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COMMUNITY-BASED AVIAN INFLUENZA CONTROL PROJECT QUARTERLY PROGRESS REPORT 14

January – March 2010



14 May 2010 – revised 25 May 2010

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Cover photo credit: Arief Subandono, CBAIC.

During a monitoring visit to a broiler farm participating in the CBAIC commercial poultry private sector partnership (PSP) program, workers and a PSP-trained technical staff partner discuss the farm's overall progress in implementing core biosecurity and good management practices. The farm, located in Sukabumi district, West Java, is affiliated with GOPAN, the Indonesian National Association of Independent Poultry Farms, and was found to be making good progress in improving its biosecurity. In particular, the workers' use of protective clothing and footwear is clearly visible. Dedicated work clothing is worn only on the premises of the farm to reduce the risk of bringing in disease pathogens from outside the farm.

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EXECUTIVE SUMMARY

The Community-Based Avian Influenza Control Project continued to work intensely from January through March 2010, largely wrapping up programmatic activities by the end of the period. Work included continuation of the community empowerment program to expand local level capacity for bird flu surveillance and response, the commercial poultry private sector partnership program to improve disease control and management practices, and strategic behavior change communications materials and activities in support of both. Initiatives continued to focus on western Java Island, where nearly thirty percent of the population of the entire country lives. Importantly, this area also accounts for more than seventy percent of all confirmed human and animal bird flu infections in the country.

This period, the community mobilization risk reduction program began expanded implementation of *Desa Siaga* outreach across Yogyakarta province. Meanwhile, “intensive” community mobilization and market risk reduction initiatives, integrated behavior change communications, and local government advocacy continued to expand coverage of community-based bird flu surveillance and control, with an aim towards local sustainability. Project intervention in the Indonesian commercial poultry sector expanded biosecurity and best management practices in participating broiler and layer (egg) farms. Monitoring and evaluation documented the progress of these interventions:

- 🍌 Community empowerment highlights included continuing work with 121 project villages. As always, village AI team members who once served as CBAIC village avian influenza coordinators (VAICs) continued to play an active role in AI control and prevention in their communities. An additional 930 AI team members were trained this period, as well as an additional 3000 *Desa Siaga* village health cadres.
- 🍌 The CBAIC commercial poultry private sector partnership (PSP) program fully engaged new partner JAPFA, the second largest industrial poultry producer in Indonesia. 69 JAPFA technical staff and 94 Sector 3 farm supervisors were trained in biosecurity and best management practices to reduce AI transmission and increase productivity.
- 🍌 Communication efforts continued to support project empowerment and behavior change objectives through distribution of information, education, and communication materials, and completion of a mass media campaign. AC Nielsen data indicate that the CBAIC campaign reached an estimated 159 million Indonesians nationwide, with critical, action-oriented AI risk reduction messages.

CBAIC continued to contribute to USAID avian influenza control objectives. CBAIC supports government of Indonesia AI control work, improves community-level reduction of the risk of bird flu transmission between animals – and from animals to people, and designs and implements effective behavior change communication interventions. This combination of initiatives is well suited to reduce animal and human AI cases in Indonesia.

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ACRONYMS AND ABBREVIATIONS

AI	Avian Influenza
AIMEBA	AI Monitoring, Evaluation, and Budget Analysis System (USAID)
CBAIC	Community-Based Avian Influenza Control Project
CEF	Community Empowerment Facilitator
CMU	AI Campaign Management Unit (MOA)
DSO	District Health Surveillance Officer (MOH)
FAO	Food and Agricultural Organization of the United Nations
FGD	Focus Group Discussion
GME	<i>Guide for Monitoring and Evaluating Avian Influenza Programs in Southeast Asia</i> , USAID/Measure Evaluation, September 2008 (rev. October 2008)
GOI	Government of Indonesia
H2P	USAID-funded Humanitarian Pandemic Preparedness Project
H5N1	HPAI Strain of AI
HPAI	Highly Pathogenic Avian Influenza
IDI	In-Depth Interview
IEC	Information, Education, and Communication
ILRI	International Livestock Research Institute
IOM	International Organization for Migration
KAP	Knowledge, Attitudes, and Practices
KOMNAS FBPI	National Committee for AI Control and PI Preparedness
LDCC	Local Disease Control Center
MENKOKESRA	Coordinating Ministry for Social Welfare
MOA	Ministry of Agriculture
MOH	Ministry of Health
NU	Nadhlatul Ulama
OFFLU	Joint OIE/FAO Network of Expertise on Animal Influenza
OIE	World Organization for Animal Health
PDSR	Participatory Disease Surveillance and Response
P2PL	Directorate General of Disease Control and Environmental Health
PI	Pandemic Influenza
PMI	Palang Merah Indonesia (Indonesian Red Cross)
PRA	Participatory Risk Assessment
PRAMUKA	Indonesian Boy and Girl Scouts
PROMKES	National Health Promotion Agency (MOH)
PSA	Public Service Announcement
PSP	Private Sector Partnership
SO	Strategic Objective
STTA	Short-term Technical Assistance
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VAIC	Village Avian Influenza Coordinator
WHO	World Health Organization

INTRODUCTION

Bird flu infection in humans is deadly and the threat is clear. As an expansive tropical archipelago, Indonesia’s densely populated islands provide the perfect setting for endemic deadly H5N1 avian influenza to bide its time and evolve, perhaps eventually mutating into a form that passes easily between humans, causing a pandemic with the potential to kill millions. Through 2009, Indonesia confirmed 134 deaths due to bird flu. With 161 Ministry of Health (MOH)-reported human cases nationwide, H5N1 avian influenza (AI) infection in Indonesia has resulted in a case fatality rate of more than 83 percent (MOH; Figure 1).

The Community-Based Avian Influenza Control Project (CBAIC) is part of the United States Agency for International Development | Indonesia strategy for reducing the risk of pandemic flu. Overarching goals include prevention of pandemic flu from the H5N1 strain of avian influenza and establishment of Government of Indonesia capacity for pandemic response; and reduced occurrence of AI infection in poultry and humans. Specifically, CBAIC is part of three USAID strategic objectives (SOs): Strengthen Government of Indonesia (GOI) planning, preparedness, and coordination among government sectors and levels, and donor agencies (SO1); increase effectiveness of H5N1 prevention and control in poultry (SO2); and decrease high-risk behavior associated with transmission of H5N1 among poultry and humans (SO4). This document details project progress for the period January through March 2010.



Figure 1. H5N1 deaths in Indonesia by province through 2009.

ELEMENT A

Strengthen Government of Indonesia Capacity, Coordination, Planning, and Pandemic Preparedness

The Indonesian National Committee for Avian Influenza Control and Pandemic Preparedness (KOMNAS FBPI) coordinates the Indonesian government response to the deadly H5N1 strain of avian influenza. KOMNAS is a multi-sectoral sub-unit of the Coordinating Ministry for Social Welfare (MENKOKESRA), formed by presidential decree in 2006. MENKOKESRA developed the national framework for AI prevention and pandemic preparedness and coordinates national avian influenza control activities with the Ministries of Agriculture and Health (MOA and MOH), and others. The MOH, with assistance from WHO, leads AI planning and preparedness coordination during WHO pandemic alert period (Phases 3-5). In addition, MOH, with WHO, developed a sectoral *National Influenza Pandemic Preparedness Plan*. The Ministry of Agriculture is responsible for animal health and works cooperatively with FAO.

A key USAID strategic objective is to overcome the challenges inherent in the divided avian influenza response, planning, and pandemic preparedness roles in Indonesia. CBAIC meets this objective by strengthening GOI planning, preparedness, and coordination among government sectors and levels, and donor agencies. Specifically, CBAIC supports KOMNAS through coordination and facilitation, and technical and financial assistance.

