopoietic necrosis	***	***	***		
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	***	***	***		
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	***	***	***		
8. Baculoviral midgut gland necrosis	***	***	***		
9. White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Diseases of <i>Hypophthalmus sutchi</i>	+	+	+	1	1
2. Diseases of <i>Anabas testudineus</i>	+	+	+	1	1

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

1. Epidemiological comments:

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

Comment No	
1	Diseases of <i>Hypothalmus sutchi</i> and <i>Anabas testudineus</i> (Thai koi) was observed in the Mymensingh region during the reported period. High stocking density and poor management practices were recorded from the fish farm detected as affected pond. <i>H. sutchi</i> showed distinct symptoms of bacterial infection having red mouth, operculum, jaws, base of all fins, red spot, sometimes haemorrhage, single or both the eyes were enlarged and swollen vent. Fingerlings to juvenile were affected. However, there were cases of <i>H. sutchi</i> mortalities without having any external clinical signs and symptoms. <i>Aeromonas</i> spp. observed from the diseased fish. <i>A. testudineus</i> showed infection at the fin base, exophthalmia, small to large deep lesion all over the body surface. <i>Aeromonas</i> spp. observed from the diseased <i>A. testudineus</i> . Sometimes there was report of mass mortality. Liming, application of salt, potassium permanganate, C-vit and antibiotics of tetracycline group along with some commercial drugs were being used as preventive measures.

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

Country: **CAMBODIA**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis					
2. Infectious haematopoietic necrosis					
3. Spring viraemia of carp	+?	+?	+?	III	1
4. Viral haemorrhagic septicaemia					
5. Infectious pancreatic necrosis					
6. Epizootic ulcerative syndrome (EUS)	-	-	-	II	
7. Bacterial kidney disease					
8. Red seabream iridoviral disease					
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	+?	+?	+?	III	2
10. Viral encephalopathy and retinopathy	000	000	000		
11. Enteric septicaemia of catfish	000	000	000		
12. Epitheliocystis					
13. Grouper iridoviral disease	000	000	000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>					
2. Infection with <i>Perkinsus olseni</i>					
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>					
4. Infection with <i>Marteilioides chungmuensis</i>					
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	000	000	000		
2. White spot disease	000	000	000		
3. Yellowhead disease (YH virus, gill-associated virus)	000	000	000		
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)					
5. Infectious hypodermal and haematopoietic necrosis					
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)					
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis					
8. Baculoviral midgut gland necrosis					
9. White tail disease (MrNV and XSV)	000	000	000		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease					
2. Abalone viral mortality					
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

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

1. Epidemiological comments:

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

Comment No.	
1	15 samples of each carp species (i.e. grass carp, bighead carp, silver carp, mrigal and catla) from four fish farms (Chrang Cham Res, Prek Peap, Tual Krasang and Takeo farmer hatcheries) were collected and screened using nested PCR by Dr. Gilda D. Lio-Po and her colleague. These carps did not exhibit the clinical disease.
2	15 samples of common carp (<i>Cyprinus carpio</i>) from four fish farms (Chrang Cham Res, Prek Peap, Tual Krasang, and Takeo farmer hatcheries) were collected and screened using nested PCR by Dr. Gilda D. Lio-Po and her colleague. These carps did not exhibit the disease clinical signs, no mortality and no occurrence of KHV disease.

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

Country: **INDIA**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Infectious pancreatic necrosis	0000	0000	0000		
6. Epizootic ulcerative syndrome (EUS)	-	-	-		
7. Bacterial kidney disease	0000	0000	0000		
8. Red seabream iridoviral disease	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	0000	0000	0000		
10. Viral encephalopathy and retinopathy	0000	0000	0000		
11. Enteric septicaemia of catfish	0000	0000	0000		
12. Epitheliocystis	0000	0000	0000		
13. Grouper iridoviral disease	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>	0000	0000	0000		
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+()	+()	+()	I	I
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	***	***	***		
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	0000	0000	0000		
8. Baculoviral midgut gland necrosis	0000	0000	0000		
9. White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
2. Abalone viral mortality	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

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

1. Epidemiological comments:

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

Comment No.	
1	Reported only from very limited area in Navsari and Valsad Districts of Gujarat.

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

Country: **INDONESIA**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Infectious pancreatic necrosis	0000	0000	0000		
6. Epizootic ulcerative syndrome (EUS)	-	-	-		
7. Bacterial kidney disease	0000	0000	0000		
8. Red seabream iridoviral disease	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	-	+	-	I, III	1
10. Viral encephalopathy and retinopathy	-	-	-	III	2
11. Enteric septicaemia of catfish	0000	0000	0000		
12. Epitheliocystis	0000	0000	0000		
13. Grouper iridoviral disease	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>	0000	0000	0000		
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	-	+	+	III	3
2. White spot disease	+	+	+	I, II, III	4
3. Yellowhead disease (YH virus, gill-associated virus)	0000	0000	0000		
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	-	+	-	II	5
5. Infectious hypodermal and haematopoietic necrosis	+	+	+	III	6
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	0000	0000	0000		
8. Baculoviral midgut gland necrosis	0000	0000	0000		
9. White tail disease (MrNV and XSV)	0000	0000	0000		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
2. Abalone viral mortality	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1. Infectious myonecrosis virus (IMNV)	-	+	+	III	7
2. Infection with <i>Streptococcus sp.</i>	+	+	+	I	8
3. Infection with <i>Aeromonas sp.</i>	-	+	+	I; II	9
4. Infection with <i>Aeromonas hydrophilla</i>	-	+	+	II	10
5. Infection with <i>Edwardsiella ictaluri</i>	+	+	+	I; II	11

