2005/4

QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

October-December 2005

Published by the

Network of Aquaculture Centres in Asia-Pacific

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Kasetsart University Campus, Ladyao, Jatujak
Bangkok 10900, Thailand

Food and Agriculture Organization of the United Nations

Viale delle Terme di Caracalla
Rome 00100
Italy

April 2006

Network of Aquaculture Centres in Asia-Pacific and Food and Agriculture Organization of the United Nations. April 2006. *Quarterly Aquatic Animal Disease Report (Asia and Pacific Region)*, 2005/4, October-December 2005. NACA: Bangkok, Thailand.

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Foreword

Capacity building and harmonization in aquatic animal health within the ASEAN

Under the ASEAN-Australia Development Cooperation Program's Regional Partnership Scheme (AADCP-RPS), AusAid is supporting two aquatic animal health projects - (1) Strengthening Aquatic Animal Health Capacity and Biosecurity in ASEAN and (2) Operationalise Guidelines on Responsible Movement of Live Food Finfish in ASEAN. These Projects directly support capacity building, harmonization and trade facilitation within the ASEAN but specifically 4 global and regional efforts on aquatic animal health management, namely: (a) FAO's Code of Conduct for Responsible Fisheries, (b) WTO's Sanitary and Phytosanitary Agreement; (c) FAO/NACA's Asia Regional Technical Guidelines for responsible movement of live aquatic animals and (d) FAO/NACA/OIE Asia-Pacific Quarterly Aquatic Animal Disease Reporting System

NACA will be coordinating these projects with the Australian implementing partner, AusVet Animal Health Services. Other partners are the ASEAN Secretariat, ASEAN Sectoral Working Group on Fisheries (ASWGFi), Aquatic Animal Health Research Institute (AAHRI), Thailand and Department of Agriculture, Fisheries and Forestry (DAFF), Australia. As part of the AADCP-RPS, the project will be managed by ACIL Australia Pty Ltd.

The goal of the first project is to enhance the capability of ASEAN member countries to implement ASEAN harmonized national aquatic animal health strategies to manage risks to the biosecurity of fisheries industries particularly those related to trade and impacting on the poor. The project will support (1) development of harmonized approaches to aquatic animal health management and biosecurity in ASEAN and (2) improving capacity to implement ASEAN harmonized national aquatic animal health and biosecurity strategies. The expected outputs include (a) Guidelines prepared for ASEAN members on harmonized aquatic animal health and biosecurity strategies within ASEAN, including an operational strategy for their implementation, (b) Technical support provided to 4 ASEAN countries (Cambodia, Lao PDR, Myanmar, Vietnam) for development of national aquatic animal health and biosecurity strategies (c) Twenty personnel from ASEAN trained in epidemiology, surveillance, risk analysis and contingency planning and (d) Training material developed on aquatic animal health and biosecurity for all ASEAN countries and made widely available

Two regional workshops of 4 days duration will ensure participation of all ASEAN members to build consensus and support preparation of harmonized national strategies for aquatic animal health and biosecurity. The first workshop will analyze the status of aquatic animal health management plans, capacities and institutional arrangements in ASEAN members, identify gaps, and prepare an overall workplan and detailed outputs for the project. The second will adopt the harmonized guidelines for implementation of national strategies for ASEAN countries prepared during the project. Technical support will be provided during the inter-workshop period to assist in preparation of the national strategies. Country specific activities (e.g. establishing national aquatic animal health committees, developing national list of diseases of concern, developing national strategies, piloting surveillance and disease reporting systems, developing contingency

plans) will be conducted in four target countries (Cambodia, Lao PDR, Myanmar, Vietnam) in collaboration with relevant stakeholders. Two regional training programs of 7 days duration each will be conducted over a period of 2 years. The emphasis will be on development of practical skills, particularly in the areas of epidemiology, surveillance, risk analysis, contingency planning, disease reporting and information management. Training/educational materials from the training course will be made widely available to ASEAN education and training institutes, in hard copy and web-based electronic formats, to support capacity building in ASEAN in aquatic animal health and biosecurity.

The second project aims to enhance the biosecurity of food finfish industries in ASEAN Member Countries by reducing the risk of international spread of specific fish pathogens with the purpose to enable the development by ASEAN of harmonized standard operating procedures for health certification and quarantine measures for transboundary movement of live food finfish. The project will develop an inventory of ASEAN Member Countries' health certification and quarantine procedures for live food finfish and finalize the ASEAN model to specify the scope of Standard Operating Procedures, develop a set of ASEAN Standard Operating Procedures for health certification and quarantine measures for international trade in live food finfish. The key output from the project will be a documented set of ASEAN standard operating procedures (SOPs) for health certification and quarantine measures for international movement of live food finfish which are accepted and adopted by all ASEAN member countries.

Two regional workshops (duration 2 days each) will be organized with participation of all ASEAN members. The proposed objectives of the workshop are to finalize the ASEAN export-import model which will specify the scope of the SOPs and to form the necessary working groups to write the SOPs and develop and agree on a detailed work plan. The second workshop will ratify SOPs and agree to their adoption.

Implementation of these two projects in the ASEAN is expected to contribute significantly to improved implementation of various elements contained in the Asia Regional Technical Guidelines.

Reports Received by the NACA Secretariat

Country: Australia Period: October-December 2005

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	-(2004)	-(2004)	-(2004)		1
2. Infectious haematopoietic necrosis	0000	0000	0000		
3. *Oncorhynchus masou* virus disease	0000	0000	0000		
4. Spring viraemia of carp	0000	0000	0000		
5. Viral haemorrhagic septicaemia	0000	0000	0000		
6. Viral encephalopathy and retinopathy	-(2005)	+	+	III	2
7. Infectious pancreatic necrosis	0000	0000	0000		
8. Epizootic ulcerative syndrome (EUS)	-(2005)	+	+	II	3
9. Bacterial kidney disease	0000	0000	0000		
10. Red seabream iridoviral disease	0000	0000	0000		
11. Enteric septicaemia of catfish	-(2001)	-(2001)	-(2001)		4
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	0000	0000	0000		
14. Infection with koi herpesvirus	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Mikrocytos roughleyi*	-(2005)	-(2005)	-(2005)		5
3. Infection with *Haplosporidium nelsoni*	0000	0000	0000		
4. Infection with *Marteilia sydneyi*	-(2005)	-(2005)	-(2005)		6
5. Infection with *Perkinsus olseni/atlanticus* [b/])	+	+	+	II	7
Non OIE-listed diseases relevant to the region					
6. 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/-(2005)	0000/-(2005)	0000/-(2005)		8
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	-(2004)	+	-(2005)	II	9
5. Infectious hypodermal and haematopoietic necrosis	-(2004)	-(2004)	-(2004)		10
6. Spawner-isolated mortality virus disease	-(?)	-(?)	-(?)		11
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	0000	0000	0000		
9. Baculoviral midgut gland necrosis	0000	0000	0000		
10.White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Mortalities in farmed abalone	***	***	+	II	12
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*

Crustaceans: Crayfish plague (*Aphanomyces astaci*)

a/ Please use the following symbols:

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

b/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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 Northern Territory, Queensland or Western Australia. Annual occurrence of the disease in the Australian Capital Territory, but no laboratory confirmation.
2	**Viral encephalopathy and retinopathy** 1. **Reported in Northern Territory** in December 2005. Active surveillance: 2. **In**; barramundi (*Lates calcarifer*) fry less than 3 weeks old; 3. **Clinical signs-** no clinical signs; 4. **Pathogen-** betanodavirus; 5. **Mortality rate-** nil; 6. **Economic loss-** n/a; 7. **Geographic extent-** not reported; 8. **Containment measures-** not reported 9. **Laboratory confirmation-** diagnosed by PCR; 10. **Publications-** Unpublished. 1. **Reported in Queensland** in a) November and b) December 2005. Passive surveillance: 2. **In**; a) 8 day old barramundi (*Lates calcarifer*) larvae b) 42 day old barramundi (*Lates calcarifer*) fry; 3. **Clinical signs-** a) floating at surface and death; b) detected during routine health screening; Histologically, vacuolation of neuronal cells in the retina and brain. 4. **Pathogen-** betanodavirus; 5. **Mortality rate**- a) 100% within 7 days, b) no mortality; 6. **Economic loss-** n/a; 7. **Geographic extent-** a) three larval rearing tanks, single hatchery b) single tank, single hatchery; 8. **Containment measures**- n/a; 9. **Laboratory confirmation-** Diagnosed by histology and immunohistochemestry (IHCT); 10. **Publications-** Unpublished. Not reported this period despite targeted surveillance from South Australia (last year reported 2004). Not reported this period despite active surveillance from Tasmania (last year reported 2000). Not reported this period despite passive surveillance from New South Wales (last reported third quarter 2005) and Western Australia (last reported first quarter 2005). Never reported from Victoria despite passive surveillance. No information available in the Australian Capital Territory.

