2000/2

QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

April-June 2000

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Contents

Reports Received by the NACA Secretariat

Country: **Australia** Period: **April -June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
1. Epizootic haematopoietic necrosis*	-(1996)	-(1996)	-(1996)	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)	-(2000)	+	+	3
7. Bacterial kidney disease	0000	0000	0000	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	+/0000	-(2000)/0000	-(2000)/0000	4
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	0000/-(1999)	0000/-(1999)	0000/-(1999)	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
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]				
Unknown diseases of serious nature				
Seprolegniosis- like disease	+	+	+	11

[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 hepathopancreatitis

* 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	EHN not reported during this period but known to have occurred in New South Wales (last year 1996), Victoria (last year 1996) and South Australia (1992). Targeted active surveillance and never reported in Tasmania and Western Australia. Passive surveillance in New South Wales, South Australia and Victoria. Passive surveillance and never reported in Northern Territory and Queensland. Annual occurrence of the disease in the Australian Capital Territory, but no laboratory confirmation.
2	Reported in April and May in Queensland, based on RT-PCR and histology. Not reported in Northern Territory during this period (targeted surveillance) but known to have occurred (last year-1994). Not reported in South Australia since an isolated outbreak in July 1998 despite active surveillance and histology. Passive surveillance and never reported in New South Wales, Tasmania, Victoria and Western Australia. No information available in the Australian Capital Territory.
3	Reported from Queensland in May and from New South Wales in June. Suspected to have occurred in South Australia in April but despite histological examination, presence of the agent could not be confirmed. Not reported during this period but reported to have occurred in 1999 in Northern Territory and 1998 in Western Australia (passive surveillance). Passive surveillance and never reported in Tasmania and Victoria. No information available in the Australia Capital Territory.
4	*Bonamia* species: Reported from Western Australia in April 2000 (regarded as enzootic in Western Australia). Not reported during this period but known to have occurred in Tasmania (last year 1999) and in Victoria (last year 1993). Passive surveillance and never reported in New South Wales, Northern Territory, Queensland and South Australia. No information available in the Australia Capital Territory (no marine water responsibility). *Bonamia ostreae*: Passive surveillance and never reported in New South Wales, Northern Territory, Queensland, South Australia, Tasmania, Victoria and Western Australia. No information available in the Australia Capital Territory (no marine water responsibility).
5	*M. refringens:* Active surveillance and never reported in Tasmania. Passive surveillance and never reported in New South Wales, Northern Territory, Queensland, South Australia, Victoria and Western Australia. No information available in the Australian Capital Territory (no marine water responsibility). *M. sydneyi*: Considered enzootic in Queensland, but lack of diagnostic submissions. Not reported during this period (passive surveillance) but known to have occurred in Western Australia (last year 1994) and New South Wales (last year 1999). Active surveillance and never reported in Tasmania. Passive surveillance and never reported in Northern Territory, South Australia and Victoria. No information available in the Australian Capital Territory (no marine water responsibility).
6	*M. mackini*: Active surveillance and never reported in Tasmania. Passive surveillance and never reported in New South Wales, Northern Territory, Queensland, South Australia, Victoria, and Western Australia. No information available in the Australian Capital Territory (no marine water responsibility). *M. roughleyi*: Not reported during this period (passive surveillance) but known to have occurred in New South Wales (last year 1996) and Western Australia (last year 1996). Considered enzootic in Queensland but lack of diagnostic submissions. Passive surveillance and never reported in Northern Territory, South Australia and Victoria. No information available in the Australian Capital Territory (no marine water responsibility).
7	*P. marinus*: Active surveillance and never reported in Tasmania. Passive surveillance and never reported in New South Wales, Northern Territory, Queensland, South Australia, Victoria and Western Australia. No information available for the Australian Capital Territory (no marine water responsibility). *P. olseni*: Not reported during this period (passive surveillance) but known to have occurred in South Australia (last year 1997); New South Wales and Western Australia (last year 1995). Active surveillance and never reported in Tasmania. Passive surveillance and never reported in Northern Territory, Queensland and Victoria. No information available in the Australian Capital Territory (no marine water responsibility).

