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STOP AI QUARTERLY REPORT

October 1, 2009 to December 31, 2009



Stamping Out Pandemic and Avian Influenza (STOP AI)

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DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Cover picture depicts members of the Fowl Sellers Association in Illorin, Kwara state, Nigeria.

Table of Contents

OVERVIEW	1
1. MANAGEMENT REPORT	1
1.1 STRENGTHENING A PUBLIC-PRIVATE PARTNERSHIP FOR HPAI CONTROL IN EGYPT	2
1.2 ENGAGING THE PRIVATE SECTOR IN HPAI CONTROL IN WEST AFRICA.....	3
1.3 STRENGTHENING BIOSECURITY IN PROTOTYPE LIVE BIRD MARKETS IN NIGERIA.....	4
1.4 SURVEYING BIOSECURITY TRAINING IMPACTS IN EAST AND WEST AFRICA.....	4
1.5 USING LOCAL IMPLEMENTING PARTNERS WORLDWIDE	5
2. GLOBAL ACTIVITIES	6
2.1 KNOWLEDGE MANAGEMENT	6
2.2 VIRTUAL LEARNING	7
2.3 IMPACT EVALUATION SURVEY	8
2.4 TRAINING	9
2.5 RESPONSE CAPACITY	9
2.6 RECRUITMENT.....	9
2.7 CONFERENCES AND PUBLICATIONS.....	9
3. COUNTRY ACTIVITIES.....	10
3.1 ONGOING COUNTRY ACTIVITIES	10
AFRICA	10
3.1.1 NIGERIA.....	10
3.1.2 UGANDA	11
3.1.3 WEST AFRICA HUMAN AND ANIMAL HEALTH	11
ASIA NEAR EAST REGION	13
3.1.4 BANGLADESH.....	13
3.1.5 EGYPT	15
3.1.6 NEPAL	18
3.1.7 VIETNAM.....	19
EUROPE AND EURASIA	20
3.1.8 CENTRAL ASIA REPUBLICS	20
3.1.9 GEORGIA	22
LATIN AMERICA AND CARIBBEAN.....	23
3.1.10 BOLIVIA.....	23
3.1.11 LAC PRODUCT DEVELOPMENT MEETINGS AND TRAINING COURSES	23
3.1.12 NICARAGUA.....	24

3.2	COMPLETED COUNTRY ACTIVITIES.....	25
	AFRICA	25
3.2.1	EAST AFRICA.....	25
3.2.2	SOUTHERN AFRICA.....	25
	LATIN AMERICAN AND CARIBBEAN.....	26
3.2.3	CARIBBEAN	26
3.2.4	ECUADOR.....	26
3.2.5	EL SALVADOR.....	26
3.2.6	GUATEMALA.....	27
3.2.7	PARAGUAY	27
4.	PROGRESS TOWARD RESULTS.....	28
4.1	NEW PROBLEMS ENCOUNTERED AND PROPOSED SOLUTIONS	28
4.2.	UPDATE ON RESOLUTION OF ISSUES RAISED IN PREVIOUS REPORTS	28
4.3	ANTICIPATED ACTIVITIES PLANNED FOR NEXT QUARTER	28
4.4	PROGRESS TOWARD RESULTS.....	29
5.	FINANCIAL REPORT	30
	APPENDICES	I
	APPENDIX A: TASK ORDER STATUS	II
	APPENDIX B: RECRUITMENT AND TRAINING MATRIX	III
	APPENDIX C: PRESS	VIII

OVERVIEW

STOP AI (Stamping Out Pandemic and Avian Influenza) is a unique United States Agency for International Development (USAID) project that works at the nexus of animal and human health. The project works to minimize zoonotic threats and the risk that HPAI becomes a human pandemic. STOP AI helps build developing countries' capacity to prevent, detect, respond to, and stop HPAI and other zoonotic disease outbreaks and minimize the resultant economic and nutritional consequences. In addition, it addresses select human health aspects of HPAI such as exposure during poultry production and safety measures taken during outbreaks, and helps governments develop protocols for preparing for and responding to pandemic influenza. STOP AI offers a wide range of technical assistance and training services to regional and national governments, municipalities, commercial poultry producers, and nongovernmental organizations (NGOs) throughout the world to plan for and prevent outbreaks of HPAI. The STOP AI project's period of performance is February 24, 2007 to December 31, 2010.

“Knowing some general principals on biosecurity is very important in our job. Neglecting them might seem trivial, but could result in big trouble for poultry production.”

- Evelina Em, STOP AI training participant and STOP AI Uzbekistan Master Trainer

An important assumption underlying the approach taken by STOP AI is that engagement of the private sector is crucial to achievement of sustainable HPAI control. Consequently, we have sharply focused on understanding the poultry value chain, the motivations and constraints of the private sector, and working with poultry producers, traders, processors, and their associations to improve the profitability of the sector through improved poultry management, health, and biosecurity practices.

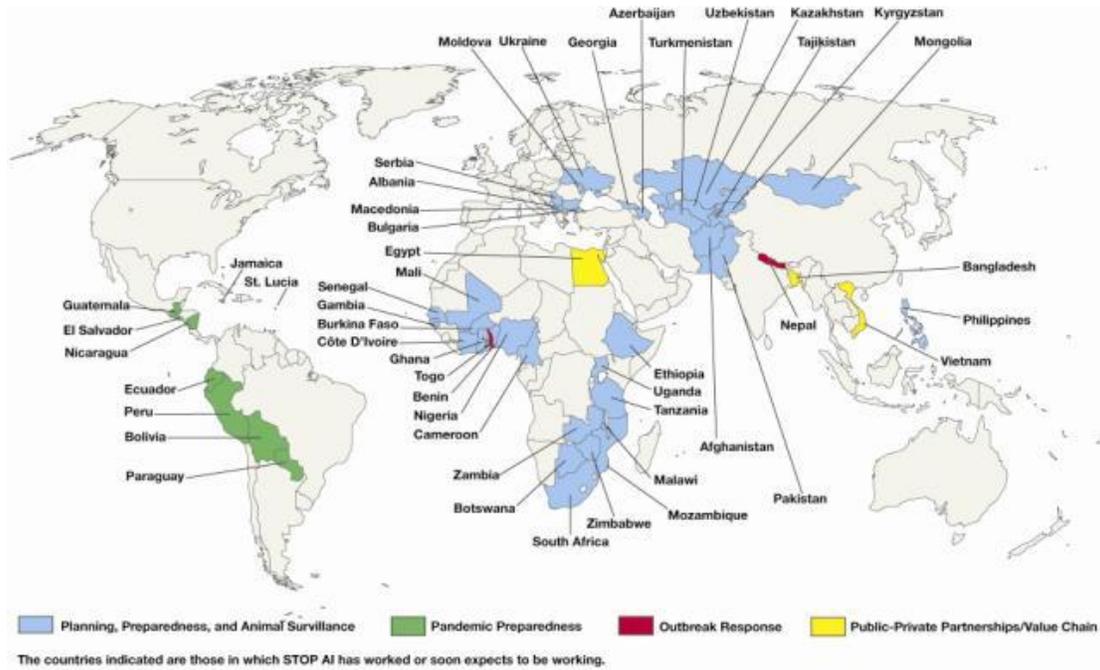
I. MANAGEMENT REPORT

DAI and its partners on STOP AI are proud of the progress the project has made through the fourth quarter of calendar year 2009, 34 months into project implementation. This quarter, STOP AI highlights the following results:

- Strengthening a public-private partnership for HPAI control in Egypt
- Engaging the private sector in HPAI control in West Africa
- Strengthening biosecurity in prototype live bird markets in Nigeria
- Surveying biosecurity training impacts in Africa
- Using local implementing partners worldwide

STOP AI's long term country activities are increasingly focused on drawing out participation from the private sector on biosecurity and cleaning and disinfection initiatives. This is being done through the provision of technical advice to individual farmers and traders as well as through engagement with poultry producer and trader associations. We treat these relationships not as a one-way flow of information and knowledge: producers and traders provide highly valuable information about local context and constraints to STOP AI trainers and providers of technical advice, which helps to improve the practicality of advice the project provides. Through increased interaction with actors in the poultry value chain, STOP AI learns what works within their environments, what the costs associated with each biosecurity improvement are, and how to connect with individual poultry farmers and live bird market operators to encourage them to enhance biosecurity and mitigate risky behavior.

The map below shows the 49 countries where STOP AI is helping to or has helped build capacity and provide technical assistance so countries can better prepare for and respond to avian and pandemic influenza.



I.1 STRENGTHENING A PUBLIC-PRIVATE PARTNERSHIP FOR HPAI CONTROL IN EGYPT

Egypt remains one of the priority countries as far as HPAI H5N1 is concerned, since the disease remains endemic within the poultry population and periodically infects humans. STOP AI is working with International Free Trade Corporation (IFT) to strengthen a public-private sector partnership as a way to sustain the effort to upgrade biosecurity and other services for Sector 2 and 3 producers.

Training and increased producer awareness of how to deal with HPAI is necessary to improve biosecurity. However, producers must have the economic incentive to commit the time and financial resources to make biosecurity investments. Therefore, STOP AI's technical assistance targets broader aspects of improving farm profitability through reduced mortality, improved feed conversions, etc. in addition to specific biosecurity issues.

STOP AI focused its activities in three governorates in the Nile Delta where concentrated poultry production areas have been directly affected by HPAI: Gharbia, Sharqia, and Dakahlia. We identified important Sector 2 and 3 producers, private vets, agricultural engineers, and General Organization of Veterinary Services (GOVS) vets in selected "HPAI hot zones" areas within the three governorates, and invited them to roundtables. The purpose of the initial roundtables was to learn about how stakeholders deal with HPAI, identify their knowledge of biosecurity, assess constraints to making improvements in biosecurity, and design STOP AI training and technical assistance.

STOP AI has established three stakeholder groups of 20 to 30 participants each in the three Delta governorates and will expand to additional groups. As shown in the table below, we have conducted five or more roundtables for each of the three groups in each governorate.

Governorates	Sharqia	Gharbia	Dakahlia	Total
Roundtables held	7	5	6	18
Total stakeholders participating	158	115	168	441
GOVS vets	84	58	65	207
Producers, private vets, and agri-engineers	74	57	103	234

Note: STOP AI also conducted 1 roundtable in Luxor attended by 11 veterinarians and 20 producers.

The roundtables have facilitated open dialogue between official GOVS vets and producers by providing a forum in which the two groups can work together to resolve conflicts. The heads of the GOVS vet services in each of our target governorates have been very supportive of the roundtables.

STOP AI has partnered with the private sector on roundtables and training. In particular, IFT, a leading veterinary pharmaceutical services provider in Egypt with over 200 vets, has provided financial sponsorship for four roundtables, covering the expenses of venue rentals and participant lunches. IFT has also helped STOP AI identify leading poultry producers in our target governorates to ensure a broad range of roundtable participants. In addition, we have started discussing partnership opportunities with the Egyptian Poultry Improvement Society (EPIS) a recently established association with about 100 members that is interested in becoming more involved in AI issues. EPIS has proposed to co-sponsor a February STOP AI biosecurity training session.

1.2 ENGAGING THE PRIVATE SECTOR IN HPAI CONTROL IN WEST AFRICA

In previous quarters STOP AI has focused much of its effort on providing training to public sector veterinarians on topics such as biosecurity in farms and live bird markets as well as on surveillance for more rapid response to H5N1 outbreaks. This is an obviously important part of any national HPAI control, but it is certainly not sufficient. Producers have also been invited to STOP AI trainings, but were not the main focus of much of the training.

As STOP AI moves forward in its support of a more sustained effort to improve biosecurity in the poultry value chain, we are focusing on engaging the private sector, working closely with associations and with model markets and farmers to provide a clear demonstration of the economic and financial benefits of better biosecurity. STOP AI has met with and assessed the capabilities of national and regional associations of poultry producers and traders as a preliminary step towards engagement and the provision of technical assistance. These efforts are part of our goal of pursuing opportunities to strengthen and expand the role of the private sector in a coordinated and sustained effort to control AI. The project is also identifying live bird markets in its focal countries of: Senegal, Mali, Burkina Faso, Cote d'Ivoire, Ghana, Gambia, Liberia, Sierra Leone, Benin, and Togo. These markets will be the venue in which a large part of our public-private partnership for improved biosecurity and HPAI control will be developed and tested for sustainability. As part of this effort, STOP AI has identified "national coordinators" who will support joint public-private efforts in live bird markets and small farms. STOP AI will bring the coordinators together in Accra, Ghana for an orientation workshop to address the activities planned for West Africa.

In addition, STOP AI will continue to travel through our focal West African countries to identify live bird markets where STOP AI will provide technical assistance for their improved LBM biosecurity and to meet with national poultry producers' association representatives to broker public-private sector partnerships that support improved biosecurity both on farms and in live bird markets. The national consultants will provide technical advice and support to the partnerships. STOP AI also plans to effect situation-specific interventions in the identified live bird markets and value chains that will serve as models for improving biosecurity.