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

1. Epidemiological comments:

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

Comment No.	
1. KHV	1). Reported in: West Java province in November 2006 2). Species affected: <i>Cyprinus carpio</i> 3). Clinical sign: irritation on part of body, gill fade and gill damage and no clinical sign on some samples 4). All samples have been detected by PCR analyze 5). Pathogen: Koi Herpesvirus 6). Mortality rate: low (less than 30%) 7). Economic loss: - 8). Names of infected areas: Subang and Bandung district in West Java province 9). Preventive/control measures: - 10). Laboratory confirmation diagnosed by PCR in Main Center for Freshwater Aquaculture Development Sukabumi 11). Publications: Unpublished
2. VNN	1). Reported in East Java province in October until December 2006 2). Species affected to humpback grouper (<i>Cromileptes altivelis</i>) and tiger grouper (<i>Ephinephelus fuscoguttatus</i>) reared in hatchery at Situbondo, East Java 3). All samples have been detected by PCR analyze 4). Pathogen: Betanodavirus 5). Mortality rate: medium to high 6). Economic loss: medium to high 7). Names of infected areas: grouper hatchery in Brackishwater Development Center Laboratory in Situbondo district, East Java 8). Preventive/control measures: - 9). Laboratory confirmation diagnosed by PCR in Brackishwater Development Center Laboratory in Situbondo, East Java 10). Publications: Unpublished
3. TSV	1). Reported in East Java province in October until December 2006 2). Species affected to either nauplius, post larvae, juvenile and broodstock of <i>L. vanamei</i> 3). All samples have been detected by PCR analyze 4). Pathogen: Taura Syndrome Virus 5). Mortality rate: low (less than 30%) 6). Economic loss: - 7). Names of infected areas: hatchery in Brackishwater Development Center Laboratory in Situbondo district in East Java

	<p>8). Preventive/control measures: -</p> <p>9). Laboratory confirmation diagnosed by PCR in Brackishwater Development Center Situbondo district, East Java province</p> <p>10). Publications: Unpublished</p>
4. WSSV	<p>1). Reported in South Kalimantan province in November 2006; Central Java in October until December 2006; East Java province in November and December 2006; South Sulawesi province in October and November 2006</p> <p>2). Species affected to <i>L. vannamei</i> in East Java; <i>P. monodon</i> in Central Java</p> <p>3). All samples have been detected by PCR analyze and Histopatology</p> <p>4). Pathogen: White Spot Syndrome Virus</p> <p>5). Mortality rate: very high (100%)</p> <p>6). Economic loss: up to 250 million \$US in October until November in Demal and Kendal district and up to 175 million \$US in Central Java province</p> <p>7). Names of infected areas: Tanah Bumbu district in South Kalimantan; Demak and Kendal district in Central Java; hatchery in Brackishwater Development Center Laboratory in Situbondo district, East Java; Barru and Pangkep district in South Sulawesi</p> <p>8). Preventive/control measures: -</p> <p>9). Laboratory confirmation diagnose by PCR in Freshwater Aquaculture Development Center Mandiingin Laboratory in South Kalimantan; Brackishwater Development Center Jepara Laboratory in Central Java; Brackishwater Development Center Situbondo Laboratory in East Java;</p> <p>10). Publications: Unpublished</p>
5. Spherical baculovirosis (<i>Penaeus monodon</i> -type baculovirus)	<p>1). Reported in Central Java province in November 2006</p> <p>2). Species affected to <i>P. monodon</i></p> <p>3). All samples have been detected by histopathology</p> <p>5). Mortality rate: low</p> <p>6). Economic loss: –</p> <p>7). Names of infected areas: hatchery in Brackishwater Aquaculture Development Center Laboratory in Jepara, Central Java</p> <p>8). Preventive/control measures: -</p> <p>9). Laboratory confirmation diagnosed by Brackishwater Aquaculture Development Center Laboratory in Jepara, Central Java</p> <p>10). Publications: Unpublished.</p>
6. IHNV	<p>1). Reported in East Java province in October until December 2006; South Sulawesi province in November and December 2006</p> <p>2). Species affected to post larvae, juvenile and broodstock of <i>L. vannamei</i>;</p> <p>3). All samples have been detected by PCR analyze and histopathology,</p> <p>4). Pathogen: family <i>Parvoviridae</i></p> <p>5). Mortality rate: low (less than 11%)</p> <p>6). Economic loss: –</p> <p>7). Names of infected areas: hatchery in Brackishwater Aquaculture Development Center Laboratory in Situbondo district, East Java; hatchery in Brackishwater Aquaculture Development Center Laboratory in Takalar, South Sulawesi.</p> <p>8). Preventive/control measures: -</p> <p>9). Laboratory confirmation diagnosed by PCR in Brackishwater Development Center Laboratory in Situbondo, East Java</p> <p>10). Publications: Unpublished.</p>
7. <i>Infectious myonecrosis virus</i>	<p>1). Reported in East Java province in November and December 2006</p> <p>2). Species affected to juvenile of <i>L. vanamei</i></p> <p>3). The clinical sign: red color on the abdominal segment end tail fan, myonecrosis with the white color aspect</p> <p>4). Pathogen : IMNV in Totiviridae family</p> <p>5). Sample have been detected by PCR analyze in BDC in Situbondo, East Java</p> <p>5). Mortality rate: Very low (less than 1%)</p> <p>6). Economic loss: –</p> <p>7). Names of infected area : Surrounded Area of Brackishwater Aquaculture Development Center Laboratory in Situbondo district, East Java.</p> <p>8). Preventive/control measures : -</p> <p>9). Laboratory confirmation diagnosed by PCR analyze in Brackishwater Aquaculture Development Center Situbondo Laboratory in East Java.</p> <p>10) Publications : Unpublished.</p>
8. <i>Streptococcus sp</i>	<p>1). Report in South Kalimantan Province in October until December 2006; Jambi province in November 2006.</p> <p>2). Species affected to <i>Oreochromis sp</i> in South Kalimantan; Tilapia in Jambi.</p> <p>3). The clinical signs are disoriented whirling motion, color of skin surface changes to be more dark, gill and internal organ is pale in South Kalimantan; pop eye and haemorrhages on spleen in Jambi.</p>

