

Project Objectives

The overall objective of the programme is to contribute to the elimination of the threat posed by HPAI due to cross-border activities in the Gangetic Plain Sub-region of South Asia.

More specifically, the project will strengthen the capacity of the countries sharing an epidemiological environment in the Gangetic Plain Sub-region to deal with the risks and threat of HPAI posed by cross-border activities.

Disease status in the sub-region

Many new HPAI outbreaks in poultry were reported at new locations in Bangladesh and Nepal. However, India did not report any new outbreak after January in Murshidabad (West Bengal). Meanwhile, the neighbouring country Bhutan, bordering West Bengal became the newly infected country in South Asia and reported five outbreaks in the villages close to its international border with India.

New outbreaks in Bangladesh:

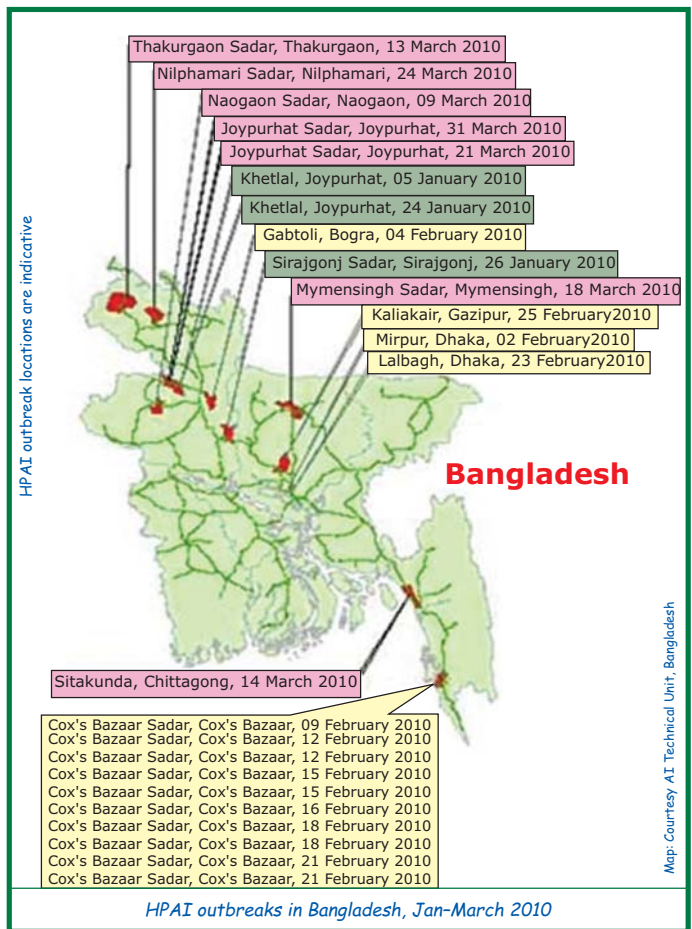
The Bangladesh government confirmed 21 new outbreak of HPAI in poultry in various parts of the country in February and March 2010. While there were 14 outbreaks in February, including 10 in a row in Cox's Bazaar Sadar. Only 7 outbreaks were reported in March and the last outbreak (in March) was at Joypurhat Sadar, Joypurhat. As per website of AI technical unit, Bangladesh, (<http://www.aitubd.org>), till the end of March, a total of 351 HPAI outbreaks were notified by the government. These included 24 outbreaks (till March) in the year 2010, 32 outbreaks in the year 2009, 226 outbreaks in the year 2008 and 69 outbreaks in the year 2007. Out of these outbreaks 298 were in commercial poultry farms and only 53 were in backyard poultry. In 2010, until March, out of 24 outbreaks only one was in backyard poultry farm, the remaining 23 were in commercial farms.

In February, on first day HPAI outbreak was reported in a commercial farm at Mirpur sub-district of Dhaka district, where only six out of 8,827 birds were reported dead, on confirmation of HPAI the remaining 8,821 birds were culled. Then on 4th February at a commercial farm situated in Sonaroy Gabtoli sub- district of Bogra district, a total of 60 birds were reported dead, authorities culled remaining 705 birds in the farm. This outbreak was followed by a series of 10 outbreaks in Cox's Bazaar district, between 9th and 21st February, in various commercial poultry farms located at Uttar Chowdhury Para (5 outbreaks), Uttar Romaliar Chhara, Hazi Para Jhilonja (2 outbreaks), Sikdar Para, Light House Para Ward-12. Atleast two another outbreaks were reported in the month of February in Lalbagh (Dhaka) and Kaliakair (Gazipur).

