**2015/1**

# QUARTERLY AQUATIC ANIMAL DISEASE REPORT (Asia and Pacific Region)

## January – March 2015

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**Network of Aquaculture Centres in Asia-Pacific**

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# Contents

# Foreword

## OIE Regional Workshop on Safe International Trade in Aquatic Animals and Aquatic Animal Products

Aquatic animals and their products are among the most traded food commodities worldwide. Transboundary movement of live aquatic animals and aquatic animal products within and across national boundaries is a necessity for economic, social and development purposes. However, this may lead to introduction of new and emerging pathogens and to disease establishment which can pose risks to importing country's animal, plant and human health status. Infectious disease outbreaks threaten the sustainability of aquaculture, with many examples of transboundary diseases causing significant losses in productivity and profitability in many countries. Moreover, the spread of these transboundary diseases clearly demonstrates the vulnerability of the aquaculture industry to disease emergence, where impacts have been aggravated by the lack of effective preparedness and response when diseases emerge.

In this context, the OIE has organized the Regional Workshop on Safe International Trade in Aquatic Animals and Aquatic Animal Products, which was held in Niigata, Japan on 22-24 July 2015. The workshop was hosted by the Ministry of Agriculture, Fisheries and Forestry (MAFF), Japan and was attended by Aquatic Focal Points from 17 countries in the Asia-Pacific Region including: Australia, Bhutan, Cambodia, Chinese Taipei, Hong Kong, Indonesia, Laos, Malaysia, Myanmar, Nepal, New Caledonia, New Zealand, Pakistan, Philippines, Sri Lanka, Thailand and Vietnam.

Key lectures were delivered by OIE, NACA and other experts as follows:

- OIE in brief (Dr. Yoko Aoyama, OIE RRAP)
- Framework for safe international trade (Dr. Gillian Mylrea, OIE HQ)
- Role of trade in disease spread – regional overview (Dr. Eduardo Leaño, NACA)
- Overview of trade – step by step (Dr. Colin Johnston, Aquaculture New Zealand)
- The difference between an OIE listed aquatic animal disease and a non-listed disease of regional importance (Dr. Gillian Mylrea)
- Using the Aquatic Code – disease specific chapters ( Dr. Colin Johnston)
- Health certification for ornamental fish in Japan (Ms. Nanae Karakawa, MAFF)
- Private-public partnership – procedures for issuing certifications (Mr. Shoh Sato, Niigata Prefectural Inland Water Fisheries Experiment Station)
- Risk analysis – principles and practicalities using relevant OIE Code chapters and publications (Dr. Colin Johnston)
- Risk assessment in Japan (Satoshi Shiku, MAFF)

Two group workshops were also undertaken: 1) Using the OIE Aquatic Code and Aquatic Manual to Determine Import Conditions for Safe Commodity Trade; and, 2) International Trade Capability Assessment.

Overall, the workshop provided participants with:

- Updates on trends of aquaculture and aquatic animal disease situation;
- Knowledge about implementation of OIE international standards to provide disease surveillance and control methodology, and to prevent the spread of aquatic animal pathogens via international trade, while avoiding unjustified sanitary barriers;
- Knowledge about application of risk analysis, import health standard development, certification and border controls;
- Opportunities for experience sharing.

# Reports Received by the NACA Secretariat

**Country: AUSTRALIA** **Period: January - March 2015**

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | -(2012) | -(2012) | -(2012) | | 1 |
| 2. Infectious haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 3. Spring viraemia of carp (SVC) | 0000 | 0000 | 0000 | | |
| 4. Viral haemorrhagic septicaemia (VHS) | 0000 | 0000 | 0000 | | |
| 5. Infection with *Aphanomyces invadans* (EUS) | -(2014) | -(2014) | -(2014) | | 2 |
| 6. Red seabream iridoviral disease (RSID) | 0000 | 0000 | 0000 | | |
| 7. Koi herpesvirus disease (KHV) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | 0000 | 0000 | 0000 | | |
| 9. Viral encephalopathy and retinopathy | + | -(2015) | -(2015) | III | 3 |
| 10.Enteric septicaemia of catfish | -(2014) | (2014) | (2014) | | 4 |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | 0000 | 0000 | 0000 | | |
| 2. Infection with *Perkinsus olseni* | -(2014) | -(2014) | -(2014) | | 5 |
| 3. Infection with abalone herpesvirus | -(2011) | -(2011) | -(2011) | | 6 |
| 4. Infection with *Xenohaliotis californiensis* | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | 0000 | 0000 | 0000 | | |
| 6. Acute viral necrosis (in scallops) | *** | *** | *** | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | 0000 | 0000 | 0000 | | |
| 2. White spot disease (WSD) | 0000 | 0000 | 0000 | | |
| 3. Yellowhead disease (YHD) | 0000 | 0000 | 0000 | | |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | -(2014) | -(2014) | -(2014) | | 7 |
| 5. Infectious myonecrosis (IMN) | 0000 | 0000 | 0000 | | |
| 6. White tail disease (MrNV) | -(2008) | -(2008) | -(2008) | | 8 |
| 7. Necrotising hepatopancreatitis (NHP) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | 0000 | 0000 | 0000 | | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | 0000 | 0000 | 0000 | | |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | -(2008) | -(2008) | -(2008) | | 9 |
| 2. Infection with *Batrachochytrium dendrobatidis* | -(2013) | -(2013) | -(2013) | | 10 |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. | | | | | |
| 2. | | | | | |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

## 1. Epidemiological comments:

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

| Comment No. | |
|---|---|
| 1 | **Epizootic haematopoietic necrosis** was not reported this period despite passive surveillance in Victoria (last reported 2012), the Australian Capital Territory (last reported 2011), New South Wales (last reported 2009) and South Australia (last reported 1992). Passive surveillance and never reported in the Northern Territory, Queensland, Tasmania and Western Australia. |
| 2 | **Infection with *Aphanomyces invadans* (EUS)** is known to have occurred previously in Queensland (last reported 2014), Western Australia (last reported 2013), New South Wales (last reported 2012), the Northern Territory (last reported 2012), Victoria (last reported 2012), and South Australia (last reported 2008). Passive surveillance and never reported in Tasmania. No information available in the Australian Capital Territory. |
| 3 | **Viral encephalopathy and retinopathy**<br><br>1. **Reported in Queensland** in January; passive surveillance;<br>2. **Species affected** – giant grouper (*Epinephelus lanceolatus*);<br>3. **Clinical signs** – not feeding, lethargy and anorexia;<br>4. **Pathogen** – *Betanodavirus*;<br>5. **Mortality rate** – minimal;<br>6. **Economic loss** – N/A;<br>7. **Geographic extent** – N/A;<br>8. **Containment measures** – N/A;<br>9. **Laboratory confirmation** – histopathology and immunohistochemistry test;<br>10. **Publications** – None.<br><br>VER is known to have occurred previously in the Northern Territory (last reported 2013), Western Australia (last reported 2013), New South Wales (last reported 2010), South Australia (last reported 2010) and Tasmania (last reported 2000). Passive surveillance and never reported in Victoria. No information available in the Australian Capital Territory. |

| | |
|---|---|
| 4 | **Enteric septicaemia of catfish**<br><br>*Edwardsiella ictaluri* was detected in clinically normal fish from a single river in Queensland in October 2014. Active surveillance in wild catfish from Northern Australia is ongoing. Enteric septicaemia of catfish is known to have occurred previously in the Northern Territory in a closed aquarium facility also holding imported ornamental fish (last reported 2011). Passive surveillance and reported previously in Queensland (last reported 2008) and Tasmania (last reported 2001) in imported zebrafish (*Brachydanio rerio*) held in PC2 containment facilities. Passive surveillance and never reported in New South Wales, South Australia, Victoria or Western Australia. No information available this period in the Australian Capital Territory. |
| 5 | **Infection with *Perkinsus olseni***<br><br>1. **Reported in Victoria** in March; active surveillance;<br>2. **Species affected** – native flat oyster (*Ostrea angasi*);<br>3. **Clinical signs** – subclinical infection;<br>4. **Pathogen** – *Perkinsus olseni*;<br>5. **Mortality rate** – N/A<br>6. **Economic loss** – N/A;<br>7. **Geographic extent** – limited to one bay;<br>8. **Containment measures** – N/A;<br>9. **Laboratory confirmation** – histopathology identification, PCR and sequencing;<br>10. **Publications** – reported as an immediate notification to the OIE in April, after confirmation of suspected infection from specimens collected in March..<br><br>Infection with *Perkinsus olseni* was not reported this period despite passive surveillance in Queensland (last reported 2014), South Australia (last reported 2013) New South Wales (last reported 2005) and Western Australia (last reported 2003). Passive surveillance and never reported in the Northern Territory and Tasmania. No information available for the Australian Capital Territory (suceptible species not present and no marine water responsibility). |
| 6 | **Infection with abalone herpesvirus (abalone viral ganglioneuritis)** was not reported this period despite targeted surveillance in Tasmania (last reported 2011) and passive surveillance in New South Wales (last reported 2011 and eradicated following detection in contained commercial live-holding facilities), and Victoria (last reported 2010). Passive surveillance and never reported in the Northern Territory, Queensland, South Australia and Western Australia. No information available this period for the Australian Capital Territory (no marine water responsibility). |
| 7 | **Infectious hypodermal and haematopoietic necrosis virus** was not reported this period but is known to have occurred previously in Queensland (last reported 2014) and the Northern Territory (last reported 2003). Passive surveillance and never reported in New South Wales, South Australia, Victoria and Western Australia. No information available this period in the Australian Capital Territory (no marine responsibility) and Tasmania (susceptible species not present). |
| 8 | **White tail disease** was not reported this period despite passive surveillance in Queensland (last reported 2008). Passive surveillance and never reported from the Australian Capital Territory, New South Wales, the Northern Territory, South Australia, Victoria and Western Australia. No information available this period in Tasmania (susceptible species not present). |

| | |
|---|---|
| 9 | **Infection with ranavirus** was not reported this period despite passive surveillance in the Northern Territory (last reported 2008, prior to official reporting for ranavirus). Suspected but not confirmed through passive surveillance in Queensland. Passive surveillance and never reported in Tasmania. No information available this period in the Australian Capital Territory, New South Wales, South Australia, Victoria and Western Australia. |
| 10 | **Infection with *Batrachochytrium dendrobatidis*** was not reported this period despite passive surveillance in Tasmania (last reported 2013), Victoria (last reported 2011) and Western Australia (last reported 2008). Suspected but not confirmed through passive surveillance in Queensland. No information available this period in the Australian Capital Territory, New South Wales, the Northern Territory, and South Australia. |

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

The AQUAVETPLAN Disease strategy manual – viral haemorrhagic septicaemia was published on the Department of Agriculture website in January 2015. (http://www.agriculture.gov.au/aquavetplan).