3	**Epizootic ulcerative syndrome** 1. **Reported in Queensland** in a) November and b) December 2005. Passive surveillance: 2. **In**; a) barramundi (*Lates calcarifer*) fingerlings b) Murray cod (*Maccullochella peelii peelii*) –juvenile and adult 3. **Clinical signs-** a) lesions and low level mortality;b) chronic mortality over months; 4. **Pathogen-** *Aphanomyces invadans*; 5. **Mortality rate-** a) 30/8800 (200/8800 sick), b);40% over 3-4 months in 400 gram juveniles 6. **Economic loss-** not available; 7. **Geographic extent-** a) single system, single farm, b) one raceway; one farm 8. **Containment measures-** not required; 9. **Laboratory confirmation-** diagnosed by histology with GMS special stain; 10. **Publications-** Unpublished. Not reported during this period despite passive surveillance, but is known to have occurred in New South Wales (last reported first quarter 2005), Northern Territory (last year reported 2004) 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.
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	Infection with *Mikrocytos roughleyi* was not reported during this period despite passive surveillance but is known to have previously occurred in New South Wales (last reported third quarter 2005) and Western Australia (last year reported 1996). Considered enzootic in Queensland but lack of diagnostic submissions. Active surveillance and never reported in Tasmania. Passive surveillance and never reported in Northern Territory, South Australia and Victoria. No information available in Australian Capital Territory (no marine water responsibility).
6	*Marteilia sydneyi* was not reported this period despite passive surveillance but is known to have previously occurred in Queensland (last year reported 2004) and Western Australia (last year reported 1994). Not reported this quarter (no monitoring), but known to have previously occurred in New South Wales (last reported 2nd quarter 2005). Active surveillance and never reported in Tasmania. Passive surveillance and never reported in Northern Territory, South Australia or Victoria. No information available in the Australian Capital Territory (no marine water responsibility).
7	***Perkinsus olseni/atlanticus*** 1. **Reported in New South Wales** in October, November and December 2005. Targeted surveillance: 2. **In-** wild (but not cultured) black lip abalone (*Haliotis rubra),* 2-5 year old; 3. **Clinical signs-** no unusual signs reported*;* 4. **Pathogen-** *Perkinsus olseni*; 5. **Mortality rate-** low; all age classes 6. **Economic loss-** uncertain- cumulative estimate ~AU$ 3 million annually; 7. **Geographic extent-** Port Stephens to Jervis Bay; 8. **Containment measures-** fishing closure of area to prevent translocation of stock; 9. **Laboratory confirmation-** Diagnosis made by Rays thioglycollate media and histopathology; 10. **Publications-** Unpublished. 1. **Reported in South Australia** in October, November and December 2005. 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. Open system; 9. **Laboratory confirmation-** Diagnosed by histology; 10. **Publications-** Unpublished. Not reported this quarter from Western Australia despite targeted surveillance, but known to have previously occurred in wild, but not in cultured *Haliotis* spp. (last year reported 2003). Active surveillance and never reported in Tasmania. Passive surveillance and never reported in Northern Territory, Queensland and Victoria. No information available in the Australian Capital Territory (no marine water responsibility).
8	**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 Not reported this period despite active surveillance, but known to have occurred previously in Northern Territory and Western Australia (last reported 2nd quarter 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).
9	**Spherical baculovirosis** 1. **Reported in Queensland** in November 2005. Passive surveillance: 2. **In-** juvenile *Penaeus merguiensis* prawns; 3. **Clinical signs-** low level mortalities*;* 4. **Pathogen-** *Penaeus monodon*-type baculovirus; 5. **Mortality rate-** nil attributable to *Penaeus monodon*-type baculovirus 6. **Economic loss-** uncertain; 7. **Geographic extent-** three individual prawns from 3/110 ponds, single farm; 8. **Containment measures-** not required; 9. **Laboratory confirmation-** Diagnosed by histology; 10. **Publications-** Unpublished. 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 Northern Territory, South Australia and Victoria. No information available in the Australia Capital Territory (no marine water responsibility) and Tasmania (susceptible species not present).
10	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 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).
11	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 SMV-related epizootics impossible.
12	**Mortalities in farmed abalone** A mortality incident on one abalone farm in the south-west of Victoria is currently being investigated. The farm has experienced significantly increased mortality, particularly in one year old abalone. Moribund and dead abalone have enlarged mouth parts, often with a protruded radula, and curling of the edges of the foot, sometimes to the point that the sides meet. Histopathologically, the disease syndrome is characterised by a ganglioneuritis with haemocytic infiltration. The presentation is not similar to any of the OIE listed diseases of abalone or other molluscs. Further investigation into the cause of the disease is being carried out, including tracing and surveillance activities. There is no evidence at this time of involvement of other farms or wild stock abalone.

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

Country: Bangladesh Period: July-September 2005

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. *Oncorhynchus masou* virus disease	***	***	***		
4. Spring viraemia of carp	***	***	***		
5. Viral haemorrhagic septicaemia	***	***	***		
6. Viral encephalopathy and retinopathy	***	***	***		
7. Infectious pancreatic necrosis	***	***	***		
8. Epizootic ulcerative syndrome (EUS)	-	-	-		
9. Bacterial kidney disease	***	***	***		
10. Red seabream iridoviral disease	***	***	***		
11. Enteric septicaemia of catfish	***	***	***		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	***	***	***		
14. Infection with koi herpesvirus	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	***	***	***		
2. Infection with *Mikrocytos roughleyi*	***	***	***		
3. Infection with *Haplosporidium nelsoni*	***	***	***		
4. Infection with *Marteilia sydneyi*	***	***	***		
5. Infection with *Perkinsus olseni/atlanticus* [b/])	***	***	***		
Non OIE-listed diseases relevant to the region					
6. 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. Spawner-isolated mortality virus disease	***	***	***		
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	***	***	***		
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	***	***	***		
9. Baculoviral midgut gland necrosis	***	***	***		
10.White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Mass mortality of *Anabas testudineus*	+	+	+	II	1
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*
Crustaceans: Crayfish plague (*Aphanomyces astaci*)

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/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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	Assuming economic benefits nowadays fish growers are encouraged to culture Anabas testudineus. This is not our local variety. The fingerlings of these fishes were imported from Thailand. Since July this year, reports come that outbreaks of disease and mass mortality occurs in these fishes. Reports mostly come from Mymensigh area. Diseased fishes have tail and fin erosion, small superficial and sometimes dermal lesion all over the body. Rate of mortality ranged grom 20-30%. Ectoparasites, *Trichodina* spp, *Chilodeella* spp, and *Ichthyophthirius multifiliis* were identified from the diseased fish and bacteria, *Aeromonas* spp and *Enterobacter* spp were isolated from the affected fish. Fish growers are applying potash and antibiotics including some available commercial drugs to treat fish.

