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QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

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Foreword

Recognizing emerging diseases in the Asia-Pacific region

The quarterly aquatic animal disease (QAAD) reporting system has over the years provided a useful mechanism for aquatic animal disease information sharing amongst 21 participating governments in the Asia-Pacific region. The Asia Regional Advisory Group has time and again recognized the value of regional reporting system and strongly recommended its continuation. The QAAD reporting system in the Asia-Pacific region is being implemented as a joint activity between NACA, FAO and OIE Regional Representation (Tokyo) since the second quarter of 1998. To date, 35 reports have been published and widely disseminated. Twenty-one countries from the region participate in the reporting system. The reporting system for aquatic animal diseases was developed following the recommendations of the NACA/OIE Expert Consultation in 1996 and was eventually integrated into the Regional aquatic animal health program of NACA. The NACA/FAO/OIE disease list includes all diseases listed by OIE in the latest edition of the OIE *Aquatic Animal Health Code*, plus diseases of concern to the Asia-Pacific region. The information generated through the regional reporting system provides up-to-date information on important diseases in the Asia-Pacific region, serves as an early warning system for emerging diseases (e.g. KHV, abalone viral mortality, grouper iridoviral disease, white tail disease in *Macrobrachium rosenbergii*, IMNV), and can be a valuable source of information to support risk analysis.

Since 2001, the NACA/FAO/OIE QAAD list is being revised annually by the NACA Regional Advisory Group (AG) on aquatic animal health. The revisions are carried out to reflect the changes made to the OIE list of aquatic animal diseases as shown in the latest edition of the OIE *Aquatic Animal Health Code*, and to include diseases of concern to the Asia-Pacific region. As a result of these revisions, the regional QAAD list, has contributed to listing of some serious emerging diseases. Important examples include:

- In response to mass mortalities of koi and common carp in Indonesia, in 2002, "mass mortalities of koi carp" was listed under "unknown diseases of serious nature" in the FAO/NACA/OIE regional QAAD reporting list, effective for reporting from the first quarter of 2003. Subsequently it was listed as "**infection with koi herpes virus**" for reporting from 2004 onwards. In May 2006, the OIE International Committee adopted the listing of this disease for the 2006 edition of the OIE *Aquatic Animal Health Code.*
- Recognizing the importance of iridoviral disease, in terms of its potential to spread and cause economic loss, "**grouper iridoviral disease**" was listed in the QAAD under "any other diseases of importance," effective the first quarter of 2003.
- **Epitheliocystis**, **Akoya oyster disease**, and the molluscan pathogen *Marteilioides chungmuensis* are of concern in the region. They were included in the QAAD list, effective the first quarter of 2003, to assist in the collection of occurrence data.
- Recognizing its potential to spread, "**abalone viral mortality**" was included as an unknown disease of a serious nature in the QAAD list, effective the first quarter of 2004. In May 2006, the OIE International Committee adopted the listing of this disease for the 2006 edition of the OIE *Aquatic Animal Health Code.*

- Recognizing the impact of **white tail disease** caused by MrNV and XSV in *M.rosenbergii*, it was included for reporting from the first quarter of 2005.
- Considering the large scale introduction of *Penaeus vannamei* to the region, **infectious myonecrosis** was added to the QAAD list, effective for reporting from the first quarter of 2006.
- At the General Session of the OIE in May 2007, the OIE Aquatic Animal Health Standards Commission has proposed **white tail disease** and **infectious myonecrosis** for listing in the 2007 edition of the *Aquatic Animal Health Code.*

At the fifth meeting of the Asia Regional Advisory Group (AG) on Aquatic Animal Health (AGM-5) held at the NACA Secretariat in Bangkok on 22-24 November 2006, the list was revised again. While doing so, it was agreed that all OIE listed diseases should be included in the regional QAAD reporting system. However, delisting of diseases by the OIE should not lead to their automatic delisting from the regional QAAD list because a globally delisted disease may still have relevance to the region. The AG agreed to retain all the 2006 OIE de-listed diseases in the QAAD for the year 2007 and seek expert opinion from regional resource experts for their retention or otherwise. This will be taken into consideration while revising the list at AGM-6 in November 2007.

We welcome your comments and suggestions on the QAAD reporting system.

Reports Received by the NACA Secretariat

Country: **AUSTRALIA** Period: **January to March 2007**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	-(2004)	-(2004)	-(2004)		1
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome (EUS)	?	?	?		2
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Epitheliocystis	***	***	***		
9. Grouper iridoviral disease	0000	0000	0000		
10. Viral encephalopathy and retinopathy	-(2006)	+	+	III	3
11. Enteric septicaemia of catfish	-(2001)	-(2001)	-(2001)		4
12. Bacterial kidney disease	0000	0000	0000		
13. Infectious pancreatic necrosis	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	+	+	+	II	5
3. Abalone viral mortality	***	***	***		
Non OIE-listed diseases					
4. Infection with *Marteilia sydneyi*	+	-(2007)	-(2007)		6
5. Infection with *Marteilioides chungmuensis*	***	***	***		
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/ -(2007)	III	7
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	-(2005)	-(2005)	-(2005)		8
5. Infectious hypodermal and haematopoietic necrosis	-(2004)	-(2004)	-(2004)		9
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000		
Non OIE-listed diseases					
7. Infectious myonecrosis	***	***	***		
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		
ANY OTHER DISEASES OF IMPORTANCE					
1.Abalone viral ganglioneuritis	+	+	+	III	10
2.Oyster oedema disease	+	+	-(2007)	III	11

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	Epizootic haematopoietic necrosis was not reported this period despite passive surveillance, but is known to have 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.
2	Epizootic ulcerative syndrome was not reported during this period despite active surveillance but is known to have previously occurred in Northern Territory (last year reported 2006). Considered endemic to certain streams and rivers of the Northern Territory. Presence suspected but not confirmed from New South Wales (last year reported 2006). 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.