A biosecurity course enables a veterinarian to enhance production safety at a poultry farm.

“Biosecurity is the cheapest, most effective means of disease control available,” says veterinarian Evelina Em of Kibray District poultry production farm “Kibray Parranda” in Uzbekistan. Recently, Em underwent a training course organized by USAID’s STOP AI project on the use of biosecurity principles and health management at poultry farms. Em is convinced that this training will help her farm to minimize animal health threats and the risk that highly pathogenic avian influenza becomes a human pandemic.

Em has been working as a veterinarian for more than 20 years, and for the past five years, she has served as the chief veterinarian of Kibray Parranda with a capacity of 100,000 chicks. Despite her extensive experience in chicks’ brooding and growing, prevention of infectious diseases, and sanitation, Em felt that the USAID course has changed her outlook.

This was the first training course she can remember to include specific knowledge applicable to her job. “I have expanded my knowledge on differential diagnostics of viral poultry diseases, clinical signs and pathology of E. coli infections, and calcium and vitamin deficiencies,” says Em.

The course also reminded Em that many infections at the farm are caused due to the lack of awareness of the farms personnel about the possible dangers. “Oftentimes, our farm employees also raise poultry at home or have family members who work at other poultry farms,” says Em. “A more rigorous application of sanitation procedures, such as a restricted use of employee mobile telephones and other personal items, as well as a better control of farm visitors, can protect us from Avian Flu.”

To minimize biosecurity risks at Kibray Parranda, Em instituted a compulsory training course on Biosecurity for all farm personnel. She also is drafting the Standard Operating Procedures related to biosecurity and plans to train all farm personnel on them. “Preventing diseases is always cheaper than treating or suffering the effects of disease,” says veterinarian Evelina Em. “Small investments in improved housing and equipment, and creating staff awareness on proper biosecurity procedures will lead to healthier and more productive birds.”

I.3 STRENGTHENING BIOSECURITY IN PROTOTYPE LIVE BIRD MARKETS IN NIGERIA

STOP AI’s Nigeria program is a strong example of institutional collaboration and synergy, with STOP AI working in close cooperation with the World Bank-supported Avian Influenza Control and Human Pandemic Preparedness and Response Project (AICP). STOP AI provides on-site technical assistance and support to four of the prototype markets being set up in Kaduna, Lagos, Kano, and Kwara states by the Federal Department of Livestock (FDL) with AICP support. The project has worked with each state to help form partnerships among the veterinary services, the municipal authorities, and the Fowl Sellers’ Association of Nigeria (FSA) to introduce and sustain bio-security practices at the markets. STOP AI has trained participants in the poultry value chain, including wholesalers, transporters, processors and retailers on Standard Operating Procedures (SOPs) for unloading, holding, slaughter, processing and disposal; and is currently undertaking the second level intervention on cleaning and disinfection (C&D) which includes hands-on practical training and demonstration in the prototype markets and selected model farms.

In exchange for agreements on developing fee-for-service arrangements, STOP AI provided each prototype market site with a power sprayer, an initial supply of disinfectant, and other locally-procured inputs for routine cleaning and disinfecting. This quarter, the Honorable Minister of Agriculture commissioned the market in Kaduna on October 29th, 2009, and the Kano market became operational in the first week of December 2009. The other two completed markets in Kwara and Lagos are expected to become operational in February 2010.

STOP AI and FSA leaders have agreed to work together toward the establishment of a weekly fee collection system that will provide the funding necessary to continue biosecurity improvements when STOP AI and AICP activities end. The elements of such a system are beginning to take shape. For example, we have begun to work out the mechanics of fee management. The money collected would be held in custody of the elected market association officials and be used for biosecurity interventions and the service of other general live bird market requirements. The fixed amount could vary according to need and objective in focus.

I.4 SURVEYING BIOSECURITY TRAINING IMPACTS IN EAST AND WEST AFRICA

STOP AI surveyed participants of our biosecurity trainings in September 2009 to determine what impact the courses had on attendees’ retention and use of the content covered. We asked respondents to share ways they applied their biosecurity knowledge. Respondents said that they took the following actions based on the trainings:

- **Improved commercial poultry farm biosecurity measures.** One respondent built vehicle dips, restricted entry into the parent stock and commercial sections of his farm, provided new uniforms and boots to workers, and built an incinerator to improve biosecurity.

Another respondent trained 5 farm attendants in biosecurity practices at his farm.

- **Added biosecurity course work for college students.** One respondent used farm demonstrations in biosecurity to train 148 final-year DVM students and is an advisor for a student working on a thesis about the application of biosecurity measures in poultry farms. Another coordinated with an NGO and a college of health science so medical and paramedical students would better understand HPAI. Another respondent provided STOP AI materials to 84 staff and students at a veterinary teaching hospital.
- **Provided new biosecurity services.** One respondent provided an extension service to villagers on village poultry biosecurity. Another distributed disinfectants to farms and live bird markets.
- **Expanded biosecurity training opportunities.** Respondents:
 - Organized a workshop on biosecurity for a local government service board on biosecurity at the grassroots level attended by 69 animal health workers;
 - Trained three veterinary technical staff in biosecurity and AI containment;
 - Trained 50 farmers, state, and local government officials in the veterinary department;
 - Trained veterinarians, medical personnel, law enforcement officers, journalists, paramedical and paraveterinary professionals, extension workers, and farmers in 20 training courses in biosecurity;
 - Trained participants from 25 high-risk districts in biosecurity, surveillance, and outbreak response;
 - Trained 95 veterinarians from 15 states through two projects that replicated STOP AI modules; and
 - Trained a local government's AI desk officers for the department of livestock and pest control.
- **Expanded awareness.** A respondent educated school-aged children in a municipality on how to avoid contracting and spreading AI. Another promoted the importance of biosecurity to local poultry farmers, live bird marketers, feed sellers, and day-old chick distributors.

1.5 USING LOCAL IMPLEMENTING PARTNERS WORLDWIDE

STOP AI understands that the best way to build a country's long-term capacity to prepare for and respond to AI outbreaks is to expand the knowledge of local organizations. In addition to providing training and technical assistance worldwide, STOP AI also partners with local institutions to implement its portfolio of AI activities. The following chart highlights our use of local and subsidiary organizations in our work to date.

Country	Local Partners	Role
Azerbaijan	AKTIVTA	Poultry Sector Mapping and Assessment
Azerbaijan	Azerbaijan Agribusiness Center, LLC.	Poultry Sector Mapping and Assessment
Azerbaijan	Jalilabad Agribusiness Center	Poultry Sector Mapping and Assessment
Bangladesh	Winrock	Logistics coordination
Bulgaria	FORA Foundation	Simulation development and training facilitation
Central Asian Republics	Project HOPE	Training Coordination
Central Asian Republics	Winrock	Project Implementation
East Africa	J.M. Mantle	Activity coordination with FAO
Egypt	The IFT Company	Stakeholder roundtable discussions in prioritized Delta hotpots for HPAI
Georgia	GIPA/GRDP	Logistics coordination and poultry survey
Ghana	Mel Consulting	Logistics coordination
Ghana	Winrock	Technical support
Moldova	FORA Foundation	Training facilitation
Mongolia	Zhorig Foundation	Logistics coordination
Nepal	Winrock	Technical support
Nepal	International Development Enterprises	Technical support
Nigeria	MacFadden	Technical support
Pakistan	Sosec	Logistics coordination
Philippines	Zuellig Foundation	Logistics coordination
Southern Africa	ECI Africa	Logistics coordination
Uganda	CDFU	Logistics coordination
Ukraine	IRD	Logistics coordination
Vietnam	Asvelis	Poultry supply chain certification
Vietnam	MDI	Poultry supply chain marketing
West Africa	ILC Africa	Logistics Coordination

2. GLOBAL ACTIVITIES

2.1 KNOWLEDGE MANAGEMENT

Presentation of the Role of Credit in Financing Biosecurity. On December 22nd Mary Miller, Senior Principle Development Specialist, presented findings of work done for the Community Based Avian Influenza Control (CBAIC) project in Indonesia. She discussed two types of finance: working capital and investment finance.

Working capital is available to contract farmers (typically Sector 3 farmers under contract with Sector 1 producers) in the form of embedded credit in-kind advances of inputs which are repaid through delivery of market-ready birds. Independent farmers are often given trade credit from input suppliers for purchases of inputs, e.g., a few weeks to pay for feed and DOCs. Also, some independent farmers band together as a group to purchase larger volumes at reduced prices.

Investment credit to buy fixed assets requires term loans that are paid out of business profits, and they are more difficult to access than working capital. For purposes of improving biosecurity these loans could cover fencing around poultry houses to limit access, disinfectant dips for vehicles at the farm gate, vehicle washing and disinfection facilities, and cages to transport birds. Approximate costs for a typical Sector 3 farm could run \$4,500 to \$5,000. Most poultry producers operate on thin margins (about \$0.05/bird). While farmers are interested in biosecurity for its own sake, they are more interested in getting financing for expansion – larger, more efficient operations that incorporate good biosecurity measures. These are also more likely to produce enough cash to repay a loan. CBAIC is studying whether such investments are cost-effective.

One important consideration is whether the market is willing or required to pay a higher price for safer poultry produced from a more bio-secure producer. If this is not a government requirement, then it becomes a lagging rather than a leading, concern. And if consumers do not demand safer chicken, there may be little incentive for the producer to invest in biosecurity. Banks are unlikely to push lending for biosecurity, and presently, Indonesian banks are reluctant to lend to poultry producers because of AI threats, and often have prohibitions in their credit policies dating from the first AI outbreaks.

Visit to New York Live Bird Markets. On December 16th, Dr. Fidelis Hegngi, Senior Staff Veterinarian at the National Center for Animal and Plant Health Programs and Inspection Service (APHIS) of the United States Department of Agriculture (USDA) National Center for Animal Health Programs, Veterinary Services, led David Tardif-Douglin, Rob-Ryan Silva, and Rich Magnani of STOP AI on a visit to New York City to learn about live poultry distribution. The purpose of the visit was to see if there were any aspects of this regulated market that could be replicated in the countries in which STOP AI works. The group visited Watkins Poultry, one of the three largest accredited poultry distributors for New York City. Watkins distributes live poultry to a network of 90 live bird shops in the metropolitan area. The distribution network serves the large and varied ethnic population which prefers to purchase poultry live and have it slaughtered on-site.



The varied ethnic groups are reflected by a wide variety of poultry offered including guinea fowl, turkeys, geese, duck, quail, and partridge. The live bird shops are limited to consumer sales only.

Watkins sources birds from as far as the Midwest, unloads and sorts the birds for daily distribution by pickup trucks to live bird shops. Watkins has an unloading bay and a separate bay for truck cleaning and disinfection. They have two automatic units for cleaning and disinfecting plastic crates used for transporting and storage.

New York State regulations stipulate that the distribution system be periodically tested for HPAI and monitored for cleaning and disinfection practices. The STOP AI group observed and assisted a New York State Department of Agriculture inspector in taking throat culture samples for HPAI testing. The State also inspects the live bird shops for proper hygiene and slaughtering procedures. STOP AI is discussing the possibility of using the distribution procedures and similar equipment as used by Watkins with the team in Bangladesh. Replacing the non-washable bamboo crates currently in use in Bangladesh with plastic crates may be the best opportunity to apply features of Watkins Poultry distribution systems in a STOP AI project activity.

2.2 VIRTUAL LEARNING

On December 3rd, STOP AI held a virtual learning (VL) event to share experiences and best practices in cleaning and disinfection (C&D) activities involving two STOP AI programs in Bangladesh and Nigeria, and a third C&D program in Indonesia being conducted by FAO. This was a pilot effort to connect field-based practitioners from different projects to discuss problem solving and lessons learned from C&D activities. STOP AI used a browser-based web conferencing service that allowed participants to share presentations, collaborate on a virtual whiteboard, and use voice and text messaging. STOP AI identified team leaders in each country who in turn selected two others to assist in the preparation of and participate in the event. During the 100 minute VL exercise, the three teams documented the current status and challenges faced in C&D programs in their countries, identified key lessons for application to C&D programs, and shared their knowledge with the other teams. Summaries of the presentations follow.

Indonesia. FAO has supported capacity building of government trainers and Master Trainers and provides biosecurity training which emphasizes proper C&D practices. Also, FAO has provided training and operational support to local government services and private sector market/collector yard workers on C&D to reduce viral contamination and viral spread along the market chain.

Key C&D Program Challenges:

- Transitioning to C&D practices that can be easily sustained using local supplies and resources.
- Expanding capacity building and awareness of C&D practices to reach more stakeholders.
- Providing practical biosecurity advice to farmers based on actual experience and evidence.
- Enabling local government services to monitor efficacy of C&D programs.

