2001/1

QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

January-March 2001

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Contents

Reports Received by the NACA Secretariat

Country: Australia **Period: January to March 2001**

	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
1. Epizootic haematopoietic necrosis*	-(2000)	-(2000)	-(2000)	1
2. Infectious haematopoietic necrosis*	0000	0000	0000	
3. *Oncorhynchus masou* virus disease*	0000	0000	0000	
4. Infectious pancreatic necrosis	0000	0000	0000	
5. Viral encephalopathy and retinopathy	-(2000)	-(2000)	-(2000)	2
6. Epizootic ulcerative syndrome (EUS)	+	+	+	3
7. Bacterial kidney disease	0000	0000	0000	
8. Red seabream iridoviral disease	***	***	***	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	-(2000)/0000	-(2000)/0000	-(2000)/0000	4
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	0000/-(1999)	0000/-(1999)	0000/-(1999)	5
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	0000/-(1996)	0000/-(1996)	0000/-(1996)	6
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	0000/-(1997)	0000/-(1997)	0000/-(1997)	7
Crustacean disease				
1. Yellowhead disease*	0000	0000	0000	
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	
3. White spot disease*	0000	0000	0000	8
4. Baculoviral midgut gland necrosis	0000	0000	0000	
5. Gill associated virus (GAV)	***	***	***	9
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	***	***	***	10
7. Taura Syndrome Virus*	0000	0000	0000	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	0000	0000	0000	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	0000/0000	0000/0000	0000/0000	
Any other diseases of importance [b]				
Piscirickettsiosis	?( )	? ( )	? ( )	
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish

Molluscs: Iridovirosis (Oyster velar disease)

Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	Epizootic haematopoietic necrosis was not reported during this period but is known to have occurred in New South Wales (last year 2000), Victoria (last year 1996), and South Australia (last year 1992). Targeted active surveillance and never reported in Tasmania and Western Australia. Passive surveillance in New South Wales, South Australia and Victoria. Passive surveillance and never reported in Northern Territory and Queensland. Annual occurrence of the disease in the Australian Capital Territory, but no laboratory confirmation.
2	Viral encephalopathy and retinopathy was not reported during this period but is known to have occurred in Queensland (last year 2000), based on histology and limited RT-nPCR only, and Tasmania (last year 2000) based on IFAT. Not reported in Northern Territory during this period (targeted surveillance) but known to have occurred (last year 1994). Not reported in South Australia since an isolated outbreak in July 1998 despite active surveillance. No information available from the Australian Capital Territory.
3	Reported from Western Australia in January 2001, Queensland in February 2001 and both New South Wales and Northern Terriroty in March 2001 (based on histological diagnosis). Passive surveillance and never reported in South Australia, Tasmania and Victoria. No information available in the Australian Capital Territory.
4	*Bonamia* species: Not reported during this period but known to have occurred in Western Australia (last year 2000), Tasmania (last year 1999) and Victoria (last year 1993). Now regarded as enzootic in Western Australia. Passive surveillance and never reported in New South Wales, Northern Territory, Queensland and South Australia. No information available in the Australian Capital Territory (no marine water responsibility). *Bonamia ostreae*: Passive surveillance and never reported in New South Wales, Northern Territory, Queensland, South Australia, Tasmania, Victoria and Western Australia. No information available in the Australian Capital Territory (no marine water responsibility).
5	*Marteilia refringens*: Active surveillance and never reported in Tasmania. Passive surveillance and never reported in New South Wales, Northern Territory, Queensland, South Australia, Victoria and Western Australia. No information available in the Australian Capital Territory (no marine water responsibility). *M. sydneyi*: Considered enzootic in Queensland, but lack of diagnostic submissions Not reported during this period but known to have occurred in Western Australia (last year 1994 – passice surveillance) and New South Wales (last year 1999 – targeted active surveillance). Active surveillance and never reported in Tasmania. Passive surveillance and never reported in Northern Territory, South Australia and Victoria. No information available in the Australian Capital Territory (no marine water responsibility).
6	*Mikrocytos mackini*: Active surveillance and never reported in Tasmania. Passive surveillance and never reported in New South Wales, Northern Territory, Queensland, South Australia, Victoria and Western Australia. No information available in the Australian Capital Territory (no marine water responsibility). *M. roughleyi*: Active surveillance and never reported in Tasmania. Not reported during this period (passive surveillance) but known to have occurred in New South Wales (last year 1996) and Western Australia (last year 1996). Considered enzootic in Queensland but lack of diagnostic submissions. Passive surveillance and never reported in Northern Territory, South Australia and Victoria. No information available in the Australian Capital Territory (no marine water responsibility).
7	*Perkinsus marinus*: Active surveillance and never reported in Tasmania. Passive surveillance and never reported in New South Wales, Northern Territory, Queensland, South Australia, Victoria and Western Australia. No information available for the Australian Capital territory (no marine water responsibility). *P. olseni*:: Not reported during this period (passive surveillance) but known to have occurred in South Australia (last year 1997); New South Wales and Western Australia (last year 1995). 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	As part of the national survey for White Spot Syndrome Virus, sampling and testing of wild and farmed crustaceans is on-going in all States and the Northern Territory. To date, there have been no confirmed cases of WSSV in any jurisdiction.
9	The relationship between 'Gill Associated Virus' GAV and 'Lymphoid Organ Virus' LOV is unclear to the extent that even the existence of GAV – as a separate and distinguishable virus – is questionable. There is no specific detection test for GAV. The research detection test (a RT-PCR test) recognises LOV. LOV appears widespread in healthy farmed and wild *Penaeus monodon* in Queensland. LOV is considered part of the Mid-crop Mortality Syndrome, but its role in MCMS pathogenesis is unclear. '
10	Midcrop Mortality Syndrome' MCMS is a general term used to describe presumed virus associated mortality in pond reared prawns. Several viral agents have been associated with MCMS outbreaks including 'Spawner-isolated Mortality Virus' SMV ('Spawner Mortality Syndrome').
11	Rickettsia like organisms (RLO) were detected by histology in January 2001 in Atlantic salmon from a sea cage in south eastern Tasmania, which had experienced elevated but low level mortality for approximately two weeks. Similar organisms, sometimes associated with typical gross and histological lesions of piscirickettsiosis, were subsequently seen in several cages within the same limited geographic area of south eastern Tasmania. Overall mortality has been low (<5%). Testing is on-going to determine the exact identity of these organisms.

