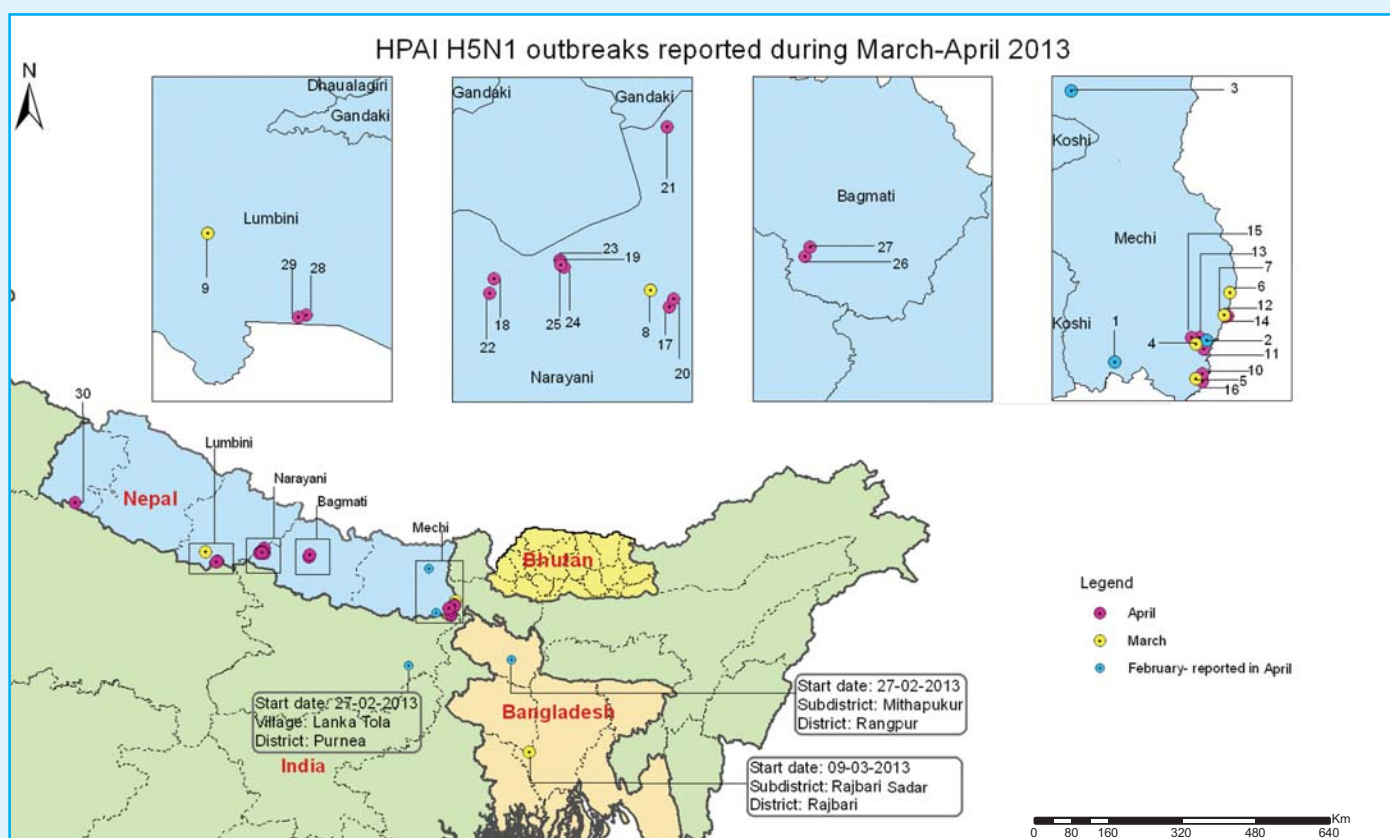


Major diseases situation in the Sub-region

Highly pathogenic avian influenza (HPAI) H5N1

Three countries in South Asia (Bangladesh, India and Nepal) reported 33 outbreaks during March - April 2013. Out of total reported outbreaks, Nepal reported 30 outbreaks (3 outbreaks occurred in February 2013, those were reported to OIE in April 2013). There was one outbreak from India and two from Bangladesh reported to OIE during the same period. The details are provided in map below.