	<p>4). Pathogen : <i>Streptococcus sp.</i> 5). Mortality Rate : 20 - 70% 6). Economic loss : - 7). Names of infected areas : Tabalong and Hulu Sungai Selatan district in South Kalimantan; Lubuk Linggau district in South Sumatera Province. 8). Preventive/control measures : - 9). Laboratory confirmation diagnosed by Freshwater Aquaculture Development Center Mandiangin Laboratory in South Kalimantan; Freshwater Aquaculture Development Center Jambi Laboratory in Jambi province, Sumatera. 10). Publications : Unpublished</p>
9. <i>Aeromonas sp</i>	<p>1). Reported in South Kalimantan province in November and December 2006; Jambi province in November 2006. 2). Species affected to <i>Chana Striata</i>; <i>Pangasius sp</i> and <i>Oreochromis sp</i> (South Kalimantan); <i>Pangasius sp</i> (Patin Jambal) (Jambi) 3). Clinical sign : weak, necrosis of skin tissue, hemorrhage in stomach and fin, lesions on the skin surface and internal organ is pale (South Kalimantan); are haemorrhage and ulcer on part of body and fill damage (Jambi). 4). Pathogen : bacteriae 5). Mortality rate: low to high (10 – 50%) 6). Economic loss: – 7). Names of infected areas : Hulu Sungai Utara, Barito Kuala district and Hulu Sungai Selatan in South Kalimantan; Senaning Batanghari village in Jambi province 8). Preventive/control measures : - 9). Laboratory confirmation diagnosed by Freshwater Aquaculture Development Center Mandiangin Laboratory in South Kalimantan; Freshwater Aquaculture Development Center Jambi Laboratory in Jambi province, Sumatera. 10) Publications : Unpublished.</p>
10. <i>Aeromonas hydrophilla</i>	<p>1). Reported in West Java province in November and December 2006; 2). Species affected to <i>Cyprinus carpio</i>, Tilapia, <i>Clarias gariepinus</i>; <i>Osphronemus gouramy</i>. 3). Clinical sign : <ul style="list-style-type: none"> • C carpio : gill fade; no clinical sign on some samples; • Tilapia: hemorrhage on caudal; no clinical sign on some samples; C gariepinus : white spot on body, fin damaged, irritation on bottom part of body, dropsy, abnormally swim. 4). Mortality rate : low to high 5). Samples were analyzed by PCR in MCFADC Sukabumi Laboratory 6). Economic loss: – 7). Names of infected areas: Sukabumi and Subang district in West Java province; Pandeglang district in Banten province; 8). Preventive/control measures : - 9). Laboratory confirmation diagnosed by laboratory confirmation diagnosed by Main Center for Freshwater Aquaculture Development Sukabumi; 11) Publications : Unpublished.</p>
11. <i>Edwardsiella ictaluri</i>	<p>1). Reported in South Kalimantan province November and December 2006; Jambi province in October 2006. 2). Species affected to <i>Pangasius sp</i> (Patin Pasupati); 3). The clinical sign: weak, disoriented whirling motion, swimming on the surface of water, haemorrhage in fin, necrosis of gill tissue, internal organ is pale and there are white granuloma in lever and kidney, pale colour on gill, white spot and swallow on the spleen and liver 4). Pathogen : bacteriae 5). Sample have been detected by Bacteriology 5). Mortality rate: low (10%) 6). Economic loss: – 7). Names of infected area: Barito Kuala district in South Kalimantan province; Mendalo Laut village, Muaro Jambi district in Jambi province. 8). Preventive/control measures : - 9). Laboratory confirmation diagnosed by Freshwater Aquaculture Development Center Laboratory Mandiangin in South Kalimantan province; Freshwater Aquaculture Development Center Jambi Laboratory in Sumatera. 10) Publications : Unpublished.</p>

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

- Ministerial Decree of Marine Affairs and Fisheries No: Kep.05/MEN/2007 concern to Non valid of the Ministerial Decree of Marine Affairs and Fisheries No: Kep.40/MEN/2002, its concern to Jawa and Bali island had decided as infected areas of KHV disease in common carp and koi carp (on 17 of January 2007);
- Ministerial Decree of Marine Affairs and Fisheries No: Kep.06/MEN/2007 concern to Non valid of the Ministerial Decree of Marine Affairs and Fisheries No: Kep.55/MEN/2004, its concern to Sumatera areas had decided as a Quarantine area for KHV disease in common carp and koi carp (on 17 of January 2007).

Country: **JAPAN**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	I	
2. Infectious haematopoietic necrosis	+	+	+	III	
3. Spring viraemia of carp	0000	0000	0000	I	
4. Viral haemorrhagic septicaemia	-	-	+	III	
5. Infectious pancreatic necrosis	+	+?	-	III	
6. Epizootic ulcerative syndrome (EUS)	-	-	-	I	
7. Bacterial kidney disease	+	-	+	III	
8. Red seabream iridoviral disease	+	+	+	III	
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	+	+	+	III	
10. Viral encephalopathy and retinopathy	-	-	-	I	
11. Enteric septicaemia of catfish	0000	0000	0000	I	
12. Epitheliocystis	+	+	+	II	
13. Grouper iridoviral disease	0000	0000	0000	I	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	I	
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000	I	
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>	0000	0000	0000	I	
4. Infection with <i>Marteilioides chungmuensis</i>	+	+	+	III	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	I	
2. White spot disease	+	-	-	I	
3. Yellowhead disease (YH virus, gill-associated virus)	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	
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	0000	0000	0000	I	
8. Baculoviral midgut gland necrosis	0000	0000	0000	I	
9. White tail disease (MrNV and XSV)	0000	0000	0000	I	
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	-	+	+	II	
2. Abalone viral mortality	0000	0000	0000	I	
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

