

Major diseases situation in the Sub-region

During the months of November – December 2014, HPAI outbreak was reported on 25/11/2014 from Government of India, Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, New Delhi, India. The sub-region continued to record leptospirosis in Sri Lanka during the period.

Highly Pathogenic Avian Influenza (HPAI) H5N1 updates

India has reported two new outbreaks of highly pathogenic avian influenza (HPAI H5N1) occurring during November – December 2014 at various farms of Kerala, affecting ducks. The date of start of the event was 20/11/2014 and date of pre-confirmation of the event on 24/11/2014. The World Organization for Animal Health (OIE) from Government of India, Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, New Delhi, India received immediate notification (25/11/2014), follow-up report No. 1 (27/11/2014), follow-up report No. 2 (03/12/2014), follow-up report No. 3 (04/12/2014), follow-up report No. 4 (16/12/2014) and another immediate notification on 18/12/2014 (Table-1 below).

The last HPAI outbreak in the country was occurred on 21/02/2014. The disease was confirmed by real-time reverse transcriptase/polymerase chain reaction (RRT-PCR), reverse transcription - polymerase chain reaction (RT-PCR) and virus isolation in High Security Animal

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Disease Laboratory, Bhopal (National laboratory) Epidemiological investigation is ongoing. An intensive surveillance campaign has been launched in a 10 km radius zone. (<http://www.oie.int>).

Sri Lanka

Leptospirosis update

A total of 738 cases of human leptospirosis with 478 and 400 cases in November - December 2014 respectively have been reported. Of 26 districts, a total of 21 districts in November and 22 districts in December were affected. The highest numbers of cases reported were 86 and 62 in Gampaha during November and Apura district in December respectively (Figure-1, Pg.2). A total of 3214 cases with highest number from Ratnapura (460) followed by Gampaha (459) were reported during 2014.

Previous experience and data suggests that the disease is mainly associated with paddy farming. More information can be seen on the website of the Epidemiology Unit, Ministry of Health, Sri Lanka.

<http://bit.ly/bul32-03>

State	VDC/Municipality, Wards and Village	Unit	Start date	Farm type	No of Sus	No of deaths	No of destroyed
KERALA	Parippu Aimananam, Parippu Aimananam, Kottayam,	Village	20/11/2014	Duck	15084	500	14584
KERALA	Purakkad & Thalavady, Purakkad & Thalavady, Alappuzha,	Village	20/11/2014	Duck	228807	15000	213807
KERALA	Chennithala, Chennithala, Alappuzha,	Village	3/12/2014	Duck	138063	2554	135509
KERALA	Ilakkumaram, Vilakkumaram, Kottayam	Village	4/12/2014	Duck	5974	500	5474
CHANDIGARH	Sukhna lake, Chandigarh,	Wild	18/12/2014	Duck	100	22	22

Table-1: HPAI (H5N1) outbreaks in India reported to OIE from 20/11/2014 to 16/12/2014