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

Country: Hong Kong SAR China Period October-December 2005

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. *Oncorhynchus masou* virus disease	0000	0000	0000	II	
4. Spring viraemia of carp	0000	0000	0000	III	
5. Viral haemorrhagic septicaemia	0000	0000	0000	III	
6. Viral encephalopathy and retinopathy	+	-	+	III	1.
7. Infectious pancreatic necrosis	0000	00000	0000	III	
8. Epizootic ulcerative syndrome (EUS)	0000	0000	0000	II	
9. Bacterial kidney disease	0000	0000	0000	II	
10. Red seabream iridoviral disease	-	-	-	III	
11. Enteric septicaemia of catfish	0000	0000	0000	III	
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	(2002)				
13. Grouper iridoviral disease	-	-	+	III	2.
14. Infection with koi herpesvirus	-	-	-	III	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000	II	
2. Infection with *Mikrocytos roughleyi*	0000	0000	0000	II	
3. Infection with *Haplosporidium nelsoni*	0000	0000	0000	II	
4. Infection with *Marteilia sydneyi*	0000	0000	0000	II	
5. Infection with *Perkinsus olseni/atlanticus* [b/])	0000	0000	0000	II	
Non OIE-listed diseases relevant to the region					
6. 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	III	
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	0000	0000	0000	II	
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	II	
6. Spawner-isolated mortality virus disease	0000	0000	0000	II	
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000	II	
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	0000	0000	0000	II	
9. Baculoviral midgut gland necrosis	0000	0000	0000	II	
10.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					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*
Crustaceans: Crayfish plague (*Aphanomyces astaci*)

a/ Please use the following symbols:

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

b/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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 NNV disease occurred during the reporting period. Two cases were in giant grouper from the same farm and one case involved green grouper.
2	One case of grouper Iridovirus affecting green grouper fingerlings co-infected with NNV (see above)

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

Country: India Period: October-December 2005

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. *Oncorhynchus masou* virus disease	0000	0000	0000		
4. Spring viraemia of carp	0000	0000	0000		
5. Viral haemorrhagic septicaemia	0000	0000	0000		
6. Viral encephalopathy and retinopathy	0000	0000	0000		
7. Infectious pancreatic necrosis	0000	0000	0000		
8. Epizootic ulcerative syndrome (EUS)	-	-	-		
9. Bacterial kidney disease	0000	0000	0000		
10. Red seabream iridoviral disease	0000	0000	0000		
11. Enteric septicaemia of catfish	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	0000	0000	0000		
13. Grouper iridoviral disease	0000	0000	0000		
14. Infection with koi herpesvirus	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Mikrocytos roughleyi*	0000	0000	0000		
3. Infection with *Haplosporidium nelsoni*	0000	0000	0000		
4. Infection with *Marteilia sydneyi*	0000	0000	0000		
5. Infection with *Perkinsus olseni/atlanticus* [b/])	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
6. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	-	-	-		
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	0000	0000	0000		
5. Infectious hypodermal and haematopoietic necrosis	***	***	***		
6. Spawner-isolated mortality virus disease	0000	0000	0000		
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	0000	0000	0000		
9. Baculoviral midgut gland necrosis	0000	0000	0000		
10.White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
2. Abalone viral mortality	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*
Crustaceans: Crayfish plague (*Aphanomyces astaci*)

a/ Please use the following symbols:

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

b/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

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

1. Epidemiological comments:

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

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

Country: Indonesia Period: October-December 2005

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	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. *Oncorhynchus masou* virus disease	***	***	***		
4. Spring viraemia of carp	***	***	***		
5. Viral haemorrhagic septicaemia	***	***	***		
6. Viral encephalopathy and retinopathy	+	+	-	III	1
7. Infectious pancreatic necrosis	***	***	***		
8. Epizootic ulcerative syndrome (EUS)	-	-	-		
9. Bacterial kidney disease	***	***	***		
10. Red seabream iridoviral disease	***	***	***		
11. Enteric septicaemia of catfish	***	***	***		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	-	-	-		
14. Infection with koi herpesvirus	-	-	+	I , III	2
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	***	***	***		
2. Infection with *Mikrocytos roughleyi*	***	***	***		
3. Infection with *Haplosporidium nelsoni*	***	***	***		
4. Infection with *Marteilia sydneyi*	***	***	***		
5. Infection with *Perkinsus olseni/atlanticus* [b/])	***	***	***		
Non OIE-listed diseases relevant to the region					
6. Infection with *Marteilioides chungmuensis*	***	***	***		
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)	***	***	***		
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	***	***	***		
5. Infectious hypodermal and haematopoietic necrosis	+	+	+	III	5
6. Spawner-isolated mortality virus disease	***	***	***		
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	***	***	***		
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	***	***	***		
9. Baculoviral midgut gland necrosis	***	***	***		
10.White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1. Infection with *Edwardsiella sp. & E. Ichtaluri*	+	+	+	III	6
2. Infection with *Mycobacterium sp.*	-	-	+	III	7
3. Infection with *Pseudomonas sp.*	+	+	+	III	8
4. Infection with *Staphylococcus sp.*	-	+	-	III	9
5. Infection with *Streptococcus sp.*	+	+	+	II	10

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*

Crustaceans: Crayfish plague (*Aphanomyces astaci*)

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/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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 VNN disease occurred in humpback grouper (*Cromileptes altivelis*) and tiger grouper (*Ephinephelus fuscoguttatus*) reared in hatchery Situbondo, East Java province. Percentage case positive VNN in October: 6,67%; in Nopember: 5 % and in December 0 %. Positive VNN samples of *Cromileptes altivelis, Ephinephelus fuscoguttatus, Lates calcarifer, Bloch, Lutjanus johnni* reared in hatchery and netcage in Mariculture Development Center in Batam. The samples from Batam, Tanjung Riau and Dabo Singkep detected by PCR method in Mariculture Development Center laboratory in Batam in October until December 2005.
2	The positive sample of KHV are *Cyprinus carpio* had been detected by Freshwater Aquaculture Development Center (FADC) Sukabumi laboratory by PCR method with high rate mortality (more than 70 %) in December 2005. The positive samples came from Cirata Reservoar and Cianjur in West Java. KHV has been made mortality about 30 % of *Cyprinus carpio* on Common carp culture (floating net culture) in Maninjau lake and Tanah Datar, Solok, Agam, Pasaman, Padang Pariaman (fish culture in pound and running water) in West Sumatera since Agustus 2005 until now. The sample of KHV has been detected by specific clinical sign of gill necrosis. KHV disease has infected in brood stock carp of *Cyprinus carpio* culture in Banjar from fingerling size to consumable size in Hulu Sungai Utara and infected to consumable size to brood stock in Tabalong, Tapin district in October and December 2005 with less than 30 % mortality rate. The positive sample from Banjar, Tabalong and Tapin district in South Kalimantan, and also in Kutai Kertanegara, East Kalimantan with more than 70 % mortality rate. All samples was detected by PCR method has not shown yet specific clinical sign of KHV, but it from Sungai Utara area had shown the clinical sign of KHV infected such as necrosis of gill tissue, lesions on the skin surface of fish and necrosis on the skin and fin. All the samples had been detected by Freshwater Aquaculture Development Center Laboratory in Mandiangin, South Kalimantan.

3	Samples of post larvae, juvenile and broodstock of L. vanamei send by farmer from East Java were positive of TSV. It had been detected by Brackishwater Development Center in Situbondo, East Java with PCR method. Percentage case positive TSV on October 22 %, on November 42 % and on December 44 %. Positive TSV samples by PCR method has been detected by Brackishwater Development Center in Takalar, South Sulawesi. The infected area is surrounding of Brackishwater Development Center in Takalar with percentage case positive of TSV in October and November only 10 %. Positive TSV samples have been detected by Mariculture Development Center Lampung laboratory in South Sumatera, but the disease occurred not reported continuously.
4	Sample of *L. vanamei* (nauplius, post larvae and juvenile) on October by PCR method is 3,5 % case positive of WSSV, on November 14 % and on December less than 1 %. It had been detected by Brackishwater, Development Center in Situbondo, East Java. WSSV were still identified and reported to caused mass mortality of shrimp in several pond in Jepara and Demak in Central Java; Karawang, Indramayu (West Java. Test was performed by clinical, histopathology and PCR method by Brackishwater Development Center in Jepara, Central Java. Species affected are *P. monodon, L. vannamei and L. rostris.* WSSV has infected shrimp in Kotabaru district, South Kalimantan. The positive samples of WSSV in October and November 2005 had been detected by PCR method in FADC Mandiangin, South Kalimantan. Positive WSSV samples have been detected by Mariculture Development Center Lampung laboratory in South Sumatera, but the disease occurred not reported continuously. In November and December 2005 the positive WSSV of brood stock from Aceh and North Sumatera province had been detected by Brackishwater Development Center Ujung Batee, Nanggroe Aceh Darussalam.
5	Samples of L. vanamei (nauplii, post larvae, juvenile and broodstock) from East Java were PCR positive against IHHNV. Percentage case positive IHHNV on October 15 %, on November 0 % and on December 25 %. It had been detected by Brackishwater Development Center in Situbondo, East Java. Positive infection against IHHNV have been detected by Mariculture Development Center Lampung laboratory in South Sumatera, but the disease occurred not reported and no information available.
6	*Edwardsiella sp* has been affected to some species: *Cyprinus carpio*, Clarias gariepinus, Tilapia. Clinical sign on *Cyprinus carpio* is gill damage with less than 70 % mortality rate in Bandung and West Jakarta and less than 30 % mortality rate in some area of West Java: Bandung, Subang, Pandeglang, Cianjur and West Jakarta. All samples had been detected by Freshwater Aquaculture Development Center Sukabumi laboratory,West Java. *Edwardsiella ichtaluri* has been affected to tilapia with less than 5 % mortality rate in Tankit area, Jambi province. The clinical signs on tilapia is haemorhhage on anus of intestine organ, swollen of liver and hyperamis spleen with pustule node and also found swollen of anterior and posterior kidney with some pustule node. The sample had been diagnose by Freshwater Aquaculture Development Center Jambi laboratory, Sumatera
7	*Mycobacterium sp.* has been affected to some species : *Carrasius* and *Tilapia.* Clinical sign: haemorhage on *Carrasius;* melanosis, exopthalmus, dropsy on *Tilapia* and no clinical sign on some samples. Infected areas are West Jakarta and Subang with low mortality rate. It had been detected by Freshwater Aquaculture Development Center Sukabumi laboratory, West Java.

