Regional activities of OIE Asia-Pacific
– programme highlights

OIE Regional Workshop for Newly Assigned Delegates
14 May 2008
Contents

• Programme D: Standardisation of veterinary biologics in harmonisation of control methods and techniques

• Programme F: Prevention and control of bovine spongiform encephalopathy (BSE) and other prion diseases / transmissible spongiform encephalopathies (TSEs) by strengthening risk analysis and diagnosis/surveillance
Contents

• Programme G: Prevention and control of main animal transboundary diseases (TADs)

• Programme H: Prevention and control of highly pathogenic avian influenza (HPAI) at source by
  • establishing national and regional strategies; and
  • strengthening laboratory diagnosis including provision of laboratory equipment/materials
1 VETERINARY BIOLOGICS
Standardisation of Veterinary Biologics (1)

Information sharing on legislation of veterinary medicinal products

• Attendance to the 2\textsuperscript{nd} Conference on International Harmonisation on Veterinary Medicinal Products (International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products (VICH)) in Tokyo, 2002

• Organised FMD Vaccines and Vaccination Meeting in collaboration with SEAFMD in 2003
Organised SE Asian sub-regional workshops on

- International / Regional Harmonisation of Veterinary Medicinal Products (Bogor, Indonesia, November 2006)
  - Experiences exchanged on international / national veterinary drug registration and quality control
- Harmonisation of Veterinary Vaccines (Pakchong, Thailand, January 2008)
  - Regional standards drafted for four vaccines
- Vaccine Production and GLP (to be held in Jakarta, Indonesia, November 2008)
1 VETERINARY BIOLOGICS
Detection of PrPSc by western blotting

Row 1, 2: Scrapie mouse: Positive control
3, 4: BSE cattle: Positive control
5, 6, 8, 9: Samples (Homogenate for ELISA)
7, 10: Samples
11: Normal cattle: Negative Control

OIE Reference Laboratory (National Institute of Animal Health, Tsukuba, Japan)
Prevention and control of BSE 2001-2002

Workshops and Meetings for updating information

- Regional Workshop on BSE Diagnosis and Surveillance (Bangkok, Thailand, November 2001)
- Regional BSE Meeting for Asia and the Pacific (Kathmandu, Nepal, November 2001)
- OIE/JLTA BSE Symposium (Tokyo, Japan, July 2002)
- Regional BSE Seminar and Workshop (Kuala Lumpur and Ipoh, Malaysia, October-November 2002)
Prevention and control of BSE
2003-08, with FAO-APHCA

Strategic workshops for various stakeholders to facilitate surveillance for BSE

(i) Hands-on Workshop on Diagnosis and Surveillance for laboratory staff of 10 member countries/territories (members),

(ii) Risk Analysis Forum for CVOs of 20 members Adopted recommendations for prevention and control of BSE in Asia and the Pacific region,

(iii) Public Awareness Consultation Meeting Drafted information papers for targeted groups of veterinary professionals; policy makers; farmers and the public/consumers (to be translated into local languages).

(Bangkok and Chiang Mai, Thailand, October 2003)
Prevention and control of BSE 2004-2007, with FAO-APHCA

Technical follow-up trainings and set up of a working group for a regional laboratory network

- Regional Workshop on BSE Diagnosis and Surveillance including ELISA and IHC for laboratory staff of 7 members in S Asia (Bangkok, Thailand, March 2005)
- First Advanced Hands-on Training Workshop on BSE Diagnosis i.e. Western Blotting for 5 members (Tsukuba, Japan, November 2005)
- Second Advanced Hands-on Training Workshop on BSE and other Prion Diseases Diagnosis for 6 members (Tsukuba and Tokyo, January 2007)
Prevention and control of BSE 2007-2008, with FAO-APHCA

- Regional Workshop on WTO’s SPS Agreement, using BSE as a model, for veterinary officers of 18 members (Chiang Mai, Thailand, July-August 2007)
  - Exercise on BSE status classification and measures to be taken for its improvement
- Regional Workshop of a BSE network on Diagnosis and Surveillance, to be held in Qingdao, China, 2008
2 BSE
3  GF-TADS
Prevention and Control of TADs

• Such as foot and mouth disease (FMD), highly pathogenic avian influenza (HPAI), classical swine fever (CSF), peste des petits ruminant (PPR) and brucellosis...

