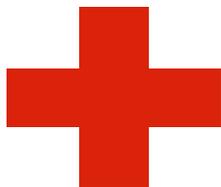


Final Report

Red Cross Avian Influenza Preparedness Project

April 1, 2006 – December 31, 2006

OFDA Agreement No. DFD-G-00-06-00096-00



American National Red Cross
International Services Department, Asia Region

In partnership with the
Cambodian Red Cross
and
**International Federation of
the Red Cross and Red Crescent Societies**

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I. Executive Summary

In response to the continued threat of avian influenza outbreaks in southeast Asia, the American National Red Cross (AmCross) in partnership with the Cambodian Red Cross (CRC) and the International Federation of Red Cross and Red Crescent Societies (Federation) implemented an avian influenza (H5N1) preparedness project funded by the United States Agency for International Development, Office of Foreign Disaster Assistance (OFDA). The project timeframe was from April 1, 2006 through December 31, 2006 and had a total monetary value of \$55,000.

The **expected results** of the project were:

1. Development of standard health messages and curricula on preventing the transmission of avian influenza that will be used to launch a nationwide public health campaign in Cambodia;
2. Strengthened existing capacities of the Red Cross as having an important role in community mobilization and health education during national crisis;
3. Red Cross actively involved in future important health conferences and campaigns;
4. Increased visibility of the Red Cross as a key player in the fight against avian influenza and build the Red Cross' stature and name among major national health institutions and organizations.

II. Background

The H5N1 outbreak poses a significant public health threat in Asia. The World Health Organization (WHO) uses a series of six phases for pandemic alert; the alert level is currently at phase three.

With more than 30 countries in the world now reporting the H5N1 virus in wild and domestic poultry, there is an ever increasing risk that the virus could mutate and create a new human strain of pandemic influenza. The H5N1 virus was first confirmed in Cambodian chickens in January 2004. Since then, Cambodia has reported the loss of more than 40,000 poultry as well as six human fatalities.

The nature of a flu pandemic will require public health action in a short period of time of unprecedented scale, for which Cambodia is currently ill equipped. Factors such as poor road infrastructure, low coverage rates for mass media and other mass communication outlets, low literacy rates, and weak local and national public health services will hinder governmental and NGO actions to provide mass education campaigns, the key element in successful early recognition and containment of the epidemic. If a generalized epidemic occurs in Cambodia, all these factors will reduce opportunities to contain the localized epidemic and significantly aggravate the potential impact of this public health emergency on the population of the country, notably on the most vulnerable.

AmCross, the Federation, and CRC with a network of over 6,000 volunteers throughout Cambodia's 24 provinces can play a significant role in disseminating prevention and preparedness information related to avian influenza to the population.

III. Project Overview & Areas of Activity

The goal of the project was *to promote much needed public awareness about the prevention and transmission of avian influenza, and reduce the threat posed by the disease to the communities*. Specifically, the achievement of the project goal was supported by the following two objectives:

Objective 1: Host a national-level Red Cross health workshop/conference for the development of standard avian influenza prevention and health messages. The purpose of the workshop was to create a forum for major stakeholders to come together to discuss and share standard health information messages and curricula about the disease that can be disseminated nationwide to the public. Upon conclusion of the workshop, the representatives and leadership from the Cambodia Red Cross branches who participated will function as focal points for applying the knowledge and tools disseminated during the meeting, for public education at their local provincial, district, and village levels.

Objective 2: Disseminate avian influenza prevention and health messages. Existing avian influenza Information, Education and Communications (IEC) materials designed, developed and produced by UNICEF and the Academy for Educational Development (AED) would be used by the Red Cross' network of 24 branches throughout Cambodia to increase awareness amongst the most rural and vulnerable communities during public awareness campaigns.

IV. Total Number of Targeted and Reached Beneficiaries by Objective

The table below summarizes the targets and achievements for each project objective.

Table 1: Project Objectives, Targets, and Achievement:

| Objective | No. of Beneficiaries TARGETED | No. of Beneficiaries REACHED | Achievement of Target |
|--|-------------------------------|--|-----------------------|
| 1. Host a national-level Red Cross health workshop/conference for the development of standard avian influenza and health messages. | 75 participants | 74 participants including 48 CRC provincial staff (Annex 1 for participant list) | 99% |
| 2. Disseminate avian influenza prevention and health messages. | 24 provinces | 24 provinces | 100% |
| 2a. TOT training for 15 CRC branch representatives | 30 representatives | 30 representatives | 100% |
| 2B. Two-day Training for 450 CRC volunteers from 15 provinces | 450 CRC volunteers | 450 CRC volunteers | 100% |
| 2C. Campaign in 24 Provinces & Districts (each province received 2,208 posters sheets and 1,000 pamphlets for distribution) | 108,000 beneficiaries● | 151,934 beneficiaries○ | 141% |

●Each volunteer (720 volunteers) visited 30 households during the campaign with an estimated household size of 5 members.

○Refer to Annex 3 for a list of beneficiaries per province.

V. Results Assessments and Surveillance Data

Ongoing project monitoring was undertaken by AmCross, CRC, and the Federation. *(The reports concerning the workshop and training in Phnom Penh are included as Annexes 1 & 2.)*

Program and financial monitoring forms were developed during the training of Red Cross staff and distributed to all 24 CRC branches. At the CRC branch or provincial level, the core CRC AI branch trainers educated their Red Cross volunteers on proper data collection techniques utilizing the developed monitoring forms. After the completion of the campaign, branch staff were responsible for gathering, checking and compiling the data received from the volunteer into a report that was sent to the CRC AI manager in Phnom Penh. *(Refer to Annex 3 for the list of beneficiaries by province).*

The CRC AI project manager visited three provinces (Kampong Chhnang, Pursat and Battambang) in late November and early December to observe the CRC volunteer training.

Several observations were made:

- Strong support was exhibited by the Red Cross branch committees as well from relevant government departments;
- The CRC volunteers were enthusiastic during the AI training course;
- The facilitators were experienced and provided clear AI prevention messages to the CRC volunteers;
- Pre and post test training results demonstrated the increased knowledge and grasp of the key messages by the volunteers

In early December, the CRC Health M&E coordinator visited two provinces (Kandal and Takeo) to monitor the community-based awareness campaigns. She observed well-organized AI campaigns that involved the participation of the local authorities and Red Cross Branch Committees. More importantly, she found that the majority of the CRC volunteers she spoke with were able to clearly communicate the four key messages of AI prevention to the beneficiaries.



Avian influenza public campaign at Takeo province conducted by CRC volunteers



CRC volunteers disseminated household by household at Kampong Speu province

VI. Successes Achieved, Constraints Encountered, and Adjustments Made

The quantitative evaluation summarized above evidences the overall success of the project. Successes achieved, constraints encountered, and adjustments made are detailed below by objective.

Objective 1: Host a national-level Red Cross health workshop/conference for the development of standard avian influenza and health messages.

Successes Achieved

On August 24-25, CRC with support from AmCross and the Federation hosted the “Red Cross Workshop on Avian influenza Preparedness and Response” in Phnom Penh. The event was attended by 48 CRC leaders from Cambodia’s 24 provinces as well as staff from the national headquarters. Also in attendance were representatives from the Ministry of Health (MoH), Ministry of Agriculture, National Committee for Disaster Management (NCDM), USAID, WHO, UNICEF, other Red Cross Movement organizations, and international NGOs. (*Refer to Annex 1 for the detailed report that includes a list of the workshop participants.*)

Representatives from various government ministries, UN agencies, the Federation, and the CRC gave presentations during the workshop. The presentations were followed by break-out sessions in which the CRC participants developed a standardized draft workplan to prepare and respond to the threat of AI in their respective provinces.

In November 2006, NCDM and the MoH formed a Working Group for National Pandemic Planning which is supported by representatives from the UN (WHO & UNDP). At present the only other members of this working group are the Federation and Cambodian Red Cross.