Coordination

CBAIC participated in a workshop to finalize a training of trainers module on community-level pandemic preparedness, which was held on 12 January hosted by the USAID-funded Humanitarian Pandemic Preparedness (H2P) initiative and Indonesian Red Cross. The module was then used during a seminar CBAIC participated in on 20 January to develop the Indonesian country plan on voluntary networking for pandemic preparedness. Participants included the National Committee on Bird Flu and Pandemic Preparedness (KOMNAS FBPI), the National Health Promotion Agency (PROMKES), the Directorate General of Disease Control and Environmental Health (P2PL), Nadhlatul Ulama (NU – the largest non-governmental Islamic service organization in Indonesia), representatives of the national boy and girl scouts (PRAMUKA), the International Organization for Migration (IOM), and World Vision.

The Evolution of AI Communication in Indonesia: 2006-2010, A Bird's-Eye View

CBAIC finalized the evolution of communication document and distributed it during a One World One Health seminar attended by local and international health experts in Jakarta in February. A total of 2500 copies were printed for KOMNAS.

The document, entitled *The Evolution of Avian Influenza Communication in Indonesia 2006-2010: A Bird's-Eye View*, captures key communication efforts implemented in response to bird flu in Indonesia. In particular, it describes the evolution of AI control, prevention, and risk reduction messages through time, as well as the evolution of message delivery methods, both in accordance with changes in knowledge regarding the disease and how it is transmitted.

The document is currently being translated into Indonesian, and will be finalized and published next reporting period.



ELEMENT B

Community-Based Avian Influenza Risk Reduction

CBAIC works with community level stakeholders in West Java province to ensure an integrated approach to reduce the risk of AI transmission. This is critically important because of the very close relationship between people and poultry in Indonesia. Three interventions are being implemented: 1) Intensive, 2) Market, and 3) *Desa Siaga*. Combined, these interventions aim to reduce risky practices associated with transmission of AI in communities, from the district down to the village level. Specifically, this strategy aims to reduce AI transmission risks in areas accounting for more than 70 percent of the populations of poultry and people in West Java.

Through collaboration with local governments, CBAIC identified priority districts to implement an intensive risk reduction program. In addition, CBAIC implemented interventions covering subdistrict markets surrounding the intensification areas. Finally, CBAIC collaborated with provincial and district health officials to incorporate AI control curriculum into *Desa Siaga* (alert village), the Ministry of Health community-level emergency and disaster preparedness and response program.

Intensive interventions (community mobilization, behavior change communication, advocacy) were conducted in the selected high-risk districts. Market interventions (training of market managers, vendors, and local health, livestock, and market officials in AI risk reduction, and dissemination of behavior change print materials) were implemented and included the municipalities of Depok, Bekasi, Bogor, Bandung, and Tasikmalaya. *Desa Siaga* outreach covered twelve more districts, and trained existing *Desa Siaga* master trainers and facilitators in AI risk reduction. With intensive and market interventions, the aim is to reduce the risk of AI transmission to both humans and animals. In *Desa Siaga* outreach interventions, the focus is on reducing the risk of AI transmission to humans.

Accomplishments contributing to USAID SO2:

- ✓ *25 markets improved hygiene and sanitation to reduce AI transmission risks*
- ✓ *121 villages implemented AI risk reduction plans*
- ✓ *930 AI team members trained*
- ✓ *350 Desa Siaga master trainers were trained in AI and AI risk reduction. In turn, they trained an additional...*
- ✓ *3000 health cadres covering more than 1400 villages with critical AI and AI risk reduction information*
- ✓ *AI risk reduction interventions covered 209 subdistricts across 22 districts in West Java and Yogyakarta provinces*

Key risk reduction program objectives are:

1. Implementation of an effective community-based risk reduction model,
2. Incorporation of the CBAIC community-based AI risk reduction model with other existing community-based programs,
3. Establishment of sustainable community-based AI control and prevention capabilities through cooperation with local government AI programs, and
4. Maximize the reach of CBAIC AI risk reduction interventions.



Above, AI team members in Singaparna, Tasikmalaya, conduct a participatory risk assessment of their community. After identifying their AI transmission risks, they developed and implemented a plan to reduce or eliminate those risks.

COMMUNITY MOBILIZATION

Coordination

The quarter saw continued coordination with provincial, district, and local governments in West Java and Yogyakarta by CBAIC staff. And CBAIC community empowerment facilitators (CEFs) held numerous consultations in their areas of responsibility, with district and local livestock and market officials, and local leaders, to provide them with regular updates on project activities.

CBAIC secured the buy-in and support of Yogyakarta provincial government for expanded Desa Siaga outreach, incorporating locally applicable AI risk reduction curriculum into the program. Plans were drawn up to implement the outreach in every district in the province.

Implementation

To address information and implementation changes from year one to year two CBAIC held refresher trainings to ensure that all CEFs had the same knowledge base for the second round of implementation. Provincial health and livestock officials that took part in the initial trainings in February 2009, also took part in these refresher trainings.



AI teams work to protect their communities from the disease. Above, residents of Sadangmekar, West Bandung, and their AI team give the “thumbs up” sign after a successful work session.

In preparation for these trainings, the CBAIC-produced community mobilization curriculum, developed in early 2009, was revised to improve CEF field facilitation and training skills. Updates were made

to the AI information, particularly detailing the current situation in West Java province. These updates were provided by the Bandung district Local Disease Control Center (LDCC), while CBAIC Senior Technical Advisor Dr. Jonathan Bell strengthened the AI transmission information. Indonesian Red Cross (PMI) added additional community empowerment skills to the curriculum.

Intensive intervention. During the period, AI teams in all 121 project villages (90 from last year, plus 31 new villages in the final year of the project) finished their CBAIC-supported AI risk reduction community work sessions, though the AI risk reduction work will continue in many of the villages even after project support ends.



Communities participating in the community mobilization program also enlist religious figures to help in local AI risk reduction efforts. Sarimanggu, Tasikmalaya (above) is just one example.

Work sessions combined the different key audiences (e.g. consumers, backyard poultry owners, Sector 3 poultry producers, market managers, poultry vendors, etc.) by neighborhood or sub-village level, and schools continued to be actively engaged in AI risk reduction community mobilization work sessions. This approach led beneficiaries to report that they felt more empowered to reduce their village’s AI risks, because representatives of all audiences in the community worked cooperatively to identify the risks and collaboratively develop and implement plans to reduce or eliminate those risks.

During the period, CBAIC CEFs finalized work with each village to develop their respective AI teams, to conduct their respective participatory risk assessments (PRA), and to develop and implement their respective risk reduction plans. Of note, 930 AI team members were trained in the 31 new villages.

To facilitate implementation of village risk reduction plans, basic commodity support was provided, occasionally with community or local government cost sharing. Commodity support included provision of hand sprayers to facilitate regular cleaning and disinfection efforts, particularly for slaughterhouses, markets, and poultry vendor stalls. Other commodities supported infrastructure improvements including non-porous – easy to clean and disinfect – cages, holding pens, and work surfaces, plus improving potable water facilities, and waste and wastewater disposal structures.

Market intervention. In this final year of the project, 25 local markets (eleven from last year, plus fourteen new markets) were partnered with, to identify and address their AI risks. CBAIC facilitated development of thirty-member market AI teams, who then conducted PRAs to identify the risks of their respective market. Next, each team developed and implemented a plan to



Market AI teams worked with vendors to identify and reduce AI transmission risks. They also monitored their markets to make sure risk reduction measures continued to be implemented.

reduce or eliminate those risks. CBAIC provided technical guidance as needed, but encouraged each market team to take ownership of the process, and to hold themselves accountable for reducing AI risks.

Market AI teams were comprised of market managers, poultry vendors, and staff from local trade and livestock offices. In some cases, local governments actually allocated staff and funding in support of market AI risk reduction efforts, particularly for infrastructure improvements. Teams engaged their peers, explaining the risks, and the steps to take to reduce those risks. Team members were also tasked with monitoring and maintaining their respective markets.