• By strengthening disease information systems; dissemination of disease knowledge; capacity building of laboratory diagnosis and legislation including animal quarantine
GF-TADs: FAO/OIE Global Framework for the Progressive Control of Transboundary Animal Diseases

Joint initiative of FAO and OIE, to

- Facilitate mechanism to empower regional alliances in the fight against TADs
- Provide capacity building and assist in programme formulation for the specific control of certain TADs based on regional priorities
GF-TADs

• Regional specialised organisations (RSOs): ASEAN, SAARC and SPC, and regional support units (RSUs) in the sub-regions

• Epidemiological network and Laboratory network

• Prioritised Diseases in the sub-regions: HPAI, FMD and CSF in ASEAN, SPC and HPAI, FMD and PPR in SAARC

• OIE Asia-Pacific: Permanent secretariat for Regional GF-TADs Steering Committee in Asia and the Pacific
Objectives: To develop and monitor the work plan of relevant organisations (e.g. RSUs) under the GF-TADs

Major recommendations:

- Relevant organisations to hold their sub-regional meetings in collaboration with OIE, FAO, regional organisations and neighboring countries, to develop short-, mid- and long term strategies for the prevention and control of TADs.

- Extension of the relevant countries: ASEAN+3 (PR China, Japan and RO Korea) and SPC+2 (Australia and New Zealand).
## Overview of the 2nd GF-TADs Regional Steering Committee Meeting

<table>
<thead>
<tr>
<th>Sub-region</th>
<th>Sub-regional support unit (RSU)</th>
<th>Targeting disease: Lead country / laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASEAN+ (Japan, RO Korea, PR China)</td>
<td>Jakarta, Indonesia / Bangkok, Thailand</td>
<td>FMD: Thailand&lt;br&gt;HPAI: Malaysia&lt;br&gt;CSF: Phillipines/Vietnam</td>
</tr>
<tr>
<td>SAARC</td>
<td>Kathmandu, Nepal</td>
<td>FMD: India&lt;br&gt;HPAI: Pakistan&lt;br&gt;PPR: Bangladesh (Tentatively) FMD, HPAI and CSF Labs to be determined</td>
</tr>
<tr>
<td>SPC +(Australia, New Zealand)</td>
<td>Suva, Fiji</td>
<td></td>
</tr>
</tbody>
</table>

ASEAN: Association of Southeast Asian Nations  
SAARC: South Asian Association for Regional Cooperation  
SPC: Secretariat of the Pacific Community  
FMD: Foot and mouth disease  
HPAI: Highly pathogenic avian influenza  
CSF: Classical swine fever  
PPR: Peste des petits ruminants
GF-TADs

Planned activities:

• Regional OIE/FAO-APHCA Workshop on Classical Swine Fever Control (to be held in Manila, Philippines, July 2008)

• FAO/OIE Sub-Regional GF-TADs meetings
  - SAARC (Kathmandu, Nepal)
  - SPC (Suva, Fiji)
  - ASEAN (Jakarta, Indonesia)

• 3rd FAO/OIE GF-TADs Regional Steering Committee Meeting, in a SAARC country, late 2008 (or 2009)
Others

• OIE/FAO-APHCA Regional Workshop on Brucellosis especially *B. melitensis* (Chiang Mai, Thailand, September 2008)

Support to the SEAFMD campaign:

• Lower Mekong FMD Zoning and Animal Movement Management (AMM) Working Group Meeting, Laos, October 2008

• Upper Mekong FMD Zoning and AMM Working Group Meeting, Thailand, January 2009

  (Sub-Commission on SEAFMD Campaign, Malaysia, March 2009)
4 Prevention and Control of HPAI
Prevention and Control of HPAI

Japanese (Special) Trust Fund projects:
1\textsuperscript{st} OIE/JSTF Project for HPAI Control at Source in South East Asia (2006-2008)

2\textsuperscript{nd} OIE/JSTF Project (2008) and New OIE/JTF Project (2008-2013) for HPAI control in Asia
1st OIE/JSTF Project on HPAI Control in Southeast Asia

1. Duration: April 2006-March 2008
2. Eight participating countries (Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand and Viet Nam) in southeast Asia
3. Four Components
   (1) Development of HPAI control strategies
   (2) Development of HPAI information systems (Link with WAHIS and OIE Regional Core)
   (3) Capacity building on diagnosis and surveillance with provision of laboratory equipment and materials
   (4) Training Field Veterinarians and Para-professionals
On-site Hands-on training on Real-Time PCR for rapid diagnosis on avian influenza (in Lao, Myanmar and Philippines, February – March 2008)
OIE/JSTF 2nd Phase Project for Strengthening HPAI Control in Asia, 2008

