2001/2

QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

April-June 2001

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Contents

Reports Received by the NACA Secretariat

Country: Australia **Period: April to June 2001**

	Disease status [a]			Comment Numbers
	April	May	June	
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)	+	+	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/+	0000/-(2001)	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	+( )	+ ( )	?	11
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	Despite passive surveillance, epizootic haematopoietic necrosis was not reported during this period but is known to have occurred in New South Wales in 2000, Victoria in 1996, and South Australia in 1992. EHN has never been reported in Tasmania and Western Australia (despite targeted active surveillance), and never reported in Northern Territory and Queensland (despite passive surveillance). Annual occurrence of the disease in the Australian Capital Territory, but no laboratory confirmation.
2	Viral encephalopathy and retinopathy was reported in May 2001 from the Northern Territory and in June 2001 from Queensland (histopathology). Not reported during this period but known to have occurred in Tasmania in 2000 based on IFAT. Not reported in South Australia since an isolated outbreak in July 1998 despite active surveillance. Never reported from New South Wales, Victoria or Western Australia despite passive surveillance.
3	Epizootic ulcerative syndrome was reported from New South Wales in April, May and June 2001 and Queensland in April 2001 (based on histological diagnoses). EUS was not reported during this quarter from the Northern Territory and Western Australia (despite passive surveillance), but known to have occurred earlier in the first quarter of 2001. EUS has never been reported in South Australia, Tasmania and Victoria (despite passive surveillance). No information available in the Australian Capital Territory.
4	*Bonamia* species: Not reported during this period but known to have occurred in Western Australia in 2000, Tasmania in 1999 and Victoria in 1993. Nowregarded as enzootic in Western Australia. Never reported in New South Wales, Northern Territory, Queensland and South Australia (despite passive surveillance). No information available in the Australian Capital Territory (no marine water responsibility). *Bonamia ostreae*: Never reported in New South Wales, Northern Territory, Queensland, South Australia, Tasmania, Victoria and Western Australia (despite passive surveillance). No information available in the Australian Capital Territory (no marine water responsibility).
5	*Marteilia refringens* : Never reported in Tasmania (despite active surveillance) and never reported in New South Wales, Northern Territory, Queensland, South Australia, Victoria and Western Australia (despite passive surveillance). No information available in the Australian Capital Territory (no marine water responsibility). *M. sydneyi*: Reported in May from New South Wales (laboratory diagnosis). Considered enzootic in Queensland, but lack of diagnostic submissions. Not reported during this period but known to have occurred in Western Australia in 1994 (passive surveillance). Never reported in Tasmania (despite active surveillance) and never reported in Northern Territory, South Australia and Victoria (despite passive surveillance). No information available in the Australian Capital Territory (no marine water responsibility).
6	*Mikrocytos mackini* : Never reported in Tasmania (despite active surveillance) and never reported in New South Wales, Northern Territory, Queensland, South Australia, Victoria and Western Australia (despite passive surveillance). No information available in the Australian Capital Territory (no marine water responsibility). *M. roughleyi*: Never reported in Tasmania despite active surveillance. Not reported during this period (despite passive surveillance) but known to have occurred in New South Wales in 1996 and Western Australia in 1996. Never reported in Northern Territory, South Australia and Victoria (despite passive surveillance). No information available in the Australian Capital Territory (no marine water responsibility).
7	*Perkinsus marinus* : Never reported in Tasmania (despite active surveillance) and never reported in New South Wales, Northern Territory, Queensland, South Australia, Victoria and Western Australia (despite passive surveillance). No information available in the Australian Capital Territory (no marine water responsibility). *P. olseni* :: Not reported during this period (despite passive surveillance) but known to have occurred in South Australia in 1997; New South Wales and Western Australia in 1995. Never reported in Tasmania (despite active surveillance) and never reported in Northern Territory, Queensland and Victoria (despite passive surveillance). No information available in the Australian Capital Territory (no marine water responsibility).

8	As part of the national survey for whitespot 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) had been 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 in April and May, and suspected in June 2001. 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):

AQUAVETPLAN Furunculosis Disease Strategy Manual released

On 22nd June 2001 the Federal Minister for Agriculture, Fisheries and Forestry, the Honorable Warren Truss, launched a new manual outlining how to respond in the advent or suspicion of an outbreak of the bacterial disease furunculosis in Australia's salmon and trout populations.