CBAIC Senior Technical Advisor Dr. Jonathan Bell conducted spot-check monitoring and evaluation visits of many of the partnering markets. Results of these visits are summarized in the MONITORING AND EVALUATION section, beginning on page 17.

Desa Siaga intervention. Last quarter, CBAIC worked closely with West Java provincial health officials and Red Cross representatives to evaluate the initial round of CBAIC *Desa Siaga* outreach. These discussions, plus visits with village-level beneficiaries, found that the initial AI control trainings were well received. Specifically, it was found that support remained strong from the province to the local level for continuing the program. Therefore, this quarter, AI risk reduction training was expanded to cover ten (10) more villages in each of six subdistricts in all twelve West Java districts in which CBAIC conducted *Desa Siaga* outreach.

West Java *Desa Siaga* refresher trainings were held in January and February, reaching 216 subdistrict trainers as well as 36 district trainers with updated information on AI, AI transmission risks, and methods for reducing those risks. These trainers trained an additional 1440 village health cadres during the period.

Further, CBAIC *Desa Siaga* outreach expanded to cover every district of Yogyakarta province. Twenty-five master trainers were trained in February 2010, followed by training of 234 subdistrict-level trainers. In turn, by the end of the period, these trainers had trained 1560 village health cadres in AI and AI risk reduction.

COMMUNICATION SUPPORT

As reported previously, using the USAID consensus report on key audiences and behaviors for AI risk reduction, CBAIC developed an umbrella theme for project-developed information, education, and communication (IEC) materials. *Aksi 100% Bersih* (Actions for 100% Cleanliness) focused on improved biosecurity for AI risk reduction.

Logos of the Ministries of Agriculture and Health, KOMNAS FBPI, USAID, CBAIC, WHO, and FAO were incorporated into IEC materials produced under this umbrella theme, which focus group discussions found improves material credibility. Strategic supportive communication efforts and materials this period included strategic mass media, community events, and a variety of IEC materials.

IEC materials

During the reporting period, CBAIC produced a plethora of IEC materials (see APPENDIX A: Indicator 9). In support of CBAIC community mobilization efforts, the previously produced double-sided key audience flyers were converted to single-sided posters to facilitate posting of the information. Content and messaging stayed the same. Next, a “Customer and Consumer” banner was produced to complement

Accomplishments contributing to USAID SO4:

- ✓ 207 thousand units of CBAIC information, education, and communication materials were distributed
- ✓ 5000 villagers reached directly by AI risk reduction community events
- ✓ 159 million* Indonesians reached across the country with action oriented AI risk reduction messages (*AC Nielsen estimate)

the “Backyard Producer” and “Vendor” banners produced previously. Like the previous banners, the customer/consumer banners were placed strategically in easy to spot, easy to read places – especially in local markets. Lastly, a 2010 planning calendar was produced, similar to that produced for 2009. The planners were distributed to partners and beneficiaries (AI teams, in particular) to facilitate scheduling of work sessions and implementation of AI risk reduction activities.

Ballyhoo billboards. Last year CBAIC had placed the ballyhoo billboards with AI risk reduction messages at key locations along the heavily traveled and densely populated “poultry corridor” that funnels poultry and poultry product into the greater Jakarta area. CBAIC repeated the effort this period, with an installment of 100 ballyhoo billboards along the same area, with an addition 50 billboards placed at local markets participating in the CBAIC risk reduction program (see photo below). Installation of the billboards began in mid-February. They will be displayed for twelve weeks.



Mass media

The third and final CBAIC mass media campaign, launched in December 2009, continued till the end of the reporting period. It centered on television and radio content, developed under the *Aksi 100% Bersih* theme. A jingle was produced, as were new TV public service announcements (PSAs) and message reinforcing “fillers” and “built-ins, plus a creative radio program. Supportive print materials and community variety shows were also utilized, which reinforced messages disseminated through television and radio.

Television. The TV campaign ran nationwide through March 2010, and was targeted towards Indonesians (male and female), between 20-45 years of age. Community leaders, local officials, veterinarians, and healthcare providers comprised a secondary target audience. The campaign was broadcast on the five highest rated national TV stations (RCTI, SCTV, IVM, Trans TV, and TPI), plus regional channel TVRI Bandung, which specifically covered rural areas in our West Java project areas. Based on AC Nielsen data, the CBAIC TV campaign reached an estimated 159 million viewers nationwide.

Two TV PSAs delivered the key messages *Lapor, Kubur* (**Report** sudden death in poultry to authorities, and **Bury** dead poultry) and *Aksi 100% Bersih* (**Actions for 100% Cleanliness** to reduce the risk of AI transmission). The first informed the viewer what to do in the event of a suspected AI outbreak. The second let the viewer know what they could do to reduce the risk of AI transmission. Both PSAs focused on audiences in the poultry supply chain and encouraged communities to protect themselves from AI by practicing *Aksi 100% Bersih*. In particular, safe practices covered by the PSAs included hand washing with soap and water, and washing things (surfaces, utensils, tools, vehicles, etc.) that have had contact with poultry or poultry parts with a brush, soap, and water. The jingle produced for the campaign served as the hook, tying elements of the campaign together for the viewer. Below is a photograph of a scene being filmed of the *Aksi 100% Bersih* PSA.



TV “built-in” content was incorporated into a popular Indonesian sitcom called *Suami-suami Takut Istri* (Husbands Afraid of their Wives). The AI risk reduction storyline followed members of the poultry supply chain in the community, that practiced *Aksi 100% Bersih* and shared with their neighbors how to protect themselves from AI. The program aired on 26 February, and positive feedback was received from a variety of AI control stakeholders.

Radio. Previous research has shown that radio content, especially talkshows, is an important supporting medium for facilitating dialogue between villagers and their local officials. In addition, local radio delivers messages in a way that is in-line with local

culture and values, and explains risk reduction messages in more detail. Ultimately, this helps to facilitate behavior change.

The messaging for the 2009/2010 CBAIC radio and TV campaigns was mutually reinforcing. To reinforce the *Aksi 100% Bersih* theme in the intensive intervention areas, CBAIC worked with ten pre-selected local radio stations to develop creative radio programs that complement the new TV PSA messages. This was accomplished through a “creative radio program” workshop held by CBAIC back in November 2009. Ten local radio stations were invited to participate based on the compatibility of their geographic coverage and audience profiles with CBAIC coverage and target audience, plus their experience in developing local-level interactive programming.

At the core of the workshop were the CBAIC theme *Aksi 100% Bersih* and the consensus risk reduction audiences and messages. Each station developed a creative program proposal in-line with CBAIC messages and goals. Proposals were submitted detailing a variety of activities including talkshows, interviews, testimonials, and IEC distribution. Every proposed program incorporated the community, poultry chain audiences, and relevant local livestock and health officials, especially participatory disease surveillance and response officers (PDSR) and district health surveillance officers (DSO). CBAIC worked with each station to fine tune each proposal and approved all by the end of November. All ten creative radio programs began broadcasting in mid-December and ran through March 2010.

Community events

At the beginning of the reporting period, CBAIC held a series of planning meetings with the respective district livestock and public health officials of Garut, Tasikmalaya, Ciamis, Bandung, and West Bandung to firm up their support for upcoming community events. Also while in each district, CBAIC held preparatory meetings with the responsible CEFs and village AI teams who will, in turn, raise awareness and invite villagers to attend each event.



Community events were entertaining and educational. They included live music, a fun “safe behaviors” skit with a popular TV celebrity, AI-themed games, and a live action contest where volunteers (like the boy in the yellow shirt, above) were selected from the audience to pantomime a “safe behavior” described by the MCs.

Summary of community events held this period.

