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Gender Aspects of the Avian Influenza Crisis in Southeast Asia:

Laos, Thailand and Vietnam

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CONTENTS

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AED	Academy for Educational Development
AI	Avian Influenza
AISC	Avian Influenza Steering Committee
ADPC	Asian Disaster Preparedness Centre
ASEAN	Association of Southeast Asian Nations
AusAID	Australian Agency for International Development
AVSF	Agronomes & Vétérinaires sans Frontières
CD	Compact Disc
DLP	Department of Livestock Production
EC	European Commission
EID	Emerging Infectious Disease
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
GDP	Gross Domestic Product
HPAI	Highly Pathogenic Avian Influenza
IEC	Information, Education and Communications
IFRC-RCS	International Red Cross and Red Crescent Societies
INGO	International Non-Government Organisation
KAP	Knowledge, awareness, practice
LWU	Lao Women's Union
MAF	Ministry of Agriculture and Forests – Laos
MARD	Ministry of Agriculture and Rural Development – Vietnam
MoH	Ministry of Health
MoIC	Ministry of Information and Culture – Laos
NAHICO	National Avian and Human Influenza Coordination Office
NAICPP	National Avian Influenza Control and Preparedness Plan
NGO	Non-Government Organisation
OIE	World Organization for Animal Health (former Office International des Epizooties)
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Education Funds
UNSIC	United Nations System Influenza Coordination
VAHIP	Vietnamese Avian and Human Influenza Project
VHV	Village Health Volunteers - Laos
VVW	Village Veterinary Workers - Laos
VWU	Vietnam Women's Union
WHO	United Nations World Health Organisation

EXECUTIVE SUMMARY

The links between livestock and poultry production and gender are well known, but whether the avian influenza crisis has important gender implications, is a question that has yet to be systematically examined. Beyond the simple view that women are more affected by the AI crisis since they are the ones directly involved in the care and handling of poultry particularly in small-scale backyard production is a more complex reality that needs to be better understood and analysed. This sets the rationale for this study on gender aspects in the avian influenza crisis.

The study primarily aims to analyse and compare the gender dimensions of avian influenza in three affected Southeast Asian countries: Thailand, Vietnam and Laos, and will draw common lessons and conclusions that can serve as planning references for other similar Asian countries. It would shed light on the socio-economic aspects of AI in relation to gender equity, the differential impact on the livelihoods of women and men poultry raisers, and the vulnerability of women's social and economic position.

The assessment and analysis of the gender aspects of AI employed a range of data collection techniques aimed at various types of stakeholders. Key informant interview was mainly used in eliciting information and views of national AI coordinating and planning agencies, national machineries for women/ gender and development, donor agencies as well as the civil society. Gender planners and officers of these agencies were particularly sought and consulted.

Among different scales of poultry producers, a combination of household interview and direct observations of poultry keeping and marketing practices was employed. Gender-specific information in activity, access and control related to poultry production and management, and an assessment of AI knowledge and behaviour of women and men were particularly collected. A significant amount of time thus was invested in the poultry farm visits. Markets were visited to observe the practices in trading and selling poultry.

Interviews with women and men in the poultry-farming households in Thailand, Vietnam and Laos revealed that the nationwide AI information campaigns have in varying degrees, effectively reached the people. Overall, there is a good level of understanding and knowledge among commercial and backyard poultry farmers about how to protect oneself from AI infection. All socio-economic groups may have, at certain level and extent, faced difficulties in accessing information about the disease but the barriers were greatest for the poor and the women. Women face particular problems and risks because of their direct contact with backyard poultry, which constitutes a great proportion of poultry production for these three target countries. The risk factor even increases as women have generally less education than men.

Following traditional thinking, only men are considered farmers and heads of households, and are often invited to poultry production and management training courses or specific courses for AI prevention and control. This is compounded by the fact that most animal health workers, veterinarians, and village livestock agents, are men.

The widespread acknowledgment of the key roles of women, particularly in small-scale backyard poultry production and marketing, has not really been translated in specifically targeting women as both communicators and as recipients/beneficiaries of AI campaigns and trainings. Women poultry keepers rarely receive adequate support and services or resources and training. Neglect of this important production group can exacerbate the effects of socio-economic shocks resulting from AI outbreaks.

Women, clearly, are in the frontline defence against the disease. With their traditional roles as primarily in-charge of backyard poultry, and mainly responsible for the health care of the family, their knowledge about AI can effectively make a difference in reducing risks for their children and family, and to society in general. However, despite the emergency health concerns of AI, and the critical dual roles of women in poultry-raising and health care provision for their families, AI strategies have hardly taken account their roles and potential contributions in improving responses to AI. There is hardly recognition of women's roles in enhancing health-seeking behaviour of their children and family.

Restructuring of the poultry sector will particularly affect small-scale female farmers (the number of backyard poultry raisers has decreased) and market actors (traders, transporters). Particularly in Vietnam, there seems to be a growing trend of shifting the responsibilities of managing poultry production to husbands/men. This follows the government-guided shift from subsistence small-scale poultry keeping to a more bio-secured high investment/income commercial poultry production. As poultry production moves as a major source of household income, men, as heads of households tend to take over the traditional poultry responsibilities from women.

Planners and implementers of AI actions, particularly, lack understanding and acknowledgment of the differences of vulnerabilities between women and men in terms of loss of livelihoods/incomes, risks to infection based on their traditional roles and responsibilities in household care and management, and their negotiating position in the family and community. In general, attention to gender considerations is not seen as an important element in improving AI responses. Most AI focused agencies and programmes do not have a defined component or activity that addresses gender issues in their AI actions. National plans and programmes on AI prevention, control and pandemic preparedness, which set out the framework for coordinated actions for reducing risks and improving emergency response preparedness, do not include a gender perspective. Guidelines hardly, if at all, mention gender as a strategic concept and tool in AI responses.

Reasons for the 'gender omission' in AI responses and actions can be as follows: AI programme planners and technicians for both animal and human health concerns at all levels are mostly men, who mainly look at the technical aspects of AI prevention and control, especially in an emergency situation, and with hardly any understanding of gender as an analytical and planning tool; lack of systematic and credible analysis on the gender implications of AI crisis in different socio-economic and cultural contexts, lack of gender-segregated data in AI researches including project monitoring reports, absence of gender policies in most agencies working on AI, which in turn leads, to lack of gender awareness and programming capacity, and weak participation of women and women-focused agencies in AI response and action planning.

This study has provided important insights and observations which strengthen confirmation of the gendered impacts of AI, and showed that gender is a highly relevant factor and can significantly improve the effectiveness and sustainability of AI actions. Women should be recognized as major stakeholders in the AI crisis and play a key role in the first line of defense against AI. In Southeast Asia, women comprise a significant and often greater proportion of participants in backyard poultry keeping. Their contribution from poultry production goes beyond food production and income-generation. They are major players in the rural and agricultural economy, as well as the national economy. Moreover, women, in their traditional roles as family health and care givers, can play a key role in the prevention and control of AI.

Guided by the findings of the study, the following are therefore recommended:

Research

- Using gender analysis, conduct country assessments of gender differentials of socio-economic and livelihood impact of AI crisis among different types of poultry production and marketing systems. Particular focus should be given to changes in gender patterns among ethnic minorities, and in areas where food insecurity is a persistent problem. The study should as well identify the AI vulnerabilities of women and men as well as their potential roles and contributions in AI control and responses.

- Analysis of the gender differentials in knowledge, attitudes and behaviour as a result of AI communication campaigns.

- Analysis of information needs of women and men on AI, including the gender differentials in opportunities and constraints to access them.

- Analysis of gender impacts of national policies on bio-security controls on poultry production and livelihoods. There is a need, for example, to establish, if as a result of government's preference for a more bio-secured and predominantly male-managed market-oriented poultry production, the traditional roles of women in managing backyard poultry resources has

significantly diminished, and have possibly led to livelihood displacements for many poor rural women.[1] It is well known that when a family's secondary livelihood moves to become a major source of income, the head of the household who is usually male, will exercise authority over the management of that livelihood.

Competence Development on Gender

- A programme on competence development on gender should be established aimed at enhancing awareness, knowledge, commitment and capacity necessary to incorporate gender perspectives in AI strategies and actions. The target groups should include planners, policy-makers, programme managers of multi-lateral and bilateral AI programmes, government agencies, and NGOs supporting and implementing AI programmes and actions.

Actions and Measures to Address Gender Issues and Impacts of the AI Crisis

- Measures that ensure that AI campaign messages are women-friendly should be established – easy to understand, with balanced gender portrayals, culturally- appropriate, and delivered at a place and time allowing women's participation.

- Strengthen the capacity of the women's mass organizations (for example, the Vietnamese Women's Union and the Lao Women's Union) including women NGOs to effectively disseminate information on AI to rural households specifically reaching poor women with limited mobility and little schooling.

- Women should be made specific targets in training for poultry production and care, and in AI infection control methods.

- Training materials and methods should be interactive and participatory and adjusted to women's learning ability.[2] They should take account women's special needs and interests in poultry management and disease control.

- Establish measures to improve the gender balance of animal health workers (village livestock agents and extension staff, field/farm veterinarians, animal health volunteers and authorities). It is widely acknowledged that there is a positive link between increasing female animal health workers and increased benefits for female poultry and livestock farmers.

Measuring gender impact of AI crisis, and the progress on gender equity and equality results of AI actions requires the tracking of appropriate indicators that can capture information on gender differentials and changes, which in turn, contribute to gender-responsive AI planning and actions. As the limited time of the fieldwork can only effectively allow qualitative methods for data collection and verification, identifying quantitatively measurable and verifiable indicators was a challenge. Nevertheless, the numerous interviews and observations helped in identifying information and data requirements that can be incorporated into designing AI programmes and actions, and can be considered as relevant gender indicators, as follows:

- Gender differences in income from production of poultry and poultry-related products
- Gender differences in control and decision-making over poultry resources
- Gender differences in AI knowledge and preventive behaviour
- Level of involvement and participation of women and men in community-based trainings and AI communication campaigns
- Level of women's and men's participation in AI surveillance, response and preparedness activities
- Gender differences in farmers' organisations membership
- Gender differences in access to credit
- Gender differences in access to technology
- Gender differences in village human and animal health workers
- Extent of use of participatory approach in AI actions and campaigns

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1 An observation made in Vietnam by the Vietnam National Red Cross Project on AI.

2 It has been proven worldwide that this is also a more effective training method for adult male farmers.

1. BACKGROUND AND OBJECTIVES

The highly pathogenic avian influenza virus (H5N1) was first identified in birds in China in 1996, and since 2003 has caused large scale poultry outbreaks and spread to other bird and animal species in many countries in different regions of the world: Asia, the Middle East, Africa and Europe. Particularly, in Africa and Asia, it has affected countries with large concentrations of poor and food-insecure people in the rural areas. Of a serious concern, it has infected humans in at least 14 countries.

The recent poultry outbreaks in avian influenza (AI) in China, Japan, South Korea, Thailand, Indonesia and Vietnam are a matter of public concern. Apart from the high economic costs and the socio-economic implications of the poultry outbreak, avian influenza also poses an alarming public health risk through transmission of infection from animals to human, and the risk of a change in the virus resulting in sustained human to human transmission causing a widespread human pandemic. Such a pandemic would be potentially devastating in its impact on human lives and sustainable development globally.

The possibility of an avian influenza pandemic became a serious risk in late-2005 and early-2006. The European Union (EU) played a central role in the global response to the Avian Influenza crisis by addressing the worrying situation in Asia and worldwide, by playing a major role in three international conferences and delivering quickly in terms of commitments and payments. At the Beijing conference of Januray 2006 (see hereunder) the EU committed 214 million euros for the fight against AI (out of which 100 million euros were funded by the European Commission (EC). Two years later, after the New Delhi conference of December 2007, the EU had committed € 413 million (out of which the EC alone funded € 245 million) to support efforts to contain and eliminate the disease and build long term sanitary and institutional capacity.

The first International Pledging Conference on Avian and Human Pandemic Influenza was convened in Beijing, China on 17-18 January 2006 under the co-sponsorship of the Government of the People's Republic of China, the European Commission and the World Bank and in close coordination with the World Health Organization (WHO), Food and Agriculture Organization (FAO) and World Organisation for Animal Health (OIE). The conference was attended by representatives from more than 100 countries around the world and representatives of international technical and financing agencies, organisations, the private sector and civil society.

The conference was organized to promote, mobilise, and help coordinate financial support from the donor community for the national, regional and global response to highly pathogenic avian influenza (HPAI) and to support efforts at all levels to prepare for a possible human influenza pandemic. The pledging conference drew on recommendations previously developed by the international community including *the Resolution of Enhancing Capacity-building in Global Public Health* adopted at the 60th Session of UN General Assembly and the FAO/OIE/WHO/World Bank-sponsored International Meeting on Avian Influenza and Human Pandemic Preparedness held in Geneva on 7-9 November, 2005.

International technical agencies such as FAO, WHO, and OIE have been playing a major role in informing the response by developing global strategies to control HPAI and prevent a human influenza pandemic. Others, such as the International Partnership on Avian and Pandemic Influenza, the European Commission and the World Bank, have been active in mobilising the donor community and partner countries to adopt a more strategic and coordinated approach.

In Asia, Governments have established national coordination mechanisms and applied control measures to limit the circulation of the virus in poultry including enhanced surveillance, culling, market controls, and in Vietnam since October 2005, mass poultry vaccination. Human health services have been strengthened and public communications campaigns carried out.

Poultry plays a vital role in many rural households in Asia. It is an asset of many households especially those who live in the border and below the poverty line. They are a key source of animal protein, in the form of meat or eggs, and thus contribute to family nutrition, particularly for children. They are sold or bartered for essential family needs such as seeking medical treatment or buying medicines and clothes, or paying school fees. Improvements in children's health have been linked to

additional income earned by women in small-scale backyard poultry keeping. Poultry are generally owned and managed by women with often the assistance of children.

