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# GENDER ASSESSMENT OF AVIAN INFLUENZA IN EGYPT



April 2010

This publication was produced for review by the United States Agency for International Development. It was prepared by DevTech Systems, Inc., for the Short-Term Technical Assistance & Training Task Order, under Contract No. GEW-I-01-02-00019-00.

# **GENDER ASSESSMENT OF AVIAN INFLUENZA IN EGYPT**

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**Photo Credit: Dr. F. Hosny, Stop-AI**

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

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## **Acknowledgements**

The gender assessment team, Virginia Lambert and Hanan Radwan, appreciates the patience and preparation that the USAID Health Office staff, collaborators, and partners gave in sharing their understanding of the issues related to Avian Influenza in Egypt, in making background materials available to us, and in accompanying us in viewing some of the issues first hand. The seriousness with which USAID considered the gender issues in Avian Influenza impact and control also is welcome. We particularly would like to thank Vikki Stein for her support in organizing the assessment and in providing guidance on the report.

## Acronyms

ADS	USAID Automated Directives System
AI	Avian Influenza
CDA	Community Development Association
CDS	Center for Development Services
CHL	Communication for Healthy Living
CIDA	Canadian International Development Agency
EDHS	Egypt Demographic and Health Survey
FAO	United Nations Food and Agriculture Organization
GOE	Government of Egypt
GOVS	General Organization for Veterinary Services
H1N1	The “Swine Flu” virus
H5N1	The Avian Influenza virus
KAP	Knowledge, Attitudes, and Practices
MOALR	Ministry of Agriculture and Land Reclamation
MOH	Ministry of Health
NAMRU3	U.S. Naval Medical Research Unit No.3
NGO	Non-governmental organization
USAID	United States Agency for International Development
WFP	World Food Program

## Executive Summary

As part of the USAID/Egypt strategic review of its support to the Government of Egypt (GOE) to control the spread of Avian Influenza (AI) in poultry and to avoid human infection, the Mission undertook a gender assessment. The analysis focuses on understanding the underlying gender issues related to AI, especially in terms of food security, child malnutrition, poverty, and human infection, and provides recommendations to take account of gender in future AI-related activities.

The poultry industry in Egypt is diverse and includes large-scale technical, fully integrated, and industrialized poultry and egg production firms (sectors 1 and 2); small-scale family-owned commercial farms operating mostly in the informal sector without registration or licenses (sector 3); and a vast number of household or “backyard” producers (Sector 4) throughout the country, comprised of mostly women who raise poultry for family consumption and sale in local markets. The brunt of the government’s control measures taken in response to the AI crisis have been directed at relatively small-scale commercial farms; and more importantly, at rural women who are household producers and are a relatively powerless, invisible, and politically inactive part of the population.

The impact of these control actions— including culling poultry, closing farms, eliminating poultry-raising in some areas, restricting movement of live birds, and prohibition of live bird markets— has been negative for the households, the women in these households, and the control of AI in both animals and humans. From a macro-economic point of view, these failed actions have weakened the entire poultry industry, with repercussions through all links in the poultry production value chain.

The virus is now endemic in Egypt’s poultry population, and the task of future policy and actions is the long-term reduction of the risk for humans and for the poultry industry. The shortcomings of previous interventions may be ascribed in part to insufficient attention to socio-economic considerations, including gender. The historical, cultural, and economic significance of household poultry-raising and live bird markets was also largely overlooked, and resulted in a failure to recognize the status, independence, and empowerment of rural women in the family and the community. To be sustainable, future policies must be socially viable and collaborative, and should seek to correct the effects of the AI response in Egypt to date in terms of poverty, malnutrition, health, increased social inequality as well as the general suspicion of and lack of confidence in relevant government entities.

The focus of this assessment is on the household producers (sector 4) and small-scale commercial farms (sector 3), since gender relations are a key aspect of the poultry production value chains in these sectors. Drawing on livelihood assessments and discussions with implementers involved with the programs, the assessment documents the extent of the disruptive impact of AI and the control measures on rural women. The income generated by women through poultry-raising was a significant part of rural household income, particularly among the poorest households. The interruption of this

income stream, without the generation of viable alternatives, has been particularly harsh for households headed by women, many of whom relied almost entirely on income from selling poultry and eggs. Studies also have documented the impact of AI and the control measures on household food consumption and animal protein, with negative results for childhood nutrition. The loss of income also affected school attendance since women often used these earnings to cover school fees.

The lack of understanding of the way in which these measures were imposed and the observation that only a few people have fallen ill or died from AI have contributed to an aura of distrust. Some women have been reluctant to re-stock their flocks; others have questioned the urgency of adopting new practices for safe poultry-raising and avoiding human infection. The analysis of the socio-economic context and gender relations for sector 4 household poultry-raisers should serve as the basis for design of additional campaigns and messages to re-build trust, as well as a collaborative approach to control the spread of the virus in household flocks and protect the women and children who care for the birds. In addition, recognizing that although the women in rural households are responsible for poultry, their husbands/male relatives also have roles in managing expenditures and, in some cases, buying and selling birds. Behavior change messages should be directed to both women and men.

In contrast to the studies of socio-economic impacts of AI, gender relations, and livelihoods among household producers, minimal attention has been given to the gender roles and relations related to poultry production in the small-scale family-owned commercial farms (sector 3). The male head-of-household is designated as the owner and manager of the farm. However, as family-owned operations often have poultry sheds located adjacent to family residences, experience suggests that the wife and other family members are also involved in farm management. As increasing attention is being given to sector 3 commercial farms in terms of policy measures and assistance in bio-security, a rapid assessment of the socio-economic context, the roles of the wife/others in the household, and of the gender relations in management of these farms is recommended as a base for socially viable and sustainable measures.

Gender relations also are important in understanding the pattern of human infection and mortality from AI in Egypt. Over the past four years since the virus first emerged in Egypt, 104 people have been infected and 30 have died. Sixty percent (60%) of the victims have been female. While the majority of the victims have been children (age 15 or less), most of the fatalities have been adults, and in particular, adult women (73% of all deaths). There is no evidence that the greater vulnerability of adult women is due to biological factors or to differences in care. Rather, it is attributed to two factors linked to gender roles: greater contact with live birds and delay in seeking care. Statistics show a clear correlation between recovery and the amount of time that passes between the onset of symptoms and the beginning of treatment. Women's delay in seeking medical assistance may be tied to denial of symptoms because of household and childcare responsibilities; the inconvenience of traveling to a medical center because of the need for male accompaniment; and the fear of losing the poultry flock to culling if an AI infection is confirmed. By contrast, both parents are likely to respond quickly to any influenza symptoms in their children.

Communication campaigns and active surveillance programs should take these gender-based constraints for women into account to reduce mortality, and importantly, work to overcome and reverse the distrust and fear generated by past policies.

The report concludes with two broad recommendations for the future strategy. First, social scientists should be engaged to provide an assessment of the potential socio-economic impact of policies and strategies, focused on gender relations involving men as well as women, and particularly on the central roles of women. Secondly, the understanding of gender roles and relations should be mainstreamed into the activities so that as policies are implemented they include actions to mitigate the impact on poor women, to assist in making household poultry production safe, and to ensure that the agencies and their agents in the villages are sensitive to the roles and constraints of rural women.

## I. Introduction

### Purpose and Scope of the Study

The U.S Agency for International Development Mission in Egypt (USAID/Egypt) has supported the Government of Egypt (GOE) in its response to avian influenza (AI) since the H5N1 virus appeared in the country in February 2006, first in poultry and later in people. This gender analysis of AI programs and policies in Egypt is part of a USAID strategic review of its activities in this area. The purpose of the gender assessment is twofold: 1) to understand the underlying gender issues related to AI in poultry and humans, especially in terms of food security, child malnutrition, poverty propagation, and human infections; and 2) to provide recommendations to take account of gender in activities to mitigate AI.

Gender is a social construct that refers to relations between the sexes, based on their relative roles. It encompasses the economic, political, and socio-cultural attributes, constraints, and opportunities associated with being male or female. As a social construct, gender varies across cultures, is dynamic, and open to change over time.<sup>1</sup> Gender analysis involves an understanding of the relationship between men and women in terms of the roles they play, which are both different and interdependent, the relationship of power between them and their differential access to resources. In USAID, this analysis is addressed through two questions:<sup>2</sup>

- How will the different roles and status of women and men affect the work undertaken?
- How will the anticipated results of the work affect women and men differently?

The GOE responded to the appearance of avian influenza as a crisis, through a series of measures intended to stop the spread of the virus in animals and eliminate it, and to avoid human infection. In addition to a massive and immediate communication campaign to alert the public to the gravity of the crisis, control measures were directed primarily to the relatively small-scale commercial farms and, more importantly, to the vast numbers of household producers, who are mostly women and raise poultry in their homes for household consumption and sale in the local market. The impact of these control actions, such as culling poultry, closing small commercial farms, eliminating poultry-raising in some areas, and outlawing live bird markets— undertaken without attention to socio-economic considerations, including gender— has been negative for the households, the women in these households, and the control of AI in both animals and humans. Gender analysis is useful in understanding these impacts.

The highly integrated, large-scale industrialized poultry production operations also were subject to surveillance and culling, but to a large extent these efforts were managed internally rather than by government agents. The formal sector registered and licensed firms also were in a position to access the government compensation program to mitigate the economic impact of the control measures. The large scale firms, however, have felt the

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<sup>1</sup> USAID Automated Directives System (ADS) 201.3.9.3.

<sup>2</sup> USAID ADS 201.3.9.3.

strong negative impact of the jolts and fluctuations in the market resulting from the panic surrounding the onset of the crisis.

Gender roles also are a factor in human infection, with higher rates of infection and death among adult women than men. Women have been identified as the principal audience for communication messages about the virus and appropriate behavior to avoid human infection and to raise poultry properly, and the media and content of the messages have been designed accordingly.

### **Overview of the Poultry Industry**

The United Nations Food and Agriculture Organization (FAO) classifies poultry production units in four categories based on scale of production, degree of integration, and bio-security measures. The first three categories (i.e., sectors 1, 2, 3) refer to commercial production; sector 4 is village or backyard production for local consumption. Sector 1 consists of large, fully integrated industrial operations. Sector 2 firms are similar to sector 1, but somewhat smaller and less integrated. Bio-security standards are high, and slaughtering, processing, and marketing are controlled by the parent corporation. Sector 3 farms, the most numerous, are usually family-owned, producing between 5,000 and 15,000 birds per cycle, with minimal bio-security and marketing through the live bird markets.