In March, outbreaks were reported from

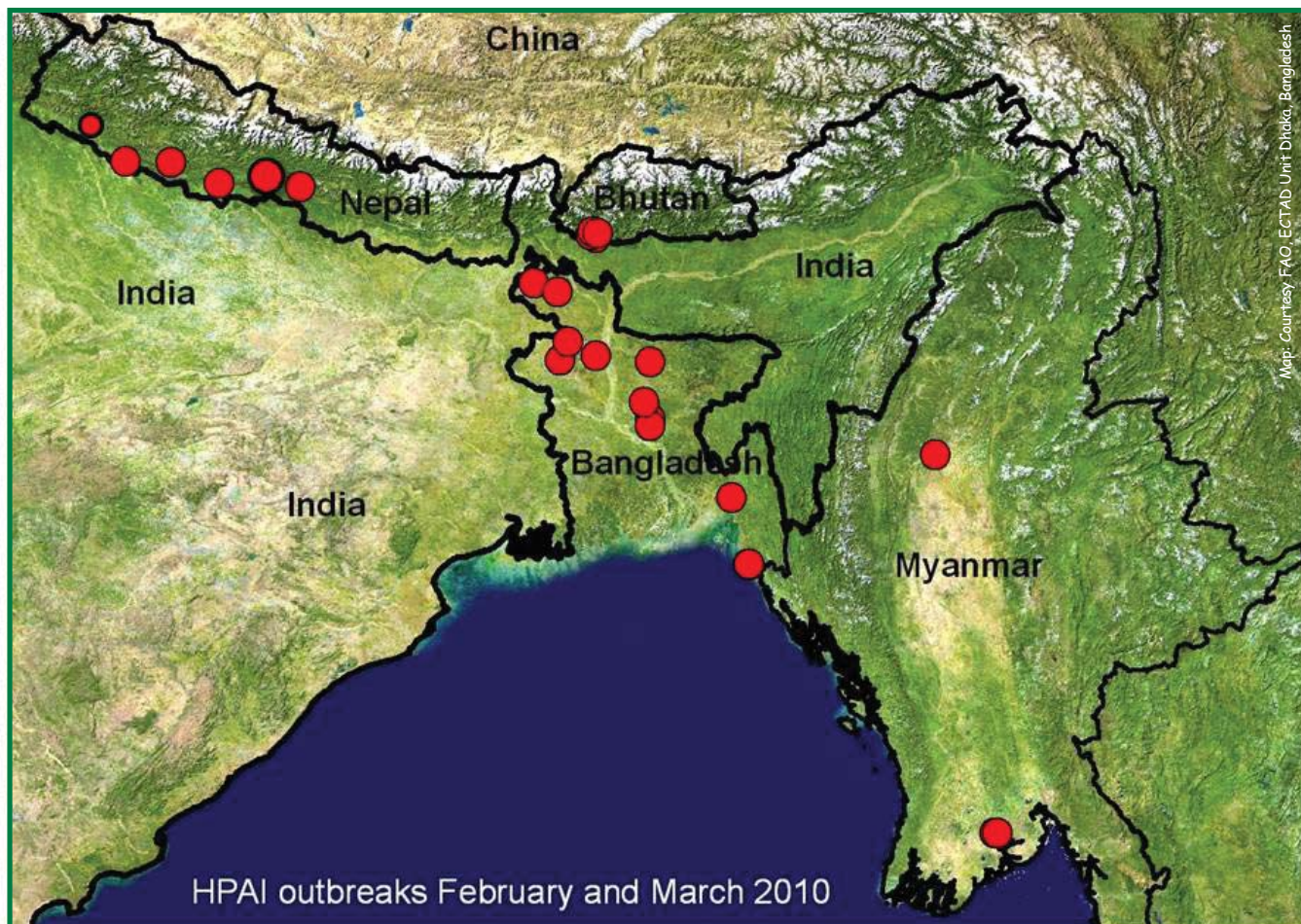
Naogaon Sadar, Thakurgaon Sadar, Sitakunda (Chittagaon), Mymensingh Sadar, Nilphamari Sadar and Joypurhat Sadar (two outbreaks on 21st and 31st March).