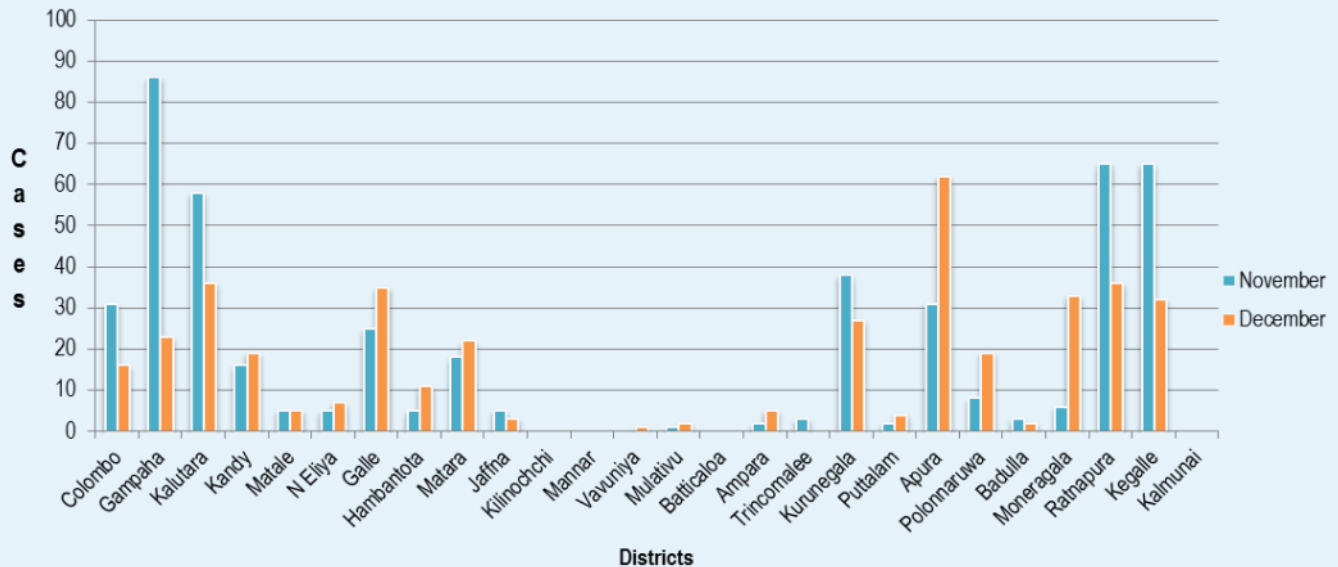


Figure 1: Number of cases of leptospirosis during Nov-Dec 2014

Workshops and Meetings

Closing workshop on the “Emergency assistance for surveillance of avian influenza A (H7N9) virus in poultry and animal population in Southeast Asia (TCP/RAS/3406) and South Asia (TCP/RAS/3407)”

The closing workshop on the “Emergency assistance for surveillance of avian influenza A(H7N9) virus in poultry and animal population in Southeast Asia (TCP/RAS/3406) and South Asia (TCP/RAS/3407)” was held at Bangkok, Thailand from 17 to 18 December 2014, organized by FAO RAP. The meeting was attended by participants from animal health officials of selected countries from South Asia (4) and Southeast Asia (7), SAARC Director, officials and resource persons from FAO HQ, USAID/RDMA, FAO RAP and others. Dr Baikuntha Parajuli, National Consultant from FAO Nepal attended the closing workshop.

This regional emergency assistance project (TCP) was designed and approved to help high-risk countries in South Asia and South East Asia to mitigate the impacts of an imminent threat of incursion of influenza A(H7N9) virus and hinder its spread across the region through risk-based surveillance, targeted value chain analysis and regional capacity building. The workshop was organized to summarize the activities undertaken through this TCP and discuss on way forward.

The following were the objectives of this workshop:

- To update participants on the disease situation and status of activities under the H7N9 programme.
- To share information on country activity updates on emergency preparedness.
- To discuss steps on moving emergency preparedness forward.



Participants of the Emergency assistance for surveillance of avian influenza A (H7N9) virus in poultry and animal population in Southeast Asia and South Asia

The two days workshop included presentations on updates on avian influenza A(H7N9), report on regional activities conducted in South Asia and South East Asia, communication tool kits, value chain and its take home messages, recaps on commitments made by countries and group work and presentations.

During the opening session, welcome remark was delivered by Ms Wantanee Kalpravidh, Regional Manager, ECTAD, FAO, RAP. Introduction and objectives of the

workshop was provided by Animal Health Officer, Ms Carolyn Benigno. Ms Sophie Von Dobschuetz, Global H7N9 Coordinator and Mr Guillaume Belot from FAO HQ provided the scientific updates on H7N9. Reports on regional activities conducted in Southeast Asia and South Asia were presented by Mr Kachen Wongsathapornchai and Baikuntha Parajuli. Value chains and its take home message were delivered by Mr Jan Hinrichs. Communication tool kit and review framework for use of the communications tool kit in other countries were presented by Mr Chitoor Gopinath and Mr Domingo Caro III.

The poster prepared based on the commitments by countries were displayed. Based on the poster presentation, breakout groups were formed for Southeast Asia and South Asia. The South Asia group was coordinated by Mr MJH Javed from SAARC Secretariat and Southeast Asia was coordinated by Mr Kachen Wongsathapornchai from FAO RAP. These groups were assigned to discuss the challenges and possible solutions based on the posters and asked for group presentation on day two workshop sessions.

The workshop recommended that the support activities, which were well taken through this TCP/RAS/3407 project shall not be the end of emergency activities on A(H7N9). Future projects shall address to fulfill the technical gaps in the countries which are in high and moderate risks in South Asia and Southeast Asia.

Workshop on Assessment and Response to Avian Influenza in Nepal, 14 - 15 December 2014, Kathmandu, Nepal

From 2010 to 2013 the population of poultry in Nepal increased by 55% from 53 M to 82 M, which includes a 25.3% increase in the number of long-lived chicken egg layers. Poultry density is intensifying and many new poultry producers are entering into the business, sometimes with little training or experience. The number of reported AI events due to H5N1 and H9N2 in Nepal increased by 355% between 2010 and 2012.

The U.S. Embassy, USAID and the Government of Nepal have requested FAO and technical partners including USDA to conduct a situation assessment of



Participants of the Workshop on Assessment and Response to Avian Influenza in Nepal

avian influenza in order to provide additional assistance in response to the critical situation in Nepal including regional aspects. Relevant components required to conduct the situation assessment include economic value chain analysis, epidemiological analysis, laboratory diagnostic results, disease response efforts (prevention and control) and communications.