8	WSSV was detected in frozen commodity prawns. Genotyping of the frozen prawns indicated that they originated from South East Asia. A recent survey of Australian farmed prawns for WSSV was carried out in accordance with OIE recommended sampling and testing methods (testing by nested PCR). All samples tested were negative.
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) recognised LOV. LOV appears widespread in healthy 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 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	Several thousand farmed sub-adult silver perch *Bidyanua bidyanus* and hybrid silver perch x welch's grunter *Bidyanus welchi* died following a 5-6 degree (Celsius) reduction in water temperatures, to 7.5- 8 degrees (Celcius), during the previous week. Moribund fish had severe, multifocal mycotic dermatitis and occasionally bronchitis, consistent with seprolegniosis. The outbreak had epidemiological and pathological features in common with those described for winter saprolegniosis in channel catfish in the U.S.

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

Country: **Bangladesh** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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 hepathopancreatitis

* 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

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

Country: **Cambodia** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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 hepathopancreatitis

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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

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

Country: **People's Republic of China** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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)
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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. New aquatic animal health regulations introduced within past six months (with effective date)

Country: **Hong Kong, China** Period: **January to March 2000**

Item	Disease status [a]			Comment numbers
	January	February	March	
Diseases prevalent in some parts of the region				
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*)*	***	***	***	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	***	***	***	
3. Mikrocytosis (*Mikrocytos mackini, M. roughleyi*)*	***	***	***	
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*	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*)*	***	***	***	
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 hepathopancreatitis

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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

2. New aquatic animal health regulations introduced within past six months (with effective date)
No new regulations. With Hong Kong's National Strategy Framework for the Responsible Movement of Live Aquatic Animals, the standards for health certification of ornamental fish have been updated through fish sampling and disease screening.

Country: **Hong Kong, China** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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	) 1
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*)*	***	***	***	) 2
3. Mikrocytosis (*Mikrocytos mackini, M. roughleyi*)*	***	***	***	)
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	***	***	***	)
Crustacean disease				
1. Yellowhead disease*	0000	0000	0000	)
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	) 3
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	) 1
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	***	***	***	2
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 hepathopancreatitis

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?	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	Passive and active surveillance
2	No surveillance system
3	Passive surveillance for freshwater ornamental shrimps

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

Nil

Country: **India** Period: **April to June 2000**

Item	Disease status[a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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*	0000	0000	0000	
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]				
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 hepathopancreatitis

* 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	The occurrence of Epizootic Ulcerative Syndrome (EUS) was reported from bottom dwelling species like murrels, catfish and weed fishes. The lesion start as small grain to pea size haemorrhagic spots over the body which ultimately turn into big ulcers.
2	White spot disease was noticed in some coastal shrimp farms. The disease was observed to affect al age groups of shrimps in culture systems.

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

Country: **Indonesia** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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]				
Parasite				
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 hepathopancreatitis

* OIE notifiable diseases

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+	Disease reported or known to be present
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?	Suspected by reporting officer but presence not confirmed
+()	Occurrence limited to certain zones
***	No information available
0000	Never reported
-	Not reported (but disease is known to occur)
(year)	Year of last occurrence

1. Epidemiological comments:

Comment No.	Epidemiological comment
1	
2	

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

Country: **Iran** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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. Mikrocytosis (*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 hepathopancreatitis

* 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

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

Country: **Japan** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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 hepathopancreatitis

* 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

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

Country: **Korea (DPR)** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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 hepathopancreatitis

* 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

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

Country: **Korea (RO)** Period: **January to March 2000**

Item	Disease status [a]			Comment numbers
	January	February	March	
Diseases prevalent in some parts of the region				
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)	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. Mikrocytosis (*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*	-(1999)	-(1999)	-(1999)	
4. Baculoviral midgut gland necrosis	?	?	?	
5. Gill associated virus (GAV)	0000	0000	0000	
6. Spawner mortality syndrome('Midcrop mortality syndrome')	0000	0000	0000	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	-	-	-	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	0000	0000	0000	
Any other diseases of importance[b]				
Gyrodactylosis (*Gyrodactylus salaris*)				
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 hepathopancreatitis

* 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

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

Country: **Korea (RO)** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
1. Epizootic haematopoietic necrosis*	***	***	***	
2. Infectious haematopoietic necrosis*	+	+	+	1
3. *Oncorhynchus masou* virus disease*	?	?	?	
4. Infectious pancreatic necrosis	+	-	-	2
5. Viral encephalopathy and retinopathy	?	?	?	
6. Epizootic ulcerative syndrome (EUS)	0000	0000	0000	
7. Bacterial kidney disease	0000	0000	0000	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	0000	0000	0000	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	-	-	-	
3. Mikrocytosis (*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*	+	+	+	3
4. Baculoviral midgut gland necrosis	?	?	?	
5. Gill associated virus (GAV)	0000	0000	0000	
6. Spawner mortality syndrome('Midcrop mortality syndrome')	0000	0000	0000	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	-	-	-	
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 hepathopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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+?	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	IHN has occurred in rainbow trout weighting 10, 100, 300 and 500 g in many culture farms in Gangwon-do. Mortality was 10 to 40%, 60 to 70% for fry stage.
2	IPN occurred in rainbow trout fry stage in many culture farms in Ganson-do until April, and was not observed in May.
3	White spot disease has occurred among *Peneaus chinensis* in many culture farms around the coast of Korea.