It is also important to note that what is common in all Asian countries affected by avian influenza is the involvement of many small scale operators (farmers, traders and local market stallholders) in poultry production and marketing (FAO 2006).

The links between livestock and poultry production and gender are well known, but whether the avian influenza crisis has important gender implications, is a question that has yet to be systematically examined. Beyond the simple view that women are more affected by the AI crisis since they are the ones directly involved in the care and handling of poultry particularly in small-scale backyard production, is a more complex reality that needs to be better understood and analysed. It should be noted though that there is no difference in the number of human cases in AI between male and female.

Recognising the different potentials and vulnerabilities of women and men in the avian influenza crisis suggest that gender analysis in AI deserves more attention. The unpredictable events that characterise avian influenza and the assessment of the culturally determined roles and responsibilities of women and men in family care, and poultry production and marketing, can potentially contribute in designing effective action programmes in AI prevention and control. This sets the rationale for this study on gender aspects in the avian influenza crisis.

The study primarily aims to analyse and compare the gender dimensions of avian influenza in three affected Southeast Asian countries: Thailand, Vietnam and Laos, and will draw common lessons and conclusions that can serve as planning references for other similar Asian countries.

The study will particularly answer the following questions:

1. Does the AI crisis have a gender implication and impact? Can it have measurable indicators and impact?
2. Are gender considerations systematically taken into account in government and donors' funded AI actions? If so, how? If not, why?
3. What are the current gender gaps in AI actions? How can they be addressed?
4. How can gender be systematically addressed in AI actions? What are the key indicators?

It is expected that the findings of this study can shed light on the socio-economic aspects of AI in relation to gender equity, the differential impact on the livelihoods of women and men poultry raisers, and the vulnerability of women's social and economic position. Of equal importance, the findings can be used to strategically identify specific areas in which gender differences can play a role in formulating AI control and response mechanisms and could impact on the prevention or spread of AI in both animals and humans. The study thus will specifically determine the relevance and beneficial effects of mainstreaming gender in planning and policy-making on AI control and prevention in Southeast Asia. It will particularly propose guidelines for mainstreaming gender in actions funded by the European Commission based on the framework of its external response to the AI crisis.

2. METHODOLOGY

The Study Team comprised of four specialists: Gender Specialist, two Animal Health Specialists with professional background and experience in veterinary medicine in Asia, and a Health Economist.

The assessment and analysis of the gender aspects of AI employed a range of data collection techniques aimed at various types of respondents at different levels. Key informant interview was mainly used in eliciting information and views of national AI coordinating and planning agencies, national machineries for women/ gender and development, donor agencies as well as the civil society. Gender planners and officers of these agencies were particularly sought and consulted.

Among different scales of poultry producers, a combination of household interview and direct observations of poultry keeping and marketing practices was employed. Gender-specific information in activity, access and control related to poultry production and management, and an assessment of AI knowledge and behaviour of women and men were particularly collected. A significant amount of time thus was invested in the poultry farm visits. Markets were visited to observe the practices in trading and selling poultry.

Guide questions were prepared for the interview-meetings with government agencies, UN agencies, donor agencies, and NGOs. (Annex V. - A)For the poultry farm households, a short interview questionnaire was used. (Annex V. - B) Due to the limited time for the fieldwork and farm visits, about two AI-affected villages were strategically selected for each country. Assistance was sought from Interpreters to conduct the interviews in the local language, which were later translated into English. The field data collection was complemented with desk review of relevant reports and researches. About four weeks (14 March – 11 April 2008) was allocated for the field data collection period which included visits to the three target countries: Thailand, Vietnam and Laos. Two important constraints faced by the study were the limited areas that can be visited for each country, and the small sample of different types of poultry-keepers who can be possibly reached and interviewed, particularly since focus group discussions could not be organised due to the limited time available to prepare for the field visits. Random selection of either villages or farms has not taken place. The limited information collected during farms visits therefore does not allow generalisation. It should be therefore noted at the outset, that the findings and interpretations presented in this report are derived from limited field evidences and observations supplemented by interviews with key stakeholder agencies, and related and similar researches conducted in the region rather than on a statistical-based quantitatively verified linkages between gender and the avian influenza crisis.

The table below presents a profile of the poultry-farm respondents covered by the study

Country/Province/District	Type of Poultry Farming	
	Backyard / small scale	Commercial
Thailand		
Suphan Buri Province	6 households: 4 males; 4 females	3 farms: 3 males; 1 female
Vietnam		
Hanoi Province	11 households: 5 males; 6 females	3 farms: 3 males; 1 female
Laos		
Vientiane Province	8 households: 4 males; 4 females	1 farm: 1 male
Total	25 households: 13 males; 14 females	7 farms: 7 males; 2 females

There are, however, important opportunities that are worth mentioning. On many instances, the discussions with various agencies on the possible gender issues and implications of the AI crisis proved to be an effective gender-awareness raising exercise. It has somehow stimulated thinking on the potential benefits to AI programmes and actions, if gender perspectives are taken into account. It has raised concerns about the relevance of equally and fully engaging men and women in the planning and implementation of AI strategies and actions.

2.1 RELEVANT GENDER AND DEVELOPMENT (GAD) CONCEPTS

The following key gender and development concepts are important to adequately understand the social and gender analysis undertaken by this study:

1. ***Gender*** refers to the social attributes, roles and opportunities associated with being male and female, and the relationships between women and men, and girls and boys, as well as the relations between women and those between men. These attributes, opportunities and relationships are socially constructed and are learned through socialisation processes through a culture of a particular society. They are context, time-specific and changeable. Gender determines what is expected, allowed and valued in a woman or a man in a given context.

2. Gender is closely associated with issues concerning women, but the two terms are not the same. Examining gender requires looking at concerns and issues of both women and men, and often the finding is that women, because of historical, cultural and economic circumstances, are disadvantaged compared to men. Most interventions therefore along gender, just like class interventions, focus on the disadvantaged sector – the women, to enable them to catch up with men. Development interventions on class issues, rationally also focus on the disadvantaged 'poor' as it is the poor who needs to be helped in order to bring them on equal and fair-level playing field with the 'rich'.

3. ***Gender analysis*** is the systematic process of identifying differences in the conditions, needs and participation rates, access of resources and development, control of assets and decision-making, etc between women and men. It identifies key issues of gender inequality and inequity so that they can be properly addressed. Gender analysis provides the basis for, and the first step in gender mainstreaming.

4. ***Gender mainstreaming*** is a globally accepted strategy for promoting gender equality. It involves ensuring that gender perspectives and attention to gender equality are central to all development activities – policy development, research, advocacy/dialogue, legislation, resource allocation, planning, implementation, monitoring and evaluation of programmes and projects.

5. ***Gender equality*** denotes women and girls having the same opportunities in life as men and boys. It means that women and men, girls and boys have equal conditions for realising their human rights and for contributing to and benefiting from economic, social cultural and political development.

6. ***Gender equity*** is the process of being fair and just to women and men. To ensure fairness, measures are often put in place to correct the historical and social disadvantages that prevent women and men from operating on a level playing field. It recognises that women and men have different needs, preferences, and interests and that equality of outcomes may necessitate different treatment of men and women.

3. GENDER DIMENSIONS IN THE AVIAN INFLUENZA CRISIS: VULNERABILITIES, RISKS AND OPPORTUNITIES

3.1 THAILAND

The Kingdom of Thailand is a country of 236,800 sq km in South-East Asia, bordering Myanmar in the north and west, Laos in the east, Cambodia in the southeast, the Gulf of Thailand and Malaysia in the south and the Andaman Sea in the southwest. The country consists of a central plain, the Khorat Plateau in the east and mountains elsewhere. The country is administratively divided in nine regions and 76 provinces. The latter are subdivided in districts and sub-districts.

Thailand has a tropical climate with a rainy, warm, cloudy southwest monsoon (mid-May to September) and a dry, cool northeast monsoon (November to mid-March). The southern isthmus is always hot and humid.

Thailand has an estimated population of 65.5[3] million (0.98 males/female) consisting of Thai (75%), Chinese (14%) and others (11%). Ten percent (2004 est.) of the total population lives below the poverty line. The overall literacy rate is 92.6%[4]; the male rate is 94.9% and the female 90.5%. The total labour force is 37.12 million (2007 est.). In 2000 it was estimated that 49% of the population was occupied in agriculture, 14% in industry and 37% in the services' sector.

The country's GDP is composed of agriculture (10.8%), industry (45.3%) and services (43.8%). Livestock contributes 22% to the agricultural GDP. Major agricultural products are rice, cassava (tapioca), rubber, maize, sugarcane, coconuts and soybeans. Major export commodities are textiles and footwear, fishery products, rice, rubber, jewels, automobiles, computers and electrical appliances.

3.1.1 Overview of the AI Crisis and Responses/Strategy Plans

The livestock sector contributes a relatively small part to the agricultural sector, however some of its segments are considered remarkable in terms of industrialising food production and engaging in export markets. The poultry industry has in the span of two decades, transformed itself from the rural, backyard production of chickens catering to the domestic markets to industrial production of chicken meat predominantly for international markets. Between 1980 and 2002, production of chicken and eggs increased continuously. While output in eggs almost doubled in two decades, poultry meat almost quadrupled over the same period. During the same two decades, Thai people have increased their consumption of meat. Chicken became extremely popular as the price dropped due to mass industrial production. However, it is mainly because the country has entered the world market that its production of chicken meat has increased so dramatically.

In 2002, Thailand was the world's fifth largest exporter of chicken meat, selling abroad 468,000 tons of chicken meat and canned chicken for US$ 963 million. The main export markets were Japan and the EU, accounting for 54% and 31.23% of the exported volume respectively. After rubber and rice, chicken was the third agricultural product exported from Thailand (in value). As far as the major chicken producers are concerned, there is not a clear division between chicken produced for export and for the local market. The Japanese and EU markets only demand certain parts of the chicken (e.g. boneless breast). The parts not exported (e.g. wings, ribs, internal organs) are packaged or further processed into local products (e.g. chicken balls, sausages) for distribution in the domestic supermarkets and convenience stores in major urban centres. Most eggs produced in Thailand are consumed domestically[5].

The Thai poultry industry is not uniformly distributed throughout the country. Large-scale commercial production is particularly important in the central and eastern region, while backyard operations are mainly found in the north, northeast and southern regions. The poultry sector is very diverse with commercial broiler enterprises, consisting on average of 3,500 birds per 'flock', constituting only two percent of all 'flocks' but accounting for nearly sixty percent of the standing poultry population. On the

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3 CIA fact book 2008

4 2000 census

5 Delforge, I.: Raising chickens and pigs for Charoen Pokphand: Field research on contract farming in Thailand. Focus on the Global South. 2004.

other hand, backyard flocks, with an average flock size of 30 birds, constitute approximately three quarters of flocks but account for only around one fifth of the standing poultry population[3].

Before the 2004 AI outbreak, Thailand was among the world's major poultry exporters and produced about one billion chickens per year with approximately 400,000 persons employed in the industry. Aside from commercial hybrid broilers and layers, backyard poultry are raised for food in most villages.

In 2004 there were officially 31,072 chicken and duck farms raising about 217 million birds. These statistics exclude the large number of farms with less than 500 broilers, native chickens or ducks, or farms with less than 100 layers. Farmers producing native chicken varieties mainly produce for their own consumption and for the local markets. They do not send their produce to slaughterhouses. According to a FAO[6] report, 76% of farms producing chicken for the broiler marketing chain are managed by agribusiness companies or by their contract farmers. The Thai Development Research Institute (TDRI) however estimates that 99 % of the farms producing chicken meat are under contract with a company, while only 6% of layer farms are under contract. Exact data on the number of contract farmers in the country do not exist[3].

In Thailand, the broiler production chain is highly vertically integrated. This means that the same companies control the whole sector, from chicks to feed and from processing to marketing. To date there are 13 vertically integrated firms[3].

Many of the contract farms are family run businesses. For most families, raising chickens on contract is not the only economic activity in the household. Most of them still grow rice for their own consumption, and they sometimes grow other crops, farm fish or raise cattle.

Thailand has experienced five waves of HPAI outbreaks between January 2004 and February 2008. Thailand's first outbreak was detected on January 20, 2004, in a traditional layer farm in Suphan Buri province. A total of 6,180 birds died and 60,170 were destroyed. This outbreak was followed by 156 subsequent outbreaks. In April the number of outbreaks had reached a total of 193 and more were reported in the following months. By November 923 outbreaks had been reported. The period between January and November had marked two major waves, affecting respectively 181 areas in 41 provinces and 206 areas in 39 provinces, and resulted in the deaths of around 60 million birds through disease and culling. In the same period 17 human cases were confirmed of which 12 became fatal.

In the 2004 AI outbreak, eighty-three percent of the infected flocks were backyard chickens (56%) and ducks (27%); the rest were broilers (6%), layers (5%)' quails (2%), and other birds (3%).[7]

Estimation of the crude risk of HPAI infection by flock type, as defined by the Thai animal health authorities, showed that, although layer flocks only constituted one percent of all flocks, they accounted for five percent of all registered infected flocks. Quail flocks showed the highest risk of detected HPAI infection, nearly reaching 1.6 percent. Against widely held expectations, backyard flocks showed the lowest risk of detected HPAI infection, 0.05 percent, only one quarter of layer and broiler flocks.

Recent studies by FAO concluded that ducks, people and rice paddies, rather than chickens, are the major factors behind outbreaks of H5N1 in Thailand and Viet Nam, and are probably behind outbreak persistence in other countries of the region such as Cambodia and Laos.[8]

Throughout (2005) additional outbreaks of H5N1 were reported including another five human cases of which two proved fatal. In February 2005 a countrywide surveillance programme (known as x-ray survey) was started. The survey aimed to detect AI infection in any village. In close collaboration among the Ministry of Agriculture and Cooperatives, Ministry of Public Health, and the provincial

6 A. Costales : "A review of the Thailand poultry sector", FAO, March 2004

7 Thanawat, T., Prasit Chaitawessub, et al. 2005. Highly Pathogenic Avian Influenza H5N1, Thailand, 2004.

8 In "Mapping H5N1 highly pathogenic avian influenza risk in Southeast Asia: ducks, rice and people", Proceedings of the National Academy of Sciences of the United States (PNAS), May 2008.

governors, volunteer public health workers and livestock workers searched for and reported sick and dead poultry in villages. Farmers were also persuaded to report sick or dead poultry in their flocks to authorities.