**Country: BANGLADESH** **Period: October - December 2014**

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | October | November | December | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 2. Infectious haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 3. Spring viraemia of carp (SVC) | 0000 | 0000 | 0000 | | |
| 4. Viral haemorrhagic septicaemia (VHS) | 0000 | 0000 | 0000 | | |
| 5. Infection with *Aphanomyces invadans* (EUS) | - | +() | +() | I, II | 1 |
| 6. Red seabream iridoviral disease (RSID) | 0000 | 0000 | 0000 | | |
| 7. Koi herpesvirus disease (KHV) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | 0000 | 0000 | 0000 | | |
| 9. Viral encephalopathy and retinopathy | 0000 | 0000 | 0000 | | |
| 10.Enteric septicaemia of catfish | 0000 | 0000 | 0000 | | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | 0000 | 0000 | 0000 | | |
| 2. Infection with *Perkinsus olseni* | 0000 | 0000 | 0000 | | |
| 3. Infection with abalone herpesvirus | 0000 | 0000 | 0000 | | |
| 4. Infection with *Xenohaliotis californiensis* | | | | | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | 0000 | 0000 | 0000 | | |
| 6. Acute viral necrosis (in scallops) | 0000 | 0000 | 0000 | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | 0000 | 0000 | 0000 | | |
| 2. White spot disease (WSD) | - | - | - | | |
| 3. Yellowhead disease (YHD) | 0000 | 0000 | 0000 | | |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | 0000 | 0000 | 0000 | | |
| 5. Infectious myonecrosis (IMN) | 0000 | 0000 | 0000 | | |
| 6. White tail disease (MrNV) | 0000 | 0000 | 0000 | | |
| 7. Necrotising hepatopancreatitis (NHP) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | | | | | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | | | | | |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | 0000 | 0000 | 0000 | | |
| 2. Infection with *Batrachochytrium dendrobatidis* | 0000 | 0000 | 0000 | | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. Grayish white spot of cultured Shing (*Heteropneustes fossilis*) | *** | - | - | I | 2 |
| 2. | | | | | |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

**1. Epidemiological comments:**

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

| Comment No. | |
|---|---|
| 1 | **Infection with Aphanomyces invadans (EUS):**<br>1. **Area affected**: reported from Rajshahi, Sylhet and Mymensingh region;<br>2. **Species affected**: Indian major carps (Catla, Rui, Mrigal), Koi (*Cyprinus carpio*) and Silver barb (*Puntius gonionotus*)<br>3. **Clinical signs**: Hemorrhage on body with lesion and erosion on tail region;<br>4. **Pathogens**: *Aeromonas* sp, *Pseudomonas* sp and *Aphanomyces invadans*;<br>5. **Mortality**: 5-25%;<br>6. **Control measures**: Salt and Potassium permanganate treatment, water exchange, reduced feeding, reduced stocking density; |
| 2 | **Grayish white spot of cultured Shing:**<br>**1. Area affected:** reported from greater Mymensingh region<br>**2. Species affected:** Shing (*Heteropneustes fossilis)*<br>**3. Clinical signs or lesions:** loss of equilibrium, grayish white spot, slight lesion on body, body and tail erosion, hemorrhage in base of fin and edge of head, move with whirling & heavy mortalities of fish occur shortly after the advent of lesions;<br>**4. Pathogen:** Unknown;<br>**5. Mortality:** 50-95% within 3-10 days;<br>**6. Control measures:** Salt and lime treatment, Suggested to improve bio-security of farms; |

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

**Country: BANGLADESH** **Period: January - March 2015**

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 2. Infectious haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 3. Spring viraemia of carp (SVC) | 0000 | 0000 | 0000 | | |
| 4. Viral haemorrhagic septicaemia (VHS) | 0000 | 0000 | 0000 | | |
| 5. Infection with *Aphanomyces invadans* (EUS) | - | +() | +() | I, II | 1 |
| 6. Red seabream iridoviral disease (RSID) | 0000 | 0000 | 0000 | | |
| 7. Koi herpesvirus disease (KHV) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | 0000 | 0000 | 0000 | | |
| 9. Viral encephalopathy and retinopathy | 0000 | 0000 | 0000 | | |
| 10.Enteric septicaemia of catfish | 0000 | 0000 | 0000 | | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | 0000 | 0000 | 0000 | | |
| 2. Infection with *Perkinsus olseni* | 0000 | 0000 | 0000 | | |
| 3. Infection with abalone herpesvirus | 0000 | 0000 | 0000 | | |
| 4. Infection with *Xenohaliotis californiensis* | | | | | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | 0000 | 0000 | 0000 | | |
| 6. Acute viral necrosis (in scallops) | 0000 | 0000 | 0000 | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | 0000 | 0000 | 0000 | | |
| 2. White spot disease (WSD) | - | - | - | | |
| 3. Yellowhead disease (YHD) | 0000 | 0000 | 0000 | | |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | 0000 | 0000 | 0000 | | |
| 5. Infectious myonecrosis (IMN) | 0000 | 0000 | 0000 | | |
| 6. White tail disease (MrNV) | 0000 | 0000 | 0000 | | |
| 7. Necrotising hepatopancreatitis (NHP) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | | | | | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | | | | | |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | -(2008) | -(2008) | -(2008) | | |
| 2. Infection with *Batrachochytrium dendrobatidis* | -(2013) | -(2013) | -(2013) | | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. | | | | | |
| 2. | | | | | |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

**1. Epidemiological comments:**

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

| Comment No. | |
|---|---|
| 1 | **Infection with Aphanomyces invadans (EUS):**<br>1. **Area and affected species:** EUS was detected in Indian Major carps (Catla, Rui, Mrigal), Koi (*Cyprinus carpio*) and Silver barb (*Puntius gonionotus*) from very limited areas in Rajshahi, Sylhet and Mymensingh districts region<br>2. **Clinical signs or lesions:** Hemorrhage on body with lesion and erosion on tail region<br>3. **Pathogens:** *Aeromonas* sp, *Pseudomonas* sp and *Aphanomyces invadans;*<br>4. **Mortality: 7-30%;**<br>5. **Control measures:** Salt and Potassium permanganate treatment, water exchange, reduced feeding, reduced stocking density; |
| 2 | |

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

**Country: CHINA** **Period: January - March 2015**

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 2. Infectious haematopoietic necrosis | +?( ) | +?() | *** | | |
| 3. Spring viraemia of carp (SVC) | *** | *** | *** | | |
| 4. Viral haemorrhagic septicaemia (VHS) | 0000 | 0000 | 0000 | | |
| 5. Infection with *Aphanomyces invadans* (EUS) | 0000 | 0000 | 0000 | | |
| 6. Red seabream iridoviral disease (RSID) | 0000 | 0000 | 0000 | | |
| 7. Koi herpesvirus disease (KHV) | *** | *** | *** | | |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | 0000 | 0000 | 0000 | | |
| 9. Viral encephalopathy and retinopathy | 0000 | 0000 | 0000 | | |
| 10.Enteric septicaemia of catfish | 0000 | 0000 | 0000 | | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | 0000 | 0000 | 0000 | | |
| 2. Infection with *Perkinsus olseni* | 0000 | 0000 | 0000 | | |
| 3. Infection with abalone herpesvirus | 0000 | 0000 | 0000 | | |
| 4. Infection with *Xenohaliotis californiensis* | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | 0000 | 0000 | 0000 | | |
| 6. Acute viral necrosis (in scallops) | 0000 | 0000 | 0000 | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | *** | *** | *** | | |
| 2. White spot disease (WSD) | *** | *** | *** | | |
| 3. Yellowhead disease (YHD) | *** | *** | *** | | |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | +?( ) | +?( ) | +?( ) | | |
| 5. Infectious myonecrosis (IMN) | *** | +?( ) | +?( ) | | |
| 6. White tail disease (MrNV) | 0000 | 0000 | 0000 | | |
| 7. Necrotising hepatopancreatitis (NHP) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | 0000 | 0000 | 0000 | | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | +?( ) | *** | *** | | |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | 0000 | 0000 | 0000 | | |
| 2. Infection with *Batrachochytrium dendrobatidis* | 0000 | 0000 | 0000 | | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. | | | | | |
| 2. | | | | | |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

**1. Epidemiological comments:**

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

| Comment No. | |
|---|---|
| 1 | |
| 2 | |

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

## Country: HONG KONG SAR, CHINA Period: January - March 2015

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | 0000 | 0000 | 0000 | II | |
| 2. Infectious haematopoietic necrosis | 0000 | 0000 | 0000 | III | |
| 3. Spring viraemia of carp (SVC) | 0000 | 0000 | 0000 | III | |
| 4. Viral haemorrhagic septicaemia (VHS) | 0000 | 0000 | 0000 | III | |
| 5. Infection with *Aphanomyces invadans* (EUS) | 0000 | 0000 | 0000 | III | |
| 6. Red seabream iridoviral disease (RSID) | - | - | - | III | |
| 7. Koi herpesvirus disease (KHV) | - | - | - | III | |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | - | - | - | III | |
| 9. Viral encephalopathy and retinopathy | - | - | - | III | |
| 10.Enteric septicaemia of catfish | 0000 | 0000 | 0000 | II | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | 0000 | 0000 | 0000 | II | |
| 2. Infection with *Perkinsus olseni* | 0000 | 0000 | 0000 | II | |
| 3. Infection with abalone herpesvirus | 0000 | 0000 | 0000 | II | |
| 4. Infection with *Xenohaliotis californiensis* | 0000 | 0000 | 0000 | II | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | 0000 | 0000 | 0000 | II | |
| 6. Acute viral necrosis (in scallops) | 0000 | 0000 | 0000 | II | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | 0000 | 0000 | 0000 | III | |
| 2. White spot disease (WSD) | - | - | - | III | |
| 3. Yellowhead disease (YHD) | 0000 | 0000 | 0000 | III | |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | 0000 | 0000 | 0000 | II | |
| 5. Infectious myonecrosis (IMN) | 0000 | 0000 | 0000 | II | |
| 6. White tail disease (MrNV) | 0000 | 0000 | 0000 | II | |
| 7. Necrotising hepatopancreatitis (NHP) | 0000 | 0000 | 0000 | II | |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | 0000 | 0000 | 0000 | II | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | 0000 | 0000 | 0000 | II | |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | 0000 | 0000 | 0000 | II | |
| 2. Infection with *Batrachochytrium dendrobatidis* | 0000 | 0000 | 0000 | II | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. | | | | | |
| 2. | | | | | |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

