Animal health situation of the OIE Regional Commission for Asia, the Far East and Oceania in 2013

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28th Conference of the OIE Regional Commission for Asia, the Far East and Oceania
Cebu (Philippines) 18 to 22 November 2013
Members having submitted a Report on the Animal Health Situation for this Conference

20 Members

Australia
Bhutan
Brunei
China (People’s Rep. of)
Chinese Taipei
India
Iraq
Japan
Korea (Rep. of)
Mongolia

Myanmar
Nepal
New Caledonia
New Zealand
Papua New Guinea
Philippines
Russia
Singapore
Sri Lanka
Vietnam
Content

✓ Reported exceptional epidemiological events
✓ Six-monthly reports
✓ Transparency of the world animal health situation: trends in animal disease reporting to the OIE by OIE Members of the region (2005 – 1st semester 2013)
✓ Submission times of reports for 2012

REGIONAL SITUATION REGARDING SELECTED OIE-LISTED DISEASES

• Sheep and goat pox
• High pathogenic avian influenza due to H5N1 (HPAI H5N1)
• Low pathogenic avian influenza (LPAI)
• Classical swine fever (CSF)
• Foot and mouth disease (FMD)
• Infection with Perkinsus olseni

SITUATION REGARDING A NON OIE-LISTED DISEASE: Bovine anaemia caused by Theileria orientalis ikeda in New Zealand
Exceptional epidemiological events
Number and reasons for notification of exceptional epidemiological events reported by OIE Members in Asia, the Far East and Oceania

January 2012 - 31 October 2013

- First occurrence
- New host
- New strain
- Reoccurrence

- Highly path. avian influenza
- Foot and mouth disease
- Low pathogenic avian influenza (poultry)
- Sheep pox and goat pox
- Classical swine fever
- Avian chlamydiosis
- Infection with Perkinsus olseni
- Leishmaniosis
- Maedi-visna
- Newcastle disease
- O. w. screwworm (C. bezziana)
- Porcine reproductive/respiratory syndrome
- Rabies
- Viral haemorrhagic septicaemia
- White spot disease

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Six-monthly reports
Second six-monthly reports for 2012, by type of report (aquatic or terrestrial), received by the OIE (as of 31 October 2013)
First six-monthly reports for 2013, by type of report (aquatic or terrestrial), received by the OIE
(as of 31 October 2013)
Transparency of the world animal health situation

Trends in animal disease reporting to the OIE by OIE Members of the region compared to the worldwide situation

2005 – 1st semester 2013
Number of OIE Members in Asia, the Far East and Oceania having submitted six-monthly reports for terrestrial and/or aquatic animal diseases, for the period 2005 to first semester 2013 as of 31 October 2013

![Bar chart showing the number of OIE Members submitting reports for terrestrial and aquatic animal diseases from 2005 to 2013.](chart.png)
Evaluation of submission times of 2012 reports by OIE Members in the region
Immediate notifications reports:
Time observed between confirmation of an exceptional event and submission of the corresponding immediate notification to the OIE for OIE Members in Asia, the Far East and Oceania

January 2012 – 31 October 2013

- Within 24 hours after confirmation: 39%
- Between 2 and 7 days: 39%
- Between one week and one month: 15%
- More than one month: 7%
Six-monthly and annual reports:
Submission time of six-monthly and annual reports from OIE Members in Asia, the Far East and Oceania, and from all countries reporting to the OIE 2009 – 2012
Submission times of terrestrial and aquatic six-monthly reports from OIE Members in Asia, the Far East and Oceania, for the 1st semester of 2012

- Green: Submission time within 1 month after the end of the semester
- Light green: Submission time between 1 and 3 months after the end of the semester
- Light yellow: Submission time between 3 and 6 months after the end of the semester
- Orange: Submission time exceeding 6 months after the end of the semester
- Red: No report submitted

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Submission times of terrestrial and aquatic six-monthly reports from OIE Members in Asia, the Far East and Oceania, for the 2nd semester of 2012
Submission times of annual reports from OIE Members in Asia, the Far East and Oceania, for 2012
Situation in the Region regarding selected OIE-listed diseases
Sheep and goat pox
Sheep and goat pox

• Endemic in central and North Africa, the Middle East and some parts of South-East Asia