All four sectors are present in the poultry production system in Egypt. Industrialized commercial production (sectors 1 and 2) began in the 1960s, and is dependent on imported breeds and supplies. Production in sectors 1 and 2 includes breeders, layers for table eggs and, to a lesser extent, broilers for meat. Sector 3 farms have imported and native breeds (and crosses). Domestic breeds are preferred by consumers and bring a higher market price than imported breeds. Farms classified as sector 3 are mostly broiler (meat) production units, although they also include traditional hatcheries and some egg production units. Most of these farms operate within the informal economy. Approximately 80% of the estimated 25,000 commercial poultry farms in Egypt (sectors 1, 2, and 3) are not registered.<sup>3</sup>

Government tariffs and subsidies in the 1980s and 1990s to encourage the growth of the domestic poultry industry contributed to inefficient practices, which led to drops in production at the turn of the century when the protection was lifted, even before the onset of avian influenza. During the 1960s and early 1970s, household production accounted for most of the poultry meat and eggs consumed.<sup>4</sup> The most recent estimates for the distribution of production by sector demonstrate the continued importance of the less formal systems of production.

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<sup>3</sup> UN 2010.

<sup>4</sup> Poultry sector country review. FAO Animal Production and Health Division. Emergency Centre for Transboundary Animal Diseases, Socio Economics, Production and Biodiversity Unit. (July 2008).

The distributions<sup>5</sup> are:

<b>Table 1. Distribution of Production by Sector</b>			
<b>Meat</b>		<b>Eggs</b>	
<b>Sectors 1 and 2</b>	<b>28%</b>	<b>Sectors 1 and 2</b>	<b>48%</b>
<b>Sector 3</b>	<b>55%</b>	<b>Sector 3</b>	<b>20%</b>
<b>Sector 4</b>	<b>17%</b>	<b>Sector 4</b>	<b>32%</b>

Domestic poultry in Egypt include chickens, ducks, geese, turkeys, and pigeons. Commercial production is limited almost exclusively to chickens. The diversity is important at the household level, where the mixing of species is crucial not only to household livelihood strategies and cultural practices, but also to control of AI. Since ducks are asymptomatic after infection for an extended period, they are often carriers of the virus into household flocks.

Little attention was given to the sector 4 producers before the outbreak of AI. Poultry-raising by women has been an integral part of the rural household for centuries, and largely ignored in national accounting as an economic activity. The estimated number of households raising poultry for home consumption and local sale (before AI) ranges from five to eight million. The economic, livelihood, and social importance of sector 4 production has become increasingly apparent as a result of the observed negative impacts of the government controls in response to AI.

## **Avian Influenza in Egypt**

### Animal Health

Since February 2006, approximately 1,665 outbreaks of AI have been reported in poultry in all parts of the country, although the seven governorates with the highest concentration of poultry production account for 70% of the outbreaks. “Outbreaks have been detected in over 920 commercial farms (sectors 1, 2, and 3) and over 530 backyard/rooftop operations. Over 40 million birds have been culled.”<sup>6</sup>

Most reports of these statistics caution that they are likely distorted by the more intensive surveillance in the household sector compared to the commercial farms, and by general under-reporting. In the household sector, women are reluctant to contact authorities when their birds fall ill because of fear of culling and losses for themselves and their neighbors. (They feel they are “blamed” for the outbreak.) In the commercial sector, reporting means financial loss and temporary or permanent closure of the farm. Reports of outbreaks also cause market fluctuations that interrupt production and create waves of loss throughout the

<sup>5</sup> Distributions are quoted from the PowerPoint presentation prepared by Dr. Farid Hosny for the gender assessment team. Data on the scale of production in each sector varies across sources, although the relative proportion attributed to each sector is basically the same. The primary difficulty in identifying the number of birds is in Sector 4, and to some extent in Sector 3, which continue to operate outside the formal system.

<sup>6</sup> UN 2010.

commercial value chain. Farmers seek to dispose of infected birds themselves, sometimes through the live bird markets in order to cut their losses.<sup>7</sup>

### Human Health

Between March 2006 and March 2010, Egypt confirmed 103 human cases of avian influenza (43 males and 60 females). Of these reported cases, 30 people have died. The death rate is highest among adult women (over age 15), who account for 73% of deaths. Egypt accounts for a significant proportion of the world's reported H5N1 human cases, but the 29% fatality rate is significantly lower than in other countries. Also, the average age of the victims is lower: 60% have been age 15 or less. The lower mortality rate in Egypt as compared to other countries correlates with a shorter average time between onset of symptoms and medical treatment. Likewise, in Egypt, the higher mortality rate among adult women compared to adult men (there is no gender disparity among those under age 15) has been attributed to delay in seeking medical attention. Neither sex of the person or quality of treatment appears to be a factor in the higher mortality among women.

In the past, infection rates have been highest in the first four months of the year. Only 8 cases were confirmed in 2008, compared to 18 in 2006 and 25 in 2007, but the number rose to 39 in 2009, and cases were more evenly spread throughout the year than in the past. Thirteen cases have been reported through February 2010.<sup>8</sup> Relatively little is known about the process of human infection except that the virus enters through the respiratory system, and in Egypt, all confirmed cases have had contact with sick or dead poultry. The fact that only 103 people have become ill and only 30 have died in the four years since the disease entered Egypt, and the lack of explanation for why most people who handle poultry do not become ill, have contributed to skepticism about the actual threat and rejection of the government's strong emergency actions to counter it.

The reporting on human infection does not provide information on the source of the contact with poultry but most cases are attributed to the household (sector 4) or the live bird markets, which are the points of most direct contact between people and birds.

### **The Poultry Production Value Chain**

Avian influenza has been endemic in poultry in Egypt since 2007. The emergency measures directed to the women in sector 4 and the relatively informal commercial farms of sector 3 were not only ineffective in stopping the spread of the virus but also may have been counterproductive through the creation of an atmosphere of distrust and subterfuge, and damaging to food security, income, and social status of women.<sup>9</sup> Recent analysis by USAID and FAO of poultry production value chains sought to identify the intersections

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<sup>7</sup> The most recent AI update from USAID/Washington (Clements 3-5-10) questions the accuracy of the report of animal outbreaks in 2009, since it does not show an increase over 2008 similar to that in human infections. Since people become ill through contact with infected birds, the increase in human cases should be matched by an increase in outbreaks in poultry. Human cases are almost always reported before animal cases. UN 2010.

<sup>8</sup> These data are consistent with (Clements, 3-5-10) except that he reports 14 cases through February 2010, for a total of 104 cases. Since no information is available on the age, sex, or outcome of this most recent case, it has been omitted from the other statistics.

<sup>9</sup> UN 2010.

across the sectors, and illuminate the social contexts related to consequences and strategies to repair damage and control risk:<sup>10</sup>

- The poultry in the household sector, which is destined for family consumption and the local market, does not leave that sector. On the other hand, birds from commercial farms enter the household sector through purchases in the live bird markets and hatcheries. The backyard and rooftop coops are not the source of the infection, but rather the recipients and victims of the spread of the virus. Eliminating these traditional practices will not eliminate the disease. The source of the infection is likely the commercial sector.
- Humans move between the different sectors and may serve as agents for carrying the virus from place to place, and flock to flock. Rodents, crates, packing boxes, means of transport, and litter disposal may serve the same function.
- The greatest risk for human infection is in the household sector and the live bird markets because of the direct human/animal contact, and the introduction of the virus through infected animals.
- Bio-security measures are required to prevent human infection in the live bird markets, in home production, and at various points in the commercial value chain to reduce the spread of animal infection. Human infection results from animal infection.

The unanticipated negative results of the government's direct control actions during the past four years have demonstrated the importance of analysis of the value chain of poultry production across the four sectors, and of the social context to which these actions are directed. While the government's communication campaign was effective in informing people about H5N1, the message was overridden by distrust and rejection of the controls imposed with little understanding or concern for their social impact.

Rural women, a relatively powerless, invisible, and politically inactive segment of the population, bore the brunt of the negative social and economic consequences of these actions. Because the virus is now endemic, the task of policy in the future is the long-term reduction of the risk for humans and for the poultry industry. Such policies must be socially viable and collaborative rather than punitive in order to be sustainable. Analysis of gender roles and relations is useful not only to understand and correct the damage of the earlier policies, but also to understand the terms of social viability in the design of new policies. Gender relations are a key aspect of the poultry production value chains in sectors 3 and 4, of household livelihoods and food security, and of the physical well-being and health of family members.<sup>11</sup>

### **Sources of Information and Organization of the Report**

The information in this report is drawn primarily from secondary sources, supplemented by approximately one week of meetings with program implementers and brief field visits to

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<sup>10</sup> See, for example, FAO 2008, UN 2010.

<sup>11</sup> There is little indication in the literature of direct gender implications for AI in the industrialized sectors 1 and 2, and minimal information in the literature about AI in these operations.

villages in Sharqiya and Fayoum. The value of this report lies in the application of gender analysis to this material.

The principle focus is on sectors 3 and 4. The discussions in parts II and III of the report focus on socio-economic relations in these sectors, the impact of government policy and actions in response to AI on women and men, and the importance of taking account of gender roles in the new strategy. Part IV provides preliminary analysis of potential gender considerations to other points on the poultry production value chain, in terms of the relative impact of policies and actions on men and women, and of the importance of taking gender relations into account in building sustainable and effective programs. Part V addresses gender issues relative to human infection. Recommendations for programming are included in each section, and the overall findings and recommendations are summarized in the last section.

## **II. Household (“Backyard”) Poultry Production: Sector 4**

### **Background**

Poultry-raising is an integral component of Egyptian rural culture. It is also an important source of income and livelihood for rural families. A common saying in rural Egypt is that “a family can never go hungry or suffer as long as it has one of two things: livestock or poultry.”

Although precise data on the size of household poultry production in Egypt are not available, it is estimated that five million Egyptian families raise a total of 300 million poultry.<sup>12</sup> The majority of these households are located in the rural areas, although recent years have witnessed a growing number of so-called “rooftop coops” in slum areas of Cairo, Alexandria, and other major cities. Women are the main caretakers and owners of the birds, of which chickens are the most popular, followed by ducks, geese, pigeons, and turkeys. Although imported species are common in sector 4 flocks, local preference favors the “*baladi*” or traditional species for their productivity (quick growth, long life, high hatching rate), profitability (inexpensive to manage and sell for higher prices than imported species) and adaptive traits (resistant to cold and hot temperatures).<sup>13</sup>

Before AI, free-range poultry was a common sight in most rural areas, especially water-borne birds like ducks and geese. Since 2006, however, flocks have been mostly kept within the confines of the homes in one or more locations: a) in rooftop sheds; b) left to wander freely on the roof; c) in sheds behind or adjacent to the home; d) in a separate room, often adjacent to living quarters; and e) left to wander freely in the house. The 2008 Egypt Demographic and Health Survey (EDHS 2008) reports that 75% of the respondents with poultry reported that poultry were kept in cages or enclosures at least part of the day. The comparable figure before 2006 was 41%.