**1. Epidemiological comments:**

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

| Comment No. | |
|---|---|
| 1 | |
| 2 | |
| 3 | |

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

**Country: INDIA** **Period: January - March 2015**

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 2. Infectious haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 3. Spring viraemia of carp (SVC) | 0000 | 0000 | 0000 | | |
| 4. Viral haemorrhagic septicaemia (VHS) | 0000 | 0000 | 0000 | | |
| 5. Infection with *Aphanomyces invadans* (EUS) | +( ) | +( ) | - | I,II,III | 1 |
| 6. Red seabream iridoviral disease (RSID) | 0000 | 0000 | 0000 | | |
| 7. Koi herpesvirus disease (KHV) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | 0000 | 0000 | 0000 | | |
| 9. Viral encephalopathy and retinopathy | - | - | - | | |
| 10.Enteric septicaemia of catfish | 0000 | 0000 | 0000 | | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | 0000 | 0000 | 0000 | | |
| 2. Infection with *Perkinsus olseni* | - | - | - | | |
| 3. Infection with abalone herpesvirus | 0000 | 0000 | 0000 | | |
| 4. Infection with *Xenohaliotis californiensis* | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | 0000 | 0000 | 0000 | | |
| 6. Acute viral necrosis (in scallops) | 0000 | 0000 | 0000 | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | 0000 | 0000 | 0000 | | |
| 2. White spot disease (WSD) | +( ) | +( ) | +( ) | III | 2 |
| 3. Yellowhead disease (YHD) | *** | *** | *** | | |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | - | - | - | | |
| 5. Infectious myonecrosis (IMN) | 0000 | 0000 | 0000 | | |
| 6. White tail disease (MrNV) | - | - | - | | |
| 7. Necrotising hepatopancreatitis (NHP) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | - | - | - | | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | 0000 | 0000 | 0000 | | |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | 0000 | 0000 | 0000 | | |
| 2. Infection with *Batrachochytrium dendrobatidis* | 0000 | 0000 | 0000 | | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. | | | | | |
| 2. | | | | | |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

**1. Epidemiological comments:**

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

| Comment No. | |
|---|---|
| 1 | **Infectious with *Aphanomyces invadans* (EUS):**<br><br>Reported in Indian major carps and *Channa striatus* from Maharajganj, Barabanki and Lakhimpur Kheri districts of Uttar Pradesh; Indan major carps and *Putius japonicus* from Sepahijala and Dhalai districts of Tripura. |
| 2 | **White spot disease (WSD):**<br><br>WSSV was detected in *Litopenaeus vannamei* from Nellore district of Andhra Pradesh; East Medinapur district of West Bengal; Cuddalore, Kanchipuran, Thiruvallur and Nagapattinam districts of Tamil Nadu; Uttar Kannada and Udipi districts of Karnataka. Also detected in *Penaeus monodon* from Kannur and Kollam districts of Kerala; East Medinipur and North 24 Paraganas districts of West Bengal; Ratnagiri district of Maharashta; and in *Panulirus homarus* from Thoothukudi distrit of Tamil Nadu. All cases were diagnosed by level III diagnosis. . |
| 3 | |

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

**Country: INDONESIA** **Period: January - March 2015**

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 2. Infectious haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 3. Spring viraemia of carp (SVC) | 0000 | 0000 | 0000 | | |
| 4. Viral haemorrhagic septicaemia (VHS) | 0000 | 0000 | 0000 | | |
| 5. Infection with *Aphanomyces invadans* (EUS) | 0000 | 0000 | 0000 | | |
| 6. Red seabream iridoviral disease (RSID) | 0000 | *** | *** | | |
| 7. Koi herpesvirus disease (KHV) | +( ) | +( ) | *** | III | 1 |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | *** | *** | *** | | |
| 9. Viral encephalopathy and retinopathy | +( ) | +( ) | +( ) | III | 2 |
| 10.Enteric septicaemia of catfish | *** | *** | *** | | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | 0000 | 0000 | 0000 | | |
| 2. Infection with *Perkinsus olseni* | 0000 | 0000 | 0000 | | |
| 3. Infection with abalone herpesvirus | 0000 | 0000 | 0000 | | |
| 4. Infection with *Xenohaliotis californiensis* | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | 0000 | 0000 | 0000 | | |
| 6. Acute viral necrosis (in scallops) | 0000 | 0000 | 0000 | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | *** | *** | *** | | |
| 2. White spot disease (WSD) | +( ) | +( ) | +( ) | III | 3 |
| 3. Yellowhead disease (YHD) | *** | *** | +( ) | III | 4 |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | *** | +( ) | +( ) | III | 5 |
| 5. Infectious myonecrosis (IMN) | +( ) | *** | *** | III | 6 |
| 6. White tail disease (MrNV) | 0000 | 0000 | 0000 | | |
| 7. Necrotising hepatopancreatitis (NHP) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | 0000 | 0000 | 0000 | | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | 0000 | 0000 | 0000 | | |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | 0000 | 0000 | 0000 | | |
| 2. Infection with *Batrachochytrium dendrobatidis* | 0000 | 0000 | 0000 | | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. | | | | | |
| 2. | | | | | |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

## 1. Epidemiological comments:

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

| Comment No. | |
|---|---|
| 1 | **KHV**<br>1. **Origin of the disease/pathogen:** (1) January: Kota Sukabumi, West Java Province; (2) February: (a) Kota Sukabumi, West Java Province, (b) seeds from Mandiangin.<br>2. **Species affected:** *Cyprinus carpio* Koi;<br>3. **Clinical signs:** (1) gill necrosis; (2) (a) scales flake offs; (b) red spots and ulcers on fish body;<br>4. **Pathogen:** KHV;<br>5. **Mortality rate:** (1) <30%; (2) (a) -; (b) 50%;<br>6. **Economic loss:** (1) IDR 1.4 million; (2) (a) -; (b) IDR 5 million;<br>7. **Names of infected areas:** (1) Cikole subdistrict, Kota Sukabumi; (2) (a) Kadudampit subdistrict, Sukabumi District; (b) Bincau Village, Martapura district, Banjar district;<br>8. **Preventive/control measures:** anti-KHV vaccine, immunostimulant, isolation of infected fish, harvest;<br>9. **Laboratory confirmation:** Main Center Freshwater Aquaculture Development Sukabumi Laboratory, Freshwater Aquaculture Development Center Mandiangin Laboratory;<br>10. **Publications:** not published. |

| | |
|---|---|
| 2 | **VER**<br>1. **Origin of the disease/pathogen:** (1) January: Batam, Riau Island Province; (2) Feburary: (a) Batam, Riau Island Province; (b) seeds from Situbondo; (3) March: (a) Batam, Riau Island Province; (b) Kerawang, West Java; (c) Lombok; (d) Situbondo;<br>2. **Species affected:** (1) *Lates calcarifer*; (2) (a) *Trachinotus blochii*, 19-20 cm; (b) hybrid grouper; (3) (a) *L. calcarifer* eggs; (b) *Epinephelus fuscoguttatus*; (c) *T. blochii*, *E. fuscoguttatus*; (d) hybrid grouper;<br>3. **Clinical signs:** (1) no clinical sign; (2) (a) ulcers on the body, thin fish, high mortality; (b) loss of appetite, fish clustering at the bottom; (3) (a) no clinical sign; (b) whirling; (c) slanted and rotational swimming, loss of appetite, mortality; (d) sluggish swimming, loss of appetite, high mortality;<br>4. **Pathogen:** Viral encephalopathy and retinopathy nodavirus;<br>5. **Mortality rate:** (1) -; (2) (a) 40 out of 400 fish; (b) > 80%; (3) (a) -; (b) 50%; (c) 30-60% and 90% from early population; (d) 30-60%;<br>6. **Economic loss:** (1) -; (2) (a) IDR280,000; (b) around IDR300 million; (3) (a) -; (b) -; (c) IDR2.7 million; (d) IDR55 million;<br>7. **Names of infected areas:** Batam, Riau Island Province; Situbondo (floating net cage in Gelung Village, Panarukan subsdistrict); Cilebar, Karawang; West Lombok district; hatchery in Situbondo;<br>8. **Preventive/control measures:** vitamin (C; multivitamin) supplementation in feeds, formalin immersion, isolation of infected fish, collection of dead fish and burried them, improved water quality management, vaccination;<br>9. **Laboratory confirmation:** Batam Mariculture Development Center Laboratory, Mariculture Development Center Lombok Laboratory, Aquaculture Business Development Center Laboratory Karawang, Brckishwater Fisheries Center at Stubondo Laboraotry;<br>10. **Publications:** not published. |
| 3 | **WSD**<br>1. **Origin of the disease/pathogen:** (1) January: (a) Mauk subdistrict, Tengerang district; (b) Kemiri subdistrict, Tengerang distrit; (c) Jepara, Central Java; (2) February: (a) Pekalongan, Central Java; (b) Jepara; (c) Daerah Istemawa, Yogyakarta; (3) March: (a) Purworejo; (b) Pesawaran, Durian Village, Lampung; (c) shrimp seeds from Gresik; (d) Lampung<br>2. **Species affected:** *L. vannamei* (1a-c; 2a-b; 3a-c; 3d DOC30); *P. monodon* (2c);<br>3. **Clinical signs:** (1) (a-b) shrimps swimming weakly near the water surface, irregular movement towards the edge of the pond; (c) white spot in carapace, swimming on the water surface, mass mortality for 3-7 days; (2) (a) white spot in carapace, loss of appetite, dead shrimps on the pond edge, mass mortality for 3 days; (b) white spot in carapace, mass mortality for 3-10 days; (c) gradual mortality, sudden loss of appetite; (3) (a) reddish shrimps, swimming on the water surface, loss of appetite; (b) no specific changes; (c) clinical signs not observed as weak shrimps were eaten by Tialpia; (d) white spots in carapace and rostrum;<br>4. **Pathogen**: White spot syndrome virus (WSSV)<br>5. **Mortality rate:** (1) (a-b) <30%; © 75%; (2) (a-b) 80%, © 50%; (3) (a) 50%; (b) <30%); (c) 30-60%; (d) <30%;<br>6. **Economic loss:** -;<br>7. **Names of infected areas:** (1) (a) Mauk subdistrict; (b) Kemiri subdistrit, Tengarang district; (c) Jepara, Central Java; (2) (a) Pekalongan, Central Java; (b) Keling subdistrit, Jepara district; (c) Daerah Istimewa, Yogyakarta; (3) (a) Jatimalang, Purworejo; (b) Pesawaran, Durian village; (c)Tanggulangin, Jabon and Candi subdistricts; (d) Pesawaran subdistrict;<br>8. **Preventive/control measures:** Use of WSSV-free PLs, water quality management, sanitation of equipment, biosecurity, Vitamin C supplementation and use of immunostimulants, disinfectiom, early harvest;<br>9. **Laboratory confirmation:** Main Center of Mariculture Development Lampung, Center of Fish Disease and Environment Investigation Serang-Banten Laboraotry, Main Center Brackishwater Aquaculture Development Jepara Laboratory, Main Center of Mariculture Development Lampung, Aquaculture Business Development Center Karawang Laboratory, Brackishwater Fisheries Center at Sitobondo Laboratory,<br>10. **Publications:** not published. |