• caused by strains of capripoxvirus

• produces a characteristic clinical disease in fully susceptible breeds of sheep and goats

• In indigenous animals, generalised disease and mortality are less common → **Major constraint to the introduction of exotic breeds of sheep and goats** and to the development of intensive livestock production

Clinical presentation includes:
- Fever
- macules & papules on the body
- rhinitis, conjunctivitis
- Necrotic evolution of mucosae
- Common secondary pneumonia

**Morbidity rate:** Endemic areas 70–90%
**Mortality rate:** Endemic areas 5–10%, although can approach 100% in imported animals
Percentage of reporting OIE Members affected by sheep and goat pox in Asia, the Far East and Oceania, by semester between 2005 and 2012
Sheep and goat pox in Asia, the Far East and Oceania
2005-2013

- Present for more than eight years in Afghanistan, China (People’s Rep. of), India, Iran and Pakistan

- Iraq: disease present in 2007, 2008, and 2010 to 2013 (only information reported)

- Disease initially present but subsequently reported absent: Korea (Rep. of) (absent since 2008), Laos & Nepal (absent in 2012 in the 2 countries), Bangladesh (absent in 2nd semester 2012), Chinese Taipei (absent in 2nd semester 2012 and 1st semester 2013) and Vietnam (absent in 1st semester 2013)

- Russia: disease present in the eastern part of the country in 2008 and 2010 to 2012. In September 2012 and October 2013, reoccurrences of the disease in the area of Zabajkal Skij Kray were notified to the OIE through immediate notifications (last event resolved in October 2013)
Sheep and goat pox in Asia, the Far East and Oceania

- **Mongolia**: absent from 2010 onwards. In January 2013, Mongolia submitted an immediate notification to inform the OIE of a reoccurrence in the area of Dornogovi.

- **Malaysia** and **Sri Lanka**: reported the disease absent for at least the period from 2005 to 2013.

- 4 countries have only provided information for certain years, indicating the absence of the disease:

- Sheep and goat pox never reported in **Australia**, **Brunei**, **Fiji**, **Maldives**, **Micronesia (Fed. States of)**, **New Caledonia**, **New Zealand**, **Philippines**, **Singapore**, **Thailand** and **Vanuatu**.

- No information for sheep and goat pox: **Cambodia**, **Papua New Guinea** and **Timor-Leste**.
Evolution of sheep and goat pox in Asia, the Far East and Oceania between 2005 and 31 October 2013, and vaccination strategies applied in 2012 and the first half of 2013
Activities implemented by Veterinary Services for surveillance and control of sheep and goat pox

- **Chinese Taipei**: clinical surveillance routinely practised

- **Russia**: 9500 samples are due to be tested this year within the framework of an annual national surveillance programme

- **Chinese Taipei**, **Iran** and **Iraq** *routinely vaccinated* a high proportion of their national sheep and goat population (over 65%) in 2012

- **Pakistan** *routinely vaccinated* an equivalent of 0.5% of its national sheep and goat population in 2012

- **Afghanistan**, **Bangladesh**, **China (People’s Rep. of)**, **India** and **Russia** also implemented *routine vaccination* in 2012
Sheep and Goat pox in the region : Conclusion

• Sheep and goat pox has been present in Asia for decades

• The disease has caused production losses and the number of affected countries has been relatively stable in the past eight years (period of the analysis)

• A number of countries in Asia have implemented control programmes, notably involving the use of routine vaccination

• Additional efforts are necessary to better control and eradicate the disease in affected countries, and to prevent its spread to countries where the disease has never been identified, such as every country in Oceania
Highly pathogenic avian influenza due to H5N1
HPAI H5N1: Historical background

- **First reported in 1997** in Hong Kong (SAR-PRC), and affected a human.
- **2003-2004:** HPAI H5N1 restricted to South-East Asia.
- **2005:** it spread to Central Asia, Russia and Eastern Europe.
- **2006:** peak of the epidemics reached Africa, the Middle East and spread to Western Europe.
- **2008:** 15 countries / territories affected in the region.
- **2009-2010:** the number of affected countries slowly decreased.
- **2011:** 14 countries / territories affected in the region.
HPAI H5N1

• Typically high morbidity (respiratory signs, nervous signs and diarrhoea) is accompanied by high and rapidly escalating unexplained mortality.