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

Country: **Lao PDR** Period: April to June 2000

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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 hepathopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological comments:

Comment No.	Epidemiological comment
1	

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

Country: **Malaysia** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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. Mikrocytosis (*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]				
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 hepathopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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+?	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 35 samples were tested for white spot virus on *Penaeus monodon* and only one sample was tested positive in a grow-out pond in Kuala Selangor. Remedial steps were taken to break cycle and proper disposal of infected shrimp an water and the problem was overcome.

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

- NIL -

Country: **Myanmar** Period: April to June 2000

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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 hepathopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological comments:

Comment No.	Epidemiological comment
1	
2	
3	
4	

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

Country: **Nepal** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
1. Epizootic haematopoietic necrosis*	***	***	***	
2. Infectious haematopoietic necrosis*	***	***	***	
3. *Oncorhynchus masou* virus disease*	***	***	***	
4. Infectious pancreatic necrosis	***	***	***	
5. Viral encephalopathy and retinopathy	***	***	***	
6. Epizootic ulcerative syndrome (EUS)	+	-	-	1
7. Bacterial kidney disease	***	***	***	
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*	***	***	***	
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	***	***	***	
3. 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
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Crustaceans: Nuclear polyhedrosis baculovirosis (*Baculovirus penaei*); Crayfish plague (*Aphanomyces astaci*); Taura syndrome; Necrotising hepathopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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+?	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 the month of Aprl 2000, EUS infection was not found commonly except at sporadic state only in few local fish species, it may be due to mild weather condition resulted by the regular premonsoon rainfall in the Southern part of Terai Region in Nepal.
2	

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

No new aquatic animal health regulation was introduced in the past six months.

Country: **Pakistan** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
1. Epizootic haematopoietic necrosis*				
2. Infectious haematopoietic necrosis*				
3. *Oncorhynchus masou* virus disease*				
4. Infectious pancreatic necrosis				
5. Viral encephalopathy and retinopathy				
6. Epizootic ulcerative syndrome (EUS)	+ ( )	+( )	+( )	1
7. Bacterial kidney disease				
Mollusc disease				
1. Bonamiosis (*Bonamia* sp., *B. ostreae*)*				
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*				
3. 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]				
Argulosis	+	+	+	2
Lernea infection	+	+	+	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 hepathopancreatitis

* 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 occurrence of EUS was reported from limited interior areas of Sindh Province. Reports were actually based upon the clinical signs observed in some farms.
2	High stocking density and rising temperature often trigger external parasitic infections particularly in carp brood fish farms.

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

None.

Country: **Philippines** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
1. Epizootic haematopoietic necrosis*	***	***	***	
2. Infectious haematopoietic necrosis*	***	***	***	
3. *Oncorhynchus masou* virus disease*	***	***	***	
4. Infectious pancreatic necrosis	***	***	***	
5. Viral encephalopathy and retinopathy	0000	0000	0000	1
6. Epizootic ulcerative syndrome (EUS)	-	-	-	2
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*	***	***	***	3
2. Infectious hypodermal and haematopoietic necrosis	***	***	***	
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')	***	***	***	5
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 hepathopancreatitis

* OIE notifiable diseases

[a] Please use the following symbols:

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

1. Epidemiological comments:

Comment No.	Epidemiological comment
1	No reported case (passive) of the disease (clinical manifestation) during the reporting period. The disease is suspected but not yet confirmed to be present in the country.
2	No reported case (passive) during the reporting period (April-June). EUS was last observed from snakehead taken from the river in La Paz, Carmen, Davao del Norte (Region XI), Mindanao.
3	The disease was last reported in *Penaeus monodon* post-larvae from hatcheries in Tagkawayan and Calauag, Quezon (Luzon) in July 1999, examined using combined SDS Western Blot Enzyme Immunoassays at the University of Philippines at Los Banos (UPLB), Biotechnology.
4	*P. monodon* post larvae (33 batches) from Iloilo, Cebu and Dumaguete (Visayas) and General Santos (Mindanao) examined using PCR technique produced negative results. Examination conducted by the NPPMCI/UPLB-Biotech. No reported case (passive) in *P.monodon* grow-out farms.
5	Information available was in 1998, when samples of *P.monodon* from selected grow-out farms were sent to Australia in October 1998 (Dr. Leigh Owens of James Cook University). Examination of the samples by in-situ hybridisation using Spawner Mortality Virus (SMV) probe produced positive results.