The *AQUAVETPLAN Furunculoosis Disease Strategy Manual* is the first in a series of disease specific manuals to be developed. It was adopted from equivalent AUSVETPLAN disease strategy manuals and aims to provide both terrestrial and aquatic animal health professionals with quick and easy access to the information they need to efficiently manage an emergency response in the event of a suspect or confirmed incursion of furunculosis in Australia.

Furunculosis is a highly contagious bacterial disease that affects salmonids (salmon and trout). The bacterium causes furunculosis (Aeromonas salmonicida subspecies salmonicida) does not occur in Australia. However, it is found throughout Europe as well as in North America, South Africa and Japan. Furunculosis is currently one of the most economically significant diseases of farmed salmonids in these countries.

The *AQUAVETPLAN Furunculosis Disease Strategy Manual* contains information about the disease furunculosis, its diagnosis and an approach to its control, which has been endorsed by government and private sector stakeholders throughout Australia. Like all AQUAVETPLAN Manuals it is a working document and will be updated as required.

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*	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)	+	+	+	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	0000	0000	0000	
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	
3. White spot disease	-	-	-	
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]	**+**	**+**	**+**	2
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	Outbreak of EUS in the Indian major carps, Silver barb, Snake head, Perch, Catfish and Silver carp in the greater Mymensingh area. *Pungasius sutchi* were identified as affected by bacterial and fungal diseases during the reported period. However, report from other part of the country could not be known.
2	Report came from brackish water stations of Bangladesh Fisheries Research Institute (BFRI) that both the *P. monodon* and *M. rosenbergii* are affected with bacterial diseases during February and March.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):
Not applicable.

Country: Bangladesh **Period: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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)	+	+	+	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]	**+**	**+**	**+**	4
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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+( )	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	Outbreak of EUS in the Indian major carp, Silver barb, Snake head, Perch, Catfish and Silver carp in the Mymensingh and Cox's Bazar area. (Reported).
2	*P. monodon* were reported to be affected with Yellow head disease at brackish water region.
3	Report came from brackish water and marine water sites that the *P. monodon* is affected with white spot virus during the reported period while *M. rosenbergii* is affected with bacterial disease.
4	In the South-east part of the country both *P. monodon* and *M. rosenbergii* are affected with lice. Soft-shell and appendage rot disease severely occurred in the P. monodon. *Argulus* and *Ichthyopthirius* infection in Indian major carps was observed in the southern part of the country. Dropsy and gill rot also identified in the Indian major carps. In the Mymensingh region, *Pungasius suitchi* are seriously affected with bacterial disease.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):
Not applicable.

Country: Cambodia **Period: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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:

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

Country: People's Republic of China **Period: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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	
2	
3	
4	
5	
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Hong Kong China **Period: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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
+?	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	
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: India **Period: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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)	+	+	+	1
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*	?	?	?	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	
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	
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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+	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	In Ongole (Andhra Pradesh) EUS has been observed in some wild tanks and inland culture fish ponds mainly in major carps characterised by wounds, blisters all over the body, loss of scales and mortality.
2	Yellow head disease has been observed in some brackishwater shrimp culture ponds characterised by yellow coloured appendages, hepatopancreas and secondary infections and deaths. Confirmation by specific diagnostic test needs to be done.
3	White spot disease has been confirmed by white spots in cephalothorax, atrophy of hepatopancreas and mortality up to 100%.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

No.

Country: Indonesia **Period: April to June 2001**

Item	Disease status[a]			Comment Numbers
	April	May	June	
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
?	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: Iran **Period: April to June 2001**

Item	Disease status[a]			Comment Numbers
	April	May	June	
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. 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
+?	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: April to June 2001**

Item	Disease status[a]			Comment Numbers
	April	May	June	
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: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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 seabream 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: Korea (RO) **Period: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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	
8. Red seabream iridoviral disease	**+?**	**+?**	**+?**	
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*	+	+	+	1
4. Baculoviral midgut gland necrosis	***	***	***	
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*	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	White spot disease occurred many shrimp culture farms on the western coast of the Republic of Korea and caused mass mortalities of cultured *Penaeus chinensis*.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Lao PDR **Period: April to June 2001**