3	**Viral encephalopathy and retinopathy** 1. **Reported in Queensland** in a) February and b) March 2007. Targeted surveillance; 2. **In** a) *Lates calcarifer* 10 day old larvae, b) *Cromileptes altivelis* 3 month old fry; 3. **Clinical signs-** a) cessation of feeding, phototropism, b) not reported; 4. **Pathogen-** betanodavirus; 5. **Mortality rate-** a) 80%, b) unknown; 6. **Economic loss-** not reported; 7. **Geographic extent-** a) 1 rearing tank on single farm, b) 2 tanks on single farm; 8. **Containment measures-** none, endemic to area. Targeted surveillance of all barramundi hatcheries in Queensland is on-going; 9. **Laboratory confirmation-** diagnosed by histopathology; 10. **Publications-** unpublished. 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 New South Wales (last year reported 2006), Western Australia (last year reported 2005) and Tasmania (last year reported 2000). Never reported from Victoria despite passive surveillance. No information available in the Australian Capital Territory.
4	Enteric septicaemia of catfish was not reported this quarter but is known to have occurred in zebrafish (*Brachydanio rerio*) 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.
5	***Perkinsus olseni*** 1. **Reported in South Australia** in January, February and March 2007. Targeted surveillance: 2. **In** wild (but not cultured) blacklip abalone (*Haliotis rubra)* and greenlip abalone (*Haliotis laevigata)*. 3. **Clinical signs-** pustules on epipodium (normal clinical signs of perkinsosis in abalone); 4. **Pathogen-** *Perkinsus olseni*; 5. **Mortality rate-** no mortalities observed, some morbidity associated with infection. Infections are ongoing; 6. **Economic loss-** unknown; 7. **Geographic extent-** open system. Lower Eyre and Yorke Peninsulas; 8. **Containment measures-** none; 9. **Laboratory confirmation-** diagnosed by histology; 10. **Publications-** unpublished. Not reported this quarter from Western Australia despite targeted surveillance (last year reported 2003). While *Perkinsus* has been isolated previously by culture off the gills of a clinically normal abalone in 2003, clinical infection from *Perkinsus* has never been reported from Western Australia. Presence suspected but not confirmed from New South Wales (last year reported 2005). Passive surveillance and never reported in the Northern Territory, Queensland, Tasmania and Victoria. No information available in the Australian Capital Territory (no marine water responsibility).
6	***Marteilia sydneyi*** 1. **Reported in New South Wales** in January 2007. Passive surveillance. 2. **In** Sydney rock oysters (*Saccostrea glomerata*). 3. **Clinical signs-** nil; 4. **Pathogen-** *Marteilia sydneyi*; 5. **Mortality rate-** nil; 6. **Economic loss-** nil; 7. **Geographic extent-** single lease; 8. **Containment measures-** not reported; 9. **Laboratory confirmation-** diagnosed by histopathology; 10. **Publications-**unpublished. Not reported this period despite passive surveillance but is known to have previously occurred in Queensland (last year reported 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).

7	**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). **Gill-associated virus** 1. **Reported in the Northern Territory** in February 2007. Active surveillance: 2. **In** *Penaeus monodon*; 3. **Clinical signs-** nil*;* 4. **Pathogen-** gill associated virus*;* 5. **Mortality rate-** nil; 6. **Economic loss-** nil; 7. **Geographic extent-** multiple ponds-no disease; 8. **Containment measures-** n/a - endemic in region; 9. **Laboratory confirmation-** diagnosis made by PCR; 10. **Publications-** unpublished. 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).
8	Spherical baculovirosis 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).
9	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).
10	Abalone viral ganglioneuritis was reported in wild abalone (*Haliotis* spp.) in two of five reefs sampled in western Victoria. Monitoring of farms in western Victoria shows that stock continue to be clear of the virus.
11	*Pinctada maxima* mortalities have continued on a small number of pearl oyster leases in northern Western Australia. Investigations into the aetiology of the disease are on-going. Affected leases remain under quarantine.

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

Country: **CAMBODIA** Period: **January to March 2007**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis					
2. Infectious haematopoietic necrosis					
3. Spring viraemia of carp	+?	+?	+?	III	1
4. Viral haemorrhagic septicaemia					
5. Epizootic ulcerative syndrome (EUS)	-	-	-	II	
6. Red seabream iridoviral disease					
7. Koi herpesvirus disease	+?	+?	+?	III	2
Non OIE-listed diseases					
8. Epitheliocystis					
9. Grouper iridoviral disease	000	000	000		
10. Viral encephalopathy and retinopathy	000	000	000		
11. Enteric septicaemia of catfish	000	000	000		
12. Bacterial kidney disease					
13. Infectious pancreatic necrosis					
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*					
2. Infection with *Perkinsus olseni*					
3. Abalone viral mortality					
Non OIE-listed diseases					
4. Infection with *Marteilia sydneyi*					
5. Infection with *Marteilioides chungmuensis*					
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 baculovirosis (*Penaeus monodon*-type baculovirus)					
5. Infectious hypodermal and haematopoietic necrosis					
6. Tetrahedral baculovirosis (*Baculovirus penaei*)					
Non OIE-listed diseases					
7. Infectious myonecrosis					
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					
ANY OTHER DISEASES OF IMPORTANCE					

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

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not	(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. common carp, grass carp, bighead carp, silver carp, mrigal and catla) from five fish hatcheries (Chrang Cham Res, Prek Peap and Tual Krasang public hatcheries, and Hak Sae & Sam farmer/private hatcheries) were collected on 13-15 January 2007 in Cambodia and screened using PCR and TR-PCR tests by Dr. Gilda D. Lio-Po and her colleagues at SEAFDEC Fish Disease Laboratory in the Philippines. All carps are negative for SVCV. Meanwhile the cell culture and pathogenicity assays are ongoing.
2	15 samples of common carp, grass carp were collected on 13-15 January 2007 in Cambodia from five fish hatcheries (Chrang Cham Res, Prek Peap and Tual Krasang public hatcheries, and Hak Sae & Sam farmer/private hatcheries) and screened using PCR and TR-PCR tests by Dr. Gilda D. Lio-Po and her colleagues at SEAFDEC Fish Disease Laboratory in the Philippines. As a result, common carp are negative for KHV and grass carp are negative for GCHV. Meanwhile the cell culture and pathogenicity assays are ongoing.