Constraints Encountered and Adjustments Made

- The workshop was originally scheduled in June but was delayed to accommodate CRC planning needs, chiefly the national society’s 4th General Assembly held in the beginning of August.
- Another constraint was the time spent on discussion between CRC and American Red Cross revolving around contractual issues in the project agreement. These discussions, while necessary, caused delays in activity implementation.

Objective #2: Disseminate avian influenza prevention and health messages.

Successes Achieved

Prior to the initiation of this project, both UNICEF and AED had designed, tested, developed and produced IEC materials on avian influenza. AmCross and CRC met with representatives from each organization to determine which materials would be most appropriate for the target communities.

Materials obtained from the AED were printed on a large scale. In addition, UNICEF donated 29,000 posters and 2,400 pamphlets resulting in a significant cost savings for the project. All IEC materials were used by the Red Cross' network of 24 branches throughout Cambodia to disseminate avian influenza prevention messages to many of the most rural, vulnerable communities.

With the savings from the production of the IEC materials, AmCross requested approval from OFDA to re-program project funds for the purpose of initiating a Red Cross nationwide avian influenza public awareness campaign that incorporated the following three activities: (1) training of trainers (ToT) for 30 CRC provincial branch representatives from 15 branches, (2) training of 450 CRC volunteers in a two day training (30 volunteers per branch), and (3) a public awareness campaign in 24 provinces on avian influenza preparedness and response.

(1) Following the national avian influenza workshop, CRC conducted a ToT on August 26, 2006 for 30 AI "core trainers" (branch directors and development officers) from 15 of the 24 CRC branches (the other nine CRC branches were previously trained using German Red Cross and Japanese Red Cross funds). The purpose of the ToT was to provide participants with AI information and to build their skills to train provincial Red Cross volunteers to conduct community-level awareness-raising campaigns. The training focused on the symptoms of avian influenza in humans and poultry, preventing transmission of avian influenza, and village level AI warning and reporting systems. *(Refer to Annex 2 for more information regarding the training of trainers.)*

(2) Prior to the awareness campaign, each Red Cross branch held meetings with their provincial departments of health and agriculture to select the targeted districts, communes, and villages to conduct the campaign. Subsequently, the 30 "core trainers" trained 450 CRC volunteers (30 volunteers/province) on various aspects of AI¹.

(3) The AI campaign included the distribution of posters provided by UNICEF and AED. CRC volunteers focused on the dissemination of four key messages² as established by NCDM in coordination with relevant ministries and outlined in the Cambodian National Communication Strategy & Action Plan for Avian and Human Influenza. *(Refer to Annex 3 for numbers of beneficiaries reached by province.)*

The volunteers approached community members through house to house visits, through small group sessions of 20 to 40 people, larger group sessions ranging from 80 to 200 people, as well as targeting farmers in the fields who were planting rice. In addition, some of the branches invited local television crews to record the activities and broadcast the campaign locally.

¹ In total, 720 volunteers participated in the 3-day campaign: 450 volunteers under OFDA funding and 270 under German and Japanese Red Cross' funds

² The key messages focused on 1) hand-washing, 2) separating newly acquired poultry from existing flocks and keeping them fenced, 3) reporting suspected AI cases to local authorities, and 4) eating well cooked poultry.



CRC volunteer with small group during campaign in Takeo province



CRC volunteer disseminating AI information during house visit in Kandal province



CRC Kandal province branch secretary (left) at campaign in village



CRC volunteer with small group during campaign in Kompong Speu province

Constraints Encountered and Adjustments Made

- During the public awareness campaigns, the limited number of Red Cross volunteers at the commune level resulted in one Red Cross volunteer responsible for an entire commune. This impacted the amount of time that each Red Cross volunteer could devote to educational sessions at the household level. This constraint was further compounded by the lack of sufficient transport to some of the communes.
- Quantifying the exact number of households or families reached in some provinces is difficult as certain volunteers only report the number of individuals who attended the educational sessions rather than the number of households reached. More training is required on data collection for branch staff and volunteers to address this problem for future campaigns and monitoring.

- The CRC AI focal person also oversees CRC's blood donor recruitment project, which created significant constraints on his time towards AI activities. It is expected that CRC will hire an AI project manager in early 2007.
- There is a marked difference in capacity among the 24 CRC branches located throughout the provinces of Cambodia. Financial and programmatic systems are under development but limited resources hamper training with many of the branches.

VII. Success Stories

During the public awareness campaign, many people expressed their appreciation for the hard work the CRC volunteers were doing to provide important AI preventive messages to their communities. Many people in the villages stated that they had only received AI information from the Red Cross volunteer network, not from other sources; this is testament to the wide-reaching and effective CRC volunteer network.

Another success at the national level was that CRC was invited to become a member of the newly formed Pandemic Planning Working Group, which is co-chaired by the NCDM and the Ministry of Health with support from the United Nations. CRC is the only humanitarian organization in Cambodia that was invited to sit on this working group.

VIII. Overall Project Performance

Both components of the project, the national level workshop and the public awareness campaigns, positioned the Red Cross closely with important partners such as the NCDM and the UN avian influenza working group in Phnom Penh.

The Red Cross AI workshop was held in late August with all CRC branch representatives present. Officials from various ministries, WHO, UNICEF, FAO, USAID as well as interested NGOs participated and presented key information during the two-day conference. Avian influenza IEC posters were donated by UNICEF and AED. The amount saved in the production of the IEC materials was used to support a nationwide Red Cross campaign.

The ToTs conducted for branch core trainers were effective and succeeded in imparting the key messages to the trainers as demonstrated by the pre and post test results. The core trainers and branch staff were then able to adequately train the volunteers in the key AI prevention messages and skills, as well as data gathering techniques.

The campaign itself succeeded in reaching many communities that had little or no previous exposure to, or knowledge of, AI prevention messages. Communities were grateful for the professionalism and dedication of the Red Cross volunteers, who were able to clearly disseminate important AI information

IX. Summary of Cost-Effectiveness

The original budget for this grant was \$55,000, allocated to support the actual holding of an AI conference, and towards production of AI IEC materials for national distribution. The overall expenditures totaled \$51,173.

A total of \$16,360 was originally allocated from OFDA funds to the conference, while \$38,640 was allocated for the production of IEC materials. Donations of IEC materials by UNICEF and AED allowed for an expansion of the project scope and deliverables. Excess OFDA funds were reallocated to support (1) TOT for 30 CRC provincial branch representatives from 15 branches, (2) Training of 450 CRC volunteers in a two day training (30 volunteers per branch), and (3) Public Awareness Campaign for 24 CRC provincial branches on avian influenza preparedness and response. In addition to the funds committed by OFDA, ARC supported the project extensively using internal funds.

All programmatic deliverables as measured by participants and/or beneficiaries were achieved as stated in Table 1, Section IV. The project proved cost effectiveness per unit. As an example, the public awareness campaign reached 151,934 beneficiaries at a per unit cost of \$0.10 per beneficiary (not including administrative costs). This compares to the budgeted per unit cost of \$0.14 per beneficiary.

The cost effectiveness of the project should take into consideration that the majority of funds supported training and capacity building of the Cambodian Red Cross staff and volunteers from all 24 provinces. The long term benefits of this training will support CRC in further campaigns to educate the populace resulting in additional beneficiaries.