Serial Nos. (1 - 30) indicated in the map are related to the S/N as shown in table (page no. 2-3)

Bangladesh

An HPAI outbreak in a commercial poultry farm in village Indro-Narayanpur, Upazila Rajbari Sadar, District Rajbari, Dhaka Division, started on 9 March 2013 where a total of 558 out of a susceptible population of 1800 birds died and the remaining 1242 chickens at the farm were destroyed (www.oie.int).

Seventh human H5N1 case in Bangladesh

The seventh case of Influenza A (H5N1) has been confirmed from one of the surveillance sites of Institute of Epidemiology Disease Control and Research (IEDCR). Diagnosis was made on the basis of Real time RT-PCR. This was a 1 year 11 months old male child from Chauddogram, Comilla. He was admitted to Comilla Medical College Hospital, later transferred to Dhaka Shishu (Child) Hospital and then to a private clinic. He died on

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18 February 2013. This is the first death case of H5N1 in Bangladesh. As this child had no typical features of Influenza Like Illness (ILI), throat and nasal samples were sent for reconfirmation to CDC Atlanta, USA (WHO reference laboratory) and received confirmation on 6 April 2013. Detailed outbreak investigation was conducted. There was strong epidemiological link with backyard poultry deaths. No other case was found among contacts during the investigation (www.iedcr.org).

India

In the state of Bihar (adjoining West Bengal), an HPAI-H5N1 outbreak was recorded on 27 February 2013 at Madhubani, Lanka Tola, district Purnea. Out of 7000 susceptible birds

a total of 338 birds died in government owned Regional Poultry Farm (www.dahd.nic.in). The report to OIE indicated the confirmation of causal agent by High Security Animal Disease Laboratory, Bhopal (OIE Reference Laboratory) as H5N1 HPAI on 7 March 2013 (www.oie.int). The details of positive samples submitted by the Bihar government were, 3 chicken carcasses, 10 tracheal and 10 cloacal swabs, 5 lungs and 5 intestinal swabs. The samples were found positive in real-time and RT-PCR, and virus isolation (www.dahd.nic.in). Between 1 and 7 April 2013, the High Security Animal Disease Laboratory, Bhopal reported 28 serum samples positive for H5 antibodies from Bihar in the haemagglutination inhibition test (www.dahd.nic.in).

Nepal

Between 12 February and 30 April 2013, there were 30 HPAI (H5N1) outbreaks confirmed in Jhapa (13), Chitwan (10), Lalitpur (2), Rupandehi (2), Nawalparasi (1), Kailali (1) and Taplejung (1) districts. Of the total reported outbreaks, 9 (30%) outbreaks were reported in commercial broiler, 10 (33.33%) outbreaks were reported each in commercial layers and backyard birds. Birds showed respiratory distress, nervous signs and all affected birds died. A total of 43,466 poultry died

and the other 67,136 were destroyed in 29 reported outbreaks. One wild crow (*Corvus splendens* (Corvidae), found dead in the premises of custom office at Nepal-India border was also found positive for H5N1 virus. Cleaning and disinfection activities in the infected premises were completed. Intensive surveillance activities are ongoing throughout the country. The details are provided in the table below (www.oie.int).