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<sup>12</sup> FAO 2008.

<sup>13</sup> FAO/WFP 2007.

## Cultural, Economic and Social Factors

Poultry-raising has been a crucial and intricate element of Egyptian culture since the Pharaonic era, as engravings on ancient Egyptian temples reveal. Poultry care is a vital activity in the daily life of rural women in Egypt, frequently the first chore of the day. As one female farmer put it, “I feed my birds before I feed my family breakfast. Once I have taken care of them, I tend to my other chores before going off to the field.”

Poultry-raising in Egypt is a vital source of income, earned, and controlled by women. A rapid assessment undertaken by FAO/WFP in 2007 revealed that apart from households that used eggs and birds exclusively for home consumption, the sale of poultry and eggs is estimated to contribute an average of 44.5% to household income.<sup>14</sup> The income earned by women from poultry-raising is used to purchase food and other necessities such as soap, gas, tea, sugar, and clothes. A significant portion of poultry-derived money is also spent on paying school fees and purchasing school materials; with the AI outbreak, some of the women had to take their children out of school because they were no longer able to pay school fees or provide the necessary materials.<sup>15</sup> A Knowledge, Attitudes, and Practices (KAP) study undertaken by the Center for Development Services (undated) indicated that 94% of the household poultry producers use the money earned to pay for household expenses.

A question could be raised on the particularity of poultry-raising as an income source for women relative to other possible sources. Several reasons can be provided:

- Poultry production is an important source of animal protein relative to livestock meat, which is more expensive;
- Poultry raising is a relatively inexpensive activity where kitchen leftovers and broken seeds can be used as feed;
- Poultry manure can be used as a fertilizer for crop production;
- Unlike larger livestock, poultry production is not dependent on land ownership, which is significant given that only 24.5% of rural households own land;
- Poultry is an important item consumed at festivals (weddings, births, funerals) and religious and traditional ceremonies.<sup>16</sup>

Household (sector 4) poultry production is the oldest form of poultry-raising in Egypt, but unlike the commercial sectors, it is not legally supported and therefore does not enjoy the direct benefits that accrue to licensed and registered farms. The FAO/WFP livelihoods impact study indicated that 94 % of the sample households kept poultry before the AI

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<sup>14</sup> The 2007 FAO/WFP rapid assessment of the livelihoods impact of AI and its control involved 550 respondents in 24 villages in the governorates of Assuit, Fayoum, Minya, and Sohag. The study sampled three household categories, very poor, poor, and medium, defined on the basis of landholdings, jobs, sources of income and social status. The “very poor” have the highest proportion of female-headed households. The proportion of households with a formal job and income from land is highest in the “medium” category. Income derived from poultry before AI varies considerably being nearly 100% among the “very poor” and nil among some “medium” households that have poultry only for home consumption.

<sup>15</sup> FAO/WFP 2007.

<sup>16</sup> FAO 2008.

outbreak in 2006. In 2000, traditional operations produced 22% of chicken meat, 64% of ducks, 34% of turkeys, and all geese and pigeons.<sup>17</sup>

### **Gender Roles and Relations Relative to Poultry**

Poultry-raising within the household sector (sector 4) is an activity carried out almost exclusively by the women, with occasional help from their children (mostly girls). This means that women are responsible for feeding, caring, slaughtering, and de-feathering of the birds. Women earn and generally decide how to spend the income derived from household poultry production.

Female-headed households, where women run and manage the household including the generation and control of income, are usually among the poorest in Egypt. These women are widows, divorcees, or widowed mothers whose sons have migrated and either do not contribute to household maintenance or send remittances. Female-headed households have been particularly hard hit by the poultry control measures taken in response to AI because these women usually do not have alternative sources of income. According to the 2008 EDHS, 13.4% of all households are headed by women, 15% in urban areas and 12% in rural areas. In addition to remittances, the women may work as day laborers in agriculture or as factory workers, fruit/vegetable vendors, maids, and as vendors in the live bird markets.

Although household poultry-raising is generally associated with women, an interesting observation noted from the field visits is that increasingly, important elements of poultry-raising are decided and performed by their husbands/male relatives. For example, purchase of chicks and feed may be provided for by the men who in most households control the family earnings. Even in cases where women can purchase their poultry requirements from money that they have earned, it is customary for them to obtain their husbands'/male relatives' approval before acting. As one housewife encountered in Fayoum remarked:

“I can't go to the market or buy anything without my husband's approval since he's the one who has the money. Usually, our men don't object to us buying poultry or feed but since they are the heads of the households, we have to seek their approval first before doing anything.”

Although the scope of the study did not allow for coverage of governorates in Upper Egypt south of Fayoum, it is reasonable to assert the different gender relations between Upper Egypt versus the Delta, including with respect to men's control over decision-making and women's relative mobility. In Upper Egypt, where social traditions are more conservative, the male heads of households have the upper hand in decision making for almost all matters related to the household. Moreover, women in Upper Egypt are mostly confined to their homes and do not enjoy the freedom to move around within or outside their villages like their counterparts in the Delta.

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<sup>17</sup> TAHA 2003 found in FAO 2008.

These two aspects may give rise to the following gender implications with respect to AI:

- Decisions related to poultry-raising such as purchase of inputs (chicks, birds, feed, etc.) and sale of eggs/meat may be controlled by the male head of household.
- Certain poultry related activities such as buying, selling, and slaughtering may be taken over by the men. This means that men may be more at risk of contracting AI in Upper Egypt than in the Delta.
- Women who contract AI themselves or whose children become ill may find it difficult to seek medical help for themselves or their children without a male escort.
- Women may not have control over decisions and income related to seeking medical care (e.g., for transportation).

Given these differences, a regional gender analysis in Upper Egypt may be needed to design effective communication strategies and messages that take account of men as a potential target group, and that are tailored to the restricted mobility and decision-making of women.

### **Government AI Response Activities and Impact**

The main policy responses that followed the AI outbreak consisted of direct control measures such as massive culling of household poultry (and closure in the case of sector 3 farms). The gender implications of these policies lie in the impact on women through the reduction of their flocks:

- reduction of household income;
- a sharp decline in meat and egg consumption which affects the nutrition of children;
- a decline in the decision-making role and status of women; and
- strained social relations with husbands and male relatives.

These impacts are described below.

#### Poultry Production and Household Livelihood

The AI outbreak in February 2006 resulted in the culling of over 40 million birds throughout the country. Consumers avoided poultry and meat products, and the government imposed regulatory restrictions on balcony, rooftop and backyard family runs, small-scale poultry production units, closure of live bird markets, and movement restrictions.<sup>18</sup>

During the initial AI crisis over 20,000 poultry coops from rooftops and balconies in poor and middle class residential areas were destroyed in Cairo alone. Prices rose significantly. There was a three-fold increase in the price of table eggs and the cost of poultry meat doubled. Prices for camel and beef rose. In short, the prices of all animal and fish protein sources almost doubled in response to severe shortages in supply rather than increase in demand. Consumption of animal protein dropped with serious health consequences, such

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<sup>18</sup> FAO 2008.

as protein malnutrition syndrome especially in the sector of the population living within and below the poverty line.<sup>19</sup>

Aggregate figures for the impact of AI and the subsequent governmental policies on the household poultry sector are lacking.<sup>20</sup> However, according to the 2008 EDHS, nationally the proportion of households reporting poultry-keeping declined by more than half between 1988 and 2008, as did the average number of birds per household. This decline is undoubtedly in part due to the AI crisis. The FAO/WFP 2007 livelihoods study found the deepest impact among the “very poor” households, where the total number of birds kept fell by 92%, due to reduction in the number of households keeping birds and the size of flocks. The reduction in the “poor” and “medium” categories was 82% and 72%, respectively.

Similar results were found in the 2009<sup>21</sup> FAO replication of the earlier rapid assessment of the socio-economic impact on vulnerable households, based on a sample of households in Gharbia and Fayoum.<sup>22</sup> This study found that 99% of households kept poultry before 2006, but the percentage had declined sharply to 60% by 2008. Again, AI and the resulting control measures had the greatest impact on the “very poor,” in terms of reduction in the number of households keeping birds and the total number of birds kept, which fell by 80 percent. For this sample, on average, poultry production was the main source of income before the outbreak, mainly through the sale of birds, accounting for 32% of the income of the “very poor” households, of which about 60% were headed by women.<sup>23</sup>

The negative impacts of AI have been compounded by the lack of alternatives to poultry-raising for women. In the FAO/WFP 2007 study, about 70% of the participants in the group discussions and household interviews said they had no particular strategy for generating income, apart from sending children to work or working as day laborers in agriculture. Only 17 women (13%) included in the study had found new income sources, in petty trade, making of clothes, selling vegetables, working as housemaids, seasonal labor working on agricultural land, selling milk, and husking maize. The majority of households interviewed became fully dependent on the husband’s salary and transfers, with the proportion of households dependent on these sources increasing from 7% before 2006 to 63% after the AI outbreak. Only 17% of the households continue to derive some income from sale of poultry and eggs, compared to 90% before 2006. In lieu of alternative income, women have instead had to cut expenditures to adapt to a lower income level. Depending on the income level, these adaptations included changes in diet, reduction in medical treatments and medicines, fewer funds for children’s education, and diminished savings for special occasions like a daughter’s wedding.<sup>24</sup>

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<sup>19</sup> FAO 2008.

<sup>20</sup> Ibrahim 2006.

<sup>21</sup> The second study (FAO 2009) used the same methodology and categorization of households as FAO/WFP 2007 to assess changes in 2007 and 2008. This study covered 16 villages and interviews with 16 key informants and 194 households, and group discussions involving 64 people.

<sup>22</sup> FAO 2009.

<sup>23</sup> FAO 2009.

<sup>24</sup> FAO/WFP 2007.

## Children

The AI outbreak and the subsequent control measures have reduced the consumption of poultry meat and eggs, especially by children. According to the FAO/WFP 2007 livelihoods assessment, the overall trend among households has been to reduce animal proteins in the form of eggs, poultry meat, milk, and milk products in favor of cheaper vegetable proteins in the form of beans, lentils, and chickpeas. This trend has become a vicious circle because the lack of poultry and poultry products has increased the prices of most food items, in particular animal protein sources. The 2008 EDHS suggests that the decrease in animal protein as a result of the AI crisis may be a factor in the recent increase in acute and chronic malnutrition in children under age five identified in the survey. Patterns of malnutrition in children had been stable in Egypt between 2000 and 2005. The recent increase coincided with the appearance of AI in 2006.