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

Country: **HONG KONG SAR** Period: **October-December 2006**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	II	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia	0000	0000	0000	III	
5. Infectious pancreatic necrosis	0000	0000	0000	II	
6. Epizootic ulcerative syndrome (EUS)	0000	0000	0000	II	
7. Bacterial kidney disease	0000	0000	0000	II	
8. Red seabream iridoviral disease	-	-	-	III	
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	-	+	-	III	1
10. Viral encephalopathy and retinopathy	+	+	+	III	2
11. Enteric septicaemia of catfish	0000	0000	0000	II	
12. Epitheliocystis	(2002)			III	
13. Grouper iridoviral disease	-	-	-	III	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000	II	
2. Infection with *Perkinsus olseni*	0000	0000	0000	II	
Non OIE-listed diseases relevant to the region					
3. Infection with *Marteilia sydneyi*	0000	0000	0000	II	
4. Infection with *Marteilioides chungmuensis*	0000	0000	0000	II	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	II	
2. White spot disease	-	-	-	III	
3. Yellowhead disease (YH virus, gill-associated virus)	0000	0000	0000	II	
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	0000	0000	0000	II	
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	II	
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000	II	
Non OIE-listed diseases relevant to the region					
7. Necrotising hepatopancreatitis	0000	0000	0000	II	
8. Baculoviral midgut gland necrosis	0000	0000	0000	II	
9. White tail disease (MrNV and XSV)	0000	0000	0000	II	
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000	II	
2. Abalone viral mortality	0000	0000	0000	II	
ANY OTHER DISEASES OF IMPORTANCE					

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

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not	(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	One case of koi herpes virus infection mostely affecting younger pet koi carp in a weel maintained garden pond system with associated morbidity and mortality of 25% and 15% were seen in November. Source of infection was not established but might be related to new fish introductions 8-10 months prior to the outbreak
2	Three cases of disease caused by nervous necrosis viruswere seen during the reporting period from the same property.All cases occurred in recently imported giant grouper fingerlings and the mortalities reached 30% in the December case.

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

Country: **HONG KONG SAR** Period: **January to March 2007**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	II	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia	0000	0000	0000	II	
5. Epizootic ulcerative syndrome (EUS)	0000	0000	0000	II	
6. Red seabream iridoviral disease	-	-	-	III	
7. Koi herpesvirus disease	-	-	-	III	
Non OIE-listed diseases					
8. Epitheliocystis	(2002)			II	
9. Grouper iridoviral disease	-	-	-	III	
10. Viral encephalopathy and retinopathy	+	+	+	III	1
11. Enteric septicaemia of catfish	0000	0000	0000	II	
12. Bacterial kidney disease	0000	0000	0000	II	
13. Infectious pancreatic necrosis	0000	0000	0000	II	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000	II	
2. Infection with *Perkinsus olseni*	0000	0000	0000	II	
3. Abalone viral mortality	0000	0000	0000	II	
Non OIE-listed diseases					
4. Infection with *Marteilia sydneyi*	0000	0000	0000	II	
5. Infection with *Marteilioides chungmuensis*	0000	0000	0000	II	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	III	
2. White spot disease	-	-	-	III	
3. Yellowhead disease (YH virus, gill-associated virus)	0000	0000	0000	II	
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	0000	0000	0000	II	
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	II	
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000	II	
Non OIE-listed diseases					
7. Infectious myonecrosis	0000	0000	0000	II	
8. Baculoviral midgut gland necrosis	0000	0000	0000	II	
9. White tail disease (MrNV and XSV)	0000	0000	0000	II	
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000	II	
ANY OTHER DISEASES OF IMPORTANCE					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Gyrodactylosis (*Gyrodactylus salaris*).
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*;
Crustaceans: Crayfish plague (*Aphanomyces astaci*);
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Finfish: Channel catfish virus disease; Piscirickettsiosis.
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Crustaceans: Necrotising hepatopancreatitis**.**

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not	(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	Three cases of disease caused by nervous necrosis viruswere seen during the reporting period from 2 properties. Two cases in Jaurary and February occurred in imported giant grouper fingerlings submitted by the same owner with cumulative mortality reached 30% while the case in March occurred in 4-5 month olg green grouper with 1% mortality.

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

Country: **INDONESIA** Period: **January to March 2007**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	+	+	+	III	1
Non OIE-listed diseases					
8. Epitheliocystis	0000	0000	0000		
9. Grouper iridoviral disease	0000	0000	0000		
10. Viral encephalopathy and retinopathy	-	-	+	III	2
11. Enteric septicaemia of catfish	0000	0000	0000		
12. Bacterial kidney disease	0000	0000	0000		
13. Infectious pancreatic necrosis	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with *Marteilia sydneyi*	0000	0000	0000		
5. Infection with *Marteilioides chungmuensis*	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 baculovirosis (*Penaeus monodon*-type					
5. Infectious hypodermal and haematopoietic necrosis	+	+	+	III	5
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000		
Non OIE-listed diseases					
7. Infectious myonecrosis	+	+	+	III	6
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		
ANY OTHER DISEASES OF IMPORTANCE					
1. Infection with *Streptococcus sp.*	+	+	+	I	7
2. Infection with *Aeromonas sp.*	+	+	+	I , II	8
3. Infection with *Aeromonas hydrophilla*	+	+	+	I , II	9
4. Infection with *Edwardsiella ictaluri*	+	+	+	I , II	10

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

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	***	No information available
but		0000	Never reported
	no clinical diseases	-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not	(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	1). Reported in: West Java province in January and February 2007; South Kalimantan province in January until March 2007 2). Species affected: *Cyprinus carpio* 3). Clinical sign: haemorrhage on part of body, irritation on swim-bladder, and no clinical sign on some samples in West Java; necrosis of gill tissue, color of gill is brownish, in South Kalimantan , its found some lesions on the skin surface and fin 4). All samples have been detected by PCR analyze 5). Pathogen: Koi Herpesvirus 6). Mortality rate: low to high 7). Economic loss: – 8). Names of infected areas: Subang, Pandeglang, Cianjur and Sukabumi district in West Java province; Balangan, Hulu Sungai Utara and Banjar district in South Kalimantan province 9). Preventive/control measures: – 10). Laboratory confirmation diagnosed by PCR in Main Center for Freshwater Aquaculture Development Sukabumi Laboratory; Freshwater Aquaculture Development Centre Mandiangin Laboratory in South Kalimantan 11). Publications: Unpublished
2	1). Reported in East Java province in January until March 2007; Lampung province in March 2007 2). Species affected to humpback grouper (*Cromileptes altivelis*) and tiger grouper (*Ephinephelus fuscoguttatus*) reared in hatchery at Situbondo, East Java 3). All samples have been detected by PCR analyze 4). Pathogen: Betanodavirus 5). Mortality rate: – 6). Economic loss: – 7). Names of infected areas: grouper hatchery in Brackishwater Development Center Laboratory in Situbondo, East Java; and in Lampung district, Lampung province. 8). Preventive/control measures: – 9). Laboratory confirmation diagnosed by PCR in Brackiswater Development Center Laboratory in Situbondo, East Java 10). Publications: Unpublished