Item	Disease status[a]			Comment Numbers
	April	May	June	
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: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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]				
Ulcer disease in Red Snapper (*Lutjanus argentimaculatus*)	+	+	+	2
'Scale-drop' syndrome in *Lates calcarifer*	+	+	+	3
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 75 samples were PCR tested for white spot virus on *Penaeus monodon* (nauplii, PL, broodstock and grow-out) from Kedah, Perlis, Penang, Selangor, Johore, Pahang, Sarawak and Sabah. Only 1 samples were tested positive, ie PL from in a hatchery in Pahang.
2	Ulcer lesions were seen in Red Snapper (*Lutjanus argentimaculatus*) in marine cage culture in Langkawi Island, Kedah and Bukit Tambun, Penang. The affected fishes weigh about 15-300g. Approximately 7-58% of the fishes were affected in each cultured cage, however they survived the 9 month culture period. Many Vibrio spp. Were isolated including V. parahaemolyticus and V. alginoliticus. Other fish species cultured in the same site were not affected. Further investigation is still going on.
3	The 'scale drop' syndrome was noticed to be specific to *Lates calcarifer* in marine cage culture as other fish species in the same cultured site were not affected. At least 70% of the affected culture stock died. The affected areas were Kuala Kurau, Perak; Tg. Tawai, Kedah and Bk. Tambun, Penang. Monogeneans like *Benedenia* spp and gram-negative long rod were associated with this problem. However it was noted that pond culture stock of *L. calcarifer* were not affected by this problem.
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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*	+( )	+( )	+( )	3
2. Infectious haematopoietic necrosis*	+( )	+( )	+( )	3
3. *Oncorhynchus masou* virus disease*	+( )	+( )	+( )	3
4. Infectious pancreatic necrosis	+( )	+( )	+( )	3
5. Viral enc ephalopathy and retinopathy	+( )	+( )	+( )	3
6. Epizootic ulcerative syndrome (EUS)	+( )	+( )	+( )	3
7. Bacterial kidney disease	+( )	+( )	+( )	3
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	000	000	?	1
2. Infectious hypodermal and haematopoietic necrosis	000	000	?	1
3. White spot disease	000	000	?	1
4. Baculoviral midgut gland necrosis	000	000	?	1
5. Gill associated virus (GAV)	000	000	?	1
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	***	***	***	2
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	Training for specific diagnostic are required.
2	Retaliation of embryonic development was occurred in Tiger Shrimp hatcheries.
3	No significant reports accepted.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

None.

