2001/3

QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

July-September 2001

Published by

Network of Aquaculture Centres in Asia-Pacific
Suraswadi Building, Department of Fisheries
Kasetsart University Campus, Ladyao, Jatujak
Bangkok 10900, Thailand

Food and Agriculture Organization of the United Nations
Viale delle Terme di Caracalla
Rome 00100
Italy

January 2002

Network of Aquaculture Centres in Asia-Pacific and Food and Agriculture Organization of the United Nations. January 2002. *Quarterly Aquatic Animal Disease Report (Asia and Pacific Region)*, 2001/3, July-September. 2001. FAO Project TCP/RAS/6714 and 9605. Bangkok, Thailand.

Contents

Reports Received by the NACA Secretariat

Country: Australia **Period: July to September 2001**

	Disease status [a]			Comment Numbers
	July	August	September	
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/-(2001)	0000/(2001)	0000/-(2001)	5
3. Mikrocytosis (*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	
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	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. No information this quarter from South Australia.
2	Viral encephalopathy and retinopathy was reported from the Northern Territory in August and September 2001 (laboratory diagnosis). VER was not reported from Queensland during this period but is known to have occurred in June 2001 (based on histopathology) and Tasmania (last year 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. No information available this quarter from South Australia.
3	Reported from Queensland in July, August and September 2001 (based on histological diagnoses). Not reported during this quarter from New South Wales but known to have occurred in April, May and June 2001. Not reported during this quarter from the Northern Territory and Western Australia (despite passive surveillance), but known to have occurred earlier (first quarter 2001). Passive surveillance and never reported in South Australia, Tasmania and Victoria. No information available in the Australian Capital Territory. No information available this quarter from South Australia.
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) and no information available this quarter from South Australia. *Bonamia ostreae*: Passive surveillance and never reported in New South Wales, Northern Territory, Queensland, South Australia, Tasmania, Victoria and Western Australia. No information in the Australian Capital Territory (no marine water responsibility) and no information available this quarter from South Australia.
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) and no information available this quarter from South Australia. *M. sydneyi*: Considered enzootic in Queensland, but lack of diagnostic submissions. Not reported during this period but known to have occurred in New South Wales (May 2001-active surveillance) and Western Australia (last year 1994- passive 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). No information available this quarter from South Australia.
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) and no information available this quarter from South Australia. *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) and no information available this quarter from South Australia.
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) and no information available this quarter from South Australia. *P. olseni*:: Not reported during this period (despite 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) and no information available this quarter from South Australia.

8	As part of the national survey for white spot virus, 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 WSV 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').

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

Not applicable this quarter.

Country: Bangladesh **Period: July to September 2001**

Item	Disease status [a]			Comment Numbers
	July	August	September	
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. Mikrocytosis (*Mikrocytos mackini, M. roughleyi*)*	0000	0000	0000	
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	0000	0000	0000	
Crustacean disease				
1. Yellowhead disease				
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	
3. White spot disease	+	+	+	2
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]	**+**	**+**	**+**	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	Outbreak of EUS in the Indian major carp, in Mymensingh and in the Southern-East part, i.e., Cox's Bazar area. (Reported).
2	*P. monodon* were reported to be affected with White spot virus was reported to be outbreak both in the brackish water and marine water region. Report came from brackish water sites that the *P. monodon* is affected with bacterial diseases, such as, appendages rot and gill rot. Softening of shell was also reported during the reported period.
3	In the central part of the country, in greater Mymensingh region, where pangas is being intensively cultured was frequently reported that *Pangasius sutchi* were seriously affected with bacterial and fungal diseases.
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2. New aquatic animal health regulations introduced within the past six months (with effectivedate):

Not applicable.

Country: Cambodia **Period: July to September 2001**

Item	Disease status [a]			Comment Numbers
	July	August	September	
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. Mikrocytosis (*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*				
Molluscs 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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***	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: People's Republic of China **Period: July to September 2001**

Item	Disease status [a]			Comment Numbers
	July	August	September	
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. Mikrocytosis (*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
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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: Hong Kong China **Period: July to September 2001**

Item	Disease status [a]			Comment Numbers
	July	August	September	
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. Mickocytosis (*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

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

Country: India **Period: July to September 2001**

Item	Disease status [a]			Comment Numbers
	July	August	September	
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	-	-	
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	2
2. Infectious hypodermal and haematopoietic necrosis	0000	?	0000	3
3. White spot disease*	+	+	+	4
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

[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	In some parts of Andhra Pradesh and Bihar disease were observed in murrels and other commercial fin fishes of freshwater. Erratic behaviour of fishes, reddish lesions on the body and silandary bacterial infections on the lesion. Application of lime and common salt suggested curing the disease. The disease is suspected on the basis of gross lesions only. As the disease has not been confirmed, therefore, instead of (+) sign the sign (?) has been used for its reporting.
2	In Andhra Pradesh disease observed in some brackish water shrimp culture ponds. Low stocking density, chrlorination of ponds and water, proper management practices suggested.
3	In Andra Pradesh disease occurrence has been suspected because of opaque musculature, white or buff coloured spots in cuticular epidermis motionless shrimp with followed mortality.
4	P. monodon cultured shrimp got infected erratic behaviour of shrimp coming closure to the pond edge. Poor intake of food, white spots on the shells. Disease confirmed by dot blot test, characterised by white spots in cephalothorax and mortality up to 100% in some ponds in Andhra Pradesh State. White spot disease in shrimp also has been observed in some parts of Tamil Nadu during August, 2001.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

No.