• Since its emergence, this virus has been associated with continuing sporadic human cases, and a high case-fatality proportion of 59% in humans.

• During 2012, 32 human infections with H5N1 influenza were reported to the WHO and 20 of these cases were fatal.

• During 2012 and 2013, outbreaks of HPAI H5N1 have continued to be reported in poultry in 15 countries/territories in Asia, the Far East and Oceania.
Percentage of reporting OIE Members affected by HPAI H5N1 in Asia, the Far East and Oceania, by semester, between 2005 and 2012.
HPAI H5N1 in Asia, the Far East and Oceania
2005-2013

- Present for more than eight years: China (People’s Rep. of), Indonesia & Vietnam; present in India since 2006

- Cambodia: present between 2005 and 2012 & 2 exceptional events notified through immediate notifications in January 2013 and in August 2013

- Bangladesh, Hong Kong (SAR-PRC) and Nepal started to provide regular information on HPAI in WAHIS later and H5N1 has continuously been reported present since then (respectively since 2007, 2008 and 2009)

- Iran: absent since 2009 and reoccurrence in 2011 in the region of Mazandaran (event resolved in January 2012)

- Myanmar: absent since 2009 and reoccurrence in 2010; in 2012, the disease was still present in poultry in the region of Baigo Saigaing, whereas it has not been reported in wild birds since 2010

- Bhutan: had never reported HPAI until 2010, when outbreaks occurred near its southern border (last HPAI H5N1 event in this zone closed in April 2013)
HPAI H5N1 in Asia, the Far East and Oceania  
2005-2013

- **Chinese Taipei**: had never reported HPAI H5N1 until 2012, when infected pet birds were intercepted at the International Airport (in accordance with the provisions of the OIE *Terrestrial Animal Health Code*, this event did not affect Chinese Taipei’s H5N1 HPAI-free status)

- Korea (Dem. People’s Rep. of): absent at least since 2007, date of the first occurrence of HPAI due to H7N7 a new outbreak of HPAI due to H5N1 notified in May 2013 in a duck farm in P'yongyang-Si, closed in May 2013

- **Mongolia**: last occurrence in 2010 in poultry, and in 2012 in wild birds; HPAI reported absent in 2013

- **Russia**: last occurrence in 2008 in poultry, but disease still present in wild birds in 2012

- **Iraq**: last HPAI H5N1 outbreaks notified to the OIE in 2006

- In 4 countries, the date of last occurrence was in 2007 or 2008, after the pandemic crisis: **Afghanistan & Malaysia** (both 2007), **Pakistan & Thailand** (both 2008) – and 3 countries were affected for a longer period: **Laos** (until 2010) and **Japan & Korea (Rep. of)** (both until 2011)
### HPAI H5N1 in Asia, the Far East and Oceania

#### Country / Territory

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#### LEGEND

- Present
- Suspected
- Absent
- Never reported
- No information

#### Notes

- During 2005-2013, HPAI H5N1 was present in several countries in Asia, the Far East, and Oceania.
- Countries with no reported cases are marked as "Never reported."
### HPAI H5N1 in Asia, the Far East and Oceania
#### 2005-2013

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**Legend:**
- **Present**
- **Suspected**
- **Absent**
- **Never reported**
- **No information**
Evolution of HPAI H5N1 in Asia, the Far East and Oceania between 2005 and 31 October 2013, and cumulative number of poultry losses (dead or destroyed) during this period
Control measures for HPAI H5N1 indicated by countries/territories affected in 2012/2013

- **Stamping out** by all the countries affected in domestic birds

- **Zoning** by all the affected countries, with the exception of **India** (disease present for 8 years in certain zones), **Indonesia** (disease endemic) and **Russia** (disease identified only in wild birds)

- **Vaccination prohibited** in the majority of the affected countries; **mass vaccination** only applied by **China (People’s Rep. of)**, **Hong Kong (SAR-PRC)**, **Korea (Dem. People’s Rep. of)** and **Russia**
HPAI H5N1 control/eradication programmes

• Korea (Rep. of) and Vietnam: efforts to raise public awareness

• Korea (Rep. of): 100% compensation policy for losses

• Russia and Singapore conducted simulation exercises on HPAI in 2012 and 2013

• Regional coordination: the Philippines participated in Association of Southeast Asian Nations (ASEAN) meetings in Indonesia in April 2013 on the subject of HPAI

• The Philippines highlighted difficulties encountered in implementing its control programme for AI:
  - lack of technical staff to handle the programme
  - limited procurement of diagnostic kits and reagents
Conclusions

- HPAI H5N1 is a **major disease** in the region and has caused losses in poultry and some sporadic cases of infection in humans since it was first reported in late 2003.