3	1). Reported in South Sulawesi province in March 2007; East Java province in January until March 2007 2). Species affected to *L. Vanamei* ; to either nauplius, post larvae, juvenile and broodstock of *L. vanamei* 3). All samples have been detected by PCR analyze 4). Pathogen: Taura Syndrome Virus 5). Mortality rate: low to high 6). Economic loss: about 4,000 $US 7). Names of infected areas: on semi-intensive ponds at Baru district in South Sulawesi; grouper hatchery in Brackishwater Development Center Laboratory in Situbondo, East Java 8). Preventive/control measures: – 9). Laboratory confirmation diagnosed by PCR in Brackishwater Development Center Laboratory in Jepara, Central Java province; in Brackiswater Development Center Laboratory in Situbondo, East Java 10). Publications: Unpublished
4	1). Reported in Central Java province in January until March 2007; East Java province in February and March 2007; South Kalimantan province in January and February 2007; Lampung province in February 2007 2). Species affected to *L. vannamei* and *P. monodon* in Central Java; *L. vannamei* in East Java 3). Clinical sign: there are white spot in skin surface of shrimp had infected, before that affected shrimp are weak and swimming on the surface of water 4). All samples have been detected by PCR analyze 5). Pathogen: White Spot Syndrome Virus 6). Mortality rate: low to high 7). Economic loss: about 55,000 $US in Jepara district, Central Java province; 8). Names of infected areas: in several ponds in Jepara, Demak, Kendal, Brebes district in Central Java province; grouper hatchery in Brackishwater Development Center Laboratory in Situbondo and Madura island, East Java; infected shrimp in Tanah Bumbu and Kotabaru district in South Kalimantan; in Lampung district, Lampung province. 9). Preventive/control measures: – 10). Laboratory confirmation diagnose by PCR in Brackishwater Development Center Jepara Laboratory in Central Java; in Brackiswater Development Center Situbondo Laboratory in East Java; Freshwater Aquaculture Development Centre Mandiangin Laboratory in South Kalimantan 11). Publications: Unpublished
5	1). Reported in Central Java province in February and March 2007; East Java province in March 2007; Lampung province in March 2007). Species affected to post larvae, juvenile and broodstock of *L. vannamei*; 3). All samples have been detected by PCR analyze 4). Pathogen: family *Parvoviridae* 5). Mortality rate: low to medium 6). Economic loss: about 2,000 $US in Central Java province 7). Names of infected areas: several ponds in Jepara district, Central Java province; grouper hatchery in Brackishwater Development Center Laboratory in Situbondo district, East Java; in Lampung district, Lampung province. 8). Preventive/control measures: – 9). Laboratory confirmation diagnose by PCR in Brackishwater Development Center Jepara Laboratory in Central Java; Brackishwater Development Center Laboratory in Situbondo, East Java 10). Publications: Unpublished.

6	1). Reported in East Java province in January until March 2007). Species affected to juvenile of *L. vanamei* 3). The clinical sign: red color on the abdominal segment end tail fan, myo-necrosis with the white color aspect 4). Pathogen: IMNV in Totiviridae family 5). Sample have been detected by PCR analyze in BDC in Situbondo, East Java 6). Mortality rate: medium 7). Economic loss: – 8). Names of infected area: Surrounded Area of Brackishwater Aquaculture Development Center Laboratory in Situbondo, in East Java. 9). Preventive/control measures: – 10). Laboratory confirmation diagnosed by PCR analyze in Brackishwater Aquaculture Development Center Situbondo Laboratory in East Java. 11) Publications: Unpublished.
7	1). Report in South Kalimantan province in January until March 2007; in North Sulawesi province in March 2007 2). Species affected to *Oreochromis sp* in South Kalimantan and *Tilapia sp* in North Sulawesi province, 3). The clinical sign are affected fish was disoriented whirling motion, color of skin surface changes to be more dark and exophtalmia in South Kalimantan 4). Pathogen: *Streptococcus sp.* 5). Mortality Rate: 30 - 70% 6). Economic loss: – 7). Names of infected areas: Tabalong, Hulu Sungai Utara and Barito Kuala district in South Kalimantan; Minahasa district in North Sulawesi province, 8). Preventive/control measures: – 9). Laboratory confirmation diagnosed by Freshwater Aquaculture Development Center Mandiangin Laboratory in South Kalimantan; Freshwater Aquaculture Development Center Tatelu Laboratory in North Sulawesi. 10). Publications: Unpublished
8	1). Reported in Jambi province in February and March 2007 2). Species affected to Common Carp at Sungai Gelam and *Pangasius sp* (Patin Jambal) at Mendalo Laut village, Muaro Jambi district, Pasar Tembesi village Muara Tembesi district, Jambi province). Clinical sign: hemorrhage and ulcer on part of body and fill damage.). Pathogen: bacteriae 5). Mortality rate: low 6). Economic loss: – 7). Names of infected areas: Sungai Gelam, Jambi and Laut Muaro Jambi district in Jambi province 8). Preventive/control measures: – 9). Laboratory confirmation diagnosed by Freshwater Aquaculture Development Center Jambi Laboratory in Jambi province, Sumatera.)) Publications: Unpublished.
9	1). Reported in West Java and South Kalimantan province in January until March 2007; in North Sulawesi province in February and March 2007 2). Species affected to *Cyprinus carpio* and Tilapia in West Java; *Cyprinus carpio* and Pangasius in South Kalimantan 3). Clinical sign: • In West Java for C carpio: haemorrhage on part of body; irritation on swim-bladder; no clinical sign on some samples and Tilapia: melanosis and exophthalmia • In South Kalimantan: weak, gill is pale, necrosis of skin tissue, haemmorrhage in stomach and fin and lesions on the skin surface 4). Mortality rate: C. carpio is high and Tilapia and Pangasius is low 5). Samples were analyzed by PCR in MCFADC Sukabumi Laboratory; Freshwater Aquaculture Development Center Mandiangin Laboratory in South Kalimantan 6). Economic loss: – 7). Names of infected areas: C. carpio in Sukabumi district in West Java province; and Tilapia in Purwakarta district in Banten, West Java province; Banjar district in South Kalimantan; Minahasa district in North Sulawesi province, 8). Preventive/control measures: – 9). Laboratory confirmation diagnosed by laboratory confirmation diagnosed by Main Center for Freshwater Aquaculture Development Sukabumi; Freshwater Aquaculture Development Center Mandiangin Laboratory in South Kalimantan; Freshwater Aquaculture Development Center Tatelu Laboratory in North Sulawesi 11) Publications: Unpublished.