The virus as in previous years (2007-2009) belongs to 2.2 lineage indicating that virus is being maintained in reservoirs unnoticed within the country.



Contents

	Page No
Disease status in the sub-region	1
Activities undertaken	3
District level meetings in Tripura, Bihar & West Bengal (India) on advocacy, disease investigation, clinical symptoms and value chain mapping	3
Laboratory training on the use of Rapid Antigen Detection Kits, India	6
Participation in 4th ECTAD Asia meeting;	6
Upcoming project events;	6
New Staff.	6



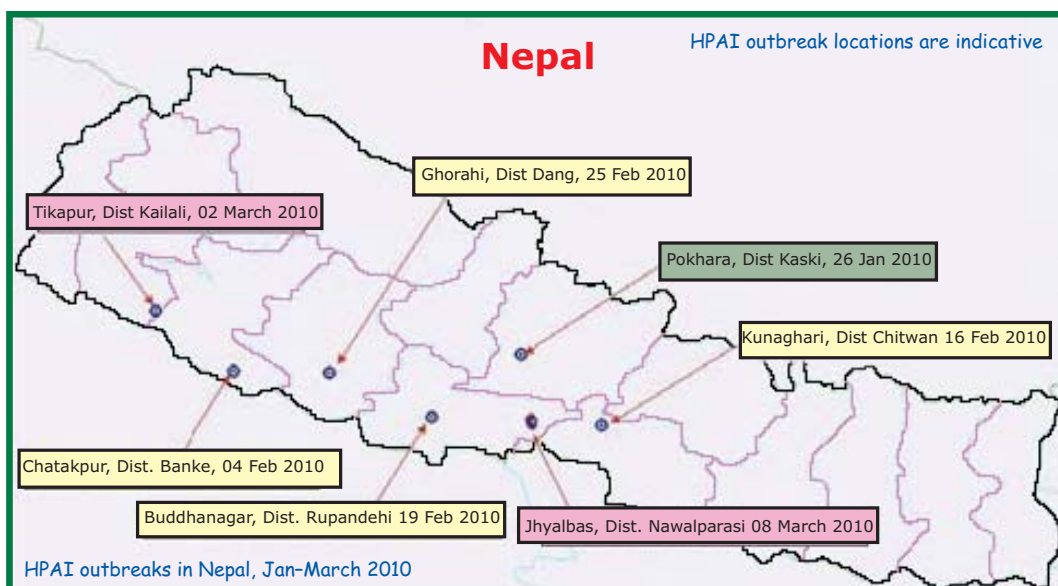
Situation in India:

- ⊕ Till the end of January 2010, the Government of India notified outbreaks in 12 villages in Khargram and Burwan blocks of Murshidabad district of West Bengal. Following it no further outbreak was reported from India.
- ⊕ A Central Rapid Response Team of Ministry of Health (<http://mohfw.nic.in>) was stationed at Murshidabad to assist the state health authorities for surveillance activities in human population. Till 14th February, all containment measures were carried out as per the action plan of Department of Animal Husbandry, Dairying & Fisheries (DADF), Government of India (<http://dahd.nic.in>) and 1,50,686 birds were culled and 18,190 eggs were destroyed.
- ⊕ The virus in 2010, belonged to 2.2 lineage and appeared to be similar to the viruses detected in 2008 and 2009 from India indicating that the virus is being maintained in reservoirs unnoticed within the country.

in Banke district of Mid-Western region of Nepal, where in backyards 351 birds out of 637 were found dead. The Central Veterinary Laboratory, Kathmandu carried out the rapid as well as Reverse Transcription Polymerase Chain Reaction (RT-PCR) test. The samples were positive for HPAI, hence remaining 286 birds were culled. On 16th February at Chainpur-8, Kunaghari, in Chitwan district at Western region of Nepal, HPAI struck in backyard poultry and 30 birds out of 224 were found dead. Rapid test confirmed H5 virus in dead poultry, thus remaining 194 birds were culled. Similarly on 19th February HPAI struck at backyard birds at Dudhraccha-3, Buddhanagar, Rupandehi district in Western region of Nepal. A total 256 birds among 614 were found dead. Rapid and Real time RT-PCR (RRT-PCR) test found samples positive for H5 and as a follow-up action remaining 358 birds were culled. On 25th February two birds