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

AQUAPLAN Disease Zoning Policy Guidelines released

On 23rd January 2001, the AQUAPLAN Disease Zoning Policy Guidelines were released by the Office of the Chief Veterinary Officer of Australia. Copies can be downloaded from the Web – http://www.affa.gov.au/outputs/animalplanthealth.html, or be obtained from OCVO directly.

The Guidelines were written as part of AQUAPLAN, Australia's National Strategic Plan for Aquatic Animal Health 1998-2003. They were pprepared by the 'AQUAPLAN Disease Zoning Team Policy Project Team'. In writing the Zoning Policy Guidelines, the Project team considered comments by stakeholders such as the Commonwealth and State/Territory governments as well as the private sector. The final Guidelines were endorsed by governments and the private sectors.

The AQUAPLAN Disease Zoning Policy Guidelines explain the generic principles of zoning based on pathogen distribution, the movement principles between zones, and international relevance of national zoning. The Guidelines are based on those developed by the OIE and provide principles that may be used to develop disease zoning policies that are beneficial to both export and import from both the international and domestic trade perspectives. Effective zoning policies can also help minimise the spread of diseases throughout the country and enable trade to continue in disease free areas.

Following the release of the Guidelines, a National Workshop on Aquatic Animal Disease Zoning was held in Canberra. Twenty -two delegates from the Commonwealth, States and Territories and the private sector met to examine all of the issues that need to be considered prior to setting up the zones; to develop the process of setting up and obtaining recognition of free zones; and to consider the requirements to establish and maintain zones particularly with regards to surveillance and monitoring to OIE standards. Examples of existing aquatic animal disease zoning programs in Australia as well as plans to develop such programs were discussed in depth, considering implications of such programs for Australia domestically as well as internationally. The Workshop agreed on a strategy to develop, endorse and implement aquatic animal disease zoning programs, consistent with current arrangements in the terrestrial animal sectors.

Country: Bangladesh **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*				
2. Infectious haematopoietic necrosis*				
3. *Oncorhynchus masou* virus disease*				
4. Infectious pancreatic necrosis				
5. Viral encephalopathy and retinopathy				
6. Epizootic ulcerative syndrome (EUS)				
7. Bacterial kidney disease				
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*				
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*				
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*				
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*				
Crustacean disease				
1. Yellowhead disease				
2. Infectious hypodermal and haematopoietic necrosis				
3. White spot disease				
4. Baculoviral midgut gland necrosis				
5. Gill associated virus (GAV)				
6. Spawner mortality syndrome ('Midcrop mortality syndrome')				
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*				
2. Viral haemorrhagic septicaemia*				
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*				
Any other diseases of importance [b]				
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish
Molluscs: Iridovirosis (Oyster velar disease)
Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	
2	
3	
4	
5	
6	
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8	

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

Country: Cambodia **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*				
2. Infectious haematopoietic necrosis*				
3. *Oncorhynchus masou* virus disease*				
4. Infectious pancreatic necrosis				
5. Viral encephalopathy and retinopathy				
6. Epizootic ulcerative syndrome (EUS)				
7. Bacterial kidney disease				
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*				
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*				
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*				
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*				
Crustacean disease				
1. Yellowhead disease				
2. Infectious hypodermal and haematopoietic necrosis				
3. White spot disease				
4. Baculoviral midgut gland necrosis				
5. Gill associated virus (GAV)				
6. Spawner mortality syndrome ('Midcrop mortality syndrome')				
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*				
2. Viral haemorrhagic septicaemia*				
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*				
Any other diseases of importance [b]				
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish
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(year)	Year of last occurrence

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: People's Republic of China **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*				
2. Infectious haematopoietic necrosis*				
3. *Oncorhynchus masou* virus disease*				
4. Infectious pancreatic necrosis				
5. Viral encephalopathy and retinopathy				
6. Epizootic ulcerative syndrome (EUS)				
7. Bacterial kidney disease				
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*				
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*				
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*				
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*				
Crustacean disease				
1. Yellowhead disease				
2. Infectious hypodermal and haematopoietic necrosis				
3. White spot disease				
4. Baculoviral midgut gland necrosis				
5. Gill associated virus (GAV)				
6. Spawner mortality syndrome ('Midcrop mortality syndrome')				
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*				
2. Viral haemorrhagic septicaemia*				
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*				
Any other diseases of importance [b]				
Unknown diseases of serious nature				

[b]In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish
Molluscs: Iridovirosis (Oyster velar disease)
Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

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***	No information available
0000	Never reported
-	Not reported (but disease is known to occur)
(year)	Year of last occurrence

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Hong Kong, China **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases	0000	0000	0000	
1. Epizootic haematopoietic necrosis*	0000	0000	0000	
2. Infectious haematopoietic necrosis*	0000	0000	0000	
3. *Oncorhynchus masou* virus disease*	0000	0000	0000	
4. Infectious pancreatic necrosis	0000	0000	0000	
5. Viral encephalopathy and retinopathy	0000	0000	0000	
6. Epizootic ulcerative syndrome (EUS)	0000	0000	0000	
7. Bacterial kidney disease	0000	0000	0000	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	0000	0000	0000	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	0000	0000	0000	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	0000	0000	0000	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	0000	0000	0000	
Crustacean disease				
1. Yellowhead disease	0000	0000	0000	
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	
3. White spot disease	0000	0000	0000	
4. Baculoviral midgut gland necrosis	0000	0000	0000	
5. Gill associated virus (GAV)	0000	0000	0000	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	0000	0000	0000	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	0000	0000	0000	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	0000	0000	0000	
Any other diseases of importance [b]				
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish

Molluscs: Iridovirosis (Oyster velar disease)

Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

+	Disease reported or known to be present
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+( )	Occurrence limited to certain zones
***	No information available
0000	Never reported
-	Not reported (but disease is known to occur)
(year)	Year of last occurrence

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	
2	
3	
4	
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6	
7	
8	

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

Country: India **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*	0000	0000	0000	
2. Infectious haematopoietic necrosis*	0000	0000	0000	
3. *Oncorhynchus masou* virus disease*	0000	0000	0000	
4. Infectious pancreatic necrosis	0000	0000	0000	
5. Viral encephalopathy and retinopathy	0000	0000	0000	
6. Epizootic ulcerative syndrome (EUS)	+	+	0000	1,2,3
7. Bacterial kidney disease	0000	0000	0000	
8. Red seabream iridoviral disease	0000	0000	0000	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	0000	0000	0000	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	0000	0000	0000	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	0000	0000	0000	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	0000	0000	0000	
Crustacean disease				
1. Yellowhead disease*	0000	0000	0000	
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	
3. White spot disease*	0000	0000	0000	
4. Baculoviral midgut gland necrosis	0000	0000	0000	
5. Gill associated virus (GAV)	0000	0000	0000	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	0000	0000	0000	
7. Taura Syndrome Virus*				
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	0000	0000	0000	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	0000	0000	0000	
Any other diseases of importance [b]				
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish

Molluscs: Iridovirosis (Oyster velar disease)

Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	Light reddish spot on the scales.
2	The spots became more reddish with gradual falling of scales and occurrence of ulcers; going deep into musculature.
3	Normally head is affected lastly followed by death of the fish.
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5	
6	
7	
8	

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

Nil.

Country: Indonesia **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*				
2. Infectious haematopoietic necrosis*				
3. *Oncorhynchus masou* virus disease*				
4. Infectious pancreatic necrosis				
5. Viral encephalopathy and retinopathy				
6. Epizootic ulcerative syndrome (EUS)				
7. Bacterial kidney disease				
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*				
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*				
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*				
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*				
Crustacean disease				
1. Yellowhead disease				
2. Infectious hypodermal and haematopoietic necrosis				
3. White spot disease				
4. Baculoviral midgut gland necrosis				
5. Gill associated virus (GAV)				
6. Spawner mortality syndrome ('Midcrop mortality syndrome')				
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*				
2. Viral haemorrhagic septicaemia*				
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*				
Any other diseases of importance [b]				
1. Bacterial necrosis				
2. Fouling disease on shrimp				
3. MBV				
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish

Molluscs: Iridovirosis (Oyster velar disease)

Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	
2	
3	
4	
5	
6	
7	
8	

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

Country: Iran **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*	0000	0000	0000	
2. Infectious haematopoietic necrosis*	0000	0000	0000	
3. *Oncorhynchus masou* virus disease*	0000	0000	0000	
4. Infectious pancreatic necrosis	0000	0000	0000	
5. Viral encephalopathy and retinopathy	0000	0000	0000	
6. Epizootic ulcerative syndrome (EUS)	0000	0000	0000	
7. Bacterial kidney disease	0000	0000	0000	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	0000	0000	0000	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	0000	0000	0000	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	0000	0000	0000	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	0000	0000	0000	
Crustacean disease				
1. Yellow head disease	0000	0000	0000	
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	
3. White spot disease	0000	0000	0000	
4. Baculoviral midgut gland necrosis	0000	0000	0000	
5. Gill associated virus (GAV)	0000	0000	0000	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	0000	0000	0000	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	0000	0000	0000	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	0000	0000	0000	
Any other diseases of importance [b]				
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish

Molluscs: Iridovirosis (Oyster velar disease)

Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Japan **Period: January to March 2001**

Item	Disease status[a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*	0000	0000	0000	
2. Infectious haematopoietic necrosis*	+	+	+	
3. *Oncorhynchus masou* virus disease*	+	+	+	
4. Infectious pancreatic necrosis	+	-	+	
5. Viral encephalopathy and retinopathy	+?	-	-	
6. Epizootic ulcerative syndrome (EUS)	-	-	-	
7. Bacterial kidney disease	+	+	+	
8. Red sea bream iridoviral disease	-	-	+	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	0000	0000	0000	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	0000	0000	0000	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	0000	0000	0000	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	0000	0000	0000	
Crustacean disease				
1. Yellowhead disease*	0000	0000	0000	
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	
3. White spot disease*	-	-	-	
4. Baculoviral midgut gland necrosis	(1992)	(1992)	(1992)	
5. Gill associated virus (GAV)	0000	0000	0000	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	0000	0000	0000	
7. Taura Syndrome Virus*	0000	0000	0000	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	-	+	+	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	0000	0000	0000	
Any other diseases of importance[b]				
Unknown diseases of serious nature				

[b]In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish

Molluscs: Iridovirosis (Oyster velar disease)

Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a]Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Korea (DPR) **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*				
2. Infectious haematopoietic necrosis*				
3. *Oncorhynchus masou* virus disease*				
4. Infectious pancreatic necrosis				
5. Viral encephalopathy and retinopathy				
6. Epizootic ulcerative syndrome (EUS)				
7. Bacterial kidney disease				
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*				
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*				
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*				
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*				
Crustacean disease				
1. Yellowhead disease				
2. Infectious hypodermal and haematopoietic necrosis				
3. White spot disease				
4. Baculoviral midgut gland necrosis				
5. Gill associated virus (GAV)				
6. Spawner mortality syndrome ('Midcrop mortality syndrome')				
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*				
2. Viral haemorrhagic septicaemia*				
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*				
Any other diseases of importance [b]				
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish
Molluscs: Iridovirosis (Oyster velar disease)
Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Korea (RO) **Period: October to December 2000**

Item	Disease status [a]			Comment Numbers
	October	November	December	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*	***	***	***	
2. Infectious haematopoietic necrosis*	-	-	-	
3. *Oncorhynchus masou* virus disease*	0000	0000	0000	
4. Infectious pancreatic necrosis	-	-	-	
5. Viral encephalopathy and retinopathy	-	-	-	
6. Epizootic ulcerative syndrome (EUS)	0000	0000	0000	
7. Bacterial kidney disease	0000	0000	0000	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	0000	0000	0000	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	-	-	-	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	0000	0000	0000	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	***	***	***	
Crustacean disease				
1. Yellowhead disease	0000	0000	0000	
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	
3. White spot disease	+	+	+	
4. Baculoviral midgut gland necrosis	***	***	***	
5. Gill associated virus (GAV)	0000	0000	0000	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	0000	0000	0000	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	0000	0000	0000	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	0000	0000	0000	
Any other diseases of importance [b]				
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish

Molluscs: Iridovirosis (Oyster velar disease)

Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Lao PDR **Period: January to March 2001**

Item	Disease status[a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*	***	***	***	
2. Infectious haematopoietic necrosis*	***	***	***	
3. *Oncorhynchus masou* virus disease*	***	***	***	
4. Infectious pancreatic necrosis	***	***	***	
5. Viral encephalopathy and retinopathy	***	***	***	
6. Epizootic ulcerative syndrome (EUS)	***	***	+( )	
7. Bacterial kidney disease	***	***	***	
8. Red sea bream iridoviral disease	***	***	***	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	***	***	***	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	***	***	***	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	***	***	***	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	***	***	***	
Crustacean disease				
1. Yellowhead disease*	***	***	***	
2. Infectious hypodermal and haematopoietic necrosis	***	***	***	
3. White spot disease*	***	***	***	
4. Baculoviral midgut gland necrosis	***	***	***	
5. Gill associated virus (GAV)	***	***	***	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	***	***	***	
7. Taura Syndrome Virus*	***	***	***	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	***	***	***	
2. Viral haemorrhagic septicaemia*	***	***	***	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	***	***	***	
Any other diseases of importance[b]				
Unknown diseases of serious nature				

[b]In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish
Molluscs: Iridovirosis (Oyster velar disease)
Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a]Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Malaysia **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*	0000	0000	0000	
2. Infectious haematopoietic necrosis*	0000	0000	0000	
3. *Oncorhynchus masou* virus disease*	0000	0000	0000	
4. Infectious pancreatic necrosis	0000	0000	0000	
5. Viral encephalopathy and retinopathy	0000	0000	0000	
6. Epizootic ulcerative syndrome (EUS)	-	-	-	
7. Bacterial kidney disease	0000	0000	0000	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	***	***	***	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	***	***	***	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	***	***	***	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	***	***	***	
Crustacean disease				
1. Yellowhead disease	-	-	-	
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	
3. White spot disease	-	+	-	1
4. Baculoviral midgut gland necrosis	0000	0000	0000	
5. Gill associated virus (GAV)	0000	0000	0000	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	0000	0000	0000	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	0000	0000	0000	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	***	***	***	
Any other diseases of importance [b]				
Iridovirus (suspected in red drum and sea bass)	-	-	-	
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish

Molluscs: Iridovirosis (Oyster velar disease)

Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	A total of 68 samples were tested for white spot virus on Penaeus monodon (nauplii, PL, broodstock and grow-out) from Kedah, Penang, Selangor, Johore, Pahang and Sabah. Only 2 samples were tested positive, ie one from nauplii in a hatchery in Tg. Dawai area in Kedah and one from the PL of a hatchery in Kota Kinabalu, Sabah. The affected stock were destroyed with chrorin disinfection.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

- NIL -

Country: Myanmar **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*				
2. Infectious haematopoietic necrosis*				
3. *Oncorhynchus masou* virus disease*				
4. Infectious pancreatic necrosis				
5. Viral encephalopathy and retinopathy				
6. Epizootic ulcerative syndrome (EUS)				
7. Bacterial kidney disease				
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*				
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*				
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*				
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*				
Crustacean disease				
1. Yellowhead disease				
2. Infectious hypodermal and haematopoietic necrosis				
3. White spot disease				
4. Baculoviral midgut gland necrosis				
5. Gill associated virus (GAV)				
6. Spawner mortality syndrome ('Midcrop mortality syndrome')				
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*				
2. Viral haemorrhagic septicaemia*				
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidum costale, H. nelsoni*)*				
Any other diseases of importance [b]				
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish

Molluscs: Iridovirosis (Oyster velar disease)

Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Nepal **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	Marchl	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*	***	***	***	
2. Infectious haematopoietic necrosis*	***	***	***	
3. *Oncorhynchus masou* virus disease*	***	***	***	
4. Infectious pancreatic necrosis	***	***	***	
5. Viral encephalopathy and retinopathy	***	***	***	
6. Epizootic ulcerative syndrome (EUS)	+	+	+	1
7. Bacterial kidney disease	***	***	***	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	***	***	***	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	***	***	***	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	***	***	***	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	***	***	***	
Crustacean disease				
1. Yellowhead disease	***	***	***	
2. Infectious hypodermal and haematopoietic necrosis	***	***	***	
3. White spot disease	***	***	***	
4. Baculoviral midgut gland necrosis	***	***	***	
5. Gill associated virus (GAV)	***	***	***	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	***	***	***	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	***	***	***	
2. Viral haemorrhagic septicaemia*	***	***	***	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	***	***	***	
Any other diseases of importance [b]				
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish

Molluscs: Iridovirosis (Oyster velar disease)

Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	EUS was found in Terai as well as in the Mid-Hill lakes of the country during the reporting period, in the local as well as Chinese and major carp species including *Clarias* species. The extent of fish loss was estimated to be less than 5 %.
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2. New aquatic animal health regulations introduced within the past six months (with effective date)

No new aquatic animal health regulation in the reporting quarter.