10	1). Reported in Jambi province in January until March 2007 2) Species affected to Patin siam and Patin pasopati 3). The clinical sign: fish show pale color on gill, white spot and swallow on the spleen and liver. 4). Pathogen: bacteriae 5). Sample have been detected by Bacteriology 6). Mortality rate: medium (30 – 60 %) 7). Economic loss: – 8). Names of infected area: some villages in Muaro Jambi district are Mendalo Laut, Pasar Tembesi Muara Tembesi, Talang Bakung and Thehok and Nusa Indah Jambi city; floating cage at Batanghari river in Aro and Bajubang village, Laut Batanghari district Jambi province 9). Laboratory confirmation diagnosed by Freshwater Aquaculture Development Center Jambi Laboratory in Jambi province, Sumatera. 10) Publications: Unpublished.

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

Country: **JAPAN** Period: **January to March 2007**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
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. Epizootic ulcerative syndrome (EUS)	-	-	-	I	
6. Red seabream iridoviral disease	-	+	-	III	
7. Koi herpesvirus disease	+	+	+	III	
Non OIE-listed diseases					
8. Epitheliocystis	+?	+	+	II	
9. Grouper iridoviral disease	0000	0000	0000	I	
10. Viral encephalopathy and retinopathy	-	-	-	I	
11. Enteric septicaemia of catfish	0000	0000	0000	I	
12. Bacterial kidney disease	+	+	+	III	
13. Infectious pancreatic necrosis	+	-	-	III	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000	I	
2. Infection with *Perkinsus olseni*	0000	0000	0000	I	
3. Abalone viral mortality					
Non OIE-listed diseases					
4. Infection with *Marteilia sydneyi*	0000	0000	0000	I	
5. Infection with *Marteilioides chungmuensis*	+	+	+	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 baculovirosis (*Penaeus monodon*-type baculovirus)	0000	0000	0000	I	
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	I	
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000	I	
Non OIE-listed diseases					
7. Infectious myonecrosis	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	
ANY OTHER DISEASES OF IMPORTANCE					

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	
2	

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

Country: **Lao PDR** Period: **October-December 2006**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. 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 *Bonamia exitiosa*	***	***	***		
2. Infection with *Perkinsus olseni*	***	***	***		
Non OIE-listed diseases relevant to the region					
3. Infection with *Marteilia sydneyi*	***	***	***		
4. Infection with *Marteilioides chungmuensis*	***	***	***		
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 baculovirosis (*Penaeus monodon*-type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	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	***	***	***		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Gyrodactylosis (*Gyrodactylus salaris*).
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini* ; *Perkinsus marinus*; *Xenohaliotis californiensis*;
Crustaceans: Crayfish plague (*Aphanomyces astaci*);
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
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not confirmed	(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No	
1	

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

Country: **LAO PDR** Period: **January to March 2007**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Epitheliocystis	0000	0000	0000		
9. Grouper iridoviral disease	0000	0000	0000		
10. Viral encephalopathy and retinopathy	0000	0000	0000		
11. Enteric septicaemia of catfish	0000	0000	0000		
12. Bacterial kidney disease	0000	0000	0000		
13. Infectious pancreatic necrosis	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with *Marteilia sydneyi*	0000	0000	0000		
5. Infection with *Marteilioides chungmuensis*	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 baculovirosis (*Penaeus monodon*-type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000		
Non OIE-listed diseases					
7. Infectious myonecrosis	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		
ANY OTHER DISEASES OF IMPORTANCE					

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	
2	

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

Country: **MALAYSIA** Period: **January to March 2007**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease	-	-	-		
7. Koi herpesvirus disease	-	+( )	-	I,II,III	1
Non OIE-listed diseases					
8. Epitheliocystis	0000	0000	0000		
9. Grouper iridoviral disease	+	+	-	III	2
10. Viral encephalopathy and retinopathy	+	+	+	1, II , III	3
11. Enteric septicaemia of catfish	0000	0000	0000		
12. Bacterial kidney disease	0000	0000	0000		
13. Infectious pancreatic necrosis	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with *Marteilia sydneyi*	0000	0000	0000		
5. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	000	000	000		
2. White spot disease	-	-	-		
3. Yellowhead disease (YH virus, gill-associated virus)	000	000	000		
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	000	000	000		
5. Infectious hypodermal and haematopoietic necrosis	+	+	+	III	4
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	000	000	000		
Non OIE-listed diseases					
7. Infectious myonecrosis	000	000	000		
8. Baculoviral midgut gland necrosis	000	000	000		
9. White tail disease (MrNV and XSV)					
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	000	000	000		
ANY OTHER DISEASES OF IMPORTANCE					

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

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not	(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	**Koiherpesvirus disease** 1 group of koi in one farm was reported to have continuous mortality during active surveillance in Februari 2007. Some of the fish showed clinical signs of haemorrhage at the fin and body. remaining fish were tested after 2 weeks incident using pooled organs of gill, kidney and spleen. PCR revealed low infection of KHV in 2 of the sampled ponds. Positive detection was not found in broodstocks samples. No follow up studies were made since all the fish were immediately harvested. Never reported in other Perak area during these period despite active surveillance.
2	**Grouper Iridoviral disease** Active surveillance: 1. **Reported in a) Northern part of west Malaysia b) East Malaysia (Sabah)** 2. **In**; a) *Epinephelus* sp, b) *E.fuscoguttatus* 3. **Clinical signs- a)** no clinical signs; b) no clinical signs, 4. **Pathogen-** *Iridovirus* 5. **Mortality rate- a)** no mortality 6. **Economic loss-** n/a; 7. **Geographic extent-** a) floating cages in both areas 8. **Containment measures-** not reported 9. **Laboratory confirmation- a)** diagnosed by PCR (commercial detection Kit) 10. **Publications-** Unpublished. 11. **Others** : Not reported in Mac despite passive surveillance, some of the samples during active surveillance were not yet tested.

