

## **RESEARCH SUMMARY**

**Research Title: Bangladesh – Border Study**

**Study location: Five Bangladesh border districts – Dinajpur (Rajshahi division), Chapai Nawabganj (Rajshahi division), Satkhira (Khulna division), Chuadanga (Khulna division), and Sylhet (Sylhet division).**

**Study dates: August 21, 2009 – September 4, 2008**

This study is part of the global Task Order of the Academy for Educational Development (AED) to study behavior change and communications activities regarding Avian Influenza prevention and containment, and response to pandemic influenza. The H5N1 virus, the causative agent of Avian Influenza, is highly pathogenic. If given enough opportunities, H5N1 will change into a form that is highly infectious to humans, or combine with the highly contagious seasonal influenza virus and spread easily from person to person. Bangladesh faces particularly high risk of pandemic influenza, given the proximity of human habitation and backyard poultry, and frequent contact between people and birds.

### **Research Objectives**

The objectives of the study are as follows:

- i. To determine motivations and incentives necessary to adapt best practices to prevent the spread of Avian Influenza into communities.
- ii. To identify the barriers (real or imagined) that prevent the target audiences – consumers, transporters, vendors, farmers, and stakeholders in the poultry production and processing industry – from adapting best practices to prevent Highly Pathogenic Avian Influenza (HPAI).

### **Methodology**

The study was conducted in vulnerable and high-risk border communities in Bangladesh, and covered respondents associated with poultry production and processing (industrial, small, and backyard farmers); domestic and cross-border trade and transport of poultry; general commerce and trade (vendors, transporters, consumers); oversight of border crossings and customs; and citizens living in communities along international borders and entry points in Bangladesh.

Five Bangladesh bordering districts were selected randomly, and included locations in three divisions: Rajshahi, Khulna, and Sylhet. Thereafter, one upazila adjacent to the border from each district was selected for the sample survey.

The study gathered and analyzed both qualitative and quantitative information. A survey interview collected quantitative data on 232 females and 132 males in 365 households, equally distributed throughout the five study districts. Researchers also conducted in-depth qualitative interviews with 90 respondents, including semi-commercial poultry farmers, commercial poultry farmers and workers, vendors, processing industry workers, transporters, large industry consumers (such as hotels and restaurants), livestock officers, and custom officials.

## Key Findings

- Backyard poultry farmers are predominantly (65%) female. Education level of household heads among backyard farmers is largely below the secondary level, and 38% are illiterate. All other respondents are male.
- With some variation, people residing adjacent to the borders can afford their daily expenditures for food. Monthly income of backyard farmers ranges from less than Tk. 3,000 (17%) to more than Tk. 10,000 (10%), and averages Tk. 4,000-5,000. Workers on large farms earn an average of Tk. 3,390 per month. Average monthly income of semi-commercial and commercial farm owners is Tk.10,800 and Tk. 42,000, respectively.
- Poultry products in larger quantity are mainly transported by motorized van. Non-motorized vans are used for smaller amounts and shorter distances. While transporting, metallic cages are used for poultry birds and specially made carton boxes for chicks. Eggs are carried in trays packed in cartons.
- Poultry processing (slaughtering, dressing, and cutting) is performed manually, and most often in the home of the consumer.
- Awareness and knowledge of Avian Influenza among small rural backyard farmers is dangerously low:
  - 59% have heard about Avian Influenza.
  - 32% know nothing about its mode of spread among poultry birds.
  - They do not have proper knowledge about detection of Avian Influenza among birds.
  - 21% know that humans can get Avian Influenza from infected domesticated birds.
- Semi-commercial and commercial poultry farmers are more aware of Avian Influenza than others. They know Avian Influenza can affect humans; are familiar with signs and symptoms of Avian Influenza and the mode of spread among humans; and how to protect oneself from being infected.
- Most of the vendors, transporters, large consumers, and processors of poultry and poultry products have heard about Avian Influenza and have some knowledge about its spread among the poultry birds, but have little knowledge about the signs and symptoms of the disease, and are somewhat confused about the risk of Avian Influenza among humans.
- Knowledge and practice levels regarding prevention of Avian Influenza is very low.
- Poultry in backyard farms are kept in sheds adjacent to dwelling house. These sheds are made of clay or brick, with roofs of hay or wood. In all but a few cases, chickens and ducks are kept together. Most often, female members of the households take care of the poultry, with female household heads followed by adolescent girls. There are no

restrictions to prevent children and other domestic individuals from coming in contact with the animals. Poultry are allowed to roam free in daytime and collect food from outside. Hand washing practice after contact with poultry is rare and such practices prior to contact with poultry are absent.

- The official ban on poultry trade between Bangladesh and India since the August 2004 outbreak of AI in India has not stopped poultry smuggling across the border. Almost all respondents, including the custom officials, are unaware of laws related to cross-border poultry trade, or any checklist used for transit clearance.
- The predominant perception of the border residents is that they are more vulnerable to Avian Influenza because of outbreaks of Avian Influenza in bordering districts of India. Many, however, believe that Avian Influenza is not a serious risk, but a conspiracy by a foreign country to damage the emerging poultry sector of Bangladesh.