The Thai government used a stamping-out policy to control AI outbreaks and compensated farmers for their losses. According to the Animal Epidemic Act, farmers are entitled to compensation of 75% of the value of the poultry destroyed. Approximately 62 million birds were either killed by the AI virus or culled for disease control. As of March 2004, the AI epidemic had an estimated effect on the national gross domestic product of 0.39%. These losses amounted to 25.24 billion Thai Baht or US$631 million.[9]

Other measures included a public awareness campaign aimed at educating public on avian influenza and to bolster consumers' confidence that poultry was safe.[10] Additionally, the practice of allowing ducks to freely graze was discontinued and long-distance duck travelling greatly diminished because farmers and traders had to provide health certificates for the animals. Because of traditional poultry farming practices, such measures are unlikely to bring change in short period of time.

Early March 2006, Thailand submitted a final report to the OIE indicating successful elimination of the disease. However, in July and August new outbreaks were reported in Phichit and Nakhon Phanom provinces. In total 2,272 birds died and 3,523 were destroyed. And again three human cases, all fatal, were reported, bringing the total number of human cases in Thailand to 25 (17 male, 8 female) 17 (13 male, 4 female) of which fatal. Ten of the cases were under the age of 10, nine of them boys. A number of the adult cases were related to contact with or handling birds (sick and dead or plucking and slaughtering).

The following table presents the division of H5N1 cases per age group:

Age group	Male	Female
0 – 10	9	1
11 – 20	3	1
21 – 30	2	2
31 – 40		2
41 - 50	2	2
51 - 60	1	

Three more outbreaks occurred between January and April 2007 in Phitsanulok, Nong Khai and Mukhahan provinces in farms with little or no bio-security. A total of 362 birds died and 3,907 were destroyed.

The most recent outbreaks occurred in January 2008 in a commercial farm in Nakhon Sawan province and in backyard chickens in Phichit province. In total 4,115 birds died and 55,832 were destroyed.

The 2004 waves caused, besides the human casualties, enormous economic losses due to culling of millions of birds, a decline in domestic poultry consumption and a temporary ban on chicken export to major trading partners. This resulted in the establishment of a National Committee on the Control of Avian Influenza, comprising the Permanent Secretaries of involved ministries as well as the Secretary General of the National Economic and Social Development Board. The Committee is placed under the supervision of the Deputy Prime Minister. The Committee, which consists of two sub-committees, the National Committee on Avian Influenza Control and the National Committee on Influenza Pandemic Preparedness, is responsible for developing the national strategy for dealing with the avian

[9] Ibid.

[10] In early 2004, lack of information and communication with regard to AI caused the public to lose confidence in poultry products.

influenza problem and co-ordinating with relevant agencies, overseeing implementation and reporting latest developments directly to the Prime Minister. Committee meetings take place once a month, in case of AI outbreaks more often.

The Committee developed the National Strategic Plan for Avian Influenza Control (2005-2007), which consists of the National Strategic Plan for Avian Influenza Control in Thailand and the Thailand National Strategic Plan for Influenza Pandemic Preparedness.

The National Strategic Plan for Avian Influenza Control consists of six inter-related strategies:

1. Development of a disease free poultry management system, to be implemented by the Department of Livestock Development.
2. Disease surveillance and response during outbreaks, to be implemented by the Department of Livestock Development in collaboration with the Department of Disease Control.
3. Knowledge generation and management, to be implemented by the National Science and Technology Development Office.
4. Capacity building of organisations and manpower, to be implemented by the Departments of Livestock Development and Disease Control.
5. Create understanding and participation of the civil society and private sectors, to be implemented by the Public Relations Department in combination with the Departments of Livestock Development and Disease Control.
6. Develop sustainable integrated management systems and mechanisms, to be implemented by the National Science and Technology Development Office.

The Thailand National Strategic Plan for Influenza Pandemic Preparedness consists of five strategies:

1. Strengthening influenza surveillance systems, to be implemented by the Departments of Disease Control, Medical Services, Livestock Development, National Park, Wildlife and Plant Conservation and by Universities.
2. Preparedness of medical supplies and equipment, to be implemented by the Department of Diseases Control in collaboration with the Department of Health Service Support.
3. Preparedness for pandemic responses, to be implemented by all concerned state agencies, including the Bureau of the Budget and the Comptroller General's Department.
4. Public relations and education, to be implemented by the Office of the Prime Minister, public health organisations and the Thai Health Promotion Foundation.
5. Development of sustainable and integrated management systems, to be implemented by the National Science and Technology Development Agency, the Minister of Public Health and the Office of the Prime Minister.

The plan focuses on the technical aspects of prevention and control in the poultry and human health sectors. No special attention is paid to possible gender issues and gender is not taken into account in the AI programmes.

The Ministry of Interior and the Ministry of Public Health are directly in-charge of the avian influenza outbreak prevention. As of January 2007, daily surveillance by the Ministry of Public Health - Bureau of Epidemiology report indicated a total of 61 clinical influenza and/or pneumonia patients from 21 provinces[11], 25 of which were confirmed H5N1 cases and 17 of those fatal. The Ministry has trained 80,000 village volunteers in a door-knocking campaign in the North and Northeast where the avian influenza outbreak happened. Similar campaigns are launched in other regions which included nationwide distribution of booklets on AI symptoms and preventive measures.

3.1.2 Gender Roles and Relations in Poultry Production and Marketing

During the fieldwork in Thailand, four commercial poultry farmers and eight backyard poultry keeping farmers were interviewed. The 2-day farm visits were mainly carried out in the province Suphan Buri, a major poultry production region which has suffered large-scale poultry die-offs and destruction from four serious AI outbreaks since 2003.

[11] Source: IFRC and RCS (2006): Appeal No. MDR 00018

Among the commercial farms interviewed, men were found to play a more dominant role than women with respect to the care and management[12] of the poultry: feeding, collecting eggs, cleaning[13] and maintaining, selling of manure, as well as transporting and selling of chickens. Women are responsible for keeping the income from the poultry enterprise, and more or less, share an equal role in decision-making over the use of the income.

Following the first outbreaks of AI and the stricter bio-security measures (e.g. the empty period between two broiler cycles has increased from one to three weeks), the annual income of broiler farms has decreased. Anger was voiced by one of the respondents that commercial farms are subject to strict bio-security measures (both by agribusiness companies and government), whereas no measures are imposed on neighbouring backyard farms.

Majority of workers in poultry slaughter houses for export and domestic market, which process about 30,000 birds per day, are men. Many of these slaughter facilities though are known to have met standards of bio-security. In contrast, small slaughter houses which kill about 500 -1,000 chickens per day mainly for the local market, are known to have lower standards of bio-security.

Most of the backyard poultry keeping households interviewed indicated that rice-farming was their major source of income. The importance of poultry in the household income has steadily declined through the years following financial losses from the series of AI outbreaks that hit Suphan Buri Province. This is compounded by the socio-economic complexity of following the government's AI control guidelines related to poultry production such as confining and separating poultry in fenced houses vis-à-vis the traditional practices of free-roaming and scavenging around home yard and farm fields.

Men, almost exclusively, are involved in activities related to breeding poultry for cockfighting including its gaming activities. They are also mainly responsible for purchase of live poultry and slaughtering them for consumption. Sale of dressed poultry, poultry parts and eggs in markets however is usually in the hands of women (95% of the sellers are female[14]). Women primarily perform tasks related to feeding and caring for the poultry, and preparing them for cooking. Decisions on types of poultry to raise, the proportion of the poultry for market or home consumption or to be used for cockfighting also usually rest on men.

Government veterinarians, livestock authorities and staff, and village livestock volunteers are predominantly male, while village health volunteers are mostly women. Men thus mainly carry out culling during AI outbreak as well as the vaccination of poultry against Newcastle disease. Women as village health volunteers conduct AI communication campaigns including the more aggressive, 'door-to-door' knocking.

3.1.3 Understanding and Knowledge of Avian Influenza

Overall, there is a good level of understanding and knowledge among commercial and backyard poultry farmers about how to protect oneself from AI infection, which was mainly received through television. This is not, however, effectively translated into changed behaviour. Many farmers interviewed admitted that they have not followed strictly the guidelines enforced by the authorities. For example, in one commercial poultry farm visited, the female labourer reported that she did not wear at all the protective mask and boots which the farm owner gave to her for use in the farm. The protective clothing was only worn during the AI outbreak in the village. She reasoned that she has not seen anybody wear those protective apparels, not even the owner himself, so why does she have to wear them anyway. In a visit to a cockfighting breeding farm, the owner said that despite the information campaigns, he takes no precaution at all. He used his bare hands to collect the dead chickens, and throw them into a hole for burying. He does not believe at all about the existence of AI – he challenges the government to provide hard evidence of AI as a serious public health concern.

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12 One of the contract broiler farms was managed by a women, who has an advanced education in banking,

13 Labourers on a visited contract broiler farm are responsible for most of the actual work. Women were said to do the cleaning of the premises and shed at the end of the cycle, including manure collection, as women are better equipped for that type of work than men.

14 Personal communication Head of Livestock Office, Suphan Buri.

Similarly, a visit to a commercial contract farm for the domestic market revealed that there is no strict enforcement in the use of protective masks and boots. The owner reported that the contracting company strictly requires these protective measures but as the farm is not regularly visited and monitored, compliance is weak. He said that his workers complained that masks are inconvenient especially with breathing.

In addition, an example of a clear lack of hygiene are the two observations made in Klong Toey market in Bangkok, of dressed as well as barbecued poultry placed next to or on top of cages with live birds (see annex VIII).

3.1.4 Gender-based Vulnerabilities, Risks and Opportunities

Most farmers and government authorities interviewed believed that there are no gender implications in the AI epidemic and crisis. Nevertheless, when it comes to vulnerability to AI infection, many of them think that women face more risks compared to men. This is mainly because men have more access to information and training on animal health including AI[15], and have more technical understanding about AI infection and prevention, and thus can protect themselves better. Women's general low level of education and limited access to AI information and training increase their risks and vulnerabilities for AI exposure and infection. One male farmer-respondent thinks that women, in general, fear AI more than men, because many women believe that AI cannot be treated, and is fatal.

The Head of the Provincial Livestock Office (PLO) Suphan Buri Province, during an interview with her, gave a view that there is really no significant difference of risks of AI exposure between women and men. She, however, stressed that level of schooling can be an important factor in adopting behaviour for AI protection and infection prevention. She cited that poor and uneducated women in rural and remote areas may still cook chickens that are found dead while in the better educated urban population, this would be an unlikely behaviour. She thus thinks that there is an information gap in AI between rural and urban areas in Thailand that can put people, particularly in rural areas, in serious risks.

However, as men are perceived to be more directly handling poultry, some respondents believed that they face greater risks of AI infection compared to women. Just like the women, they are often directly involved in the care and feeding of poultry and those who are engaged in raising and transporting fighting cocks - an almost exclusively, men's domain – face greater risks in AI infections.

With regard to AI impact on household income, one female backyard poultry keeper who cared and managed the chickens herself, said that when her chickens died because of AI, she felt sorry for the loss of her income that she could have earned in selling the poultry, and the implications of less access to poultry meat as food for the family. She thinks that because women have limited time and mobility, they are not able to attend trainings about poultry production and care, and as such, renders women poultry keepers more vulnerable to income losses, and worst, to AI infection compared to men. She asserted as well that if properly equipped with AI information and knowledge, women can play an essential role in AI prevention and control. She can particularly educate and protect her children and family on AI, and can take precautions in the care of poultry. Women, she continued, can also play an important role in informing neighbours and other female backyard poultry keepers about AI. She said that she only learned about AI from the television.

3.1.5 Are Gender Considerations Taken into Account in Avian Influenza Actions?

In general, there is a very limited understanding of gender implications in the AI crisis, and thus gender considerations in AI actions are hardly given attention. There is instead a tendency to narrowly view gender as an issue of male-female ratio and distribution in the AI work and actions rather than the more analytical concerns related to gender-specific roles, access and control, and men and women's opportunities, constraints and vulnerabilities in the AI crisis and control measures.

Except for the UN and bi-lateral agencies, and NGOs interviewed: FAO, WHO, UNSIC, the AusAID's regional programme in emerging infectious diseases (EID), Asian Preparedness Disaster Centre (APDC), and the Regional IFRC and RCS Office, the rest of the key stakeholders such as responsible

[15] The man as head of the household is the one who would be invited for trainings or AI information meetings.

government authorities, and poultry farmers (both backyard and commercial types) think that that gender does not really play an important role in the Avian influenza crisis.

While there is a certain level of recognition of gender issues in AI among the UN agencies and NGOs working in AI, there is no specific component on gender in their AI initiatives. Only the AusAID's ASEAN Plus Three Emerging Infectious Diseases (EID) Programme has a gender component which includes conducting a gender analysis of AI in the target countries, and mainstreaming gender in its policy initiatives, implementation mechanisms and capacity building activities.

3.1.6 Recommendations

- More efforts are needed in public education campaigns and may have to be reinforced with household counselling, particularly in rural and remote areas where access to AI information are limited and high risk groups have lower levels of education.

- Efforts are needed to find practical solutions to induce behaviour change. Despite the widespread knowledge about AI and effective means of protection, it seems that many people who are at risk – backyard poultry farmers in rural areas, poultry sellers in the market, breeders of cockfighting games – have not changed their behaviour. It should be particularly noted that most human cases of AI in Thailand have largely resulted from contact with sick or dying chickens in the backyard. Most transmissions occur within the family cluster with often children getting infected. Efforts thus should be made for education campaigns to effectively reach children. Women as health care givers should be targeted for their roles and contributions in the disease prevention and control.