3	**Viral Encephalopathy And Retinopathy** a) Active surveillance: 1. **Reported in a) Kedah b) Trengganu** 2. **In**; a) sea bass (*Lates calcarifer*) and *Epinephelus* sp, b) Groupers sp.(*E.fuscoguttatus : broodstocks and imported fry)* 3. **Clinical signs-** no clinical signs 4. **Pathogen-** betanodavirus; 5. **Mortality rate- a) 30-60% in seabass**; no mortality b) no mortality in broostocks ; 70-80% mortality in imported fry 6. **Economic loss-** n/a; 7. **Geographic extent-** a) open sea cages and floating cages ; b) 1 hatchery and 1 farm with fiberglass tank system 8. **Containment measures-** n/a 9. **Laboratory confirmation- a)** diagnosed by PCR 10. **Publications-** Unpublished. 11. **Others** - Heavy infestation of *caligus* was found in imported fry **b) Passive surveillance**: 1. **Reported in Northern part of west Malaysia in a) Penang (Feb.07) and b) Kedah (Mac 07).** 2. **In**; cobia use for broodstocks , a) size : 3 – 4 kg; b) 0.5 – 1 kg 3. **Clinical signs** a) darting and circling motion at water surface, high mortality at deep net level, floating at surface; b) dark body colouration and circling motion 4. **Pathogen**- betanodavirus; 5. **Mortality rate**- 100% mortality in 2 days 6. **Economic loss**- n/a; 7. **Geographic extent** a) 3 different owners of floating cages; b) 1 floating cages; 8. **Containment measures**- n/a; 9. **Laboratory confirmation**- Diagnosed by PCR, no significant findings on parasites and bacteria 10. **Publications**- Unpublished. 1. **Reported in Northern part of west Malaysia i.e Kedah.** 2. **In;** sea bass (*Lates calcarifer*) fry less than 4 weeks old; 3. **Clinical signs**- dark body colouration, circling motion (lab observation) 4. **Pathogen**- betanodavirus; 5. **Mortality rate**- 30-60% in seabass; 6. **Economic loss**- n/a; 7. **Geographic extent**- floating net cages 8. **Containment measures**- n/a 9. **Laboratory confirmation**- Observation at labs and repeated test by PCR; 10. **Publications**- Unpublished.
4	Shrimp samples from the yearly monitoring of SPS Aquaculture under DOF in February had been tested positive by KLIA PCR laboratory. The specimens were recorded as PCR positive or carrying IHHNV genes.

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

Country: **MYANMAR** Period: **January to March 2007**

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

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

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not	(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 51 samples of P.monodon have been tested at PCR lab of Department of Fisheries (DOF) of which 2 samples (3.92%) were recorded as WSSV positive
2	A total of 51 samples of P.monodon have been tested at PCR lab of Department of Fisheries (DOF) of which 2 samples (3.92%) were recorded as IHHNV positive. In February 2007, during on-site training course on shrimp nd prawn health management surveillance trip, marine shrimp and freshwater prawn samples (20) were collected from farms and hatcheries and one shrimp larvae (P.monodon) sample showed positive test for IHHNV

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

Country: **NEPAL** Period: **January to March 2007**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. Spring viraemia of carp	***	***	***		
4. Viral haemorrhagic septicaemia	***	***	***		
5. Epizootic ulcerative syndrome (EUS)	+	+	+	I	1
6. Red seabream iridoviral disease	***	***	***		
7. Koi herpesvirus disease	***	***	***		
Non OIE-listed diseases					
8. Epitheliocystis	***	***	***		
9. Grouper iridoviral disease	***	***	***		
10. Viral encephalopathy and retinopathy	***	***	***		
11. Enteric septicaemia of catfish	***	***	***		
12. Bacterial kidney disease	***	***	***		
13. Infectious pancreatic necrosis	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with *Marteilia sydneyi*	0000	0000	0000		
5. Infection with *Marteilioides chungmuensis*	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 baculovirosis (*Penaeus monodon*-type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000		
Non OIE-listed diseases					
7. Infectious myonecrosis	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		
ANY OTHER DISEASES OF IMPORTANCE					

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

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not	(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 repored from Siraha district in January, Rupandehi and Nawalparasi districts in February and March 2007. The species affected were reported to be Naini (Cirrhinus mrigala), Rohu (labeo rohita) and puntius sp. The affected total pond water surface area was 3 ha. Application of lime Ca(OH)2 @ 500 kg/ha at the first sign of outbreak was reported to be effective. The trend of fish mortality rate is decreasing compared to the previous years. The economic loss reported to be not significant

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

Country: **PHILIPPINES** Period: **January to March 2007**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome (EUS)	-	-	-		
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Epitheliocystis	0000	0000	0000		
9. Grouper iridoviral disease	0000	0000	0000		
10. Viral encephalopathy and retinopathy	+	-	-	III	1
11. Enteric septicaemia of catfish	0000	0000	0000		
12. Bacterial kidney disease	0000	0000	0000		
13. Infectious pancreatic necrosis	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with *Marteilia sydneyi*	0000	0000	0000		
5. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+	+	+	III	2
3. Yellowhead disease (YH virus, gill-associated virus)	-	-	-		
4. Spherical baculovirosis (*Penaeus monodon*-type	-	+	+		3
5. Infectious hypodermal and haematopoietic necrosis	+	+	+	III	4
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000		
Non OIE-listed diseases					
7. Infectious myonecrosis	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		
ANY OTHER DISEASES OF IMPORTANCE					

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

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not	(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	Detected in *Lates calcarifer* (juvenile stage) from Iloilo by PCR. Examination conducted by SEAFDEC-AQD, Fish Health Laboratory.
2	Detected in post larva and grow-out stages of *P. monodon* and *P. vannamei* by PCR. Examinations conducted by SEAFDEC and BFAR-C.O. Fish Health Laboratories. Detected also in *P. indicus* from grow out farm in Iloilo by one-step PCR by SEAFDEC Fish Health Lab.
3	Detected in (*P. monodon*, post larva) samples by wet mount of squash preparation of hepatopancreas (stained with malachite green) examined under light microscope. Examinations conducted by SEAFDEC-AQD.
4	Detected in *P. vannamei* post larva and grow-out stages from Pangasinan and Zambales by PCR. Examination conducted by SEAFDEC- Fish Health Lab.