New outbreaks in Nepal:

- ⊕ After the first HPAI outbreak in January 2010 at Ward No. 7, Gharipatan area of Pokhara town in Kaski district, Nepal was reeling under many outbreaks in various districts in February and March.
- ⊕ It started on 4th February at Phatepur -8, Chatakpur



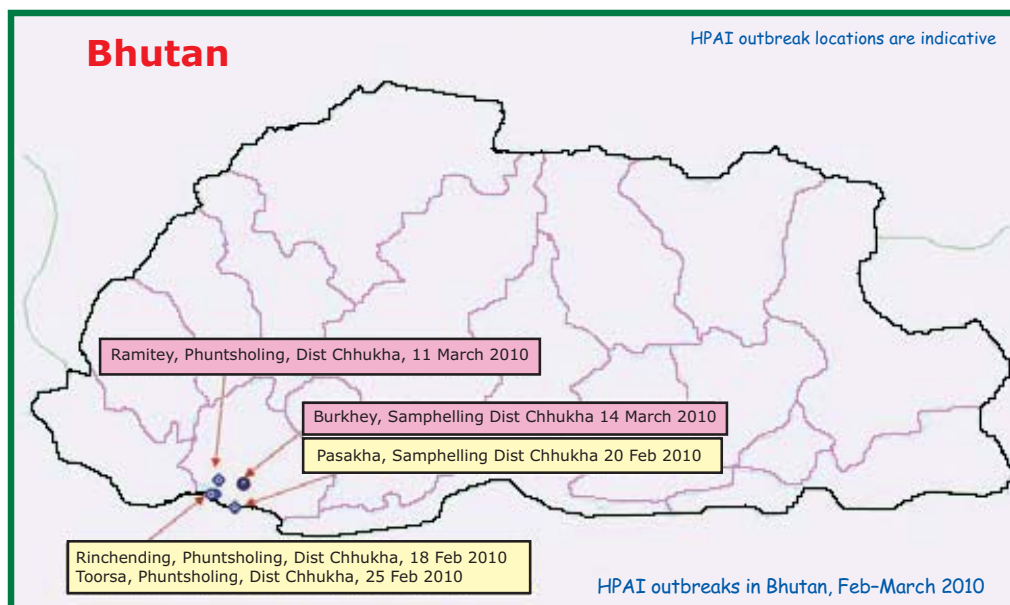
at a backyard were found dead in Tribhuvannagar NP-10, Ghorahi in Dang district in Mid-Western region of Nepal and rapid as well as RRT-PCR tests found samples as HPAI positive. As per information provided to OIE by the Project Director of Animal Health, Department of Livestock Services, Ministry of Agriculture and Co-operatives, Government of Nepal, the source of outbreak(s) was unknown or inconclusive and stamping out, cleaning and disinfection operations were completed in all outbreaks. Besides surveillance activities were ongoing.

⊕ In March, the Government of Nepal reported two incidents of HPAI outbreaks to OIE. The first outbreak was on 2nd March among backyard chickens, ducks and pigeons where 40 birds among 123 were found dead at Tikapur municipality-ward 9 in Kailali district situated in Far-Western region of Nepal. After confirmation of HPAI positive test remaining birds were culled. The next outbreak was reported on 8th March at Deurali VDC-ward 6 Jhyalbas in Nawalparasi district situated in Western region of Nepal. This outbreak was among backyard chickens, ducks and pigeons where 216 birds among 4,767 were found dead and on RRT-PCR test samples were HPAI positive. Thus remaining 4,551 birds were culled and all necessary epidemiological actions were taken.

⊕ The full picture of the clades of the virus involved was not available, but it is known that in addition to the 2.2 lineage experienced one year ago in Nepal's eastern region, a further lineage (2.3.2), which was not previously detected in Nepal has been recovered from the Pokhara outbreak.

⊕ As per report submitted to OIE by the Director, Department of Livestock, Ministry of Agriculture, Thimphu, Royal Government of Bhutan, the source of outbreak(s) was unknown or inconclusive. But report also mentioned that origin of infection could be due to illegal movement of animals, and contact with wild birds. As part of epidemiological comments the reports mentioned that the outbreaks were situated near the southern international border, which is West Bengal of India.