Lessons learned:

- Creditability is essential when engaging private sector stakeholders. Positive impact on attitudes and behaviors are possible when stakeholders believe that trainers and service providers have a high level of practical experience.
- Cleaning accounts for 80-90% of viral and microbial decontamination, but is often underemphasized by stakeholders, while disinfectants are often regarded as a panacea. Disinfection in the presence of organic material is not effective. Cleaning is best accomplished with detergents or soaps, many of which are locally available.
- Personal protective equipment (PPE) is often misused during C&D activities as many stakeholders believe that safety risks are low, and some PPEs are unsuitable for local conditions.
- Protocols for use and safety risks of disinfectants vary by product. Trainers must identify safe and suitable locally available disinfectants, and they must tailor SOPs and training materials for the products selected.

Bangladesh. The program objectives in two wholesale markets in Dhaka were to institutionalize a fee-for-service cleaning program to reduce viral load, minimize the spread of HPAI, and document lessons learned. STOP AI obtained spraying equipment and cleaning materials; installed or improved the waterlines, drainage, and electricity infrastructure; trained the market group leaders and workers; and provided oversight support from May through September 2009.

Key C&D Program Challenges:

- Prior to the C&D program, stall cleaning in both markets consisted of sweeping and washing with water and spraying disinfectant directly on live birds or organic matter, neither of which is an effective means of preventing HPAI. Prior to the program, no vehicle C&D took place in the markets and many operators were reluctant to participate.
- Politics played out through market committees and other agencies may have resulted in prolonged decision making that caused implementation delays.
- Installation of water and electrical infrastructure was more difficult than anticipated and C&D implementation was significantly delayed in one market.

Lessons Learned:

- Develop a partnership attitude with users to understand their C&D needs and constraints.
- Work with local governments and other public entities to establish C&D service supply.
- Develop realistic user expectations and C&D targets. Overselling to users and suppliers may lead to early enthusiasm followed by major let-down.
- Establish transparent cost reimbursement structures to the market committees for utilities used during C&D to avoid the appearance of favoritism or corruption.

Nigeria. The Avian Influenza Control and Human Pandemic & Preparedness & Response Project (AICP) and Federal Department of Livestock (FDL) plan to build 12 poultry markets designed to enable market that will allow market vendors to practice good biosecurity practices when slaughtering, processing, and selling poultry. STOP AI has trained live bird marketers, processors, and transporters on Standard Operating Procedures for the prototype LBMs, and preparations are underway to distribute disinfectants, equipment, and supplies to operators of the new markets and selected small holder farms and provide practical training on C&D for various stakeholders.

Key C&D Program Challenges:

- Changing the attitudes of actors in the LBMs and small holder farms so that they adopt good biosecurity practices.
- Introducing C&D periods in the LBMs considering the economic constraints of market participants.
- Adopting thorough cleaning before disinfection in old style LBMs which use wooden cages.

Lessons Learned:

- Emphasis should be on practical training and consistent with the educational level of the actors/operators.
- Behavior change requires patience and understanding to de-emphasize old style practices.
- Stakeholders that are able to own the facilities they occupy are more likely to adopt good C&D practices.



2.3 IMPACT EVALUATION SURVEY

STOP AI considers it to be very important to understand the impact and longevity of the training and technical assistance we have provided. We seek to use a variety of tools to learn how our work has affected HPAI control. Among these is a survey given to training participants on retention of key biosecurity principles and technical messages contained in STOP AI training programs. In this pilot effort we asked respondents to share ways they applied their biosecurity knowledge. Participant responses to the survey are detailed in section 1.4 of this report. STOP AI is considering the feasibility of hosting participant surveys in the future. An additional benefit from this

pilot effort will be the continued contact and interaction with the participants, thus strengthening the network of trained experts who are actively connected to STOP AI.

2.4 TRAINING

Much of STOP AI's development of training material was done earlier in the project. Increasingly our development of training material is focused on adaptation to tailor existing training manuals to the local context. In the past quarter, STOP AI developed training materials for a series of country activities including those in:

- West Africa: Live bird market biosecurity materials
- West Africa: Masters of Philosophy (M.Phil) course curriculum for the University of Ghana
- CAR: STOP AI Emergency Response Groups training materials
- Ukraine: Outbreak Response and Field Drill materials
- Egypt: Biosecurity and Outbreak Response materials.

2.5 RESPONSE CAPACITY

STOP AI continued to collaborate with the DELIVER Project to secure in-stock and special-order AI commodities required for STOP AI technical assistance and training events, and to keep the DELIVER Project updated on STOP AI's projected need for AI commodities.

2.6 RECRUITMENT

STOP AI continues to recruit for positions with our long-term project offices and activities in Bangladesh and West Africa.

Bangladesh. STOP AI continues to recruit, hire, and train local staff for Bangladesh project activities. In November, STOP AI hired a Finance and Administration Officer, Mr. Mison Barua. Mr. Barua was trained by Aasta Heasley, STOP AI Bangladesh Country Coordinator, on topics of project finance and operations. STOP AI continues to interview for a Finance and Administration assistant for the Dhaka office and six Field Veterinarians and a Senior Technical Advisor to support project activities in the districts.

West Africa. STOP AI is identifying national coordinators for each of the 2010 West Africa activity countries – Senegal, Mali, Burkina Faso, Cote d'Ivoire, Ghana, Gambia, Liberia, Sierra Leone, Benin, and Togo.

2.7 CONFERENCES AND PUBLICATIONS

“Practical High Pathogenicity Avian Influenza First Response Training Exercise” Article Published in Avian Diseases. The scientific journal *Avian Diseases* accepted an article for publication written by STOP AI personnel on training vulnerable populations to respond to avian influenza outbreaks. “Practical High Pathogenicity Avian Influenza First Response Training Exercises”, authored by Dr. Andrea Miles, Harm Kiezebrink, Dr. Gary Mullins, Jules Sparrey, Meredith MacDonald, and Ed Salt, describes various aspects of STOP AI's training approach emphasizing four basic principles: protect humans first, protect animals, contain the virus, and isolate the outbreak. STOP AI's training approach differs from traditional capacity building in that it uses experiential techniques and exercises to ground theory, while providing participants with opportunities to practice what they have learned in a safe environment. The project has used these practical, hands-on applications to prepare vulnerable populations around the globe in avian influenza response. The article is scheduled for publication in early 2010.

3. COUNTRY ACTIVITIES

This section highlights STOP AI's ongoing and recently completed country activities undertaken this quarter.

3.1 ONGOING COUNTRY ACTIVITIES

AFRICA

3.1.1 NIGERIA

Activity 3: Biosecurity Training. Since June 2009, STOP AI has provided on-site technical assistance and support to four of the prototype markets set up by Federal Department of Livestock (FDL) with World Bank-funded Avian Influenza Control Project (AICP) support. STOP AI also collaborated with AICP to facilitate improvements in biosecurity in the new live bird markets (LBMs) designed to restructure and modernize poultry markets and enable market vendors to practice sound biosecurity practices when unloading, holding, slaughtering, processing, and selling poultry. To reinforce principles of biosecurity in the LBMs, STOP AI provides technical assistance in Nigeria to complement the AICP LBM effort by working with the Ministry of Agriculture Federal Department of Livestock and Pest Control Services (FDLPCS), State-level Ministry of Agriculture Avian Influenza Desk Officers, Local Government Councils, the Fowl Seller's Association of Nigeria (FSA), and the Poultry Association of Nigeria (PAN) to increase knowledge and practice of biosecurity at live bird markets and smallholder poultry farms in four states namely: Kaduna, Kano, Lagos, and Kwara. STOP AI assisted the four target states by providing the training, mentoring, and, in some cases, equipment for improved biosecurity.

In the fourth quarter, Dr. Jarra Jagne, STOP AI Senior Technical Advisor, and Dr. Garba Maina, STOP AI's on-site technical consultant, conducted technical oversight, meetings, and site visits with various partners, collaborators, and stakeholders involved in the Live Bird Markets and small holder poultry farm biosecurity in the four pilot project sites in Nigeria. October 10th -23rd, 2009, the mission held briefing/debriefing sessions with FDL, AICP, and USAID.

Key Accomplishments:

- In each state, STOP AI established partnerships with the veterinary services, municipal authorities, and the FSA to introduce and sustain biosecurity practices at the markets.
- STOP AI trained participants in the live bird market value chain, including wholesalers, transporters, processors, and retailers on Standard Operating Procedures (SOPs) for unloading, holding, slaughter, processing, and disposal. A total of 144 participants were trained on the SOPs and another 60 participants were trained on topics of cleaning and disinfecting (C&D).
- STOP AI is currently undertaking a second level intervention on C&D which includes hands-on practical training and demonstration in the prototype markets and selected model farms. The practically oriented training, initiated in November in each of the markets in the four project sites, provides more training, re-orientation, and encourages behavior change.



- STOP AI is also distributing to each prototype market site a power sprayer, an initial supply of disinfectant, and other locally procured inputs with which to initiate routine cleaning and disinfecting.
- STOP AI is working with the state-level FSA and the municipal government council to establish a fee-collection mechanism to finance the continuous supply of disinfectant and fuel needed to sustain on-going use of the sprayers for routine disinfection following the termination of support from STOP AI and AICP projects.

Planning for further projects in Nigeria continues as Dr. Jagne, Dr. Maina, and the STOP AI home office work to build upon progress demonstrated in four targeted wet markets and extend technical assistance to additional markets being constructed in other states. The new markets are expected to become operational starting April 2010. STOP AI proposes to extend project activities in Nigeria through September 2010 to help consolidate the initial efforts in the first phase of the project aimed at breaking the chain of transmission of the HPAI virus through an intensive field-based participatory biosecurity intervention in the target prototype LBM and small holder farms.

3.1.2 UGANDA

Activity 2: On-Demand/Country Requested Work. In the second and third quarter of 2009, STOP AI provided on-site technical assistance to increase district preparedness for HPAI surveillance and outbreak response by facilitating a series of 3-day district-level response planning and practice exercises in four high-risk districts of Uganda: Masindi, Rukungiri, Soroti, and Tororo. In each district, STOP AI's on-site technical consultant, Dr. Charles Musinguzi, and STOP AI Master Trainers involved local authorities, the rapid response team (RRT) personnel trained through STOP AI's Biosecurity, Surveillance, and Outbreak Response training course, and other key district-level stakeholders in developing a district-level integrated action plan for avian influenza. STOP AI also helped test the plan and practice skills through simulation and drills.

STOP AI continues to prepare the final Uganda activity report summarizing the District-Level Action Planning courses as well as the HPAI Action Plans prepared by the participant groups from the four districts of Masindi, Rukungiri, Soroti, and Tororo. The report will be finalized in early 2010. This report will close out STOP AI's project activities in Uganda.

3.1.3 WEST AFRICA HUMAN AND ANIMAL HEALTH

STOP AI continues to establish sustainable mechanisms and relationships to more effectively ensure AI surveillance, preparedness, and outbreak response capabilities at a regional level and in key countries in the West Africa region. A key element of STOP AI's approach is engaging the private sector. In the fourth quarter, STOP AI continued to work with poultry producers, market operators, processors, and associated actors comprising the value chain in West Africa. STOP AI helped them establish the biosecurity regimens, regional surveillance, and a response network needed to control HPAI. Of the five West Africa Animal Health activities, STOP AI completed Activities 1 (Regional Surveillance and Outbreak Response Training), 2 (Development and Strengthening of the Regional Laboratory Network), and 3 (Training in Biosecurity for Commercial Farms and Live Bird Markets) and continues to implement Activities 4 (Technical Assistance for National Preparedness Plan) and 5 (On-Demand/Country Requested Work).

Activity 1: Regional Surveillance and Outbreak Response Training. Completed in the third quarter of 2009.

Activity 2: Strengthening Regional Laboratory Network. STOP AI supported FAO in conducting a series of trainings to members of the West Africa Regional Laboratory Network this quarter. The Shipping Avian Influenza Samples by Air: International Air Transport Association Dangerous Goods Regulations course trains personnel responsible for preparing and packaging infectious substances to be able to comply with regulations established by the International Air Transport Association (IATA) for the international air shipment of infectious substances, IATA Dangerous Goods Class 6.2. To support the broader effort led by the Food and Agriculture Organization (FAO) to strengthen the diagnostic capacity of laboratories in 23 West and Central Africa countries, STOP AI collaborated with FAO/Emergency Center for Transboundary Animal Disease/Regional Animal Health Center (FAO/ECTAD/RAHC) to deliver three regional workshops intended to increase quality assurance and improve

laboratory practice across the two sub-regions. STOP AI contributed technical input throughout each five-day workshop.

From November 9th to November 13th, STOP AI Senior Technical Advisor, Dr. Jarra Jagne, delivered a 1-day training activity on Shipping Avian Influenza Samples by Air: International Air Transport Association Dangerous Goods Regulations for 15 participants. This was the third of three 5-day regional Diagnostic Laboratory Quality Assurance Workshops for laboratory personnel in collaboration with FAO. Each of the workshop events was divided into two modules: Module 1 is four days on Establishing/Improving Quality Systems in the Network's Laboratories and led by FAO. Module 2 is one day on Shipping Avian Influenza Samples by Air: International Air Transport Association Dangerous Goods Regulations and is led and delivered by STOP AI. Countries represented in the November workshop were the English speaking countries in West Africa: Nigeria, Ghana, Gambia, Sierra Leone, and Liberia.