Country: Pakistan **Period: January to March 2001**

Item	Disease status[a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*				
2. Infectious haematopoietic necrosis*				
3. *Oncorhynchus masou* virus disease*				
4. Infectious pancreatic necrosis				
5. Viral encephalopathy and retinopathy				
6. Epizootic ulcerative syndrome (EUS)				
7. Bacterial kidney disease				
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*				
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*				
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*				
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*				
Crustacean disease				
1. Yellowhead disease				
2. Infectious hypodermal and haematopoietic necrosis				
3. White spot disease				
4. Baculoviral midgut gland necrosis				
5. Gill associated virus (GAV)				
6. Spawner mortality syndrome ('Midcrop mortality syndrome')				
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*				
2. Viral haemorrhagic septicaemia*				
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*				
Any other diseases of importance[b]				
Argulosis				
Lernea infection				
Unknown diseases of serious nature				

[b]In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish
Molluscs: Iridovirosis (Oyster velar disease)
Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a]Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Philippines **Period: January to March 2001**

Item	Disease status[a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*	***	****	****	
2. Infectious haematopoietic necrosis*	***	****	****	
3. *Oncorhynchus masou* virus disease*	***	****	****	
4. Infectious pancreatic necrosis	***	****	****	
5. Viral encephalopathy and retinopathy	0000	0000	0000	
6. Epizootic ulcerative syndrome (EUS)	-	-	-	1
7. Bacterial kidney disease	***	****	****	
8. Red sea bream iridoviral disease	***	***	***	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	***	****	****	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	***	****	****	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	***	****	****	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	***	****	****	
Crustacean disease				
1. Yellowhead disease*	***	****	****	
2. Infectious hypodermal and haematopoietic necrosis	***	****	****	
3. White spot disease*	-	-	-	2
4. Baculoviral midgut gland necrosis	***	***	***	
5. Gill associated virus (GAV)	***	***	***	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	***	***	***	3
7. Taura Syndrome Virus*	***	***	***	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	***	****	****	
2. Viral haemorrhagic septicaemia*	***	****	****	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	***	****	****	
Any other diseases of importance[b]				
Unknown diseases of serious nature				

[b]In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish
Molluscs: Iridovirosis (Oyster velar disease)
Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a]Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	No reported case (passive) during the reporting period (January-March). EUS was last observed from snakehead taken from the river in La Paz, Carmen, Davao del Norte (Region XI), Mindanao on February 2000.
2	*P. monodon* post larvae (106 batches) from Cebu, Himamaylan, Iloilo, Bohol and Dumaguete examined using PCR technique produced negative results. Examination conducted by the NPPMCI. *P. monodon* samples from two grow -out ponds in Negros Occidental produced negative results.
3	Information available was in 1998, when samples of *P. monodon* from selected grow -out farms sent to Australia in October 1998 (Dr. Leigh Owens of James Cook University). Examination of the samples by *in-situ* hybridization using Spawner Mortality Virus (SMV) probe produced positive results.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Singapore **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*	0000	0000	0000	
2. Infectious haematopoietic necrosis*	0000	0000	0000	
3. *Oncorhynchus masou* virus disease*	0000	0000	0000	
4. Infectious pancreatic necrosis	0000	0000	0000	
5. Viral encephalopathy and retinopathy	- (2000)	-(2000)	-(2000)	
6. Epizootic ulcerative syndrome (EUS)	0000	0000	0000	
7. Bacterial kidney disease	0000	0000	0000	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	***	***	***	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	***	***	***	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	***	***	***	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	***	***	***	
Crustacean disease				
1. Yellowhead disease	***	***	***	
2. Infectious hypodermal and haematopoietic necrosis	***	***	***	
3. White spot disease	-	-	-	
4. Baculoviral midgut gland necrosis	***	***	***	
5. Gill associated virus (GAV)	***	***	***	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	***	***	***	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	0000	0000	0000	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	***	***	***	
Any other diseases of importance [b]	Nil	Nil	Nil	
Unknown diseases of serious nature	Nil	Nil	Nil	

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish
Molluscs: Iridovirosis (Oyster velar disease)
Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Sri Lanka **Period: January to March 2001**

Item	Disease status[a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*				
2. Infectious haematopoietic necrosis*	0000	0000	0000	
3. *Oncorhynchus masou* virus disease*	0000	0000	0000	
4. Infectious pancreatic necrosis	0000	0000	0000	
5. Viral encephalopathy and retinopathy	0000	0000	0000	
6. Epizootic ulcerative syndrome (EUS)	?	?	?	1
7. Bacterial kidney disease	0000	0000	0000	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	0000	0000	0000	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	0000	0000	0000	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	0000	0000	0000	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	0000	0000	0000	
Crustacean disease				
1. Yellowhead disease	?	?	?	2
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	
3. White spot disease	+	+	+	3
4. Baculoviral midgut gland necrosis	0000	0000	0000	
5. Gill associated virus (GAV)	0000	0000	0000	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	0000	0000	0000	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	0000	0000	0000	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	0000	0000	0000	
Any other diseases of importance[b]				
Unknown diseases of serious nature				

[b]In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish

Molluscs: Iridovirosis (Oyster velar disease)

Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a]Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	Clear visual signs were not reported.
2	No symptoms were observed.
3	White spot disease was observed. Intensity of occurrence was higher compared to the previous quarters.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Thailand **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*	***	***	***	
2. Infectious haematopoietic necrosis*	***	***	***	
3. *Oncorhynchus masou* virus disease*	***	***	***	
4. Infectious pancreatic necrosis	***	***	***	
5. Viral encephalopathy and retinopathy	?	-	-	1
6. Epizootic ulcerative syndrome (EUS)	+	-	-	2
7. Bacterial kidney disease	***	***	***	
8. Red sea bream iridoviral disease	***	***	***	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	***	***	***	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	***	***	***	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	***	***	***	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	***	***	***	
Crustacean disease				
1. Yellowhead disease*	?	?	?	
2. Infectious hypodermal and haematopoietic necrosis	***	***	***	
3. White spot disease*	+	+	+	3
4. Baculoviral midgut gland necrosis	***	***	***	
5. Gill associated virus (GAV)	***	***	***	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	***	***	***	
7. Taura Syndrome Virus*	***	***	***	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	***	***	***	
2. Viral haemorrhagic septicaemia*	***	***	***	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	***	***	***	
Any other diseases of importance [b]				
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish

Molluscs: Iridovirosis (Oyster velar disease)

Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	The disease ooccurred in wild-caught grouper fry (*Epinephelus* sp.) in one fish farm in Southern of Thailand. The clinical signs developed within 1-2 weeks after the fry had been collected from the wild. The mortality was about 80-90% and histopathological signs indicated clinical signs of VNN disease similar to those that described in the OIE Manual. One virus isolate was obtained using SSN-1 cell line. The suspected virus was sent to VNN Reference Laboratory in Japan for confirmation.
2	EUS outbreak occurred in rice paddy field in Samutprakarn province, Central of Thailand. The affected fish was brood stock size of snakeskin gourami, *Trichogaster pectoralis*. The EUS occurred at days 5-7 after the fish had been grated and partial harvested. 35% of fish were infected and died. This report was confirmed by histological section.
3	A total of 7320 tiger prawn samples cultured in 23 Provinces had been sent to 11 PCR Laboratories of the Department of Fisheries. 281 samples or 3.84% were recorded as PCR positive or carrying SEMBV gene.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Vietnam **Period: October to December2000**

Item	Disease status [a]			Comment Numbers
	October	November	December	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*	0000	0000	0000	
2. Infectious haematopoietic necrosis*	0000	0000	0000	
3. *Oncorhynchus masou* virus disease*	0000	0000	0000	
4. Infectious pancreatic necrosis	***	***	***	
5. Viral encephalopathy and retinopathy	0000	0000	0000	
6. Epizootic ulcerative syndrome (EUS)	-	-	-	1
7. Bacterial kidney disease	0000	0000	0000	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	0000	0000	0000	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	0000	0000	0000	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	0000	0000	0000	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	0000	0000	0000	
Crustacean disease				
1. Yellowhead disease	-	-	-	2
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	
3. White spot disease	+	+	+	3
4. Baculoviral midgut gland necrosis	***	***	***	
5. Gill associated virus (GAV)	***	***	***	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	0000	0000	0000	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	0000	0000	0000	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	0000	0000	0000	
Any other diseases of importance [b]				
Diseases of grass carp	+	+	+	4
White spot disease in fish (Ichthyopthiriosis)	+( )	+ ( )	+ ( )	5
Monodon baculovirus diseases (MBV)	+	+	+	6
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:
Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish
Molluscs: Iridovirosis (Oyster velar disease)
Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	Not reported during this period but known to be occurred in Bac Ninh province in March, 2000 (confirmed by RIA-1).
2	The disease was suspected to occur during this period in some provinces, such as Ben Tre, Minh Hai, Tien Giang and Soc Trang (not confirmed yet). This was also reported in Nghe An province in July, August, 2000 (confirmed by RIA-1).
3	Reported in the central and southern Vietnam: Khanh Hoa, Phu Yen, Ben Tre, Minh Hai, Tien Giang and Soc Trang provinces. Affected shrimp were tiger shrimp (*Penaeus monodon*). The disease was confirmed by RIA-3 (histological techniques) and by RIA-2 (histological techniques, PCR). Mortality reached 80-100% in the central of Vietnam, but only 30-50% in the southern Vietnam.
4	Reported on broodstock grass carp in Thai Nguyen province with Red Spot on the body during this period.
5	Reported on cage-cultured grass carp in Phu Tho province (in the North Vietnam). Fish were affected by *Ichthyophthirius multifiliis* on the skin and gill. The prevalence was 30-50%.
6	Reported in the central and northern Vietnam, such as Khanh Hoa, Phu Yen, Ben Tre, Minh Hai, Tien Giang and Soc Trang provinces (histological techniques). The disease was infected on *Penaeus monodon*.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Vietnam **Period: January to March 2001**

Item	Disease status [a]			Comment Numbers
	January	February	March	
Diseases prevalent in some parts of the region				
Finfish diseases				
1. Epizootic haematopoietic necrosis*	0000	0000	0000	
2. Infectious haematopoietic necrosis*	0000	0000	0000	
3. *Oncorhynchus masou* virus disease*	0000	0000	0000	
4. Infectious pancreatic necrosis	***	***	***	
5. Viral encephalopathy and retinopathy	0000	0000	0000	
6. Epizootic ulcerative syndrome (EUS)	-	-	-	1
7. Bacterial kidney disease	0000	0000	0000	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	0000	0000	0000	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	0000	0000	0000	
3. Microcytosis (*Mikrocytos mackini, M. roughleyi*)*	0000	0000	0000	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	0000	0000	0000	
Crustacean disease				
1. Yellowhead disease	+	+	+	2
2. Infectious hypodermal and haematopoietic necrosis	***	***	***	
3. White spot disease	+	+	+	3
4. Baculoviral midgut gland necrosis	***	***	***	
5. Gill associated virus (GAV)	***	***	***	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	0000	0000	0000	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	0000	0000	0000	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	0000	0000	0000	
Any other diseases of importance [b]				
Diseases of grass carp	+	+	+	4
White spot desease in fish (Ichthyophthiriosis)	+( )	+ ( )	+ ( )	5
Monodon Baculovirus disease (MBV)	+	+	+	6
Unknown diseases of serious nature				