⊕ So far, all the cases were in Phuentsholing and Samphelling Gewogs of Chukha Dzongkhag with free ranging poultry in five villages found infected. As of 25th March, a total of 29 cases have been reported, of which 23 birds died, and 2,970 were destroyed.



Newly infected country Bhutan:

⊕ Bhutan became the new infected country in South Asia. Till now Bhutan was totally untouched by HPAI outbreaks, while during the last three years neighbouring countries, Bangladesh, India (West Bengal, Assam and Sikkim) were reeling under the continuous outbreaks. In the recent years people in Bhutan have developed interest on poultry rearing, basically for meeting the egg demand of the households. As a result, about 55% households rear their poultry at the backyard. The country had its first HPAI outbreak at a backyard farm on 18th February at Rincheniding village, Phuntsholing Gewong in Chhukha district located in the Western region of the country. Phuntsholing town is the gateway city of Bhutan along the sole road which connects Jaigaon town in Jalpaiguri district of West Bengal in India to western Bhutan. In the first outbreak sample were sent for testing to OIE reference Laboratory at Bhopal (India) and also to National Institute of Animal Health, Bangkok. As the results were positive for HPAI, authorities culled all the birds in the infected premises. Within two days of first outbreak on 20th February another outbreak was reported in village Pasakha, Samphelling Gewogs in Chhukha district, where out of the 1,200 susceptible free range poultry three were found dead. On confirmation of HPAI positive test from Bhopal Laboratory 1,091 poultry were culled. There was yet another outbreak on 25th February at Toorsa village, Phuntsholing Gewong in Chhukha district, where three deaths out of 434 among free range village chicken were reported and later remaining 431 birds were culled.

⊕ Bhutan government reported two other HPAI outbreaks in March. On 11th March in the village Ramitey, Phuntsholing Gewong in Chhukha district two out of 53 free range village chickens were found dead. Later remaining 51 birds were culled after positive laboratory test. In March the last outbreak which was reported to OIE by the Government of Bhutan, started on 14th March at village Burkhey, Samphelling Gewogs in Chhukha district. The village is not accessible by motorable road and HPAI outbreak was among free range village chickens, where 2 birds out of 1,371 were found dead. On confirmation of HPAI, all remaining 1369 birds were culled.

⊕ The virus in Bhutan belonged to 2.2 lineage and appeared to be similar to the viruses detected in India.

Activities undertaken

- ⊕ District level workshops at Agartala (Tripura), Kishanganj (Bihar), Malda, Dakshin Dinajpur, Cooch Behar and North 24 Parganas (West Bengal) in February - March, 2010.
- ⊕ Laboratory training on the use of Rapid Antigen Detection Kits at India, at the Regional Disease Diagnostic Laboratories, Bangaluru, Guwahati and Kolkata on 8th-9th February, 11th-12th February and 22nd-23rd March, 2010.
- ⊕ Participation in 4th meeting of ECTAD Asia.

District level workshops in India

⊕ Within the framework of the project OSRO/RAS/701/USA Phase II orientation/sensitization workshops were planned for the prevention and control of HPAI at the selected bordering districts in high-risk corridors of Bangladesh, India and Nepal. The targeted participants for the workshop were identified as district veterinary/livestock staff; NGOs; relevant private sector entities working in the area; forces manning the borders; representatives from health departments; representatives from the district administration; and media (print & electronic). The objective of the workshops was to make better understanding of the poultry sector in the high-risk districts across the border with emphasis on sensitization and capacity building of the concerned staffs of the respective countries to strengthen the HPAI prevention and control activities in the border areas.

⊕ Objectives included sensitization on advocacy related technical areas for better impact of risk and outbreak communication interventions; sensitization on clinical picture of HPAI; sensitization on district level findings of the poultry value chain mapping and poultry production/marketing systems; and also, provide technical

guidance and training to veterinarians on investigation of HPAI outbreaks. A total 14 such workshops were planned including six in Bangladesh, seven in India and one in Nepal.