X. Appendices (following pages)

1. Report on Red Cross Workshop on Preparedness and Response Plan for Avian Influenza
2. Report on Cambodia Red Cross Training of Trainers
3. List of beneficiaries by provinces
4. T-shirt and poster used in campaign

APPENDIX 1



Red Cross Workshop on Preparedness and Response Plan for Avian Influenza Report



**August 24-25th, 2006
Phnom Penh Hotel
Phnom Penh, Cambodia**



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Annexes

- Annex I: Workshop Agenda
- Annex II: Participant List
- Annex III: Global and Cambodia AI Situation
- Annex IV: Sample Planning and Reporting Formats
- Annex V: Workshop Evaluation

Background

The avian influenza (H5N1) outbreak in Asia poses a serious public health threat to the region. With 36 countries worldwide now reporting the virus in wild and domestic poultry and 10 countries reporting human cases³, there is an ever increasing risk that it could mutate, creating a new human strain of pandemic influenza (PI), with disastrous consequences.

To date, there have been six reported cases of human avian influenza (AI) in Cambodia, with 100% mortality rate. Since 2005, the Cambodia Red Cross (CRC) has been actively involved in AI prevention, preparedness and response activities. Aligned with Red Cross global and regional strategies and Cambodian government plans, the CRC is currently conducting an AI awareness and prevention program in nine of Cambodia's 24 provinces utilizing a total of 450 volunteers. The campaign includes the distribution of posters provided by UNICEF, focusing on the four messages outlined in the Cambodian National Communication Strategy & Action Plan for Avian and Human Influenza.

Additionally CRC is now formulating an integrated and coordinated disaster preparedness and response plan for influenza pandemic. To draft the plan in a participatory way and ensure key lessons learnt are incorporated, CRC, in partnership with the American Red Cross and with funding support from OFDA, planned a national workshop from August 24-25th in Phnom Penh, Cambodia, attended by 74 participants from CRC NHQ and branches, IFRC, Partners National Societies, government ministries and relevant stakeholders (see annex I).

Objectives of the Avian Influenza Workshop

The objectives of the AI workshop were the following:

- 1) **To create a forum for major stakeholders to come together to discuss and share standard health messages and curricula about the disease that can be disseminated nationwide to the public;**
- 2) **To provide participants with information on the global and national AI situation, and on strategies, plans and activities of key stakeholders; and**
- 3) **To receive input from the Red Cross branches towards developing a CRC preparedness and response plan.**

Opening Ceremony

In their opening remarks, **Edward Shea**, Regional Representative for the American Red Cross, **Kate Crawford**, Director of USAID's Office of Public Health, and **Scott Simmons**, Federation Representative in Cambodia all highlighted the strong partnership with CRC and praised its ongoing AI initiatives at the national and community levels, and with neighboring countries. Additionally, they stressed the critical role CRC's volunteer network can play by educating the Cambodian population on AI prevention, and expressed hope that the workshop will give participants greater knowledge of AI and also facilitate recommendations towards a CRC national preparedness and response plan.



Opening speeches

³ World Organization for Animal Health (24/08/06) -- www.oie.int/download/AVIAN%20INFLUENZA/A_AI-Asia.htm

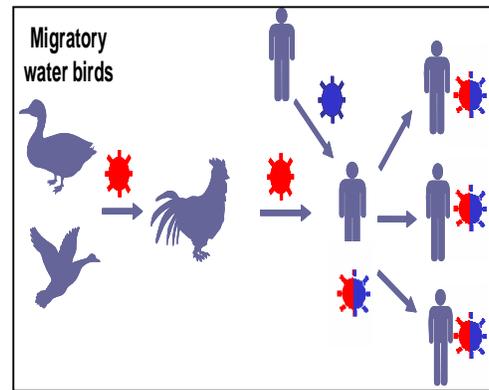
These sentiments were echoed by **Madame Pum Chantinie**, Secretary-General of the Cambodian Red Cross, who stressed the importance of branch contribution towards developing a realistic plan of action. However, she cautioned that an effective plan is based on practical needs and available resources, and challenged the branch directors to think of innovative ways to expand the volunteer network, and train them in order to provide better service delivery to the vulnerable.

Stakeholder Presentations

To ensure a deeper understanding of the current AI situation, as well as elaborate on plans for potential pandemic influenza outbreaks, presentations from key governmental and international stakeholders were given during the workshop⁴:

Dr. Megge Miller, World Health Organization

Dr. Miller outlined the current global situation (see annex II), defining AI terminologies and how pandemic influenza is created. The chief concern is that the *“virus is always unstable and always subject to change”* which may lead to AI and human influenza (HI) virus mixing together causing a pandemic. Since the first reported cases in 2003, geographic spread has accelerated; 241 cases recorded to date with 141 deaths, a fatality rate of 59%⁵. Alarmingly, human AI infections have mainly affected young people aged 10-29. Whereas most human cases had exposure to dead or sick birds, not all infections had such exposure and are consequently not understood (asymptomatic ducks, environmental contamination, human-human transmission).



How Pandemic Influenza is created

Dr. Sorn Sann, Department of Animal Health, Ministry of Agriculture, Fisheries and Forestry

Dr. Sann gave an overview of the medical aspects of the H5N1 virus (survival, transmission, symptoms) and drew a comprehensive timeline of the spread of AI within Cambodia in birds and humans – 6 human cases with 100% mortality rate (see annex II). He highlighted the measures the MAFF is instituting including legal (quarantine laws), animal health (culling, restricting transport of fowl), institutional (taskforces, reporting systems), and food security (preparation habits). Key ways forward include:

- 1) Strengthen veterinary services and establish surveillance systems in every village;
- 2) Educate farmers on farm bio-security and poultry sellers to wear masks;
- 3) Restrict movement of poultry in-country and cross-borders;
- 4) Shift free-range bird raising practices to coop-raising.



Sample UNICEF IEC material

Dr. Tan Try, UNICEF

Dr. Try presented on the national AI communications strategy and action plan which aims to educate people on the virus' transmission and symptoms, and on prevention and reduction methods in both birds and humans. Key messages are tailored to the various stages of the disease, including the potential of a pandemic. Multi-media coverage includes IEC materials (posters, leaflets, billboards), training booklets, TV and radio spots. Crucial to strategy success is ensuring effective peer education and strengthening local-level networks.

⁴ For complete soft or hard copies of all presentations, please contact Dr. Uy Sam Onn, samonn_uy@yahoo.com

⁵ WHO (23/08/06) -- www.who.int/csr/disease/avian_influenza/country/cases_table_2006_08_23/en/index.html

Dr. Ly Sovann, Ministry of Health

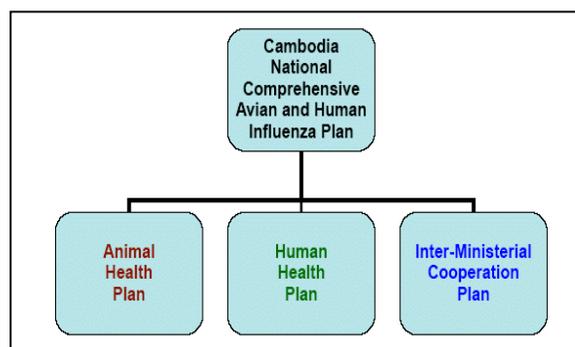
Dr. Sovann outlined the MoH’s 5 AI prevention strategies including:

- 1) *Educating the public and medical practitioners* – developing and distributing IEC materials in public places, hospitals and health centers; posting hotlines in private clinics; training village health workers; organizing public forums and call-in shows;
- 2) *Strengthening monitoring and surveillance* – creating national and provincial rapid response teams and simple surveillance reporting system at the community level;
- 3) *Building laboratory capacity* – providing equipment and medicine, installing hotlines, and training staff on sample collection;
- 4) *Strengthening capacity of referral hospitals* – launching AI pandemic simulation exercises for hospital staff throughout the country, training on infection control and quarantine, providing equipment and vehicles; and
- 5) *Developing an AI prevention and preparedness plan* – work with relevant stakeholders to draft plan and assign responsibilities and actions.