Activity 3: Live Bird Market Biosecurity Training. Live bird market (LBM) biosecurity has increasingly emerged as critical to HPAI control. With that understanding, STOP AI continued its training on the concepts and principles of biosecurity that would allow participants to build their capacity to prevent and control highly pathogenic avian influenza in LBMs. A 3-day course on biosecurity for LBMs took place in Kano, Nigeria December 8th – 11th 2009. Twenty-three participants from Anglophone West Africa attended, representing Ghana, Sierra Leone, Liberia, the Gambia, and Nigeria. Participants were country nominated individuals with key supervisory roles in the sale and transport of poultry or are otherwise involved in the poultry marketing and the value chain. Nigeria was selected as the site for this training because of the Nigerian Government's investment in improved poultry market biosecurity. A number of improved poultry market facilities have been constructed or refurbished around the country, including Kano. Training participants visited examples of these improved market facilities and participants' observations were then used in participatory exercises on market design, re-designing Standard Operating Procedures for market biosecurity, and other related topics. Trainers included STOP AI technical staff and regional experts drawn from the STOP AI roster and Nigeria Veterinary Services. Technical staff from the FAO's Regional Animal Health Centre in Bamako, Mali observed the course. A similar Live Bird Market training for Francophone West Africa including Senegal, Mali, Burkina Faso, Niger, Guinea, Togo, and Benin, is scheduled to take place in Kano, Nigeria February 15th -18th, 2010.

Activity 4: Opportunities to Strengthen and Expand the Role of the Private Sector in a Coordinated and Sustained Effort to Control Avian Influenza. In the first quarter of 2010, STOP AI plans to identify "national coordinators" for each of the 2010 West Africa activity countries: Senegal, Mali, Burkina Faso, Cote d'Ivoire, Ghana, Gambia, Liberia, Sierra Leone, Benin, and Togo. STOP AI will bring the consultants together in Accra, Ghana the first week of February 2010 for an orientation workshop to address the activities planned for West Africa.

In January-February 2010, Dr. Gary Mullins and Dr. Timothy Obi will travel through the aforementioned countries to identify the Live Bird Markets where STOP AI will provide technical assistance for their improved biosecurity. During these visits, Drs. Mullins and Obi will also meet with national poultry producers' association representatives as a first step in brokering public-private sector partnerships to support improved biosecurity both on-farm and in live bird markets. One role of the national consultants will be to consistently provide technical advice and support to the partnerships. STOP AI plans to effect situation-specific interventions in the identified live bird markets and value chains that will potentially serve as models for improving biosecurity.

Integrating Public Health-Veterinary Regional Activity Building and Coordination in West Africa Activity 1: "Special Elective" Masters Course on AI Outbreak Response and Pandemics. In the fourth quarter of 2009, STOP AI progressed from the concept of an integrated core curriculum on HPAI to establishing institutional partnerships and the development and scheduling of the first pilot course. Led by its human health partner, Management Sciences for Health, STOP AI collaborated with faculty of the University of Ghana's School of Public Health and Veterinary Faculty, the Inter-State School for Veterinary Medical Sciences of Senegal (EISMV), and medical epidemiologists from West Africa, to design a course on HPAI for field epidemiologists of either medical or veterinary backgrounds. The STOP AI West Africa team met in Cambridge in November to develop an AI Outbreak, Prevention, Surveillance, and Response course curriculum to integrate into a joint public

health/veterinary medicine field epidemiology master's program. Two consultants from Ghana and one from Senegal, Dr. Issa Wone, Dr. Nathaniel Yebuah, and Dr. Yaghouba Kane, worked with Dr. Lisa Stone and Maria Pia Sanchez to develop curriculum.

The University of Ghana will pilot the course as a component of its M.Sc. Field Epidemiology program in March 2010. The University of Ghana is a foundation member of the African Field Epidemiology Network (AFENET) and STOP AI has held a number of direct discussions with AFENET regarding this approach to integrated training on zoonotic disease and how it might be replicated by other members of the network or as a model for other zoonotic disease investigation training.

Poultry Health in Development in East, Southern, and West Africa Activity 1: Update and Adapt the PHiD materials as needed. The Poultry Health in Development (PHiD) activity, led by STOP AI partner, the University of California – Davis represented by Professor Carol Cardona, is designed to develop training curricula for delivery by local veterinarians working with local school teachers throughout rural East, Southern and West Africa. The PHiD technical team consisting of Professor Carol Cardona, Dr. Peter Msoffe of Sokoine University of Agriculture, Tanzania, Dr. Paul Mbutia of the University of Nairobi, Dr. George Aning of the Central Veterinary Laboratory of Ghana, and Dr. Yaghouba Kane of the Inter-State School for Veterinary Medical Sciences, Senegal, convened in Nairobi December 16th – 21st to finalize the core curriculum and sub-activity implementation plans. Future activities to be implemented in 2010 for non-commercial backyard poultry producers include: materials and lessons on poultry health appropriate for school-age children, training for women's groups, other domesticated avian species including guinea fowl, and understanding what contributes to successful farmer adoption of poultry vaccination. Regional trainings focused on the small-scale commercial sector are expected to take place in Uganda (with Southern African countries participating), Nigeria (Anglophone West Africa), and Senegal (Francophone West Africa).

Office Start Up. STOP AI completed operationalization of its new West Africa coordination office in Accra, Ghana in 2009. Directed and managed by Dr. Timothy Obi, a Veterinary Epidemiologist with long field experience in Nigeria, the Middle East, and Europe, Dr. Obi has rapidly established working relationships with key international, regional, and national institutions working on avian influenza in the region. In November, Dr. Obi and STOP AI West Africa Senior Technical Advisor, Dr. Gary Mullins, met with USAID West Africa HPAI Regional Coordinator, Dr. Baba Soumare, to finalize plans for STOP AI's 2010 activities. Drs. Obi and Mullins then traveled to Bamako, Mali where they explored potential partnership arrangements with FAO's Emergency Centre for Transboundary Animal Diseases (ECTAD). The series of partnership discussions also included USDA APHIS West Africa. A number of opportunities for collaboration were identified and these will be taken forward as STOP AI 2010 activities are implemented. FAO and APHIS have indicated that they will remain in contact with STOP AI as their own activities develop and continue to explore ways and means of collaborating to maximize benefits to the region and make efficient use of resources.

ASIA NEAR EAST REGION

3.1.4 BANGLADESH

Objective two of the Bangladesh Workplan is to develop private-public partnerships for improved biosecurity practices in two hard hit districts, Gazipur and Dinajpur. STOP AI's overall strategy to establish interventions that curtail the spread of HPAI in the Bangladesh poultry industry involves the direct engagement of value chain participants in the design of interventions. The two high risk districts were selected to serve as the venues for STOP AI's pilot program to affect community change and improve biosecurity through stakeholder engagement.

In the third quarter of 2009, STOP AI finalized mapping of poultry value chains in Gazipur and Dinajpur and analyzed the data from a baseline survey of knowledge and biosecurity practices in the two districts. Survey results and stakeholder workshops held in the third quarter showed a clear need for increased understanding of HPAI risks and transmissions along with basic biosecurity safety. There was a fairly high level of general awareness and concern of AI but a large number of respondents did not know how to protect themselves or their birds from infection and did not know how the virus was transmitted or could be killed. Given the significant differences in

the production systems in the two districts – Gazipur with concentrated commercial activity and Dinajpur dominated by backyard production – further biosecurity training will need to be tailored to the individual subsectors of the poultry industry, targeting the specific actions each group can take to reduce their risks and improve biosecurity.

During the fourth quarter of 2009, STOP AI Bangladesh Country Team Leader, Dr. Shankar Mondal, traveled to the STOP AI Home Office in Bethesda, Maryland to work with STOP AI personnel to finalize the Public Private Partnership Implementation Plan. From October 17th to 27th, Dr. Mondal, Linda Spink, and Rich Magnani met to firm up STOP AI's planned activities in the Gazipur and Dinajpur districts to include:

- Biosecurity Training: STOP AI will conduct 30 sub-sector specific training sessions in each district;
- Infrastructure Development of Live Bird Markets: STOP AI will assist in the development of Live Bird Market (LBM) infrastructure and the subsequent implementation of cleaning and disinfection (C&D) activities in two LBMs in each district; and
- Follow-up with Commercial Farms: STOP AI will work with 15 commercial poultry farms in Gazipur district to establish biosecurity improvement models.

Activity 1: Biosecurity Training. As part of STOP AI's PPP activities, STOP AI Senior Technical Advisor, Dr. Mick Fulton worked with the STOP AI team in Bangladesh to develop biosecurity training materials for each of the five subsectors of the poultry industry: Commercial Farmers, Transporters, Hatcheries, Wet Market Sellers and Slaughterers, and Backyard Farmers. The materials designed for backyard farmers will be finalized by early 2010 and will also be used to train community leaders such as teachers and religious leaders based on their direct involvement with and access to poultry raising households.



A Training of Trainers (ToT) model will be used to reach the largest number of beneficiaries and ensure a sustainable biosecurity training program in the districts. In early 2010, STOP AI will select trainers to conduct cascade sector-specific 1-day trainings at the upazilla level. STOP AI will provide ongoing coaching and technical assistance to the new trainers and supervise them working in the field. To encourage sustainability of the training program, STOP AI will gradually become less involved in the direct facilitation of upazilla-level trainings as our district-level trainees become capable of carrying out training on their own.

Activity 2: Follow up Assistance to Commercial Farms in Gazipur. In the second or third quarter of 2010, STOP AI will focus follow up assistance on commercial producers in Gazipur. STOP AI proposes creating biosecurity improvement models in selected commercial farms to demonstrate best biosecurity practices. During the Activity 1: Biosecurity Training, STOP AI will select up to 25 farmers who demonstrate active interest in improving biosecurity. These farmers will be invited to submit proposals to receive cost-sharing support from STOP AI to make biosecurity improvements in their farms.

Activity 3: Infrastructure Improvements for Cleaning and Disinfection in Live Bird Markets. STOP AI is implementing Wet Market C&D programs in Gazipur and Dinajpur, applying experience gained in the C&D activities in Dhaka's Kaptan Bazaar and Mohammadpur markets. Like the Dhaka C&D work, STOP AI plans to add or improve electricity, water supply, and other infrastructure necessary for the C&D process in the market area and in vendor stalls. Since starting the PPP activities, STOP AI assessed nine LBMs in Gazipur and six in Dinajpur. Two markets in each of the districts will be selected for STOP AI's C&D program in early 2010.

Ongoing Biosecurity Technical Assistance. As follow-up to biosecurity training conducted in Chittagong district, STOP AI personnel visited seven farms from November 2nd to 5th, 2009 to conduct interviews and to discuss the possible sources of the H5N1 virus on the farm.

Training for Department of Livestock Services and City Corporation Staff. Objective 3 of the Bangladesh Workplan is to provide technical assistance and training to the Department of Livestock Services and Dhaka City Corporation. STOP AI organized two Live Bird Market training programs, one in Sylhet and the other in Chittagong. The training programs, conducted on October 4th through 7th and October 11th through 14th, were held as a Training of Trainers (ToT) for 50 participants from the Department of Livestock Services, City Corporations, and market committees. The DLS and City Corporation Staff are critical to support improved biosecurity practices within the districts and especially within the markets they regulate and oversee. Collaborating with FAO, STOP AI previously conducted three Biosecurity Wet Market Training Programs in Dhaka, Khulna, and Rajshahi. STOP AI conducted the trainings in Chittagong and Sylhet by drawing on alumni to serve as co-trainers, thereby reinforcing retention of the subject matter.

New Hires and Staff Training. STOP AI will soon complete hiring new staff positions in the district offices. In the fourth quarter of 2009, STOP AI hired a Finance & Administration Officer.

3.1.5 EGYPT

Our team participated in AI assessments by two international teams. The first was FAO's HPAI Real-Time Evaluation in October 2009, and the second, requested by the National Supreme Council, brought together the WHO, FAO, and UNICEF at UNDP headquarters. STOP AI attended evaluation meetings and hosted the team at a STOP AI roundtable.

We continue to coordinate activities and discuss opportunities with FAO, the USAID-funded Strengthening Avian Influenza Detection & Response (SAIDR), and USAID through weekly meetings. STOP AI coordinated with the USAID-funded Communication for Healthy Living project (CHL) to discuss opportunities for collaboration and CHL has agreed to publish biosecurity themed calendars as well as three training manuals that will be distributed by STOP AI.