1. Follow up of the previous OIE/JSTF Project on HPAI control at Source in Southeast Asia

2. For the improvement of the laboratory diagnosis and surveillance capacity on HPAI through training provided with laboratory equipments and materials

3. Member countries/territories other than Southeast Asia
   JPY 503,000,000 (=about USD 4,340,000)
1. Areas: Southeast, East and South Asian countries
2. Period: 5 years (2008-2012 fiscal years)
3. Major activities for effective HPAI Control:
   Taking into account the current epidemiological situation of AI in Asia, strengthen regional collaboration in
   - Disease information networking;
   - Capacity building of veterinary services, by evaluation of performance of veterinary services with PVS tool and by provision of training on diagnosis and legislation for animal disease control;
   - Surveillance of wild birds and domestic animals along migratory flyways; and establishment of AI virus database
4. Funds: 71,000,000 JPY (630,000 USD) / year
   =3,100,000 USD for 5 years
I  Strengthening Information Networking in Asia

Convene annual regional meetings of veterinary officers (focal points) for sharing animal health information including control strategies (to be held in Japan or other countries for 3-5 days)

II  Strengthening the capacity of Veterinary Services

II-1 Evaluation of Performance of Veterinary Services (PVS)

PVS evaluation has been implemented in Cambodia, Indonesia, Laos, Mongolia and Vietnam in Asia.(5/28)
The OIE/JTF Project supports the PVS programme for good governance of VSs in Asia, a key for early detection and rapid response for disease control including HPAI.
Activities

II-2a  Training courses on legislation for animal disease prevention and control, especially for HPAI (In late 2008, Japan or another country)

- Laws, regulations, rules, guidelines, manuals
- OIE Code
- Visit to Animal Hygiene Service Centres of prefectural government (Japan) to study the enforcement of disease control measures under laws and regulations

II-2b-1  Training courses on diagnosis and surveillance of Al (for southeast Asian countries)

Regional training for laboratory staff on diagnosis with advanced technologies (2008-2012)

e.g. Hands-on training on sequence analysis at each participating laboratory (2008-2009)
Activities

II-2b-2  Training courses on diagnosis and surveillance of AI (probably for south-Asian countries + Mongolia)

Capacity building of laboratory staff on diagnostic technologies and surveillance (2008-2012) supplemented with the procurement of laboratory diagnostic equipment and materials by the 2\textsuperscript{nd} OIE/JSTF Project

- Regional training on RRT-PCR and sequencing (2008)
- Hands-on training for the key techniques for virus isolation (including cell culture) (2009)
- Hands-on training of RRT-PCR and sequencing at each participating laboratory (2009-2010)
- Sequence analysis at each participating laboratory (2010-2012)
Background

- The outbreak of highly pathogenic avian influenza (HPAI) of the H5N1 subtype virus in Asia, which has subsequently spread to Russia, Middle East, Europe and Africa, has put increased focus on the role of wild birds in the dissemination of influenza viruses.

- Due to the antigenic variation of influenza viruses which can generate new and highly pathogenic strains for both animals and humans, surveillance of the viruses in the natural reservoirs, wildfowls and shorebirds, within the context of their ecology and interactions with domestic animals, is essential to narrow the knowledge gaps on the epidemiology and possibly predict the risk for preparedness and control.
Bar-headed geese (*Anser indicus*)

Domesticated ducks and geese? *(Anas sp. or Anser sp.)*
Objectives

• To provide supportive information for increasing awareness, and for the effective control measures of HPAI at national and regional levels.
III-1 Planning and implementation of surveillance for avian influenza (AI) (1)

1-1 Organisation of a regional expert group for establishing well-targeted implementation plan of the surveillance and a regional committee for steering the plan, monitoring and evaluating the outputs.