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

1. Epidemiological comments:

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

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

Country: **MALAYSIA**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Infectious pancreatic necrosis	0000	0000	0000		
6. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
7. Bacterial kidney disease	0000	0000	0000		
8. Red seabream iridoviral disease	- (2005)	- (2005)	- (2005)	I, II, III	1
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	?	?	?	I,III	2
10. Viral encephalopathy and retinopathy	-	-	-	1, II , III	3
11. Enteric septicaemia of catfish	0000	0000	0000		
12. Epitheliocystis	0000	0000	0000		
13. Grouper iridoviral disease	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>	0000	0000	0000		
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	-	-	-		
2. White spot disease	-	-	-		
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirus (<i>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		
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	0000	0000	0000		
8. Baculoviral midgut gland necrosis	0000	0000	0000		
9. White tail disease (MrNV and XSV)	0000	0000	0000		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
2. Abalone viral mortality	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

<p>DISEASES PRESUMED EXOTIC TO THE REGION^b LISTED BY THE OIE Finfish: Infectious salmon anaemia; Gyrodactylosis (<i>Gyrodactylus salaris</i>). Molluscs: Infection with <i>Bonamia ostreae</i>; <i>Marteilia refringens</i>; <i>Mikrocytos mackini</i> ; <i>Perkinsus marinus</i>; <i>Xenohaliotis californiensis</i>; Crustaceans: Crayfish plague (<i>Aphanomyces astaci</i>); NOT LISTED BY THE OIE, BUT OF POTENTIAL RELEVANCE Finfish: Channel catfish virus disease; Piscirickettsiosis. Crustaceans: Infectious myonecrosis.</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	No positive samples detected during this period using histopathology and PCR during routine monitoring of deep sea cages in Langkawi and Sandakan. Outbreak of RSIV was last confirmed in May 2005 following high mortality of giant grouper in deep sea cages, Langkawi.
2	Some of the fish showed gill necrosis and enlarged spleen and kidney during monitoring program during this period but PCR test were negative
3	No positive samples detected by RT-PCR during routine monitoring of deep sea cages in Langkawi and Sandakan at this period of time. Confirmation of the last occurrence by RT-PCR Kit was in April 2006 following high mortality in juvenile pompano imported from Taiwan.

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

Country: **MYANMAR**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	October	November	December		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	***	***	***		
4. Viral haemorrhagic septicaemia	***	***	***		
5. Infectious pancreatic necrosis	***	***	***		
6. Epizootic ulcerative syndrome (EUS)	-	-	-		
7. Bacterial kidney disease	***	***	***		
8. Red seabream iridoviral disease	***	***	***		
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	***	***	***		
10. Viral encephalopathy and retinopathy	***	***	***		
11. Enteric septicaemia of catfish	***	***	***		
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>					
2. Infection with <i>Perkinsus olseni</i>					
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>					
4. Infection with <i>Marteilioides chungmuensis</i>					
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	-	-	-	III	1
2. White spot disease	-	-	-	III	1
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	***	***	***		
5. Infectious hypodermal and haematopoietic necrosis	-	-	-	III	1
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	***	***	***		
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	***	***	***		
8. Baculoviral midgut gland necrosis	***	***	***		
9. White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

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

1. Epidemiological comments:

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

Comment No.	
1	A total of 16 samples of <i>P.monodon</i> have been tested at PCR lab of Department of Fisheries (DOF). Actually in this season the weather is very cool and the temperature is low. So many hatcheries are not producing shrimp PL

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

Country: **NEPAL**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	October	November	December		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	***	***	***		
4. Viral haemorrhagic septicaemia	***	***	***		
5. Infectious pancreatic necrosis	***	***	***		
6. Epizootic ulcerative syndrome (EUS)	-	+	+	I	1
7. Bacterial kidney disease	***	***	***		
8. Red seabream iridoviral disease	***	***	***		
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	***	***	***		
10. Viral encephalopathy and retinopathy	***	***	***		
11. Enteric septicaemia of catfish	***	***	***		
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>	0000	0000	0000		
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	0000	0000	0000		
3. Yellowhead disease (YH virus, gill-associated virus)	0000	0000	0000		
4. Spherical baculovirus (<i>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		
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	0000	0000	0000		
8. Baculoviral midgut gland necrosis	0000	0000	0000		
9. White tail disease (MrNV and XSV)	0000	0000	0000		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
2. Abalone viral mortality	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

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

1. Epidemiological comments:

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

Comment No.	
1	EUS was reported from farmers' ponds in Rupanedhi and Morang districts during November and December. The species affected are Rohu (<i>Labeo rohita</i>), Naini (<i>Cirrhinus mrigala</i>) and <i>Puntius</i> species. The affected pond water surface area was 2.5 ha. However, the economic loss reported was not significant level. The application of hydrated lime @ 500 kg/ha was suggested.

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

Country: **PHILIPPINES**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Infectious pancreatic necrosis	0000	0000	0000		
6. Epizootic ulcerative syndrome (EUS)	-	-	-		
7. Bacterial kidney disease	0000	0000	0000		
8. Red seabream iridoviral disease	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	0000	0000	0000		
10. Viral encephalopathy and retinopathy	-	-	-		
11. Enteric septicaemia of catfish	0000	0000	0000		
12. Epitheliocystis	0000	0000	0000		
13. Grouper iridoviral disease	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>	0000	0000	0000		
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+	+	+	III	1
3. Yellowhead disease (YH virus, gill-associated virus)	-	-	-		
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	-	+	-		2
5. Infectious hypodermal and haematopoietic necrosis	-	+	-	III	3
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	0000	0000	0000		
8. Baculoviral midgut gland necrosis	***	***	***		
9. White tail disease (MrNV and XSV)	0000	0000	0000		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
2. Abalone viral mortality	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

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

1. Epidemiological comments:

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

Comment No.	
1	Out of 432 samples (post larva, juvenile/adult) from hatchery and grow-out <i>P. monodon</i> farms examined, 95 samples showed positive results for White spot virus by PCR. Examinations conducted by NPPMCI and BFAR-C.O. Fish Health Laboratories. Detected also in <i>P. vannamei</i> post larva and grow-out (8 samples) by PCR. Examinations conducted by BFAR, NPPMCI and SEAFDEC-AQD, Fish Health laboratories.
2	Examination of 175 samples (<i>P. monodon</i> post larva), showed no spherical occlusion bodies by wet mounts of squash preparation of hepatopancreas (stained with malachite green) examined under light microscope. Examinations conducted by NPPMCI Detected in one sample (<i>P. monodon</i> , post larva) from Iloilo by wet mount of squash preparation of hepatopancreas (stained with malachite green) examined under light microscope. Examinations conducted by SEAFDEC-AQD.
3	Detected in <i>P. monodon</i> grow-out and broodstock (4 samples) from Antique, Negros Oriental and Negros Occidental by PCR. Examination conducted by SEAFDEC-AQD Fish Health Lab.