Country: Myanmar **Period: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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	0000	***	***	
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	?	?	?	1
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')	***	***	***	
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	Need to update broodstock management technology.
2	Proper management of water quality.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Nepal **Period: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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: 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	***	***	***	
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')				
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]				
Lernaeosis	+	+	+	
Saprolegniasis	-	+	-	
Argulasis	+	+	+	
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 reported in 1998 in the Punjab Province but no case of EUS was noticed during this period (Jan-March, 2001).
2	Seven cases of Lernaeosis were reported from private Fish Farm (infected area, 15 acres) in Punjab province of Pakistan. Deptrex was suggested to be used and no mortality occurred in Farms.
3	One case of Saprolegniasis was reported from private farms in NWFP. High size of infected area:About 4-6 cms near head, eyes and fin areas. Death toll:Massive. Preventive measures:Improvement of Hygine. Treatment:Pottacium per Mengenate and NaCl. Symptoms: poor appetite and slow movement.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Philippines **Period: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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)	+	+	+	1
7. Bacterial kidney disease	-	-	-	2
8. Red sea bream iridoviral 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*	-	+	+	3
4. Baculoviral midgut gland necrosis	0000	0000	0000	
5. Gill associated virus (GAV)	0000	0000	0000	
6. Spawner mortality syndrome ('Midcrop mortality syndrome')	***	***	***	4
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*)*	***	****	****	
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 affected fish are hatchery bred grouper (*Epinephelus coioides*) larvae (40 days after hatching) and some *E. coioides* broodstock (SEAFDEC AQD in Iloilo). The affected larvae showed increasing mortality at approximately 20 days with high mortality in 1-2 weeks time. Initial signs of the affected larvae were reduced in feeding activity and body darkening. Affected fish also showed erratic swimming behavior such as spinning and horizontal looping. Diagnostic methods conducted were histopathology , RT-PCR and cell culture showed isolation of Nodavirus. This is the first documented report of VNN in the Philippines. The disease case has been consulted with Dr. Nakai of Hiroshima University. A paper for publication is being prepared for submission to International journal. As preventive measures SEAFDEC is screening all stocks of grouper including all stages (broodstock, eggs, larvae, fry) and isolating/discarding all positive stocks. (Reported by: Dr. E.C. Lacierda , SEAFDEC-Fish Health Section)
2	No reported case (passive) during the reporting period (April-June) EUS was last reported from snakehead taken from the river in La Paz, Carmen, Davao del Norte (Region XI), Mindanao on February 2000.
3	One batch of sample of *P. monodon* post larvae (from one hatchery in Iloilo) showed positive results during the month of May using PCR technique. There were 139 batches of *P. monodon* post larvae from hatcheries in Iloilo (Region VI) and Cebu (Region VII) and 18 spent *P. monodon* spawners (from Negros Occidental, Region VI) examined during the months of April - June 2001. Examination conducted by the NPPMCI Laboratory in Negros Occidental and BFAR-Region 7 Laboratory (in Cebu). *P. monodon* from grow-out ponds in Calatagan, Batangas (Region IV) and Hagonoy, Bulacan (Region III) showed positive results during the month of June for WSSV using PCR technique. In Batangas, seven out of eighteen ponds where samples were taken were tested positive after the second step amplication. This means that from the six farms where the samples were taken, five farms have WSSV positive ponds. Pond tested positive for WSSV that experience massive mortalities was advised to abort the culture operation . In Bulacan, four ponds from one grow-out farm were tested positive for WSSV. Ponds that experienced massive mortalities were aborted under the close supervision of BFAR and UPLB-Biotech. Also, *P. monodon* post larvae from one hatchey in Calatagan, Batangas tested positive (month of June) for WSSV. The owner was advised to destroy the affected larvae. Examination conducted by UPLB and BFAR.
4	Information available was in 1998, when samples of *P. monodon* from selected grow-out farms sent (by BFAR: Dr. J.D. Albaladejo) to Australia in October 1998 (Dr. Leigh Owens of James Cook University). Examination of the samples by *in-situ* hydribization using Spawner Mortality Virus (SMV) probe produced positive results.

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

Country: Singapore **Period: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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: April to June 2001**

Item	Disease status[a]			Comment Numbers
	April	May	June	
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	
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	Clear visual signs were not reported.
2	No symptoms were observed.
3	White spot disease was observed. Intensity of occurrence was higher in month of June compared to April and May.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Thailand **Period: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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)	-	-	-	
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')	***	***	***	
7. Taura Syndrome Virus*	***	***	***	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	-	-	-	3
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	One virus had been isolated from diseased grouper by National institute of Coastal Aquaculture (NICA) Songkhla province and sent to VNN Reference Laboratory in Japan as recorded in the last report (January – March 2001). The results confirmed that the suspect virus grew in SSN-1 was a Nodavirus. A VNN monitoring program in the affected area using virus isolation was found negative during this report period.
2	A total of 7293 tiger prawn samples cultured in 23 Provinces had been sent to 11 PCR Laboratories of the Department of Fisheries. 153 samples or 2.10% were recorded as PCR positive or carrying SEMBV gene.
3	The SVCV monitoring program in ornamental fish exporting premises has been conducted since November 1999. The virus isolation performed according to the OIE Manual using EPC line. Results were negative.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Vietnam **Period: April to June 2001**

Item	Disease status [a]			Comment Numbers
	April	May	June	
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
3. White spot disease	+	+	+	4
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	+	+	+	5
White spot disease in fish (Ichthyophthiriosis)	+( )	+ ( )	+ ( )	6
Monodon Bacdulovirus disease (MBV)	+	+	+	7
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 on tiger shrimp (*Penaeus monodon*) cultured in some provinces in the northern Vietnam, such as Nghe An, Ha Tinh, Hai Phong and Quang Ninh. This was confirmed by RIA-1 (Histological techniques).
3	The disease was also reported on tiger shrimp (*Penaeus monodon*) during this period in some provinces in the North Vietnam, such as, Nghe An, Ha Tinh, Quang Ninh and Hai Phong (confirmed by RIA-1).
4	Reported in all provinces where culture tiger shrimp (*Penaeus monodon*) throughout Vietnam. The disease was confirmed by RIA-1 (histological techniques, PCR), RIA-2 (histological techniques, PCR) and by RIA-3 (histological techniques).
5	Reported on grass carp (*Ctenopharyngodon idelus*) during this period in some provinces in the northern Vietnam, such as Bac Ninh, Hung Yen, Thai Nguyen and Ha Tay.
6	During this period, the disease was reported on cage-cultured grass carp in Phu Tho province (in the North of Vietnam). Fish were affected by *Ichthyophthirius multifiliis* on the skin and gill.
7	Reported in all provinces cultured tiger shrimp throughout Vietnam. This disease was confirmed by RIA-1, 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