Mr. Ross Sovann, National Committee for Disaster Management (NCDM)

Mr. Sovann presented on the Cambodia National AI and HI plan which seeks to nurture greater inter-ministerial cooperation, ensure key roles for technical agencies and public information, and develop a business continuity plan. Immediate and future actions include:

- Submission of a plan to the government for approval;
- Development of a Pandemic plan involving wider range of ministries and stakeholders;
- Conduct a series of simulation exercises on plan;
- Restructuring NCDM to establish National Emergency Coordination Centre, appointment of National Emergency Coordinator, extend Disaster Coordination Committees to commune level



Structure and scope of AI plan

Group Discussions: RC Branch AI Activities and Recommendations

Group discussions were organized to elicit updates on RC Branches’ current AI activities and share recommendations based on experiences and lessons learned. Questions and compiled answers from the three discussion groups are below:

| What activities are the CRC branches conducting to educate communities on AI? | What recommendations do you have to better combat AI in Cambodia in the future? |
|--|--|
| <ul style="list-style-type: none"> ➤ Based on national AI plan and chose appropriate target areas and groups ➤ Working closely with the Ministry of Health and the Ministry of Agriculture ➤ Training RCVs on AI dissemination in June (2-day training) and how to monitor outbreaks ➤ Created RCV dissemination plan for main target groups (1 RCV responsible for 15 families) ➤ Distributed IEC to target groups and key locations (hospitals, schools, pagodas) ➤ Gather reports from RCVs and submit to NHQ | <ul style="list-style-type: none"> ➤ Ensure IEC materials include more pictures ➤ Agree on core AI messages by all stakeholders ➤ Train more RCVs, add more days for education (6 days / month) and give RCVs more incentives (travel allowance, posters) ➤ Refresher training for RCVs every six months ➤ Provide soap and masks directly to beneficiaries ➤ Door to door dissemination more effective than group dissemination ➤ Extend program to all 24 provinces ➤ Integrate AI into national school curriculum |

Red Cross Response to Avian Influenza

Professor Tran Thu Thuy, Head of Health Care Department, Vietnam National Red Cross

Professor Thuy summarized VNRC's rapid response to AI throughout Vietnam including development of a prevention and preparedness plan. To date, there have been 93 human cases of AI and 42 deaths in Vietnam. VNRC's activities include sub-regional prevention campaigns in high risk areas, establishment of a steering committee and dissemination teams, staff and volunteer training, and dissemination of key hygiene and AI messages. Lessons learned include:

1. Information obtained from the National Steering Committee assisted in developing VNRC's AI action plan;
2. AI action plan provided the Red Cross chapters with timely preventive methods;
3. Mass media provided valuable support in responding appropriately to the situation.

Professor Thuy recommended that a coordinated project between Cambodia, China, Laos and Vietnam be jointly planned and implemented due to the regional cross-border threat of AI.

Dr. Amgaa Oyungerel, Southeast Asia Regional Public Health in Emergencies Delegate, IFRC

Dr. Oyungerel gave an overview of the Red Cross/Red Crescent's global and regional AI activities, and highlighted the Movement's comparative advantages which include its large volunteer network and existing community health and disaster preparedness structures. Regionally, a working group has been established along with the development of a contingency plan. Technical support, information sharing and coordination are being facilitated by the regional delegation for all national societies.

- Key roles in **prevention** include public education, backyard farm bio-security, and community-based awareness.
- Key roles in **emergency response** include protecting staff and volunteers, medical services, relief operations, and psychosocial support.

Challenges include the inherent uncertainty of AI, making strategies and risks groups unclear and lack of scaling-up capacity within national society health programs. Successful elements have included early buy-in from leadership (Vietnam), coordination with government in planning stages (Cambodia), focus on a few key messages and integrating AI into Red Cross existing programs and services.

Dr. Sok Long, Director of Health Department, CRC

Dr. Long presented on the CRC's current AI project being implemented in high risk communities and utilizing its volunteer network in coordination with key stakeholders, including NCDM. The project has two components:

1. **Preparedness:** establishing a national coordination framework and inter-departmental AI committee, developing a contingency plan with the Disaster Management Department, training staff on their roles and responsibilities in case of a pandemic, and disseminating materials in communities;
2. **Response:** currently in development, utilizing feedback from this workshop (*see below: group discussion*).

There is also sub-regional collaboration with Vietnam and Laos intended to effectively address the cross-border threat of AI.

Challenges for the AI project include lack of compensation for culled birds, lack of human and financial resources, and lack of adequate media coverage on risks of AI.



Dr. Long

Mr. Hok Yong, Development Officer, CRC Kandal Branch

Mr. Yong summarized his Branch’s efforts in AI. He first received training at NHQ and then subsequently contacted local authorities to discuss the project and identify suitable locations for implementation. Once the target areas were identified, RCVs in those areas were trained to disseminate key messages to households, groups in schools or during festivals, and high risk groups such as poultry sellers and backyard farmers. Several challenges have been encountered including difficulties in mobilizing RCVs as transport costs are high and poor conditions of roads and the lack of proper teaching materials.

Reporting Formats and Distribution Plans

One of the challenges witnessed in activity implementation at the community level to date has been the poor reporting by RCVs and branch staff due to insufficient training on data collection and unclear report formats and distribution plans.

The project team for this workshop sought to redress the problem by introducing new planning and reporting formats during the workshop (see annex III). Branches and volunteers will be encouraged to test the formats in subsequent field activities to further refine the samples.

Group Discussion: RC Preparedness and Response Plan

Effective planning is bottom-up, ensuring ownership by all key players and understanding of roles and responsibilities. To draft a comprehensive CRC AI plan, the final workshop session was devoted to brainstorming on key components and actions for both preparedness and response. Compiled group answers are below:

| Preparedness | Response |
|---|--|
| <ul style="list-style-type: none">➤ Draft preparedness and response plan and budget➤ Build capacity of staff and volunteers to implement plan➤ Establish branch-level preparedness and response committee composed of internal (Red Cross) and external (NCDM, ministries) members➤ Control spread of disease in farms by distributing soap, protective clothing, and masks➤ Draft communications plans – conduct awareness campaigns and distribute IEC materials➤ Establish clear emergency monitoring and reporting procedures➤ Integrate AI activities into other RC projects | <ul style="list-style-type: none">➤ Assign responsibilities of all Red Cross staff in case of emergencies and ensure all materials and resources are in place➤ Work with involved agencies to check cases in outbreak areas➤ Disseminate emergency information through communication channels to NCDM, CRC NHQ➤ Free hotline for volunteers to connect directly to NCDM or NHQ to report outbreaks➤ Have volunteers in place at village-level with clear roles and responsibilities in case of emergency, give them protective materials |

Next Steps

- Training of trainers (ToT) workshop for 30 participants from 15 Red Cross branches on August 26, 2006. The purpose of the ToT is to provide participants with AI information and dissemination skills in order to train their RCVs in conducting community-level awareness-raising campaigns, and to be able to plan for prevention and response;
- 2-day training in October, organized by the above trained facilitators, for 450 RCVs in the 15 branches who previously did not receive AI training
- 3-day campaign planned for October, covering all 24 provinces. 720 RCVs (30 RCVs per province) will disseminate key AI messages at the community-level.
- Establishment of CRC's AI Steering Committee and ongoing dissemination activities in 9 targeted provinces until the end of 2006 with funding from the German Red Cross;
- Development of CRC's AI preparedness and response contingency plan by mid-August 2007;
- Search for funding support for CRC's three-year AI preparedness and response project.