Date	Location	Attendance	Remark
21 Feb 2010	Leles subdistrict, Garut	900	Opened by district chief
3 Mar 2010	Cikoneng subdistrict, Ciamis	1000	Opened by district secretary
10 Mar 2010	Manonjaya subdistrict, Tasikmalaya	850	Opened by district chief
14 Mar 2010	Cicalengka subdistrict, Bandung	750	Opened by head of district animal health bureau
30 Mar 2010	Lembang subdistrict, West Bandung	1600	Opened by district chief
	TOTAL ATTENDANCE	5100	

Similar to previous project-developed and sponsored events, these new events focused on a dramatized simulation of safe (risk reducing) behaviors and practices, the star of which was a popular television celebrity. The simulation storyline touched on the different key audiences of the poultry supply chain, focusing on the consensus risk reducing behaviors and practices for each. In particular, use of water, soap, and a brush to thoroughly clean surfaces, equipment, and vehicles, was stressed. Simulations were then followed by question and answer sessions with local health and livestock officials to provide the audience with more detailed information.



Two-story broiler houses are a common site in CBAIC project areas, especially in Tasikmalaya district, like those pictured above. CBAIC community mobilization and private sector partnership programs both worked to empower commercial (Sector 3) poultry farmers to increase their biosecurity to improve disease control, and, specifically, to reduce AI transmission risks.

ELEMENT C

Commercial Poultry Private Sector Partnership

A key element of CBAIC year three activities included development and implementation of a commercial poultry private sector partnership (PSP) program. This program continues in the fourth and final year of CBAIC. The PSP program is a technical assistance activity aimed at helping the Indonesian commercial poultry sector to better use their resources to prevent and control avian influenza (AI) and other poultry diseases. This program will contribute to reducing the risk of pandemic flu developing from H5N1 highly pathogenic avian influenza, a main objective of the USAID AI control program.

PSP program activities focus on western Java Island, specifically West Java province and parts of Banten province, one of the largest concentrations of commercial poultry farms in the country. In addition, nearly thirty percent of the entire country lives in the area, and more than seventy percent of all confirmed human and animal bird flu infections have been reported here.

Year one of the commercial poultry PSP program concluded in September 2009. A separate document details the initial effects of the interventions on the Indonesian commercial poultry sector, and distills lessons learned and their implications for advancing the program during the nine-month CBAIC work extension.

PSP YEAR TWO

CBAIC is continuing its year one partnerships in year two. Through the PSP program, CBAIC continues to provide technical assistance to participating Sector 3 broiler farms contracting with Cheil Jedang, Charoen Pokphand, and Sierad Produce. In addition, CBAIC developed a partnership with JAPFA Comfeed, the second largest industrial poultry firm in Indonesia, to provide biosecurity training and technical assistance to 45 of its Sector 3 contract broiler farms. CBAIC also partnered with two Poultry Shop groups to provide training and assistance to 90 of their contract broiler farms. Lastly in year two, CBAIC worked with an additional five layer farms to improve their biosecurity.

Biosecurity training

During this reporting period, CBAIC conducted biosecurity training workshops for Sector 1 partner technical staff and Sector 3 farm supervisors. A total of 69 technical staff were successfully trained as trainers, and, in turn, with CBAIC assistance and oversight, a select group trained 94 farm supervisors in biosecurity and good management practices which aim to increase disease control and farm revenue. This brings the total number of technical staff and farm supervisors trained in biosecurity by the program to 680.

Monitoring and evaluation

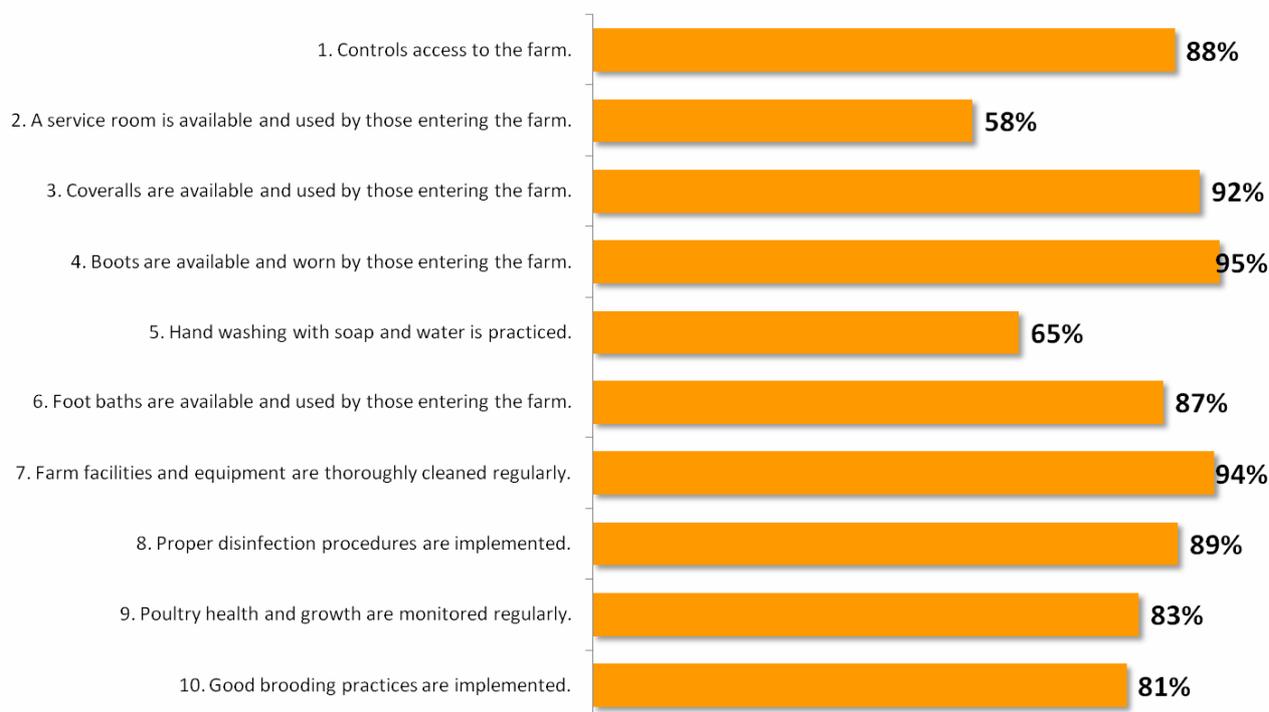
During the period, CBAIC implemented a systematic monitoring plan, agreed to by all Sector I partners last period. Production data was collected from participating broiler farms for more than eight flock cycles, including pre-program cycles and a control group to improve statistical reliability of the data. A short-term technical advisor commenced an impact analysis of the PSP program. During the period, the analyst, Mr. Farid Maruf, collected data from all commercial partners and began his analysis.

Below: Clean, disinfect, and leave empty for at least 24 hours. These biosecurity practices are key to reducing the risk of AI transmission for members of the poultry supply chain that raise or hold poultry. The CBAIC PSP program found through monitoring efforts that the majority of participating Sector 3 broiler farms implemented these steps to help them reduce AI risk.



The impact analysis has synthesized data collected from more than 1000 monitoring visits and interviews. Data was collected on depletion (mortality), feed conversion, productivity, and biosecurity compliance. Of note, initial results have found that three-quarters of the 340 farms participating in the PSP program were implementing at least 8 of the 10 core biosecurity measures and good farm management practices of the program. (See figure on next page.) Interestingly, program farms were found to have better weight gain and lower depletion rates than control group farms, even during rainy season, a time when depletion normally rise. While weight gain is influenced by many factors, going forward (after CBAIC ends), further work may be able to determine an estimate of just how much influence biosecurity measures and good farm management practices can make. Next period, key findings will be reported in detail under separate cover.

Summary of biosecurity compliance by PSP participating farms.