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

Country: **SINGAPORE**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Infectious pancreatic necrosis	0000	0000	0000		
6. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
7. Bacterial kidney disease	0000	0000	0000		
8. Red seabream iridoviral disease	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	(2006)	(2006)	(2006)	III	1
10. Viral encephalopathy and retinopathy	-	-	+	III	2
11. Enteric septicaemia of catfish	0000	0000	0000		
12. Epitheliocystis	-	-	-		
13. Grouper iridoviral disease	-	-	-		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	***	***	***		
2. Infection with <i>Perkinsus olseni</i>	***	***	***		
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>	***	***	***		
4. Infection with <i>Marteilioides chungmuensis</i>	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	***	***	***		
2. White spot disease	-	-	-		
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	-	-	-		
5. Infectious hypodermal and haematopoietic necrosis	***	***	***		
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	***	***	***		
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	***	***	***		
8. Baculoviral midgut gland necrosis	***	***	***		
9. White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Mullet systemic iridoviral disease	-	-	-		
2.					

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

1. Epidemiological comments:

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

Comment No.	
1	<p>This quarter, KHV was not detected in samples taken from 15 batches of koi imported from Japan, under compulsory inspection and quarantine. Samples from 7 batches of koi under the Accredited Ornamental Fish Exporters Surveillance (AOFES) Scheme and voluntary submission of samples from 3 batches of Malaysian koi tested negative for KHV.</p> <p>Of 113 batches of koi tested for KHV in 2006, 36 were voluntary submissions (passive surveillance) 38 were from the Accredited Ornamental Fish Exporters Scheme (active surveillance) and 39 were from compulsory quarantine of Japanese koi (active surveillance) 106 batches were tested KHV negative, while 7 tested KHV positive by nested PCR. Positive cases had been reported earlier in the first and second quarter of this year and involved koi imported from Thailand and Malaysia, respectively.</p>
2	<p>Under the Imported Marine Fish Surveillance Scheme, samples from a batch of 24,500 pieces of 1.5” tiger grouper fry imported from Indonesia in December showed CPE was on SB and GF cells, and was tested positive as viral nervous necrosis virus (VNNV) by RT-PCR. The batch suffered 70% mortality within the first 2 months of stocking. The remaining stock survived and were grown out.</p>

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

Country: **SRI LANKA**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Infectious pancreatic necrosis	0000	0000	0000		
6. Epizootic ulcerative syndrome (EUS)	-	-	-		
7. Bacterial kidney disease	0000	0000	0000		
8. Red seabream iridoviral disease	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	0000	0000	0000		
10. Viral encephalopathy and retinopathy	0000	0000	0000		
11. Enteric septicaemia of catfish	0000	0000	0000		
12. Epitheliocystis	0000	0000	0000		
13. Grouper iridoviral disease	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>	0000	0000	0000		
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+	+	+		
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
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		
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	0000	0000	0000		
8. Baculoviral midgut gland necrosis	0000	0000	0000		
9. White tail disease (MrNV and XSV)	0000	0000	0000		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
2. Abalone viral mortality	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

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

1. Epidemiological comments:

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

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

Country: **THAILAND**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
DISEASES PREVALENT IN THE REGION	October	November	December		
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	III	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia	0000	0000	0000	III	
5. Infectious pancreatic necrosis	(1985)	(1985)	(1985)	III	
6. Epizootic ulcerative syndrome (EUS)	-	-	-	II	
7. Bacterial kidney disease	***	***	***		
8. Red seabream iridoviral disease	0000	0000	0000	III	
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	?	+()	?	III	1
10. Viral encephalopathy and retinopathy	-	-	-	III	
11. Enteric septicaemia of catfish	***	***	***		
12. Epitheliocystis	-	-	-	II	
13. Grouper iridoviral disease	-	-	-	III	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000	II	
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000	II	
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>	0000	0000	0000	II	
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000	II	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	+	+	+	III	2
2. White spot disease	+	+	+	III	3
3. Yellowhead disease (YH virus, gill-associated virus)	-	-	-	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>)	***	***	***		
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	***	***	***		
8. Baculoviral midgut gland necrosis	***	***	***		
9. White tail disease (MrNV and XSV)	+	+	+	III	6
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Ranavirus	-	-	-	III	7
2.					

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

1. Epidemiological comments:

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

Comment No.	
1	The koi herpesvirus (KHV) genes were detected by nested PCR developed at the AAHRI, DOF. 28 koi farms/companies/hobbyists had been surveyed using nested PCR for this reporting period. 5/28 koi specimens showed PCR positive. 4/28 positive cases found without clinical sign, while 1/28 positive case exhibited disease clinical signs, focal hemorrhages on the body and lethargy and found in a hobbyist house. The diseased kois, size 20-30 cm in total length, were also heavily infected with monogene parasites. The parasites were removed using chemicals then the kois re-covered. The mortality recorded was 10% (5 kois from 50 kois). The remainder 40 kois were normal and quarantined in the hobbyist house and bio-security was applied. Under KHVD controlling criteria, if the viral genes still present and viruses can be isolated or fish exhibits KHVD histopathological signs, the affected kois will be destroyed. No cases met the criteria.
2	A total of 495 shrimp PL samples had been tested at PCR Laboratories of the DOF before stocking in culture ponds under the health management and disease control strategies. 9 specimens or 1.8% was recorded as RT-PCR positive or carrying TSV genes that advised to be destroyed.
3	A total of 1,414 shrimp PL samples had been tested at PCR Laboratories of the DOF before stocking in culture ponds under the health management and disease control strategies. 12 specimens or 0.85% was recorded PCR positive or carrying SEMBV genes that advised to be destroyed.
4	A total of 146 shrimp PL samples had been tested at PCR Laboratories of the DOF before stocking in culture ponds under the health management and disease control strategies. The PCR detections for genes of YHV showed negative.
5	A total of 805 shrimp PL samples had been tested at PCR Laboratories of the DOF before stocking in culture ponds under the health management and disease control strategies. 121 specimens or 15% were recorded as PCR positive or carrying IHNV genes that advised to be destroyed. The tested specimens did not show disease clinical signs and there was no outbreak due to IHNV infection in the hatcheries.