Intense group discussions on CRC preparedness and response plans

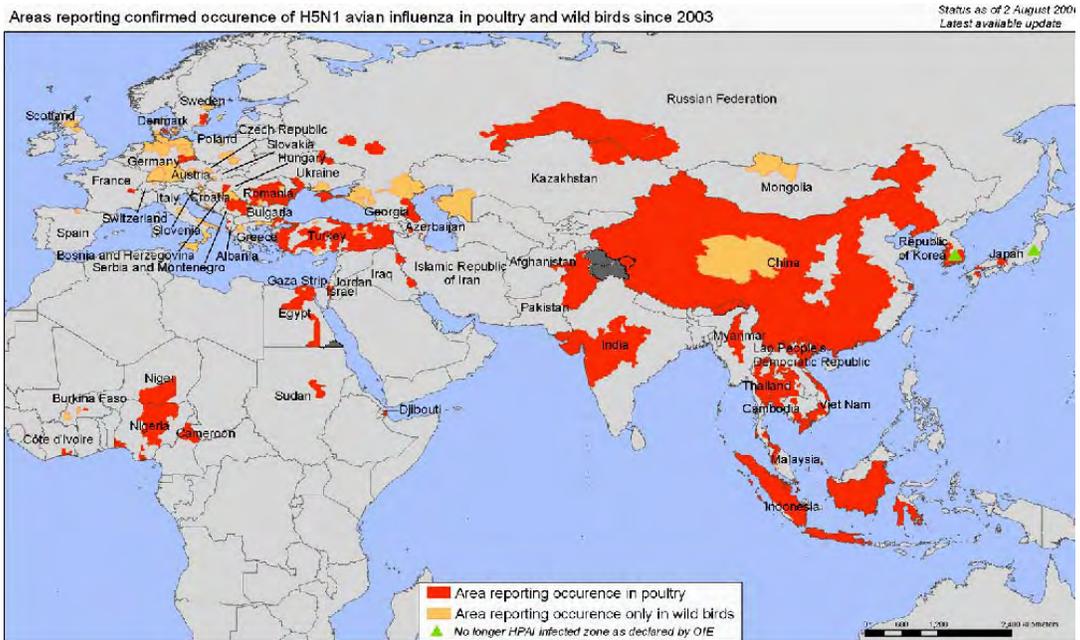
Annex I: Workshop Agenda

| AUGUST 24, 2006 | | |
|------------------------|---|---|
| 8:00 – 8:10 | Registration of Participants | |
| 8:10 – 8:20 | Commencement of Event | Dr. Uy Sam Onn |
| 8:15 – 8:20 | National Anthem | All participants |
| 8:20 – 8:25 | Opening Remarks: American Red Cross | Mr. Edward Shea, Senior Field Representative |
| 8:25 – 8:30 | Opening Remarks: International Federation of Red Cross and Red Crescent Societies | Mr. Scott Tind Simmons, Head of Delegation |
| 8:30 – 8:45 | Opening Remarks: USAID | Ms. Kate Crawford, Director of USAID Office of Public Health |
| 8:45 – 9:00 | Opening Remarks: Cambodian Red Cross | Mme. Pum Chantinie, Secretary General |
| 9:00 – 9:10 | Group Photo and Tea Break | Phnom Penh Hotel |
| 9:10 – 9:30 | Workshop objectives and ground rules | Dr. Uy Sam Onn |
| 9:30 – 10:15 | Current Global Threat of Avian Influenza | Dr. Megge Miller, WHO |
| 10:15 – 11:00 | Current AI Situation and Threat in Cambodia | Dr. Sorn San, Ministry of Agriculture |
| 11:00 – 11:45 | Developing a Strategic Communication Plan and IEC Materials | Dr. Tan Try, UNICEF |
| 11:45 – 12:00 | Q&A | Dr. Uy Sam Onn |
| 12:00 – 13:30 | Lunch | Phnom Penh Hotel |
| 13:30 – 14:15 | Human Contraction of AI: Preventative Measures | Dr. Ly Sovann, Ministry of Health |
| 14:15 – 15:00 | National Comprehensive Avian and Human Influenza Plan | Mr. Ross Sovann, National Committee for Disaster Management |
| 15:00 – 15:15 | Q&A | Dr. Uy Sam Onn |
| 15:15 – 15:45 | Tea Break | Phnom Penh Hotel |
| 15:45 – 16:45 | Group discussion (three groups) | Dr. Sok Long |
| 16:45 – 17:00 | Review of day | Dr. Uy Sam Onn |
| AUGUST 25, 2006 | | |
| 8:00 – 8:45 | Response of Vietnam National Red Cross to AI Crisis | Prof. Thuy, Vietnam National Red Cross |
| 8:45 – 9:30 | AI Global Activities and Southeast Asia Region Strategies | Dr. Amgaa Oyunerel, IFRC Delegation, Bangkok |
| 9:30 – 10:00 | CRC's AI Prevention Activities in Kandal | Mr. Hok Yonn, Development Officer, CRC |
| 10:00 – 10:30 | Tea Break | Phnom Penh Hotel |
| 10:30 – 11:15 | Introduction to CRC's Avian Human Influenza Plan | Dr. Sok Long, Director of Health Dept |
| 11:15 – 12:00 | IEC Distribution Plan and monthly reporting format | Dr. Uy Sam Onn |
| 12:00 – 13:30 | Lunch | Phnom Penh Hotel |
| 13:45 – 15:00 | Group Discussion (prevention and response plan three groups) | Dr. Sok Long and Dr.Sam Onn |
| 15:00 – 15:20 | Tea Break | Phnom Penh Hotel |
| 15:20 – 16:30 | Group Presentation, Q&A | Dr. Uy Sam Onn |
| 16:30 – 16:45 | Report on conference results | Mr. Long Vibol, Mondulkiri Red Cross Branch |
| 16:30 – 16:45 | Closing Remarks | Mme. Pum Chantinie, Secretary-General |

Annex II: Participant List

| Name | Organization |
|--------------------------------|---|
| Madame Pum Chantinie | Secretary General, CRC |
| Yim Leav, Soa Say | Takeo Branch, CRC |
| Kong Sary, Hok Yon | Kandal Branch, CRC |
| Om Channa, Sot Sokhorn | Kompong Speu Branch, CRC |
| Ouk Lay, Sok Chanthach | Kampot Branch, CRC |
| Ros Sareith, Oeun Sam Ang | Kompong Cham Branch, CRC |
| San Khith, Thach Smann | Banteay Meanchey Branch, CRC |
| Long Sopheap, Pov Sereyvuth | Koh Kong Branch, CRC |
| Sar Vanna, Chan Taravuthy | Svay Rieng Branch, CRC |
| Mao Song, Yen Lyda | Prey Veng Branch, CRC |
| Kang Born, Phalla Tharine | Battambang Branch, CRC |
| Thong Virada, Bou Seng Long | Kratie Branch, CRC |
| Dim Nath, Chan Sara | Rattanakiri Branch, CRC |
| Long Vibol, Ngom Sophal | Mondolkiri Branch, CRC |
| Say Proloeug, Noy Bophan | Stung Treng Branch, CRC |
| Soung Savuth, Sor Seang Heang | Oddar Meanchey Branch, CRC |
| Vann Heang, Mou Seng Nhoegn | Pursat Branch, CRC |
| Douk Sida, Development Officer | Kompong Thom Branch, CRC |
| Sum San On, Liv Lorn | Siem Reap Branch, CRC |
| Teng Huy, San Borit | Sihanoukville Branch, CRC |
| So Korng, Chea Solyda | Pailin Branch, CRC |
| Prak Sophorn, Chan Moly | Kompong Chhnang Branch, CRC |
| U Sam Heang, Sor Savet | Preah Vihear Branch, CRC |
| Uch Kloeung, Kong Sophal | Kep Municipality Branch, CRC |
| Chhoeng Gnan, Chea Kim Srun | Phnom Penh Municipality, CRC |
| Chan Boreth | Human Resources Dept., CRC |
| Pin Samnang | Communications Dept., CRC |
| Khun Virak | Disaster Management Dept., CRC |
| Hin Spheak | Administration/Finance Dept., CRC |
| Sok Long | Health Dept., CRC |
| Uy Samonn | Health Dept., CRC |
| Teng Sopheak | Health Dept., CRC |
| Thai Molika | Health Dept., CRC |
| Dy Dara | Health Dept., CRC |
| Scott Simmons | IFRC |
| Edward Shea | American Red Cross |
| Chum Sophal | American Red Cross |
| Heng Saly | American Red Cross |
| In Sopheap | Danish Red Cross |
| Marie Helene Maeux Bok | French Red Cross |
| Kate Crawford | USAID |
| Jonathan Ross | USAID |
| Robert Barton | OFDA |
| Tan Try | UNICEF |
| Megge Miller | WHO |
| Brian Eglend | CARE International |
| Angelique Smit | AED |
| Ross Sovann | National Committee on Disaster Management |
| San San | Ministry of Agriculture |
| Ly Sovann | Ministry of Health |
| Total | 74 participants |