- Since the peak of the disease in 2006, the number of countries affected has decreased, thanks to early detection and rapid response, and **major efforts** have been made at national and regional levels to control the disease during the past few years.

- However, some countries have experienced **difficulties in permanently eradicating the disease**, partly because wild birds have played an important role in its dissemination.

- The number of OIE Members affected by the disease in the region has not decreased since 2011 but has **stabilised**; additional efforts will be necessary to prevent the spread of the disease to currently non-affected countries, and to better control and eradicate the disease from affected countries.
Low pathogenic avian influenza
Low pathogenic avian influenza

• On **31 March 2013**, China (People’s Rep. of) notified WHO of 3 laboratory-confirmed cases of human infection with an influenza A (H7N9) virus not previously reported in humans

• As of 27 October 2013, a total of **136 confirmed cases** of human infection with avian influenza A (H7N9) virus had been reported to WHO by China (People’s Rep. of) and **one case** had been reported by Chinese Taipei; 45 of these cases were fatal

• LPAI due to virus strain H7N9 should therefore be notified to the OIE when it occurs in poultry and any occurrence of AI H7N9 in animal species other than poultry should, in view of its proven zoonotic impact, be notified to the OIE as an emerging disease as per chapter 1.1. of the *Terrestrial Animal Health Code*
Percentage of OIE reporting Members in Asia, the Far East and Oceania affected by LPAI, by semester, between 2005 and the first half of 2013

Stable trend
China (People’s Rep. of): no information for LPAI in poultry between 2006 and 2012

March 2013: all provinces were instructed to investigate the situation in animals

4 April 2013: the OIE was notified of the detection of a new strain of LPAI (H7N9) in a live bird market in Shanghai, control measures (especially stamping out) were implemented

4 April – 21 May 2013: 10 follow-up reports were submitted for 21 outbreaks of 53 cases in total, in the eastern part of the country - 2.8 million samples were tested & nearly 111,000 birds were destroyed (event still continuing). 132 human cases had been reported to WHO

Additional human cases were notified in July (2 cases) & October (2 cases), indicating that the virus is still circulating, but the OIE has not received any reports of animal cases

Methods of tracing back of human cases?
Methods of monitoring and sampling implemented in animals?
**LPAI in Asia, the Far East and Oceania**

2005-2013

- **Australia**: *First occurrence* of LPAI in January 2012, LPAI H5N3 detected during routine surveillance in the zone of Victoria (event resolved in June 2012); *reoccurrence* of LPAI H5N3 in March 2013 (event resolved in June 2013)

- **Chinese Taipei**: LPAI H5N2 identified in 2008; reoccurrence of serotype H5N2 in 2010 and in H7N3 also reported it in 2011. In August 2013, an *immediate notification* was submitted to the OIE for the detection of serotype H5N3 in the zone of Hua-Lien

- LPAI present, serotypes not reported: **Iran** (since 2007), **Iraq** (2007, 2008 and since 2010)

- **Korea (Rep. of)**: LPAI present since 2006; serotype H7N8 present in 2007, H5N2 in 2008 and H7N2, H7N6 and H7N7 in 2010

- **Nepal**: reoccurrence in 2011 and 2012 (serotypes not reported)

- **Sri Lanka**: in January 2012, LPAI H5N2 occurred in the region of Kurunegala (event closed in February 2012); LPAI absent since then
LPAI in Asia, the Far East and Oceania
2005-2013

- **Papua New Guinea**: LPAI suspected in 2010/2011, the country is working to characterise AI viruses circulating in wild and domestic birds and the preliminary results showed no circulating AI viruses in the populations sampled.

- **LPAI reported absent**: Bangladesh, Fiji, Korea (Dem. People’s Rep. of), Malaysia, Pakistan (information reported in an irregular manner for all), Afghanistan (absent since 2009), Japan (absent since 2010).