- ⊕ Till the end of March all planned workshops in India and Nepal were concluded with high number of participation in each workshop. In December, 2009 first such workshop was held in Biratnagar (Nepal) with participants from Jhapa and Morang districts. In January, 2010, one such workshop was held at Siliguri, West Bengal, India for the participants from Darjeeling district. In February, 2010, yet another workshop was held at Agartala (Tripura, in North-Eastern region of India) and in March, 2010, remaining five workshops were held in Kishanganj (Bihar), Malda, Dakshin Dinajpur, Cooch Behar and North 24 Parganas districts of West Bengal.

Workshop at Agartala (Tripura) 18th-19th February, 2010:

- ⊕ Under the cross border project Sonamura (West Tripura district, Tripura, India) was identified as one of the high risk corridor corresponding to Comilla district of Bangladesh for possible cross border spread of HPAI. Therefore, an orientation/sensitization workshop was organised over two days at Agartala (West Tripura district, Tripura state, India) on 18th-19th February, 2010. Tripura state is completely surrounded by Bangladesh on three sides (856 km of border) while in the East its 53 km border touches Indian state of Assam and 109 km border touches another Indian state of Mizoram. Agartala is the capital city of the state and the biggest commercial town of West Tripura district and has seven big poultry markets. Besides, there are sub divisional markets in Khowai, Sonamura and Bishalgarh. There are also other small weekly or daily markets where poultry are traded. Agartala has the largest poultry market in the area and caters to the poultry needs of neighbouring districts as well as influences the cross-border poultry trade with Bangladesh. Tripura had three confirmed HPAI outbreaks in April, 2008, two of those were in West Tripura district (Mohanpur and Bishalgarh blocks) and one was in Kamalpur of Dahlai district.
- ⊕ A day before the workshop, the ECTAD unit (SAARC) team visited the poultry markets in Agartala, Boxanagar, and Sonamura (West Tripura) on 17th February, 2010. The team also visited the adjoining border areas especially Sonamura border linking Bangladesh where there were fenced as well as open border manned by Border Security Force (BSF). Brief discussions with the BSF as well as staff of Animal Resources Development Department (ARDD) and local poultry traders helped the team members to understand the poultry value chain in the area as well as the gamut of cross-border trade. The team also visited an epidemiologically interesting wetland area in Sonamura where wild waterfowl and domestic ducks were found to be sharing the same habitat (with a high possibility of virus transmission between domestic and wild birds). This site was being used by the West Tripura ARDD to collect samples from wild birds for HPAI surveillance.
- ⊕ On 18th February, altogether about 150 participants attended the workshop including State Government and field ARDD staff, NGOs, poultry farmers, feed manufacturers, women groups, self-help groups, several officers from the Border Security Force and also representatives from Tripura police. Representatives of the Veterinary College, departments of health and forest also participated in the workshop. Representatives of UNICEF India office (New Delhi and Kolkata) and AED (New Delhi and Kolkata) also attended the workshop.



Advocacy & Communication Group work at Agartala workshop on 18th Feb, 2010

- ⊕ The workshop was opened by Mr. Sahid Choudhury, Member of Legislative Assembly (MLA), representing ruling party from Boxanagar constituency in the state.
- ⊕ The opening of the workshop was followed by a presentation by Dr. Mohinder Oberoi on clinical signs of HPAI in poultry. He explained that how HPAI could be diagnosed in the field through clinical signs and other general indicators of the disease. The presentation generated tremendous interest, particularly among the non-technical participants and resulted in a lengthy question and answer session and discussions. This was followed by a presentation from Mr Jagmeet Uppal on orientation/sensitization of participants related with key areas of advocacy interventions related with risk/outbreak communication for HPAI prevention and control. He explained the key areas of strategic communication and the principles of communication during outbreaks. He emphasized the creation of 'felt need' among the targeted participant groups for communication interventions/messages through sustained advocacy. He gave group work to the participants for prevention and control of 'animal to animal' and 'animal to human' transmission and the expected behaviour change through the interventions in prominent technical areas. He facilitated the groups to understand the 'group work matrix'. The group work was followed by presentation by each group and discussions.
- ⊕ On the second day, a senior ARDD staff member of West Tripura district presented the status of poultry production and trade in the district. The presentation included geographical information, poultry population, volumes of poultry production, cost of the various types of poultry in the wholesale and retail markets, production pattern, past information on HPAI outbreaks and the various actions taken by the department for preparedness, diagnosis and control.
- ⊕ This was followed by a presentation by ECTAD team on poultry value chain mapping and production and marketing systems. The presentation also focused on the study to understand how poultry markets work and how poultry market chains are linked to epidemiologically significant events. In the afternoon, another presentation on technical guidance for disease investigation for veterinarians and veterinary technicians was made. This included a presentation on step by step guidance on investigation of disease outbreaks in the field. The participants were then divided into three groups to discuss three poultry disease outbreak scenarios to come up with their step by step line of action and diagnosis. The group work was followed by presentations by each of the groups and a question and answer session and discussions. In concluding the workshop, the Director Dr. A. Roy Burman of ARDD thanked FAO for conducting the workshop and requested for more training workshops and also assistance for field studies in the future.