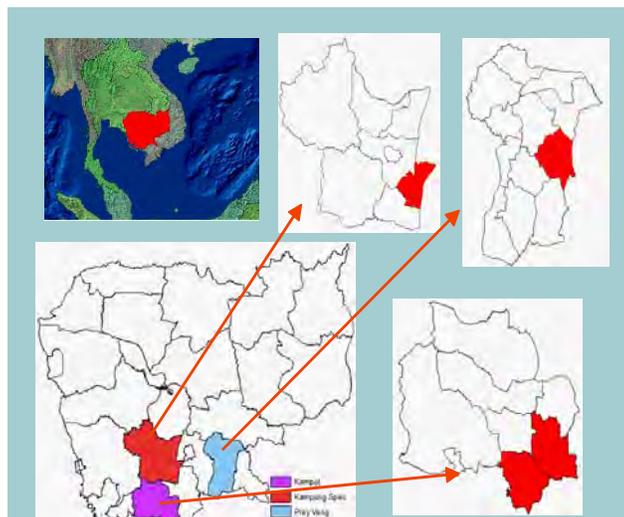
Annex III: Global and Cambodia Avian Influenza Situation



Areas reporting confirmed occurrence of H5N1 AI in poultry and wild birds since 2003

| | | |
|--|---|---|
| Inter-pandemic phase New virus in animals, no human cases | Low risk of human cases | 1 |
| | Higher risk of human cases | 2 |
| Pandemic alert New virus causes human cases | No or very limited human-to-human transmission | 3 |
| | Evidence of increased human-to-human transmission | 4 |
| | Evidence of significant human-to-human transmission | 5 |
| Pandemic | Efficient and sustained human-to-human transmission | 6 |

WHO Phases of Pandemic Alert



Locations of human cases (6) of AI reported in Cambodia since 2004

Annex IV: Sample Planning and Reporting Format

➤ Sample Distribution Plan:

Posters: Handwashing
 Quantity: 1000 posters
 Packages: 04

| Date | Provinces | Districts | Communes | Villages | Responsible person |
|------|-----------|-----------|----------|----------|--------------------|
| | | | | | |
| | | | | | |
| | | | | | |

➤ Reporting Sample:

Province:
 District:
 Name: DOs or RCVs
 Month:
 IEC materials
 Date:

| Target Area | | Beneficiaries and target audience | | | | | |
|-------------|----------|-----------------------------------|------------|-------|---------|---------|--------|
| Communes | Villages | Times | Households | Farms | Sellers | Posters | Groups |
| | | | | | | | |
| | | | | | | | |

Comments:

Approved by:

Red Cross Branch Director:

Annex V: Workshop Evaluation

At the end of the workshop, all participants were asked to evaluate the proceedings. Below are selected answers:

1. How do you feel about this workshop?

- Good 100 %
- Not good 0 %

2. Do you think enough time was given for presentations and group discussions?

- Too long 6 %
- Adequate 91 %
- Too short 3 %

3. What did you learn from the workshop? (selected answers)

- Better understanding of AI symptoms;
- Clearer understand about action plans for prevention, preparedness and response in Cambodia
- Have more skills and knowledge to share information with people in community.

4. What do you think about presenters' explanations?

- Clear 90 %
- Unclear 10 %

5. What do you think about the material used in workshop?

- Very good 17 %
- Good 80 %
- Not good 3 %

6. Suggestions

- AI workshops should be organized at least 2 times a year
- Encourage RCVs by providing them with materials such as soap and masks
- Budget should be provided after the workshop for AI dissemination in the community
- Training course should be held in the provinces for RCVs
- Free hot-line for RCVs to reporting from community

Participants were also asked to list the key AI dissemination messages. They are listed below:

- Wash hands with soap before preparing and eating food
- Wash hands after handling poultry
- Do not touch or eat dead poultry
- Keep poultry in cages
- Burn dead poultry
- Clean poultry cages every day
- Do not let children have contact with the poultry
- Go to hospital if you suspect AI symptoms
- Wear mask when you cough or sneeze
- If you suspect a case, report to the animal health officer in your community
- Consume only well-cooked poultry and eggs

APPENDIX 2

Cambodian Red Cross Avian Flu Project

REPORT OF

Training of Trainers



Date: 26 August 2006

Venue: Lucky Star Hotel, Phnom Penh

Participants: 30 representatives from 15 Red Cross Branches

Management: CRC Health Department: Dr. Sok Long, Director;
Dr. Uy Sam Onn, Avian Flu focal person,
and 4 support volunteers

Funded by: USAID/OFDA through the American Red Cross

Introduction:

CRC began the dissemination of avian flu preparedness information during early 2006, with funding support from the German Red Cross and the Japanese Red Cross through the Federation delegation in Cambodia. A total of two focal staff from each of nine provinces were trained so that they could train volunteers in their respective branches. These volunteers could then disseminate the information in community awareness campaigns.

This second training was organized in conjunction with the two-day CRC national workshop on Avian Flu that occurred on 24-25 August 2006. Thirty participants from 15 Red Cross Branches participated in the second training held on 26 August 2006.

Objective:

To provide focal staff from all Red Cross branches with key AI prevention and response messages and communication skills so that they can train their local volunteers to conduct community awareness sessions in their respective villages.

Introduction remarks:

The CRC Avian Flu coordinator began the training by introducing the agenda of the training and the facilitators. The training was participatory and an open dialogue.

Facilitators:

1. Dr. Heng Seng, AI coordinator from the Ministry of Health
2. Dr. Chea Hui, AI coordinator from Ministry of Health
3. Mr. Ho Savun Representative from Ministry of Agriculture, Forestry, and Fisheries
4. Mr. U Sok Leang Trainer from the Cambodian Red Cross

Presentations:

1. Human Health "Symptom of Avian Influenza"
2. Human Health "Avian Flu transmission and prevention"
3. Animal health "Symptom, Bio-security, cage/fence poultry"
4. Animal health "Transmission and Prevention"
5. Basic human and food preparation hygiene practices
6. Environment
7. How to use visual aids effectively and methods to facilitate training & group discussions

Observation:

Most participants felt that the training offered them the opportunity to learn the key AI prevention messages which they will be able to disseminate in their communities. The participation / discussion from relevant ministries in the training was crucial in the technical and coordination in the future project implementation at all levels.

Closing remark:

The director of Health Department gave the closing remark with a focus on the Red Cross role in the fight against the Avian Flu virus, particularly at the branch and volunteers levels throughout Cambodia.

He added that the key message learnt from the conference was that dissemination has to be translated into short and clear messages that are relevant, understandable, and practical according to local context.

The message should at all times be consistent and highlight key package message including reporting sick or dead birds, stay away from sick or dead birds, wash hands after contact with poultry, and separate new poultry from existing flocks. The director also reminded the participants of the importance of cooperation and collaboration with relevant ministries and agencies in the planning and operation against the deadly virus.