The loss of income from poultry-raising in poor rural households also has had a negative impact on children to the extent that mothers are unable to cover the costs of schooling and have withdrawn their children from classes. Some women reported that their only alternative source of income to poultry has been for their children to go to work.<sup>25</sup> Children also have been victims of the crisis through contracting the illness because of their exposure to poultry in assisting their mothers at home and in the markets. The majority of the reported human cases of avian influenza in Egypt have been children (age 15 or below.)

## Status of Women

Not only is poultry-raising one of the few avenues available for rural women to contribute to household income security, it also is a significant source of independent activity and decision-making authority for women. The poultry, as assets held and controlled by women, provide them with a personal source of income and the capacity to make choices about how the income is spent (e.g., on children's education.) Both the assets and the income contribute to women's relative status in the household and the community, providing a sense of independence and empowerment. The AI crisis has diminished this source of negotiating power and choice, reduced women's resources to provide for their children, and led to a greater reliance on the husband's wage or financial support from male relatives. The resulting financial dependence of women and arguments over the use of limited financial resources has reportedly caused tension and intra-household conflicts.<sup>26</sup>

Women also have suffered a loss of self-esteem through their inability to meet social obligations linked to poultry. Chickens and eggs are important in social interactions, as an essential part of the meal on certain holidays and religious festivals, to mark social occasions like weddings, births, and deaths, and to provide as gifts to neighbors and guests.<sup>27</sup>

## **Response to the Government Actions**

Much of the literature and analysis that has been generated on the impact of AI and policy measures have centered on "hard" factors such as animal/human infections, poultry

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<sup>25</sup> FAO/WFP 2007.

<sup>26</sup> FAO/WFP 2007.

<sup>27</sup> FAO/WFP 2007.

production, and income. However, a closer analysis of the “soft” gender-related issues reveals other indicators which may not be as easy to record and enumerate but nevertheless offer telling implications on the impact of both women and men in the sector 4 process.

### Distrust

The massive culling program following the initial AI outbreak gave rise to antagonism and distrust by sector 4 households affected by the intervention. For one thing, those whose flocks had been culled (instances of which were observed during the field visits) were still reluctant, even four years later, to re-stock for fear their new birds would be confiscated as well. Even some households whose poultry flocks were not culled were hesitant to purchase poultry out of fear of possible culling by government agents.

A notable outcome of this distrust is reluctance by the women to reveal a) that they raise poultry; and b) the number or species of their birds, although another reason for this may be fear of the so-called “evil eye.” Interestingly, only two household members of an entire village (Hedhed Village, Bilbeis District, Sharqiya Governorate) agreed to allow the team members to look at their poultry. Others refused or denied that they raised any poultry even though the sounds of the birds could be clearly heard.

Recently, the government has placed more well-defined and less demanding restrictions on culling and has embarked on a nationwide communication and awareness raising program on preventive measures. Openness to and acceptance of these messages may be difficult, however, among women and men in the sector 4 category, owing to their apprehension about governmental activities following the culling and the fear that the latter measure may be repeated.

### Behavior

Some observers have cited a broad public apathy towards the threat of AI given the relatively small number of deaths from the disease. For example, in an awareness film produced by FAO, several women in Imbaba District (Cairo) commented “We live with these birds day and night and nothing has happened to us. So what is all this fuss about avian influenza?”<sup>28</sup> Further investigation on the extent of and grounds for these attitudes would be a valuable input to the design of the on-going behavioral change communication programs.

An interesting finding was highlighted in the KAP study conducted by the Center for Development Services on a sample of 2,100 married women between the ages of 18-45 years in seven governorates. Almost half (46%) of this sample stated that there was no difference between avian influenza and the “*shouta*” or Newcastle disease that has always affected and killed birds in Egypt, reinforcing the sense that rural women do not regard AI as a new or serious threat to either their birds or themselves. A telling example of the lack

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<sup>28</sup> FAO with CIDA 2009a.

of concern or fear is the case of one of the female respondents cited in the survey report:

“In the qualitative assessment we observed in one of the breeding houses a cage near the family living area. The breeder said that she is keeping the ducks in this cage because they are sick and she wants to keep an eye on them.”<sup>29</sup>

Survey results to measure how practices in poultry raising and slaughtering have changed since the advent of avian influenza vary depending on how and when the questions were asked. All show, however, that although most people are aware of the dangers of avian influenza for poultry and humans, fewer recognize the symptoms of the disease, and fewer still have converted their knowledge into changed preventive practices. For instance, the CDS KAP study found:<sup>30</sup>

- Only 51% of breeders who breed more than one type of bird separate them.
- Only 46% of breeders who breed ducks breed them in a separate place from other birds.
- About 34% of home poultry breeders who incubate fertile eggs raise the newborn chicks in the same place with other home birds.
- Only 38% of women and 29% of girls consider protective measures such as caging and hygiene practices in caring for and slaughtering birds in any way.
- About 30% of breeders ask their children to help in slaughtering birds, and only 32% of them reported that children cover mouth and nose when doing this.
- The majority of women and girls clean the breeding place by sweeping it only (79% of women and 78% of girls).
- When respondents were asked the question "what would you do if you found a dead bird in the street?" 42% of women and 49% of girls said that they would do nothing.

In sum, this “snapshot” of behavior at one point in time shows that despite the massive awareness raising programs initiated by different parties, many rural women who raise poultry still have not adopted the required preventive measures against AI. Furthermore, they exhibit indifference toward the potential threat caused by it or, in the case of reporting the virus, fear of a negative impact from their neighbors’ reaction. The 2008 DHS found that among those who knew about avian influenza only 23 percent thought there was any likelihood of a family member being infected. It is important to monitor these behaviors and attitudes over time and to adjust communication campaigns accordingly. As the risk of AI becomes a routine part of daily life do the preventive measures become routine or do they disappear when the crisis atmosphere passes? Projects such as Communication for Healthy Living (CHL) that have undertaken intensive awareness campaigns have noted significant positive changes over the years.<sup>31</sup> The strength of this type of grassroots campaign working at the village level through the Community Development Association (CDA) is in building trust and a sense of common good within the community, thus

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<sup>29</sup> CDS, un-dated document.

<sup>30</sup> CDS, un-dated document.

<sup>31</sup> CHL Annual Implementation Plan, FY 2010.

generating behavioral change. However, the scope of the impact may be limited by personnel, time, and financial resource requirements in each location.

### Communication and Decision-making within the Household

The gender implications of the AI outbreak and subsequent interventions in sector 4 concern both men and women. This is not only due to the involvement of men in decisions related to poultry-raising, but also to the fact that they may participate in activities that place them at risk of becoming transmission vectors or victims.

A noteworthy activity undertaken by the CHL project in involving men in communication messages has been the formation of “*dawar*” meetings in which prominent male members of a village and local officials discuss, among other things, health-related issues including AI.<sup>32</sup> According to the CHL progress reports, these meetings have become an important vehicle not only for discussing messages on preventive action but for information dissemination to the general public,<sup>33</sup> which would inevitably include their wives/female relatives and other women.

These observations and findings suggest communication and sharing of messages between men and women over topics like poultry-raising does occur. These topics had appeared to be the exclusive domain of women, but do involve men as stakeholders.

### **Community Outreach**

It is clear that the AI outbreak and the resulting measures undertaken to curb it have had a considerable and more visible impact on the household poultry-raisers classified under sector 4. Women have been particularly affected insofar as their health, livelihood and decision-making roles have weakened as a result of both the virus spread and the accompanying measures such as massive culling.

To be sure, communication and awareness raising efforts on the part of the government and assisting projects emphasize the importance of women poultry-raisers in sector 4 as their primary target group. However, the feedback and observations obtained from the interviews and field trips conducted for this report underscore certain aspects that require gender focused strategies in order to mitigate the negative effects of AI on rural women.

Since the AI outbreak, community outreach activities are being implemented intensely in sector 4 in order to communicate preventive and health messages to women poultry raisers. Those who are responsible for such outreach activities include, but are not limited to:

- Health workers (*ra'edat refeyat*) affiliated to the Ministry of Health;
- Extension workers affiliated to the Ministry of Agriculture and Land Reclamation;
- Veterinarians affiliated to the General Organization for Veterinary Services; and
- Volunteers affiliated to Community Development Organizations.

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<sup>32</sup> CHL Annual Implementation Plan, FY 2010).

<sup>33</sup> CHL, Annual Progress Report, FY 2009.

Although many of these workers are women and the vast majority may have field experience (in terms of familiarity with Egyptian rural conditions), it is doubtful whether they are knowledgeable or convinced of the gender dimensions and implications involved in the issue of AI. It may be asked, for instance, whether these workers are aware that: a) women poultry-raisers are not only vectors but victims of AI; b) poultry raising is a crucial element in the lives of these women, especially female-headed households; c) women may not readily accept awareness messages unless they are assured that they will not be harmed by culling or other measures; and d) outreach to husbands/male relatives who control decision-making in poultry raising and have a direct influence on changing women's attitudes/behavior is just as important as outreach to the women.

### **Recommendations**

Restructure the communication and messages, as well as the services to the sector 4 producers to rebuild trust and correct the negative impacts of previous policies.

Encourage safe poultry production and provide support to the women in terms of assistance in safe practices, soft loans for re-stocking, and protection against loss. One of the most important messages that could be directed to women is, "You can raise poultry and profit well from it as long as you employ certain hygienic and behavioral measures such as hand washing, wearing special clothes etc." Also, "You will be visited by veterinarians, extension workers, and health workers from the government. Listen to them and take what they say seriously." The messages directed to men would focus on the fact that AI is not a disease that concerns only women. Men and their children are implicated in it as well and need to be aware of and use the recommended precautions.

Undertake activities (e.g., training and other capacity building) to sensitize those who are responsible for communication and outreach to sector 4 communities of the gender implications and elements that need to be considered for the mitigation of AI impacts on women.

The role of men in poultry-raising may not be direct in terms of caring for the birds, but it is nevertheless relevant. It is thus important to include husbands and other male relatives as a target group in communication and awareness messages undertaken for the mitigation of AI impact. This involves designing specific awareness messages for men and their inclusion in outreach activities.

Communication and outreach programs should enlist the support of and coordinate with local NGOs to ensure effectiveness and sustainability of their activities. When active, local NGOs (CDAs) are an important source for outreach to women. This is because: a) their members are recruited from the local community and are thus known and respected by them; b) they are mandated to serve the community by providing services that improve their livelihood and well-being; and c) they contribute to the sustainability of development activities because they are an entrenched institution.