- Measures should be made that campaigns and trainings on AI include women poultry farmers as well. Currently, trainings on livestock production and AI are targeted to male farmers who are members of the Farmers/ Livestock Association. Women are not considered as farmers.

3.2 VIETNAM

The Socialist Republic of Vietnam (Vietnam) is a densely populated country of 329,560 sq km in S.E. Asia, bordering China in the north, Laos and Cambodia in the east, and the Gulf of Tonkin and the South China Sea in the west. The country consists of low, flat deltas in the south and north, central highlands, and hilly, mountainous areas in the far north and northwest. The country is administratively divided in 59 provinces and five municipalities. Provinces are subdivided in communes (13,000 in total) and villages.

The climate is tropical in the south, and monsoonal in the north with a hot, rainy season (May to September) and a warm, dry season (October to March).

Vietnam has a population of approx. 86.1 million (0.98 male/female)[16], 70% of which live in rural areas. The population of which 14.75% live below the poverty line (2007 est.) consists of Kinh (Viet, 86.2%), Tay (1.9%), Thai (1.7%), Muong (1.5%), Khome (1.4%), Hoa (1.1%), Nun (1.1%), Hmong (1%), and others (4.1%)[17]. The languages in use are Vietnamese (official), English (increasingly favoured as a second language), some French, Chinese, Khmer, and the mountain area languages Mon-Khmer and Malayo-Polynesian. The overall literacy rate is 90.3%, with a male rate of 93.9% and a female rate of 86.9% (2002 est.). Literacy rates of mountain tribes are lower.

Vietnam has a labour force of 45.73 million (2007 est.) of which 55.6% is engaged in agriculture, 18.9% in industry and 25.5% in the services sector (July 2005). Agricultural products consist of paddy rice, coffee, rubber, cotton, tea, pepper, soybeans, cashew nuts, sugar cane, peanuts, bananas, poultry, fish and seafood.

3.2.1 Overview of the AI Crisis and Responses/Strategy Plans

The poultry sector is dominated by small-scale family run farming enterprises, which are responsible for two-thirds of the total production and approximately half of the marketed products. The links with the market are usually informal and transport and marketing patterns un-systemised. There is a strong

[16] 2008 estimate, CIA fact book
[17] 1999 census

consumer preference for live birds. Poultry is either slaughtered at home or in the market after purchase. Eight million households were estimated to be practising poultry rearing, and with an average household size of over five people, this means that at least 40 million people are to some extend building their existence and securing their livelihood through poultry production. In general it can be stated that the poorer the household, the more important the poultry is for the family. In economic terms poultry provides security (savings and readily available cash in case of emergency) and income. Poultry has high nutritional value (meat, eggs) for the family health, and many social functions (gifts, games, special food for visitors, religious ceremonies).

To date the poultry sector can be divided in three main categories:

- Small size production with less than 200 birds (95% of the poultry or 7.9 million flocks with 118 million birds are in flocks of less than 50 heads)
- Medium commercial production with 200 – 2,000 birds
- Large-scale farm production with more than 2,000 birds.

Vietnam was among the first countries to report the HPAI virus and remains one of the worst affected in terms of human infections and deaths.[18] Avian influenza has hit Vietnam hard. The first outbreak in both the avian and human population was reported at the end of 2003. Since then the virus has spread through the bird populations in almost every city and province.[19] After the first report, the total number of outbreaks in January alone reached 448. At the peak of the epidemic, 24 percent of the communes and 60 percent of the towns were affected, and by March about 17 percent of the poultry population had died or been culled, amounting to about 45 million birds. In July the number of reported outbreaks had reached 1,736. The initial wave was followed by two less severe outbreaks, in late 2004/early 2005 and in August 2005. A national poultry vaccination program was undertaken from October 2005 to January 2006 in all 64 provinces covering 170 million chickens and 79 million ducks. Vaccination is continuing to date, although the government is planning a study into blanket vaccination versus surveillance and control plus targeted vaccination in order to reduce costs. No new outbreaks of HPAI in poultry had been reported between December 2005 and July 2006. Since then continued outbreaks are being reported. To date, 51 million poultry have died.

Together with the high number of outbreaks in poultry, many human cases have been reported. To date the counter reads 106[20] confirmed cases, of which 52 fatal. Of the 106 cases, 35 were reported male and 28 female. Of the 52 fatal cases, 21 have been reported male, 14 female. A number of the cases were reported having been in contact with sick and/or dead poultry or involved in poultry slaughter. One man had been reported caring for his sick brother. Of the cases of which age was reported they could be divided in the following age groups:

Age group	Male	Female	Unknown
0 – 10	6	7	1
11 – 20	13	10	
21 – 30	7	6	
31 – 40	6	5	
41 - 50	2		
61 - 70	1		

The country's case fatality rate for avian influenza infection is one of the highest in the region. The human infections were mainly concentrated around the Red River Delta provinces in the north and the Mekong Delta Region in the south, matching the distribution of poultry outbreaks. The relatively high number of confirmed human cases combined with widespread poultry outbreaks of H5N1 has led to concerns over the possible emergence of a human pandemic strain and had made AI in Vietnam a

[18] Indonesia has the most avian influenza related deaths 108 out of 133 confirmed cases - compared to other countries worldwide.

[19] IFRC and RCS (2007) Appeal No. MAAVN001

[20] Cases/deaths: 3/3 (2003); 29/20 (2004); 61/19 (2005); 8/5 (2007); 5/5 (till 01-05-2008).

focus of national and international concern. However, when H5N1 infections in birds spread globally, the risk of a pandemic originating outside Vietnam increased as well. This all caused the Vietnamese government to enhance planning efforts to control H5N1 infection in domestic poultry and prepare for a possible human pandemic. Provincial authorities have been ordered to address the outbreaks by stepping up vaccinations, culling infected poultry and disinfecting poultry farms in high-risk areas.

The HPAI epidemic has resulted in significant social and economic costs, particularly among Vietnam's millions of farm households with small numbers of poultry. It is estimated that the direct economic impact of the epidemic was a reduction of 0.5 percent of 2004 GDP, affecting some 8 million of Vietnam's 11 million households thought to be engaged in poultry production.

The government reacted forcefully to contain the HPAI epidemic, once its scope and ferocity became apparent. In January 2004, the Prime Minister established a multi-ministerial AI Steering Committee (AISC) chaired by the Minister of Agriculture and Rural Development, and comprising representatives of the Ministries of Agriculture and Rural Development (MARD), Health, Finance, Planning and Investment and others. The Committee set forth to develop a National Preparedness Plan in Response to avian influenza Epidemic H5N1 and Human Influenza Pandemic which was approved by the government on November 18, 2005. The Plan includes response measures under different scenarios and allocates responsibilities and actions among fourteen ministries, mass organisations, i.a. the Vietnamese Women's Union, and People's Committees.

A National Action Plan for the Control of HPAI was drafted to provide guidelines for containing the epidemic, to be implemented by the AI Working Group, comprising the various technical animal husbandry and animal health institutes, the two northern (Hanoi) and southern (Ho Chi Minh City) regional veterinary diagnostic laboratories, and the provincial, commune and village level veterinary services. At the commune and village levels, Commune AI Control Committees, comprising commune leaders, law and order personnel, and animal health workers, sampled affected farms and supervised the control of animal movement, culling and disposal. An Emergency Disease Contingency Plan for Control of Highly Pathogenic avian influenza in Vietnam was approved by MARD on December 5, 2005. It constitutes the basis for the National Veterinary Services to develop their own strategy to control HPAI.

In February 2006, the government established a National Task Force under the National Steering Committee to develop an Integrated Operational Program for Avian and Human Influenza (OPI).

Policy measures adopted by MARD follow the Global Strategy prepared by FAO, the Office International des Epizooties (OIE) and the WHO and propose medium- to long-term aggressive control measures through deployment of conventional methods of culling, bio-security and movement control combined with strategic vaccination of domestic poultry and ducks. Other measures include raising public awareness, strengthening diagnostic capacity, enhancing research capability, imposing a temporary ban on the hatching of ducks (resulting in smuggling of cheap breeders from China), and carrying-out epidemiological surveys to understand the route of transmission as well as the role of wild birds. Following the recommendation of a study on compensation and related financial support to farmers, the government's compensation for birds culled during the stamping-out of outbreaks had been raised from 10-15 percent of the market value to 50 percent in June 2005.

Specific short-, to medium-term objectives are (a) to strengthen veterinary services to control HPAI and other potential zoonotic disease threats; (b) to control HPAI using a cost-effective phased approach that addresses each sector; and (c) to plan poultry sector restructuring to achieve better control of HPAI while minimising the loss of livelihoods and environmental pollution. Over the longer term, the country plans to restructure its poultry industry by improving bio-security and food safety along the market chain from producer to consumer while protecting the livelihoods of poor farmers and preserving the environment.

The Department of Livestock Production (DLP) has developed a restructuring plan[21] for the poultry sector until 2015, which proposes a centralisation to ban poultry from populated areas and industrialisation of poultry farming to improve bio-security. The aim of the plan is to concentrate

[21] Thieme, O., et al.: Poultry sector restructuring in Viet Nam. Draft. FAO/World Bank, 2007.

poultry production in fewer and larger units with better breeds, feeding and management, to relocate farms out of residential areas into specific poultry production areas and to change the market chains towards the selling of processed poultry. The number of poultry keeping households would thus be reduced to 5 million which means that 3.3 million or about 40% of the existing households would have to stop poultry production. Out of the reduced households, 3.2 million would be small-scale poultry producers. The proportion of commercial production for chicken is planned to reach about 50 percent and for waterfowl between 65 and 70 percent.

The restructuring policies - imposition of new regulations to upgrade farm and market bio-security, improving market efficiency and restructuring of the poultry sector - may have a negative effect in access to and participation in markets. Small-scale commercial producers will be forced to either downscale or change location to get a veterinary certification, the live-bird ban will affect peri-urban backyard producers to alter production and to sell to traders or at market stalls, and small-scale traders and transporters will need to re-invest in equipment or be restricted to rural sales. All this would result in fewer market participants, many of which are women.

The restructuring of the poultry sector will also change the characteristics of produced poultry products towards processed and cooled poultry meat, which has been produced in an industrial and safe way, and to eggs from commercial layer breeds. FAO studies revealed that in urban centres a change in consumer preferences towards processed and cooled poultry meat from supermarkets and other outlets could be observed but that the marketing infrastructure still needs to be developed.

A National Plan of Action on Human Influenza Pandemic Prevention and Control was approved by the MoH on November 24, 2005. The Plan addresses all the core areas in a human pandemic influenza response including surveillance and early warning systems, risk communication for the public and health care workers, border control and social distancing measures.

In developing its policy framework to respond to HPAI and the threat of a human influenza pandemic, the health authorities address two scenarios:

- A continuation of the current “pre-pandemic” phase in which outbreaks of HPAI in poultry present a risk of further human cases of HPAI; and
- A human influenza pandemic caused by a new viral strain during which the number of human cases would be large and would place a great demand on the curative care sector.

The policy frameworks to respond to the two scenarios are: for the first scenario, the reinforcement of the surveillance system to allow the early detection of cases and rapid response to them, and the promotion of behaviour change in the population to minimise risk of human infection, and for the second scenario, both classic public health and curative care responses tailored to the specific emergency.

The specific objectives are: (a) to minimise the incidence and mortality of human avian influenza infections; (b) to reduce the risk of an influenza pandemic occurring; and (c) to take steps necessary to reduce the impact of a human influenza pandemic. The principle underlying the health sector’s response is to link activities targeting HPAI to a broader agenda to strengthen the capacity of the sector to detect, control and respond to emerging infectious diseases, especially zoonoses.

3.2.2 Gender Roles and Relations in Poultry Production and Marketing

Poultry production in Vietnam can be divided in small-scale backyard farming, medium-scale commercial production and large-scale farm production. Women manage small-scale poultry production[22], to a lesser extent, medium-scale farms, and are employed on large-scale farms as labourers. Large-scale farms are usually male operated enterprises. Women are further involved in trading activities (e.g., 80% of the traders in Ha Tay, Thai Nguyen markets, see also annex VIII), however men are involved in transport and trade as well. Although women manage small-scale farms and are responsible for most of the work involved, the head of the household, mostly the husband, has the ownership over the farm and the decision-making power[23]. In the study of Le Thi Mong

[22] CSO: 80% in backyard poultry production

[23] Curry, J.: Market impacts as hidden costs of avian influenza on rural livelihoods and households. IGG HPAI Symposium, 14 November 2006.

Phuong[24], women played a role in slaughtering poultry in small slaughtering houses and most markets. In latter places men and other family member would provide support.

Men are also responsible for veterinary care of the poultry and have better access to information and training on poultry production and marketing. From the fieldwork, it was found out that, in general, only men attend training courses on poultry production, and in AI control and prevention. This is confirmed by the study of Phuong who found that men have more access to marketing information and production techniques through training courses. These training courses are usually organised by the district veterinary station. The men who were interviewed expressed that when the husbands attend a training course, they would share the information to the women, and their neighbours. This warrants further investigation and validation.

Phuong[24] found women to be responsible for most poultry production tasks in small-scale production systems of one to 50 birds. Tasks included management, feeding watering, disease detection, purchase of feed supplements and veterinary care. Women were also responsible decision makers for sales and poultry marketing. Men however, are decision makers concerning financial management and production expansion. In households with 50 to 200 birds, men are responsible for the production management and veterinary care. Women in these households remain largely responsible for feeding, watering, cleaning, marketing and sales. In both systems women were reported to 'keep the money'. Half of the 'backyard' farms visited by the mission were male operated enterprises. Those households where men are the poultry owners, they themselves do most of the work although in some cases women do the cleaning and manure disposal.