Activity 1: Establishing a Public-Private Partnership to provide technical assistance in biosecurity upgrading and other services for Sector 2 and 3 producers. STOP focused its activities in three governorates in the Nile Delta where concentrated poultry production areas have been directly affected by HPAI: Gharbia, Sharqia, and Dakahlia. We identified important Sector 2 and 3 producers, private vets, agriculture engineers, and General Organization of Veterinary Services (GOVS) vets in selected "HPAI hot zones" within the three governorates, and then invited them to roundtables. The purpose of the initial roundtables was to learn about how stakeholders deal with HPAI, identify their knowledge of biosecurity, assess constraints to making improvements in biosecurity, and design STOP AI training and technical assistance. To date, roundtable topics have been similar across all of the groups and have included the following:

- HPAI impacts
- Biosecurity principals
- Waste management and composting
- Breeding
- Cleaning and Disinfection
- Vaccination methods and impacts
- Proper culling and disposal of culled birds
- Poultry feeding
- Broiler and layer economics

STOP AI has established three stakeholder groups of 20 to 30 participants, each in the three Delta governorates and will expand to additional groups. As shown in the table below, we have conducted five or more roundtables for each of the three groups in each governorate. The groups have a core of repeat participants with new participants attending as word has spread through the communities.

Delta Roundtables

Governorates	Sharqia	Gharbia	Dakahlia	Total
Roundtables held	7	5	6	18
Total stakeholders participating	158	115	168	441
• GOVS vets	84	58	65	207
• Producers, private vets, and agri-engineers	74	57	103	234

STOP AI also conducted a roundtable in Luxor attended by 11 veterinarians and 20 producers.

We have discussed PPPs with the board of the Egyptian Poultry Union, and initially they expressed interest in establishing a biosecurity training center in the Delta, for which they requested financial support from STOP AI. However, more recently the board has shown no initiative to move forward with this proposal.

We have partnered with the private sector on roundtables and training. In particular, IFT, which employs 200 vets and is a leading veterinary pharmaceutical services provider in Egypt, has provided financial sponsorship for four roundtables, covering the expenses of venue rentals and participant lunches. IFT has also helped STOP AI identify leading poultry producers in our target governorates to ensure a broad range of roundtable participants.



Roundtables have facilitated open dialogue between official veterinarians and producers by providing a forum in which the two groups can work together to resolve conflicts. The heads of government veterinary services in each of our target governorates have been very supportive of our roundtables and are usually available to answer poultry producers' questions about official objectives.

In addition, we have started discussing partnership opportunities with the Egyptian Poultry Improvement Society (EPIS), a recently established association with about 100 members that is interested in becoming more involved in AI issues. EPIS has proposed to co-sponsor a February STOP AI biosecurity training session.

Activity 2: Support for FAO's proposed Decontamination program. FAO proposed to conduct farm gate truck cleaning and disinfection (C&D) of about 1,500 Sector 2 and Sector 3 layer and broiler breeding farms. They will provide disinfectant, detergent, and PPEs, train farm staff to carry out C&D, and will monitor the process. STOP AI has proposed to assist FAO, but FAO so far has not required our support. FAO team leader, Dr. Yilma Jobre reported that the proposed Farm Gate C&D program was changed to a Farm Gate Biosecurity program shortly after the STOP AI startup in August 2009. The biosecurity program was as resource intensive so FAO did not require STOP AI support.

Activity 3: Support for GOVS Staff Training. The Egypt workplan called for one Outbreak Response training session which was conducted in October by Dr. Jarra Jagne for GOVS vets drawn from various Delta governorates. After the first trainings delivered by Dr. Jagne in October, the GOVS requested another session which was conducted by Dr. Mick Fulton in December. Both sessions were attended by 30 vets each. The trainings covered disease pathology, control mechanisms, and outbreak response simulations at local poultry farms which included composting. GOVS has requested a third session scheduled for late February 2010 which will be

led by Dr. Jagne. The third training will focus more on biosecurity than on outbreak response. Topics will include AI epidemiology, biosecurity, waste management, composting, mortality, vaccination, cleaning and disinfection, and biosecurity audits and risk factors.

GOVS governorate directors in Dakahlia, Sharqia, and Gharbia have requested STOP AI training sessions for governorate vet staff. We have accommodated these requests by adding a two hour GOVS training session before the two to three hour roundtable meeting held with private producers in each of the governorates.

Project Office Start Up. Our Egypt office is now fully staffed and operational. STOP AI hired one field accountant to handle financial matters and three veterinary assistants to support outreach, material production, and training logistics. All necessary IT equipment has been released from customs or procured locally and our IT support team from Washington configured the office's server and network.

3.1.6 NEPAL

STOP AI's program in Nepal, now in its third phase, is gearing up activities to further strengthen the country's capability to combat and stamp out potential outbreaks within its very open borders. While Phase I and II mainly placed emphasis on capacity building and strengthening of public sector institution and paravets for early detection, preparedness, outbreak prevention, control, and containment of outbreaks, Phase III targets surveillance and control activities such as Biosecurity Training and continuing with Participatory Disease Intelligence Communities (PDIC) monitoring and strengthening in the field to thwart the threat of any possible virus transmission. These activities were developed, in consultation with the Department of Livestock Services, to address any gaps or shortfalls in either knowledge or practice among those who are on the frontlines, who could unwittingly contribute to elevating the nation's vulnerability to HPAI. There is recognition among all those engaged in the fight against HPAI that the PDICs are the first line of defense and could benefit from additional strengthening. STOP AI's surveillance and control activities have begun and will continue through the end of September 2010 since there are 57 PDICs that have been targeted to receive both the monitoring and biosecurity training. The expectation is that by the end of these training programs, a total of 13,770 villagers, 200 poultry farmers, 754 VAITC members, and 25 individuals from both Government and the private sector will have been informed and trained on biosecurity issues and practices.



STOP AI's activities in the fourth quarter of 2009 focused on expanding project activities to the Ilam District.

Activity I: Provision of Technical Assistance for HPAI H5NI Preparedness and Outbreak Response. Ilam is a STOP AI target zone as it is a high risk district for AI because it shares a border with India. While an outbreak of H5NI has not been reported in Nepal since February 2009, the reemergence of infection cannot be ruled out and activities for preparedness on control and containment of HPAI should be kept ready. Activities completed in the fourth quarter of 2009:

- **Curriculum Development for VAITC Members.** In coordination with AI.COMM, STOP AI developed a training curriculum for training Village Avian Influenza Technical Committee (VAITC) members. The curriculum and teaching materials aim to provide uniformity and consistency to the materials used by the VAITCs. The materials included an introduction to AI; the sources, symptoms, transmission, and prevention of AI; an introduction to biosecurity: an overview of government preparedness for the control and containment of AI; and roles and responsibilities of VAITC members to prevent AI in the community. AI.COMM provided teaching aids for 51 distribution sites at Village Development Committees (VDCs). STOP AI Nepal Team Leader, Dr. Neel Karki and a team of district coordinators then conducted trainings of 9 VDCs in Ilam, training 130 VAITC members.

- **District Contingency Plan Ilam.** From October 23rd – 30th, 2009, Dr. Karki led a team of two senior veterinarians from the DLS to complete a District Contingency Plan for the Ilam District. The first consultation meeting with the District Avian Influenza Control Technical Committee (DAITC) of Ilam was held on October 26th. The report prepared by the team was approved by the DAITC.
- **Paravet Training for Ilam District.** Twenty-five paravets from the Ilam District took part in a 2-day training in Ilam held October 25th – 26th. The course served as an Avian Influenza orientation and covered topics of surveillance to build the paravets capacity to respond and contain Avian Influenza in their district.

3.1.7 VIETNAM

Poultry Supply Chain Activity. In the fourth quarter of 2009, STOP AI continued supporting the production, processing, and marketing of a pilot, certified, “free-range” program to demonstrate the viability and advantages of increased biosecurity throughout free-range supply chains.

Activity 3 & 4: Support to Production and Processing and Support to Marketing. In November, STOP AI’s Dr. John Bowman met with the two local implementers of the supply chain activity—ASVELIS and MDI—to discuss current progress, constraints, and next steps. Together, the implementing team reconfigured activities for the first quarter of 2010 by planning informal site tours for government officials from DLP and DAH and a half-day workshop to gather their perspectives on the project and its relationship to proposed MARD policies for the poultry sector.



Additionally, John Bowman visited the new Vung Tau supply chain operation (An Think group) outside of HCMC in order to become familiar with those operations. He visited two farms, one “early generation” site for day-old to eight-week-old chicks and one site for eight week-slaughter. STOP AI found that the existing infrastructure and biosecurity protocols at the farms were impressive.

STOP AI also provided local and imported equipment to the Vung Tau slaughterhouse which plans to be operational in January, 2010. The Vung Tau managerial staff is in the process of preparing two wholesale marketing outlets in the HCMC area which will receive chilled carcasses from the slaughterhouse. STOP AI will help support marketing and promotional activities in the future.

In addition, STOP AI held a series of meetings with USAID, FAO, and other counterparts to discuss the potential of several newly proposed 2010 activities for STOP AI in Vietnam, including digital mapping of AI initiatives, increased engagement of the private sector in the fight against AI, and support of the Department of Livestock Production in sub-sector planning and analysis.

Veterinary Health Law Reform Activity. The Vietnamese Ministry of Agriculture and Rural Development (MARD) initiated a program to develop a modern veterinary law and solicited the assistance of USAID as well as FAO, OIE, and other donors in this process. At the request of USAID/Vietnam and the API Unit in USAID/Washington, STOP AI provided assistance to MARD in this endeavor.

Activity 1: Consultation with Veterinary Law Drafting Committee Delegation and Provision of Advance on the Draft Legislation. STOP AI and the legal drafting team led by the Ministry of Agriculture’s Department of Animal Health (MARD/DAH) met to identify priority issues within the draft legislation. STOP AI helped support and organize seven provincial fact finding missions (FFM) that gathered provincial and district level input. STOP AI also visited two DAH Regional Offices. The team used this feedback to make adjustments to the language in the third draft of the national legislation. These adjustments were overseen by a STOP AI technical expert competent



in Veterinary Science and Law, Dr. Jode Garbe, Veterinarian/Attorney. Dr. Garbe has significant legislative drafting experience and is currently based in Kigali, Rwanda.

Dr. Garbe participated in all of the provincial missions with the drafting team, offering technical advice from an international perspective while helping to facilitate some of the contrasting needs of the Provincial level authorities with the Hanoi-based drafting team. STOP AI's DAI sister project, STAR II (Supporting Trade Acceleration Reform), participated in the provincial missions as well, assisting both STOP AI and DAH with the law reform process (STAR II has worked on many law reform activities for the Government of Vietnam, and is currently playing a lead role in the revision of the Food

Safety Law). During the FFM, the team met with a variety of individuals implementing the current animal health ordinance in provinces and districts. These included officials from the sub-DAH and DARD (provincial MARD) offices, the Ministry of Health, and the Provincial People's Committees. Each province submitted a report on its activities and its opinions of Draft 3 of the Animal Health Legislation. Additionally, STOP AI visited one government inspection station on the major north-south highway, one intensive swine husbandry operation, and two intensive slaughter facilities.

The STOP AI Veterinarian/Attorney was then invited to stay on from November 30th to December 19th, 2009 to work closely with the drafting team to re-write many aspects of the Vet legislation based on the FFM. Draft 4, the result of these STOP-AI activities, is better suited as national legislation and has strengthened the position of DAH activities in disease outbreaks and the prevention of animal disease epidemics by creating a direct line of authority for implementation of remedial measures to contain such outbreaks and epidemics. Once the final language changes have been incorporated into Draft 4, the legislation will be released to the provinces and other governmental offices for comment next quarter. This legislation, ultimately, will be submitted to the National Assembly along with the implementing Decree which has yet to be drafted.

EUROPE AND EURASIA

3.1.8 CENTRAL ASIA REPUBLICS

The STOP AI project office in CAR continued successfully implementing its activities according to the project planning matrix developed in the first quarter of 2009. STOP AI also continued actively collaborating with local governments and the donor community to increase the synergy among the projects. STOP AI continued to work in partnership with the World Bank, FAO, WHO, CDC, and other international donors in CAR.

Activity 1.1: Assistance in Evaluation and Revision of National Preparedness and Response Plans: Enhancing CAR Countries Preparedness and Response Capacity. STOP AI CAR continued providing assistance in evaluation and revision of national Preparedness and Response Plans (PRP). The project successfully communicated the need for having local HPAI H5NI outbreak response plans based on internationally-accepted practices and local realities with the local governments in Tajikistan, Turkmenistan, Kazakhstan, and Kyrgyzstan. Each of the Central Asian countries requested our assistance to develop local response plans.

- On November 6th and December 7th, STOP AI organized an orientation seminar on local level outbreak response plan development with key animal and human health personnel of Avian Influenza Local Commissions of Tajikistan and Turkmenistan, respectively. STOP AI staff also visited Avian Influenza Local Commissions to make detailed presentations of the plan development program during the oblast level HPAI H5NI Biosecurity, Surveillance, and Outbreak Response cascading trainings.
- The veterinary services of the Kyrgyzstan, Kazakhstan, Tajikistan, and Turkmenistan have announced competition for the best local response plan. In the next reporting quarter, the STOP AI experts will

give technical direction in developing the local response plans in coordination with the oblast governments, which will write the plans.