- **LPAI never reported**: Bhutan, Brunei, Indonesia, Laos, Maldives, Micronesia (Fed. States of), Mongolia, Myanmar, New Caledonia, New Zealand, Philippines, Singapore, Thailand and Vanuatu.

- **No information for LPAI**: Cambodia, India, Russia, Viet Nam and Leste.

In the absence of an active surveillance programme to sample poultry farms or wild birds, it is impossible to detect the presence of the virus.

**Bhutan, Myanmar, Singapore** and **Vietnam**: following the outbreak of AI H7N9 in China (People’s Rep. of) in April 2013, they have strengthened their surveillance and control and prevention measures for AI.
Evolution of LPAI in Asia, the Far East and Oceania between 2005 and 31 October 2013, and serotypes identified during this period
Control measures for LPAI indicated by OIE Members affected in 2012/2013 (as of 31 October 2013)

- 4 countries applied **stamping out**, especially **Australia, China (People’s Rep. of)** and **Sri Lanka**, which experienced exceptional LPAI events in 2012/2013

- **Vaccination prohibited** in **Australia, Chinese Taipei, Nepal** and **Sri Lanka**, whereas **Iran** and **Iraq**, where LPAI has been reported present for more than six years, applied **mass vaccination** in 2012/2013

- **Australia, China (People’s Rep. of)** and **Chinese Taipei** have applied **zoning** to control LPAI
LPAI : Conclusion

- LPAI has been present in many countries of the region for years; with 8 different serotypes of H5 and H7 viruses reported to the OIE since 2006.

- Most viruses of the H5 and H7 subtype isolated from birds have been of low virulence for poultry, but there is always a risk of their becoming virulent by mutation.

- Some of these viruses may also have considerable zoonotic potential, and the H7N9 event that occurred this year is a clear example of this.

- In order to know more about the epidemiology of these viruses, it is essential for all countries to apply proper surveillance programmes, including active surveillance, and report their findings in a timely manner and with maximum transparency.
Classical swine fever
Classical swine fever

• Highly contagious, supposed first record of CSF in 1833 in Ohio, USA

• Transmission mainly oronasal & often spread by feeding uncooked contaminated swill

• Can have a severe economic impact on the meat production industry as a result of widespread animal deaths, as well as trade restrictions on meat exports

• CSF has the potential to cause devastating epidemics particularly in previously free countries

Clinical presentation includes:
- Fever & Anorexia
- Hemorrhagic lesions of the skin, cyanosis of the skin especially of extremities in the acute form
- Diarrhea & Respiratory signs
- Abortion in the congenital form

Mortality rate: can approach 100% in young pigs

http://www.vetnext.com/search.php?s=aandoeninq&id=73310958261%20188
Percentage of reporting OIE Members affected by CSF in Asia, the Far East and Oceania, by semester, between 2005 and the first half of 2013
CSF in Asia, the Far East and Oceania
2005-2013

- Present for **more than 8 years**: China (People’s Rep. of), India, Indonesia, Laos, Nepal, Philippines, Russia, Thailand and Vietnam

- 4 other countries reported the presence of CSF in 2012/2013: Bhutan & Cambodia (CSF present since 2010), Mongolia (reoccurrence in September 2012 in the region of Darkhan-Uul, event resolved in October 2012), Singapore (infection detected in wild animals in 1st semester 2012, then CSF reported absent)


- CSF never reported: Afghanistan, Bangladesh, Brunei, Fiji, Iran, Iraq (last information provided in 2008), Maldives, Micronesia (Fed. States of), New Caledonia, Papua New Guinea, Vanuatu

- No information: Pakistan & Timor-Leste

Russia immediately notified the OIE of a **reoccurrence** in the region of Amurskaya Oblast in September 2013, in the Asian part of the country (event resolved in October 2013)

Philippines: shortage of technical staff to handle the control programme, the country is working on its revision to adapt it to the ASEAN Regional Framework for the Control and Eradication of CSF in South East Asia

Japan: guidelines for control of CSF were amended in June 2013; in particular, PCR testing at prefectural Veterinary Service centres is now regarded as the diagnostic method to enable prompt diagnosis in affected/suspected animals
Evolution of CSF in Asia, the Far East and Oceania between 2005 and 31 October 2013, and vaccination strategies applied in 2012 and 2013
Conclusion