In AI prevention and control, men are involved in culling and disposal of the birds, as well as in implementation of bi-annual vaccination campaigns. Field veterinary and extension workers are mainly men.

3.2.3 Understanding and Knowledge of Avian Influenza

The women and men poultry keepers interviewed during the fieldwork have shown to have good knowledge about AI. They know the symptoms and how to detect the disease among fowls and birds, and what to do when there are sudden die-offs among the animals. They also claimed that they are able to protect their families against AI.[25] Information sources about AI include the television news programmes and public information campaigns, the community broadcasts/loudspeakers, the farmers' training courses, the government's veterinary staff, and the leaflets and handbooks distributed by the government's AI campaigns. In the study of Phuong[24] AI awareness had improved since the outbreaks, but women's awareness on disease prevention and control remained limited.

The respondents reported that they are able to follow the guidelines such as: do not touch the poultry without gloves, separating different species of poultry being raised, do not eat dead poultry or birds, always wash hands after handling poultry, and report immediately to authorities, and do not touch the poultry, when they are suspected to be sick. They bring their poultry and birds to the veterinary station in the village for the vaccination (if they have few poultry) and would call the veterinary worker to come to their farm for the vaccination if they have more than 40 birds. A few of them had attended the training courses on poultry production and AI prevention and control organised by the Farmers' Association and the Vietnamese Women's Union or by the District Veterinary Station. Reasons given for not attending the courses are: no awareness, no time, and the timing of the trainings were not suitable to their own schedules.

They suggested that the government should give free-of-charge to farmers, protection suits, masks, gloves and boots. In addition, they think that the vaccination should be done every month because the cycle of the poultry is very short, and if the vaccination campaigns are only carried out every 4 or 6 months, then the young chicks are often not vaccinated. Timings of trainings should also be adapted to farmers' time, and should be short and easy to understand. They also suggested that more AI and animal disease control trainings and information campaigns should be conducted.

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[24] Le Thị Mong Phuong: Gender analysis In poultry production in Chuc Son town, Chuong My district, Ha Tay province and Cha La commune, Duong Minh Chau district, Tay Ninh province. Draft. FAO. 2006.

[25] Some of the male respondents mentioned to look for other job opportunities, because of the health risks AI poses for their families.

3.2.4 Gender-based Vulnerabilities, Risks and Opportunities

Phan Van Luc, et.al[26] reported that women are involved in all aspects of poultry production (raising, transporting, selling, slaughtering) and are thus directly impacted by the adverse economic and social effects of AI and related bio-security control measures, as well the human health risks. Further that women are invariably the ones that come into direct contact with poultry manure and blood and are therefore more vulnerable to the disease effects of HPAI than men. Officials of the Hanoi provincial Department of Agriculture and Rural Development nevertheless mentioned that most human HPAI cases are not related to poultry raising and handling but to consumption of poultry meat, which is contrary to any previously reported information.

Related to the adverse effects of the restructuring policy he writes that small- and medium-scale commercial farms with little bio-security experience relatively low levels of economic loss in the event of a HPAI outbreak, and therefore motivation to upgrade to a higher level of bio-security would be limited related to required costs of bio-security and the economies of scale.

Schou Larsen reports that the stricter the government regulations, the higher the number of birds required to make a profitable business and the higher the investment needed, meaning that strict regulations will disfavour poorer farmers. [27] He mentions that the DLP restructuring plan will pose a real barrier to most small-scale family run poultry enterprises and that the fast majority of these businesses have three options only, giving up poultry production and finding alternative sources of income, continuing production of bio-insecure birds for the black market, or scaling down production to a household consumption level and stop selling birds beyond the closest vicinity.

Despite the major role women play in poultry production, there exists a gender bias in government interventions in the poultry sector, which ranges from male dominated committees making decisions, male dominated veterinary field and livestock extension services, to male-targeted extension and training programmes[28]. This preferential targeting of men limits women's productive access to markets and training. The Vietnamese Women's Union (VWU), however is, to a certain extent rectifying this gender bias by providing training programmes to its grassroots members. Together with the NGO, Agronomes & Vétérinaires sans Frontières (AVSF), the VWU implements a project, which would improve livelihoods through chicken production in 200 communes. The programme includes provision of 50 chickens (through a loan) and training in poultry production, bio-security and animal health.

Restructuring of the poultry sector will particularly affect small-scale farmers (the number of backyard poultry raisers has decreased) and market actors (traders, transporters). The shift towards commercial forms of production and processing for poultry will also hurt poor consumers who cannot access or afford to shop at high-value outlets like supermarkets. For instance, it is reported that in Hanoi, more than 60 percent of poor households surveyed had never shopped in a supermarket while in Ho Chi Min city 33 percent did not shop there.[29] There seems to be a growing trend of shifting the responsibilities of managing poultry production to husbands/men. This follows the government-guided shift from subsistence small-scale poultry keeping to a more bio-secured high investment/income commercial poultry production. As poultry production moves as a major source of household income, men, as heads of households tend to take over the traditional poultry responsibilities from women.[30]

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26 Phan Van Luc, et.al.: The economic impact of highly pathogenic avian influenza – Related biosecurity policies on the Vietnamese poultry sector. In: McLeod, A., & F. Dolberg (eds.): Future of Poultry farmers in Viet Nam after HPAI. A workshop held at Horison Hotel, Hanoi, March 8-9, 2007.

27 Schou Larsen, C.E.: Drivers and inhibitors for commercialisation of the poultry sector in the light of avian influenza. In: McLeod, A., & F. Dolberg (eds.): Future of Poultry farmers in Viet Nam after HPAI. A workshop held at Horison Hotel, Hanoi, March 8-9, 2007.

28 Within the farmers' union there is no notion of a gender aspect and few women are member of the VFU. (E. de Guzman, personal communication)

29 Agrifood Consulting International/FAO: The impact of avian influenza on poultry sector restructuring and its socio-economic effects. Poultry Sector Rehabilitation Project – Phase I. 2006.

30 From meeting-interview with the Vietnam National Red Cross (VNRC) AI Consultant and AI Programme Monitoring Officer

Other reasons for the possible changing gender pattern include: men, because of their better education compared to women, have more access and higher attendance to AI trainings, they can understand better the technical information on AI prevention and animal vaccinations and are better able to secure the poultry livelihood of the family. As heads of households, they exercise the authority and decision-making on important health concerns.

Moreover, while surveillance and infection control in poultry has significantly improved in the country, this is more likely to refer to the formal poultry industry (highly controlled medium and large scale enterprises) leaving out the informal or backyard poultry sector.

Women, especially those who are not members of the VWU and who are solo heads of their households, are often not able to participate and benefit from the development activities in their communities. They are hardly reached by information campaigns against AI, and do not have access to credit that can improve their livelihoods. Backyard poultry are often considered important assets or savings of these disadvantaged women. Their exclusion to development resources and information makes them highly vulnerable to AI risks and infection.

3.2.5 Are Gender Considerations Taken into Account in Avian Influenza Actions?

Key stakeholder government agencies for AI control and preparedness such as Ministry of Agriculture and Rural Development (MARD) and Ministry of Health (MoH) and their responsible departments (Dept. of Animal Health, Dept. of Livestock Production, Vietnamese Administration of Preventive Medicine, etc) do not really view gender as an important determinant for the effectiveness in AI control and preparedness. They generally believe that women and men have equal risks for AI infection and that the government has provided equal training opportunities for women and men and are therefore given equal protection from the disease. Promoting gender equality is mainly interpreted as making efforts in improving gender parity in staff at all levels including access to training and education opportunities.

In the interview, however, with the Chief of Communicable Diseases and Vaccine Management of the Dept. of Health, he acknowledged that in rural areas where women are mainly responsible for the management of backyard poultry, they may likely face higher risks for AI infection. He admitted though that women's concerns in the AI crisis are not specifically considered. He thinks that in the future planning of AI actions of the government, strategies should be included to address the need to target women and improve their knowledge in AI protection. He said that he will advocate for the attention of gender in the IEC component of the government strategy plan specifically strengthen the role and participation of the Vietnamese Women's Union in the AI information campaigns.

The representative of the Dept of Animal Health expressed that while the roles of women in sustainable poultry production are widely recognised, it is quite difficult to link that with their roles to AI prevention and control. He acknowledged though that it may be useful to show the linkage between women's roles in poultry keeping, their AI knowledge, and their roles in ensuring the health care of the family. He is concerned' however, that decision-making in the households are largely dominated by men.

It is interesting to note that Vietnamese Unions were generally found to be an effective and reliable partner in the AI communication campaigns. Government agencies and NGOs have appreciated their contributions in bringing AI messages to the rural communities, and to women, in particular. The Deputy Director of the Vietnamese Avian and Human Influenza Project (VAHIP) suggested that if Vietnam wishes to improve the gender attention in the AI crisis, it should actively involve the Vietnamese Women's Union in the planning and implementation of AI actions, and that farmers' training should specifically target women.

The United Nations Joint Programme in avian influenza which involves four UN agencies (WHO, FAO, UNICEF and UNDP) has identified key areas for gender mainstreaming in Phase II of the programme. It has set priority areas for integrating gender perspectives throughout the different sectors of the programme as well as including gender as an integral part of monitoring and reporting. In terms of livelihoods, the mainstreaming of UN Joint Programme in AI aims to improve women's knowledge on bio-security and strengthen their capacity to manage the disease.

The Hanoi-based ADB Greater Mekong Sub-region Communicable Diseases Control Project has developed Gender Action Plan for each target country. The Plan identified gender objectives and activities for each component of the project with the aim of incorporating gender perspectives and issues in the components and strategies of the project.

Interview-discussions with key staff of WHO brought particular focus to the concern that most analyses on the effects AI on women are mainly assessing the impacts on their poultry livelihoods and the food security of their families, but not on their roles as health care givers and workers. Women's risks of exposures to the disease as care givers, is not really examined. Additionally, when women are ill themselves, they do not seek care and treatment immediately. They also noted that hand washing campaigns are mostly targeting mothers and children, but not necessarily men. Since decisions to seek treatment in the household are usually made by men, it may be worthwhile to bring the campaign to the Farmers' Union as well whose members are mostly men. Support of men should thus be equally sought in the hand washing campaign. They also suggested that AI communication strategy should have balanced messages for the risks on human health and animal health.

FAO together with the Ministry of Agriculture and Rural Development (MARD) have conducted gender analysis in poultry production in Vietnam. The study, however, is still under review by FAO and not thus readily available. The EC Study Team has received a print copy of the study after several requests from the FAO Headquarters.

CARE and the Vietnamese Red Cross have specific activities targeting women in their AI programmes. CARE has assigned a Gender Focal Point to ensure that gender considerations and implications are systematically taken into account in their AI action planning, implementation and monitoring.

The farmers who were interviewed believe that there are no differences between male and female in exposures to AI risks. As such, it is not necessary to take into account gender in developing strategies/actions for AI preparedness and control. They acknowledged though that those who are more educated are more likely to protect themselves better compared to those with less schooling.

3.2.6 Recommendations

- Strengthen support to the Vietnamese Women's Union (VWU) particularly in building its competence in the following:
  - to participate and contribute in IEC Planning of the National AI Strategy of the Government of Vietnam,
  - to provide trainings in bio-security and AI prevention at the farmer's level using gender-sensitive, and women-friendly methods,
  - organising meetings with households and families with the aim of delivering messages on AI prevention and control.

- Efforts should be made to increase the number of women among Animal Health Workers and Village Veterinarians with the aim of reaching women poultry farmers (especially the poor and solo-heads of households) and encouraging them to attend training in poultry production and disease prevention.

- Measures and mechanisms should be established to collect and analyse AI data according to sex. For example, data and analysis on assessment and evaluation of AI campaigns and trainings should be gender-differentiated. This will enable planners to design appropriate and relevant AI strategies for women and men.

- Conduct a more systematic and evidence-based research to assess the impact of AI men's and women's poultry livelihoods. There is a need, particularly, to validate the reports and observations of the growing tendency of women to remove themselves from the poultry activities/enterprises of their families as a result of the AI crisis.

- Explore and identify the potential roles and contributions of women and men in pandemic preparedness. Involve and train women in rapid response team (particularly women in the

health sector) for infectious diseases including AI at all levels of governance (village, district, provincial, national).

- Efforts should be made that AI communication campaigns should have balanced messages of animal health and human health aspects. WHO has noted that most AI messages are largely focusing on concerns related to animal health.

- Information and knowledge on gender issues in livestock and poultry should be disseminated to all stakeholder agencies. This will facilitate better understanding of the gender implications of the AI crisis. It is of particular concern that WHO, despite its involvement in the UN AI Joint Programme has little knowledge of the gender issues in livestock, and thus does not take into account such information into its AI planning and actions

3.3 LAOS

The People's Democratic Republic of Lao (Laos) is a landlocked country of 236,800 square (sq.) kilometre (km) in the centre of Indochina, sharing borders with China to the north, Myanmar to the north-west, Thailand to the west, Cambodia to the south, and Vietnam to the east. These borders are largely permeable with legal and illegal crossing of food products, animals and people. Around 70% of the countries terrain is mountainous. The landscapes of northern Laos, and the regions adjacent to Vietnam in particular, are dominated by hills. Administratively the country is divided into 16 provinces — each province shares at least one international border—, one municipality, 141 districts, and about 10,553 villages[31]. .

Laos has a tropical climate with two distinct seasons, a rainy season from the beginning of May to the end of September and a dry season from October through to April. The average precipitation is highest in southern Laos. The annual average temperature is about 28 °C, rising to a maximum of 38 °C in April and May.