### **III. Small Scale Commercial Production: Sector 3**

#### **Background**

Increasingly, attention by the government, FAO, and USAID is shifting from household producers in sector 4 to sector 3 commercial farms as the source of the continuing spread of the H5N1 virus. Unlike farms in sectors 1 and 2, sector 3 farms are not industrialized or integrated operations. They are usually family/household businesses, with low levels of technology and some hired non-family labor. Most are owned by men and most of the laborers are men. Sector 3 farms are distinguished from household units by scale of production,<sup>34</sup> and by the fact that the birds are housed in structures, separate from but contiguous to the family house. The chicken sheds, often old and/or rented, are rudimentary and lack the fundamental structural components of bio-security (rodent control, ventilation, etc.). Bio-security practices are characterized as fair to poor. Many of these farms are neither licensed nor registered, although they are the primary client of government-provided veterinary and other poultry-related services.

Sector 3 farms account for the majority of the broiler production in Egypt, and are key suppliers of the live bird markets. Traditional hatcheries and most layer farms<sup>35</sup> also fall into this category and are the principal source of chicks for the sector 4 household producers.

Sector 3 farms have been identified as the target of efforts to control/manage the spread of AI because of the minimal practice of bio-security measures on these farms and, more importantly, the movement of the live birds for marketing. Transmission of the virus from sector 3 farms also may occur through the sale of chicks to household producers, from the movement of people (including government service providers) from one sector to another, and through inadequate disposal of waste materials.

Unfortunately, data on the actual incidence of AI in sector 3 poultry or humans are unreliable because the response of commercial farmers to government edicts since the onset of AI in Egypt has been circumvention and hiding the evidence. In addition, the literature on the impact of AI and of government control measures includes little insight into the socio-economic context and impact at the household level analogous to that reported for the sector 4 households. A key finding of this report is the importance of filling this gap in analysis as a base for developing socially viable policies and building compliance.

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<sup>34</sup> One or two sheds with 5000 birds each, producing 20,000 broilers annually, and/or up to 20,000 layers producing less than five million eggs per year (Hosny, F. "Analysis of Egypt's Poultry Production Value Chain" prepared for CHL, 30 June 2009, cited in draft).

<sup>35</sup> Seventy-five percent of the estimated 1703 layer farms in Egypt in 2007 were small-scale producers with non-caged birds (sector 3), accounting for approximately 28% of total egg production. (FAO 2008).

## **Government AI Response Activities and Impact**

The government actions to control AI after the initial outbreak in 2006 directed at sector 3 farms<sup>36</sup> included restrictions on the movement of birds across governorates, the attempted closure of live bird markets, and the mandate that birds should only be slaughtered in abattoirs. An outbreak of the disease in a sector 3 farm resulted in culling of the entire flock (and initially of all poultry within a three-kilometer and later one-kilometer radius), and the closure and decontamination of the farm for a minimum of one month or in some instances, indefinitely. In spite of a government compensation policy for culled birds, sector 3 farmers usually were not compensated because they were neither registered nor licensed. The actions to counter AI in sector 3 farms were considered punitive and clearly were costly.<sup>37</sup>

As in the case of sector 4 producers, the measures taken by the government were not only ineffective in stemming the spread of the virus, but may actually have contributed to it by forcing the farmers to take clandestine measures to avoid the costs and punishment. Live bird markets continued to operate but moved around, poultry shops moved the slaughtering operations to indoor locations, and outbreaks went unreported with sick birds being moved quickly into the market or killed and disposed of informally.

The impact of AI outbreaks and of the control measures for sector 3 farms at the macro-level are visible and have been documented. They include a reduction in the availability of poultry meat, eggs and other products, with repercussions on prices and on consumption of animal protein. Closing of farms reduces employment throughout the value chain – on the farms, in the feed mills, transport, abattoirs, and markets.

The micro-level socio-economic impacts have received little attention. For example, little is known about the impact on the households owning these farms, alternative income sources sought, changes in living standards, impacts on factors such as consumption, education, migration, or human infection, and of potential gender differences within this context.

## **Gender roles and Relations in Sector 3 Farms**

Sector 3 farms are family-run commercial enterprises usually owned and managed by the men as heads of household. Experience in gender analysis in rural areas suggests, however, that as family-run operations with the chicken sheds directly adjacent to household residences, women and other family members are likely to be involved in management and labor. The impact of the commercial enterprise on household income and well-being also is related to the gender roles and other income streams in the household (e.g., government employment.) Accordingly, gender relations in the household and in the operation of the family enterprise are a potentially significant component of the social context for defining the viability and impact of AI and related government policies.

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<sup>36</sup> According to FAO 2008 restrictions on import and export of poultry and poultry-related products before AI reached Egypt affected the industrial commercial producers (sectors 1 and 2), and as a result actually benefitted the smaller-scale producers.

<sup>37</sup> In addition to the cost associated with culling, decontamination, and extended closure. For example, sector 3 farms were expected to pay to have a certificate from a veterinarian to transport birds, vaccinations, and required bio-security measures for licensing and continued operation.

### **Are women involved?**

This is a question that requires further analysis but is an important element that warrants consideration in a gender analysis of AI impact. Owing to scope and time constraints, the team visited only one sector 3 farm. This farm cannot be viewed as representative since it is located in a desert area on the fringes of Bilbeis District (Sharqiya governorate) and operated by tenants rather than the owner.

Nevertheless, interviews with local officials revealed that although the male owners are the primary managers and decision-makers on most sector 3 farms, their wives/female relatives are not isolated from the farms and their activities because of the sheer proximity of the farms to the houses. Thus, for example, the expert responsible for veterinarian preventive care at Shariqiya governorate reported that in many cases, women provide the vets with information on their farms (e.g., number of poultry, species, production, costs, vaccination, etc.) when their husbands/male relatives are not present. Moreover, while women in sector 3 farms may not be responsible for the daily labor and operations, they are nevertheless involved in occasional supervision. In addition, women provide food for the laborers and may visit the farms to obtain poultry or eggs for household consumption. Although most employees on the sector 3 farms are men, women also provide labor in the layer farms and hatcheries, gathering and sorting eggs, and sorting chicks.

These activities have two important implications:

- Wives/female relatives of sector 3 farm owners may play an important role (directly or by advising their husbands/male relatives) in decision making.
- The proximity of the farms to the houses and the occasional entry of women into the farms may increase their susceptibility to AI infection if the virus appears on their farms. They also may serve as vectors of AI between the family commercial and the household flocks.

At this stage, information on gender relations in sector 3 enterprises, the role of women, their relations to the owners, and their risk for infection or as vectors for carrying the virus into the household sector is lacking and requires further analysis.

### **Recommendations**

Carry out a rapid appraisal of the gender roles and relations relative to poultry-raising in sector 3 farms, including key informant interviews and focus groups so that messages and technical assistance may be appropriately targeted to the men and women involved. Also, include investigation of the impacts of AI on sector 3 households in terms of income use, livelihoods, and gender roles to counter or avoid the negative impacts documented in sector 4 households. The main issues and questions to be addressed are:

- Do women own and operate sector 3 farms? If so, what percentage do they represent?
- What is the nature of decision-making and the role of these female owners in managing their farms and what are the factors that would make them more prone to AI infection?

- How do these female owners deal with sector 2 producers and sector 4 purchasers?
- In cases where men own and operate sector 3 farms, what is the extent of involvement of their wives/daughters/mothers/sisters/in-laws or other female relatives living in the household in management and decision making related to the farms? How do these roles relate to those of the male owners?
- What is the level of knowledge of women in sector 3 farms of AI risks and preventive measures?
- What is the nature of transaction between sector 3 farm owners and sector 4 raisers and other intermediaries (eg. peddlers, LBM dealers, etc.)?
- In the cases of farms that have been closed down, how has this move affected the income, livelihood and gender relations within the households that own these farms?
- How have these farm owners (male and female) reacted to closure or other policy restrictions? What are their opinions and attitudes towards AI in general?
- Are young girls or children involved or exposed to poultry in sector 3 farms? If so, what are the risk factors of AI infection?

Identify the wives/other women in the sector 3 households as a target group for communication and technical assistance about bio-security practices, risks for infection and transmission, government policies, licensing, etc.

Ensure that both the husband and wife are included in interactions with communicators and veterinarians.

Sector 3 women and men should be included in communications and awareness raising activities, and to the extent possible, both should be present during home visits, and both should participate in training. Specific measures may need to be taken to encourage this participation such as announcements/invitations that explicitly state that both men and women should attend. Timing and location of training sessions should be chosen with a view to maximizing participation; when necessary– to accommodate respective schedules and responsibilities– separate sessions for men and women should be considered.

#### **IV. Gender Relations at Other Points on the Value Chain**

Analysis of the poultry production value chain(s), from the hatcheries to consumers, is used to identify points and mechanisms for transmission of the AI virus among birds and from poultry to humans. Key processes along this chain include propagation and distribution of chicks and young birds, housing and caring for birds for sale or for egg production, slaughtering and processing, collection, transport, and marketing. Feed mills, cage/crate makers, pharmaceutical suppliers and veterinary services, and waste disposal are also linked to the poultry industry and impacted by AI in terms of economic stability and employment.

The poultry sector/industry employed approximately 1.4 million people in 2003, accounting for 6% of Egypt's labor force and 15% of the agricultural (non-fishery)

workforce.<sup>38</sup> The initial appearance of the AI virus caused significant disruption throughout the value chain. Subsequent outbreaks continue to generate instability in the industry. Consumer fears of eating poultry and eggs lead to fluctuations in production and prices, and ultimately to loss of jobs and unemployment. In rural areas, instability in these jobs for men and women adds another burden and reduces alternatives for rural households already faced with cuts in the income and food provided by household poultry production. Sex-disaggregated data on employment and job loss in the poultry industry is not available but reportedly most jobs are held by men although women are employed in abattoirs, hatcheries, and table egg production. The distribution of employment by sex is relevant not only in economic terms but also as a consideration in the installation and communication of bio-security measures.

Besides the production units themselves, transport, marketing, and slaughtering/processing are the points in the production chain that are most directly implicated in the spread of the H5N1 virus. Sector 1 farms, and to a large extent sector 2 farms, are fully integrated operations, meaning that all points along the value chain are controlled by the parent corporation. Slaughtering and marketing are a part of the integrated system, with formal slaughterhouses, and processing for cold storage or freezing, and marketing through supermarkets and export.

### **Live Bird Markets**

Live bird markets, with historical and cultural traditions that parallel household poultry-raising, are essential to the value chain of sectors 3 and 4, and run the gamut from informal village markets without fixed locations to permanent outdoor markets and live bird shops in cities. They are the primary commercial outlet for sector 3 farms, and operate on the fringes of the informal economy with minimal regulation. They also are implicated as key points of contact between people and poultry and for the potential transfer of the virus among birds. Local village markets are the point of sale for birds and eggs from household poultry. The women who sell in these markets may bring their own birds to the market or collect birds from neighbors to sell at a small profit.