COMMUNICATION SUPPORT

As detailed last period, CBAIC developed two photo-series posters to improve commercial poultry biosecurity practices, specifically for Sector 3 contract farms. Project photographs of the Indonesian context were used in the posters, combined with straightforward instructions on how to reduce the risk of disease by: 1) practicing biosecure farm entry-exit procedures, and 2) safely and effectively burying poultry carcasses. CBAIC worked closely with Sector 3 poultry farmers to ensure the effectiveness of the messages contained in the posters. Revisions were made based on the findings of poster pre-testing; scaled down copies of the final versions of the posters appear below. In addition, the communication work that supports the community mobilization program (e.g. mass media, print materials, etc. – described in the previous section), also supports the PSP program by reinforcing key AI risk reduction messages. Two thousand copies of each poster were produced and distributed; plus, 2000 instructional biosecurity videos for commercial poultry farm workers – produced by the United States Department of Agriculture and dubbed in Indonesian – were copied and distributed.

MONITORING AND EVALUATION

Monitoring of CBAIC initiatives was accomplished through field visits, interviews with staff and contractors, and review of project documents. Data was collected and compiled into the table in APPENDIX A, documenting progress towards project performance indicators. In addition, an evaluation of key findings of the 2009 knowledge, attitudes, and practices (KAP) survey, was reported under separate cover. Results of market monitoring by CBAIC Senior Technical Advisor Dr. Jonathan Bell are detailed later in this section.

KNOWLEDGE, ATTITUDES, AND PRACTICES

In 2009, CBAIC conducted a KAP survey in western Java to evaluate the reach and effectiveness of year three project initiatives. The survey included qualitative and quantitative investigations. Also, in an effort to address issues of comparability with previous survey results (2008), the 2009 survey included questions addressing items from the previous surveys. The focus of the 2009 survey was to a) assess USAID AI control program impact in western Java, b) determine reach and impact of CBAIC year three initiatives, and c) create a strong baseline for future surveys.

The qualitative portion of the KAP survey was conducted through focus group discussions (FGD) and in-depth interviews (IDIs). Initial analysis of the qualitative data found that, generally, CBAIC messages of personal hygiene and environmental sanitation (“actions for 100% cleanliness”) to reduce AI risks were well received by key audiences. Of note, television was the most often identified source of avian influenza information (reported by more than 90% of respondents). CBAIC messaging with greatest recall included *Bury* dead chickens, and *Report* cases of sudden death in poultry to local officials. Interestingly, *Burn and Bury*, a message delivered in the 2008 CBAIC mass media campaign, was also readily recalled by respondents of the 2009 KAP survey.

Results of an in-depth analysis of the 2009 KAP data were presented by JHU-CCP in January 2010, and were reported separately. Briefly, strong knowledge gains were observed, particularly in the areas of: AI and its symptoms in animals and humans, modes of disease transmission, and AI risk reduction behaviors and practices. These results indicate that integrated program strategies – such as that designed and implemented by CBAIC – are effective at reducing AI risk.

Going forward, it will be important to take the poultry supply chain approach “to the next level.” This could be accomplished by expanding the role of village AI teams, biosecurity-trained members of the commercial poultry sector, and village health cadres trained in AI and AI risk reduction, to increase demand for health and sanitation improvements along the supply chain, to further reduce AI risks for the benefit of producers and consumers alike.

MARKET MONITORING

Fifteen markets, including all the markets that were new to the fourth year of CBAIC were subject to a technical evaluation for avian influenza transmission risks. The results of these evaluations are given below, by district, from west to east across West Java province. As mentioned previously, market monitoring was conducted by CBAIC Senior Technical Advisor Dr. Jonathan Bell. Notes from his monitoring visits are summarized below. A more detailed narrative with additional photographs will be produced next period under separate cover.

Ciamis district

Manis. This is a large well organized, tidy and clean market which was established 18 years ago. The walkways are concrete and are both clean and free of garbage. The poultry stalls are mixed up with the other stalls, and the market management is interested in making a separate poultry area. The broiler chickens are mainly sold already slaughtered, but there are a few stalls, which have live broilers. One excellent feature is that there is a monthly day when the market is empty of poultry and the poultry vending areas are cleaned and disinfected. The management has promoted healthy and clean behavior under the *Aksi 100% Bersih* slogan and has already noted that behavior has changed. They say that detergent is used for cleaning. The kiosks are indeed very clean. The management is well aware of the competition from supermarket type marketing and is working hard to keep the market healthy and clean. Some of the broiler meat vendors have certification regarding the hygiene in their stalls. The management said that liquid waste from the poultry vending stalls is put into containers and transported from the market. The management is concerned that some of the roofing need renovation. The office is very clean and tidy in relation to those in other markets. The garbage area is clean and well managed.

There are sales of live *ayam kampung* (Sector 4 – backyard poultry) outside the market between 5 am and 7 am. They are housed in new metal cages funded through the CBAIC year three program, with pull out trays at the bottom that can be cleaned.

Conclusion

What is really striking from is the huge difference between the best market, Manis, and the worst one, in neighboring Ciamis, Manonjaya (see next page). Although they are less than 15 km apart from each other, and have essentially the same resources, it would be difficult to imagine a greater difference in organization, cleanliness and tidiness. This suggests that the possibility that study tours to well managed neighboring markets might be an effective aid to improvement.

Tasikmalaya district

Rajapolah. This market is served by three slaughterhouses, situated about one kilometer away from the market. It does not usually deal in *ayam kampung* – only on festival days such as Idul Fitri.

The concerns of the market management are garbage disposal, particularly the track leading to the garbage, and drainage. In general, the market is relatively clean although there is garbage on the ground and in drains. Ceramic tiles have been installed in all but two of the 27 meat vendors' kiosks as part of the CBAIC year three program, as well as water dispensers for hand washing.

The slaughterhouses process between about 60 and 300 chickens per day per location. In the largest one, the walls are black with dried blood, and there are feathers stuck to the wall. Wastewater goes to a pool with catfish, and from the pool it goes to the river. There is a continuous supply of spring fed water. The wastewater from one of the smaller slaughterhouses was transmitted to the river in a pipe, which at least avoided contamination of the immediate neighborhood. The third slaughterhouse is situated in a relatively isolated spot between the road and the railway line, which is good. Wastewater also leads to a pool with catfish.

Karangmekar. This small market is due to be relocated, so the problem of providing a hygienic environment for poultry meat sales, which had previously been done in the street, was solved by providing carts with tiled ceramic surfaces. The main concern of the market management is garbage management. At present, it is disposed of away from the market in an isolated rural spot, so in fact it does not pose a significant health hazard, even though it contains feathers. There is no recycling system in place.

The market is supplied by a slaughterhouse situated in a residential area from which wastewater is directed to a pond containing catfish. Water then flows out of the pond into a small canal. The average number of birds processed is 30 per day, with a maximum of 50. There is also a specialist duck producer nearby who markets the duck meat in Bandung. Waste from the slaughtering is also directed to a pond containing catfish.

Given the relatively isolated rural location of this market, the risk for bird flu is low. A local nurse reported that there are local cases of tuberculosis, malaria, and chikungunya, but no human cases of avian influenza to date.

Manonjaya. This is a large, disorganized and generally dirty market. Garbage is disposed of in a location inside the market amongst stalls, and has to be carried out to the garbage truck once a week one basket at a time. Some of the 21 poultry meat vendors have ceramic tiled surfaces from the CBAIC year three program, and two have wash basins supplied by the local government. Only slaughtered chickens are sold inside the market. *Ayam kampung* are sold alive outside the market.

The market is served by six slaughterhouses. There is one large one which is clean and well separated from residential houses and which slaughters 500 to 1000 birds per day. Waste goes to a pool containing catfish, and the water exiting the pool is filtered before it is piped to a canal. Another large slaughterhouse has a sign from the CBAIC PSP program in place. This is supplied with poultry from Tasikmalaya district. A third one visited was situated in fields in a good rural location. However, the actual slaughtering takes place in a room at the back of a house that also doubles a kitchen. Although there is some risk here, at least the room is clean. It is supplied from Ciamis, processing about 25 kg per day and purchasing four days stock at a time.