Workshop at Kishanganj (Bihar) 4th-5th March, 2010

- ⊕ Under the cross border project Jogbani (Araria district of Bihar, India) was identified as one of the high risk corridor corresponding to Morang district of Nepal for possible cross border spread of HPAI. Adjoining district of Araria is Kishanganj, with corresponding district Jhapa in Nepal, which witnessed two HPAI outbreaks in early 2009. Therefore, an orientation/sensitization workshop was organised over two days at Kishanganj on 4th-5th March, 2010. Kishanganj is also bordering Darjeeling and North Dinajpur districts of West Bengal, where in the past HPAI outbreaks were reported. The workshop was opened by the then acting Deputy Commissioner of the district, while Chief Medical Officer, a senior Police officer of the district, were present during the inauguration. About 115 participants from both districts were present during



Participants at Agartala workshop on 18th Feb, 2010

the workshop, which included veterinary officers, para-vets, backyard poultry farmers, women groups representation, and also a representative from field publicity unit of the Ministry of Information & Broadcasting of Government of India. ECTAD unit (SAARC) team facilitated various sessions of the workshop as well as advocacy related group work on first day and disease investigation related group work on second day.

Workshop at Malda, Dakshin Dinajpur, Cooch Behar and North 24 Parganas (West Bengal)

Each of the four districts of Malda, Dakshin Dinajpur, Cooch Behar, North 24 Parganas in West Bengal was identified as high risk corridors corresponding to respective districts across international border of Bangladesh. Hence, it was necessary to understand the cross border trade and border scenario in each of the district. The ECTAD unit (SAARC) team visited the border areas in the districts i) Mahdipur in Malda; ii) Hili in Dakshin Dinajpur; and iii) Petrapole in North 24 Parganas. Border in Cooch Behar district at Dinhata was visited by the team during their earlier trip in January, 2010. At each of the border areas local officers of ARDD of West Bengal government accompanied the ECTAD team. At every location brief discussions with BSF staff posted at the border and local poultry traders were held. Team also visited some important poultry markets in the districts. The BSF staff informed that they were all necessary steps in stopping illegal movement of produce from either side. These meetings helped the team members to understand the poultry value chain in the area(s) as well as the gamut of cross-border trade.

Mahdipur, (Malda): There is no inflow of poultry from Bangladesh except duck eggs during festive seasons or may be a very small number of poultry inflow as a token 'gift' to relatives who return from Bangladesh. The border point is one of the legal trade route between both countries, where Indian trucks go up to 500 meter inside the Bangladesh border to download the consignment. In return, at the border check-post, truck tyres were being disinfected by the ARDD contracted employees through manual spray pumps using sodium hypochlorite solution. It was reported that the poultry population in the area was minimal. There were also no live bird markets seen on the road sides leading to border. The team visited an epidemiologically interesting wetland area created by Farakka barrage on river Ganges, where wild waterfowl and domestic ducks were found to be sharing the same habitat (with a high possibility of virus transmission between domestic and wild birds).

Hili, (Dakshin Dinajpur): The area has many "Pockets" and "Enclaves". The pockets and enclaves are defined as the land area enclosed from all sides or three sides by either of the country or a village where visibly there is no "no man's land" and houses in one country have been carved out with those in the neighbouring between the two countries. Poultry and cattle freely move between the two countries in a few 'pockets' and 'enclaves' and population 'mixing' is natural phenomenon. ECTAD team visited one such village, which is considered "very sensitive" under the terminology of the border manning forces of both sides. In the village while walking, one can easily put a feet in neighbouring country's territory if by mistake feet goes a few inches in left or right direction, or while walking it is easy to put hand on the wall of house of other country. So, far no HPAI outbreak has been reported from this village, despite rampant common poultry scavenging among both the countries. Hili is also a legal trade route between both countries and there too trucks coming from Bangladesh were being sprayed with disinfectants on tyres. The border is quite porous and not fully fenced.