Asia Diagnostic Guide to Aquatic Animal Diseases. 2001. Bondad-Reantaso, M.G., McGladdery, S.E., East, I. and Subasinghe, R.P. (eds). FAO Fisheries Technical Paper No. 402, Suppl. 2. Rome, FAO. 2001. 236 pp.
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Manual of Procedures for the Implementation of the Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals. 2001. FAO/NACA. Fisheries Technical Paper, No. 402, Suppl. 1. FAO, Rome. 103 p.
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Health Management in Aquaculture. 2001. Lio-Po, G., C.R. Lavilla, E.R. Cruz-Lacierda. (eds).
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Reference PCR Protocols for Detection of White Spot Syndrome Virus (WSSV) in Shrimp. Shrimp Biotechnology Service Laboratory. Vol. 1, No. 1, March 2001
Information from:
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Husbandry and Health Management of Grouper. 2001. APEC/SEAFDEC. APEC, Singapore and SEAFDEC, Iloilo, Philippines. 94 p.
Information from:
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Manual for Fish Disease Diagnosis - II: Marine Fish and Crustacean Diseases in Indonesia (2001) by Isti Koesharyani, Des Roza, Ketut Mahardika, Fris Johnny, Zafran and Kei Yuasa, edited by K. Sugama, K. Hatai, and T Nakai
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Diseases in Penaeid Shrimps in the Philippines. Second Edition (2000). C.R. Lavilla-Pitogo, G.D. Lio-Po, E.R. Cruz-Lacierda, E.V. Alapide-Tendencia and L.D. de la Pena

Information from:
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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:
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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
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E-mail: oie@oie.int
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Manual for Fish Disease Diagnosis – II. Marine Fish and Crustacean Diseases in Indonesia. 2001. by Isti Koesharyani, Des Roza, Ketut Mahardika, Fris Johnny, Zafran and Kei Yuasa.

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

Information from:
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Use of Chemicals in Aquaculture in Asia. 2000. J.R. Arthur, C.R. Lavilla-Pitogo and R.P. Subasinghe (eds). Proceedings of the Meeting on the Use of Chemicals in Aquaculture in Asia, 20-22 May 1996, Tigbauan, Iloilo, Philippines.

Diseases of Penaeid Shrimps in the Philippines. 2000. by C.RLavilla-Pitogo, G.D. Lio-Po, E.R. Cruz-Lacierda, E.V. Alapide-Tendencia and L.D. De la Pena. Aquaculture Extension Manual No. 16.

Health Management in Aquaculture. 2001. G.D. Lio-Po, C.R. Lavilla, E.R. Cruz-Lacierda (eds).

Information from:
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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:
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DNA-based Molecular Diagnostic Techniques: Research Needs for Standardisation and Validation of the Detection of Aquatic Animal Pathogens and Diseases. 2000. (P Walker and RP Subasinghe, eds.). 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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Australian Aquatic Animal Disease – Identification Field Guide by Alistair Herfort and Grant Rawlin

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

Handrisk™ Software for Import Risk Analysis

Information from:
EpiCentre, Massey University
Private Bag 11222, Palmerston North, New Zealand
Web: http://www.handirisk.co.nz
E-mail: sales@handirisk.com

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

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Fish Health for Fish Farmers by Tina Thorne

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Web: http://www.gov.au.westfish

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

Information from:
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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.

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Health Management in Shrimp Ponds. 3rd edition (P. Chanratchakool, J.F. Turnbull, S.J. Funge-Smith, I.H. MacRae and C. Limsuwan).

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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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