The first priority of the market management is to move the garbage location – not surprisingly since the smell of the garbage pervades the office. They are also concerned about the roofing, water sources and the drainage channels. There are sales of *ayam kampung* by ten traders outside the market once a week on Wednesdays between 6 am and 10 am. There is a plan to relocate the market but nothing is known about when. When it rains there are floods in the market due to its low position in relation to the ground outside.

A poultry supplies shop just outside the market sells Hitchener B1 vaccine against Newcastle disease.

Although this market is dirty and disorganized, the risk of avian influenza is relatively low since broiler birds are not slaughtered within the market, and the slaughterhouses are relatively well separated from residential areas.

Conclusion

The practice of feeding waste from poultry slaughter to catfish is widespread in Tasikmalaya. This does not represent a very high risk – provided the fish are cooked well, and could mitigate a little distribution of the virus in the neighborhood.

Garut district

Kadungora. This is a government market with 373 active kiosks.

According to the management, the priority problems are:

- 1) Water resources
- 2) The need to change wood surfaces to ceramic
- 3) Garbage disposal (at present they need to borrow a truck from Leles)

Slaughtered broilers are sold in the market, either whole or already cut up. They are normally slaughtered in separate small slaughterhouses near the market, which typically slaughter 150-200 birds per day. Only occasional slaughtering is done in the market.

One vendor of chicken meat purchased his own ceramic tiles.

The garbage disposal system is very well organized. The garbage is sorted into different types of recyclable garbage, and the organic vegetable waste is piled together. It was reported that poultry waste, such as feathers, is put into bags and burnt. Dead cats are buried. This system of garbage disposal could serve as a model for other markets.

Leles. This is another government market; already slaughtered broilers are sold here. There is a small slaughterhouse at the back of the market, which is relatively clean compared to others with only a few feathers.

Sukaratu. This small market in Melangong subdistrict is under the administration of the town. It has eleven broiler meat vendors, and no live poultry sales. The chickens come from as far as Tasikmalaya, and are home slaughtered in units processing as few as twenty chickens a day. The vendors are not interested in grouping their stalls in one place, due to commercial reasons.

There is flooding after heavy rain, and no source of clean water, so drainage and water supply are two facilities that could be addressed to improve the general hygiene of the market.

Conclusion

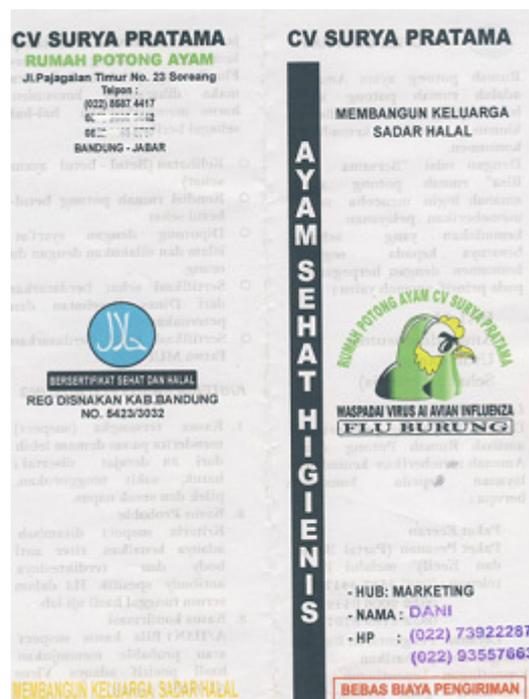
All three markets are of the previously identified category without large populations of live poultry and large slaughterhouses, so they are of relatively low risk for the transmission of avian influenza virus. The garbage processing system in Kadungora is something that could with advantage be emulated elsewhere.

Bandung district

Soreang. This market has two vendors of *ayam kampung*, one of which sells 100 – 200 live birds per day. About 70% are taken back to households, whereas the rest are purchased by traders who sell them in secondary markets. The birds are stored in a big bamboo cage and spend the night there. The premises are rarely empty of poultry. They are delivered in smaller bamboo cages on motorcycles. Above the larger shop is a big UNICEF ‘hand’ poster listing some precautions to take including ‘avoiding contact between people and poultry’ contradicted by the people of all ages gathered round the baskets containing the chickens. Ducks and chickens are kept in close proximity, in the smaller shop in the same basket. The baskets are said to be cleaned once or twice a week – in one shop with detergent and in one without. the chicken droppings are used for fertilizer.

The slaughterhouses for broilers are located just outside the market. One was in the CBAIC year three intensive program. This slaughterhouse prides itself on its halal and hygienic products, as advertised in the brochure at right.

In stark contrast to many other small slaughterhouses, it is clean and well organized. It sells chickens both to retailers and end customers. The steps required to prepare a chicken carcass, namely 1. Halal slaughtering 2. Retention in a barrel until dead 3. Immersion in hot water 4. Defeathering in a defeathering machine with two buckets of hot water 5. Removal of innards, are carried out in a orderly way in a clean environment.





However, the wastewater from the defeathering machines runs directly into the adjacent canal, shown in the photograph at left. Feathers are stuck onto the bamboo walkway from where people wash their clothes. This is clearly a risk for the transmission of AI virus, given that it is known that it is present at high levels in the feather follicles and that the number of cases peaks in the wet

season. It is difficult to envisage a easily applied control measure to counteract this risk. Adding disinfectant to the wastewater would be an environmental hazard, as well as being expensive. Filtering the feathers would do nothing to stop the transmission of virus. Directing the wastewater into a septic tank would be a large infrastructure project; a feasibility study and an environmental impact assessment would be needed. At the rate of two buckets per chicken, thousands of liters of water per day are discarded.

West Bandung district

Kertamulya. This is a very busy market. there are five separate chicken slaughterhouses within the market, with throughputs in the range of 200 to 300 birds per day per unit. They are very dirty, with feathers everywhere in some, including the drain. Two of them are combined with sales points. There is a big canal at the back of the market through which waste is eventually channeled.

The concerns of the market management are that clean behavior and culture is not yet instilled in the people working in the market.

Tanimulya. This is small private market with six broiler met vendors, and two chicken slaughter units. It is planned to move the slaughter units to the back of the market.

Jambudipa. This market has concrete floors and is relatively clean. There is a slaughterhouse outside the market and a sales point with slaughtering facilities incorporated. About 60-70 chickens are slaughtered per day at around 4 am. The cages are cleaned every week or two weeks, with detergent, it was said. It was also reported that the local livestock office sprayed the market once a month. The drainage is underground and the water eventually goes to Padalarang.

According to the management, there are no special problems apart from handling rubbish, which tends to be thrown into the drainage channels.

Batujajar. This market was selected for intervention in CBAIC year three. Three interventions were made: a new rubbish collection place, a water tank, and a septic

tank in which waste from the slaughterhouse was collected. This slaughterhouse processed 500 chickens per day. This is an interesting prototype of an intervention designed to prevent slaughter waste going into public canals.

Conclusion

Of these markets, Kertamulya is one where the most resources could be usefully invested. It has unclean slaughter facilities without precautions being taken. There could be some investment in the infrastructure to make them easily cleanable, coupled with adoption of changes in behavior regarding cleaning and the use of detergent.

Cimahi municipality

Antri Baru. This is a large, privately managed market with a through put of 10,000 broilers a day slaughtered in the early morning in eight slaughtering units. *Ayam kampung* are kept live in stalls selling already slaughtered broilers and are slaughtered individually there.

The following risk factors were observed here:

- Dirty cages, both bamboo and plastic, caked with feathers,
- Feathers sold for badminton shuttlecocks (one human AI case in Indonesia was a shuttlecock maker)
- Feathers cleaned up with water only – no detergent
- No empty period for the market after cleaning and disinfection
- Feathers in water channels
- Stagnant water containing a high concentration of feathers
- The market as a whole was very dirty

Through CBAIC, the following infrastructure had been installed:

- a new water tank
- one poultry slaughtering unit with ceramic tiles

It is unlikely that these two interventions alone would have been sufficient to have an impact on the risk of avian influenza transmission. The major risk factors outlined above remain, and until behavioral changes are implemented such as the use of detergent for washing, disposal of feathers other than in wastewater channels, and a empty period after washing and disinfection, the risks will remain. The basic hygiene problems in this market have not yet been overcome.