Laos presently has a population of approximately 6.7 million (1.02 female per male)[32], of which 77% live in rural and remote areas. The population density is low, 23.7 persons per sq. km. About 57.5 % of the population lives in lowland, 17.5% in mid-land and 25% in up-land areas. In 2005 an estimated 30.7% of the population lived below the poverty line. Important identified causes of poverty are limited access to cultivation land, especially for rice production, and livestock diseases. Poverty levels increase with altitude and related limited infrastructure. A World Bank report mentioned that although ethnic minorities account for only one third of the population, they make up more than half the countries poor. Laos' population is made up of 47 different ethnic and cultural groups, classified into four ethno-linguistic families: the Lao-Tai, Mon-Khmer, Hmong-Mien and Sino-Tibetan. However there are 10 big different language groups. The Lao-Thai are the biggest ethnic group and represent 66.6% of the population. The Mon-Khmer with 20.6% represents the second largest group, the Hmong-Mien are the third group with 8.4% and the smallest group, the Sino-Tibetan represent 3.3% of the population. About 93% of non-Lao-Tai people live in rural areas, compared to 69% for Lao-Tai. The overall literacy rate[33] is 68.7%, the male one 77%, and the female one 60.9%. Literacy rates are higher in the Lao-Tai group than in the other ethnic groups.

The main employment sectors for Lao people are the agricultural, industries' and services' sectors. Subsistence agriculture dominated by rice (paddy and upland rice), accounts for about 40% of GDP and provides 80% of total employment. Livestock plays an important role in the agricultural production (cattle and buffaloes as draught power) and in the household economy. Pigs and poultry are raised for household consumption and as live bank.

Veterinary services in Laos are limited, due to shortage of qualified personnel and the absence of a veterinary college. To date there are 69 fully qualified veterinarians, of which 12 are employed at the Department of Livestock and Fisheries in Vientiane. Approximately 900 government personnel are involved in animal production and health at national, provincial and district levels**.** Besides 785 livestock officers located at 12 provincial livestock offices, there are 5177 active village veterinary

[31] 2005 population survey
[32] CIA annual report 2008
[33] 2001 estimations

workers (VVWs), distributed over 11,180 villages, who are responsible for administering animal health services for cattle, buffaloes and pigs (50%), dogs and cats (30%) and poultry (20%). In recent past, VVWs used to be almost all male. To date however, due to donor-assistance, women would make up 40% of the VVWs in areas with livestock assistance programmes and projects. Male VVWs were said not being interested in treating pigs or poultry, unless the animals are their own. Livestock vaccination is considered a female chore for species other than bovines. Poultry deaths are rife, however little preventive measures are taken, although vaccines against i.a. Newcastle disease and fowl cholera are available. Laos like Thailand prohibits vaccination against AI.

Laos has one of the lowest health spending in Asia with about $12 per capita, with more than half disbursed by households for drugs and user fees.

Vientiane Capital has four referral and three specialised hospitals and each province has one provincial hospital (including four regional hospitals). There are 125 district hospitals and 789 health centres distributed across the country. The majority of personnel in hospitals and public health facilities are women. Many health facilities have insufficient professional medical and administrative staff, limited essential drugs and fundamental equipment. In most hospitals, there are insufficient isolation rooms, no adequate equipments for patients with severe respiratory diseases and no incinerators to dispose of dangerous infectious materials. The legislation is out-dated and special regulations for cremation of highly infectious bodies, e.g. AI victims, are missing.

There is an absolute shortage of health workers compounded by uneven distribution with most workers based in urban areas. Also, the skills' level of health care workers tends to be low. There are about 14,000 village health volunteers (VHV), approx. 50% females, who are or have been working on various programs such as the malaria and drug-kit programmes. The training of VHV is very limited and variable (from a few days to 6 weeks). Many VHVs working in remote areas among ethnic groups are male, as knowledge of the Lao language is required for VHVs. This is often the same person as the VVW.

3.3.1 Overview of the AI Crisis and Responses/Strategy Plans

Laos' poultry population consisted in 2006 of about 20 million birds. Most poultry production in Laos is free-range. Village backyard poultry constitutes 80% of the total population and is owned by subsistence farmers in all provinces on holdings of 10-30 birds. The remaining 20% is raised in more than 120 commercial mainly layer enterprises, which serve the larger urban populations of Vientiane, Luang Prabang, Champasack and Savannakhet. Local village breeds are preferred for household consumption. Ninety-five percent of the population is engaged in poultry-raising in one form or another. In rural areas 100% of the population raises poultry, while 70% of the city inhabitants raise backyard poultry. In poorer households, poultry may be the only livestock raised. Village poultry is mostly raised for personal family consumption (eggs and meat) with little local marketing and distribution. Nevertheless, poultry is seldom consumed, mainly at special occasions. Poultry produced for the market is generally brought to village or local district markets for sale. There are neither large live poultry markets nor large commercial poultry slaughter enterprises. Women have ownership over and are responsible for village poultry production, and marketing of poultry and poultry products. Commercial poultry production and the raising of fighting cocks is a male domain.

Laos has experienced four waves of avian influenza infection in the period March 2004 to April 2008, during which close to 517,000 birds (free range ducks, backyard and commercial chickens) died or were destroyed through culling. The first two series of outbreaks occurred mainly in the commercial sector, but the last two epidemics involved backyard poultry.

Laos recorded its first outbreaks of HPAI in early 2004 (January-March 2004) in Vientiane Municipality, and in the provinces of Champasak and Savannakhet. The majority of cases (42 out of 45) were recorded in small commercial enterprises, of which 38 in Vientiane Municipality. The remaining three incidences were in reported in village poultry. However, it was suspected that more outbreaks in rural areas occurred, but were either not detected (massive poultry deaths are common), or reported[34], due to poor infrastructure. It is estimated that 155,000 poultry died during the outbreak,

[34] To enhance reporting a pilot has started in 2008 with a free-of-charge hotline located in NAHICO.

one-third from the disease itself and the remainder through culling. No compensation was paid, but farmers received AI training and a T-shirt and were later restocked with poultry.

The second wave of outbreaks in poultry occurred in mid-July 2006 in Vientiane Municipality with reports of high mortality in chickens (approximately 2,500) in a farm in Xaythani District. Authorities responded quickly to establish a "red zone" around the farm, culling all chickens in a 1 km radius (approximately 30,000) and providing compensation at 60% of the market value. Money was paid five to six months after the outbreak. Active and continuous surveillance was introduced in a 5km radius; no further cases in poultry were recorded and there was no evidence of any human infection.

The following series of outbreaks were reported late February-early March 2007 in Vientiane Capital and Vientiane, Champasak, Xiankhuang and Savannakhet Provinces. Once again the outbreaks were concentrated in the Capital and poultry in seven out of nine districts located in or around the capital city were culled, either as a result of the presence of infected premises or as a preventative measure. This time, two fatal cases of human infection were also reported, a 15-year old female, a seller of barbequed chickens from Vientiane, and a 42-year old female from Vientiane Province. Ducks in the household of the latter have been reported positive for H5N1. In both cases, subsequent investigations confirmed that the patients' villages had recently experienced HPAI outbreaks in ducks or other poultry species. In an effort to control the spread of the disease, culling operations (together with associated compensation programs) were launched in all of the infected areas with the result that 350,603 birds were destroyed along with 567,243 potentially infected eggs. These series of outbreaks resulted in a ban on raising poultry in urban centres.

The most recent series of outbreaks were reported early February 2008 in Long district, of Luang Namtha province, bordering Myanmar and China. A total of 765 chickens died and 1317 were culled.

Following the first outbreaks of AI, a national avian and human influenza coordination office (NAHICO) was established within the Ministry of Health and a National avian influenza Control and Pandemic Preparedness Plan 2006 to 2010 (NAICPP) was developed by the Government of Lao P.D.R. with technical assistance of an United Nations (UN) inter-agency team.

A public awareness campaign was carried out during and following the first outbreak period and included distribution of leaflets to provincial and district animal field officers, and to farms and villages in Vientiane. In addition, radio and televisions messages were developed and broadcast in Vientiane. Several booklets and handouts were also produced to educate bird owners and VVW on the signs of HPAI and preventive measures such as bio-security.

While bio-security in village and small commercial settings is very limited or non-existent, public awareness communication has emphasized the need for local awareness, quarantine and restricted exposure. HPAI outbreaks may be feasibly contained in village or district settings, as long as reporting and response systems function. In general HPAI constitutes an immediate threat to household and village food security and a longer-term threat to human health and socio-economic growth.

Adopted in January 2006, the Plan is designed to coordinate a multi-sector approach for the control of HPAI in poultry and strategies to prepare in the event of a pandemic of AI in Laos. The two human fatalities have focused increased attention on the implementation of the NAICPP.

The plan, which implementation is coordinated by the NAHICO, consists of five strategies:

1. Development of a disease free avian management system to be implemented by the Ministry of Agriculture and Forests (MAF) with assistance from FAO.
2. Disease surveillance and response in humans during outbreak to be implemented by the Ministry of Health (MoH) with assistance from the World Health Organisation (WHO).
3. Laboratory and curative care to be implemented by MoH and assisted by WHO.
4. Health, education and community action to be implemented by the NAHICO, with inputs from Ministry of Information and Culture (MoIC), Lao Youth Union, Lao Women's Union (LWU) and Lao Federation of Trade Unions with UNICEF, FAO, WHO, World Bank, UNDP and INGOs such as Care and AED.

5. Strengthen the institutional and legal frameworks by strengthening the function of the National Communicable Disease Control Committee as well as financial reserves and stockpiles of essential supplies for HPAI outbreaks.

The plan mainly focuses on the technical aspects of prevention and control. Gender aspects, other than implementation of education and community action programmes with assistance of the LWU, are not addressed in the Plan.

Reviews by donors and agencies suggest that substantial progress has been made with the technical aspects of the NAICCP (strategy 2 and 3) and that coordination between national and international agents has effectively institutionalised procedures for future outbreaks.

The AEC task force has recently developed a black portfolio with posters, stickers, booklets, radio messages, bars of soap and CDs[35] to be distributed to village leaders in villages and districts at risk. All village heads have to attend the training, to be able to inform the population and take appropriate measures as soon as AI has been reported in the area. In 2008 a free-of-charge telephone hotline has been established within NAHICO with UN equipment and technical support from CARE, to facilitate early reporting.

Recent KAP studies (UNICEF, FAO, CARE, AED) also show that substantial progress has been made with the public awareness objectives outlined in strategy four, although practices have not really changed. For this reason it has been decided to reduce the number of messages and prioritise on technical importance and implementation capability. To date, IEC focuses on "three cleans" (clothes and bedding; living environment; clean feed and water) to bring about behaviour change. The messages address poultry raising practices combined with human disease prevention.

3.3.2 Gender Roles and Relations in Poultry Production and Marketing

Poultry production in Laos consists mainly of backyard poultry raising and care of the birds lies mainly in the hands of women and children. Large-scale commercial production in contrast is either a family enterprise or a male business. Raising and care of fighting cocks is a male chore.

Backyard poultry is mainly raised for household consumption. However when needs for cash arise, one or several chickens or ducks are sold, usually to a middleman who comes to the house, or at the local market. Although middlemen are usually men, market sellers of poultry and poultry products are mainly women (see Annex VIII). Women have decision-making power over the proceeds from the sale, although it may be shared with the husband. In the village visited, interviewed men were claiming all poultry related work with the exception of cooking (wife) and decisions related to sale and use of the proceeds (husband and wife). The interviewed women however mentioned to do all poultry related work, although men in majority would slaughter poultry. This is in contrast with the observations made by Baumann[36] who reports that in semi-intensive and backyard production systems poultry raising is usually the responsibility of women, who are in charge of raising the poultry, handling the manure, slaughtering (possibly with male help), processing and selling the birds, as well as in charge of income from poultry, even when it is the men who manage poultry, as income from poultry is usually used for household related consumption expenditures.

Although women play a major role in poultry production and marketing, training courses concerning poultry production and AI prevention and control are usually given to men, who as heads of the household are addressed and who often have higher education levels and better knowledge of the Lao language. All IEC material to date is in the Lao language while ethnic minorities, living in remote areas, seldom understand or speak Lao.

The Lao Women's Union in collaboration with AED trained in Vientiane municipality, Luang Prabang, Savannakhet, and Champassak provinces, one village per district to increase awareness among key target audiences of high-risk behaviours, practical prevention measures, and recognition and response to AI in animals and humans. AED provides budget to train district level staff plus 10 villages

[35] N.B. All material is in Lao

[36] Baumann, P.: Managing risk and developing options: HPAI and livelihood linkages in the Lao PDR. FAO. 2008.

per district. District level training courses should allow district staff to disseminate the information to village level. Recent evaluations revealed that these training courses have little or no impact, the contents have not been understood and women were said not being interested in AI messages. In this respect Bagnol[37] reports that little has been done to coordinate activities and efforts at province, district and village levels and that communication materials are mainly produced at central level and thus carry an urban bias. Therefore very little material is produced in local languages and even less targeting female rural farmers. Women attending training courses have difficulties concentrating when children are present, while women without children do not participate due to work in the farm. Moreover, women are not able or have no time to read posters and brochures. According to the LWU, women do not listen to the radio either. Bagnol also mentions that discussions on the characteristics of the audiences and sharing available data could allow a better understanding of female farmers' realities and specific needs. She recommends that gender units should take the lead to advocate for gender sensitive messages and to ensure that interests and perspectives of female farmers are taken into consideration, as gender perspectives were completely absent.

3.3.3 Understanding and Knowledge of Avian Influenza

The farm visits of the backyard production system took place in a village in the red zone. The eight poultry backyard farmers (4 males and 4 females) interviewed during the visits were generally all aware of AI and its symptoms. They learned about AI from different sources: livestock officers, veterinarians, community health volunteers, television, radio and newspapers.

One commercial poultry farmer interviewed said that he has attended an AI training organized by the company named CP. From the course, he learned how to protect himself from the disease, for example, removing your clothes that you wear in the farm before you leave the farm, and how to bury dead poultry killed by the AI.

On the other hand, none of backyard poultry farmers-respondents has attended training on poultry production and health care, although some of them know of training on AI prevention and control provided by the Provincial Livestock Officer (PLO) twice a year. A week before the visit of the mission the whole village had to participate in a village AI advocacy meeting, which is based on the contents of the black portfolio distributed by NAHICO.