8	*Pseudomonas sp.* has been affected to some species: *Cyprinus carpio*, *Carrasius* and *Tilapia.* Clinical sign on *Cyprinus carpio* is gill damage; haemorhage on *Carrasius;* melanosis, exopthalmus, dropsy on *Tilapia* and no clinical sign on some other samples. Mortality rate in Bandung on *Cyprinus carpio* are medium mortality and low mortality in some other areas. Infected area : West & East Jakarta, Subang, Bandung and Cianjur. All samples had been detected by Freshwater Aquaculture Development Center Sukabumi laboratory, West Java.
9	*Staphylococcus sp.* has been affected to *Cyprinus carpio* with clinical sign haemorhage and no clinical sign on some samples on October until December 2005. In Bandung area had medium mortality rate. All samples had been detected by Freshwater Aquaculture Development Center Sukabumi laboratory, West Java
10	*Streptococcus sp.* is ussualy pathogenic to seabass caused by systemic infection. *Streptococcus sp.* infected seabass broodstock had detected by Mariculture Development Center in Batam on December 2005. Affected fish are weak and disoriented whirling motion, darkening of the body fish, haemorhages on eyes, operculum, and around the mouth. Internal organ had clinical signs are spleenomegaly, posterior kidney enlarged and haemorhages on the swimbladder. *Streptococcus sp.* was detected in Tilapia. Some infected area : Talago villago, Talago lako Kerinci and Air Jernih villago, Kec Pauh Sarolangun distrik Jambi Province on October until December 2005 . Clinical signs are pop eye and haemorrhages on spleen. Its detected by Freshwater Aquaculture Development Center laboratory in Jambi, Sumatera. *Streptococcus sp.* has been detected on sample from Banjar area with mortality rate 50% and in Hulu Sungai Utara area was 30% in December 2005. Disease characteristic are swimming with uncoordinated erratic movement, color of skin surface changes to be more pale and haemorrhages. All the sample has been identified by Freshwater Aquaculture Development Center laboratory in Mandiangin, South Kalimantan.

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

Country: Iran Period: October-December 2005

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	-	-	-		
3. *Oncorhynchus masou* virus disease	0000	0000	0000		
4. Spring viraemia of carp	-	-	-		
5. Viral haemorrhagic septicaemia	-	-	-		
6. Viral encephalopathy and retinopathy	0000	0000	0000		
7. Infectious pancreatic necrosis	-	-	-		
8. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
9. Bacterial kidney disease	0000	0000	0000		
10. Red seabream iridoviral disease	0000	0000	0000		
11. Enteric septicaemia of catfish	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	0000	0000	0000		
13. Grouper iridoviral disease	0000	0000	0000		
14. Infection with koi herpesvirus	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	***	***	***		
2. Infection with *Mikrocytos roughleyi*	***	***	***		
3. Infection with *Haplosporidium nelsoni*	***	***	***		
4. Infection with *Marteilia sydneyi*	***	***	***		
5. Infection with *Perkinsus olseni/atlanticus* [b/])	***	***	***		
Non OIE-listed diseases relevant to the region					
6. Infection with *Marteilioides chungmuensis*	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	-	-	-		
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	-	-	-		
6. Spawner-isolated mortality virus disease	0000	0000	0000		
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	***	***	***		
9. Baculoviral midgut gland necrosis	***	***	***		
10.White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*

Crustaceans: Crayfish plague (*Aphanomyces astaci*)

a/ Please use the following symbols:

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

b/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

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

1. Epidemiological comments:

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

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

Country: Japan Period: October-December 2005

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	I	
2. Infectious haematopoietic necrosis	+	+	+	III	
3. *Oncorhynchus masou* virus disease	-	-	-	I	
4. Spring viraemia of carp	0000	0000	0000	I	
5. Viral haemorrhagic septicaemia	-	-	-	I	
6. Viral encephalopathy and retinopathy	-	+	-	III	
7. Infectious pancreatic necrosis	+	-	-	III	
8. Epizootic ulcerative syndrome (EUS)	-	-	-	I	
9. Bacterial kidney disease	-	+	+	III	
10. Red seabream iridoviral disease	+	+	+	III	
11. Enteric septicaemia of catfish	0000	0000	0000	I	
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	+	+	+	II	
13. Grouper iridoviral disease	0000	0000	0000	I	
14. Infection with koi herpesvirus	+	+	+	III	
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000	I	
2. Infection with *Mikrocytos roughleyi*	0000	0000	0000	I	
3. Infection with *Haplosporidium nelsoni*					1
4. Infection with *Marteilia sydneyi*	0000	0000	0000	I	
5. Infection with *Perkinsus olseni/atlanticus* [b/])	0000	0000	0000	I	
Non OIE-listed diseases relevant to the region					
6. Infection with *Marteilioides chungmuensis*	-	-	+	III	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000	I	
2. White spot disease	-	-	-	III	
3. Yellowhead disease (YH virus, gill-associated virus)	0000	0000	0000	I	
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	0000	0000	0000	I	
5. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	I	
6. Spawner-isolated mortality virus disease	0000	0000	0000	I	
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000	I	
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	0000	0000	0000	I	
9. Baculoviral midgut gland necrosis	0000	0000	0000	I	
10.White tail disease (MrNV and XSV)	0000	0000	0000	I	
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	+	+	+	II	
2. Abalone viral mortality	0000	0000	0000	I	
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*
Crustaceans: Crayfish plague (*Aphanomyces astaci*)

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/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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	*Haplosporidium nelsoni* was detected at 2% positive in Pacific oyster (*Crassostrea gigas*) spats collected from the North-eastern part of Japan (see OIE Disease Information on the 5 October, 2001 on the OIE internet homepage). However, mortality or disease of Pacific oyster associated with *H.nelsoni* has not been reported at all. Therefore, the symbol is not described at the portion of Haplosporidiosis in this report form.

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

The Fisheries Resources Conservation law and the enforcement Ordinance of the Fisheries Resources Conservation law were amended (Date pf entry into force: 20 October 2005)

Country: Lao PDR Period: January-March 2005

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. *Oncorhynchus masou* virus disease	***	***	***		
4. Spring viraemia of carp	***	***	***		
5. Viral haemorrhagic septicaemia	***	***	***		
6. Viral encephalopathy and retinopathy	***	***	***		
7. Infectious pancreatic necrosis	***	***	***		
8. Epizootic ulcerative syndrome (EUS)	-	-	-		
9. Bacterial kidney disease	***	***	***		
10. Red seabream iridoviral disease	***	***	***		
11. Enteric septicaemia of catfish	***	***	***		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	***	***	***		
14. Infection with koi herpesvirus	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*					
2. Infection with *Mikrocytos roughleyi*					
3. Infection with *Haplosporidium nelsoni*					
4. Infection with *Marteilia sydneyi*					
5. Infection with *Perkinsus olseni/atlanticus* [b/])					
Non OIE-listed diseases relevant to the region					
6. 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. Spawner-isolated mortality virus disease					
7. Tetrahedral baculovirosis (*Baculovirus penaei*)					
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis					
9. Baculoviral midgut gland necrosis					
10.White tail disease (MrNV and XSV)					
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease					
2. Abalone viral mortality					
ANY OTHER DISEASES OF IMPORTANCE					
1.Oodinium sp	+	+	+	I, II	1
2.Trichodina sp	+	+	+	I, II	2
3. Ichthyophthirius	+	+	+	I,II	3
4.Epistylis sp	+	+	+	I,II	4
5.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*
Crustaceans: Crayfish plague (*Aphanomyces astaci*)