- With the request of the Ministry of Agriculture of Uzbekistan, STOP AI CAR conducted two trainings on HPAI H5N1 Outbreak Response with Multi-Agency Emergency Response Groups on national and oblast levels on November 24th – 25th and November 27th – 28th. Both trainings were delivered by Dr. Joldosh Dadybaev. Forty-five veterinarians and human health specialists involved in emergency response teams enhanced their knowledge and skills in effective and safe emergency response. The course also included on-farm functional exercises: zoning, humane culling, swab sampling, and rapid antigen diagnostics using FLU DETECT test kits.
- STOP AI CAR also continued cascading down the HPAI H5N1 Biosecurity, Surveillance, and Outbreak Response trainings in Kazakhstan. Three oblast level trainings were provided by STOP AI Kazakh National Master Trainers: Magiza Essilova, Kalamkas Shampiyeva, and Kakimjan Kyraubaev, in Kustanai, Urask, and Shimkent. The trainings were offered in both Russian and Kazakh languages.



Activity 1.2: Technical Assistance to Poultry Producers and Veterinarians on Biosecurity Practices. STOP AI continued providing direct technical assistance to local small and medium commercial poultry producers and veterinarians on Disease Management and Biosecurity Practices.

With the request from the governments in Tajikistan, Uzbekistan, and Turkmenistan for technical assistance, the project cascaded down the Poultry Management, Diseases, Biosecurity, and Outbreak Response training course developed for CAR by STOP AI Senior Technical Advisor, Dr. Jarra Jagne, in the second quarter of 2009. The project delivered the following three 3-day trainings for 63 small and medium-scale commercial poultry managers and veterinarians and state veterinarians working with poultry industry in Uzbekistan and Turkmenistan:

- In-country national-level training in Dushanbe, Tajikistan on October 29th - 31st. Mr. Mashokir Nazarov, the head of the Poultry Producers Association of Tajikistan assisted us in inviting the participants and organizing the events. The training was delivered by Dr. Joldoshbek Dadybaev and STOP AI Master Trainers.
- In-country national-level training in Tashkent, Uzbekistan on December 1st – 3rd. STOP AI local implementing partner in Uzbekistan, Project HOPE, organized the logistics of the training. This is the second national-level Disease Management and Biosecurity Practices workshop in the country due to the large number of poultry operations in Uzbekistan.
- In-country national-level training in Ashgabat, Turkmenistan on December 9th-11th. Mr. Khojaakhmet Charyev, Director of Poultry Enterprise “Altyn Khilal”, assisted STOP AI in organizing the workshop.

Activity 1.4: Improving Veterinary Laboratory Capacity. In response to the multiple requests of the central veterinary laboratories of the Central Asia countries, STOP AI CAR, in collaboration with Synbiotics, delivered a 2-day regional training on Laboratory Diagnostics and Dangerous Goods Regulations of International Air Transport Association (IATA) for 24 virologists on December 16th- 17th. STOP AI collaborated with USAID’s DELIVER project to secure the appropriate commodities to ensure the high quality of the training. The training included two training modules:

- *One-day certified IATA training:* The purpose of the workshop was to train animal and human health laboratory personnel responsible for preparing and packaging infectious substances to be able to comply with regulations established by the IATA for the international air shipment of infectious substances.
- *One-day laboratory diagnostics training:* The purpose of the module is to train veterinary laboratory personnel to do sample preparation, testing, and result interpretation for virological and/or serological detection of HPAI and other poultry diseases. Drs. Abdelghani Benkhelil, Mariette Bonnard, and Sergiu Baltaga of Synbiotics, in collaboration with Dr. Jarra Jagne, covered the Laboratory Diagnostics training.

Technical Guidance. STOP AI's project team in CAR provided technical assistance and direction to Joldosbek Kasynbekov, the FAO point of contact in Kyrgyzstan, to deliver training on Wild Bird Surveillance for Hunters. The workshop was delivered October 27th – 29th in Issyk Kul, Kyrgyzstan. STOP AI assisted FAO by revising the training materials for the course to add STOP AI technical information to the training modules, delivering a session on Rapid Antigen Tests and USAID laboratory kits, and facilitating various sessions throughout the workshop.

Additionally, STOP AI worked to combine the efforts of three parties – the Government of Kyrgyzstan, USAID, and the World Bank – to enhance the preparedness on the rayon (district) level. The World Bank-funded Project Implementation Unit (PIU) of the Ministry of Agriculture of Kyrgyzstan used STOP AI's technical assistance and direction to train about 1,000 local veterinary and health specialists throughout Kyrgyzstan. The trainings were delivered by Kyrgyz national Master-Trainers (MTs) specially trained by STOP AI to deliver these workshops. Additionally, based on an agreement between the World Bank and STOP AI, STOP AI monitored the rayon level trainings and provided technical assistance to the local MTs.

3.1.9 GEORGIA

Aiming to make STOP AI's Outbreak Response training material available to the field personnel who will be responsible for managing these activities in the case of an outbreak, STOP AI worked with a group of Master Trainers selected from the State Veterinary Service to conduct cascade training workshops in the fourth quarter of 2009.

Activity 3: Outbreak Response Cascade Trainings. STOP AI continued cascading the Outbreak Response Training for Georgia with two 3-day courses in Akhaltsikhe and Zugdidi. Both courses were conducted December 21st- 23rd, 2009 with the support of STOP AI's in-country implementing partner, GIPA/GRDP. Master Trainers and veterinary doctors Lena Ninidze and Ketik Tsiklauri conducted the training in Akhaltsikhe and Maya Nadirashvili and Jimsher Osiasvili delivered the training in Zugdidi. A total of 34 participants from Samegrelo-Zemo-Svaneti and Samtskhe-Javakheti participated in the trainings, among which were regional representatives of the Veterinary Services and National Center for Disease Control.

Since the start of STOP AI's Outbreak Response Training activity in September 2009, a total of 121 participants received the training. Twenty-nine of the participants are human health professionals and 92 are animal health professionals.

The program in Georgia will continue through the first quarter of 2010. STOP AI will continue collaborating with GIPA/GRDP to plan the activities.

“All the participants express great appreciation of taking part in such a significant training and especially the chance of meeting with the qualified technical trainers. The participants had the opportunity to meet with their colleagues, the representatives of relevant organizations, share the experience, and discuss the way for further collaboration.”

- Feedback from STOP AI local implementing partner, GIPA/GRDP

LATIN AMERICA AND CARIBBEAN

3.1.10 BOLIVIA

STOP AI Regional Representative, Dr. Horacio Espinoza continues to facilitate ongoing National Avian Influenza (AI) and Pandemic Influenza (PI) prevention and control efforts. Working in tandem and support of AI partners, LinksMedia, CDC/NMRCD, STOP AI identified the AI/PI prevention and control activity areas as highest priority for providing a baseline level of national operations readiness in Bolivia. The following activities are designed by STOP AI to bolster AI/PI preparedness capacity in Bolivia.

Laboratory Quality Assurance and Leadership Development Training. Dr. Oscar Morales conducted the third module of the Laboratory Quality Assurance/Leadership Development workshops in Santa Cruz and Cochabamba from November 2nd to 13th. A total of 54 participants from various animal and human health programs in Bolivia including INLASA (the Ministry of Health Laboratory in La Paz), LIDIVECO (Animal Health Laboratory funded by the government and the private sector), PRONESA-SENASAG (field veterinarians including the Avian Program of the Ministry of Agriculture), COSMIL (Laboratory of the Bolivian Army Health Services), SEDES Cochabamba (Departmental Secretariat of Health from Cochabamba), Universidad Rene Moreno (Laboratory of the Veterinary School of the National University), LIDIVET (Animal Health Laboratory funded by government and the private sector), SEDES Santa Cruz Team 1, and SEDES Santa Cruz Team 2, as well as CENETROP (Institute of Tropical Medicine). The fourth and final module of the Laboratory Quality Assurance/Leadership Development Workshops is scheduled for March, 2010.

Infection Control Workshops. In the month of October, STOP AI conducted four workshops on the topics of prevention and control of hospital respiratory infections. Using training modules developed in Paraguay in 2009, Dr. Horacio Espinoza conducted trainings targeted at preparing the country against Avian and Pandemic Influenza. A total of 161 people from 18 hospitals and 25 health centers in the departments of Chuquisaca, Pando, Tarija, and Oruro developed their personal and establishment's capacity to control infection. The four 2-day trainings took place between October 15th and 27th and helped participants to identify areas that their departments require greater technical assistance. Dr. Espinoza will continue to follow up with participants virtually and in person, as schedules allow, over the next three months, remaining in contact with each department and providing additional technical assistance.

3.1.11 LAC PRODUCT DEVELOPMENT MEETINGS AND TRAINING COURSES

Virtual Municipal Pandemic Planning. In October 2009, STOP AI submitted a workplan for the next generation of work in LAC on the Municipal Pandemic Preparedness Toolkit: *Leadership During a Pandemic: What Your Municipality Can Do*. This will largely involve training in the Central and South America region on how to use the toolkit, but will also entail assessments of how the toolkits are viewed and how user friendly each of them is. Based on that assessment, which will come from detailed evaluations from each of our training sessions as well as from comments received on web-based versions of the toolkits, we will undertake to produce a second edition of the toolkit. STOP AI subcontractor MSH and LAC Toolkit Project implementing partner and authors of the Food Security and Recovery tools, TANGO International, will collaborate together to develop sections of the training.

These training will consist both of in-country trainings and a virtual program. STOP AI will train a cadre of master trainings in the tool content areas, the tools themselves, and the training materials. The master trainers will conduct the in-country trainings. In the virtual course, STOP AI will update the VMPP based on feedback from the participants and facilitators in the field test, the newly developed in-country training course, and feedback from the LAC team. This will be the second generation VMPP that we proposed implementing in multiple countries at the same time, thus increasing reach of the materials. STOP AI is currently coordinating with the Ministry of Health in El Salvador to determine the possibility of conducting one of the "next generation" toolkit trainings in El Salvador.

Food Security. As part of STOP AI's Products Development and Diffusion Scope of Work, STOP AI executed a marketing analysis of the fortified blended foods (FBF) to include situational analysis of the FBF target market environment, FBF target industry, FBF target company(s), and FBF buyers and marketing strategy(s) to sustain a

population during the response and early recovery phases of a pandemic. Currently, locally processed food manufacturers working in AI Partner target countries are contemplating the manufacture of ready-to-eat high nutritional value Emergency Food Products (EFPs) as a means of sustaining food insecure populations during a severe pandemic. Jamaica's Office of Disaster Preparedness and Emergency Management (ODPEM) expressed a strong interest regarding how best to get Jamaica positioned for the eventuality of food shortages if the pandemic becomes severe. STOP AI's initial research suggests that the limited availability of extrusion machinery combined with the high cost of importing the raw material/ingredient resources may preclude the possibility of production of Food for Peace (FFP) EFPs in El Salvador or Peru. The costs associated with manufacturing are presently under evaluation in Jamaica.

3.1.12 NICARAGUA

In April 2008, STOP AI began a program of support to Nicaraguan municipalities for the development and operationalization of municipal-level pandemic preparedness and response plans. Since that time, the STOP AI Nicaragua program has supported the development of plans for 104 of Nicaragua's 153 municipalities, working in 11 of Nicaragua's 17 SILAIS. The program has reached more municipalities than initially expected. The primary objective of the program in Nicaragua has been to help strengthen a planning and preparedness mindset in municipal health systems. Assistance has been provided through the department-level SILAIS, which has served to further strengthen pandemic preparedness at that level as well. The vehicle for this assistance has been the municipal pandemic preparedness and response plans and, in addition to the plans, STOP AI Nicaragua has helped the SILAIS and their municipal health personnel evaluate the state of implementation of their pandemic plans.

The STOP AI Nicaragua team has come up with a CD that consolidates the documents they have helped SILAIS and municipalities develop, including:

- A tool to classify municipalities according to risk of avian and pandemic influenza that was applied in Nicaragua, Guatemala and El Salvador.
- A guide for developing a pandemic preparedness and response plans at the local/municipal level.
- A library of the municipal pandemic preparedness and response plans that have been developed.
- A tool for evaluating implementation of municipal influenza pandemic preparedness and response plans.
- Tabletop simulation material for a municipal pandemic influenza response plan.
- Material for a field simulation of a municipal pandemic influenza response plan.

This material was provided to counterparts in the Ministry of Health and to pandemic assistance partners, and was widely acclaimed by all counterparts to whom it was presented.