• Altogether more than **240 000 pigs were lost** between 2005 and 2013 in the region

• In many OIE Members of the region, CSF is enzootic & good control can be achieved through **vaccination**

• Countries may encounter economic and technical difficulties in progressing towards effective control and eradication; also, dealing with the presence of **infection among wild boar**, acting as reservoirs, complicates the control of the disease

• However, in some other regions of the world CSF has been successfully eradicated, and it is possible to maintain CSF freedom

• In other countries of the region, CSF has never been reported or has been absent for decades. In such countries, strict controls on imports of pigs and pig products, together with regulation of swill feeding are necessary to prevent the introduction of the disease
Foot and mouth disease
Foot and Mouth Disease

- Causes trade disruption in countries or zones officially recognised as FMD free, resulting from the animal disease status of trading partners
- Has serious repercussions for livestock due to a reduced growth rate and to morbidity and mortality in young stock
- FMD exceptional events in 2013: China (People’s Rep. of), Russia & Mongolia (new FMD strain in the 3 countries: serotype A) and Chinese Taipei

Clinical presentation includes:
- Vesicles, erosions on oronasal mucous membranes & mammary glands
- Foot lesions
- Death of young animals from myocarditis in cattle

Morbidity rates: may approach 100%.
Mortality rate: 1–5% in adult animals, 20% or higher in young calves, lambs and piglets
### Member Countries in the Asia, the Far East and Oceania region with an OIE-recognised FMD status (country or zone) in 2013

<table>
<thead>
<tr>
<th>FMD free where vaccination is not practised</th>
<th>FMD free zone where vaccination is not practised</th>
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<tbody>
<tr>
<td>Australia</td>
<td>Malaysia (Zones detailed in the report)</td>
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<tr>
<td>Brunei</td>
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<td>Indonesia</td>
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<tr>
<td>Japan</td>
<td>Philippines (Zones detailed in the report)</td>
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<tr>
<td>New Caledonia</td>
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<td>New Zealand</td>
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<td>Singapore</td>
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<td>Vanuatu</td>
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Distribution of FMD status among the OIE Members of the Regional Commission between 2005 and the first half of 2013

- No report submitted
- FMD absent
- FMD suspected
- FMD present, serotype reported
- FMD present, serotype not reported
Evolution of FMD and its serotypes in Asia, the Far East and Oceania between 2005 and the first half of 2013.

Number of years of presence of FMD 2005-2013:
- Light gray: 1
- Light blue: 2
- Medium blue: 4
- Dark blue: 6
- Black: 8 or more
- No report submitted:
- Year of last occurrence:
- Never reported:

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Average of FMD losses reported in LSU by year between 2005 and the first half of 2013.
Average FMD losses reported, in LSU by year, for Members reporting FMD present for at least six years between 2005 and the first half of 2013

Countries affected

Iraq
Russia
Laos
Myanmar
Pakistan
Afghanistan
China
Nepal
Sri Lanka
Malaysia
Thailand
Bhutan
Cambodia
India
Vietnam
Iran

Losses in LSU

0
1000
2000
3000
Strategy for FMD control/eradication programmes

- **Australia, New Zealand** and **Singapore**: reviewed their **national contingency plans**

- **Japan**: **difficulty** encountered in the annual simulation exercise on FMD as the preparation for allocation of human resources was not sufficient in some prefectures

- **China (People’s Rep. of)**: implementation of a national FMD **training programme** for official veterinarians

- **Nepal**: in 2013, **workshop** on FMD control strategy organised by FAO in the eastern region of the country

- **Chinese Taipei, China (People’s Rep. of), Korea (Rep. of), Nepal**: **mass vaccination** policy
Strategy for FMD control/eradication programmes

• **Vietnam**: new budget for the FMD control programme approved (USD 32.5 million)

• **Iraq**: works together with the international roadmap for controlling FMD under the supervision of the OIE and the European Commission, through isolation and identification of the virus as a first priority for vaccine matching that will be used in livestock vaccination campaigns

• **Sri Lanka**: progressive control pathway developed, country resumed FMD vaccine production in 2012