Birds are often slaughtered in the market by women, assisted by children, especially young girls. Even the live bird shops in urban areas, which may be owned by either women or men, rely on women and young girls to slaughter the birds on site. Slaughtering and de-feathering involves close extended contact with the birds. The potential for contact with sick birds as well as inadequate waste disposal generate strong risks for human infection in these settings.

The live bird markets also are implicated as high risk for bird-to-bird transmission of the AI virus. Multiple species, birds of various ages, and potentially infected birds come together in the market and share a single space, and then are dispersed to multiple locations. Birds that are not sold during the day are carried back at the end of the day. Live bird markets are the source for young birds and chicks for household producers, and at times for sector 3 farms. Sector 1 and 2 farms with excess production also may sell birds through these markets, and there is evidence that birds from infected flocks on commercial farms are

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<sup>38</sup> FAO 2008.

sometimes sold at bargain prices in live bird markets to evade culling. In addition to the birds themselves, people, waste products, crates, rodents, and transport vehicles also may serve as vectors for transfer of the virus to and from these settings.

As in the case of measures taken against household poultry, government decrees to eliminate the live bird markets have been ineffective, as well as socially and culturally unacceptable. They have placed great hardship on the poor women for whom these markets are a primary source of income. Again, like the sector 4 restrictions, the measures may have contributed to enhancing the spread of AI by leading them to operate clandestinely, often in enclosed settings that magnify the risk of respiratory illness.

Efforts to eliminate the markets confronted the long tradition of consumer preferences for freshly slaughtered birds and for the native “*baladi*” breeds, which are only available in the live bird markets and shops. The preference for fresh over frozen or processed meat is based on taste, but also, with the advent of AI, on the belief that choosing a live healthy bird guards against potential infection masked in frozen or processed meat. The mandate that all birds be slaughtered in abattoirs rather than in the live bird markets also was unrealistic from the point of view of capacity. Until recently there were only 184 abattoirs in the entire country, with the capacity to handle only about 20% of broiler production. Further, the machines in the abattoirs require that the poultry be uniform in size and shape, and the “*baladi*” poultry do not meet these criteria.<sup>39</sup> Increasingly attention is directed to regulation rather than elimination of the markets, with the requirement for adherence to strict bio-security standards.

### **Gender Roles and Relations in the Markets**

The risks for both human and animal transmission in the live bird markets affect women and girls disproportionately because of their roles in these markets. Curbing the risk by closing the markets and eliminating the roles is not a viable option. Poor women, especially widows in urban areas, have few options for gaining income outside the markets. The punitive measures directed to the markets and to these women have increased their risk. The poor who are desperate to feed their families buy the birds being sold at bargain rates because they are sick, accepting the risk of contracting influenza in order to put food on the table.

### **Recommendation**

Recognizing that eliminating the live bird markets is not a viable option, the policy focus shifts to the possibilities of regulation, maintenance of effective bio-security standards, controlling the entry and exit of birds with certifications of vaccination or lack of disease. This process of formalization will necessarily limit the options of the women who work in the markets informally, and may force some of them out. Communication messages and collaborative approaches to counter the current atmosphere of distrust and defiance and encourage compliance, provision of financial support/credit to comply with bio-security measures, and the identification of alternative sources of employment and income may be necessary to achieve the change.

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<sup>39</sup> FAO 2009.

## V. Gender and Human Infection

Two observations about the impact of AI on human health have implications in terms of gender analysis. First, the higher rates of infection and mortality among adult women compared to adult men and children (up to age 15) point to gender-related factors as key explanatory variables in the risk and response to infection. Biological differences do not explain the greater vulnerability of women. Rather, two factors related to gender roles provide the most viable explanations: women experience greater direct exposure to poultry and women tend to delay seeking their own health care.

The impact of the roles of rural women on their risk of infection has been discussed. Observations of the attitudes and social behavior of women and men in rural Egypt – reported by most of the individuals interviewed– suggest two reasons why rural women may delay seeking help when they become ill:

- Women in rural Egypt are responsible for child care and housekeeping. These tasks are important for family well-being, but are time-consuming. Women may feel guilty or unwilling to devote time and attention to tending to their own health.
- In most of rural Egypt, proper medical services are best obtained at the district or governorate-level clinics/hospitals. For many villagers, the travel required to visit these medical facilities can be burdensome – costing money for transportation expenses and possibly requiring a male relative to escort female patients. If the health clinic is local and within walking distance from the woman's home, or if the reasons for the visit are related to family planning, pregnancy and/or reproductive health issues, women can be allowed, and in most cases do, to approach the clinics on their own – or at most, accompanied by other women.<sup>40</sup> In general, however, health facilities are not adequate in the districts and may be non-existent in the villages. (In many villages, health clinics are no more than buildings without staff and equipment.)

In contrast, most of the individuals interviewed stated that (from their experience), concern over the health of *children* takes priority and parents do not hesitate to seek medical help for their children.

In the final analysis, the predominance of female fatalities indicates that since women are the main victims of the AI virus, AI policies and activities need to consider gender implications involved in the role of women in poultry-raising on the one hand and their relations with men and children on the other.

A second issue in human infection related to gender roles is the apparent reversal in the trend of declining cases from 2006 through 2008, with 39 cases in 2009, and 14 through the first two months of 2010. While a part of this shift may be explained by the under-reporting of new animal outbreaks, which would cause more human illness, another part of the explanation seems to be that women, the target audience for messages about how to

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<sup>40</sup> Male approval may be an obstacle even if the men do not accompany the women, which would be rare since women do not normally travel to distant places unaccompanied.

avoid human infection, are no longer acting on the basis of these recommendations, or alternatively, that the actions are ineffective.

Little is known about the factors associated with vulnerability to and contracting of the illness, or about the extent and consistency with which preventive behaviors have been adopted. A massive media campaign coordinated across government and international agencies and field personnel was launched when the first outbreak of AI was reported in Egypt. While the CHL survey has documented that citizens received and understood the messages about H5N1, at least in the initial year, the effectiveness of this approach may have waned over time, as the perceived threat for individuals has diminished, and the necessity to take risks to meet household subsistence needs has increased.

### **Message Confusion**

The outbreak of the H1N1 (swine flu) virus in Egypt in April 2009 has exacerbated the difficulty of communication and outreach to members of the sector 4 households and the public in general. This is because:

- The recent outbreaks and greater risk of human-to-human infections caused by H1N1 in comparison to H5N1 have caused greater concern and generated greater attention by the public towards the former virus.
- The medical advice communicated to the public on the H1N1 virus assures them that rest and flu medication can sufficiently kill the virus, whereas the messages relayed on the H5N1 virus urged those suspected infections to seek medical help immediately.

Although the scope of the analysis and time constraints did not allow for further investigation into this topic, it was pointed out by several project representatives as a factor that needs to be taken into consideration when devising communication and awareness raising messages.<sup>41</sup>

Moreover, some of the interviewed project representatives pointed to the fact that the abundance of awareness messages and the fact that they are disseminated by various organizations (General Organization for Veterinary Services [GOVS], Ministry of Agriculture and Land Reclamation [MOALR], Ministry of Health [MOH], and projects) may overwhelm and sometimes confuse the recipients; “message fatigue” sets in and audiences cease to pay attention.

### **Research**

NAMRU3 (U.S. Naval Medical Research Unit No. 3) researchers recently completed the data collection for a qualitative study of 60 rural Egyptian households to attempt to assess the degree of understanding and behavior change in dealing with poultry, to identify specific behavioral variables associated with exposure and contracting of human illness,

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<sup>41</sup> The distrust associated with AI may be a further complicating factor both in terms of delays in treatment and in distinguishing between the two illnesses. The primary screening question for H5N1 in a person with influenza like symptoms is whether he/she had contact with poultry. Reluctance to admit to the presence of poultry or the extent of contact of other family members may delay screening, surveillance, and treatment.

and factors associated with risk perception and trust of government officials. The study is based on data gathered through extended observation in 20 households that have had poultry and human illness, 20 matching households that have had an outbreak in poultry but no human infection, and 20 matching households with poultry but without animal or human illness. Analysis of the data has just begun, but the results of the study should provide an important base for future campaigns and activities in prevention of human infection.

### **Ministry of Health**

It also is important to point out that the relatively low death rate among victims of Avian Influenza in Egypt reflects well on the preparation and responsiveness of the Ministry of Health (MOH) to the threat of AI, including active surveillance in local areas where outbreaks in animals or humans are suspected, efficient and accurate lab tests and results reporting, and effective treatment protocols. The communication campaign (with CHL), targeted at rural women, has been effective in transmitting information about symptoms of human illness.

Gaps remain, however, linked in part to problems of coordination and communication among government agencies and employees in the field. While the MOH is focused on rural women through local outreach and surveillance, the MOALR, through its extension workers, is responsible for communication, surveillance, and sampling at the farm level with male farm workers in the sector 3 farms. No direct attention has been given to messaging or surveillance in the live bird markets. Channels and procedures exist on paper so that suspected infection in poultry discovered by an extension agent is communicated to the MOH and the people in the house and farm are immediately put under surveillance for human infection, and *vice versa* (i.e., human cases lead to surveillance of the poultry). Miscommunication and delays as well as reactive and evasive actions by the victims sometimes cause problems. For example, if a human case is detected, all poultry may have been removed from the setting by the time the veterinarians arrive.

### **Recommendations**

While media – especially television – messages are effective in raising the alarm and delivering basic information like frequent hand washing, they are not effective in conveying the details of symptoms and procedures particularly in the case of infection in animals. Face-to-face communication and personal interaction, through trusted agents and messengers, is needed. The CHL work through the village community development associations (CDAs) and the Ministry of Health attempts to hold seminars in the village clinics with women who come for pre-natal visits or vaccination campaigns, are examples of this approach.

Perhaps the most pressing problem in dealing with rural women in both adoption of practices to prevent human infection and in seeking health care is the deep level of distrust and fear of government authorities. Women feel they must lie about their own illness and about the presence of sick or dead poultry and exposure of other family members in order to protect themselves and their neighbors. Until this barrier is broken down, representatives of all government agencies cannot play a positive role in behavior change.

Actions to be considered to rebuild trust include:

- developing a clear policy relative to household poultry, and ensuring that it is implemented consistently;
- reassuring women that raising poultry is acceptable with certain practices that protect them and their families from becoming ill and reduce the risk of illness in their poultry;
- developing communication messages about the safe practices and the response to symptoms of illness in poultry or people;
- delivering these messages through face-to-face communication with trusted agents, like representatives of the local CDA;
- considering financial support to institute bio-security measures and compensation for women whose flocks are culled due to illness;
- identifying and correcting the confusion in messages about the necessary response for H1N1 and H5N1;
- ensuring that men as well as women receive the messages about personal hygiene and safe practices in care, handling, slaughtering and use of poultry; directing the messages to men can help build their support for protective behaviors implemented or advocated by women, and strengthen the barriers to transfer of the illness to humans; and
- encouraging coordination among entities involved in addressing AI in order to integrate and mainstream gender activities into their plans and activities; such coordination avoids redundancy and confusion of awareness messages, as well as gaps in coverage.