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

Country: **REPUBLIC OF KOREA** Period: **October-December 2006**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	October	November	December		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	-	-	-	III	1
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	-	-	-	III	2
5. Infectious pancreatic necrosis	-	-	-	III	
6. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
7. Bacterial kidney disease	0000	0000	0000		
8. Red seabream iridoviral disease	+	+	+	III	3
Non OIE-listed diseases relevant to the region					
9. Infection with koi herpesvirus	-(1998)	-(1998)	-(1998)		
10. Viral encephalopathy and retinopathy	+	+	+	III	4
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 *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	+	+	+	III	5
Non OIE-listed diseases relevant to the region					
3. Infection with *Marteilia sydneyi*	0000	0000	0000		
4. Infection with *Marteilioides chungmuensis*	+	+	+	III	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	+( )	?	0000	III	
2. White spot disease	+	+	+	III	
3. Yellowhead disease (YH virus, gill-associated virus)	0000	0000	0000		
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	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					

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Gyrodactylosis (*Gyrodactylus salaris*).
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini* ; *Perkinsus marinus*; *Xenohaliotis californiensis*;
Crustaceans: Crayfish plague (*Aphanomyces astaci*);
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
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not confirmed	(year)	Year of last occurrence

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

1. Epidemiological comments:

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

Comment No	
1	IHN was not detected in cultured rainbow trout (*O. mykiss*) in Gangwon-do by RT-PCR during the active surveillance. The active surveillance has been started since 2005.
2	Viral haemorrhagic septicaemia was not detected in flounder (*Paralichthys olivaeceus*) in Tongyoung, Ulsan, Wando, Jeju, Pohang and Goje area. by RT-PCR during the active surveillance.
3	RSIV was detected in flounder (*Paralichthys olivaeceus*) in Pohang by PCR during active surveillance. Not reported this period despite active surveillance in flounder in Tongyoung, Ulsan, Wando, Jeju and Goje area.
4	Viral encephalopathy and retinopathy was detected in flounder (*Paralichthys olivaeceus*) in Ulsan, Pohang, Wando and Goje by RT-PCR during active surveillance. Not reported this period despite active surveillance in flounder in Jeju area.
5	*Perkinsus olseni* was detected in manila clam (*Ruditapes philippinarum*) in Gochang and Boryong by PCR during active surveillance.
6	*Taura syndrom virus* was detected in whiteleg shrimp(*Penaeus vannamei*) in Sacheon by PCR during active surveillance

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

Country: **REPUBLIC OF KOREA** Period: **January to March 2007**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	+?	+?	+?	III	
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	+	+	+	III	
5. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
6. Red seabream iridoviral disease	+?	+?	+?	III	
7. Koi herpesvirus disease	(1998)	(1998)	(1998)	III	
Non OIE-listed diseases					
8. Epitheliocystis	0000	0000	0000		
9. Grouper iridoviral disease	0000	0000	0000		
10. Viral encephalopathy and retinopathy	+	+	+	III	
11. Enteric septicaemia of catfish	0000	0000	0000		
12. Bacterial kidney disease	0000	0000	0000		
13. Infectious pancreatic necrosis	+?	+?	+?	III	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with *Marteilia sydneyi*	0000	0000	0000		
5. Infection with *Marteilioides chungmuensis*	+	+	+	II	1
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	***	***	***	III	
2. White spot disease	***	***	***	III	
3. Yellowhead disease (YH virus, gill-associated virus)	0000	0000	0000		
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	***	***	***	III	
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000		
Non OIE-listed diseases					
7. Infectious myonecrosis	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		
ANY OTHER DISEASES OF IMPORTANCE					

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

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not	(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	60 Pacific oyster samples tested and detected in *M.chungmuensis* in 2 samples.

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

Country: **SINGAPORE** Period: **January to March 2007**

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

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

a/ Please use the following symbols:

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

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

1. Epidemiological comments:

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

Comment No.	
1	Viral nervous necrosis (VNNV) RNA was detected from a batch of greasy grouper fry in February and one batch of tiger grouper fry in March by RT-PCR. Both batches of fry were imported from Indonesia and under quarantine.

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

Country: **SRI LANKA** Period: **January to March 2007**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome (EUS)	-	-	-		
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Epitheliocystis	0000	0000	0000		
9. Grouper iridoviral disease	0000	0000	0000		
10. Viral encephalopathy and retinopathy	0000	0000	0000		
11. Enteric septicaemia of catfish	0000	0000	0000		
12. Bacterial kidney disease	0000	0000	0000		
13. Infectious pancreatic necrosis					
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with *Marteilia sydneyi*	0000	0000	0000		
5. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+	+	+	III	
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	?	?	?		
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000		
Non OIE-listed diseases					
7. Infectious myonecrosis	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		
ANY OTHER DISEASES OF IMPORTANCE					

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

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not	(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	Origin of the diseases: Northwestern Province in 1996 Species affected: P. monodon Clinical Signs: Whit spots on the body may be present or absent Pathogen: WSSV Mortality Rate: Lower than it was initially detected. As stated below in section 2

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

Country: **THAILAND** Period: **January to March 2007**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000	III	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. Spring viraemia of carp	0000	0000	0000	III	
4. Viral haemorrhagic septicaemia	0000	0000	0000	III	
5. Epizootic ulcerative syndrome (EUS)	-	-	-	II	
6. Red seabream iridoviral disease	0000	0000	0000	III	
7. Koi herpesvirus disease	+( )	?	-	III	1
Non OIE-listed diseases					
8. Epitheliocystis	-	-	-	II	
9. Grouper iridoviral disease	-	-	-	III	
10. Viral encephalopathy and retinopathy	-	-	-	III	
11. Enteric septicaemia of catfish	***	***	***	II	
12. Bacterial kidney disease	***	***	***	II	
13. Infectious pancreatic necrosis	(1985)	(1985)	(1985)	III	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000	II	
2. Infection with *Perkinsus olseni*	0000	0000	0000	II	
3. Abalone viral mortality	***	***	***	II	
Non OIE-listed diseases					
4. Infection with *Marteilia sydneyi*	0000	0000	0000	II	
5. Infection with *Marteilioides chungmuensis*	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 baculovirosis (*Penaeus monodon*-type baculovirus)	?	?	?		
5. Infectious hypodermal and haematopoietic necrosis	+	+	+	III	5
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	***	***	***		
Non OIE-listed diseases					
7. Infectious myonecrosis	***	***	***		
8. Baculoviral midgut gland necrosis	***	***	***		
9. White tail disease (MrNV and XSV)	+	-	+	III	6
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Ranavirus	-	-	-	III	