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/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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.Oodinium sp; 2. the disease observed during January to February ;3. Catfish ,silver barb and tilapia are affected;4. lesion hemorrhage ,grayish on the body and scrape of the fin;5.disease confirmed dy direct microscope ; 6. mortality rate no much;7.data on size of infected area not available;8. Treatment by formalin solution 30-40 ppm;9. sample send to the National laboratory ;10. National Animal Health Centre. Vientiane
2	1.Trichodina sp;2. tilapia ,silver barb, catfish;3.lesion on the body and gill;4.disease confirmed by direct microscopy;5.mortality no much;6.size of infected area not available;7 sample send to laboratory 8. National Animal Health Centre, Vientiane;9.treatment used formalin 25-30ppm
3	1. Icthyophthirius sp;2.catfish,carp.tilapia;3.disease observed during January to March ;4 .the disease found in the gill and skin ;5. sample send to National laboratory ;6.National Animal Health Centre ,Vientiane;7.size of infected area not available; 8. treatment by formalin 25-30 ppm
4	1.Epistylis sp;2. silver barb ,carp ; 3.didease observer on February to March;4. lesion hemorrhage on the body and fin;5. mortality no much ;6 disease confirm by direct microscopy ;7.sample send to the National laboratory;8. National Animal Health Centre , Vientiane;9. treatment by formalin 25-40 ppm and NaCl .

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

Country: Lao PDR Period: April-June 2005

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	April	May	June		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. *Oncorhynchus masou* virus disease	***	***	***		
4. Spring viraemia of carp	***	***	***		
5. Viral haemorrhagic septicaemia	***	***	***		
6. Viral encephalopathy and retinopathy	***	***	***		
7. Infectious pancreatic necrosis	***	***	***		
8. Epizootic ulcerative syndrome (EUS)	-	-	-		
9. Bacterial kidney disease	***	***	***		
10. Red seabream iridoviral disease	***	***	***		
11. Enteric septicaemia of catfish	***	***	***		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	***	***	***		
14. Infection with koi herpesvirus	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*					
2. Infection with *Mikrocytos roughleyi*					
3. Infection with *Haplosporidium nelsoni*					
4. Infection with *Marteilia sydneyi*					
5. Infection with *Perkinsus olseni/atlanticus* [b/])					
Non OIE-listed diseases relevant to the region					
6. 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. Spawner-isolated mortality virus disease					
7. Tetrahedral baculovirosis (*Baculovirus penaei*)					
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis					
9. Baculoviral midgut gland necrosis					
10.White tail disease (MrNV and XSV)					
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease					
2. Abalone viral mortality					
ANY OTHER DISEASES OF IMPORTANCE					
1. Aeromonas hydrophila	+	+	+	I, II	1
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*
Crustaceans: Crayfish plague (*Aphanomyces astaci*)

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/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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.Aeromonas hydrophyla ;2. disease observer during April to June and October to December;3.tilapia;4. lesion wound; 4. disease confirmed by media culture and isolated by biochemical test on API- test kit ;5. sample send to National laboratory;6. National Animal Health Centre, Vientiane ;7.size of infected area not available;8. liming and Antibiotic carried out as control method.

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

Country: Lao PDR Period: July-September 2005

Item	Disease status [a/]			Level of diagnosis	Epidemiological comment numbers
DISEASES PREVALENT IN THE REGION	Month				
FINFISH DISEASES	July	August	September		
OIE-listed diseases					
1. Epizootic haematopoietic necrosis	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. *Oncorhynchus masou* virus disease	***	***	***		
4. Spring viraemia of carp	***	***	***		
5. Viral haemorrhagic septicaemia	***	***	***		
6. Viral encephalopathy and retinopathy	***	***	***		
7. Infectious pancreatic necrosis	***	***	***		
8. Epizootic ulcerative syndrome (EUS)	-	-	-		
9. Bacterial kidney disease	***	***	***		
10. Red seabream iridoviral disease	***	***	***		
11. Enteric septicaemia of catfish	***	***	***		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	***	***	***		
14. Infection with koi herpesvirus	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*					
2. Infection with *Mikrocytos roughleyi*					
3. Infection with *Haplosporidium nelsoni*					
4. Infection with *Marteilia sydneyi*					
5. Infection with *Perkinsus olseni/atlanticus* [b/])					
Non OIE-listed diseases relevant to the region					
6. 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. Spawner-isolated mortality virus disease					
7. Tetrahedral baculovirosis (*Baculovirus penaei*)					
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis					
9. Baculoviral midgut gland necrosis					
10.White tail disease (MrNV and XSV)					
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease					
2. Abalone viral mortality					
ANY OTHER DISEASES OF IMPORTANCE					
1. Trichodina sp	+	+	+	I,II	1
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*
Crustaceans: Crayfish plague (*Aphanomyces astaci*)

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/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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.Trichodina sp;2. catfish;3.lesion on the body and gill;4.disease confirmed by direct microscopy;5.mortality no much;6.size of infected area not available;7 sample send to laboratory 8. National Animal Health Centre, Vientiane;9.treatment used formalin 25-30ppm

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

Country: Lao PDR Period: October-December 2005

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	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. *Oncorhynchus masou* virus disease	***	***	***		
4. Spring viraemia of carp	***	***	***		
5. Viral haemorrhagic septicaemia	***	***	***		
6. Viral encephalopathy and retinopathy	***	***	***		
7. Infectious pancreatic necrosis	***	***	***		
8. Epizootic ulcerative syndrome (EUS)	-	-	-		
9. Bacterial kidney disease	***	***	***		
10. Red seabream iridoviral disease	***	***	***		
11. Enteric septicaemia of catfish	***	***	***		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	***	***	***		
14. Infection with koi herpesvirus	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*					
2. Infection with *Mikrocytos roughleyi*					
3. Infection with *Haplosporidium nelsoni*					
4. Infection with *Marteilia sydneyi*					
5. Infection with *Perkinsus olseni/atlanticus* [b/])					
Non OIE-listed diseases relevant to the region					
6. 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. Spawner-isolated mortality virus disease					
7. Tetrahedral baculovirosis (*Baculovirus penaei*)					
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis					
9. Baculoviral midgut gland necrosis					
10.White tail disease (MrNV and XSV)					
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease					
2. Abalone viral mortality					
ANY OTHER DISEASES OF IMPORTANCE					
1. Oodinium	+	+	+	I,II	1
2. Trichodia	+	+	+	I,II	2
3. Aeromonas hydrophila	+	+	+	I,II	3

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*

Crustaceans: Crayfish plague (*Aphanomyces astaci*)

a/ Please use the following symbols:

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

b/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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.Oodinium sp; 2. the disease observed during January to February and October to December ;3. Catfish ,silver barb and tilapia are affected;4. lesion hemorrhage ,grayish on the body and scrape of the fin;5.disease confirmed dy direct microscope ; 6. mortality rate no much;7.data on size of infected area not available;8. Treatment by formalin solution 30-40 ppm;9. sample send to the National laboratory ;10. National Animal Health Centre. Vientiane.
2	Trichodina sp;2. tilapia ,silver barb, catfish;3.lesion on the body and gill;4.disease confirmed by direct microscopy;5.mortality no much;6.size of infected area not available;7 sample send to laboratory 8. National Animal Health Centre, Vientiane;9.treatment used formalin 25-30ppm
3	1.Aeromonas hydrophyla ;2. disease observer during April October to December;3.tilapia;4. lesion wound; 4. disease confirmed by media culture and isolated by biochemical test on API-test kit ;5. sample send to National laboratory;6. National Animal Health Centre, Vientiane ;7.size of infected area not available;8. liming and Antibiotic carried out as control method.