Municipal Level Pandemic Planning and Risk Assessment. Throughout the quarter, Drs. Carlos Saenz and Julio Ortega worked with 17 municipalities in the SILAIS of Masaya, El Jicaró, Nueva Segovia, Madriz, and Rivas to conduct monitoring and evaluation of pandemic plans. The STOP AI team conducted a table top outbreak simulation exercise with COMUPRED staff in Ocotal and with municipal health directors in the SILAIS of Nueva Segovia. Additionally, STOP AI held meetings to evaluate the pandemic plan implementation with the management team and epidemiologist of the health center in El Sauce Municipality, which has oversight responsibility for nine other health posts serving the roughly 38,000 people of the municipality. The exercise, planned in advance, was to go through an agreed-upon set of criteria by which each of the participating municipalities would evaluate implementation of their pandemic preparedness and response plans. Drs. Carlos Saenz and Julio Ortega worked with the El Sauce health center team to conduct this evaluation, going over each criterion, coming up with quantitative and qualitative evidence of plan implementation.

During the week of November 9th – 13th, Carlos Saenz and Julio Ortega held an anti-pandemic table top exercise/response simulation with members of the Municipal Committee for Natural Disaster Prevention and Mitigation (COMUPRED) from the Somoto municipality and the Municipal Health Directors of nine municipalities from SILAIS Madriz. The team held a preparation session for the pandemic influenza response tabletop simulation exercise with members of the Municipal Committee for COMUPRED from the Jicaró municipality and family health team coordinators and community health coordinators (ESAF) from the organized sectors in accordance

with MOSAFC. A training on pandemic influenza response tabletop simulation exercise with the epidemiology team from SILAIS Rivas was implemented on November 26th, 2009.

3.2 COMPLETED COUNTRY ACTIVITIES

AFRICA

3.2.1 EAST AFRICA

In third quarter of 2008, STOP AI explored ways to have a greater impact within the East Africa region. As a means of reaching more people and to try to reach deeper into the regional level staff to increase the capacity of those most likely to be engaged in the outbreak responses, STOP AI supported a series of Cascade District-Level training programs conducted by participants who attended STOP AI's HPAI Surveillance, Biosecurity, and Response Training of Trainers workshops in Ethiopia and Tanzania. The participants from seven countries in the East Africa region: Kenya, Uganda, Rwanda, Sudan, Burundi, Tanzania, and Ethiopia, were invited to submit proposals to conduct a training program in their home countries to share the course, content, and skills with their colleagues at the district level. From the East Africa Regional training courses, STOP AI selected five proposals for funding.

Activity 2: On-Demand/Country Requested Work – Biosecurity, Surveillance, and Outbreak Response Training, Juba, Sudan. The fifth and final proposal is for a workshop in North Sudan prepared by STOP AI alumni, Dr. Ismail Adam Yagoub, Dr. Haitham Fadlalla Eltayeb, and Dr. Nisreen Ahmed Hamid Hassan. The training is planned for January 31st – February 4th, 2010 and participants from Khartoum will attend the workshop. The event is supported by Veterinaires Sans Frontieres-Belgium (VSF-B) with accounting and reporting, a contribution of equipment from the Ministry of Animal Resources and Fisheries, as well as a \$1,000 contribution from Support program for Integrated National Action Plan (SPINAP). This workshop will complete the STOP AI supported training proposals in East Africa.

3.2.2 SOUTHERN AFRICA

Included in STOP AI's Southern Africa Workplan is an On-Demand/Country Requested Technical Assistance component. FAO undertook an HPAI Outbreak Response Field Simulation exercise for veterinary and medical practitioners from Southern Africa Development Community (SADC) member states in September 2009. The exercise was held in Zambia, where Support Program for Integrated National Action Plan (SPINAP) funds have already been used for some Rapid Response Training. It was anticipated that the simulation exercise would highlight critical areas where rapid response planning, team preparation, and field implementation requires additional attention. STOP AI proposed to provide follow-on support to strengthen Zambian RRT capacity by designing and conducting two workshops to prepare the Zambian RRTs and individuals responsible for managing a national HPAI outbreak response for their roles and responsibilities in an upcoming field simulation. The first workshop, a 3-day Zambian National HPAI Response Plan, was held in September 2009 to prepare participants for the FAO Field Simulation. The second workshop, a Rapid Response Team Training, was planned to take place subsequent to the FAO exercise.

Activity 3: On-Demand/Country Requested Technical Assistance. STOP AI collaborated with USAID Southern



Africa and Centers for Disease Control and Prevention (CDC) Southern Africa to design and deliver a Rapid Response Team Training November 2nd – 6th in Kabwe, Zambia. A total of 26 participants from six provinces including Northern, Luapula, Copperbelt, Southern, Lusaka, and Central, attended the workshop. Workshop participants represented Zambian ministries and authorities who will be directly involved in responding to an outbreak of Avian Influenza. Based on the Zambian National HPAI Response Plan, key ministries included in the training program were the Ministry of Agriculture and Cooperatives and the Ministry of Health. Participants from the Inspection Stations also attended the course.

STOP AI and CDC developed a training framework as a program to include animal and human health modules and to allow time for both animal and human health technical trainers to present sector appropriate materials. The 5-day workshop agenda interspersed animal and human health topics and included interactive and practical exercises in the classroom as well as a field drill at a poultry farm, also designed to include animal and human health rotations.

LATIN AMERICAN AND CARIBBEAN

3.2.3 CARIBBEAN

Under STOP AI's Jamaica SOW, STOP AI was charged with studying the possibility that producing Emergency Food Production Options in Jamaica prior to (and/or during) pandemic to ensure adequate response to future Jamaican (if not Caribbean wide) emergency food aid needs. Between November 16th and 20th, STOP AI conducted an abbreviated market study concerning the feasibility of producing Food for Peace (FFP) Emergency Food Products (EFP) in Jamaica as an alternative to receiving imported food aid to sustain pandemic impacted "food insecure" populations. As next steps, STOP AI will complete price point and production cost research working directly with Jamaican processed food manufacturers.

STOP AI worked with the staff of the Office of Disaster Preparedness and Emergency Management (ODPEM) to coordinate and conduct this research. STOP AI also worked with ODPEM to discuss and prepare for the upcoming February 2010 workshop to customize the Municipal Pandemic Toolkit to the Jamaican reality down to the Parish and municipal levels. STOP AI's point of contact at USAID/Jamaica was kept abreast of all proceedings.

3.2.4 ECUADOR

As pandemic influenza circles the globe, it has affected Ecuador and its hospitals in much the same way it has in many of the Andean countries. The Ecuadorian Ministry of Health (MOH) had identified gaps of concern in the country's capacity to institute good hospital infection control, especially as it relates to the prevention and control of pandemic flu. The main referral hospitals for pandemic influenza in Ecuador were specifically identified as in need of technical assistance in the management of a large number of patients with pandemic influenza. In December 2009, STOP AI designed a revised Scope of Work for activities in Ecuador to conduct activities aimed at infection control capacity building. Working in collaboration with the MOH and the referral hospitals, STOP AI will work to expand their hospital infection control training component to provide training specifically targeted at case management and the reduction of nosocomial spread of pandemic flu. Assessments and planning meetings are expected to begin January 2010.

3.2.5 EL SALVADOR

STOP AI's technical assistance in El Salvador focuses on topics of pandemic preparedness and response capability to the municipal level.

Laboratory Quality Assurance. STOP AI conducted the third module of the Laboratory Quality Assurance/Leadership Development Training October 18th – 24th. Fifteen participants from the Ministry of Agriculture laboratories, MOA Field Veterinarians, and Ministry of Health hospital laboratories attended the workshop.

Municipal Pandemic Planning. Through the reporting period, municipal pandemic planning activities with the Ministry of Health have been indefinitely postponed due to H1N1 concerns. The El Salvador team will be discussing potential Scope of Work changes and will communicate any proposed changes.

3.2.6 GUATEMALA

STOP AI's activities in Guatemala include technical assistance in implementing Quality Assurance programs to both the Ministry of Health (MOH) and Ministry of Agriculture (MOA) laboratories via a series of workshops. The Quality Assurance programs will bring them closer to becoming certified as referral laboratories for influenza. The workshops will also promote communication and cross training, synergy, and knowledge sharing between the MOH and MOA labs.

Laboratory Quality Assurance. The STOP AI team of Dr. Gizela Maldonado and Dr. Oscar Morales conducted the third of four workshops on quality assurance as a 5-day course in Guatemala City. Twenty-eight participants from various Guatemala organizations and institutions including the National Health Laboratory (LNS), the School of Veterinary Medicine of San Carlos University, Mariano Galvez University, the Red Cross of Guatemala, the Avian Health Program (PROSA), and the Regional Reference Laboratory for Avian Influenza (LARRSA) worked to improve their ability to formulate challenge models and redefined their action plans. Team members practiced new skills and used tools to improve efficiency in their work.

Municipal Pandemic Planning. Municipal pandemic planning activities have been indefinitely postponed due to H1N1 concerns.

3.2.7 PARAGUAY

Laboratory Quality Assurance. The fourth of four workshops in quality assurance implementation was delivered for the Central Laboratory of the Ministry of Health and for the SENACSA (Ministry of Agriculture laboratory) September 22nd – October 2nd, 2009. The workshops were implemented in Asuncion, Paraguay and attended by two teams from the Central Lab and three teams from SENACSA, for a total of 27 participants. Both participating organizations have a role in the preparation and response to avian and pandemic influenza.

Activities for the Central Lab (MOH) and for SENACSA were implemented in separate sessions (September 22nd – 25th and September 28th – October 2nd). This separation came as result of conflicting schedules, mostly from the MOH lab which is still readjusting its workload and priorities from the recent emergency caused by the outbreak of pandemic influenza A H1N1 and the actual threat of a dengue outbreak. The teams from the animal and human health sectors revised the advances and results from the implementation of their action plans. Each team prepared and delivered a presentation to their senior management. Along with advances and achievements, the teams presented new goals they intend to work for the immediate future as continuation of their contribution toward the implementation of quality assurance in their respective institutions.



By working toward the implementation of quality assurance, both sectors - human and animal health diagnostics in Paraguay - will continue strengthening their laboratory capabilities, creating a better environment for the proper implementation of influenza testing and surveillance.

Previous STOP AI workshops (July 14th – 25th, 2008, October 7th – 15th, 2008, and April 27th – May 8th, 2009) resulted in the formulation and implementation of action plans by each team. The action plans are designed to move the teams toward achieving their respective goals of implementing quality assurance programs in their sections and strengthening the laboratory diagnostic capabilities for preparedness and response to avian and

pandemic influenza. The outbreak of the pandemic influenza H1N1 in April 2009 disrupted the proper implementation of the workshops requiring schedule and content adjustments in response to the actual situation that the outbreak created in the participants' institutions.

4. PROGRESS TOWARD RESULTS

4.1 NEW PROBLEMS ENCOUNTERED AND PROPOSED SOLUTIONS

Departure of UC Davis Principal Investigator on Poultry Health and Development Program. DAI was notified by the UC Davis principal investigator for the STOP AI Poultry Health and Development Program for Africa, Dr. Carol Cardona, that she had taken up a position with University of Minnesota and was leaving the University of California system. Her departure could jeopardize the success of the PHiD program and DAI is working with UC Davis and Dr. Cardona to find a way to continue this program preferably with her continued leadership. We are working through a number of options and hope to have an acceptable arrangement in the next month or so especially since this is a fairly large program that cannot accept substantial delay in implementation.

Postponement of FAO Tabletop Simulation and Field Exercises for Ukraine. Last quarter STOP AI was asked to participate in an FAO Tabletop Simulation and Field Exercises for Ukraine, with the understanding that STOP AI had gained substantial insights from our various simulations and field exercises conducted around the world, especially linking animal health and public health considerations in our exercises. During our preparations for this joint exercise, it was postponed in large part because of Ukraine's preoccupation at the time with the H1N1 pandemic. We are working to reschedule this and participate in the coming quarter.

4.2. UPDATE ON RESOLUTION OF ISSUES RAISED IN PREVIOUS REPORTS

We resolved the issues with project activities in Vietnam, Bangladesh, and Sudan. The postponement and delays in LAC caused by H1N1 continues but is expected to be resolved in early 2010.

Southern Vietnam Value Chain Approach Resolution. STOP AI resolved the marketing setback encountered in the third quarter of 2009 by redesigning the marketing component of the Poultry Supply Chain activities and introducing a new element of Wholesale Shops. Additionally, STOP AI requested approval of USAID for an extended workplan to support the implementation of the activity, due to expire on January 31, 2010, through September 2010. The extension is requested for both ASVELIS and MDI to implement a new series of activities to maintain and strengthen the existing six supply chains, initiate several new chains, find and confirm sales contracts, commence third party certification aspects, and hold mid- and final-project stakeholder workshops.

Temporary Training Delays in Sudan Resolution. STOP AI finalized a contract with Veterinaires Sans Frontières – Belgium (VSF-B) to support the cascade trainings in Southern and Northern Sudan. The training in Southern Sudan was conducted in the 3rd quarter and the final training course, conducted by the Northern Sudan alumni, is planned for January 31st – February 4th, 2010.

Bangladesh Bank Account Resolution. STOP AI successfully opened a bank account in Bangladesh with HSBC. The bank account became operational in November 2009.