| | |
|---|---|
| 4 | **YHD**<br>1. **Origin of the disease/pathogen:** (1) March: Merak, Cilegon district;<br>2. **Species affected:** *Litopenaeus vannamei*<br>3. **Clinical signs:** yellowish cephalothorax and pale body;<br>4. **Pathogen:** YHV<br>5. **Mortality rate:** <30%;<br>6. **Economic loss: -**<br>7. **Names of infected areas:** Pulomerak subdistrict, Cilegon City;<br>8. **Preventive/control measures:** environmental management;<br>9. **Laboratory confirmation:** Center of Fish Disease and Environment Investigation Serang-Banten Laboratory;<br>10. **Publications:** not published. |
| 5 | **IHHN**<br>1. **Origin of the disease/pathogen:** (1) February: Daerah Istimewa Yogyakarta; (2) March: Jepara, Central Java<br>2. **Species affected:** *Penaeus monodon*<br>3. **Clinical signs:** (1) bent shrimp rostrum, heterogenous shrimp growth rate, gradual mortality in 3-10 days; (2) loss of appetite, slow growth, abnormal behavior, gradual mortality;<br>4. **Pathogen:** IHHNV<br>5. **Mortality rate:** (1) 50%; (2) 30%<br>6. **Economic loss: -**<br>7. **Names of infected areas:** Daerah Istimewa Yogyakart, Jepara;<br>8. **Preventive/control measures:** immunostimulant, probiotics sanitation of all equipment;<br>9. **Laboratory confirmation:** Main Center for Brackishwater Aquaculture-Jepara;<br>10. **Publications:** not published. |
| 6 | **IMN**<br>1. **Origin of the disease/pathogen:** (1) January: (a) Situbondo – shrimp PLs; (b) Tengarang – Kemiri subdistrict;<br>2. **Species affected:** *Litopenaeus vannamei* (a) 60 days; (b) PLs<br>3. **Clinical signs:** (a) shrimps with reddish segments and tail; mortality; (b) reddish segments on abdomen and shrimp tail;<br>4. **Pathogen:** IMNV<br>5. **Mortality rate:** (a) low mortality; (b) <30%)<br>6. **Economic loss:** (a) about IDR500,000; (b) -;<br>7. **Names of infected areas:** (a) Mandiangin subdistrict; (b) Kemiri subdistrict, Tengarang district;<br>8. **Preventive/control measures:** Minimized water change to avoid fluctuations in water quality parameters, application of probiotics and vitamins, use of IMNV-free PLs, stress reduction through water and feed management, immunostimulat-supplementation in feeds;<br>9. **Laboratory confirmation:** (a) Brackishwater Fisheries Center at Situbondo Labortory; (b) Center of Fish Disease and Environment Investigation Serang-Banten Laboratory;<br>10. **Publications:** not published. |

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

**Country: I.R. IRAN** **Period: January - March 2015**

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 2. Infectious haematopoietic necrosis | + | + | + | III | 1 |
| 3. Spring viraemia of carp (SVC) | - | - | - | | |
| 4. Viral haemorrhagic septicaemia (VHS) | + | + | + | III | 2 |
| 5. Infection with *Aphanomyces invadans* (EUS) | 0000 | 0000 | 0000 | | |
| 6. Red seabream iridoviral disease (RSID) | 0000 | 0000 | 0000 | | |
| 7. Koi herpesvirus disease (KHV) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | 0000 | 0000 | 0000 | | |
| 9. Viral encephalopathy and retinopathy | 0000 | 0000 | 0000 | | |
| 10.Enteric septicaemia of catfish | *** | *** | *** | | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | 0000 | 0000 | 0000 | | |
| 2. Infection with *Perkinsus olseni* | 0000 | 0000 | 0000 | | |
| 3. Infection with abalone herpesvirus | 0000 | 0000 | 0000 | | |
| 4. Infection with *Xenohaliotis californiensis* | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | 0000 | 0000 | 0000 | | |
| 6. Acute viral necrosis (in scallops) | 0000 | 0000 | 0000 | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | 0000 | 0000 | 0000 | | |
| 2. White spot disease (WSD) | - | - | - | | |
| 3. Yellowhead disease (YHD) | 0000 | 0000 | 0000 | | |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | 0000 | 0000 | 0000 | | |
| 5. Infectious myonecrosis (IMN) | 0000 | 0000 | 0000 | | |
| 6. White tail disease (MrNV) | *** | *** | *** | | |
| 7. Necrotising hepatopancreatitis (NHP) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | *** | *** | *** | | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | *** | *** | *** | | |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | *** | *** | *** | | |
| 2. Infection with *Batrachochytrium dendrobatidis* | *** | *** | *** | | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. | | | | | |
| 2. | | | | | |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

**1. Epidemiological comments:**

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

| Comment No. | |
|---|---|
| 1 | **IHN** was reported in February and March in two provinces: propagation center in Hamadan; and, propagation center in Mazandaran (first report with clinical signs).<br>1. **Origin of the disease:** still unknown, case is under investigation;<br>2. **Species affected** – *Onchorrhyncus mykiss* (Rainbow trout), 5 months old;<br>3. **Clinical signs** – mass mortality, lethargic swimming with intermittent bouts of frenzied, abnormal activity, pinpoint haemorrhages in visceral organs, pale gills;<br>4. **Pathogen** – IHNV;<br>5. **Mortality rate** – 20-30%,<br>6. **Economic loss** – not calculated yet<br>7. **Geographic extent** – Hamadan and Mazandaran;<br>8. **Control measures** – emergency harvest, stamping out of juveniles, fallowing;<br>9. **Laboratory confirmation** – histopathology, nested-PCR and cell culture at Centre of Veterinary Laboratory (CVL);<br>10. **Publications** – None. |
| 2 | **VHS** reported in January to March in three provinces: 2 fish farm in Chaharmahal & Bakhtiari; one farm in Kohkiloyeh &Boierahmad; and, one farm in West Azarbaijan.<br>1. **Origin of the disease:** still unknown, case is under investigation;<br>2. **Species affected** – *Onchorrhyncus mykiss* (Rainbow trout), 5 months old;<br>3. **Clinical signs** –pinpoint haemorrhages in visceral organs, pale gills, ascites, exophthalmia, bleeding under the skin around the base of pectoral and pelvic fins;<br>4. **Pathogen** – VHSV;<br>5. **Mortality rate** – 10-30%,<br>6. **Economic loss** – not calculated yet<br>7. **Geographic extent** – Chaharmahal & Bakhtiari; Kohgiloye & Boirahmad; West Azarbaijan;<br>8. **Control measures** – emergency harvest, stamping out of juveniles, fallowing;<br>9. **Laboratory confirmation** – Real-time and nested PCR, ELISA, histopathology; confirmed by Centre of Veterinary Laboratory (CVL) and Mashhad PCR Lab;<br>10. **Publications** – None. |

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

**Country: JAPAN** **Period: January - March 2015**

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | 0000 | 0000 | 0000 | I | |
| 2. Infectious haematopoietic necrosis | + | + | + | I,III | 1 |
| 3. Spring viraemia of carp (SVC) | 0000 | 0000 | 0000 | I | |
| 4. Viral haemorrhagic septicaemia (VHS) | + | +( ) | +( ) | I,III | 2 |
| 5. Infection with *Aphanomyces invadans* (EUS) | -(2014) | -(2014) | -(2014) | I | |
| 6. Red seabream iridoviral disease (RSID) | -(2014) | -(2014) | -(2014) | I | |
| 7. Koi herpesvirus disease (KHV) | -(2014) | -(2014) | -(2014) | I | |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | 0000 | 0000 | 0000 | I | |
| 9. Viral encephalopathy and retinopathy | -(2014) | -(2014) | -(2014) | I | |
| 10.Enteric septicaemia of catfish | - (2010) | -(2010) | -(2010) | I | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | 0000 | 0000 | 0000 | I | |
| 2. Infection with *Perkinsus olseni* | - (2007) | -(2007) | -(2007) | I | |
| 3. Infection with abalone herpesvirus | 0000 | 0000 | 0000 | I | |
| 4. Infection with *Xenohaliotis californiensis* | +?( ) | -(2015) | -(2015) | III | 3 |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | -(2014) | -(2014) | -(2014) | I | |
| 6. Acute viral necrosis (in scallops) | 0000 | 0000 | 0000 | I | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | 0000 | 0000 | 0000 | I | |
| 2. White spot disease (WSD) | -(2014) | -(2014) | -(2014) | I | |
| 3. Yellowhead disease (YHD) | 0000 | 0000 | 0000 | I | |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | 0000 | 0000 | 0000 | I | |
| 5. Infectious myonecrosis (IMN) | 0000 | 0000 | 0000 | I | |
| 6. White tail disease (MrNV) | 0000 | 0000 | 0000 | I | |
| 7. Necrotising hepatopancreatitis (NHP) | 0000 | 0000 | 0000 | I | |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | 0000 | 0000 | 0000 | I | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | 0000 | 0000 | 0000 | I | |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | -(2012) | -(2012) | -(2012) | I | |
| 2. Infection with *Batrachochytrium dendrobatidis* | -(2009) | -(2009) | -(2009) | I | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. | | | | | |
| 2. | | | | | |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