6	Findings of the MrNV and XSV viral genes in larvae in giant freshwater prawn hatcheries, <i>Macrobrachium rosenbergii</i> , were usually associated with mortality. However the affected larvae did not exhibit whitetail clinical signs. 84 prawn larvae specimens from hatcheries were RT-PCR-tested for the present of both viral genes. 12 of the specimens showed positive results. Findings of the viral genes in prawn brooders and prawns in grow-out farms did not associated with diseases. 3/12 prawn brooders specimens from hatcheries were also RT-PCR positive during this reporting period. Concepts in bio-security for disease prevention had been advised to hatchery owners, operators or farmers. The disease was identified at the AAHRI, DOF.
7	No ranavirus could be isolated in EPC cell line during the reporting period. Information obtained from passive surveillance system at the Inland Aquatic Animal Health Research Institute (AAHRI), DOF.

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

Country: **VIETNAM**Period: **July-September 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
	July	August	September		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Infectious pancreatic necrosis	0000	0000	0000		
6. Epizootic ulcerative syndrome (EUS)	+()	+()	+()	I, II	1
7. Bacterial kidney disease	0000	0000	0000		
8. Red seabream iridoviral disease	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	0000	0000	0000		
10. Viral encephalopathy and retinopathy	0000	0000	0000		
11. Enteric septicaemia of catfish	+()	+()	+()	I, II	2
12. Epitheliocystis	0000	0000	0000		
13. Grouper iridoviral disease	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>	0000	0000	0000		
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+	+	+	I, II, III	3
3. Yellowhead disease (YH virus, gill-associated virus)	+()	+()	+()	I, II, III	4
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	+	+	+	I, II, III	5
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	0000	0000	0000		
8. Baculoviral midgut gland necrosis	0000	0000	0000		
9. White tail disease (MrNV and XSV)	+()	+()	+()	I	6
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
2. Abalone viral mortality	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1. Swollen-syphon on <i>Babylonia areolata</i>	-	-	-	I, II	7

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

1. Epidemiological comments:

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

Comment No.	
1	- Infection occurred in catfish (<i>Pangasius micronema</i> , <i>Pangasius hypophthalmus</i>) - Disease characteristic: Lesions on the skin surface, gill and fin. - Mortality rate: low, scattered. - The disease occurred in limited areas in Dong Thap, Hau Giang, Soc Trang, Bac Lieu, Ca Mau and Quang Ninh provinces.
2	- Infection occurred in catfish (<i>Pangasius micronema</i> , <i>Pangasius hypophthalmus</i>). - Disease characteristic: haemorrhages on fin, tail, latex – bearing in liver and kidney. - Mortality rate: low, scattered. - The disease occurred in limited areas in Dong Thap, Ben Tre, Hau Giang and Can Tho provinces.
3	- Infection occurred in shrimp (<i>Penaeus monodon</i> , <i>Metapenaeus ensis</i>), green crab (<i>Scylla serrata</i>). - Disease characteristic: White spots on the skin surface. - The disease occurred in Ba Ria-Vung Tau, Ninh Binh, Binh Dinh, Quang Binh, Quang Tri provinces and some limited areas in the South.
4	- Infection occurred in prawn (<i>Penaeus monodon</i>). - The disease occurred in limited areas in Ba Ria-Vung Tau province and some limited areas in the South - Pathogen: Gill-associated virus (GAV)
5	- Infection occurred in prawn (<i>Penaeus monodon</i>). - The disease occurred in Ba Ria-Vung Tau, Da Nang, Binh Dinh, Quang Ninh, Ninh Binh, Nam Dinh, Thanh Hoa provinces and in some limited areas in the South.
6	- Infection occurred in freshwater giant prawn (<i>Macrobrachium rosenbergii</i>). - Disease characteristic: white tail. - Mortality rate: low, scattered. - The disease occurred in limited areas in Can Tho, Bac Lieu provinces.

7	<ul style="list-style-type: none">- Infection occurred in <i>Babylonia areolata</i>- Pathogen: -- Disease characteristic: Syphon swells up; stop eating; die scattered or in mass- The disease occurred in limited zones in some provinces in the Middle.- Preventive/control measures: -
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2. New aquatic animal health regulations introduced within past six months (with effective date):

Country: **VIETNAM**

 Period: **October-December 2006**

Item	Disease status ^{a/}			Level of diagnosis	Epidemiological comment numbers
	Month				
	October	November	December		
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Infectious pancreatic necrosis	0000	0000	0000		
6. Epizootic ulcerative syndrome (EUS)	+()	+()	+()	I, II	1
7. Bacterial kidney disease	0000	0000	0000		
8. Red seabream iridoviral disease	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	0000	0000	0000		
10. Viral encephalopathy and retinopathy	0000	0000	0000		
11. Enteric septicaemia of catfish	+()	+()	+()	I, II	2
12. Epitheliocystis	0000	0000	0000		
13. Grouper iridoviral disease	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with <i>Bonamia exitiosa</i>	0000	0000	0000		
2. Infection with <i>Perkinsus olseni</i>	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
3. Infection with <i>Marteilia sydneyi</i>	0000	0000	0000		
4. Infection with <i>Marteilioides chungmuensis</i>	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+	+	+	I, II, III	3
3. Yellowhead disease (YH virus, gill-associated virus)	+()	+()	+()	I, II, III	4
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	+	+	+	I, II, III	5
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	0000	0000	0000		
8. Baculoviral midgut gland necrosis	0000	0000	0000		
9. White tail disease (MrNV and XSV)	+()	+()	+()	I	6
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
2. Abalone viral mortality	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1. Swollen-syphon on <i>Babylonia areolata</i>	-	-	-	I, II	7