H1N1 Outbreaks in LAC Resolution. STOP AI continues to monitor the A/H1N1 situation in Latin America. The El Salvador and Guatemala teams are discussing potential Scope of Work changes to reprogram project activities in countries where the A/H1N1 pandemic has subsided.

4.3 ANTICIPATED ACTIVITIES PLANNED FOR NEXT QUARTER

STOP AI has the following activities planned:

Africa: We will hold a Live Bird Market workshop for Francophone **West African** countries in Nigeria in February. In March, STOP AI will hold a Poultry Management and Disease workshop for English speaking **West Africa** countries in Accra. Also in the first quarter of 2010, STOP AI will work with the faculty at the University of Ghana to conduct the **West Africa** integrated HPAI training course as part of their Masters of Philosophy curriculum. STOP AI will support a workshop in Northern Sudan as part of the **East Africa** cascade district-level training program. STOP AI is planning further projects in **Nigeria** to build upon progress demonstrated in four targeted wet markets.

ANE: STOP AI will continue conducting stakeholder roundtable training sessions in **Egypt**. STOP AI will expand biosecurity training for Sector 2 and 3 producers from Delta HPAI hot zones in **Egypt**. We will finish revisions to biosecurity training materials for backyard producers in **Bangladesh**. STOP AI will kick off the newly approved Phase III **Nepal** work plan for continued work in support of Nepal AI initiatives. In **Vietnam**, STOP AI will continue our long-term activities of capacity building through technical assistance, field visits, and inspections for supply chain participants in the six existing supply chains. STOP AI will host a series of supply chain site visits for **Vietnam** government officials in January.

E&E: We will conduct two poultry production trainings in **Georgia** in February 2010. In the next quarter, STOP AI will continue working on local-level outbreak response plan development in each of the **CAR** focus countries and will conduct a poultry production, management, biosecurity, and outbreak response program in Tajikistan and a poultry industry training in Kazakhstan.

LAC: STOP AI will conduct the fourth and final module of the Laboratory Quality Assurance and Leadership Development training in **Guatemala** in January and **Bolivia** in March. STOP AI will conduct an infection control workshop with the Ministry of Health and hospital staff in **Ecuador**. In January, we will hold a hospital infection control Training of Trainers (ToT) in **Guatemala**. In **Paraguay**, STOP AI will continue infection control follow-up visits with individual hospitals. Additionally, STOP AI is coordinating the next generation health toolkit trainings in El Salvador.

Global: STOP AI will begin initial planning for a lessons learned workshop “What is Next in HPAI Control: Lessons from STOP AI” aimed at informing future HPAI control activities. In March, a representative of STOP AI will present a poster and attend the *International Society for Infectious Diseases* in Miami, Florida. The conference’s scientific program runs the spectrum from cutting edge science to state-of-the-art practices to global infectious disease control. In early 2010, we will explore another Virtual Learning exercise by hosting a virtual meeting bringing the STOP AI teams in Egypt and Bangladesh together to discuss best practices in improving market and farm level biosecurity.

4.4 PROGRESS TOWARD RESULTS

As detailed in sections 1 through 3 of this report, STOP AI made significant progress delivering on its country and global activities. For the quarter, STOP AI conducted \$2.25 million worth of work. We anticipate that next quarter’s expenditures will be \$2.7 million.

APPENDICES

APPENDIX A: TASK ORDER STATUS

APPENDIX B: RECRUITMENT AND TRAINING MATRIX

APPENDIX C: PRESS



APPENDIX B: RECRUITMENT AND TRAINING MATRIX

STOP AI continued its recruitment for country activities. The following table shows the personnel we recruited to perform country work, and the role they played providing either short-term technical assistance (STTA) or long-term technical assistance (LTTA) to the field.

Country	Activity	Personnel	STTA	LTTA	Role
Bangladesh	Technical assistance	Dr. Shankar Mondal, Zakaria Noyon		✓	Technical assistance
Bangladesh	Cleaning and Disinfection Activities	Dr. Shankar Mondal, Zakaria Noyon, Parimal Mondal, Md. Abdul Jabbar, Kajal Bhattacharjee		✓	Technical assistance
Bangladesh	PPP Activities in Pilot Districts	Dr. Shankar Mondal, Zakaria Noyon, Dr. Mick Fulton, Subir Sarker, Alamgir Rashid, Suman Das Gupta	✓	✓	Technical assistance
Bolivia	Training	Dr. Horacio Espinoza	✓		Technical assistance and technical trainer
Bolivia	Laboratory Quality Assurance Training	Dr. Oscar Morales	✓		Technical trainer
Central Asia Republics	Technical assistance	Armen Asatryan, Dr. Joldoshbek Dadybaev, Raushan Amanzhanova, Roksana Tashbaeva	✓	✓	Technical specialists, logistics support specialist, and technical trainers
Central Asia Republics	Training (Kazakhstan)	Armen Asatryan, Dr. Joldoshbek Dadybaev, Raushan Amanzhanova, Essilova Magiza Sunnatovna, Shampiyeva Kalamkas Duissenovna, Dr. Kakimhan Kyraubaev	✓	✓	Technical specialists, logistics support specialist, and technical trainers
Central Asia Republics	Training (Kyrgyzstan)	Armen Asatryan, Dr. Joldoshbek Dadybaev, Raushan Amanzhanova, Roksana Tashbaeva, Dr. Jarra Jagne, Dr. Abdelghani Benkhelil, Dr. Mariette Bonnard, Dr. Sergiu Baltaga	✓	✓	Technical specialists, logistics support specialist, and technical trainers



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Country	Activity	Personnel	STTA	LTTA	Role
Central Asia Republics	Training (Tajikistan)	Armen Asatryan, Dr. Joldoshbek Dadybaev, Raushan Amanzhanova, Toheer Zoerov, Dr. Tojiddin Salimov	✓	✓	Technical specialists, logistics support specialist, and technical trainers
Central Asia Republics	Training (Turkmenistan)	Armen Asatryan, Dr. Joldoshbek Dadybaev, Dr. Khojaakhmet Charyev, Dr. Berdy Sopuev	✓	✓	Technical specialists, technical trainers
Central Asia Republics	Training (Uzbekistan)	Armen Asatryan, Dr. Joldoshbek Dadybaev, Raushan Amanzhanova, Em Evelina, Project HOPE personnel	✓	✓	Technical specialists, logistics support specialist, and technical trainers
Egypt	Technical assistance	Dr. Farid Hosny, Rich Magnani, Rob Ryan-Silva, Hilary Langer	✓	✓	Technical assistance and project management
Egypt	Training	Dr. Jarra Jagne, Dr. Farid Hosny, Dr. Mick Fulton	✓	✓	Technical trainers
El Salvador	Laboratory Quality Assurance Training	Dr. Oscar Morales	✓		Technical trainer
Georgia	Training	Lena Ninidze, Ketik Tsiklauri, Maya Nadirashvili, Jimsher Osiashvili, Georgia Institute for Public Affairs (GIPA)	✓	✓	Technical trainers and logistics support specialists
Guatemala	Laboratory Quality Assurance Training	Dr. Gizela Maldonado, Dr. Oscar Morales	✓		Technical trainers
Nepal	Technical assistance	Dr. NPS Karki, Luke Colavito, Dala Ram Pradhan, Bagie Sherchand	✓	✓	Technical assistance
Nicaragua	Technical assistance	Dr. Carlos Saenz, Dr. Julio Ortega		✓	Technical assistance
Nigeria	Technical assistance	Dr. Garba Maina, Dr. Jarra Jagne	✓	✓	Technical assistance
Paraguay	Laboratory Quality Assurance Training	Dr. Oscar Morales	✓		Technical trainer



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Country	Activity	Personnel	STTA	LTTA	Role
Southern Africa – Zambia	Training	Dr. Jarra Jagne, Ed Salt	✓		Technical trainer and training facilitator
Vietnam	Technical assistance	Dr. John Bowman, Asian Veterinary & Livestock Services Joint Stock Company (ASVELIS), International Market Development & Investment Joint Stock Company (MDI JSC)	✓	✓	Technical assistance
Vietnam	Technical assistance	Dr. Jode Garbe and Dr. John Bowman	✓		Technical assistance and legislation development
West Africa Integrated Public Health– Veterinary Health	Technical assistance	Dr. Lisa Stone, Maria Pia Sanchez, Dr. Issa Wone, Dr. Nathaniel Yebuah, and Dr. Yaghouba Kane	✓		Technical assistance and curriculum development
West Africa – Veterinary Health	Laboratory Training	Dr. Jarra Jagne	✓		Technical Trainer
West Africa – Veterinary Health	Training	Dr. Jarra Jagne, Dr. Timothy Obi, Dr. Paul Abdu, Dr. Garba Maina, Dr. BA Afolabi, Kathy Alison,	✓		Technical Trainers and Training Facilitator
West Africa – Veterinary Health	Technical assistance	Dr. Carol Cardona, Dr. Peter Msoffe, Dr. Paul Mbuthia, Dr. George Aning, and Dr. Yaghouba Kane	✓		Technical assistance and curriculum development

Network Building

STOP AI also continued to build its roster of professionals by adding training participants and master trainers, all of whom could be contacted to conduct future technical assistance or training courses for in-country activities. The following table highlights this quarter's training outputs by course. STOP AI trained 2,027 total course participants and developed 50 new cascade trainers with 116 courses given in 15 countries.

Country	Training Course	TOT	# of Courses	Total # of Course Days	# of Participants	Cascade Trainers Trained
Bangladesh	Live Bird Market Training	✓	2	8	50	50
Bolivia	Laboratory Quality Assurance and Leadership Development		1	11	54	
Bolivia	Infection Control Workshop		4	8	161	
CAR	Regional Laboratory Diagnostics and Dangerous Goods Regulations of International Air Transport Association (IATA)		1	2	24	
CAR	Kazakhstan HPAI H5N1 Biosecurity, Surveillance, and Outbreak Response Trainings		3	9	76	
CAR	Tajikistan Poultry Management, Disease, Biosecurity, and Outbreak Response Trainings		1	3	26	
CAR	Tajikistan Orientation Seminar to prepare for HPAI Local-Level Outbreak Response Plan Development by Local Commissions		1	1	20	
CAR	Turkmenistan Poultry Management, Disease, Biosecurity, and Outbreak Response Trainings		1	3	21	
CAR	Turkmenistan Orientation Seminar to prepare for HPAI Local-Level Outbreak Response Plan Development by Local Commissions		1	1	21	
CAR	Uzbekistan Emergency Response Group Training on Outbreak Response		2	4	45	
CAR	Uzbekistan Poultry Management, Disease, Biosecurity, and Outbreak Response Trainings		1	3	16	
Egypt	Biosecurity Roundtables		18	18	441	
Egypt	Outbreak Response Trainings and Management Trainings		2	7	60	
El Salvador	Laboratory Quality Assurance and Leadership Development Training		1	7	15	
Georgia	Outbreak Response Cascade Trainings		2	6	34	
Guatemala	Laboratory Quality Assurance/Leadership Development Training		1	5	28	
Nepal	Avian Influenza Curriculum Development and Training for VAITC Members		51	51	747	
Nepal	Paravet Training		1	2	25	



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Nicaragua	Municipal-Level Pandemic Preparedness and Response Planning		17	34	72	
Paraguay	Laboratory Quality Assurance/Leadership Development Workshop		2	9	27	
Southern Africa – Zambia	Rapid Response Team Training		1	5	26	
West Africa	Shipping Avian Influenza Samples by Air: International Air Transport Association Dangerous Goods Regulations Course		1	5	15	
West Africa	Live Bird Market Biosecurity Training		1	3	23	
Total			116	205	2027	





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Turkmen Farmers Learn How to Increase Poultry Production Profits

PAS No 264
December 11, 2009

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Twenty one experienced poultry producers from all over the country are working on the quiz covering nutrition, vaccination and immunity as well as waste management issues

Ashgabat, December 9-11, 2009 – Over twenty experienced poultry producers from all over Turkmenistan attended a three day workshop to learn how to improve

poultry production operations. The workshop was as part of a United States Agency for International Development (USAID) project called "Stamping out Pandemic Avian Influenza" (STOP AI).

In partnership with the with livestock and poultry veterinary service of the Association "Turkmen livestock", USAID invited twenty five poultry veterinarians and production management specialists to participate in the training sessions. Participants learned about topics as diverse as incubator-usage, brood and growth management, poultry housing and waste management, record keeping, and poultry nutrition.

As STOP AI project is focused on avoiding pandemic avian influenza, participants also reviewed and discussed how they could work together to manage poultry health issues including discussions of common poultry diseases and the use of vaccination in commercial poultry production. A biosecurity risk assessment exercise led to the development of biosecurity plans for each of the participant farms. Participants also learned about global best practices for responding to an HPAI outbreak.

Avian Influenza preparedness is one of the many areas, supported by the American people through USAID. In Turkmenistan, USAID programs provide assistance in developing the economic sector and support health care and social development.

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