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

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not	(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. 38 koi farms/companies/hobbyists had been surveyed using nested PCR for this reporting period. 3/38 koi specimens showed disease clinical signs, associated with external parasites, and KHV-nested PCR positive. The affected fish were collected from 2 hobbyist houses and the fish ponds were disinfected and the remaining diseased fish were destroyed. 6/38 KHV suspect cases with nested PCR positive cases found in 3 koi farms. However the kois did not exhibit disease clinical sign. Fish in suspect zone in the farms were quarantined 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. These 6 suspect cases did not meet the criteria.
2	A total of 1,165 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. 41 specimens or 3.5% was recorded as RT-PCR positive or carrying TSV genes that advised to be destroyed.
3	A total of 2,070 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. 53 specimens or 2.6% was recorded PCR positive or carrying SEMBV genes that advised to be destroyed.
4	A total of 202 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. 1 specimen or 0.5% was recorded PCR positive or carrying YHV genes that advised to be destroyed.

5	A total of 1,456 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. 314 specimens or 21.6% were recorded as PCR positive or carrying IHHNV genes that advised to be destroyed. The tested specimens did not show disease clinical signs and there was no outbreak due to IHHNV infection in the hatcheries.
6	36 prawn brooders and post larvae specimens from hatcheries were RT-PCR-tested for the present of both viral genes, MrNV and XSV. 2 specimens showed RT-PCR positive results, one from brooder and one from post larvae. However no disease clinical signs in both cases. Concepts in bio-security for disease prevention had been advised to hatchery owners, operators or farmers. The disease was identified at the AAHRI, DOF.

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

Country: **VIETNAM** Period: **January to March 2007**

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	January	February	March		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	0000	0000	0000		
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. Spring viraemia of carp	0000	0000	0000		
4. Viral haemorrhagic septicaemia	0000	0000	0000		
5. Epizootic ulcerative syndrome (EUS)	***	***	***		
6. Red seabream iridoviral disease	0000	0000	0000		
7. Koi herpesvirus disease	0000	0000	0000		
Non OIE-listed diseases					
8. Epitheliocystis	0000	0000	0000		
9. Grouper iridoviral disease	0000	0000	0000		
10. Viral encephalopathy and retinopathy	0000	0000	0000		
11. Enteric septicaemia of catfish	+()	+()	+()	I	1
12. Bacterial kidney disease	0000	0000	0000		
13. Infectious pancreatic necrosis	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Perkinsus olseni*	0000	0000	0000		
3. Abalone viral mortality	0000	0000	0000		
Non OIE-listed diseases					
4. Infection with *Marteilia sydneyi*	0000	0000	0000		
5. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+()	+()	+()	I, II, III	2
3. Yellowhead disease (YH virus, gill-associated virus)	+()	+()	+()	I, II, III	3
4. Spherical baculovirosis (*Penaeus monodon*-type	+()	+()	+()	I, II, III	4
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000		
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000		
Non OIE-listed diseases					
7. Infectious myonecrosis	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		
ANY OTHER DISEASES OF IMPORTANCE					

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

a/ Please use the following symbols:

+	Disease reported or known to be present	+( )	Occurrence limited to certain zones
+?	Serological evidence and/or isolation of causative agent but no clinical diseases	***	No information available
		0000	Never reported
		-	Not reported (but disease is known to occur)
?	Suspected by reporting officer but presence not	(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 (*Pangasius micronema, Pangasius hypophthalmus*). - Disease characteristic: Give up feeding, glassy; haemorrhages on fin, tail; latex – bearing in liver and kidney. - Mortality rate: low, scattered. - The disease occurred in limited areas in Mang Thit district, Vinh Long province.
2	- Infection occurred in tiger shrimp (*Penaeus monodon*). - The disease occurred in limited areas in Ba Ria-Vung Tau, Binh Thuan, provinces which controls by NAFIQAVED branch No.5 and some intensive ponds in Ca Mau, Bac Lieu, Soc Trang provinces.
3	- Infection occurred in tiger shrimp (*Penaeus monodon*). - The disease occurred in limited areas in Ca Mau, Bac Lieu, Soc Trang, Ba Ria-Vung Tau and Binh Thuan provinces. - Pathogen: Gill-associated virus (GAV)
4	- Infection occurred in tiger shrimp (*Penaeus monodon*). - The disease occurred in limited areas in Ho Chi Minh city and Ba Ria-Vung Tau, Binh Thuan, Ca Mau, Bac Lieu, Soc Trang provinces.

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 hepatopancreatitis[1]
9. Infectious myonecrosis[1]

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[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 *Bonamia exitiosa*	1. Infection with *Marteilia sydneyi*
2. Infection with *Perkinsus olseni*	2. Infection with *Marteilioides chungmuensis*
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 baculovirosis (*Penaeus monodon*-type baculovirus)	
5. Infectious hypodermal and haematopoietic necrosis	
6. Tetrahedral baculovirosis (*Baculovirus penaei*)	
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 (*Gyrodactylus salaris*)	2. Piscirickettsiosis
2.2 Molluscs	
OIE-listed diseases	**Non OIE-listed diseases**
1. Infection with *Bonamia ostreae*	1. Infection with *Mikrocytos mackini*
2. Infection with *Marteilia refringens*	
3. Infection with *Perkinsus marinus*	
4. Infection with *Xenohaliotis californiensis*	
2.3 Crustaceans	
OIE-listed diseases	**Non OIE-listed diseases**
1. Crayfish plague (*Aphanomyces astaci*)	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, RP. and JR Arthur (editors). FAO Fisheries Proceedings No. 4, Rome, FAO. 2005. 178p.

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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 AG[1], Bangkok, Thailand, November 7-9, 2001)

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

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

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

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

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

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

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

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

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

Please use the following symbols to fill in the forms.

A. Symbols used for negative occurrence are as follows:

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

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

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

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

B. Symbols used for positive occurrence are shown below.

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

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

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

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

[1] Regional Advisory Group on Aquatic Animal Health (AG)

C. Levels of Diagnosis

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

D. Subjects to be covered in the Epidemiological Comments

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

IMPORTANT

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

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

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