Country: Indonesia **Period: July to September 2001**

Item	Disease status [a]			Comment Numbers
	July	August	September	
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
1	
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Iran **Period: July to September 2001**

Item	Disease status[a]			Comment Numbers
	July	August	September	
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: July to September 2001**

Item	Disease status [a]			Comment Numbers
	July	August	September	
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*)*				1
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	*Haplosporidium nelsoni* was detected at 2% positive in Pacific oyster (Crassostrea gigas) spats collected from the Northeastern part of Japan (OIE Disease Information on the 5 October, 2001 on the OIE internet homepage). However, mortality or disease of pacific oyster associated with *H. nelsoni* has not been reported at all. Therefore, the symbol is not described at the portion on Haplosporidiosis in this report form.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Korea (DPR) **Period: July to September 2001**

Item	Disease status[a]			Comment Numbers
	July	August	September	
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: July to September 2001**

Item	Disease status [a]			Comment Numbers
	July	August	September	
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: Lao PDR **Period: July to September 2001**

Item	Disease status[a]			Comment Numbers
	July	August	September	
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: July to September 2001**

Item	Disease status [a]			Comment Numbers
	July	August	September	
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	-	-	-	1
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	
3. White spot disease	-	-	-	2
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*)	+	+	+	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	No Yellowhead disease was detected during the reporting months.
2	A total of 26 samples were PCR tested for white spot virus on *Penaeus monodon* (PL and broodstock) from Kedah, Selangor, Johore and Sabah. All the samples were tested negative for the reporting months.
3	Ulcer lesions were continued to be seen in Red Snapper (*Lutjanus argentimaculatus*) in marine cage culture in Langkawi Island and Sungai Petani, Kedah and Bukit Tambun, Penang. The weight of the affected fishes were about 15-300g. Approximately 7-58% of the fishes were affected in each cultured cage. Many Vibrio spp. were isolated including *V. parahaemolyticus* and *V. alginoliticus*. Other fish species cultured in the same site were not affected. Histological findings revealed ulcerative garnulomatous myodermitis; corneal edema and ulcer with mild lymphocytic perivascular keratitis with thrombosis and granulomatous keratitis diffuse hepatocellular vacuolation. Virological isolation failed to reveal any CPE forming viruses. Efforts had been made to obtain primers to detect non-CPE forming viruses. Attempt to isolate fungi, mycobacterium and paarasites did not yield any positive results. Further investigation is still going on.
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2. New aquatic animal health regulations introduced within the past six months (wth effective date):

Since July 2001, certification for White Spot Disease Virus free status is enforced when exporting frozen or processed s[1]hrimps to Australia and to EU countries on request.

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Country: Myanmar **Period: July to September 2001**

Item	Disease status [a]			Comment Numbers
	July	August	September	
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 encephalopathy 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	-	-	-	
2. Infectious hypodermal and haematopoietic necrosis	-	-	-	
3. White spot disease	-	-	?	1
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	+	+	-	2

[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	Required specific diagnostic methods for WSSV.
2	Mass mortality in fingerlings of Giant African Fish hybrid occurred during July to August. Moribund and death specimen were observed tail, fin rots and seneral weakness.
3	No significant reports accepted.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Nepal **Period: July to September 2001**

Item	Disease status[a]			Comment Numbers
	July	August	September	
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)	+	+	*	1,2
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 Disease was reported in the Reservoir of Kulekhani in local fish species and it was also found in the cultured fish in the Fisheries Development Centre Bhairahawa and Bhandara. The disease incidence was mild and the loss in fish production is very negligible. The disease occurrence in the private sector f ish farms was not reported.
2	EUS Disease was reported in the Reservoir of Kulekhani in local fish species and it was also found in the cultured fish in the Fisheries Development Centre in Bhairahawa and Bhandara. The disease incidence was mild and the loss in fish production is very negligible. The disease occurrence in the private sector fish farms was not reported.
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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: July to September 2001**