## **VI. Summary and Conclusions**

Drawing on secondary sources and the experience of individuals who have worked to control the impact of avian influenza in Egypt during the past four years, this report has documented the damage caused by the virus and, more importantly, by the control measures taken by the government. These measures, instituted without taking account of the social relations and social context in the poultry industry, were counterproductive and socially and economically harmful for the millions of rural women for whom poultry-raising was a part of their daily lives. The apprehension and distrust among women resulting from the policies and actions of the past four years have created a barrier to the acceptance of new socially and gender-aware policies and messages. An important task for the revised strategy will be to develop communication channels and tools to penetrate this barrier and to institute activities to mitigate the negative impacts on livelihoods, poverty, nutrition, and the status of rural women.

Looking to the future in a revised strategy for sustainable control of the virus and risk reduction for people and animals the report has identified the ways in which gender roles and relations may come into play in efforts to control the virus in the sector 3 farms and value chain, especially the live bird markets. Two strong sets of recommendations are provided here. First, engage social scientists to provide an assessment of the potential socio-economic impact of policies and strategies, focused on gender relations involving

men as well as women, and particularly on the central roles of women. The second is that the understanding of gender roles and relations be mainstreamed into the activities so that as policies are implemented they include actions to mitigate the impact on poor women, to assist in making household poultry production safe, to respond to the constraints that delay care seeking, and to ensure that the agencies and their agents in the villages are sensitive to the roles and constraints of rural women.

## **ANNEX A: Scope of Work: Gender Analysis of Avian Influenza in Egypt**

*December 16, 2009*

### **Purpose**

The purpose of this review are twofold: 1) to understand the underlying gender issues as they relate to Avian Influenza (AI) in poultry production and humans, especially how they relate to food security, child malnutrition, poverty propagation and human infections; and 2). To provide recommendations for activities that would mitigate AI while taking gender into account. Recommendations will be integrated into existing programs and also be used for future programming.

Avian Influenza activities are entering their third year of implementation in Egypt. This gender analysis is opportune on three levels: 1) this is the first time USAID has supported an intensive gender analysis of avian influenza in Egypt. 2) A strategic review of AI will be taking place in January 2010. The information provided from the gender analysis will provide additional perspective to help point the way forward for future AI programming. 3) USAID/Egypt Office of Health and Population is amending its assistance agreement with the Government of Egypt. A gender assessment of our programs is also taking place at this time. The AI specific information will complement this.

The USAID/Egypt Office of Health and Population's programs focus on advancing gender equity and health. As such, this scope of work should consider H5N1 issues in this context. Recommendations and observations should look for opportunities to *promote* the relative status of girls/women, and look for ways to influence power dynamics and harmful gender norms.

### **Background**

Highly Pathogenic H5N1 Avian Influenza was first confirmed in Egypt in February 2006 from backyard birds in several governorates. Since February 2006, Egypt has accounted for a significant proportion of the world's reported H5N1 poultry outbreaks and human cases. It ranks number three in the world behind Indonesia and Vietnam for both avian and human cases. Outbreaks continue to be reported primarily in the Nile Delta area; however H5N1 has been confirmed in 27 out of the 29 governorates and is considered endemic. To date there have been more than 1,200 outbreaks in poultry and a total of 90 human cases (27 fatalities.)

Although knowing that the data may be skewed due to targeted areas of active surveillance, as well as the absence of passive surveillance, it is still of interest to note that of the more than 1,200 outbreaks in poultry that have been reported, 60% involved household poultry. Poultry rearing has played a crucial role in rural development due to the low setup cost and the potentially high returns for smallholders when they expanded their flocks. It is also a main source of income for poor households, many of which are female-headed. Keeping poultry contributes directly or indirectly to health, education, women's economic empowerment, decreasing economic vulnerability and poverty, and maintenance of social relations and status.

Avian Influenza has affected the whole family, but in particular women and children. Women are the primary caretakers of backyard poultry in Egypt, with occasional assistance from children (male and female). As a result of AI, they have lost an important source of income. This in turn has affected women's role within the family. Women no longer contribute economically to the family, contribute less or have had to seek an alternate form of income. Children are affected as women's income is often used to buy their clothes, pay for school fees and other related items. Avian Influenza and its control measures have greatly affected women's economic empowerment and status, and thus constitute a major development issue.<sup>42</sup>

To date, 27 human fatalities have been recorded from a total of 90 human cases. Of the 90 confirmed cases, 56 are female and 34 are male. A majority of the cases (49) have been in children less than 10 years old, but most deaths occur in people older than 15 years. As noted in "An Analysis of H5N1 Poultry Outbreaks and Human Cases in Egypt" produced by the USAID/Washington Avian and Pandemic Influenza Unit:

- The detection of H5N1 human cases in Egypt is much faster than in other developing countries;
- The case fatality rate for H5N1 human cases in Egypt is much lower than in other developing countries; and
- H5N1 human cases are primarily among backyard farmers and children (mostly adult women and children (both male and female.)

Also noted in "An Analysis of H5N1 Poultry Outbreaks and Human Cases in Egypt":

- H5N1 infections and deaths are more common in females than males
- Women's traditional role of caring for children and household poultry may be responsible for higher infection rates among women and children
- On average, female cases are much older than male cases and have a much higher case fatality rate

Poultry meat and eggs represent an excellent source of supplementary income and essential nutrients for the poor, particularly for children and women. The economic and potential nutritional losses faced can be devastating, depending on the strategies chosen to control Avian Influenza. Such producers have already been adversely affected by the disease, and more importantly by the control measures introduced.<sup>43</sup>

Control of H5N1 is a priority for the Government of Egypt (GOE). An Integrated National Plan for Avian and Human Influenza (2007-2008) was developed and is the GOE's strategy to address the disease. USAID began providing assistance to the Government of Egypt in 2006. Since that time, implementing partners have included the Ministry of Health (MOH), Ministry of Agriculture and Land Reclamation (MOALR), Communications for Healthy Living (CHL) a project of the Johns Hopkins University/Center for Communications

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<sup>42</sup> Highly Pathogenic Avian Influenza: A Rapid Assessment of the socio-economic impact on vulnerable households in Egypt. FAO/WFP Joint Project Report, July 2007.

<sup>43</sup> Highly Pathogenic Avian Influenza: A Rapid Assessment of the socio-economic impact on vulnerable households in Egypt. FAO/WFP Joint Project Report, July 2007.

Programs, the Food and Agriculture Organization (FAO), OFFLU (the joint FAO and World Organization for Animal Health network of expertise on influenza), Development Alternatives Incorporated Stamping Out Pandemic and Avian Influenza (STOP AI) Project, and two commodity based activities, the DELIVER Project, and Federal Occupational Health.

### **USAID's Response**

Since 2002, USAID has helped establish the Egyptian National Infection Control Program, the Epidemiology and Surveillance Unit, and the National Disease Surveillance and Response Project in the Ministry of Health. In its initial response to Avian Influenza, the Egyptian government was able to draw on this previous USAID support. In 2006, USAID funding was also provided to strengthen the Ministry of Health's AI surveillance and response capacity through the establishment of rapid response teams at central and governorate levels, training of health workers and veterinarians, and provision of supplies.

USAID, through its partner CHL, has worked in partnership with the Egyptian government since 2003 to develop and build an integrated, strategic approach to communication across health issues. CHL emphasizes planning and development of distribution systems to enable ready response to emerging health threats. As a result, the CHL project assisted the government of Egypt (Ministry of Health and the Ministry of Information (MOI) to launch an immediate communication response and maximize outreach when H5N1 emerged. USAID worked with the MOH and MOI to develop the first national AI communication strategy which included an AI web site and a national communication campaign. The campaign included posters, flyers, television spots, and community mobilization activities.

USAID has committed almost \$30 million over the period 2006-2010 for fighting AI in Egypt. This funding has so far been used towards training in preparedness and response activities related to animal health; human health surveillance, infection control, and care including hospitals upgrades and equipment; provision of Personal Protective Equipment (PPE); and continued communications campaigns.

USAID's AI activities in Egypt have focused on several areas:

- Improving preparedness and planning by the MOH and MALR;
- Improving detection and reporting of poultry outbreaks and human cases;
- Improving containment of poultry outbreaks and human cases; and
- Improving communications related to AI.

### **USAID's Implementing Partners**

MOALR: USAID provides financial support to the Ministry of Agriculture and Land Reclamation (MOALR)/General Organization of Veterinary Services (GOVS) to implement Strengthening Avian Influenza Detection and Response (SAIDR) Project. The animal health plan is focused on establishing adequate surveillance in small poultry farms and backyards, including strengthening targeted surveillance, and initiating active surveillance and community participatory approaches. Data from all surveillance efforts provides important information that will enhance detection, response and prevention of

future AI outbreaks. Implementations of containment and biosecurity measures, as well as outbreak response techniques, are also priorities.

National Laboratory for Veterinary Quality Control in Poultry Production (NLQP): USAID provides financial support to the NLQP to strengthen its capacity to diagnose AI, purchase PT-PCR test kits for AI, and to assist in the development of an efficacious H5N1 vaccine for poultry.

MOH: USAID provides financial support to the Ministry of Health (MOH)/ Epidemiology Surveillance Unit (ESU) to implement Strengthening Avian Influenza Detection and Response (SAIDR) Project. The purpose of this activity is to strengthen surveillance networks; improve AI case management skills and infection control systems in local hospitals; make significant investments in curative care by providing additional ventilators for selected general, chest, fever and pediatric hospitals; improve outbreak investigation and response methods, with the view to detect human to human transmission at the earliest stages; and assist governorate-level planning for pandemic preparedness.

Food and Agriculture Organization of the United Nations (FAO) Emergency Center for Transboundary Animal Diseases (ECTAD): USAID provides financial support to ECTAD in order to implement activities associated with MOALR's Strengthening Avian Influenza Detection and Response project as well as the National Laboratory for Quality Control-Poultry's (NLQP) Avian Influenza Vaccine Efficacy Project (AIVEP). In addition to what is listed under the MOALR, ECTAD activities also include improved bio-security and hygiene at production, collection points and live bird markets, including decontamination; developing and maintaining Public-Private partnerships for the prevention and control of Highly Pathogenic Avian Influenza H5N1 and other emerging infectious diseases; and development of cost-effective and feasible bio-security measures for resource limited circumstances.