Phnom Penh, 26 August 2006

Prepared by

Dr. Uy Sam Onn
Avian Flu Focal Person
Cambodian Red Cross

Notes from the presentations

1- Human Health: Symptoms of Avian Influenza

The main concern is that the virus is always unstable and always subject to change which may lead to AI and human influenza (HI) virus mixing together causing a pandemic. Since the first reported cases in 2003, geographic spread has accelerated; 241 cases recorded to date with 141 deaths, a fatality rate of 59%. Alarmingly, human AI infections have mainly affected young people aged 10-29. Whereas most human cases had exposure to dead or sick birds, not all infections had such exposure and are consequently not understood (asymptomatic ducks, environmental contamination, human-human transmission)

Symptoms of avian influenza in humans have ranged from typical human influenza-like symptoms (e.g., fever, cough, sore throat, and muscle aches) to eye infections, pneumonia, severe respiratory diseases (such as acute respiratory distress), and other severe and life-threatening complications. The symptoms of avian influenza may depend on which virus caused the infection.

As reported, every AI patient got a fever over 38 C and has similar symptoms to general flu as mentioned above such as headache, muscle pain, coughing and choking. Respiratory symptoms are included soar throat, nose blowing, but this is not applied to every patient, in some cases diarrhoea symptom appeared a week before respiratory distress (Short-breath, tachypnea and Rale Crepitans)

2- Human Health: Avian Flu transmission and prevention

AI transmission:

The presentation gave an overview of the medical specifics of the H5N1 virus (survival, transmission, symptoms) and drew a comprehensive timeline of the spread of AI within Cambodia in birds and humans – 6 human cases with 100% mortality rate).

Most cases of avian influenza infection in humans, and as the current outbreaks in Cambodia shows that human cases of avian influenza infections are very rare and most of them have been linked to direct close exposure to dead or diseased poultry or contaminated surfaces, notably during home-slaughtering, defeathering, eviscerating and preparation of raw poultry for cooking.

Avian Flu virus can be infected through touching direct or indirectly to the poultry, wild or new birds which are positive with the virus; it can also be transmitted to those who live closely with the birds or work in the poultry farm, birds slaughtering (chicken or ducks), and cock fighting as well.

Indirect touching for example is like the children play in the water where AI infected chicken or duck play there too. Touching dead and dying birds can cause sickness or infection to people.

Key roles in prevention:

The AI prevention measure is to establish a national coordination framework and inter-department AI committee, developing contingency plan with Disaster Management Department, training staff on their roles and responsibilities in case of pandemic, disseminating multi-media coverage includes training on IEC-materials (booklets, leaflets, posters and billboards), TV and radio spots broadcasting. Crucial to strategy success is ensuring effective peer education and strengthening local-level networks are instituting including legal (quarantine laws), animal health (culling, restricting transport of fowl), institutional (taskforces, reporting systems), food security (preparation habits). Key ways forward include:

1. Strengthen veterinary services and establish surveillance systems in every village;
2. Educate farmers on farm bio-security and poultry sellers to wear masks;
3. Restrict movement of poultry in-country and cross-borders;
4. Shift free-range bird raising practices to coop-raising;
5. Conduct public education, backyard farm bio-security, and community based awareness by using volunteer or peer education network in coordination with other key stakeholders including NCDM lines.

Key messages include:

- There is a serious new disease affecting chickens, ducks, geese, pigeons, quail and other wild birds. It can be passed to humans. Some people have died from the disease so you must follow this important easy to follow advice to protect yourself.
- Do not allow poultry worker to live on the farm and the workers must keep hygiene when in and out of the farm by washing hands, legs and body with soap and water
- Wash hands with soap before preparing and eating food.
- Washing hands after handling poultry.
- Don't touch dead poultry and do not eat dead or sick poultry
- Do not let children contact or play with the poultry.
- Go to hospital if you suspect AI symptoms
- Wear mask when you cough or sneeze
- In the suspected condition, report to the animal health officer in your community.
- Consume only well-cooked poultry and eggs.
- Wash your hand with soap, clean clothes, footwear, vehicles and cages with soap or disinfectant

- Avoid touching poultry, wild birds or their faeces (ESPECIALLY CHILDREN)
- Handle, prepare and consume poultry and eggs safely
- Handle sick and dead birds with appropriate clothing
- Keep birds away from living areas and ban on selling or buy dying or sickness birds
- Cover coughs and sneezes with handkerchief or krama
- Dead and dying birds can cause sickness in people. Protect yourself, protect others, and protect your animals.
- Improving your hygiene can save you and your loved ones from bird flu
- Early treatment can increase your chances of a quick recovery. Have fever, cough after handling birds think “Bird flu” and see treatment immediately
- Coughing and sneezing spreads flu. You can greatly reduce spread by covering your mouth with handkerchief or krama. Protect those you love by doing this
- Make everyone aware of the need to cover nose and mouth.

3- Animal Health: Symptom Bio-security, cage/fence poultry

The Avian Influenza virus is best transmitted via direct contact with sick and/or dead birds. Most human cases of AI have been related to such close contacts. Bio-security includes the management of all biological and environmental health risks associated with food.

Bio-security comprises two main elements: Bio-containment and bio-exclusion.

- Bio-containment refers to prevention of spread of the virus from infected premises;
- Bio-exclusion refers to measures to exclude infectious agents from uninfected ones.

Bio-security has three major components:

1. isolation: refers to the confinement of live animals within a controlled environment;
2. Traffic Control: includes both the human traffic as well as the vehicular traffic within the controlled environment;
3. Sanitation: addresses the cleanliness and disinfection of materials, people and equipment entering the controlled environment.

In simple words, bio-security is the normal way to avoid unnecessary contact between animals and microbes, infected animals and healthy ones. Bio-security also applies to public health measures that will reduce the contact between animals and humans.

The following points are the key messages for bio-security:

- Don't bring sick, dying chicken or ducks that has flu virus
- If you buy chicken or duck to raise you must separate new birds away
- Cleaning environment around the premises and equipment on farms
- Separate and prevent your poultry from wild birds and new birds
- Report all animal sickness (flu-like symptoms) immediately to the authorities
- Do not keep your poultry in mixture with new birds
- Make a fence to prevent Poultry from wild birds to local birds
- Daily inspect the quality of food and water
- Domestic poultry for AI vaccination
- Wash hands with soap before preparing and eating food.
- Washing hands after handling poultry.
- Don't touch dead poultry and do not eat dead or sick poultry
- Keep poultry in cages. Burn or bury dead poultry
- All dead birds and other contaminated objects (for instance: faeces, blood, feathers) must be destroyed properly as soon as possible throughout the day and keep cleaning the poultry cages every day.
- In the suspected condition, report to the animal health officer in your community.
- Report all animal sickness (flu-like symptoms) immediately to the authorities

4- Animal Health: Transmission and Prevention

Avian influenza is most often spread via direct contact between healthy birds and infected birds, and may be spread indirectly through contact with contaminated equipment and materials. The virus is found in secretions from the mouth, and eyes of infected birds and is also excreted in their feces. Contact with contaminated fecal material is the most common means of bird-to-bird transmission, although airborne secretions are another major means of transmission within poultry houses. Wild ducks can introduce low pathogenic AI into domestic flocks raised on range or in open flight pens via fecal contamination.

Spread of AI between poultry facilities almost always follows the movement of contaminated people and equipment. Avian influenza virus also can be isolated from the outer surfaces of egg shells. Transfer of eggs, therefore, is a potential means of AI transmission. Airborne transmission of virus from farm to farm is highly unlikely.

H5N1 can be spread from birds to people as a result of extensive direct contact with infected birds, such as defeathering during home slaughter of poultry. Concerns about public health relate to the potential for the virus to mutate into a form that could easily spread from person to person.