[b] In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish: Channel catfish virus disease; Infectious salmon anaemia; Piscirickettsiosis; Gyrodactylosis (*Gyrodactylus salaris*); Enteric septicaemia of catfish

Molluscs: Iridovirosis (Oyster velar disease)

Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepatopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological Comments

Comment No.	Epidemiological comment
1	Not reported during this period but known to be occurred in Bac Ninh province in March, 2000 (confirmed by RIA-1).
2	The disease was reported during this period in some provinces in the southern Vietnam, such as Bac Lieu, Ben Tre, Tien Giang, Kien Giang, Tra Vinh and Soc Trang. Affected shrimp were tiger shrimp (*Penaeus monodon*). This was confirmed by RIA-2 (Histological techniques).
3	Reported in the central and southern Vietnam: Khanh Hoa, Phu Yen, Bac Lieu, Ben Tre, Kien Giang, Tien Giang, Tra Vinh and Soc Trang provinces. Affected shrimp were tiger shrimp (*Penaeus monodon*). The disease was confirmed by RIA-3 (histological techniques) and by RIA-2 (histological techniques, PCR).
4	Reported on fingerling grass carp (*Ctenopharyngodon idelus*) during this period in some provinces in the northern Vietnam, such as Bac Ninh, Bac Giang, Hung Yen, Thai Nguyen and Hanoi city.
5	During this period, the disease was reported on cage-cultured grass carp in Phu Tho province (in the North of Vietnam). This was also reported on *Pangasius micronemus* Bleeker and *Pangasius pangasius* (Hamilton) in Dong Thap, An Giang provinces (in the South of Vietnam). Fish were affected by *Ichthyophthirius multifiliis* on the skin and gill.
6	Reported in the central and southern Vietnam, such as Khanh Hoa, Phu Yen, Bac Lieu, Ben Tre, Kien Giang, Tien Giang, Tra Vinh and Soc Trang provinces. The disease was infected on *Penaeus monodon*. This disease was confirmed by RIA-3 (based on the rapid-staining method (malachite green 0.5%) and histological techniques) and by RIA-2 (using histological techniques).

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

Related Publications

APEC/FAO/NACA/SEMARNAP. 2001. Trans-boundary aquatic animal pathogen transfer and the development of harmonised standards on aquaculture health management. Report of the Joint APEC/FAO/NACA/SEMARNAP Workshop, Puerto Vallarta, Jalisco, Mexico, 24-28 July 2000. Network of Aquaculture Centres in Asia-Pacific, Bangkok, Thailand. 197 pp.

Information from:
NACA Secretariat
E-mail: naca@enaca.org

OIE International Aquatic Animal Health Code. Third Edition, 2000.
OIE Diagnostic Manual for Aquatic Animal Diseases. Third Edition. 2000.

Information from:
Office International des Epizooties
12, rue de Prony, 75017 Paris, France
Tel: 33-(0)1 44 15 18 88
Fax: 33-(0) 1 42 67 09 87
E-mail: oie@oie.int
Web: http://www.oie.int

Isti Koesharyani, Des Roza, Ketut Mahardika, Fris Johnny, Zafran and Kei Yuasa. Manual for Fish Disease Diagnosis – II. 2001. Marine Fish and Crustacean Diseases in Indonesia.

Zafran, Des Roza, Isti Koesharyani, Fris Johnny and Kei Yuasa. 1998. Manual for Fish Disease Diagnosis. Marine Fish and Crustacean Diseases in Indonesia.

Information from:
Gondol Research Station for Coastal Fisheries
P.O. Box 140 Singaraja, Bali, Indonesia
Tel: 62-362-92278
Fax: 62-362-92272

Arthur, JR., CR Lavilla-Pitogo and RP Subasinghe (eds). 2000. Use of Chemicals in Aquaculture in Asia. Proceedings of the Meeting on the Use of Chemicals in Aquaculture in Asia, 20-22 May 1996, Tigbauan, Iloilo, Philippines.

Lavilla-Pitogo, CR, GD Lio-Po, ER Cruz-Lacierda, EV Alapide-Tendencia and LD De la Pena. 2000. Diseases of Penaeid Shrimps in the Philippines. Aquaculture Extension Manual No. 16.

Lio-Po, GO, C.R. Lavilla, ER Cruz-Lacierda (eds). 2001. Health Management in Aquaculture.

Information from:
Training and Information Division
SEAFDEC Aquaculture Department
5021 Tigbauan, Iloilo, Philippines
Fax: (63-33) 335 1008 336 2891
E-mail: aqdchief@aqd.seafdec.org.ph

APEC FWG 02/2000 "Development of a Regional Reseach Programme on Grouper Virus Transmission and Vaccine Development," in cooperation with AAHRI of the Department of Fisheries of Thailand, Fish Health Section of the Asian Fisheries Society and the Network of Aquaculture Centres in Asia-Pacific (NACA), October 18-20, 2000, NACA Headquarters, Bangkok, Thailand

Information from:
NACA Secretariat
E-mail: Melba.Reantaso@enaca.org

Primary Aquatic Animal Health Care in Rural, Small-Scale, Aquaculture Development: Report of an Asia Regional Scoping Workshop held in Dhaka, Bangladesh, from 27th-30th September 1999. Department for International Development, Food and Agriculture Organization of the United Nations and the Network of Aquaculture Centres in Asia-Pacific. 36 pp.