- Establish an implementation plan for the surveillance (and study of flyways of wild birds)
- Wild birds
- Domestic animals

Regional expert group

Regional committee

Steer the plan, monitor and evaluate the outputs
III-1 Planning and implementation of surveillance for AI (3)

1-2 Identification of participants for the surveillance programme
Participating countries: veterinary services (VSs); other environmental counterpart authorities; and/or entrusted organisations for the wild bird programme

1-3 Implementation
a) Collection of samples† with good epidemiological data for analysis of the viruses
b) Transport of virus isolates or samples of wild birds and domestic animals to the OIE Reference Laboratory (Hokkaido University)

† e.g. Tracheal, cloacal, fecal or blood samples
III-2 Study of flying routes of wild/migratory birds (1)

Background

Though trade/movement restriction of the poultry and captive birds is the major key for the control of HPAI, understanding of the flying routes especially those of waterfowl and shorebirds among major wetlands, lakes and other water reservoirs, is important for the awareness on the risk of AI introduction from the environment.
Objectives

- To monitor flying routes of waterfowls and shorebirds from the major breeding sites/wetlands or from outbreak sites.
- To enhance awareness on risks of possible AI introduction, combined with the surveillance results.
III-2 Study of flying routes of wild/migratory birds (3)

Planning / activities

• Select study points within the participating countries; target species; type of marking and tracking system. Simultaneous planning with the surveillance programme.

• Organisation of a workshop on flying routes and sample collections back to back with the expert group meeting

Outputs

• Posting of the regularly updated information on satellite tracking of flying routes linked to the OIE Asia-Pacific website (2008 or 2009 - )
Ideas on the sites for surveillance and flyway study, and on the host species
Factors for choosing sites /countries for surveillance

- HPAI history of outbreak among poultry and/or wild birds:
- Location within Migratory Flyway (one or two):
- Existence of JSTF supported laboratories:
- Asian Member countries of OIE:
- Number of important wetlands/lakes
- Willingness to collaborate:
  Members such as Bhutan, Cambodia, China PR, Lao, Chinese Taipei and Thailand expressed interest at the Inception meeting
- Complementarities with the existing projects
Ramsar-designated lakes (and other potential sites)

Russia: 14 in the Asia region (or Lake Chany)
Mongolia: 11 sites (or Erkhel Lake, Khunt Lake)
China: 30 sites (or Lake Qinghai, Lake Poyang)
Bhutan: 0 (Bumdelling Wildlife Sanctuary)
Vietnam: 1 site: Xuan Thuy Natural Wetland Reserve
Cambodia: 3 sites: e.g. Boeng Chhmar and Associated River system and floodplain
Laos: 0 (Mekong channel upstream of Vientiane)
Thailand: 10 sites
Myanmar: 1 site: Moyingy Wetland Wildlife Sanctuary
Philippines: 4 sites
Malaysia: 4 sites
Indonesia: 2 sites
Nepal: 4 sites
India: 19 sites
Pakistan: 19 sites
Bangladesh: 2 sites
Sri Lanka: 3 sites

† Wetlands/lakes under Ramsar criteria No.5 supports 20,000 or more water birds
Which animals to be considered?

(Species affected by H5N1)

Over 50 species of wild birds have been known to be susceptible to HPAI

Wild/Migratory birds

- Anseriformes
- Charadriformes
- Ciconiiformes
- Falconiformes
- Gruiformes
- Passeriformes
- Pelecaniformes
- Podicipediformes

Wild/Migratory birds

- e.g. Grey heron (*Ardea cinerea*)
- e.g. Green Sandpiper (*Tringa ochropus*)
- e.g. Mountain hawk-eagle (*Spizaetus nipalensis*)
- e.g. Japanese quail (*Coturnix coturnix japonica*)
- Domestic goose (*Anser anser domesticus*)
- Bar-headed goose (*Anser indicus*)
- Mute swan (*Cygnus olor*)
- Whooper swan (*Cygnus cygnus*)

Domestic animals

- e.g. Pig (*Sus domesticus*)
- Cat (*Felis domestica*)
- Tiger (*Panthera tigris*)

Source: USGS National Wildlife Health Center
Muscovy duck 
(Cairina moschata) 

Bar-headed goose 
(Anser indicus) 

Whooper swan 
(Cygnus cygnus) 

Mute swan 
(Cygnus olor) 

Mallard duck 
(Anas platyrhynchos) 

Grey heron 
(Ardea cinerea) 

Domestic chicken 
(Gallus gallus domesticus) 

Green Sandpiper 
(Tringa ochropus) 

Mountain hawk-eagle 
(Spizaetus nipalensis)
III-3 Establishment of a database for AI viruses (1)

Background

• All of the known subtypes of AI viruses are circulating in waterfowls as the reservoir for influenza viruses in all other species.