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

Country: **Singapore** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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	-	-	-	1
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
2. Marteiliosis (*Marteilia refringens, M. sydneyi*)*	0000	0000	0000	2
3. Mikrocytosis (*Mikrocytos mackini, M. roughleyi*)*	0000	0000	0000	2
4. Perkinsosis (*Perkinsus marinus, P. olseni*)*	0000	0000	0000	2
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	2
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 hepathopancreatitis

* 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	Viral Encephalopathy and Retinopathy –last major outbreak reported in Nov/Dec 1997 in seabass fry; 2 isolated cases confirmed by PCR in a batch of seabass fry and a batch of golden trevally fry in April 99.
2	No oyster farming in Singapore

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

Country: **Sri Lanka** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
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
2. Infectious hypodermal and haematopoietic necrosis	0000	0000	0000	
3. White spot disease*	+	+	+	3
4. Baculoviral midgut gland necrosis	0000	0000	0000	
5. Gill associated virus (GAV)	0000	0000	0000	
6. Spawner mortality syndrome('Midcrop mortality syndrome')	0000	0000	0000	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	0000	0000	0000	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	0000	0000	0000	
Any other diseases of importance[b]				
Unknown diseases of serious nature				

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

* 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	White spot disease was observed. Occurrence was limited to different zones in several localities.

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

Country: **Thailand** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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*	+	+	+	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				

[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 hepathopancreatitis

* 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 4,722 tiger prawn samples cultured in 21 provinces had been sent to 11 PCR laboratories of the Department of Fisheries. 96 samples of 2.03% were recorded as PCR positive or carrying SEMBV genome.

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

Country: **Vietnam** Period: **April to June 2000**

Item	Disease status [a] April	May	June	Comment numbers
Diseases prevalent in some parts of the region				
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)	-	-	-	2
7. Bacterial kidney disease	0000	0000	0000	1
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*	+	+	+	3
4. Baculoviral midgut gland necrosis	***	***	***	
5. Gill associated virus (GAV)	***	***	***	
6. Spawner mortality syndrome('Midcrop mortality syndrome')	0000	0000	0000	
Diseases presumed exotic to the region, but reportable to the OIE				
Finfish diseases				
1. Spring viraemia of carp*	0000	0000	0000	
2. Viral haemorrhagic septicaemia*	0000	0000	0000	
Mollusc diseases				
1. Haplosporidiosis (*Haplosporidium costale, H. nelsoni*)*	0000	0000	0000	
Any other diseases of importance [b]				
Disease of grass carp	+	+	+	4
White spot disease in fish (Ichthyopthiriosis)	+ ( )	- ( )	- ( )	5
Monodon baculovirus diseases (MBV)	+	+	+	6
Unknown diseases of serious nature				

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

* OIE notifiable diseases

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+	Disease reported or known to be present
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?	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 the 1998 (July-September) Quarterly Aquatic Animal Disease Report, EHN, IHN and Bacterial kidney disease was incorrectly reported to have occurred in Vietnam. The disease discussed is strongly believed to be Red Spot Disease (RSD) in grass carp and the subsequent epidemiological comments in the issue (1998 July-September) agree with this before. Additionally, these 3 diseases mainly infect salmonids which are not present in Vietnam.
2	Not report during this period but known to have occurred in Bac Ninh province (in the North Vietnam) in March, 2000 (reported by RIA1). This disease was also suspected to be present in Vietnam but not confirmed.
3	Reported in Central and Southern Vietnam: Khan Khoa, Ninh Thuan, Phuyen, Baclieu, Tiengiang, Soctrang, Travinh, Camau Provinces. Affected shrimp were Penaeus monodon (1-2.5 months old). The disease was confirmed by clinical signs and histological techniques. Additionally, this disease was also confirmed by PCR methods in Southern Vietnam. Mortalities were 90-100% in Centrak Vietnam.
4	Reported in almost all provinces in Northern Vietnam. There have been two different definitions of grass carp disease: one is Red Spot Disease (Red Spot and lesion have found on the body surface of broodstock grass carp) and another is unknown disease (mostly found on fingerling grass carp with dark body. Sometimes, internal organs such as kidney, liver and intestine are haemorrhagic. Mortality is commonly higher than the Red Spot Disease situation, up to 100%). At a moment, those are called "Red Spot Disease" by farmers.
5	The disease occurred on cage-cultured fingerling grass carp in Phutho province (in the North Vietnam) in April 2000. From May, 2000 up to now (September, 2000) this disease did not appear. Fish were affected by *Ichthyopthirius multifiliis* on the skin and gill. Mortalities were 50-60%.
6	Reported in the Nghean Province in Northern Vietnam, based on rapid-staining method (malachite green 0.5%) and histological techniques. The disease affected *Peneaus monodon* from post-larval stage. Prevalence was 10-65%. Some other pathogens such as *Vibrio anguillarum, V. alginolyticus* and parasitic species (*Zoothamnium* sp., *Epistylis* sp.) were also found on the shrimp. This disease was also reported in some provinces in Southern Vietnam (such as Baclieu, Bentre, Tiengiang, Soctrang, Travinh) and confirmed by histological techniques and PCR methods.