The CEFs involved with this market certainly understand the risk factors, but the underlying problem is the difficulty involved in persuading the people involved in managing a privately owned market to change behavior in it. It is not for want of either understanding or effort on the part of the CEFs.

Atas Baru. This market is to be included in the forthcoming program. It is a government market. It presents a generally clean and tidy impression, in contrast to Antri Baru. Although the broilers are slaughtered in the individual kiosks selling the meat, they appear clean and tidy. Some stalls have government health certificates. It was agreed with the CEFs that interventions here would most usefully be centered on behavioral changes such as having an empty period after cleaning and disinfection.

Depok municipality

Pucung. This relatively small market has sales of *ayam kampung* on its edge, and eight kiosks selling broilers. In each of the kiosks, the chickens are kept alive, slaughtered, and sold. The majority of the stalls have new ceramic tiles, and were very clean. The broilers are stored the type of plastic cages that are used to transport them. The *ayam kampung* are sold alive and could be a source of transmission of the virus. There is a slaughterhouse which is due to be renovated next to the *ayam kampung* sale point. The market itself and the walkways are generally clean; the infrastructure is relatively new. Some slaughtering of poultry takes place on the ground next to the garbage disposal point. Feathers are sold to fish producers. At present there is not a period when the market is systematically empty of live poultry.

The priorities for the market management are improving the garbage disposal facilities to keep the garbage in place, improving the drainage, and establishing a central facility for poultry slaughter.

This market has a relatively low throughput of poultry, so the threat from it is not very high. The AI transmission risks are primarily from sales of live *ayam kampung*, and distribution of feathers. Instigation of an empty period after cleaning and disinfection would help reduce risks.

Conclusion

This market has a relatively low throughput of poultry, so the threat from it is not very high. The AI transmission risks are primarily from sales of live *ayam kampung*, and distribution of feathers. Instigation of an empty period after cleaning and disinfection would help reduce risks.

OTHER ACTIVITIES

TECHNICAL COOPERATION

On 12 January, a permanent bird flu exhibition was opened at the Center for Science and Technology (Pusat Paragaan Iptek) located in the exhibition ground of Taman Mini Indonesia Indah, which is a large exhibition park located on the outskirts of Jakarta. It showcases the cultures of the different regions of Indonesia, but also has scientific exhibitions. It is frequently visited by groups of schoolchildren during the week, and by families on the weekends. The exhibition uses a variety of means to convey information about avian influenza. There are posters, full-scale models of family poultry, an interactive model of a virus particle, computer quizzes, and a large board game. A significant part of the technical and communication material used in the exhibition



came from CBAIC. The posters illustrating the disease used both illustrations and text taken from the CBAIC AI control guidebook (referred to internally as “the blue book” and, its second edition as “the green book”, and the computer quizzes were also based on material supplied by CBAIC.

The exhibition was created by the Center for Science and Technology with support from the German Agency for Technical Cooperation (GTZ) under its *Bird Flu Awareness Project in Primary Schools* project.

APPENDIX A. Performance indicator progress: January – March 2010 (page 1 of 4)

No.	INDICATOR	YEAR 4 Target	Oct-Dec 2009	Jan-Mar 2010	YEAR 4 Total	% of Target Achieved	
			Total	Total			
Result Area A: NATIONAL COORDINATION & COLLABORATION [Goal: Improved national coordination and capacity]							
1	Number of forums, and conferences where AI best practices and lessons learned related to AI are shared.	2	3	3	6	300.0	
2	Number of USAID or CBAIC-led coordination meetings in the past three months.	6	29	4	33	550.0	
3	Status of country capacity for avian influenza communications during the past three month. (AIMEBA)	3	N/A	3	3	100.0	
4	Status of country capacity for pandemic influenza communications during the past three month. (AIMEBA)	5	N/A	3	3	60.0	
Result Area B: ADVOCACY & COMMITMENT [Goal: Improved commitment, coordination, and policy support at all levels]							
5	Number of national government consultation meetings.	3	5	-	5	166.7	
6	Number of local government consultation meeting.	7	6	1	7	100.0	
7	CBAIC interventions benefiting from government cost-sharing.	13	N/A	19	19	146.2	
8	Number of communication materials/resources provided to KOMNAS and other government recipients.	41,000	45,270	23,900	69,170	168.7	
9	Total number of communication materials produced and disseminated (distributed or aired).	TOTAL (Produced)	150,000	352,275	35,909	388,184	258.8
		TOTAL (Distributed)	150,000	232,045	207,929	439,974	293.3
	9.a. Trader and Transporter (flyer)	Produced	-	-	-	-	
		Distributed	-	7,030	-	7,030	
	9.b. Trader and Transporter (poster)	Produced	30,000	30,000	-	30,000	100.0
		Distributed	30,000	13,600	16,300	29,900	99.7
	9.c. Sector 3 Poultry Producer (flyer)	Produced	-	-	-	-	
		Distributed	-	7,030	-	7,030	
	9.d. Sector 3 Poultry Producer (poster)	Produced	30,000	30,000	-	30,000	100.0
		Distributed	30,000	13,520	16,300	29,820	99.4
	9.e. Poultry Slaughterer (flyer)	Produced	-	-	-	-	
		Distributed	-	7,030	-	7,030	
	9.f. Poultry Slaughterer (poster)	Produced	30,000	30,000	-	30,000	100.0
		Distributed	30,000	14,660	15,300	29,960	99.9
	9.g. Backyard (sector 4) Poultry Producer (flyer)	Produced	-	-	-	-	
		Distributed	-	7,030	-	7,030	
	9.h. Backyard (sector 4) Poultry Producer (banner)	Produced	10,500	10,500	-	10,500	100.0
		Distributed	10,500	10,091	370	10,461	99.6
	9.i. Backyard (sector 4) Poultry Producer (poster)	Produced	63,000	63,000	-	63,000	100.0
		Distributed	63,000	20,600	42,300	62,900	99.8
	9.j. Duck Producer (flyer)	Produced	-	-	-	-	
		Distributed	-	7,030	-	7,030	
	9.k. Duck Producer (poster)	Produced	20,500	20,500	-	20,500	100.0
		Distributed	20,500	11,000	9,400	20,400	99.5
	9.l. Consumers and Customer (flyer)	Produced	-	-	-	-	
		Distributed	-	7,030	-	7,030	
	9.m. Consumers and Customer (banner)	Produced	12,000	12,000	-	12,000	100.0
		Distributed	12,000	12,841	-	12,841	107.0
	9.n. Consumers and Customer (poster)	Produced	63,500	63,500	-	63,500	100.0
		Distributed	63,500	31,920	31,400	63,320	99.7

(page 2 of 4)