A series of four missions were coordinated by FAO and other technical partners originally planned between September 2013 and January 2014 with an extension to November 2014. FAO coordinated and implemented activities through the collaborative efforts of ECTAD regional office in Bangkok, the Regional Support Unit of the ECTAD sub-regional office in Kathmandu and ECTAD country office in Kathmandu. Five high risk areas were considered including Chitwan, Kathmandu Valley, Kaski, Jhapa/Biratnagar and mid-western region. The external mission team is composed of a veterinary epidemiologist, an animal health economist, two laboratory specialists and a communications expert.

Sixty-eight (68%) (n=203) of the AI events were related to H9N2 virus and 29% (n=89) related to H5N1 subtype while three events (1%) had concurrent infection with both H5N1 and H9N2 virus subtypes. H5N1 events were reported seasonally during the first and fourth quarters of the year between 2010 and 2012 whereas H9N2 events were reported diffusely in all four quarters particularly in the latter half of 2011 and 2012. The spatial and temporal distribution of reported H5N1 and H9N2 events suggest unique reporting and transmission characteristics of H5N1 and H9N2 events. The previous

risk classification system is valid and can now be quantified. Severe economic impact of HPAI does justify investments in prevention by all stakeholders. Network and value chain data is a resource now available for faster disease detection, prevention and response at the VDC level. Clustered high risk VDCs and movement network indicate critical control points to address for disease prevention and control. Breeder/hatchery and layer production systems have highest contact rate and movement of waste material into or adjacent to poultry farms pose significant risks.

Challenges, constraints and opportunities for improving laboratory diagnostic capacity have been identified. A detailed mapping of farming populations in high risk hot zones along identified value chains should be conducted, in order to identify individual farmers at higher risk and need of suitable risk communication. Risk communicators should follow a rational and logical process guided by an understanding of areas and persons at greater risk and a One Health Zoonoses and Influenza curriculum represents a significant new and effective method of risk communication.

An action plan has been developed which is built upon evidence gained from retrospective and prospective studies and the lessons learned of H5N1 and H9N2 in Nepal. The action plan focuses on strengthening public private partnerships, policy and regulatory changes and an achievable and AI strategy based on the lessons learned. The results of epidemiological, socio-economic and communication studies can now be used to update the national AI strategy and the issue of vaccination will be considered by March 2015.

Training of Trainers (TOT) Pilot Programme to Improve Biosecurity: Review workshop, 22 - 24 December 2014, Kathmandu, Kathmandu, Nepal

A 3-day TOT review workshop was conducted in Kathmandu from December 22 - 24 2014, to evaluate the practicum experience, identify barriers and gaps, and identify the next steps. The workshop was attended by 13 participants out of the original 25 who had been successful in completing their field practicums. The group included a mix from the public and the private sectors. The objectives of the review were 1) to review

the effectiveness and usefulness of the One Health Zoonoses and Influenza curriculum based on the experience of disseminating it to target audiences during the one-month field practicum. 2) to identify challenges and gaps as well as best practices in the dissemination of the One Health Zoonoses and Influenza curriculum. 3) to recommend next steps for the development of a solid communication capacity building program in Nepal.

A key method was a special session to introduce the concept of value chains and share some of the findings of the value chain analysis done by Dr Jan Hinrichs in Nepal. The purpose of doing this was to create a better integration and synergy between socio-economic understanding of high-risk corridors and audiences and the process of communication planning and dissemination. The introduction of this topic led to significant new recommendations.

The following were the findings of the review process

- An overly long gap between the TOT in August and the availability of resources for conducting the practicum significantly eroded the quality of the practicum, and led to reduced participation as several officers had either been transferred or lost impetus.
- The quality of social mobilization of high-risk audiences varied widely, with some trainers reporting minimal participation (12 or under) and diminishing interest, and one reporting participation of 50-70 farmers in the sessions, with growing enthusiasm and interest in the content.
- Mobilization and participation were most successful



Training of Trainers (TOT) Pilot Programme to Improve Biosecurity: Review workshop

where the trainers themselves recruited participants. Wherever this process was handed over to well-connected middlemen, the training process was poorly described, leading to a mismatch between expectations and content.

- There was an expectation that farm management and biosecurity issues would be dealt with in greater detail. [A detailed treatment of both of these are part of other existing curricula, and hence outside the scope of the One Health Zoonoses and Influenza curriculum.]
- The special simulation exercise developed for Nepal to create a user-friendly understanding of transmission and risk, called *Milijuli*, was widely described as extremely effective.
- Due to pressure of time and resources, trainers compressed a process that should have been conducted over multiple one-hour sessions into a 4-day process. This resulted in the compression of knowledge and insufficient time for absorption, engagement and ownership.
- None of the participants had knowledge and understanding of value chains, and were extremely enthusiastic when this was shared. Based on this knowledge, they felt that the identification of areas for training and also the selection of participants should be very closely linked to the value chain analysis.
- Participants noted that previous communication workshops, covering 20-30 farmers, would have had close to zero impact since they do not reach several thousands of other farmers at risk.