Item	Disease status[a]			Comment Numbers
	July	August	September	
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]				
Bacterial Haemorhagic Septicamia	+	+	+	1
See Annexure A				
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 (July – September)
2	Seven cases of Abdominal Dropsy/Bacterial Haemorhagic septicaemia were reported from private fish farm (infected area 54 acres). Oxytetracycline was suggestion to be used in feed to be used in feed to treat the disease.
3	One case of lernaeasis was reported from private fish far (infected area 0..5 acre) diptrex was suggested to be used in pond. No. mortality occurred in farms.
4	Two cases of Red spot disease were reported from private fish farms (injected area 1.75 acres) oxytetracycline in feed was suggested to be used to treat the fish.
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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				
Finfis h 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: Philippines **Period: July to September 2001**

Item	Disease status [a]			Comment Numbers
	July	August	September	
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 first documented report of VNN in the Philippines was during the period of April-June 2001. The affected fish are hatchery bred grouper (*Epinephelus coioides*) larvae (40 days after hatching) and some *E. coioides* broodstock in 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. 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 (July-September) EUS was last reported from snakehead taken from the river in La Paz, Carmen, Davao del Norte (Region XI), Mindanao on February 2000.
3	There were 104 batches of *P. monodon* post larvae from hatcheries in Iloilo, Negros Occidental (Region VI), Bohol, Cebu (Region VII), Batangas (Region IV), 19 batches (juvenile) from grow-out ponds and 46 spent *P. monodon* spawners (from Cebu, Region VII) examined during the months of July - September 2001 that produced negative results for WSSV using PCR technique . Examination conducted by the NPPMCI Laboratory in Negros Occidental and BFAR-Region 7 Laboratory (in Cebu).
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: July to September 2001**

Item	Disease status [a]			Comment Numbers
	July	August	September	
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
1	
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Sri Lanka **Period: July to September 2001**

Item	Disease status[a]			Comment Numbers
	July	August	September	
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 during the 3rd quarter of the year in entire farming area.
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2. New aquatic animal health regulations introduced within the past six months (with effective date):

Country: Thailand **Period: July to September 2001**

Item	Disease status[a]			Comment Numbers
	July	August	September	
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*	-	-	-	
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	There was no record of any major losses in groupers cultured in the East and South Coast during an active surveillance. A total of 54 grouper samples had been taken for virus isolation and RT-PCR test in 3 Virology Laboratories of the Department of Fisheries. 5 tissue extract samples gave positive CPE in SSN-1 and EPC cells while one extract sample caused CPE only in SSN-1 cells. The RT-PCR is being test in all 54 grouper samples and in 6 isolated viruses and the results will be included in the next report.
2	A total of 7,084 tiger prawn samples cultured in 22 provinces had been sent to 11 PCR Laboratories of the Department of Fisheries. Most of the prawn samples were post-larvae stage which were PCR-tested before stocking in culture ponds. 205 samples or 2.89% 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: July to September 2001**

Item	Disease status [a]			Comment Numbers
	July	August	September	
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 2000 (confirmed by RIA-1).
2	The disease was reported during this period in most provinces cultured tiger shrimp (*Penaeus monodon*) throughout Vietnam. This was confirmed by RIA-1, RIA-2 and RIA-3 (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 Quang Ninh, Hai Phong, Nam Dinh, Thai Binh, Thanh Hoa, Nghe An and Ha Tinh (confirmed by RIA-1).
4	Reported in all provinces cultured 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, Hoa Binh and Phu Tho.
6	Not reported during this period but known to be occurred in Phu Tho province during the last period (confirmed by RIA-1).
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):

None.

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.

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.

DNA-based Molecular Diagnostic Techniques: Research Needs for Standardisation and Validation of the Detection of Aquatic Animal Pathogens and Diseases. 2000. (eds. P Walker and RP Subasinghe). 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.

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APEC/AAHRI/FHS-AFS/NACA. 2001. Report and proceeding of APEC FWG 02/2000 "Development of a Regional Research Programme on Grouper Virus Transmission and Vaccine Development". MG Bondad-Reantaso, J Humphrey, S Kanchanakhan and S Chinabut (Eds).

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

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.**

Health Management in Shrimp Ponds. Third Edition (by P. Chanratchakool, JF Turnbull, SJ Funge-Smith, IH MacRae and C Limsuwan).

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E-mail: naca@enaca.org

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Fax: 33-(0) 1 42 67 09 87
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Web: http://www.oie.int

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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

Reference PCR Protocols for Detection of White Spot Syndrome Virus (WSSV) in Shrimp. Shrimp Biotechnology Service Laboratory. Vol. 1, No. 1, March 2001

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Shrimp Biotechnology Service Laboratory
73/1 Rama 6 Rd., Rajdhewee, Bangkok 10400
Tel: (662) 644-8150
Fax: (662) 644-8107

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

Information frrom:
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Australian Aquatic Animal Disease – Identification Field Guide by Alistair Herfort and Grant Rawlin

Information from:
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GPO Box 858, Canberra, ACT 2601
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Facsimile (02) 6272 5771 or e-mail shopfront@affa.gov.au

Handrisk™ Software for Import Risk Analysis

Information from:
EpiCentre, Massey University
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Web: http://www.handirisk.co.nz

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