Most of the farmers interviewed think that there are no gender issues in the AI crisis. However one male respondent mentioned that 20% of the village population would have been seriously affected by the AI outbreak and subsequent control measures, because those villagers have no other source of income. One female farmer mentioned that the loss of poultry had a major impact on the livelihood as poultry would pay for the school fees of the children. Baumann[36] also mentions that medium-poor and poor backyard producers have been most impacted by the outbreaks as the income of poultry would be used on essential items, e.g. 42 families in the red zone were unable to pay school fees at the end of the year. He also mentions that the impact on poultry collectors, traders and market sellers has been significant especially in Vientiane due to the trade ban, resulting in total loss of income for some market sellers. Market sellers and poultry processors, e.g. widows or divorcees with children, that had small volumes of trade and have few capital assets found it difficult to diversify, as they have no flexibility to seek out other trade opportunities.

According to the farmers, there is no difference in AI risk exposures between women and men. Some of them noted though that men tend to be more interested in increasing their knowledge about AI while the women are always more afraid of the disease. Women poultry keepers tend to have less understanding and knowledge about AI, and how to protect oneself from infection.

3.3.4 Gender-based Vulnerabilities, Risks and Opportunities

Women through their roles as backyard poultry producers and (market) sellers and as caretakers (slaughter of poultry and preparation of food, raising of children, care for the sick) for their family and as health care workers in hospitals and health facilities are at risk of contracting AI. The risk factor is

[37] Bagnol, B.: Communication about Highly Pathogenic Avian Influenza with special emphasis on village poultry farmers. Thailand – Indonesia – Lao People's Democratic Republic. FAO Regional Office for Asia and the Pacific. 2007.

even increased as women have less education than men and are often ignored for poultry production and management training courses or specific courses for AI prevention and control.

Women are exposed to AI infections due to their roles in poultry production, marketing and food preparation. Women are usually responsible for slaughter of poultry and preparation and cooking of poultry and poultry products. Raw duck blood is a preferred dish. Women are also caretakers of the family.

In many ethnic communities, men are often exclusively attending trainings and meetings. Men often do not allow women to participate and they hardly share what they learn from the meetings/trainings with their wives and children. Moreover, most village veterinarians and volunteer health workers are men. As most women particularly in rural and remote areas are not comfortable dealing with men, it significantly deprives them of support and services for their livelihoods and health care needs.

Language barriers can also increase the AI risks for women in ethnic communities. Many women, because of their less schooling and isolation, do not speak the national Lao language and this limits their ability to understand the AI campaign messages, which are usually in Lao language and not adapted to the local situation, and to interact and communicate with AI campaign agents who would mostly only speak in Lao.

3.3.5 Are Gender Considerations Taken into Account in Avian Influenza Actions?

Gender is not a key focus area in any AI action and programme in Laos. Interviews and discussions with responsible government agencies including relevant UN agencies reveal that gender considerations have hardly been given attention in AI actions and strategies. There are some initiatives though to target women specifically, such as holding only-women meetings especially in the remote ethnic minority areas in the north. In these groups, women are often afraid to speak in the public or offer their ideas and opinions in the presence of men. Housewives were also targeted in the AI campaigns, primarily for the print materials. The NGO, Agricultural Education and Development (AED) trained the Lao Women's Union (LWU) to conduct information campaigns, specifically to reach women, in rural and remote communities. Efforts are also made to increase the female recruitment of village vet volunteers to improve support and services to women poultry and livestock farmers.

While the nationwide AI campaign appears to be successful as revealed by the KAP survey conducted by UNICEF, where 99% of the population has heard about AI, the survey data and findings were unfortunately not differentiated by gender.

Despite the widespread recognition that women face higher risks in AI infection because of their roles at home and in poultry production, gender implications of the AI crisis has yet to be systematically integrated in AI actions in Laos. Moreover, the interaction of gender and cultural factors in AI crisis, especially in the context of Laos, still needs to be better understood and analysed.

3.3.6 Recommendations

- Efforts should be made to design and implement training and information campaigns in the languages and cultural contexts of the various ethnic minorities in Laos. To date, all IEC materials in AI are in the Lao language, which is neither understood nor spoken by many high risk groups in remote and cultural minority communities.

- Strengthen support to the Lao Women's Union (VWU) particularly in building its competence in the following:
  - to participate and contribute in IEC Planning of the National AI Strategy of the Government of Vietnam,
  - to provide trainings in bio-security and AI prevention at the farmer's level using gender-sensitive, and women-friendly methods,
  - organising meetings with households and families with the aim of delivering messages on AI prevention and control.

- More efforts should be made to increase the number of women among Village Veterinary Workers and Village Health Workers with the aim of effectively reaching women and encouraging them to attend training in poultry production and disease prevention. Most

training activities are organised and attended by men who hardly share the information and knowledge to their families.

- AI information and education campaigns should establish measures that specifically target women. For example, it may be worthwhile to hold separate meetings and trainings for women in rural and remote communities. In many ethnic minority groups, women are not allowed to speak in front of men or to offer their ideas and opinions in the presence of male authorities.

- Measures and mechanisms should be established to collect and analyse AI data according to sex. For example, data and analysis on assessment and evaluation of AI campaigns and trainings should be gender-differentiated. This will enable planners to design appropriate and relevant AI strategies for women and men.

4. LESSONS AND CONCLUSIONS

Interviews with women and men in the poultry-farming households in Thailand, Vietnam and Laos revealed that the nationwide AI information campaigns have in varying degrees, effectively reached the people. All socio-economic groups may have, at certain level and extent, faced difficulties in accessing information about the disease but the barriers were greatest for the poor and the women. Women likely face particular problems and risks because of their direct contact with backyard poultry, which constitutes a great proportion of poultry production for these three target countries. The risk factor even increases as women have generally less education than men.

While the study seem to point that women, because they directly handle poultry and face disadvantages in access to AI information and knowledge and thus have higher risk for AI infection, the current data on human cases show a contrasting picture: the fatality is higher for males than females, although the difference may not be highly significant. However, the fatal cases in the 0-10 age group in Thailand (9 males and 1 female) seem to suggest that boys have significantly higher risk behaviour compared to girls. In Laos, the two fatal human cases were both females. With hardly any information on the varying routes of transmission of the HPAI virus on male and female cases, the difference of vulnerability between women and men cannot be clearly elucidated.

This study, however, goes beyond examining gender differences in human cases of HPAI. It provides an exploratory analysis of the risk factors associated to the socio-economic and cultural contexts by which women and men in the poultry sector operate. With the current directions of the AI programmes and actions, it analyses the differences in the ability of women and men to manage the risks and protect themselves, their families and their poultry livelihoods against the disease. The question is then posed: What are the implications of these gender differentials on AI prevention and control?

Following traditional thinking, only men are considered farmers and heads of households, and are often invited to poultry production and management training courses or specific courses for AI prevention and control. This is compounded by the fact that most animal health workers, veterinarians, and village livestock agents, are men. Efforts though are being made in Laos to increase female recruitment among Village Veterinary Workers.

The widespread acknowledgment of the key roles of women, particularly in small-scale backyard poultry production and marketing, has not really been translated in specifically targeting women as both communicators and as recipients/beneficiaries of AI campaigns and trainings. Women poultry keepers rarely receive adequate support and services or resources and training. Neglect of this important production group can exacerbate the effects of socio-economic shocks resulting from AI outbreaks.

Interestingly, the Vietnamese Women's Union (VWU) and the Lao Women's Union (LWU) were found to be key driving force and reliable partners (LWU) in training and dissemination of information on AI in rural and remote areas.

Women, clearly, are in the frontline defence against the disease. With their traditional roles as primarily in-charge of backyard poultry, and mainly responsible for the health care of the family, their knowledge about AI can effectively make a difference in reducing risks for their children and family, and to society in general. However, despite the emergency health concerns of AI, and the critical dual roles of women in poultry-raising and health care provision for their families, AI strategies have hardly taken account their roles and potential contributions in improving responses to AI. There is hardly recognition of women's roles in enhancing health-seeking behaviour of their children and family.

Planners and implementers of AI actions, particularly, lack understanding and acknowledgment of the differences of vulnerabilities between women and men in terms of loss of livelihoods/incomes, risks to infection based on their traditional roles and responsibilities in household care and management, and their negotiating position in the family and community.

Interviews and consultations with key stakeholders (from planners, project implementers, government authorities in all governance levels, farmers) seem to point to a common view that women and men are affected in the same way with AI crisis, and there is no distinctive and different needs and interests between women and men when it comes to AI strategy and actions. In general, attention to

gender considerations is not seen as an important element in improving AI responses. Most AI focused agencies and programmes do not have a defined component or activity that addresses gender issues in their AI actions. National plans and programmes on AI prevention, control and pandemic preparedness, which set out the framework for coordinated actions for reducing risks and improving emergency response preparedness, do not include a gender perspective. Guidelines hardly, if at all, mention gender as a strategic concept and tool in AI responses.

Reasons for the 'gender omission' in AI responses and actions can be as follows: AI programme planners and technicians for both animal and human health concerns at all levels are mostly men, who mainly look at the technical aspects of AI prevention and control, especially in an emergency situation, and with hardly any recognition and understanding of gender as an analytical and planning tool; lack of systematic and credible analysis on the gender implications of AI crisis in different socio-economic and cultural contexts, lack of gender-segregated data in AI researches including project monitoring reports, absence of gender policies in most agencies working on AI, which in turn leads, to lack of gender awareness and programming capacity, and weak participation of women and women-focused agencies in AI response and action planning.

It should be noted though that there are three programmes that are currently specifically addressing gender issues and consideration in their AI actions:

- The AusAID-funded ASEAN +3 Emerging Infectious Diseases (EID) Programme has specifically included a research aimed at analysing the gender implications of AI in the target countries. The outputs of the study will guide the programme in mainstreaming gender in its policy initiatives, implementation mechanisms and capacity building activities.

- The UN Joint Programme in Avian influenza in Vietnam has identified key areas for gender mainstreaming in Phase II of the programme. It has set priority areas for integrating gender perspectives throughout the different sectors of the programme as well as including gender as an integral part of monitoring and reporting.

- The ADB Greater Mekong Sub-region Communicable Diseases Control Project has developed Gender Action Plan for each target country The Country Gender Action Plan identified gender objectives and activities for each component of the project.

Moreover, FAO has supported a research on gender issues in avian influenza in Vietnam, as well as socio-economic studies in Laos and Cambodia aimed at assessing the impact of avian influenza on livelihoods, including gender concerns and issues. Attempts are made to compare the gender-related findings of these FAO researches to the findings of this EC study.[38]

[38] Please refer to discussion of findings of this report.

5. RECOMMENDATIONS FOR MAINSTREAMING GENDER IN AI ACTIONS AND CONTROL IN SOUTHEAST ASIA

Avian influenza is recognised as a human health and animal health risk with serious socio-economic and public health implications. Most socio-economic analyses on AI focused on impacts on livelihoods and incomes, and the public health. The implications of the differences of the roles of women and men in poultry production and marketing, along with their socio-economic roles and positions in the family and society have not been viewed as an important determinant for effective AI actions, and therefore have neither been systematically examined nor included in the planning and implementation of AI programmes and policies.

This study provided important insights and observations which strengthen confirmation of the gendered impacts of AI, and argues that gender is a highly relevant factor and can significantly improve the effectiveness and sustainability of AI actions. Women should be recognized as major stakeholders in the AI crisis and can play a key role in the first line of defense against AI. In Southeast Asia, women comprise a significant and often greater proportion of participants in backyard poultry keeping. Their contribution from poultry production goes beyond food production and income-generation. They are major players in the rural and agricultural economy, as well as the national economy. Equally important, women, in their traditional roles as family health and care givers, have a critical role in the prevention and control of AI.

Guided by the findings of the study, the following are therefore recommended:

Research

Objective:
Improved understanding and analysis of differential impacts of the AI crisis on women and men across socio-economic and cultural groups.

- Using gender analysis, conduct country assessments of gender differentials of socio-economic and livelihood impact of AI crisis among different types of poultry production and marketing systems. Particular focus should be given to changes in gender patterns among ethnic minorities, and in areas where food insecurity is a persistent problem. The study should as well identify the AI vulnerabilities of women and men as well as their potential roles and contributions in AI control and responses.

- Analysis of the gender differentials in knowledge, attitudes and behaviour as a result of AI communication campaigns.

- Analysis of information needs of women and men on AI, including the gender differentials in opportunities and constraints to access them.

- Analysis of gender impacts of national policies on bio-security controls on poultry production and livelihoods. There is a need, for example, to establish, if as a result of government's preference for a more bio-secured and predominantly male-managed market-oriented poultry production, has significantly diminished the traditional roles of women in managing backyard poultry resources, and have possibly led to livelihood displacements for many poor rural women.[39] It is well known that when a family's secondary livelihood moves to become a major source of income, the head of the household who is usually male, will exercise authority over the management of that livelihood.

Competence Development on Gender

Objective:
Enhanced awareness, knowledge, commitment and capacity necessary to incorporate gender perspectives in AI strategies and actions.

[39] An observation made in Vietnam by the Vietnam National Red Cross Project on AI.

Target groups should include planners, policy-makers, programme managers of multi-lateral and bilateral AI programmes, government agencies, and NGOs supporting and implementing AI programmes and actions.