## 1. Epidemiological comments:

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

| Comment No. | |
|---|---|
| 1 | **Infectious haematopoietic necrosis (IHN)**<br><br>1. **Reported in** 12 prefectures;<br>2. **Species affected** – Amago (*Onchorynchus rhodorus*), masou (*O. masou*), rainbow trout (*O. mykiss*), Iwana (*Salvelinus leucomaensis*);<br>3. **Disease characteristics** – mortality; pale gills, liver and kidney (anemia); threadbare gills; darkening of the skin; exophthalmia; petechial haemorrhages internally and externally; distended abdomen;<br>4. **Pathogen** – Infectious haematopoietic necrosis virus;<br>5. **Mortality rate** – 1-100%;<br>6. **Economic loss** –;<br>7. **Geographic extent** – Hokkaido, Honshu;<br>8. **Preventive/control measures** – disinfection of equipment and tanks; removal of dead fish; use of disinfected eggs;<br>9. **Laboratory confirmation** – gross clinical observation, PCR, RT-PCR and/or isolation of the virus by prefectural research laboratories;<br>10. **Publications** – None. |
| 2 | **Viral haemorrhagic septicaemia (VHS)**<br><br>1. **Reported in** 2 prefectures;<br>2. **Species affected** – Olive flounder (*Paralichthys olivaceus*), red seabream (*Pagrus major*);<br>3. **Disease characteristics** – mortality; petechiae on the gills;<br>4. **Pathogen** – VHSV;<br>5. **Mortality rate** – 0.02-4.5 %;<br>6. **Economic loss** –;<br>7. **Geographic extent** – Shikoku and Kyushu;<br>8. **Preventive/control measures** – feed restriction, removal of dead fish;<br>9. **Laboratory confirmation** – gross clinical observation or PCR by prefectural research laboratories;<br>10. **Publications** – None. |

| | |
|---|---|
| 3 | **Infection with *Xenohaliotis californiensis***<br><br>1. **Reported in** 1 prefectures;<br>2. **Species affected** – *Haliotis gigantea*;<br>3. **Disease characteristics** – none;<br>4. **Pathogen** – *Xenohaliotis californiensis*;<br>5. **Mortality rate** – 0%;<br>6. **Economic loss** –;<br>7. **Geographic extent** –Honshu;<br>8. **Preventive/control measures** – culling of infected juveniles, disinfection of equipment and tanks;<br>9. **Laboratory confirmation** –PCR by prefectural research laboratory;<br>10. **Publications** – None. |

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

**Country: MALAYSIA** **Period: January - March 2015**

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 2. Infectious haematopoietic necrosis | 0000 | 0000 | 0000 | I,II,III | |
| 3. Spring viraemia of carp (SVC) | 0000 | 0000 | 0000 | I,II,III | 1 |
| 4. Viral haemorrhagic septicaemia (VHS) | 0000 | 0000 | 0000 | I,II,III | |
| 5. Infection with *Aphanomyces invadans* (EUS) | (1986) | (1986) | (1986) | I.II | |
| 6. Red seabream iridoviral disease (RSID) | - | - | - | I,II,III | |
| 7. Koi herpesvirus disease (KHV) | - | - | - | I,II,III | 2 |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | - | - | - | III | 3 |
| 9. Viral encephalopathy and retinopathy | - | - | - | III | 4 |
| 10.Enteric septicaemia of catfish | 0000 | 0000 | 0000 | | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | 0000 | 0000 | 0000 | | |
| 2. Infection with *Perkinsus olseni* | 0000 | 0000 | 0000 | III | |
| 3. Infection with abalone herpes-like virus | 0000 | 0000 | 0000 | | |
| 4. Infection with *Xenohaliotis californiensis* | | | | | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | 0000 | 0000 | 0000 | | |
| 5. Acute viral necrosis (in scallops) | 0000 | 0000 | 0000 | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | - | - | - | I,III | 5 |
| 2. White spot disease (WSD) | + | + | + | I,III | 6 |
| 3. Yellowhead disease (YHD) | - | - | - | I,III | 7 |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | + | - | - | I,III | 8 |
| 5. Infectious myonecrosis (IMN) | - | - | - | III | 9 |
| 6. White tail disease (MrNV) | - | - | - | III | 10 |
| 7. Necrotising hepatopancreatitis (NHP) | - | - | - | III | 11 |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | 0000 | 0000 | 0000 | | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | 0000 | 0000 | 0000 | | |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | - | - | - | | |
| 2. Infection with *Batrachochytrium dendrobatidis* | 0000 | 0000 | 0000 | | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| | | | | | |
| | | | | | |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infectious salmon anaemia; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*; *Xenohaliotis californiensis*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

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

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

## 1. Epidemiological comments:

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

| Comment No. | |
|---|---|
| 1 | **Spring viraemia of carp**<br>1. No positive cases detected (PCR) during DoF active surveillance programme |
| 2 | **Koi herpesvirus disease**<br>1. One positive case detected (PCR) on September at Perak, during DoF active surveillance programme |
| 3 | **Grouper Iridoviral disease (GIV)**<br>1. No positive cases detected (PCR) during DoF active surveillance programme |
| 4 | **Viral encephalopathy and retinopathy**<br>1. No positive cases detected (PCR) during DoF active surveillance programme |
| 5 | **Taura syndrome virus (TSV)** (*Penaeus monodon, Litopenaeus vannamei*)<br>1. No positive cases detected (PCR) during DoF active surveillance programme |

| | |
|---|---|
| 6 | **White Spot Syndrome Virus (WSSV)**<br>1. Two (2) cases of WSSV were detected in January from Perak and Selangor in the samples sent to Private Laboratory for routine and monitoring purposes.<br>2. One (1) case of WSSV was detected in February from Terengganu in the samples sent to Private Laboratory for routine and monitoring purposes;<br>3. Two (2) cases of WSSV were detected in March from Selangor and Selangor in the samples sent to Private Laboratory for routine and monitoring purposes for *P. monodon* and *L. vannamei*. |
| 7 | **Yellow head disease (YHV)** (*P. monodon, Litopenaeus vannamei*)<br>1. No positive cases detected (PCR) during DoF active surveillance programme |
| 8 | **Infectious hypodermal and haematopoietic necrosis virus (IHHNV)** (*Macrobrachium rosenbergii*, *P. monodon, L. vannamei*)<br>1. One (1) case of IHHNV was detected in January from Perak in the samples sent to Private Laboratory for routine and monitoring purposes. |
| 9 | **Infectious Myonecrosis (IMNV)**<br>1. No positive cases detected (PCR) during DoF active surveillance programme |
| 10 | ***Macrobrachium rosenbergii* Nodavirus (MrNV)**<br>No samples were tested for MrNV |
| 11 | **Necrotising hepatopancreatitis (NHPB)**<br>No samples were tested for NHPB. |

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

**Country: MYANMAR** **Period: January - March 2015**

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | *** | *** | *** | | |
| 2. Infectious haematopoietic necrosis | *** | *** | *** | | |
| 3. Spring viraemia of carp (SVC) | *** | *** | *** | | |
| 4. Viral haemorrhagic septicaemia (VHS) | *** | *** | *** | | |
| 5. Infection with *Aphanomyces invadans* (EUS) | *** | *** | *** | | |
| 6. Red seabream iridoviral disease (RSID) | *** | *** | *** | | |
| 7. Koi herpesvirus disease (KHV) | | | | | |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | *** | *** | *** | | |
| 9. Viral encephalopathy and retinopathy | *** | *** | *** | | |
| 10.Enteric septicaemia of catfish | *** | *** | *** | | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | | | | | |
| 2. Infection with *Perkinsus olseni* | | | | | |
| 3. Infection with abalone herpesvirus | | | | | |
| 4. Infection with *Xenohaliotis californiensis* | | | | | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | | | | | |
| 6. Acute viral necrosis (in scallops) | | | | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | - | - | - | III | 1 |
| 2. White spot disease (WSD) | - | - | - | III | |
| 3. Yellowhead disease (YHD) | - | - | - | III | |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | - | - | - | III | |
| 5. Infectious myonecrosis (IMN) | *** | *** | *** | | |
| 6. White tail disease (MrNV) | *** | *** | *** | | |
| 7. Necrotising hepatopancreatitis (NHP) | *** | *** | *** | | |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | *** | *** | *** | | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | *** | *** | *** | | |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | | | | | |
| 2. Infection with *Batrachochytrium dendrobatidis* | | | | | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. Parasitic disease | | | | | 2 |
| 2. Bacterial disease | | | | | 2 |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

**1. Epidemiological comments:**

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

| Comment No. | |
|---|---|
| 1 | During this period, we have received 6 samples of crustaeans (2 frozen shrimp, 2 soft shell crab, and 2 alive shrimps for export) for testing, and found that all samples were negative for WSSV, YHV and TSV. |
| 2 | Visited some fish farms in Yangon, Mandalay and Ayeyarwaddy regions during this period. Parasitic infestations (*Dactylogyrus* spp. *Ergasilus* spp., *Argulus* spp., *Trichodina* spp., and protozoans) and bacterial disease (*Streptococcus* sp.) were found in some farms due to poor water quality. |
| 3 | |

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

**Country: PHILIPPINES** **Period: January - March 2015**

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 2. Infectious haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 3. Spring viraemia of carp (SVC) | 0000 | 0000 | 0000 | III | |
| 4. Viral haemorrhagic septicaemia (VHS) | 0000 | 0000 | 0000 | | |
| 5. Infection with *Aphanomyces invadans* (EUS) | -(2002) | -(2002) | -(2002) | I | 1 |
| 6. Red seabream iridoviral disease (RSID) | 0000 | 0000 | 0000 | III | 2 |
| 7. Koi herpesvirus disease (KHV) | 0000 | 0000 | 0000 | III | 3 |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | -(2008) | -(2008) | -(2008) | III | |
| 9. Viral encephalopathy and retinopathy | - | - | - | III | 4 |
| 10.Enteric septicaemia of catfish | *** | *** | *** | | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | 0000 | 0000 | 0000 | | |
| 2. Infection with *Perkinsus olseni* | 0000 | 0000 | 0000 | | |
| 3. Infection with abalone herpesvirus | *** | *** | *** | | |
| 4. Infection with *Xenohaliotis californiensis* | *** | *** | *** | | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | 0000 | 0000 | 0000 | | |
| 6. Acute viral necrosis (in scallops) | *** | *** | *** | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | 0000 | 0000 | 0000 | III | 5 |
| 2. White spot disease (WSD) | + | + | + | III | 6 |
| 3. Yellowhead disease (YHD) | -(1999) | -(1999) | -(1999) | III | 7 |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | + | + | + | III | 8 |
| 5. Infectious myonecrosis (IMN) | 0000 | 0000 | 0000 | III | 9 |
| 6. White tail disease (MrNV) | 0000 | 0000 | 0000 | III | |
| 7. Necrotising hepatopancreatitis (NHP) | 0000 | 0000 | 0000 | III | 10 |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | *** | *** | *** | | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | + ( ) | - | - | III | 11 |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | *** | *** | *** | | |
| 2. Infection with *Batrachochytrium dendrobatidis* | *** | *** | *** | | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. | | | | | |
| 2. | | | | | |