Information from:
NACA Secretariat
E-mail: naca@fisheries.go.th;Melba.Reantaso@enaca.org

Walker, P. and R.P. Subasinghe. 2000. DNA-based Molecular Diagnostic Techniques: Research Needs for Standardisation and Validation of the Detection of Aquatic Animal Pathogens and Diseases. FAO Fisheries Technical Paper 395. Report and Proceedings of the Expert Workshop on DNA-based Molecular Diagnostic Techniques: Research Needs for Standardisation and Validation of the Detection of Aquatic Animal Pathogens and Diseases, Bangkok, Thailand, 7-9 February 1999.

Information from:
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Tel. +39 06 570 56473; Fax + 39 06 570 530 20
E-mail: Rohana.Subasinghe@fao.org

Herfort, Alistair and Grant Rawlin. Australian Aquatic Animal Disease – Identification Field Guide

Information from:
AFFA Shopfront- Agriculture, Fisheries and Forestry- Australia.
GPO Box 858, Canberra, ACT 2601
Telephone (02) 6272 5550 or free call – 1800 020 157
Facsimile (02) 6272 5771 or e-mail shopfront@affa.gov.au

Tonguthai, Kamonporn, Supranee Chinabut, Temdoung Somsiri, Pornlerd Chanratchakool, Somkiat Kanchanakhan. Diagnostic Procedures for Finfish Diseases

Information from:
Project Manager
Southeast Asia Aquatic Disease Control Project (SEAADCP)
Aquatic Animal Health Research Institute (AAHRI)
Thailand's Department of Fisheries, Kasetsart University Campus, Jatujak, Bangkok 10900
E-mail: aahri@fisheries.go.th

Thorne, Tina. **Fish Health for Fish Farmers**

Information:
Fisheries Western Australia
3rd Floor, SGIO Atrium
186 St. Georges Terrace, Perth WA 6000
Tel: (08) 9482 7333 Fax: (08) 9482 7389
Web: http://www.gov.au.westfish

Alday de Graindorge. V. and T.W. Flegel. 1998. **CD-ROM on Diagnosis of Shrimp Diseases** This CD-Rom provides detailed information on the diagnosis of shrimp disease, with emphasis on *Peneaus monodon*.

Information from:
NACA Secretariat
E-mail: naca@enaca.org

Epizootic Ulcerative Syndrome (EUS) Handbooks

Two new EUS handbooks are available free of charge: (1*) Pathology and Histopathology of EUS* by S. Chinabut and R.J. Roberts; and (2) *EUS Technical Handbook* by J.H. Lilley, R.B. Callinan, S. Chinabut, S. Kanchanakhan, I.H. MacRae and M.J. Phillips.

Information from:
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E-mail: aahri@fisheries.go.th

Chanratchakool, P., JF Turnbull, SJ Funge-Smith, IH MacRae and C Limsuwan.Health Management in Shrimp Ponds (3d ed.) P

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List of Diseases in the Asia-Pacific Quarterly Aquatic Animal Disease Reports

Diseases prevalent in some parts of the region

Finfish Diseases:	Epizootic haematopoietic necrosis*
	Infectious haematopoietic necrosis*
	Oncorhynchus masou virus disease*
	Infectious pancreatic necrosis*
	Viral encephalopathy and retinopathy*
	Epizootic ulcerative syndrome (EUS)
	Bacterial kidney disease
Mollusc Diseases:	Bonamiosis (*Bonamia* sp., *B. ostreae*)*
	Marteiliosis (*Marteilia refringens*, *M. sydneyi*)*
	Microcytosis (*Mikrocytos mackini*, *M. roughleyi*)*
	Perkinsosis (*Perkinsus marinus*, *P. olseni*)*
Crustacean Disease:	Yellowhead disease
	Infectious hypodermal and haematopoietic necrosis (IHHN)
	White spot disease
	Baculoviral midgut gland necrosis
	Gill associated virus (GAV)
	Spawner mortality syndrome ('Midcrop mortality syndrome')

Diseases presumed exotic to the region, but reportable to OIE

Finfish Diseases:	Spring viremia of carp*
	Viral haemorrhagic septicaemia*
Mollusc Diseases:	Haplosporidiosis (*Haplosporidium costale*, *H.nelsoni*)*

Any other diseases of importance: In particular, these include the following diseases so far presumed, but not proven, to be exotic to this region:

Finfish Diseases:	Channel catfish virus disease
	Infectious salmon anaemia
	Piscirickettsiosis
	Gyrodactylosis (*Gyrodactylus salaris*)
	Enteric septicaemia of catfish
Mollusc Diseases:	Iridovirus (Oyster velar disease)
Crustacean Diseases:	Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*)
	Crayfish plague (*Aphanomyces astaci*)
	Taura syndrome
	Necrotising hepatopancreatitis

* OIE notifiable diseases

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

(Revised during the Second Workshop*)

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 "Month" please enter months of a quarter in question, e.g. July, August, September.

In "Comment Numbers" on page 1, please enter serial numbers, and write your corresponding comments on page 2. See Section C below.

If an unknown disease of serious nature appears, please fill in the last line of the form and add epidemiological comments on page 2.

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 occurrence of a disease in question is sporadic but it is known to be present. However the occurrence is relatively rare.
+?	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.

*Refers to the Second Training Workshop of the FAO/NACA/OIE Regional Programme for the Development of Technical Guidelines on Quarantine and Health Certification and Establishment of Information Systems for the Responsible Movement of Live Aquatic Animals in Asia, 1-5 February 1999, Bangkok, Thailand.

C. 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 **one and a half months (45 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

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