• The virus library and its genetic database supplemented with clinical and ecological information can be utilised for the epidemiological analysis such as on the dynamics of the viruses and roles of the bird hosts.
III-3 Establishment of a database for AI viruses (2)

Objectives

- To establish a library of AI virus strains and their genes, where influenza virus strains isolated from animal species in the surveillance are characterised, stored, and provided for the use of diagnosis and epidemiological analysis for the effective control.
III-3 Establishment of a database for AI viruses (3)

Activity

• Establish a database and library for AI viruses at the OIE Reference Laboratory (Hokkaido University), to store the data/viruses obtained from the surveillance, accessible by OIE Members

• Annual workshop on diagnosis and data analysis at OIE Reference Laboratory
III-3 Establishment of a database for AI viruses (4)

Output/Indicator

- Increase in the number of registration for the database and virus strains of the library.
- Compiled data of the viruses utilised for the genetic and epidemiological analysis so that the geographic distribution/movement of the AI viruses are understood. Including the mapping.
### Annual plan for 2008/09 (draft)

<table>
<thead>
<tr>
<th>Components</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
</tr>
</thead>
<tbody>
<tr>
<td>III  Surveillance of wild birds and domestic animals along migratory flyways</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III-1 Planning and implementation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III-2 Study of flying routes of wild/migratory birds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III-3 Establishment of a database for AI viruses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **III**  Surveillance of wild birds and domestic animals along migratory flyways
- **III-1** Planning and implementation
- **III-2** Study of flying routes of wild/migratory birds
- **III-3** Establishment of a database for AI viruses

**Note:**
- Sampling
- Banding/marking/ringing and setting of transmitters
- Workshop on diagnosis and data analysis
- OIE Reference Laboratory (Hokkaido, Univ.) (Venue/dates to be determined)
OIE/JTF Project for Strengthening HPAI control in Asia

I Strengthening Information Networking in Asia
To facilitate animal health information exchange and regional cooperation and alliance for disease control

II Strengthening capacity of Veterinary Services
For good governance of VSs, and thus early detection and rapid response for disease control
II-1 Evaluation of performance of veterinary services (VSSs)
II-2 Training on legislation and diagnostic technologies for HPAI control

III Surveillance of wild birds and domestic animals along migratory flyways
To provide supportive information for awareness and effective control measures
- Surveillance of AI viruses, and epidemiological study related to flying routes of migratory birds

Database
Monitor and characterise the virus for preparedness and effective control
- Establishment of a database for AI accessible by OIE Members

Diagnosis
Capacity building for diagnosis
- National laboratories
- OIE Reference Laboratory (Hokkaido University)

HPAI control in Asia

Epidemiological Information

Test results

Samples

Virus characterization

AI viruses

Database

Diagnosis

OIE
Japan confirms deadly H5N1 bird flu in swans –official

- TOKYO: Japan has detected bird flu of the virulent H5N1 strain for the first time in 13 months, officials said Tuesday, following tests on a group of swans.
- The swans were found eight days ago on the banks of Lake Towada in Akita prefecture, about 550 kilometers (340 miles) north of Tokyo, the prefectural administration said in a statement.
- Three of the swans were dead and the other was debilitated.
- “Pathological tests have shown that the influenza virus is of a virulent nature and of the H5N1 type,” the statement said.
- The local administration is to inspect 15 chicken farms within a radius of 30 kilometers (19 miles) of the lake on Wednesday and Thursday, the statement said. About 42,000 chickens will be subject to the inspections.
- “We will see if proper measures, such as anti-bird nets, are being taken to prevent wild birds from entering the farms,” said prefectural health official Takayo Yamaguchi.
- In March last year, hawk eagles were found infected with the H5N1 bird flu virus in the mountains of Kuma-moto on the southern island of Kyushu.
- Japan also reported four H5N1 outbreaks in January and February last year, leading authorities to kill tens of thousands of chickens as a precaution.
- The H5N1 strain has killed more than 230 people worldwide, but none in Japan, since late 2003 through contact with infected birds, with about half of the cases in Indonesia.
- Health experts fear the strain could mutate into a form easily transmitted from person to person, leading to a pandemic.

--AFP
Thank you for your attention
Organisation Mondiale de la Santé Animale
World Organisation for Animal Health
Organización Mundial de Sanidad Animal