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

None.

Related Events and Publications

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

Information from:
NACA Secretariat
E-mail: melbar@fisheries.go.th

DFID/FAO/NACA/GoB. 2000. 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 of International Development, Food and Agriculture Organisation of the United Nations and the Networks of Aquaculture Centres in Asia-Pacific. 36pp.

Information from:
NACA Secretariat
E-mail: naca@fisheries.go.th; melbar@fisheries.go.th

Walker, P. and R.P Subasinghe (eds). 2000. **DNA-based Molecular Diagnostic Techniques: Research Needs for Standardisation and Validation of the Detection of Aquatic Animal Pathogens and Diseases.** FAO Fisheries Technical Paper 395. Report and Proceeding of the Expert Workshop on DNA-based Molecular Diagnostic Techniques: Research Needs for Standardisation and Validation 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 Rawin

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 email 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 Kanchanakan)

Information from:
Project manager
Southeast Asia Aquatic Disease Control Project (SEAADCP)
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Fish Health for Fish Farmers by Tina Thorne

Information from:
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186 St. Georges Terrace, Perth WA 6000
Tel: (08) 9482 7333 Fax: (08) 9482 7389
Web: http://www.gov.au.westfish

CD-ROM on Diagnosis of Shrimp Diseases (by 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:
NACA secretariate
E-mail: naca@fisheries.go.th

Epizootic Ulcerative Syndrome (EUS) Handbooks
Two new EUS handbooks are available free of charge: (1) Pathology and Histopahtology of EUS by S. Chinabut and R.J. Roberts; and (2) EUS Techical Handbook by J.H.Lilley, R.B. Callinan, S. Chinabut, S. Kanchanakhan, I.H.MacRae and M.J.Phillips.

Information from:
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Email: aahri@fisheries.go.th

Health Management in Shrimp Ponds. 3rd edition (by Chanratchakool, JF Turnbull, SJ Funge-Smith, IH MacRae and C. Limsuwan).

Information from:
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ADB/NACA –Report on a Regional Study and Workshop: Aquaculture Sustainability and the Environment

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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 heamatopoietic 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*)*
	Mikrocytosis (*Mikrocytos mackini, M. roughleyi*)*
	Perkinsosis (*Perkinsus marinum, P. olseni*)*
Crustacean Diseases:	Yellowhead disease
	Infectious hypodermal and haematopoietic necrosis (IHHN)
	White spot disease
	Baculoviral midgut gland necrosis
	Gill associated virus (GAV)
	Spawner nortality 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 (*Bacuovirus penaei*)
	Crayfish plague (*Aphanomyces astaci*)
	Taura syndrome
	Necrotising hepathopancreatitis

* 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 this instruction 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 page1, please enter serial number, and write your corresponding comments on page2, See Section C below.

If an unknown disease of serious nature appears, please fill in the line of the form and add epidemiological comments on page2.

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:

***	his symbol means that no information on a disease in question is available due to reasons such as lack of surveillance systems or expertise.
-	This symbols 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).
oooo	This symbol is used when disease surveillance is in place and a disease has never been re ported.
(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 disease, but no confirmed reported is available. **It is important that the species of animals to which it applies is indicated in the "Comments" on page2 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 symbols 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 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 disease (describe details as much as possible);
9. Samples sent to national or international laboratories for confirmation (indicate the names of labo ratories); and
10. Published paper (articles in journals)/web site, etc.

Important

Please send the **original report** of 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 month (45 days) after the end of the quarterly period.

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

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Notes

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