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

Country: Malaysia Period: October-December 2005

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. *Oncorhynchus masou* virus disease	0000	0000	0000		
4. Spring viraemia of carp	0000	0000	0000		
5. Viral haemorrhagic septicaemia	0000	0000	0000		
6. Viral encephalopathy and retinopathy	0000	0000	0000		
7. Infectious pancreatic necrosis	0000	0000	0000		
8. Epizootic ulcerative syndrome (EUS)	(1987)	(1987)	(1987)		
9. Bacterial kidney disease	0000	0000	0000		
10. Red seabream iridoviral disease	0000	0000	0000		
11. Enteric septicaemia of catfish	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	0000	0000	0000		
13. Grouper iridoviral disease	0000	0000	0000		
14. Infection with koi herpesvirus	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Mikrocytos roughleyi*	0000	0000	0000		
3. Infection with *Haplosporidium nelsoni*	0000	0000	0000		
4. Infection with *Marteilia sydneyi*	0000	0000	0000		
5. Infection with *Perkinsus olseni/atlanticus* [b/])	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
6. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	-	-	-		
2. White spot disease	-	-	-		
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. Spawner-isolated mortality virus disease	0000	0000	0000		
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	0000	0000	0000		
9. Baculoviral midgut gland necrosis	0000	0000	0000		
10.White tail disease (MrNV and XSV)	0000	0000	0000		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
2. Abalone viral mortality	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*
Crustaceans: Crayfish plague (*Aphanomyces astaci*)

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/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

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

1. Epidemiological comments:

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

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

Country: Myanmar Period: October-December 2005

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	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. *Oncorhynchus masou* virus disease	***	***	***		
4. Spring viraemia of carp	***	***	***		
5. Viral haemorrhagic septicaemia	***	***	***		
6. Viral encephalopathy and retinopathy	***	***	***		
7. Infectious pancreatic necrosis	***	***	***		
8. Epizootic ulcerative syndrome (EUS)	-	-	-		
9. Bacterial kidney disease	***	***	***		
10. Red seabream iridoviral disease	***	***	***		
11. Enteric septicaemia of catfish	***	***	***		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	***	***	***		
14. Infection with koi herpesvirus	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*					
2. Infection with *Mikrocytos roughleyi*					
3. Infection with *Haplosporidium nelsoni*					
4. Infection with *Marteilia sydneyi*					
5. Infection with *Perkinsus olseni/atlanticus* [b/])					
Non OIE-listed diseases relevant to the region					
6. Infection with *Marteilioides chungmuensis*					
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	-	-	+	III	1
2. White spot disease	+()	+()	+()	III	2
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	***	***	***		
5. Infectious hypodermal and haematopoietic necrosis	-	+()	+()	III	3
6. Spawner-isolated mortality virus disease	***	***	***		
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	***	***	***		
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	***	***	***		
9. Baculoviral midgut gland necrosis	***	***	***		
10.White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*
Crustaceans: Crayfish plague (*Aphanomyces astaci*)

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/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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 61 samples of *Penaeus monodon* have been tested at PCR lab of DOF of which one sample (1.64%%) were recorded as TSV positive.
2	A total of 61 samples of *Penaeus monodon* have been tested at PCR lab of DOF of which 14 samples (22.98%) were recorded as WSSV positive
3	A total of 61 samples of *Penaeus monodon* have been tested at PCR lab of DOF of which 6 samples (9.84%) were recorded as IHHNV positive

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

Country: Nepal Period: October-December 2005

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	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. *Oncorhynchus masou* virus disease	***	***	***		
4. Spring viraemia of carp	***	***	***		
5. Viral haemorrhagic septicaemia	***	***	***		
6. Viral encephalopathy and retinopathy	***	***	***		
7. Infectious pancreatic necrosis	***	***	***		
8. Epizootic ulcerative syndrome (EUS)	-	+	+	I	1
9. Bacterial kidney disease	***	***	***		
10. Red seabream iridoviral disease	***	***	***		
11. Enteric septicaemia of catfish	***	***	***		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	***	***	***		
14. Infection with koi herpesvirus	***	***	***		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	***	***	***		
2. Infection with *Mikrocytos roughleyi*	***	***	***		
3. Infection with *Haplosporidium nelsoni*	***	***	***		
4. Infection with *Marteilia sydneyi*	***	***	***		
5. Infection with *Perkinsus olseni/atlanticus* [b/])	***	***	***		
Non OIE-listed diseases relevant to the region					
6. 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. Spawner-isolated mortality virus disease	***	***	***		
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	***	***	***		
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	***	***	***		
9. Baculoviral midgut gland necrosis	***	***	***		
10.White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*

Crustaceans: Crayfish plague (*Aphanomyces astaci*)

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/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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 in rohu and mrigala were reported from Nawalparsai district of Western development region of Nepal. The disease appeared in about 16 ha of farmers ponds and rhe estimated fish mortality was about 0.2%. Application of hydrated lime at 500kg/ha was recommended as treatment

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

Country: Philippines Period: October-December 2005

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	***	***	***		
2. Infectious haematopoietic necrosis	***	***	***		
3. *Oncorhynchus masou* virus disease	***	***	***		
4. Spring viraemia of carp	***	***	***		
5. Viral haemorrhagic septicaemia	***	***	***		
6. Viral encephalopathy and retinopathy	-	-	-		
7. Infectious pancreatic necrosis	***	***	***		
8. Epizootic ulcerative syndrome (EUS)	-	-	-		
9. Bacterial kidney disease	***	***	***		
10. Red seabream iridoviral disease	***	***	***		
11. Enteric septicaemia of catfish	***	***	***		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	***	***	***		
13. Grouper iridoviral disease	***	***	***		
14. Infection with koi herpesvirus	0000	0000	0000	III	1
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	***	***	***		
2. Infection with *Mikrocytos roughleyi*	***	***	***		
3. Infection with *Haplosporidium nelsoni*	***	***	***		
4. Infection with *Marteilia sydneyi*	***	***	***		
5. Infection with *Perkinsus olseni/atlanticus* [b/])	***	***	***		
Non OIE-listed diseases relevant to the region					
6. Infection with *Marteilioides chungmuensis*	***	***	***		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	+	+	+		2
3. Yellowhead disease (YH virus, gill-associated virus)	***	***	***		
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	***	***	***		
5. Infectious hypodermal and haematopoietic necrosis	***	***	***		
6. Spawner-isolated mortality virus disease	***	***	***		3
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	***	***	***		
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	***	***	***		
9. Baculoviral midgut gland necrosis	***	***	***		
10.White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*
Crustaceans: Crayfish plague (*Aphanomyces astaci*)

a/ Please use the following symbols:

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

b/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

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

1. Epidemiological comments:

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

Comment No.	
1	Koi carp juveniles (12 pieces) taken from one private farm in Davao, Mindanao in November 2005 showed negative results for KHV by PCR (Nested step), cell culture isolation and pathogenicity assay. Koi carp fingerlings and juveniles (88 pieces) taken from three private farms in Pampanga and Rizal, Luzon in September 2005 also showed negative results by PCR (Nested step), cell culture isolation and pathogenicity assay.
2	There were 12 (batches/samples) of *P. monodon* (post larva, juvenile/grow-out stage) that showed positive results for White spot virus by PCR (Nested-step). There were 41 (batches/samples) of *P. monodon* (post larva, juveniles) showed negative results for WSV by PCR (two-step). Examinations conducted by SEAFDEC-AQD and BFAR-C.O Fish Health laboratories.
3	Information available was in 1998, when samples of *P. monodon* from selected grow-out farms sent to Australia in October 1988 (Dr. L. Owens, James Cook University). Examination of the samples by *in-situ* hybridization using Spawner Mortality Virus (SMV) probe produced positive results.