**DISEASES PRESUMED EXOTIC TO THE REGION**[b]
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

### 1. Epidemiological comments:

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

| Comment No. | |
|---|---|
| 1 | Two hundred seventy five (275) samples (155 *Anguilla spp* ., 120 *Monopterus albus*) were negative for Infection with *Aphanomyces invadans* (EUS) by gross morphological examination. Samples were from Rizal, General Santos, Cotabato, Isabela and Negros Occidental. Examinations were conducted by the Bureau of Fisheries and Aquatic Resources (BFAR) Central Office Fish Health Laboratory. |
| 2 | Four (4) samples (2 seabass and 2 siganid) were analyzed using PCR test. All samples showed negative results for Red Seabream Iridoviral Disease. Samples were collected from Sarangani Province. Examinations were conducted by Southeast Asian Fisheries Development Center/Aquaculture Department (SEAFDEC/AQD) Laboratory. |
| 3 | Four (4) samples of Koi carp were analyze using PCR test. All samples showed negative results for Koi Herpes Virus. The samples were collected from Pampanga. Examinations were conducted by BFAR Central Office Laboratory |
| 4 | Twelve (12) samples of snapper, seabass, grouper, siganid, *S.guttatus* and *T.nilotica* were analyzed using PCR test. All samples showed negative results for Viral Encephalopathy and Retinopathy (VER). Samples were collected from Sarangani Province, Iloilo, and Negros Occidental. Examinations were conducted by SEAFDEC/AQD. |

| | |
|---|---|
| 5 | Two hundred two (202) samples-(180 *P.*vannamei, 21 *P.monodon,* 1 *M.rosenbergii*) of different stages (brood stock, adult, fry and juvenile) were analyzed using PCR test. All samples showed negative results for Taura Syndrome. The samples were collected from Bulacan, Bohol, Quezon, Batangas, Zamboanga, Pangasinan, Davao del Sur, Cebu City, Leyte, Sarangani Province, Lanao del Norte, Zambales, Bataan, Rizal,, Antique, Iloilo, Negros Occidental, Catanduanes, Camarines Norte, Camarines Sur and Oriental Mindoro. Other samples are imported from Hawaii, U.S.A. Examinations were conducted by BFAR Central Office, BFAR Region 3, BFAR Region 4-A, BFAR Region 5, BFAR Region 6, BFAR Region 7, CARAGA Region and SEAFDEC/AQD Laboratories. |
| 6 | Five hundred forty one (541) samples of *P.vannamei, P.monodon, S.serrata* and *M.rosenbergii* of different stages (fry, juvenile, adult and brood stock) were tested using PCR. One hundred seventeen samples (73 *P.vannamei,* 25 *P.monodon,* 1 *M. Rosenbergii,* 2 *S.serrata* and 16 wild shrimp ) were positive for White Spot Syndrome Virus. The positive samples were from Quezon, Zamboanga, Pangasinan, Davao del Sur, Lanao del Norte, Batangas, Sarangani Province, Rizal, Bulacan, Aklan , Cebu, Iloilo, Negros Occidental, Catanduanes, Masbate, Camarines Norte, Camarines Sur and Oriental Mindoro. Examinations were conducted by BFAR Central Office, BFAR Region 3, BFAR Region 4-A, BFAR Region 5, BFAR Region 6, BFAR Region 7, CARAGA Region and SEAFDEC/AQD Laboratories. |
| 7 | One hundred forty four (144) samples (131 *P.vannamei*, 12 *P.monodon,* 1 *M.rosenbergii*) in different stages were analyzed using PCR test. All samples showed negative results for Yellowhead Disease. The samples were collected from Bulacan, Bohol, Quezon, Batangas, Zamboanga, Pangasinan, Davao del Sur, Cebu, Leyte, Sarangani Province, Lanao del Norte, Zambales, Bataan, Rizal, Iloilo, Negros Occidental and Oriental Mindoro. Other samples were imported from Hawaii, U.S.A. Examinations were conducted by BFAR Central Office and SEAFDEC/AQD Laboratories. |
| 8 | Three hundred forty five (345) samples of *P.vannamei, P.monodon, M.rosenbergii* and *S.serrata* of different stages (broodstock, adult, fry and juvenile) were analyzed using PCR test. Two hundred twenty six (88 *P.monodon,*35 *P.vannamei,* 2 *S.serrata* and 1 *P.indicus*) samples showed positive results for Infectious hypodermal and haematopoietic necrosis (IHHN). The positive samples were collected from Bulacan, Quezon, Zamboanga, Pangasinan, Zambales, Davao del Sur, Lanao del Norte, Aklan, Iloilo, Bohol, Cavite, Capiz and Batangas. Examination was conducted by BFAR Central Office, BFAR 4-A, BFAR Region 6, BFAR Region 7 and SEAFDEC/AQD Laboratories. |
| 9 | Two hundred sixty four (264) samples (242 *P.*vannamei, 15 *P.monodon,* 1 *M.rosenbergii* and 6 crab) of different stages were analyzed using PCR test. All samples showed negative results for Infectious myonecrosis (IMNV). The samples were collected from Bulacan, Bohol, Quezon, Batangas, Zamboanga, Pangasinan, Davao del Sur, Cebu, Leyte, Sarangani Province, Zambales, Lanao del Norte, Rizal, Bataan, Iloilo, Negros Occidental, Antique, Bohol and Oriental Mindoro. Other samples are imported from Hawaii, U.S.A. Examination was conducted by BFAR Central Office, BFAR Region 4-A, BFAR Region 6, BFAR Region 7, CARAGA Region and SEAFDEC/AQD Laboratories. |
| 10 | One hundred forty seven (147) samples (135 *P.vannamei*, 12 *P.monodon)* of different stages were analyzed using PCR test. All samples showed negative results for Necrotising Hepatopancreatitis (NHPB). The samples were collected from Bulacan, Quezon, Batangas, Zamboanga, Pangasinan, Davao del Sur, Cebu, Leyte, Sarangani Province, Zambales, Bataan and Oriental Mindoro. Other samples are imported from Hawaii, U.S.A.. Examination was conducted by BFAR Central Office and BFAR Region 7 Laboratories. |
| 11 | One hundred seventy (170) samples of *P.vannamei, P.monodon)* of different stages (fry, juvenile and adult) were tested using PCR. Fifteen (15) *P.vannamei* samples were positive for Acute Hepatocpancreatic Necrosis Disease (APHND). The positive samples were from Bulacan, Batangas, Cebu and Pangasinan. Examinations were conducted by BFAR Central Office, BFAR Region 7, CARAGA Region and BFAR Region 3 Laboratories. |

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

## Country: SINGAPORE Period: January - March 2015

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 2. Infectious haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 3. Spring viraemia of carp (SVC) | 0000 | 0000 | 0000 | | |
| 4. Viral haemorrhagic septicaemia (VHS) | 0000 | 0000 | 0000 | | |
| 5. Infection with *Aphanomyces invadans* (EUS) | 0000 | 0000 | 0000 | | |
| 6. Red seabream iridoviral disease (RSID) | (2014) | (2014) | + | III | 1 |
| 7. Koi herpesvirus disease (KHV) | (2012 ) | (2012) | (2012) | III | 2 |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | (2014) | (2014) | (2014) | III | |
| 9. Viral encephalopathy and retinopathy | + | (2015) | (2015) | III | 3 |
| 10.Enteric septicaemia of catfish | *** | *** | *** | | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | *** | *** | *** | | |
| 2. Infection with *Perkinsus olseni* | *** | *** | *** | | |
| 3. Infection with abalone herpesvirus | *** | *** | *** | | |
| 4. Infection with *Xenohaliotis californiensis* | *** | *** | *** | | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | *** | *** | *** | | |
| 6. Acute viral necrosis (in scallops) | *** | *** | *** | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | 0000 | 0000 | 0000 | | |
| 2. White spot disease (WSD) | (2013) | (2013) | (2013) | III | 4 |
| 3. Yellowhead disease (YHD) | 0000 | 0000 | 0000 | | |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | 0000 | 0000 | 0000 | | |
| 5. Infectious myonecrosis (IMN) | 0000 | 0000 | 0000 | | |
| 6. White tail disease (MrNV) | *** | *** | *** | | |
| 7. Necrotising hepatopancreatitis (NHP) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | *** | *** | *** | | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | 0000 | 0000 | 0000 | II | 5 |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | *** | *** | *** | | |
| 2. Infection with *Batrachochytrium dendrobatidis* | (2014) | (2014) | + | III | 6 |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. Infectious spleen and kidney necrosis virus (ISKNV) (marine and ornamental fish) | (2014) | (2014) | (2014) | III | 1 |
| 2. *Aeromonas salmonicida* (in goldfish) | 0000 | 0000 | 0000 | III | 7 |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