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

1. Epidemiological comments:

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

Comment No.	
1	<ul style="list-style-type: none"> - Infection occurred in catfish (<i>Pangasius micronema</i>, <i>Pangasius hypophthalmus</i>) and some other freshwater fish. - Disease characteristic: Lesions on the skin surface, gill and fin. - Mortality rate: low, scattered. - The disease occurred in limited areas in Dong Thap, Hau Giang, Soc Trang, Bac Lieu, Ca Mau provinces and some areas in the Middle.
2	<ul style="list-style-type: none"> - Infection occurred in catfish (<i>Pangasius micronema</i>, <i>Pangasius hypophthalmus</i>). - Disease characteristic: haemorrhages on fin, tail, latex – bearing in liver and kidney. - Mortality rate: low, scattered. - The disease occurred in limited areas in Dong Thap, Ben Tre, Hau Giang and Can Tho provinces.
3	<ul style="list-style-type: none"> - Infection occurred in tiger shrimp (<i>Penaeus monodon</i>). - Disease characteristic: White spots on the skin surface. - The disease occurred in Ba Ria-Vung Tau province and some limited areas in the South.
4	<ul style="list-style-type: none"> - Infection occurred in prawn (<i>Penaeus monodon</i>). - The disease occurred in limited areas in Ba Ria-Vung Tau province and some limited areas in the South - Pathogen: Gill-associated virus (GAV)
5	<ul style="list-style-type: none"> - Infection occurred in prawn (<i>Penaeus monodon</i>). - The disease occurred in limited zones in Ba Ria-Vung Tau, Da Nang, Nam Dinh and some provinces in the South.
6	<ul style="list-style-type: none"> - Infection occurred in freshwater giant prawn (<i>Macrobrachium rosenbergii</i>). - Disease characteristic: white tail. - Mortality rate: low, scattered. - The disease occurred in limited areas in Can Tho, Bac Lieu provinces.

7	<ul style="list-style-type: none">- Infection occurred in <i>Babylonia areolata</i>- Pathogen: -- Disease characteristic: Syphon swells up; stop eating; die scattered or in mass- The disease occurred in limited zones in some provinces in the Middle.- Preventive/control measures: -
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2. New aquatic animal health regulations introduced within past six months (with effective date):

List of diseases in the 9th edition of the 2006 Aquatic Code

The following diseases of fish are listed by the OIE: Article 1.2.3.1

1. Epizootic haematopoietic necrosis
2. Infectious haematopoietic necrosis
3. Spring viraemia of carp
4. Viral haemorrhagic septicaemia
5. Infectious salmon anaemia
6. Epizootic ulcerative syndrome
7. Gyrodactylosis (*Gyrodactylus salaris*)
8. Red sea bream iridoviral disease
9. Koi herpesvirus disease

The following diseases of molluscs are listed by the OIE: Article 1.2.3.2.

1. Infection with *Bonamia ostreae*
2. Infection with *Bonamia exitiosa*
3. Infection with *Marteilia refringens*
4. Infection with *Perkinsus marinus*
5. Infection with *Perkinsus olseni*
6. Infection with *Xenohaliotis californiensis*
7. Abalone viral mortality

The following diseases of crustaceans are listed by the OIE: Article 1.2.3.3.

1. Taura syndrome
2. White spot disease
3. Yellowhead disease
4. Tetrahedral baculovirosis (*Baculovirus penaei*)
5. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)
6. Infectious hypodermal and haematopoietic necrosis
7. Crayfish plague (*Aphanomyces astaci*)
8. Necrotising hepatopancreatitis¹
9. Infectious myonecrosis¹

¹ Listing of this disease is under study.

List of Diseases in the Asia-Pacific Quarterly Aquatic Animal Disease Reports (Beginning 2007)

1. DISEASES PREVALENT IN THE REGION	
1.1 FINFISH DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Epizootic haematopoietic necrosis	1. Epitheliocystis
2. Infectious haematopoietic necrosis	2. Grouper iridoviral disease
3. Spring viraemia of carp	3. Viral encephalopathy and retinopathy
4. Viral haemorrhagic septicaemia	4. Enteric septicaemia of catfish
5. Epizootic ulcerative syndrome	5. Bacterial kidney disease
6. Red seabream iridoviral disease	6. Infectious pancreatic necrosis
7. Infection with koi herpesvirus	
1.2 MOLLUSC DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with <i>Bonamia exitiosa</i>	1. Infection with <i>Marteilia sydneyi</i>
2. Infection with <i>Perkinsus olseni</i>	2. Infection with <i>Marteilioides chungmuensis</i>
3. Abalone viral mortality	
1.3 CRUSTACEAN DISEASES	
OIE-listed diseases	Non OIE-listed diseases
1. Taura syndrome	1. Infectious myonecrosis
2. White spot disease	2. Baculoviral midgut gland necrosis
3. Yellowhead disease (YH virus, gill-associated virus)	3. White tail disease (MrNV and XSV)
4. Spherical baculovirus (<i>Penaeus monodon</i> -type baculovirus)	
5. Infectious hypodermal and haematopoietic necrosis	
6. Tetrahedral baculovirus (<i>Baculovirus penaei</i>)	
1.4 UNKNOWN DISEASES OF A SERIOUS NATURE	
OIE-listed diseases	Non OIE-listed diseases
	1. Akoya oyster disease
2. DISEASES PRESUMED EXOTIC TO THE REGION	
2.1 Finfish	
OIE-listed diseases	Non OIE-listed diseases
1. Infectious salmon anaemia	1. Channel catfish virus disease
2. Gyrodactylosis (<i>Gyrodactylus salaris</i>)	2. Piscirickettsiosis
2.2 Molluscs	
OIE-listed diseases	Non OIE-listed diseases
1. Infection with <i>Bonamia ostreae</i>	1. Infection with <i>Mikrocytos mackini</i>
2. Infection with <i>Marteilia refringens</i>	
3. Infection with <i>Perkinsus marinus</i>	
4. Infection with <i>Xenohalictis californiensis</i>	
2.3 Crustaceans	
OIE-listed diseases	Non OIE-listed diseases
1. Crayfish plague (<i>Aphanomyces astaci</i>)	1. Necrotising hepatopancreatitis