• **Myanmar**: technical difficulties for production of vaccines in sufficient quantity & current capacity is only enough for controlling outbreaks and covering some hot-spot areas; existing programme to monitor the effectiveness of locally produced FMD vaccine
Infection with *Perkinsus olseni*
Infection with *Perkinsus olseni*

- Described for the 1st time in the 1980s in the South of Australia, subsequently occurred in Asia, the Far East and Oceania, Europe and South America

- Affects a wide range of mollusc species, especially clams

- Direct transmission & infections in clam hosts can be lethal (death may occur 1 or 2 years after infection)

- Frequently induces the formation of nodules & lesions that may interfere with respiration, reproduction, growth and/or survival → **impact on fishery productivity**

Regional annual production of farmed molluscs was at least 16.4 million tonnes in 2012, according to the information provided by countries through the countries’ OIE annual report
Percentage of reporting OIE Members affected by infection with *Perkinsus olseni* in Asia, the Far East and Oceania, by semester, between 2005 and the first half of 2013.
Infection with *Perkinsus olseni* in Asia, the Far East and Oceania
2005-2013

- **Australia**: disease present/suspected since 2005

- **New Zealand**: only identified in wild bivalves in the North Island between 2005 and 1st semester 2013; in August 2013, the occurrence of the disease in New Zealand paua (new host species) from a single aquaculture facility was notified.

- **Vietnam**: not reported until 2011; disease present in 2012 in Thai Binh, Ho Chi Minh and Quang Ninh provinces.

- **French Polynesia**: never reported before 2011, when clams collected within the framework of a research project, tested positive by PCR. The authorities assumed that the disease had probably been present for several years without being observed. The event was reported closed in December 2012, but in January 2013 the disease **reoccurred** as wild pearl oysters collected during routine surveillance tested positive by PCR. The event was reported closed in May 2013.
Infection with *Perkinsus olseni* in Asia, the Far East and Oceania

2005-2013

- **Disease absent**: Japan, New Caledonia, Korea (Dem. People’s Rep. of), Korea (Rep. of) (since 2007), Sri Lanka

- **Disease never reported**: Afghanistan, Bangladesh, Bhutan, China (People’s Rep. of), Fiji, Hong Kong (SAR–PRC), India, Indonesia, Laos, Malaysia, Maldives, Mongolia, Philippines, Singapore, Thailand, Chinese Taipei and Vanuatu

- **No information for Infection with *Perkinsus olseni***: Brunei, Cambodia, Iran, Iraq, Micronesia (Fed. States of), Myanmar, Nepal, Pakistan, Papua New Guinea, Russia and Timor-Leste
Infection with *Perkinsus olseni*: Conclusion

- The infection has been present in the region **for several decades**

- However, because of poor capacities or **inexistent surveillance programmes** in certain countries, the exact distribution of the disease is not yet known, with many countries not providing information to the OIE

- French Polynesia is an example of a territory that detected the pathogen within the context of a research project rather than through a surveillance system, and it is assumed that the disease had been present for years without being detected by the authorities → this example suggests that similar situations may occur elsewhere

- Infection with *Perkinsus olseni* is a **threat to mollusc farms and fisheries** in the region, especially since a number of OIE Members in the region are important mollusc producers
Situation in the region regarding a non-OIE-listed disease

Bovine anaemia caused by *Theileria orientalis ikeda*
Bovine anaemia caused by *Theileria orientalis ikeda* in New Zealand

- *Theileria sp.* is a protozoan of cattle biologically vectored by ticks – Causes anaemia, jaundice, abortion and mortality

- The first report of a *Theileria orientalis* in New Zealand in cattle was in 1982 & the infection was then shown to be relatively widespread in cattle from Northland

- In August 2012, a **new type** was identified in New Zealand: *T. orientalis ikeda* (previously reported in Asian countries such as Japan, Korea (Rep. of) as well as in Australia)

- In New Zealand, the first cases of *T. orientalis ikeda* were diagnosed in Northland; a total of 124 farms have been affected (average morbidity from 10% to 88% and average mortality was 1.6%)

- For the purpose of the OIE *Terrestrial Animal Health Code*, Chapter 11.13., theileriosis is defined as a highly fatal disease in cattle and buffaloes caused by *Theileria parva* and *T. annulata* → *T. orientalis* is thus not notifiable to the OIE; however, it will be interesting to follow the evolution of this new type in the region
Thank you for your attention