**1. Epidemiological comments:**

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

| Comment No. | |
|---|---|
| 1 | **Red seabream iridovirus (RSIV)** was detected by PCR in diseased Asian seabass from a floating netcage farm in March. The farmer had reported on-going mortalities in both seabass and mullet species. RSIV was not detected in mullet samples collected. A combination of poor water conditions from a dinoflagellate bloom and disease eventually resulted in 92.5% mortality (survival of 7.5%) in the batch of Asian seabass. **Infectious spleen and kidney necrosis virus (ISKNV)** was detected in oen batch of hybrid grouper in January and three batches of mullet in March from floating netcage farms. RSIV and ISKNV were not detected in 18 batches of diseased marine food fish this quarter by PCR. There were no ornamental fish tested for ISKNV this quarter as no diseased susceptible species were observed on premises. |
| 2 | **Koi herpesvirus (KHV)** was not detected in 35 batches of ornamental koi this quarter by qPCR. Fish tested were from surveillance programs on imported and locally farmed ornamental fish. The last detection of KHV in local koi was in September 2012. |
| 3 | **Viral nervous necrosis virus (VNNV)** was detected via RT-PCR in a batch of 2-week old, locally sourced, diseased seabass fry from a landbased hatchery. All affected fry were culled and the hatchery disinfected. The virus was not detected in 44 other batches of diseased marine food fish submitted this quarter. |
| 4 | **White spot syndrome virus (WSSV)** was not detected by qPCR in 19 batches of imported and locally farmed ornamental crustaceans (shrimps and crayfish) submitted from targeted surveillance program, and in 280 *L. vannamei* submitted from a local broodstock farm this quarter. |

| | |
|---|---|
| 5 | Lesions suggestive of **Acute hepatopancreatic necrosis disease (AHPND)** were not detected on histopathological examination of 13 batches of *L. vannamei* submitted from a local broodstock farm this quarter. |
| 6 | ***Batrachochytrium dendrobatidis* (Bd)** was detected by qPCR in skin swabs in March 2015, from a batch of African clawed frogs imported from China. The positive batch of frogs was humanely euthanized using MS-222 and follow-up investigations revealed Bd infection in another batch in the premise of the same supplier. All susceptible species (African clawed frogs and Red-bellied newts) in the farm were euthanized. Cleaning and disinfection of the equipment and premises were carried out as part of eradication efforts. The Competent Authority of the exporting country ws informed of the detection of Bd in this batch of amphibians. |
| 7 | ***Aeromonas salmonicida*** was not detected in 10 batches of goldfish submitted under a targeted surveillance program to meet Australia's export requirements this quarter. |

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

## Country: THAILAND Period: January - March 2015

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | 0000 | 0000 | 0000 | III | |
| 2. Infectious haematopoietic necrosis | 0000 | 0000 | 0000 | III | |
| 3. Spring viraemia of carp (SVC) | 0000 | 0000 | 0000 | III | |
| 4. Viral haemorrhagic septicaemia (VHS) | 0000 | 0000 | 0000 | III | |
| 5. Infection with *Aphanomyces invadans* (EUS) | (2009) | (2009) | (2009) | II | |
| 6. Red seabream iridoviral disease (RSID) | 0000 | 0000 | 0000 | III | |
| 7. Koi herpesvirus disease (KHV) | (2011) | (2011) | (2011) | III | |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | *** | *** | *** | | |
| 9. Viral encephalopathy and retinopathy | - | - | - | III | |
| 10.Enteric septicaemia of catfish | 0000 | 0000 | 0000 | II | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | 0000 | 0000 | 0000 | | |
| 2. Infection with *Perkinsus olseni* | 0000 | 0000 | 0000 | III | |
| 3. Infection with abalone herpesvirus | 0000 | 0000 | 0000 | | |
| 4. Infection with *Xenohaliotis californiensis* | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | 0000 | 0000 | 0000 | | |
| 6. Acute viral necrosis (in scallops) | *** | *** | *** | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | - | - | - | III | |
| 2. White spot disease (WSD) | +( ) | - | - | III | 1 |
| 3. Yellowhead disease (YHD) | +( ) | - | - | III | 2 |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | - | - | +( ) | III | 3 |
| 5. Infectious myonecrosis (IMN) | 0000 | 0000 | 0000 | III | |
| 6. White tail disease (MrNV) | +( ) | - | +( ) | III | 4 |
| 7. Necrotising hepatopancreatitis (NHP) | *** | *** | *** | | |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | *** | *** | *** | | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | +( ) | +( ) | +( ) | III | 5 |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | (2011) | (2011) | (2011) | III | |
| 2. Infection with *Batrachochytrium dendrobatidis* | 0000 | 0000 | 0000 | | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. | | | | | |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

**1. Epidemiological comments:**

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

| Comment No. | |
|---|---|
| 1 | A total of 159 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 1 specimen or 0.63 % recorded as PCR positive or carrying WSSV genes. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection. |
| 2 | A total of 156 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 2 specimens or 1.29 % recorded as RT-PCR positive or carrying YHV genes. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection. |
| 3 | A total of 159 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 2 specimens or 18.97 % recorded as RT-PCR positive or carrying MrNV genes. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection. |
| 4 | A total of 369 shrimp samples from shrimp farms had been tested at PCR Laboratories of the DOF under active surveillance. 70 specimens or 1.29 % recorded as RT-PCR positive or carrying YHV genes. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection. |
| 5 | A total of 584 shrimp samples from shrimp farms had been tested by PCR assay at the DOF's laboratories under active surveillance. 52 specimens or 8.91 % recorded as PCR positive for AHPND. Shrimp farms with positive testing results were subjected to health improvement, movement control, eradication and/or farm disinfection. |

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

**Country: VIETNAM** **Period: January - March 2014**

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | January | February | March | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 2. Infectious haematopoietic necrosis | 0000 | 0000 | 0000 | | |
| 3. Spring viraemia of carp (SVC) | 0000 | 0000 | 0000 | | |
| 4. Viral haemorrhagic septicaemia (VHS) | 0000 | 0000 | 0000 | | |
| 5. Infection with *Aphanomyces invadans* (EUS) | - | - | - | | |
| 6. Red seabream iridoviral disease (RSID) | 0000 | 0000 | 0000 | | |
| 7. Koi herpesvirus disease (KHV) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. Grouper iridoviral disease | 0000 | 0000 | 0000 | | |
| 9. Viral encephalopathy and retinopathy | 0000 | 0000 | 0000 | | |
| 10.Enteric septicaemia of catfish | + | + | + | I,II | 1 |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | 0000 | 0000 | 0000 | | |
| 2. Infection with *Perkinsus olseni* | - | - | - | | |
| 3. Infection with abalone herpesvirus | 0000 | 0000 | 0000 | | |
| 4. Infection with *Xenohaliotis californiensis* | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 5. Infection with *Marteilioides chungmuensis* | 0000 | 0000 | 0000 | | |
| 6. Acute viral necrosis (in scallops) | 0000 | 0000 | 0000 | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome (TS) | 0000 | 0000 | 0000 | | |
| 2. White spot disease (WSD) | + | + | + | I,III | 2 |
| 3. Yellowhead disease (YHD) | - | - | - | | |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | 0000 | 0000 | 0000 | | |
| 5. Infectious myonecrosis (IMN) | 0000 | 0000 | 0000 | | |
| 6. White tail disease (MrNV) | - | - | - | | |
| 7. Necrotising hepatopancreatitis (NHP) | 0000 | 0000 | 0000 | | |
| **Non OIE-listed diseases** | | | | | |
| 8. *Monodon* slow growth syndrome | - | - | - | | |
| 9. Acute hepatopancreatic necrosis disease (AHPND) | + | + | + | I,III | 3 |
| **AMPHIBIAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with Ranavirus | 0000 | 0000 | 0000 | | |
| 2. Infection with *Batrachochytrium dendrobatidis* | 0000 | 0000 | 0000 | | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| | | | | | |

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infection with HPR-deleted of HPR0 salmon anemia virus, Infection with salmon pancreas disease virus; Infection with *Gyrodactylus salaris*.
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Perkinsus marinus*.
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*).
**NOT LISTED BY THE OIE**
**Finfish**: Channel catfish virus disease

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | ?( ) | Presence of the disease suspected but not confirmed in a zone |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| ? | Suspected by reporting officer but presence not confirmed | 0000 | Never reported |
| +( ) | Occurrence limited to certain zones | - | Not reported (but disease is known to occur) |
| +?( ) | Confirmed infection/infestation limited to one or more zones of the country, but no clinical disease | (year) | Year of last occurrence |

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

### 1. Epidemiological comments:

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

| Comment No. | |
|---|---|
| 1 | **Enteric Septicaemia of Catfish**<br><br>Infection found in intensive catfish (*Pangasius micronema*, *P. hypophthalmus*) farms. The disease occurred in An Giang, Dong Thap and Vinh Long provinces. |
| 2 | **White Spot Disease (WSD)**<br><br>**Pathogen**: White spot syndrome virus (WSSV)<br>**Species affected:** *Penaeus monodon* and *Litopenaeus vannamei* (10-100 DOC)<br>**Name of affected area:** reported in 15 provinces (total area 1,679 ha) including Quang Binh, Quang Nam, Thua Thien Hue, Ba Ria-Vung Tau, Phu Yen, Ninh Thuan, Ho Chi Minh, Long An, Tien Gang, Ben Tre, Tra Vinh, Kien Gang, Soc Trang, Bac Lieu and Ca Mau.<br>**Mortality rate:** average to high, 100% in some cases within 10 d.<br>**Clinical signs:** lethargic or moribund shrimps aggregated at pond surface and edges, slow to erratic swimming behavior, overall body color often reddish, minute to large (0.5-2.0 mm diameter) white inclusions embedded in the cuticle;<br>**Control measures:** early harvest, strict isolation of infected ponds from movement, strengthened control of transportation, disinfection of infected ponds using Calcium hypochlorite (chlorine). |

| | |
|---|---|
| 3 | **Acute Hepatopancreatic Necrosis Diseae (AHPND)**<br><br>**Pathogen**: *Vibrio parahaemolyticus* with Phage A3<br>**Species affected:** *Penaeus monodon* and *Litopenaeus vannamei* (10-45 DOC)<br>**Name of affected area:** reported in 12 provinces and caused losses in total shrimp culture area of 443 ha. Affected provinces include Quang Nam, Ba Ria-Vung Tau, Ninh Thuan, Ho Chi Minh, Long An, Tien Giang, Tra Vinh, Ben Tre, Kien Gang, Soc Trang, Bac Lieu and Ca Mau.<br>**Mortality rate:** could reach 95% in intensive and semi-intensive farms;<br>**Clinical signs:** shrimps become lethargic with soft, darkened shells, mottling of the carapace. Pathology is limited to hepatopancreas.<br>**Control measures:** strict isolation of infected ponds from movement and transport controls, disinfection of infected ponds using Calcium hypochlorite (chlorine). |