No.	INDICATOR	YEAR 4 Target	Oct-Dec 2009	Jan-Mar 2010	YEAR 4 Total	% of Target Achieved
			Total	Total		
	9.o. Live Bird Vendor (flyer)	Produced	-	-	-	
		Distributed	-	7,030	7,030	
	9.p. Live Bird Vendor (banner)	Produced	10,500	10,500	10,500	100.0
		Distributed	10,500	10,091	10,461	99.6
	9.q. Live Bird Vendor (poster)	Produced	35,500	35,500	35,500	100.0
		Distributed	35,500	3,600	35,400	99.7
	9.r. Market Manager (Poster)	Produced	20,500	20,500	20,500	100.0
		Distributed	20,500	12,160	20,360	99.3
	9.s. Time Planner 2010	Produced	4,200	4,200	4,200	100.0
		Distributed	4,200	5,040	5,040	120.0
	9.t. AI Booklet (new)	Produced	15,000	15,000	15,000	100.0
		Distributed	15,000	16,580	16,580	110.5
	9.u. Sector 3 Poster for PSP	Produced	1,000	1,000	1,000	100.0
		Distributed	1,000	900	900	90.0
	9.v. Biosecurity training video	Produced	2,325	325	2,325	100.0
		Distributed	2,325	300	2,300	98.9
	9.w. Stop Sign	Produced	150	150	150	100.0
		Distributed	150	150	150	100.0
	9.x. Legacy Document-English version	Produced	2,100	2,100	2,100	100.0
		Distributed	2,100	2,000	2,000	95.2
	9.y. Legacy Document-Indonesia version	Produced	3,500	3,500	3,500	100.0
		Distributed	3,500	3,450	3,450	98.6
	9. z. Desa Siaga TOT manuals	Produced	2,650	-	2,650	100.0
		Distributed	2,650	83	3,633	137.1
	9.a.a. Desa Siaga village training manuals	Produced	9,800	-	9,800	100.0
		Distributed	9,800	83	9,783	99.8
	9.a.b. Community empowerment facilitator training manuals	Produced	-	-	-	
		Distributed	-	83	83	
	9. a.c. Community Mobilization training manuals	Produced	-	-	-	
		Distributed	-	83	83	
	9. a.d. Pouch	Produced	230	-	230	100.0
		Distributed	230	-	230	100.0
	9. a.e. Folder	Produced	273	-	273	100.0
		Distributed	273	-	273	100.0
	9. a.f. Visual aid/Fact Sheet	Produced	130	-	130	100.0
		Distributed	130	-	130	100.0
	9. a.g. Cue Card	Produced	200	-	200	100.0
		Distributed	200	-	200	100.0
	9. a.h. Communication VCD/DVD	Produced	3,846	-	3,846	100.0
		Distributed	3,846	-	3,846	100.0
	9. a.i. Audio Visual Compilation	Produced	3,720	-	3,720	100.0

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No.	INDICATOR		YEAR 4	Oct-Dec 2009	Jan-Mar 2010	YEAR 4 Total	% of Target Achieved
			Target	Total	Total		
		Distributed	3,720	-	3,720	3,720	100.0
	9. a.j. Desa Siaga Flip Chart	Produced	550	-	550	550	100.0
		Distributed	550	-	540	540	98.2
	9. a.k. Evolution of communication	Produced	2,500	-	2,500	2,500	100.0
		Distributed	2,500	-	2,000	2,000	80.0
	9. a.l. Pin "Aksi 100% Bersih"	Produced	1,200	-	1,200	1,200	100.0
		Distributed	1,200	-	1,200	1,200	100.0
	9. a.m. Medal "Aksi 100% Bersih"	Produced	60	-	60	60	100.0
		Distributed	60	-	60	60	100.0
	9. a.n. T-Shirt "Aksi 100% Bersih"	Produced	550	-	550	550	100.0
		Distributed	550	-	560	560	101.8
	9. a.o. Goody Bag (bag, brush, soap, apron)	Produced	100	-	100	100	100.0
		Distributed	100	-	100	100	100.0
	9. a.p. Cleaning Kit (plastic, brush, soap, set of 8 audience flyer)	Produced	3,750	-	3,750	3,750	100.0
		Distributed	3,750	-	3,750	3,750	100.0
	9. a.q. Biosecurity entry-exit poster	Produced	2,000	-	2,000	2,000	100.0
		Distributed	2,000	-	2,000	2,000	100.0
	9. a.r. Biosecurity carcass disposal poster	Produced	2,000	-	2,000	2,000	100.0
		Distributed	2,000	-	2,000	2,000	100.0
	9. a.s. Baliho	Produced	150	-	150	150	100.0
		Distributed	150	-	150	150	100.0
	9. a.t. PSP flyer-English version	Produced	100	-	100	100	100.0
		Distributed	100	-	90	90	90.0
	9. a.t. PSP flyer-Indonesia version	Produced	100	-	100	100	100.0
		Distributed	100	-	90	90	90.0
10	Percent of community mobilization villages where IEC materials have been distributed.		100	53	47	100	100.0
11	Number of people reached through CBAIC mass media campaign.	Total reach	100,000,000	N/A	169,192,696	169,192,696	169.2
	11.a. TV (AC Nielsen estimate)				159,000,000	159,000,000	
	11.b. Radio on air				10,191,396	10,191,396	
	11.c. Radio off air				1,300	1,300	

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No.	INDICATOR	YEAR 4 Target	Oct-Dec 2009	Jan-Mar 2010	YEAR 4 Total	% of Target Achieved
			Total	Total		
Result Area C: COMMERCIAL RISK REDUCTION PRACTICES & PROCEDURES [Goal: Improved commercial standards, practices, and procedures for transmission risk-reduction]						
12	Number of layer farm participating in the Private Sector Partnership (PSP) program	5	5	-	5	100.0
13	Number of sector-1 contracted sector 3 broiler farms participating in the PSP program	45	45	-	45	100.0
14	Number of Poultry Shop-contracted sector 3 broiler farms participating in the PSP program	90	45	45	90	100.0
15	Number of subdistricts reached by market interventions (including those maintained from year three and newly reached during year four)	23	23	2	25	108.7
16	Proportion of vendors & slaughterers in mobilized markets practicing biosecurity measures (one or more) adopted from Risk Reduction Packages .	25	N/A	N/A	N/A	KAP
17	Proportion of mobilized Sector 3 poultry producers practicing biosecurity measure (one or more).	50	N/A	N/A	N/A	KAP
18	Proportion of mobilized collectors & traders practicing biosecurity measures (one or more) adopted from Risk Reduction Packages.	25	N/A	N/A	N/A	KAP
19	Proportion of individuals in the poultry supply and distribution chain who state that they are more aware of risk reduction behaviors to decrease the risk of risk of H5N1 transmission to their poultry.	80	N/A	N/A	N/A	KAP
20	Proportion of individuals in the poultry supply and distribution chain that report practicing (one or more) behaviors to decrease the risk of H5N1 transmission to their poultry. (Modified from GME 6.1.100)	75	N/A	N/A	N/A	KAP
Result Area D: COMMUNITY & HOUSEHOLD RISK REDUCTION PRACTICES [Goal: Improved participation in, support for, and implementation of practices and procedures for risk reduction]						
21	Number of avian influenza teams maintained from year three, plus those developed during year four.	120	121	-	121	100.8
22	Number of Risk Reduction Packages selected by communities during year four.	400	274	99	373	93.3
23	Number of district and subdistrict <i>Desa Siaga</i> master trainers and facilitators trained in AI risk reduction behaviors and messages during year four	1,500	N/A	3,511	3,511	234.1
	23.a. Existing <i>Desa Siaga</i> master trainers and facilitators receiving refresher training.			252	252	
	23.b. New <i>Desa Siaga</i> master trainers and facilitators trained.			3,259	3,259	
24	Number of <i>Desa Siaga</i> incorporating AI risk reduction behaviors and messages during year four.	400	N/A	1,158	1,158	289.5
25	Number of people reached directly by community events during year four.	2,100	N/A	5,100	5,100	242.9
26	Total number of people trained in surveillance for H5N1 infection over the past three months. (AIMEBA)	900	990	291	1,281	142.3
27	Total number of people trained in outbreak containment for poultry over the past three months. (AIMEBA)	900	990	291	1,281	142.3
28	Total number of people trained in surveillance for poultry and wild bird outbreaks over the past three months. (AIMEBA)	900	990	291	1,281	142.3
29	Number of people trained in highly pathogenic avian influenza behavior change communication. (GME 6.6.100)	900	812	214	1,026	114.0
30	Proportion of people interviewed who state that they are more aware of risk reduction practices that can protect themselves and their families from transmission of H5N1.	80	N/A	N/A	N/A	KAP
31	Proportion of people interviewed who state that they practice behaviors (one or more) adopted from Risk Reduction Packages to protect themselves and their families from transmission of H5N1 virus. (Modified from GME 6.1.200)	75	N/A	N/A	N/A	KAP