Petrapole (North 24 Parganas): The Petrapole border is highly regulated and it is a major land transit and trading point between the two countries. Both India and Bangladesh have "veterinary teams" engaged in spraying of vehicles

entering into their territory using manually operated pumps and disinfectants (Sodium hypochlorite in India and Virkon 'S' in Bangladesh). Also, there is a rail link between two countries for goods train and Petrapole is last railway station on Indian side.

Workshop Summary: Malda workshop was held on 8th-9th March, and it was attended by about 75 participants on first day which included staff of ARDD, representatives from health and other departments, women self-help groups and backyard poultry farmers. However, there was no representation from BSF and media. On the second day about 123 participants attended the workshop. It included para-vets and also there was participation from Murshidabad district, where HPAI outbreaks were reported in January 2010. Dakshin Dinajpur workshop was held on 11th-12th March and about 165 people participated in the workshop, which was inaugurated by chairperson of the District (Zila) Panchayat. The District Magistrate also attended the workshop for a short period on first day.

Cooch Behar workshop was held on 15th-16th March, and about 115 people attended it. It was inaugurated by the District Magistrate, who explained to participants, the importance of the workshop and need for the prevention of HPAI



Advocacy & Communication Group work at Cooch Behar workshop on 15th March 2010

among human population. The last workshop in India was conducted at Barasat in North 24 Parganas district of West Bengal on 19th-20th March. It was attended by over 150 participants and inaugurated by the Chairman of the District Panchayat. The District Magistrate also spent a few hours in the workshop.

Agenda for all the workshops was similar, thus technical sessions in all the workshops started with presentation from Dr. Oberoi on clinical picture of HPAI and discussions on it. The session followed by Mr. Uppal's presentation on advocacy issues and technical areas for interventions. Mr Uppal also facilitated a group-work in the workshops on technical areas and understanding the advocacy/communication issues. The second day of the workshops was mainly devoted to district presentations on overall status of poultry and its trade in the district; poultry value chain mapping; situation of the poultry markets and



Workshop inaugural session at Barasat, North 24 Parganas on 19th March, 2010

movements of poultry from one place to another and training on disease investigation with group work.



Participants at Dakshin Dinajpur on 11th March, 2010

Laboratory training in India for use of avian influenza rapid antigen detection kits

At the request of Government of India, rapid antigen detection kits were procured and delivered for use in the high risk corridors for rapid screening of cases where outbreaks are frequently occurring. Further at the request of Government of India three cycles of laboratory trainings have been conducted on the use of rapid antigen kits on 8th-9th February (Bangaluru, Karnataka), 11th-12th February (Guwahati, Assam) and 22nd-23rd March, 2010 (Kolkata, West Bengal) at the Regional Disease Diagnostic Laboratories. So far 50 laboratory personnel have been provided hands on training. Twenty two percent

participants were females and 78 per cent males at these trainings. The kits have been successfully used in the recent HPAI outbreaks in Murshidabad district of West Bengal. Remaining two trainings are planned in May at Pune and Jalandhar.

Fourth ECTAD-Asia meeting at Bangkok

Sub-regional Manager and Sub-regional Advocacy Coordinator of ECTAD unit (SAARC), participated in 4th ECTAD Asia meeting at Bangkok from 23rd -25th February, 2010. The meeting provided a platform to exchange views among other countries and also the future approaches adopted for control and prevention of HPAI with special attention to endemic countries. Also, during the meeting there was a fruitful technical session on "One World One Health".

Upcoming Project Events

- District level meetings in Bangladesh on advocacy, risk communication, poultry production systems, cross-border value chain mapping, disease investigation in June-July, 2010;
- Laboratory training on the use of Rapid Antigen Detection Kits, India, in May, 2010;
- Policy and Technical Level Committee(s) meeting in May, 2010
- Study on livestock marketing system in Bangladesh in April - May, 2010

New Staff:

- Mr Nafis Khan, joined as Emergency Programme Officer on 20th February, 2010



Group Photograph of Participants at Malda workshop on 8th March, 2010



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FROM THE AMERICAN PEOPLE

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