Communication for Healthy Living (2003-2011; \$\$): Communication for Healthy Living (CHL), implemented by Johns Hopkins University/Center for Communication Programs, is the Office of Health and Population's cross-cutting project for affecting broad scale behavior change and for strengthening the leadership, technical skills and management systems within the public, NGO and private sectors to design and implement strategic communication programs. Communications priorities include family planning and reproductive health, maternal and child health, infectious disease control (viral hepatitis, avian influenza and H1N1) and healthy lifestyles.

### **Other Actors**

Other actors working in avian influenza include: UNICEF, UNDP, WHO, Catholic Relief Services, International Federation of the Red Crescent, European Union, World Bank, African Development Bank, International Office of Migration, and the World Food Program.

## **Purpose**

The purpose of this review are twofold: 1) to understand the underlying gender issues as they relate to Avian Influenza (AI) in poultry production and humans, especially how they relate to food security, child malnutrition, poverty propagation and human infections; and 2). To provide recommendations for activities that would mitigate AI while taking gender into account. Recommendations will be integrated into existing programs and also be used for future programming.

- What are the gender considerations for Avian Influenza in poultry and humans in Egypt?
- What are the different roles of men, women, boys and girls in poultry production, purchasing, rearing, transporting, selling and consumption?
- How are men, women, boys and girls' health affected by H5N1 (nutritional status, household diets and human infection of the H5N1 virus)?
- How are current containment strategies affecting men, women, boys and girls' health, overall well-being, and status?
- What are the implications of H5N1 on women and their families as the primary producers of backyard poultry? (health, economics and women's empowerment)

As stated above, the information gathered from this investigation will inform the future programming of Avian Influenza activities in Egypt, and will be used to amend USAID/Egypt's assistance agreement with the GOE. The final product will be a report that summarizes the underlying gender issues of avian influenza in poultry production and humans, with recommendations for gender sensitive strategies to mitigate and respond to H5N1 that should be considered for future project interventions.

Additionally, the USAID/Egypt Office of Health and Population's programs focus on advancing gender equity and health. As such, this scope of work should consider H5N1 issues in this context. Recommendations and observations should look for opportunities to *promote* the relative status of girls/women, and look for ways to influence power dynamics and harmful gender norms.

*Note: Information gathered from this assessment may be used for future procurements. As such, contractors for this activity would be bound by USAID policies related to confidentiality and conflict of interest.*

## **Illustrative questions**

- How have women been affected by H5N1 as producers of poultry? What does this mean for their livelihood? What does this mean for their contributions to their family, i.e. economic empowerment, negotiating platform with their husbands, children's nutrition, their own health, etc?
- It has been documented that the H5N1 situation has affected women household producers of poultry. The discontinued or decreased poultry production has impacted

women's financial and social independence within the family and community.<sup>44</sup> What are the specific impacts on women and girls? If a woman loses a significant portion of her "income", and resources that she normally spends on her children are scarcer, do girl children suffer for this or bear a greater burden than boy children if resources are preferentially directed towards boys, e.g. schooling and school supplies, meat or foods with a higher nutrition value?

- Consider commercial production vs. small and medium producers of poultry. How has HPAI affected these different sectors and what are the gender implications with regard to poultry purchase, rearing, transporting, selling and consumption in these contexts? Consider economic, health and other vulnerabilities at the individual, family, and community levels.
- There are many stakeholders in the value chain of HPAI. These include street vendors, cage makers, slaughter shop owners and employees, feed sellers, transporters and others. What is the gender division of labor of these positions, and how have these individuals been affected by HPAI?
- What are the policies related to Avian Influenza and how do these affect men, women, boys and girls – both as consumers and/or producers of poultry? How are the decision makers considering gender issues, especially when implementing policies or protocols that affect backyard poultry producers?
- What are the communication messages that are being relayed about AI? Are communication messages and strategies taking gender into account? Are the messages and strategies gender sensitive and gender appropriate?

## **METHODOLOGY**

### **Document Review**

USAID/Egypt will provide a list of the key documents to review prior to the start of the in country work. These should be reviewed in preparation for the initial team planning meeting and field work. While in-country, the consultants will continue a desk review of documents as necessary for the completion of the draft report.

### **Team Planning Meeting**

A team planning meeting will be held upon arrival in country. This meeting will allow USAID to present the consultants with the purpose, expectations, and agenda of the assignment. In addition, the team will:

- clarify team members' roles and responsibilities,
- establish a team atmosphere, share individual working styles, and agree on procedures for resolving differences of opinion,
- review and develop final evaluation questions

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<sup>44</sup> Highly Pathogenic Avian Influenza: A Rapid Assessment of the socio-economic impact on vulnerable households in Egypt. FAO/WFP Joint Project Report, July 2007.

- review and finalize the assignment timeline and share with USAID,
- develop data collection methods, instruments, tools and guidelines,
- review and clarify any logistical and administrative procedures for the assignment,
- develop a preliminary draft outline of the team's report, and
- assign drafting responsibilities for the final report.

**Internal USAID/Egypt meetings** will include, at a minimum:

- **Initial organizational/introductory meeting** at which the consultant team will present an outline and explanation of the design of the gender analysis (refer to the Team Planning Meeting noted above);
- **One or two consultation meetings** (as appropriate) with USAID staff to review findings, issues and constraints, and solicit feedback;
- **Final Assessment debrief** including draft findings and recommendations.

### **Key Informant Interviews**

The consultant team will conduct key informant interviews with selected USAID/Egypt staff and with key stakeholders including donors, contractors, and government or private sector counterparts as necessary. The team may also conduct focus group discussions as appropriate to supplement findings drawn from background documents.

### **Field Visits**

The consultant team should conduct field visits to better understand the underlying issues of avian influenza in country, see the realities of poultry production, and get a first hand view of projects and key players. Site visits will be coordinated with USAID staff and implementing partners, and take into account the different types of interventions and activities.

### **Wrap-up and Debriefing**

At the conclusion of the consultancy, the consultants will debrief USAID/Egypt. The purpose of this meeting will be to share findings and get final inputs before preparing the final draft version of the gender analysis report.

USAID/Egypt will provide overall direction to the consultant team, identify key documents, key informants, and assist in facilitating a work plan. USAID/Egypt personnel will be available to the Team for consultations regarding sources, technical issues, and staff retreat logistics before and during the Assessment process.

GH Tech will provide support for the consultant team when they are working in Washington, DC including work space, projectspaces.com access, limited assistance in setting up interviews and meetings, etc. GH Tech will also prepare logistics arrangements for the team's fieldwork portion of the assignment. The GH Tech team will be responsible for all in-country logistics, team meeting space and other related support services, including travel.

## DELIVERABLES AND PRODUCTS

The consultant team will produce the following deliverables:

1. **Work Plan:** During the Team Planning Meeting, the consultant team will prepare a detailed work plan which will include the methodologies to be used, and a draft outline of the final report. The work plan will be submitted to USAID/Egypt for discussion and approval. Any outstanding issues will be discussed with USAID prior to implementation.
2. **Draft Assessment:** The draft health sector Assessment document will be submitted to USAID/Egypt for review and comments after departure from Egypt.
3. **Final Assessment:** The Team will submit a final report that incorporates the Mission's comments and suggestions no later than five days after USAID/Egypt provides written comments on the Team's draft assessment report. The report will be disseminated within USAID as an internal document.

## MISSION CONTACTS

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## REFERENCES/DATA RESOURCES

- Project Workplans: CHL, SAIDR, MOH, MOALR, FAO, STOP AI
- SO 20 Assistance Agreement, 2009
- SO 20 AAD, 2008
- SO 20 Operational Plan, 2009
- SO 20 Performance Monitoring Plan
- 2008 Demographic and Health Survey
- USAID/Washington gender-related strategies and documents that define USAID gender priorities and approaches, i.e. review the gender integration continuum that defines ‘gender accommodating’ and ‘transformative’ approaches

“An Analysis of H5N1 Poultry Outbreaks and Human Cases in Egypt” produced by the USAID/Washington Avian and Pandemic Influenza Unit

“Human Infections with H5N1 Avian Influenza: *Comparison of Egypt and Indonesia*”  
Andrew Clements, USAID/Washington; Avian and Pandemic Influenza Unit; November 23, 2009

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“*Poultry Sector Country Overview*”  
FAO

Other documents as determined by USAID.

## **ANNEX B: Documents Consulted**

### **Center for Development Services**

N/A *H5N1 Bird to Bird Transmission: Knowledge, Practices, and Attitudes Research in Egypt. Main Findings.* PowerPoint. Cairo.

### **Communication for Healthy Living**

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## **FAO with CIDA and MOALR/GOVS**

2009a The Media Fellowship Project. *The Human Face of Avian Influenza*. Cairo.

## **FAO/WFP**

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## **Hosny, Dr. Farid A.**

2009 Analysis of Egypt's poultry production value chain in view of highly pathogenic avian influenza current situation. *Communication for Healthy Living*. Cairo. (June)  
Cited in DRAFT.

## **Ibrahim, Dr. Ali Ahmed, Lise Albrechtsen, Martin Upton, Nancy Morgan, Jonathan Rushton**

2006 *Market Impacts of HPAI Outbreaks. A Rapid Appraisal Process – Egypt*. Paper presented at Symposium on The Market and Trade Dimensions of Avian Influenza. Rome. (November).

## **United Nations Mission to Egypt (UN)**

2010 *Joint United Nations Assessment of Government of Egypt H5N1 Control Efforts*. WHO, UNICEF, FAO. Cairo. (February).

## **ANNEX C: Individuals Consulted**

### **USAID/Egypt Office of Health and Population**

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### **USAID/Egypt Program Office**

Soad Saada

Robert Lopez

### **Communications for Healthy Living Project**

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Ron Hess, Country Director

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Mohamed Kamal Bayoumi

### **Save the Children**

Dunni Goodman, Country Director

Hussein Raafat Ahmed

### **U.S. Naval Medical Research Unit No. 3**

Dr. Kenneth Earhart, Director

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Anna-Leena Lohiniva

### **STOP AI Project**

Farid Hosny, Country Director

Hilary Langer

### **FAO ECTAD/Egypt**

Yilma Jobre Makonnen, Team Leader

### **SAIDR Project and GOVS**

Amira Kamel Eldin Abd Elnabi, Project Manager

Yasser Basyouni

**Ministry of Health and Population**

Samir Abdel Aziz Refaey

Amr Kandeel, Undersecretary of Preventive Affairs

**Sharqiya Field Visit**

GOVS Department, Sharqiya

Atteya Mostafa Abdel Aziz, Undersecretary for Veterinarian Affairs

Safy Eddin Sabri

Atwa Mohamed

Hassan Abdel Fattah

MOALR Department, Bilbeis District

Zeinab Bakr

**Fayoum Field Visit**

Ahmed Sayed Mo'awad, Chairman of CDA of Tawfiqeya Village