Table: HPAI (H5N1) outbreaks occurred in Nepal reported to OIE

S/N	Zone	District	VDC/Municipality, wards and Village	Unit	Start date	Farm type
1	Mechi	Jhapa	Kumarkhod VDC-6, Kumarkhod	Village	12/02/2013	BYP
2	Mechi	Jhapa	Chandragadi Municipality-4, Chandragadi	Village	24/02/2013	BYP
3	Koshi	Taplejung	Fungling VDC-3, Fungling	Village	22/02/2013	BYP
4	Mechi	Jhapa	Bhadrapur Municipality-10, Bhadrapur	Village	04/03/2013	BYP
5	Mechi	Jhapa	Prithivinagar VDC- 5, Prithivinagar	Farm	04/03/2013	CP
6	Mechi	Jhapa	Bahundagi VDC-1, Bahundagi	Farm	27/03/2013	CPL
7	Mechi	Jhapa	Mechinagar Municipality-10, Mechinagar	Village	30/03/2013	BYP
8	Narayani	Chitwan	Bharatpur Municipality-8, Sharadpur	Farm	25/03/2013	CPL
9	Lumbini	Nawalparasi	Mukundapur VDC-7, Harkapur	Farm	14/03/2013	CPL
10	Mechi	Jhapa	Prithivinagar VDC-5, Prithivinagar	Village	12/04/2013	BYP
11	Mechi	Jhapa	Bhadrapur Municipality-8, Bhadrapur	Farm	14/04/2013	CP
12	Mechi	Jhapa	Mechinagar Municipality-11, Mechinagar	Village	14/04/2013	BYP & D
13	Mechi	Jhapa	Chandragadi Municipality-4, Chandragadi	Village	14/04/2013	BYP
14	Mechi	Jhapa	Mechinagar Municipality-10, Kakarvitta	Wild	18/04/2013	Crow
15	Mechi	Jhapa	Chandragadi Municipality-1, Chandragadi	Farm	19/04/2013	CP
16	Mechi	Jhapa	Prithivinagar VDC-5, Prithivinagar	Village	19/04/2013	BYP & D
17	Narayani	Chitwan	Bharatpur Municipality-9, Bharatpur	Farm	17/04/2013	CPL
18	Narayani	Chitwan	Mangalpur VDC-7, Mangalpur	Farm	18/04/2013	CPL
19	Narayani	Chitwan	Mangalpur VDC-5, Mangalpur	Farm	19/04/2013	CPL
20	Narayani	Chitwan	Bharatpur Municipality-9, Bharatpur	Farm	19/04/2013	CP
21	Narayani	Chitwan	Baharatpur Municipality-1, Ramnagar	Farm	21/04/2013	CP
22	Narayani	Chitwan	Mangalpur-8, Mangalpur	Farm	25/04/2013	CPL
23	Narayani	Chitwan	Mangalpur VDC-5, Mangalpur	Farm	25/04/2013	CPL

S/N	Zone	District	VDC/Municipality, wards and Village	Unit	Start date	Farm type
24	Narayani	Chitwan	Mangalpur VDC-5, Mangalpur	Farm	30/04/2013	CPL
25	Narayani	Chitwan	Mangalpur VDC-5, Mangalpur	Farm	30/04/2013	CPL
26	Bagmati	Lalitpur	Chapagaun VDC-2, Chapagaun	Village	21/04/2013	BYP & D
27	Bagmati	Lalitpur	Dhapakhel VDC-1, Dhapakhel	Farm	21/04/2013	CP
28	Lumbini	Rupandehi	Pokharvindi VDC-7, Pokharvindi	Farm	19/04/2013	CP
29	Lumbini	Rupandehi	Pokharvindi VDC-2, Pokharvindi	Farm	21/04/2013	CP
30	Seti	Kailali	Gadariya VDC-9, Gadariya	Farm	11/04/2013	CP

- Legend: BYP= Backyard Poultry, BYP & D= Backyard Poultry and Duck, CP= Commercial poultry broiler, CPL= Commercial poultry layer
- Note: Three outbreaks (S/N 1-3) occurred in February and reported to OIE in April 2013, six outbreaks (S/N 4-9) occurred in March and reported to OIE in April 2013, 21 outbreaks (S/N 10-30) occurred in April 2013.
- VDC = Village Development Committee; each VDC has 1-9 wards, Village= smallest unit in the VDC/Municipality.

Nipah in Bangladesh

Human Nipah virus (NiV) infection is an emerging zoonotic disease. The transmission in Bangladesh has been linked to drinking of raw date palm sap contaminated with NiV and close physical contact with Nipah infected patients.

During March - April 2013, eight new human Nipah cases were identified in Bangladesh, among them seven died (mortality about 88%) and two new districts (Magura and Manikganj) have been affected. A total 24 cases of Nipah virus infection have been reported in Bangladesh since the beginning of 2013, of which 21 cases have died. These cases were from 13 different districts (Gaibandha, Jhenaidah, Kurigram, Kushtia, Magura, Manikganj, Mymensingh, Naogaon, Natore, Nilphamari, Pabna, Rajbari, Rajshahi). The age distribution of cases was from 8 months to 60 years. Sixteen cases were male and eight female (www.iedcr.org).

Anthrax in Bangladesh

Between March and April 2013, eight human cutaneous anthrax cases were reported from Shahjadpur Upazila of district Shirajganj. The source of infection was not defined (www.iedcr.org).

RSU Workshops and Meetings

Second Laboratory Directors' Meeting and Workshop on Quality Management Systems in SAARC countries, 12-13 March 2013, Colombo, Sri Lanka

The Second Laboratory Directors' Meeting and Workshop on Enhancing the Laboratory Expertise through Quality Management Systems in SAARC countries was organized from 12 - 13 March 2013, in Colombo, Sri Lanka, by the Regional Support Unit for SAARC countries, FAO Nepal and SAARC with financial support from the European Union (EU).