The following points are possible AI outspread transmission:

- Free ranging duck flocks
- Scavenging backyard chickens
- Migratory birds
- Wet markets
- Commercial farms with lack of bio-security
- Poultry movement
- Fighting cocks
- Contact with wild birds, can shed virus without symptoms
- Surveillance difficult to achieve
- Lack of duckling supply in Cambodia
- Diagnosis of suspect mortality
- Surveillance difficult to implement
- Can shed virus without symptoms
- No routine surveillance
- Multi-source poultries and Mixing species
- Slaughtering without bio-security
- Discount when chickens are dead or sick
- Poor quality of water supply
- Intrusion of wild birds
- Dirty surroundings
- Limited vaccination of domestic poultry
- Limited control of movement from infected neighboring countries
- Inadequate means of transport

Prevention

1. Educating the public and medical practitioners – developing and distributing IEC materials in public places, hospitals and health centers; posting hotlines in private clinics; training village health workers; organizing public forums and call-in shows;
2. Strengthening monitoring and surveillance – creating national and provincial rapid response teams and simple surveillance reporting system at community level;
3. Building laboratory capacity – providing equipment and medicine, installing hotlines, and training staff on sample collection;

4. Strengthening capacity of referral hospitals – launching AI pandemic simulation exercises for hospital staff throughout the country, training on infection control and quarantine, providing equipment and vehicles;
5. Developing AI prevention and preparedness plan – work with relevant stakeholders to draft plan and assign responsibilities and actions

Followings are the key point for AI prevention:

- Make a fence to prevent Poultry from wild birds to local birds
- Daily inspect the quality of food and water for poultry
- Prevent movement of poultry from one farm to another
- Proper vaccination for domestic poultry
- Washing hands after handling poultry.
- Don't touch dead poultry and do not eat dead or sick poultry
- Keep poultry in cages.
- Cleaning the poultry cages every day.
- Separate your poultry from wild birds and new birds
- Burn or bury dead birds
- Report all animal sickness (flu-like symptoms) immediately to the authorities or health officer in your community.

5- Body and food hygiene

Each day thousands of people infect from preventable food-borne disease. Although food can become contaminated at any point from the farm to where meals are prepared, following simple food hygiene steps can prevent most food-borne disease

- **Separate raw meat from cooked or ready-to-eat foods to avoid contamination:**
- Do not use the same chopping board or the same knife. Do not handle both raw and cooked foods without washing your hands in between and do not place cooked meat back on the same plate or surface it was on before cooking. Do not use raw or soft boiled eggs in food preparations that will not be heat treated/cooked.
- **Keep clean and wash your hands:** after handling frozen or thawed raw chicken or eggs, wash thoroughly with soap your hands, surfaces and utensils that have been in contact with the raw meat.
- **Cook thoroughly:** thorough cooking of poultry meat will inactivate the viruses. Either ensure that the poultry meat reaches 70°C or that the meat is not pink. Egg yolks should not be runny or liquid.
- Wash your hands before handling food and often during food preparation
- Wash your hands after going to the toilet
- Wash and sanitize all surfaces and equipment used for food preparation
- Protect kitchen areas and food from insects, pests and other animals
- Separate raw meat, poultry and seafood from other foods
- Use separate equipment and utensils such as knives and cutting boards for handling raw foods
- Store food in containers to avoid contact between raw and prepared foods
- Cook food thoroughly, especially meat, poultry, eggs and seafood
- Use safe water or treat it to make it safe
- Wash fruits and vegetables thoroughly, especially if eaten raw
- Do not use food beyond its expiry date
-

6- Environment:

The effects on human health of environmental hazards have been of growing concern to the populations for years. The mechanisms behind environmental effects on the health of populations are complex. Experience has shown that such effects can be ameliorated only within a context of sustainable development, by working together with the relevant authorities and stakeholders to combat with this issue.

The housing environment is one of the main settings that affect human health, the quality of housing plays a decisive role in the health status of the residents; the poor living conditions caused by a lack of sanitation and knowledge accessibility pose major problems in community which also represent an unevaluated health risk especially in the place where the outbreak of AI virus occurred.

7- How to use vital aid effectively and methods of facilitate training and group discussions

- Working closely with Ministry of Health, Agriculture and relevant stake holders
- Conduct basic and refresher training to RCVs and stakeholders on AI dissemination and how to monitor outbreaks of AI virus.
- Participatory methods for group discussion, house to house AI outreach education.
- Using peer education system to conduct AI outreach education and group session in community.
- Created RCV dissemination plan to main targets groups
- Develop and distributed IEC materials, leaflet, booklet, poster and pamphlets to target group and key locations (hospitals, schools, pagodas)
- Conduct refresher training for RCVs every six months
- Conduct door to door dissemination, group dissemination, Video show and quiz show in public.
- Extend program to other all 24 provinces Integrate AI into national school curriculum
- Conduct special campaign on AI to raise awareness in target community

APPENDIX 3

List of AI campaign beneficiaries by province

| Provinces & Districts | 108,000 beneficiaries | 151,934 beneficiaries | 141% |
|--|--------------------------|--------------------------|------|
| 1. Phnom Penh | 4,500 | 11,912 | |
| 2. Kandal province (Koh Thom Sar Ang, Loeuk Dek districts) | 4,500 | 2,823 | |
| 3. Prey Veng province (Kampong Trabek,Preah Sdach, Peam Chor districts) | 4,500 | 3,899 | |
| 4. Svay Rieng province (six districts) | 4,500 | 4,156 | |
| 5. Kampong Cham province (Porgnea Krek, Memot districts) | 4,500 | 5,451 | |
| 6. Takeo province (Trang, Koh, Kirivong districts) | 4,500 | 6,812 | |
| 7. Kampong Speu province (Samraung Torng, Chbarmorn, Uddornng districts) | 4,500 | 4,607 | |
| 8. Kep city province (Damnak Chan Oeu district) | 4,500 | 1,676 | |
| 9. Mondulkirie province (Senmonorom, Koeseymar, Oraing, Peach Chorada, and Khos Ngek districts) | 4,500 | 9,540 | |
| 10. Rattanakirie province (Andung Meas, Ohyadaye, For keoy, Vine Sai, Lumpate, Kunmom, and Banlong districts) | 4,500 | 6,643 | |
| 11. Stung Treng province (Siembouk, Sesan, Strung Treng, and Talaborowate districts) | 4,500 | 1,871 | |
| 12. Kratie province (Kratie, Sambo, and Preak Prasub districts) | 4,500 | 11,352 | |
| 13. Kampong Thom province (Baray, Stoeng Sen, Kompung Svay districts) | 4,500 | 10,399 | |
| 14. Preas Vihear province (Orvieng and Chham San districts) | 4,500 | 2,534 | |
| 15. Siem Reap province (Sonikum, Prasad Balaing, Banthey Srey, Ankorg Thom, Siem Reap, and Pouk districts) | 4,500 | 5,629 | |
| 16. Otdar Meanchey province (Chong Kal district) | 4,500 | 4,432 | |
| 17. BantheyayMeanChey province (Monkhul Borey, Serey Sauphom districts) | 4,500 | 7,073 | |
| 18. Khos Kong province (Smarch Meanchey district) | 4,500 | 5,343 | |
| 19. Preas Sihanouk province (Khan Metapheap, Prey Nub, Stoeng Hav districts) | 4,500 | 9,585 | |
| 20. Kampong Chhang province (Kampong Chhang, Orleaphear districts) | 4,500 | 10,737 | |
| 21. Battambang province (Kam Rieng, Samlout, Tmar Koul, Eak Phnom, Sangke, Banan, Battambang districts) | 4,500 | 6,110 | |
| 22. Pursat province (Sampovmeas district) | 4,500 | 10,827 | |
| 23. Paillin city province (Salakrav, Paillin districts) | 4,500 | 4,641 | |
| 24. Kampot province (Kg. Bay, Kampot, Kg. Trach, BantheyayMeas, Angkor Chhey, Chouk, Dang Tong, Chhum Kiri districts) | 4,500 | 3,882 | |

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APPENDIX 4

t-shirt and poster used in campaign