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

# List of Diseases in the Asia-Pacific

## *Quarterly Aquatic Animal Disease Report (Beginning 2015)*

| **1. DISEASES PREVALENT IN THE REGION** | |
|---|---|
| **1.1 FINFISH DISEASES** | |
| **OIE-listed diseases** | **Non OIE-listed diseases** |
| 1. Epizootic haematopoietic necrosis | 1.Grouper iridoviral disease |
| 2. Infectious haematopoietic necrosis | 2.Viral encephalopathy and retinopathy |
| 3. Spring viraemia of carp (SVC) | 3.Enteric septicaemia of catfish |
| 4. Viral haemorrhagic septicaemia (VHS) | |
| 5. Infection with *Aphanomyces invadans* (EUS) | |
| 6. Red seabream iridoviral disease (RSID) | |
| 7. Koi herpesvirus disease (KHV) | |
| **1.2 MOLLUSC DISEASES** | |
| **OIE-listed diseases** | **Non OIE-listed diseases** |
| 1. Infection with *Bonamia exitiosa* | 1. Infection with *Marteilioides chungmuensis* |
| 2. Infection with *Perkinsus olseni* | 2. Acute viral necrosis (in scallops) |
| 3. Infection with abalone herpesvirus | |
| 4. Infection with *Xenohaliotis californiensis* | |
| **1.3 CRUSTACEAN DISEASES** | |
| **OIE-listed diseases** | **Non OIE-listed diseases** |
| 1. Taura syndrome (TS) | 1. Monodon slow growth syndrome |
| 2. White spot disease (WSD) | 2. Acute hepatopancreatic necrosis disease (AHPND) |
| 3. Yellowhead disease (YHD) | |
| 4. Infectious hypodermal and haematopoietic necrosis (IHHN) | |
| 5. Infectious myonecrosis (IMN) | |
| 6. White tail disease (MrNV) | |
| 7. Necrotising hepatopancreatitis (NHP) | |
| **1.4 AMPHIBIAN DISEASES** | |
| **OIE-listed diseases** | **Non OIE-listed diseases** |
| 1. Infection with Ranavirus | |
| 2. Infection with *Bachtracochytrium dendrobatidis* | |
| **2. DISEASES PRESUMED EXOTIC TO THE REGION** | |
| **2.1 Finfish** | |
| **OIE-listed diseases** | **Non OIE-listed diseases** |
| 1. Infection with HPRdeleted or HPR0 salmon anaemia virus | 1. Channel catfish virus disease |
| 2. Infection with salmon pancreas disease virus | |
| 3. Infection with *Gyrodactylus salaris* | |
| **2.2 Molluscs** | |
| **OIE-listed diseases** | **Non OIE-listed diseases** |
| 1. Infection with *Bonamia ostreae* | |
| *2.* Infection with *Marteilia refringens* | |
| *3.* Infection with *Perkinsus marinus* | |
| **2.3 Crustaceans** | |
| **OIE-listed diseases** | **Non OIE-listed diseases** |
| 1. Crayfish plague (*Aphanomyces astaci*) | |

# Recent Aquatic Animal Health Related Publications

**OIE Aquatic Animal Health Code, 18th Edition, 2015.** The OIE Aquatic Animal Health Code (the Aquatic Code) sets out standards for the improvement of aquatic animal health and welfare and veterinary public health worldwide, including through standards for safe international trade in aquatic animals (amphibians, crustaceans, fish and molluscs) and their products. The health measures in the Aquatic Code should be used by the veterinary authorities of importing and exporting countries to provide for early detection, reporting and control of agents pathogenic to aquatic animals and, in the case of zoonotic diseases, for humans, and to prevent their transfer via international trade in aquatic animals and aquatic animal products, while avoiding unjustified sanitary barriers to trade. The health measures in the Aquatic Code have been formally adopted by the World Assembly of OIE Delegates, which constitutes the organisation's highest decision-making body. The 18th edition includes an updated version of the table of contents, user's guide and glossary, and revised text in the following chapters: diseases listed by the OIE, import risk analysis, control of pathogenic agents in aquatic animal feed, general obligations related to certification, certification procedures, infection with Batrachochytrium dendrobatidis, infection with ranavirus and infection with *Perkinsus olseni*. In addition, the text in Articles X.X.7. and X.X.11. of disease-specific chapters has been merged, and some amendments have been made in Articles 10.4.4. and 10.4.6. The 18th edition also includes two new chapters: Recommendations for surface disinfection of salmonid eggs (4.4.) and Risk analysis for antimicrobial resistance arising from the use of antimicrobial agents in aquatic animals (6.5.).The Aquatic Animal Health Code is available for free download http://www.oie.int/en/international-standard-setting/aquatic-code/access-online/

**OIE Manual of Diagnostic Tests for Aquatic Animals, 2015.** The purpose of this manual is to provide a uniform approach to the detection of the diseases listed in the OIE *Aquatic Animal Health Code*, so that the requirements for health certification in connection with trade in aquatic animals and aquatic animal products can be met. It includes bibliographical references and a list of the OIE Reference Laboratories for amphibian, crustacean, fish and mollusc diseases. The manual is available for free download at http://www.oie.int/international-standard-setting/aquatic-manual/access-online/

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**WHO-FAO Food Hygiene (Basic Texts), 4th Edition, 2009**. World Health Organization and Food and Agriculture Organization of the United Nation, Rome, Italy. The Codex basic texts on food hygiene promote understanding of how rules and regulations on food hygiene are developed and applied. The General Principles of food hygiene cover hygiene practices from primary production through to final consumption, highlighting the key hygiene controls at each stage. This publication also contains the most internationally used description of the Hazard Analysis and Critical Control Point (HACCP) system and guidelines for its application. This fourth edition includes texts adopted by the Codex Alimentarius Commission up to 2009. The texts will be of use to government authorities, food industries, food handlers and consumers, as well as teachers and students of food hygiene.

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# List of National Coordinators*

| Country | Name and Address |
|---|---|
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* The matrix provides a list of National Coordinators and focal points nominated by governments for the *Asia-Pacific Quarterly Aquatic Animal Disease Reports*.

| | |
|---|---|
| **India** | Mr. Intisar Anees Siddiqui<br>Fisheries Research & Investigation Officer<br>Department of Animal Husbandry, Dairying and Fisheries<br>Ministry of Agriculture, Krishi Bhawan,<br>New Delhi 110114, India<br>Tel: +91-11-23389419/23097013 Fax: +91-11-23070370/23384030<br>E-mail: intisarsiddiqui@yahoo.co.in |
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|---|---|
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| **Pakistan** | Mr. Anser Mahmood Chatta<br>Deputy Fisheries Development Commissioner<br>Livestock Division, Ministry of Food, Agriculture and Livestock<br>10th Floor, Shaheed-e-Millat Secretariat (Livestock Wing) I<br>Islamabad, Pakistan<br>Fax: +9251 9212630; Tel: +9251 9208267,<br>ansermchatta@yahoo.com |
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| **Republic of Korea** | Dr. Myoung Ae Park<br>Director, Pathology Division<br>National Fisheries Research and Development Institute<br>152-1, Haeanro, Gijang-up<br>Gijang-gun, Busan 619-705<br>Korea<br>Tel: +82-51-7202470<br>E-mail: mapark@nfrdi.go.kr |
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| | |
|---|---|
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**Instructions on how to fill in the**
**QUARTERLY AQUATIC ANIMAL DISEASE REPORT**
(Revised during the Provisional Meeting of the AG[1], Bangkok, Thailand, November 7-9, 2001)

Symbols used in the report are similar to those used by FAO, OIE and WHO for the *Animal Health Yearbook*. Please read these instructions carefully before you fill in the forms.

Under the heading 'Country', please enter your country.

Under the heading 'Period', please enter the reporting quarter (months) and year, e.g. January to March 2002.

Under the heading "Month", please enter months of a quarter in question, e.g. January, February, March.

In "Level of Diagnosis", please enter the Level of Diagnosis used, e.g., I, II, or III. See Section C below.

In "Epidemiological Comment Numbers", please enter the serial numbers, and write your corresponding epidemiological comments on page 2. See Section D below for guidance on the subjects to be covered under Epidemiological Comments.

If an unknown disease of serious nature appears, please fill in the last line of the form, with additional information on "Level of Diagnosis" and "Epidemiological Comment Numbers" as above.

Please do not fail to enter "*******" or "**-**" as appropriate against each disease, which is essential to incorporate your information on the *Quarterly Aquatic Animal Disease Report (Asia and Pacific Region.)*

If you have new aquatic animal health regulations introduced within the past six months, please describe them under Section 2 on page 2.

Please use the following symbols to fill in the forms.

A. Symbols used for negative occurrence are as follows:

*** This symbol means that no information on a disease in question is available due to reasons such as lack of surveillance systems or expertise.

- This symbol is used when a disease is not reported during a reporting period. However the disease is known to be present in the country (date of last outbreak is not always known).

0000 This symbol is used when disease surveillance is in place and a disease has never been reported.

(year) Year of last occurrence (a disease has been absent since then).

B. Symbols used for positive occurrence are shown below.

+ This symbol means that the disease in question is reported or known to be present.

+? This symbol is used when the presence of a disease is suspected but there is no recognised occurrence of clinical signs of the disease in the country. Serological evidence and isolation of the causal agent may indicate the presence of the disease, but no confirmed report is available. **It is important that the species of animals to which it applies is indicated in the "Comments" on page 2 of the form if you use this symbol**.

+( ) These symbols mean that a disease is present in a very limited zone or zones as exceptional cases. It may also include the occurrence of a disease in a quarantine area.

? This symbol is used only when a disease is suspected by the reporting officer, but the presence of the disease has not been confirmed.

+?( ) These symbols mean that confirmed infection/infestation is limited to one of more zones of the country, but no clinical disease.

?( ) These symbols mean the presence of the disease suspected but not confirmed in a zone.

[1] Regional Advisory Group on Aquatic Animal Health (AG)

**C. Levels of Diagnosis**

| LEVEL | SITE | ACTIVITY |
|---|---|---|
| I | Field | Observation of animal and the environment<br>Clinical examination |
| II | Laboratory | Parasitology<br>Bacteriology<br>Mycology<br>Histopathology |
| III | Laboratory | Virology<br>Electron microscopy<br>Molecular biology<br>Immunology |

## D. Subjects to be covered in the Epidemiological Comments

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

**IMPORTANT**

Please send the **original report** or the best photocopy thereof to the OIE and/or NACA **by fax** and **registered airmail**. Faxed reports are needed to check whether or not the reports are all right. The deadline for submission of the reports is **two and a half months (75 days)** after the end of the quarterly period.

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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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