A total of 23 officials representing 6 SAARC Member States, WHO, FAO and Australian Animal Health Laboratory

participated in the meeting and workshop. The technical sessions consisted of presentations on the background of the meeting emphasizing on the recommendations of the First Laboratory Directors' meeting, update on the regional network activities, cross-sectoral collaboration to develop harmonized laboratory procedures and protocols on zoonotic diseases and a regional strategic framework for laboratory capacity building and networking in South East Asia. The Regional Leading Diagnostic Laboratories (RLDLs) and OIE Reference Laboratory on Avian Influenza gave an overview of the activities including the current quality assurance (QA) system in place at their laboratories. An overall discussion on activities undertaken in 2012 by SAARC Laboratory network members and progress made since the First Laboratory Directors' meeting was facilitated, including a presentation on the proficiency testing of FMD laboratories conducted in South Asia. The national laboratories made short presentations on the present status of QA and their expectations from OIE reference laboratory and RLDLs followed by group discussions. The second day was entirely devoted to the "Workshop on Enhancing the Laboratory Expertise through



Participants of Second Laboratory Directors' Meeting

Quality Management Systems in SAARC countries", which was facilitated by an expert from Australian Animal Health Laboratory, Geelong, Australia.

Training on 'Risk based surveillance and understanding disease risk within value chains', 15-20 April 2013, Chandigarh, India

A six-days training workshop on practical application of designing risk-based disease surveillance in livestock value chains was organized by the Regional Support Unit (RSU), FAO Nepal between 15 to 20 April 2013 in Chandigarh, India. A total of 20 participants from Member States, RSU-FAO Nepal and ECTAD India attended the training workshop.

The training workshop was facilitated by Dr Nicolas M Taylor, Veterinary Epidemiologist, Veterinary Epidemiology and Economics Research Unit, University of Reading, UK.

The training workshop covered the formal techniques of risk analysis, as described in the OIE terrestrial animal health code, the broad practical adaptation and application of these techniques to livestock value chains (the whole input, production and marketing chain). The training



Participants of workshop on cross-border and in-country livestock value chain



Dr A S Nanda, Animal Husbandry Commissioner, India (4th from left - sitting), Dr Subhash Morzaria, Regional Manager FAO RAP (5th from left - sitting) and Dr Nicolas M Taylor (6th from left - sitting) with other participants of 'Risk based surveillance Training'

workshop was a mixture of presentations and practical exercises, drawing on the experience of participants. A specific session and practical exercise was devoted to the planning of surveillance strategies based on the understanding of risks (risk-based surveillance).

Workshop on cross-border and in-country livestock value chains, 30 April to 1 May 2013, Kathmandu, Nepal

The FAO Regional Support Unit for SAARC countries organized a workshop of partners from Bangladesh, India and Nepal

to conduct a study to characterize the farming systems, identify high risk areas for introduction of transboundary animal diseases (TADs) via cross-border routes by mapping of markets, market chains and livestock (cattle, buffalo, sheep, goats and pigs) trade volumes across borders.

The objective of the workshop was to harmonize the approach to analyzing cross-border and domestic value chains, specifically, a) to prioritize the required epidemiological and value chain data, b) to identify data sources and study sites, and c) to identify the required data collection and analysis techniques.

The study envisages important outcomes in terms of (i) characterization of farming systems with their specific input requirements and linkages with other livestock farming systems, geographical location and contact rates with traders, (ii) mapping of in-country markets and market chains and livestock trade volumes, (iii) mapping of cross border trading routes by mapping of markets, market chains and livestock trade volumes across borders, (iv) collection of GPS referenced data for markets, border areas and trade flows, (v) identification and mapping of high risk areas (markets, fairs) for introduction of disease via trade, and (vi) evaluation of value chain analysis to guide in better understanding of the epidemiology of diseases and to develop appropriate control strategies.

Workshops and Meetings Attended

Training programme on outbreak investigation, Odisha, India

Two epidemiologists (Dr Khadak Singh Bisht and Dr Muhammad Akram) from RSU/REC supported a training

programme on outbreak investigation jointly with the FAO ECTAD (Epidemiology Unit) in India from 12 - 15 March 2013. The training programme was focused on outbreak investigation of HPAI in the vulnerable states for veterinarians from Odisha, Nagaland and West Bengal States. The objective of the training was to train the focal veterinarians from HPAI high-risk states on disease surveillance and outbreak investigation who would subsequently train other field staffs (veterinarians and para-veterinarians). A total of 15 participants attended the training programme. The RSU/REC epidemiologists trained the participants on basic epidemiology, outbreak investigation, case definitions, risk based surveillance and risk assessment.