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

Country: Republic of Korea Period: October-December 2005

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	
3. *Oncorhynchus masou* virus disease	0000	0000	0000		
4. Spring viraemia of carp	?	?	?		
5. Viral haemorrhagic septicaemia	-	-	-	III	1
6. Viral encephalopathy and retinopathy	+	+	+	III	2
7. Infectious pancreatic necrosis	-	-	-	III	
8. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
9. Bacterial kidney disease	0000	0000	0000		
10. Red seabream iridoviral disease	+	+	+	III	**3**
11. Enteric septicaemia of catfish	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	0000	0000	0000		
13. Grouper iridoviral disease	-	-	-		
14. Infection with koi herpesvirus	(1998)	(1998)	(1998)		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	0000	0000	0000		
2. Infection with *Mikrocytos roughleyi*	0000	0000	0000		
3. Infection with *Haplosporidium nelsoni*	0000	0000	0000	III	4
4. Infection with *Marteilia sydneyi*	0000	0000	0000		
5. Infection with *Perkinsus olseni/atlanticus* [b/])	-(2004)	-(2004)	-(2004)		
Non OIE-listed diseases relevant to the region					
6. Infection with *Marteilioides chungmuensis*	+	+	+	III	
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	0000	0000	0000		
2. White spot disease	-(2004)	-(2004)	-(2004)		
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. Spawner-isolated mortality virus disease	0000	0000	0000		
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	0000	0000	0000		
9. Baculoviral midgut gland necrosis	0000	0000	0000		
10.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	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*
Crustaceans: Crayfish plague (*Aphanomyces astaci*)

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/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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 haemorrhagic septicaemia was not detected in flounder (*Paralichthys olivaeceus*) in Jeollanam-do, Ulsan Gyeongsangnbuk-do and Jeju island by RT-PCR during active surveillance.
2	Viral encephalopathy and retinopathy was detected in flounder (*Paralichthys olivaeceus*) in three farms in Ulsan, in three farms in Jeju by RT-PCR during active surveillance. Not reported this period despite active surveillance in flounder in Tongyoung and Gyeongsangnam-do.
3	RSIV was detected in flounder (*Paralichthys olivaeceus*) in one farm in Jeju, in Korean rockfish (Sebastes schlegeli) in one farm in Tongyoung by PCR during active surveillance.
4	Infection with *Haplosporidium nelsoni* was not detected in oyster (Crassostrea gigas) in Tongyoung and Yeosu by histological examination and PCR during active surveillance.

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

Country: Singapore Period: October-December 2005

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. *Oncorhynchus masou* virus disease	0000	0000	0000		
4. Spring viraemia of carp	0000	0000	0000		
5. Viral haemorrhagic septicaemia	0000	0000	0000		
6. Viral encephalopathy and retinopathy	-	-	-		
7. Infectious pancreatic necrosis	0000	0000	0000		
8. Epizootic ulcerative syndrome (EUS)	0000	0000	0000		
9. Bacterial kidney disease	0000	0000	0000		
10. Red seabream iridoviral disease	0000	0000	0000		
11. Enteric septicaemia of catfish	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	-	-	-		
13. Grouper iridoviral disease	-	-	-		
14. Infection with koi herpesvirus	(2005)	(2005)	(2005)	III	**1**
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	***	***	***		
2. Infection with *Mikrocytos roughleyi*	***	***	***		
3. Infection with *Haplosporidium nelsoni*	***	***	***		
4. Infection with *Marteilia sydneyi*	***	***	***		
5. Infection with *Perkinsus olseni/atlanticus* [b/])	***	***	***		
Non OIE-listed diseases relevant to the region					
6. 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. Spawner-isolated mortality virus disease	***	***	***		
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	***	***	***		
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	***	***	***		
9. Baculoviral midgut gland necrosis	***	***	***		
10.White tail disease (MrNV and XSV)	***	***	***		
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*
Crustaceans: Crayfish plague (*Aphanomyces astaci*)

a/ Please use the following symbols:

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

b/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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	Kio herpes virus has not been detected in surveillance samples since the last detection in a batch of imported koi in September 2005.

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

Country: Thailand Period: October-December 2005

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	III	
2. Infectious haematopoietic necrosis	0000	0000	0000	III	
3. *Oncorhynchus masou* virus disease	0000	0000	0000	III	
4. Spring viraemia of carp	0000	0000	0000	III	
5. Viral haemorrhagic septicaemia	0000	0000	0000	III	
6. Viral encephalopathy and retinopathy	-	-	-	III	
7. Infectious pancreatic necrosis	(1985)	(1985)	(1985)	III	
8. Epizootic ulcerative syndrome (EUS)	-	-	-	II	
9. Bacterial kidney disease	***	***	***		
10. Red seabream iridoviral disease	0000	0000	0000	III	
11. Enteric septicaemia of catfish	***	***	***		
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	0000	0000	0000	II	
13. Grouper iridoviral disease	0000	0000	0000	III	
14. Infection with koi herpesvirus	+	+	+	III	1
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	***	***	***		
2. Infection with *Mikrocytos roughleyi*	***	***	***		
3. Infection with *Haplosporidium nelsoni*	***	***	***		
4. Infection with *Marteilia sydneyi*	***	***	***		
5. Infection with *Perkinsus olseni/atlanticus* [b/])	***	***	***		
Non OIE-listed diseases relevant to the region					
6. Infection with *Marteilioides chungmuensis*	***	***	***		
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)	?	?	?	II	
5. Infectious hypodermal and haematopoietic necrosis	+	+	+	III	5
6. Spawner-isolated mortality virus disease	***	***	***		
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	***	***	***		
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	***	***	***		
9. Baculoviral midgut gland necrosis	***	***	***		
10.White tail disease (MrNV and XSV)	+	+	+	III	6
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	***	***	***		
2. Abalone viral mortality	***	***	***		
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease

Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*

Crustaceans: Crayfish plague (*Aphanomyces astaci*)

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/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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 but no occurrence of the koi herpesvurs disease (KHVD). 31 koi farms/companies had been surveyed using nested PCR for this reporting period. Some kois (*Cyprinus carpio*, fancy carps or colored carps) from 6/31 koi farms/companies found to be positive or carry herpesviral gene. However these kois did not exhibit disease clinical signs, no mortality and no occurrence of KHVD. The kois in these farms/companies were quarantined and re-tested for the present of KHV gene. After one month quarantine and the nested PCR showed negative, the quarantine order had been removed from all 6 farms/companies. The nested PCR for KHV gene had been done at the Inland Aquatic Animal Health Research Institute (AAHRI), Department of Fisheries, Bangkok.
2	A total of 578 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. 6 specimens or 1.0% were recorded as RT-PCR positive or carrying TSV genes that advised to be destroyed.
3	A total of 1,518 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. 15 specimens or 1.0% were recorded as PCR positive or carrying SEMBV genes that advised to be destroyed.
4	A total of 123 shrimp PL samples had been tested at PCR Laboratories of the DOF before stocking in culture ponds under the health management and disease control strategies. The RT-PCR detections showed negative.
5	A total of 596 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. 74 specimens or 14.4% 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	Both MrNV and XSV have been detected in giant freshwater prawn larvae, *Macrobrachium rosenbergii*, using RT-PCR. Findings of the viral genes in larvae in prawn hatcheries were usually associated with high mortality. The affected larvae did not exhibit whitetail clinical sign. Some hatcheries with RT-PCR positive in larval specimens did not have problems in mortality or diseases. Other factors or pathogens might be involved to the disease. However, both viral genes could be detected in the healthy prawns in the grow-out ponds. These two viruses are under investigation and the surveillance system has been developed.

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

Country: Vietnam Period: October-December 2005

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. *Oncorhynchus masou* virus disease	0000	0000	0000		
4. Spring viraemia of carp	0000	0000	0000		
5. Viral haemorrhagic septicaemia	0000	0000	0000		
6. Viral encephalopathy and retinopathy	0000	0000	0000		
7. Infectious pancreatic necrosis	0000	0000	0000		
8. Epizootic ulcerative syndrome (EUS)	?	?	?	I	1
9. Bacterial kidney disease	0000	0000	0000		
10. Red seabream iridoviral disease	0000	0000	0000		
11. Enteric septicaemia of catfish	+()	+()	+()	I	
Non OIE-listed diseases relevant to the region					
12. Epitheliocystis	0000	0000	0000		
13. Grouper iridoviral disease	0000	0000	0000		
14. Infection with koi herpesvirus	0000	0000	0000		
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*	***	***	***		
2. Infection with *Mikrocytos roughleyi*	0000	0000	0000		
3. Infection with *Haplosporidium nelsoni*	0000	0000	0000		
4. Infection with *Marteilia sydneyi*	0000	0000	0000		
5. Infection with *Perkinsus olseni/atlanticus* [b/])	0000	0000	0000		
Non OIE-listed diseases relevant to the region					
6. Infection with *Marteilioides chungmuensis*	0000	0000	0000		
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome	+()	+()	+()	II	
2. White spot disease	+	+	+	I,II,III	
3. Yellowhead disease (YH virus, gill-associated virus)	+()	+()	+()	I,II,III	
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	+	+	+		
5. Infectious hypodermal and haematopoietic necrosis	****	****	****		
6. Spawner-isolated mortality virus disease	****	****	****		
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	****	****	****		
Non OIE-listed diseases relevant to the region					
8. Necrotising hepatopancreatitis	+()	+()	+()	I	
9. Baculoviral midgut gland necrosis	****	****	****		
10.White tail disease (MrNV and XSV)	+()	+()	+()	I	
UNKNOWN DISEASES OF A SERIOUS NATURE					
1. Akoya oyster disease	0000	0000	0000		
2. Abalone viral mortality	0000	0000	0000		
ANY OTHER DISEASES OF IMPORTANCE					
1.Babylonia areolata leaves shell and die in mass			2005		2
2.					

DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE[c/])
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); White sturgeon iridoviral disease
Molluscs: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*; *Perkinsus marinus*; *Candidatus Xenohaliotis californiensis*; *Hapolosporidium costale*
Crustaceans: Crayfish plague (*Aphanomyces astaci*)

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/ *Perkinsus olseni* and *P.atlanticus* are now considered conspecific. They may have different host species in different regions, and countries are encouraged to provide epidemiological comments where either of these agents occur.

c/ 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	This disease occurred in a district of Hau Giang province with 20% mortality
2	Reported from Huein the early part of 2005

OIE list of diseases in the 8th edition 2005 of the *Aquatic Code*

The following diseases of fish are listed by the OIE: Article 1.1.3.1

- Epizootic haematopoietic necrosis
- Infectious haematopoietic necrosis
- Spring viraemia of carp
- Viral haemorrhagic septicaemia
- Infectious pancreatic necrosis[1]
- Infectious salmon anaemia
- Epizootic ulcerative syndrome
- Bacterial kidney disease (*Renibacterium salmoninarum*)[1]
- Gyrodactylosis (*Gyrodactylus salaris*)
- Red sea bream iridoviral disease
- Koi herpesvirus disease[2]

The following diseases of molluscs are listed by the OIE: Article 1.1.3.2.

- Infection with *Bonamia ostreae*
- Infection with *Bonamia exitiosa*
- Infection with *Marteilia refringens*
- Infection with *Mikrocytos mackini*[1]
- Infection with *Perkinsus marinus*
- Infection with *Perkinsus olseni*[1]
- Infection with *Xenohaliotis californiensis*.

The following diseases of crustaceans are listed by the OIE: Article 1.1.3.3.

- Taura syndrome
- White spot disease
- Yellowhead disease
- Tetrahedral baculovirosis (*Baculovirus penaei*)
- Spherical baculovirosis (*Penaeus monodon*-type baculovirus)
- Infectious hypodermal and haematopoietic necrosis
- Crayfish plague (*Aphanomyces astaci*)
- Necrotising hepatopancreatitis[2]
- Infectious myonecrosis[2]

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[1] Delisting of this disease is under study.

[2] Listing of this disease is under study.

Revised quarterly aquatic animal disease (QAAD) report form for 2006

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

DISEASES PRESUMED EXOTIC TO THE REGION[b]
LISTED BY THE OIE
Finfish: Infectious salmon anaemia; Gyrodactylosis (*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:

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

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

1. Epidemiological comments:

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

Comment No.	
1	
2	
3	
4	

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

Recent Aquatic Animal Health Related Publications

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

Aquaculture Health International – A New Magazine for Fish & Shellfish Health Professionals: A high quality magazine produced jointly by Patterson Peddie Consulting Ltd in the UK and VIP Publications Ltd in New Zealand has been launched in May 2005. Initially published on a quarterly basis, 'Aquaculture Health International' will be available in both online (pdf) and printed formats (ISSN 1176-8630). Target readership is broad and includes fish health researchers, academics, veterinarians, fish health biologists, government scientists, pharmaceutical companies, fish farmers (finfish and shellfish) and aquaculture consultants. More details can be found at the magazine website: www.aquaculturehealth.com or get in touch with the editor, Dr Scott Peddie at scott@aquaculturehealth.com.

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.

OIE Aquatic Animal Health Code, 8th Edition, 2005
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

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

Shrimp Health Management Extension Manual. 2003
This extension manual summarizes farm level risk factors and practical management practices that can be used to reduce risks of shrimp disease outbreaks and improve farm production. The recommendations are based on a study conducted by NACA in Andhra Pradesh, India. The publication is of particular relevance to Andhra Pradesh, but many recommendations are still of use to farmers from other areas. Available for download at: http://www.enaca.org/Shrimp/manual/ShrimpHealthManual.pdf

Survey Toolbox for Aquatic Animal Diseases: A Practical Manual. 2002
This book written by Cameron, Angus is designed for people working in the aquatic animal diseases and production. The tools presented in the book will be valuable for anybody who needs to collect reliable information about aquatic diseases or production. The structure of the book allows it to be used on three different levels. Planners, Trainers and Field Operational Staff. The prevention, control, and eradication of aquatic animal diseases depend on a good understanding of the disease and its distribution. ACIAR Monograph MN94. Also available at: http://www.aciar.gov.au/web.nsf/doc/JFRN-5J46ZY

Risk Analysis in Aquatic Animal Health, 2001
A publication from the OIE , edited by C.J.Rodgers, gives a very good account on the need for risk analysis, risk analysis methodology, areas of application to aquatic animal health and many case histories. A very good reference book for people interested in knowing more about risk analysis or interested in performing risk analysis (www.oie.int)

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List of Diseases in the Asia-Pacific
Quarterly Aquatic Animal Disease Reports (Beginning 2005)

1. DISEASES PREVALENT IN THE REGION	
1.1 FINFISH DISEASES	
OIE-listed diseases	**Non OIE-listed diseases relevant to the region**
1. Epizootic haematopoietic necrosis	12. Epitheliocystis
2. Infectious haematopoietic necrosis	13. Grouper iridoviral disease
3. *Oncorhynchus masou* virus disease	14. Infection with koi herpesvirus
4. Spring viraemia of carp	
5. Viral haemorrhagic septicaemia	
6. Viral encephalopathy and retinopathy	
7. Infectious pancreatic necrosis	
8. Epizootic ulcerative syndrome (EUS)	
9. Bacterial kidney disease	
10. Red seabream iridoviral disease	
11. Enteric septicaemia of catfish	
1.2 MOLLUSC DISEASES	
OIE-listed diseases	**Non OIE-listed diseases relevant to the region**
1. Infection with *Bonamia exitiosa*	6. Infection with *Marteilioides chungmuensis*
2. Infection with *Mikrocytos roughleyi*	
3. Infection with *Haplosporidium nelsoni*	
4. Infection with *Marteilia sydneyi*	
5. Infection with *Perkinsus olseni/atlanticus* [b/])	
1.3 CRUSTACEAN DISEASES	
OIE-listed diseases	**Non OIE-listed diseases relevant to the region**
1. Taura syndrome	8. Necrotising hepatopancreatitis
2. White spot disease	9. Baculoviral midgut gland necrosis
3. Yellowhead disease (YH virus, gill-associated virus)	10.White tail disease (MrNV and XSV)
4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus)	
5. Infectious hypodermal and haematopoietic necrosis	
6. Spawner-isolated mortality virus disease	
7. Tetrahedral baculovirosis (*Baculovirus penaei*)	
1.4 UNKNOWN DISEASES OF A SERIOUS NATURE	
OIE-listed diseases	**Non OIE-listed diseases relevant to the region**
	1. Akoya oyster disease
	2. Abalone viral mortality
2. DISEASES PRESUMED EXOTIC TO THE REGION, BUT LISTED BY THE OIE	
2.1 Finfish	
1. Channel catfish virus disease	
2. Infectious salmon anaemia	
3. Piscirickettsiosis	
4. Gyrodactylosis (*Gyrodactylus salaries*)	
5. White sturgeon iridoviral disease	
2.2 Molluscs	
1. Infection with *Bonamia ostreae*	
2. Infection with *Marteilia refringens*	
3. Infection with *Mikrocytos mackini*	
4. Infection with *Perkinsus marinus*	
5. Infection with *Candidatus Xenohaliotis californiensis*	
6. Infection with *Hapolosporidium costale*	
2.3 Crustaceans	
1. Crayfish plague (*Aphanomyces astaci*)	

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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Notes

Published by the Network of Aquaculture Centres in Asia-Pacific and the Food and Agriculture Organization of the United Nations. For inquiries regarding editorial or technical content, please write to NACA, P.O. Box 1040, Kasetsart P.O. , Bangkok 10903, Thailand; Tel. (662) 561- 1728 to 9; Fax: (662) 561-1727; e-mail: **naca@enaca.org or mohan@enaca.org.**
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ISSN 1513-6558

Printed by Craftsman Press, Bangkok