Recent Aquatic Animal Health Related Publications

OIE Aquatic Animal Health Code, 9th Edition, 2006 and OIE Manual of Diagnostic Tests for Aquatic Animals, 5th Edition, 2006 http://www.oie.int/eng/publicat/en_aqua.htm

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

Way Forward: Building capacity to combat impacts of aquatic invasive alien species and associated trans-boundary pathogens in ASEAN countries: NACA 2005. The Final report of the regional workshop, hosted by the Department of Fisheries, Government of Malaysia, on 12th-16th July 2004. Network of Aquaculture Centres in Asia-Pacific, Bangkok, Thailand. 358pp. www.enaca.org (free download)

Diseases in Asian Aquaculture V. 2005. Walker, P.J., R.G. Lester and M.G. Bondad-Reantaso (editors). Proceedings of the 5th Symposium on Diseases in Asian Aquaculture. Fish Health Section, Asian Fisheries Society, Manila. 635 pp. Contact: suppalap@fisheries.go.th

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 J.R. Arthur (editors). FAO Fisheries Proceedings No. 4, Rome, FAO. 2005. 178p.

Preparedness and response to aquatic animal health emergencies in Asia: guidelines. Arthur, J.R., Baldock, F.C., Subasinghe, R.P., & McGladdery, S.E. (editors). 2005. FAO Fisheries Technical Paper. No. 486. Rome, FAO. 2005. 40p.

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

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

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

Australian Aquatic Animal Disease Identification Field Guide: The second, revised edition – Aquatic Animal Diseases Significant to Australia: Identification Field Guide – has recently been released by Australia's Department of Agriculture, Fisheries and Forestry (DAFF). It is very informative and user friendly. The field guide can be downloaded from <http://www.disease-watch.com>. For further information and copies of the field guide, please contact Alistair Herfort at Alistair.Herfort@daff.gov.au. The field guide provides key field identification tips and differential diagnostic features for all the OIE listed diseases and therefore has considerable regional relevance. Dissemination of the information contained in the field guide to the right stakeholders could contribute significantly to improved surveillance and reporting in the region. DAFF has kindly provided NACA with copies of the field guide for wider dissemination in the region. Those interested to receive copies, please write to NACA at mohan@enaca.org

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

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

OIE Handbook on Import Risk Analysis for Animals and Animal Products: Vol. I Introduction and qualitative risk analysis, 2004; Vol. II Quantitative risk analysis, 2004.

Volume I of this handbook introduces the concepts of import risk analysis and discusses qualitative risk analysis while Volume II addresses quantitative risk analysis. The key issues in the discipline are explained within the frameworks provided by the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures and the chapters in both *Codes* on risk analysis. The handbook will provide practical guidance to Veterinary Services confronted with the need to analyse the risks posed by imports, to ensure that stakeholders, risk analysts and decision-makers can be confident that the disease risks posed have been identified and can be managed effectively. The handbook will also be useful as a training aid to address the critical need for capacity building in this discipline.

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

The introduction of *Penaeus vannamei* and *P. stylirostris* into the Asia-Pacific Region.

Briggs M., S. Funge-Smith, R. Subasinghe and M. Phillips. 2004. Food and Agriculture Organization of the United Nations, Regional Office for Asia and the Pacific, Bangkok. RAP Publication 2004/10.99p.

This report has attempted to gather all of the currently available data on the extent of *P. vannamei* and *P. stylirostris* importation and culture in Asia, its potential problems and benefits, and in this way serve as a source document from which to investigate further the means by which control over this issue might be re-established. Recommendations aimed at controlling the importation, testing and culture of these species have been made for all levels and are included in this report.

Capacity and Awareness Building on Import Risk Analysis for Aquatic Animals.

J.R.Arthur and M.G. Bondad-Reantaso. (eds.). Proceedings of the workshop held 1-6 April 2002 in Bangkok, Thailand and 12-17 August 2002 in Mazatlan, Mexico. APEC FWG 01/2002, NACA, Bangkok. 203p. The proceedings contains 26 technical presentations, divided into 4 parts: (a) Background for risk analysis, (b) the risk analysis process, (c) Risk analysis and the World Trade Organization: Country experiences and (d) National strategies for aquatic animal health. Available for download from www.enaca.org

Manual on risk analysis for the safe movement of aquatic animals (FWG/01/2002)

Arthur, J.R., M.G.Bondad-Reantaso, F.C.Baldock, C.J.Rodgers and B.F.Edgerton. 2004. APEC/DoF/NACA/FAO, 59p. This manual provides a simplified overview of the risk analysis process to assist responsible individuals in developing countries to begin formulating national policies and approaches to conducting risk analyses. Available for download from www.enaca.org

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

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

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

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

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

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

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

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

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

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

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

Please use the following symbols to fill in the forms.

A. Symbols used for negative occurrence are as follows:

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

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

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

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

B. Symbols used for positive occurrence are shown below.

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

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

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

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

¹ Regional Advisory Group on Aquatic Animal Health (AG)

C. Levels of Diagnosis

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

D. Subjects to be covered in the Epidemiological Comments

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

IMPORTANT

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

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

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