Recommendations: The conclusions of this workshop are also the overall conclusion of the year-long process and are presented below.

Overall Recommendations

1. A detailed mapping of farming populations in high risk hot zones along identified value chains should be conducted, in order to identify individual farmers at higher risk and need of communication. The selection of participants should be a rational and logical process guided by an understanding of areas and persons at

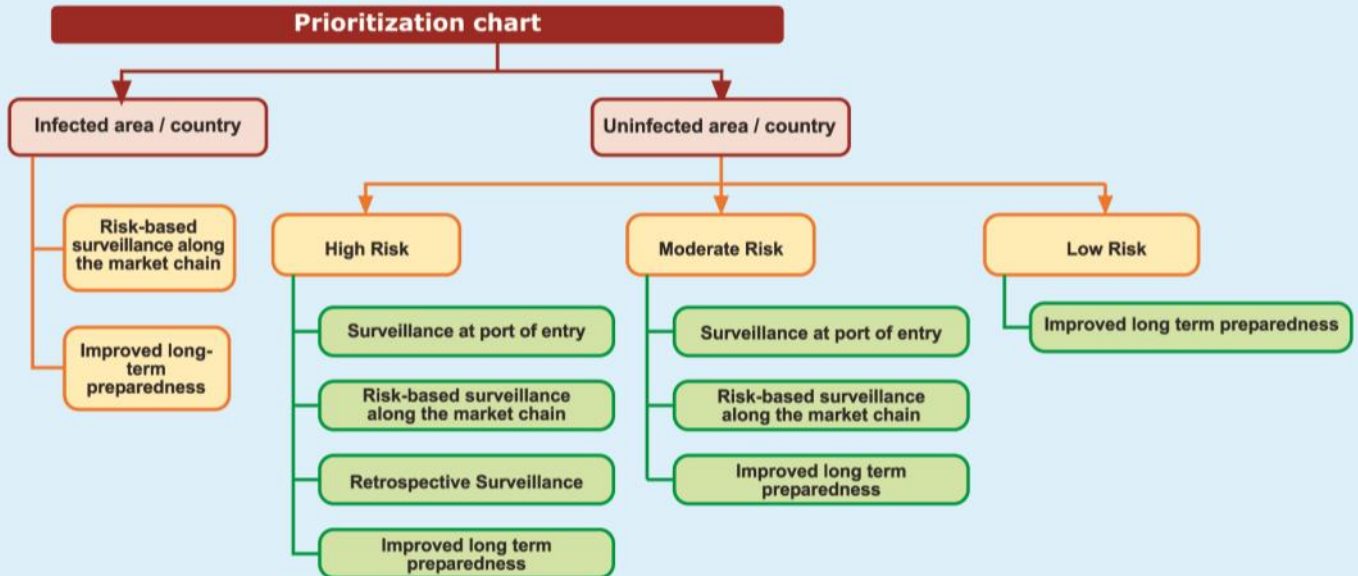
greater risk.

2. The base of trainers of trainers in all high-risk hot zones should be expanded by repeating the process of the TOTs conducted in August 2014, and should include existing trainers and new trainers, both in public and private sectors.
3. The One Health Zoonoses and Influenza curriculum:
 - i. Represents a significant new and effective method of risk communication. Other current curricula, such as Farm Management and Biosecurity, should be reviewed and rewritten with greater use of participatory and interactive approaches, instead of a top down dissemination.
 - ii. Should be recognized and accepted by the Department of Livestock services as an official curriculum, and should be integrated into existing training processes, as a supplementary foundational training that should precede all other training, in order to create a solid knowledge of basic concepts and frameworks for understanding all diseases.
 - iii. Should be updated with suggested changes and designed and printed in Nepali with visuals for use by future communicators.



Eliminating Animal Health Risks

FAO/EMPRES guidelines for emergency risk-based surveillance for avian influenza A(H7N9)



Design process for risk-based surveillance along the market chain, based on a snowball sampling strategy

STEP 1

Select Live bird markets (LBMS):
Collect biological samples and administer questionnaire.

STEP 2

Identify the catchment area of positive LBMS:
collect biological samples and administer questionnaire in farms and LBMs linked to the positive LBMs.

STEP 3

Identify the secondary catchment area (of positive farms and markets):
collect biological samples and questionnaires in farms and LBMs linked to the positive units. Conduct serological surveillance around positive farms.



Afghanistan



Bangladesh



Bhutan



India



Maldives



Nepal



Pakistan



Sri Lanka

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