Regional News

Sri Lanka declares freedom from Haemorrhagic Septicaemia (HS)

The Director General of Department of Animal Production and Health (DAPH) has declared Sri Lanka as provisionally free of HS on 12 December 2012 to OIE in his capacity as the OIE Delegate of Sri Lanka. After studying the comprehensive report for its scientific and technical information the free status was accepted. The world is awaiting to learn from Sri Lanka in this remarkable achievement which would serve a leading example for other countries.

Sri Lanka has intensified an active surveillance programme against HS in order to identify any carrier status by examining the samples for isolation of *Pasteurella multocida* 6:B and 6:E at the Veterinary Research Institute (VRI) and also the sero-surveillance through the network of 20 Veterinary Investigation Centres in the country. Furthermore, an enhanced passive surveillance has been introduced via the existing 303 government Veterinary Offices in the island.

In the history of Sri Lanka, HS was confirmed officially in 1955 and since then deaths of thousands of cattle and buffaloes were reported especially in large herds in dry zone and wet intermediate zone. The disease was controlled by efficient vaccination programme using very effective vaccines produced at VRI. Special mass-scale vaccination campaigns were launched by DAPH since 1984. This was able to reduce annual deaths to few hundreds and eventually the last outbreak was detected in 2004 (www.slva.org).

Avian influenza A(H7N9) virus in China

At the end of March 2013, China reported three cases of novel avian influenza virus A(H7N9) in humans. At the end of April 2013, there were 131 confirmed cases with 37

deaths from various provinces including Taiwan Province of China. H7N9 has been confirmed in pigeons, chickens, ducks and environmental samples mainly at live bird markets and live poultry vendors taken both from areas with and without human cases. Chinese authorities are conducting a large-scale surveillance campaign targeting animals throughout China. While H7 viruses are not unusual - they have been widely reported around the globe - this is the first time an H7 avian influenza virus has killed humans. Recent animal laboratory experiments confirm that poultry infected with H7N9 do not show clinical signs, which makes disease recognition and virus detection difficult. Only a small percentage of the numerous avian samples tested to date have resulted positive for H7N9. Current information is insufficient to explain this low percentage. However, recent results of a study in Zhejiang province of China suggested that augmented surveillance in the poultry market chain would be required.

Live bird markets play a key role in human and poultry infections. FAO is recommending enhanced and frequent surveillance of live bird markets, emphasizing the need to trace back positive infections to the farm(s) of origin (adopted from FAO EMPRESi)

Among the SAARC Member States, Bangladesh, Nepal and Pakistan are at moderate to high risk for introduction of H7N9 virus, while Bhutan, India and Sri Lanka are at low to moderate risk.

Upcoming events

- a) Second Regional Workshop on Progressive Control Pathway for Foot and Mouth Disease (PCP-FMD) for South Asian countries, July 2013, Agra, India
- b) Second Regional Workshop on Progressive Control of peste des petits ruminants for South Asian countries, July 2013, Kathmandu, Nepal
- c) Second Regional Epidemiology Networking Workshop, 6 - 8 August 2013, Paro, Bhutan
- d) Workshop on 'SAARC initiative for Elimination of Human Rabies Transmitted by Dogs, August 2013, Dhaka, Bangladesh





Eliminating Animal Health Risks

Regional Cooperation Programme on Highly Pathogenic and Emerging Diseases (HPEDs) in South Asia

PREVENT RABIES
CARE FOR YOUR DOG AND IT WILL TAKE CARE OF YOU



WHAT TO DO WHEN BITTEN BY AN ANIMAL ?

- 1. Immediately run water on the wound for a good 15 minutes after washing it thoroughly with soap or hydrogen peroxide. This will remove as much saliva (hence virus) as possible from the wound and will greatly decrease chances of infection (do not clean the wound with alcohol).
- 2. Seek medical treatment or go to hospital without delay for appropriate medical attention and post-exposure vaccination if required.
- 3. Any suspected rabid animal should be confined and put under veterinary observation according to the country's legislation.

Photo Courtesy: Animal Nepal



Regional Support Unit and Emergency Centre for Transboundary Animal Diseases for South Asia
FAO, Kathmandu, Nepal

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