The gender capacity building activities should include:

- Gender and AI Training Programme: Gender Planning, Gender Analysis, Gender Budgeting, Gender Audits
- Materials' Development on Gender and AI
- Country Fact Sheets
- Briefing Notes for Experts
- Gender and AI Training Manuals and Materials
- Development of Guidelines, Checklists and other Tools to support gender mainstreaming
- Development of Gender and AI Indicators and Monitoring Mechanisms
- Sex desegregation of AI statistical information, improved analysis of data and identifying gender gaps in the AI database
- Development of short and medium –term plans and budgets on gender mainstreaming

Institutional Arrangements to Support Gender Mainstreaming

- Establishment of Social and Gender Focal Point in AI programmes and in responsible government agencies. The Gender Focal Point should have a clear mandate and resources to support gender mainstreaming
- Establishment of interagency network on gender mainstreaming in AI programmes/actions
- Establishment of a resource base of Gender and AI expertise

Gender mainstreaming involves ensuring that gender perspectives and issues are systematically integrated, and the goal of gender equality are central to all activities – policy development, research, advocacy/dialogue, information and education, legislation, resource allocation, education and technology, legislation, finance/credit and resource allocation (ia.land) and planning, implementation and monitoring of programmes and projects. The strategy goes beyond focusing on women in isolation, but to look at both women and men as actors in and beneficiaries of development, and how their rights are defined relative to each other.

The implications of gender mainstreaming in AI programmes and actions thus are:

√ Gender analysis is an integral part of all AI plans and actions including but not limited to: country assessments, baseline studies, and project/programme design, implementation, monitoring and evaluation. Data and indicators should always be differentiated and analysed by gender.

Gender analysis can particularly help in understanding the vulnerability of different individuals to the disease across all range of settings. It can also help to strengthen the communication strategies, and promote equitable access of women and men to resources and services. A gender analysis done for an AI project can also increase capacity for social and vulnerability mapping related to AI.

√ Promoting support for gender equality as a key element of all policy dialogue with partners, including governments, donors and civil society organizations

√ Developing and implementing institutional strategies to ensure that AI programmes develop and maintain appropriate capacity to achieve gender mainstreaming in programme/project activities including policies, expertise, human resource policies, and sufficient resources for effective AI action implementation.

Actions and Measures to Address Gender Issues and Impacts of the AI Crisis

Objective:
Strengthened capacity to address gender issues and impacts of the AI crisis, and ensuring the equal and active participation of women and men in AI actions.

- Measures that ensure that AI campaign messages are women-friendly should be established – easy to understand, with balanced gender portrayals, culturally- appropriate, and delivered at a place and time allowing women's participation.From previous research and from the findings of this study, there is sufficient evidence which shows that there are gendered impacts on the education and information campaigns on avian influenza, particularly in rural and remote communities. Targeted AI campaigns for women can make a difference in reaching those at greatest risk – children and backyard poultry keepers. It is well known, however, that women's needs for information are to be structured according to their gender roles and responsibilities.

  Strengthen the capacity of the women's mass organizations (for example, the Vietnamese Women's Union and the Lao Women's Union) including women NGOs to effectively disseminate information on AI to rural households specifically reaching poor women with limited mobility and little schooling. Training local women to become agents for the AI information campaigns and AI preparedness and emergency responses may likely reach more women and improve women's knowledge and participation on AI disease control and preparedness.

  Key questions: Is it relevant to have women as agents of the campaign? What may be the benefits for women?

- Women should be made specific targets in training for poultry production and care, and in AI infection control methods. Improving women's knowledge about the disease, the measures for prevention and control including bio-security can strengthen their poultry management, protect their livelihood and source of income, ensure the food security of their families, and at the same time, improve their capacity to protect their families against AI. Moreover, incentives and support should be provided to women to encourage them to participate in trainings. For example, one of the scarcest resources of poor rural women is time. Women would thus benefit more from training activities if the time and place of the activity is adapted to their household responsibilities.

- Training materials and methods should be interactive and participatory and adjusted to women's learning ability.[40] They should take account women's special needs and interests in poultry management and disease control.

- Establish measures to improve the gender balance of animal health workers (village livestock agents and extension staff, field/farm veterinarians, animal health volunteers and authorities). It is widely acknowledged that there is a positive link between increasing female animal health workers and increased benefits for female poultry and livestock farmers.

Can the gender impact of AI be measured? What can be the relevant indicators?

Measuring gender impact of AI crisis, and the progress on gender equity and equality results of AI actions requires the tracking of appropriate indicators that can capture information on gender differentials and changes, that can in turn, contribute to gender-responsive AI planning and actions.

As the limited time of the fieldwork can only effectively allow qualitative methods for data collection and verification, identifying quantitatively measurable and verifiable indicators was a challenge. Nevertheless, the numerous interviews and observations helped in identifying information and data requirements that can be incorporated into designing AI programmes and actions, and can be considered as relevant gender indicators, as follows:

- Gender differences in income from production of poultry and poultry-related products
- Gender differences in control and decision-making over poultry resources
- Gender differences in AI knowledge and preventive behaviour
- Level of involvement and participation of women in community-based trainings and AI communication campaigns
- Level of women's participation in AI surveillance, response and preparedness activities

[40] It has been proven worldwide that this is also a more effective training method for adult male farmers.

- Gender differences in farmers' organisations membership
- Gender differences in access to credit
- Gender differences in access to technology
- Gender differences in village human and animal health workers
- Extent of use of participatory approach in AI actions and campaigns

It is worth noting that one of the biggest challenges will be the development of appropriate indicators to measure the levels of empowerment and capacity in different socio-economic and cultural groups of women and men.

ANNEX I

TERMS OF REFERENCE

I. TERMS OF REFERENCE

TERMS OF REFERENCE

Study on the gender aspects of the Avian Influenza crisis in South-east Asia (Thailand, Vietnam, Laos)

1. Context of the mission

1.1 The external response of the European Commission to the Avian Influenza global crisis

The European Commission, in close cooperation with the successive EU presidencies (UK, A, FIN, D and P) played a role of very first plan in the setting-up, coordination and implementation of the international response to the AI crisis.

At the political and organizational levels, the Commission was at the origin of the Beijing Conference in January 2006, which truly gave the impulse for an international federated, consensual and global answer. The Senior Officials' Meeting in Vienna in June 2006 was organized by the Austrian Presidency and the Commission, the Bamako Conference in December 2006 was set up by the African Union and the Government of Mali, in very close cooperation with the Commission and the Finnish Presidency.

At the financial level, the magnitude of the overall reaction to the crisis was very important, with total amounts of financial promises of 1.9 billion USD in January 2006 (Beijing) including half in the form of grants and complementary promises of USD 493 million in Bamako in December 2007, entirely in the form of grants. The European Union ranks at the second (or possibly first) place of the donors, with hardly less than (or the equivalent of) the United States, i.e. EUR 317 million entirely in grants; the Commission on its own promised (and almost entirely committed) EUR 165 million -data October 2007, before the New Delhi conference-.

From the beginning of its response to the AI crisis, the Commission has designed it from a point of view giving priority to sustainable results, and therefore to a medium and long term vision. Its answer aimed to increase the capacity of the countries and the regions to plan and to develop their own strategy for response, to exchange information, to develop and implement technical answers, all that in a sustainable way. This approach now is largely shared by a number of other financial backers. Regarding the Commission, followed by others, the future financing in the field of animal and human health in Asia, will not concern only AI, but all cross-border diseases caused by highly pathogenic agents (likely to cause crisis situations) and emerging or re-emerging diseases.

The response to the animal health problems has to be approached on a national basis and simultaneously at sub regional and regional levels. In 2006, the financing identified by the Commission primarily aimed to strengthen the national bases for action (development then financing of integrated national plans in human and animal health including the communication aspects). As from second half of 2007, actions focusing in particular on the other levels will be prepared.

The new Regional Strategy for Asia 2007-2013 approved by the Commission in July 2007 includes a specific item on "cross-border cooperation in animal and human health", addressing AI and other highly pathogenic or emerging diseases. It develops and broadens the experience of the response to the sole AI crisis, to other high-impact infectious diseases, very contagious or emerging, that could in the future call for a response of the same magnitude. The corresponding financial provisions (48 million euros) have been included in the multi annual programme 2007-2010. That investment will be centred on the institutional strengthening and long-term capacity building.

Work has begun on the next world international event in Delhi at which the Commission should be able to announce regional funds for Asia (as mentioned above) and EDF additional commitment.

1.2 Generalities on gender aspects of animal husbandry and health

The consequences of the AI crisis are multiple and not only limited to animal health and husbandry or human health, but affect economies, in particular the rural and weakest ones, livelihoods, and

development in general. The Commission responses thus target mid-and long-term capacity building objectives, as already said.

The links between livestock-farming and gender are well-known but have not always been analyzed systematically. They are generally variable according to the geographical locations and to the climate, the cultures underlying the ways of life, and in a very direct way, the various animal species and animal husbandry techniques. On the basis of simple examples, in general, animal husbandry of the small species (poultry, rabbits, Guinea pigs) or even of pigs in the subsistence economies, and sometimes even in the medium holdings, is entrusted to women (and to the children) rather than that of the major species, reserved field of men (except the case of the family dairy cow).

As indicated above, small stock-raising, in the quite vast majority of the situations of subsistence, is a "business of women and children".

But beyond the simple livestock keeping and feeding, often the gender factor also intervenes at the stage of the marketing of the animals, in this case poultry. Sales or purchases are not neutral actions vis-à-vis gender. They can either exclusively be reserved for men (case of the Moslem countries where only the man goes to the market), or very largely entrusted to women (cases of the rearing of Guinea pigs in Andean America).

The small production cooperatives of poultry frequently are female initiatives.

In a very largely general manner, when the small livestock production is organized and managed by women, they withdraw themselves the financial product. Studies show in a very constant way that these incomes are reinvested at the families' level, in education and health. From there one may dare to say that what affects seriously the small or mid-size poultry plants, will harm directly education and health at family level.

In some very particular cases (the widows in Vietnam - author's personal observations) truly middle-size enterprises are set-up by women, as the main source of subsistence for the family. In socio-economic systems where insurances do not exist, it is obvious that the avian influenza can have very important gender-sensitive social consequences.

1.3 Specific gender aspects of the AI crisis

The individual case of the H5N1 virus corresponds to an opportunist and relatively infrequent transmission of the avian virus to humans. The origin of this transmission is an extended or repeated contact with infected or dead birds. This, related to the individual role of the children in poultry-raising in subsistence economies, results in children becoming privileged targets for the H5N1 infection. In the majority of cultures, women occupy a central role in the transmission of the educational messages to the small children. Moreover, still generally, it is women who assume the culling task, and the preparation and cooking of poultry. Women, as main family "health-keepers" could also play a prominent role in early detection and reporting of outbreaks.

Therefore, the communication on the domestic tasks or the risk for the children will target rather women. On the other hand, that relating to the cockfights in the countries which practise them (largely the case in South-East Asia) will rather be intended for men. The communication has therefore to be conceived and put in practice as "gender sensitive". All this of course is only an example.

In the event of major risk or in the event of the beginning of a human pandemic of avian influenza, the principal measures recommended for the families concern the storage of food, continuity in family feeding and the care to the possible patients.
These measures concern all primarily women. Once again, a gender-sensitive communication seems primordial.

1.4 Rationale for this study

At the occasion of an official headquarters mission to South-east Asia in July 2007, the Directorate General External Relations conducted a preliminary rapid assessment of the importance of the link between the AI crisis and gender.

Gender is generally reported as being a potential issue, but with very little objective information available. “Standard”, “classical” comments like “women are more affected by the AI crisis since they are the main backyard poultry raisers” appear to be simplistic vis-à-vis a much more complex reality. It should be noted in particular that there is no significant difference in incidence of human AI between male and female. But common observations like the fact that backyard-generated revenue is used for social purpose (health and education), that compensation for poultry culling generally go to - mostly male- heads of family, that fighting cockerels are an issue, etc. suggest that the subject deserves attention. There are differences between countries, which need to be taken into consideration. In Thailand, poultry are kept by men, in Vietnam, mainly by women. In Laos, women are generally in charge of backyard poultry-raising but mid-size production is a male responsibility. Women usually attend training much more than men, etc.

The Commission concluded that in order to better assess the consequences of a sanitary crisis like HPAI, and to design appropriately action programmes that would be gender-mainstreamed, there is the need for a study on the gender aspects of the AI crisis and the AI response.

2. Description of the assignment

2.1 Global objective

The general objective of the assignment is to analyze the gender aspects of the Avian Influenza crisis in three countries of South-east Asia and to propose guidelines for mainstreaming gender in actions to be funded by the European Commission in the framework of its external response to the AI crisis.

2.2 Specific objectives

The assignment has four specific objectives:

1) To answer, in each of the countries visited, to the following key-questions:
   - has the HPAI crisis a gender-sensitive impact?
   - can that impact be described or measured?
   - are gender issues being taken into consideration into current government and donors’ funded AI actions, including (but not only) communication?
   - should data be missing for gender-assessment or gender-mainstreaming, what are they and how/by whom can they be easily collected?

2) To compare the gender dimension of the AI crisis in the three countries visited and draw common lessons or standard conclusions (that could possibly by inference be replicated for other countries with similar social and gender patterns).
3) To propose mitigation measures and/or enlighten aspects to be taken into consideration (*grille d’analyse*) for the definition of the actions to be funded from 2008 onwards at national level (in relation with integrated national strategies and action plans against AI).
4) To propose a monitoring methodology and key-agreed indicators, to follow-up on gender-mainstreaming in AI response actions.

2.3 Mission activities and suggested methodology

The work begins with a briefing at EC headquarters in Brussels followed by briefings in the three EC Delegations in Bangkok, Vientiane and Hanoi. Consultations with authorities and independent organisations in the three countries will follow, in perfect coordination with the local EC Delegation. The main part of the mission with the government body in charge of the coordination of the AI response, other donors and agencies active in the country (in particular FAO, WHO, UNDP and UNICEF), civil society and NGOs’ representatives, EU Member States represented in the country (with the presence of Delegation staff) and of course farmers and poultry keepers of both gender.

The mission will invest a significant part of time in conducted interviews with farmers and poultry keepers of both genders, with the assistance of local specialized staff (expert Cat II, see hereunder).

After the field part of the mission a debriefing will take place in each of the three Delegations and at EC Headquarters.

2.4 Expected outputs

On the basis of the appraisal and analysis of findings, the mission team will prepare a report clearlyresponding to the objectives set above.

2.5 General requirements

The study team will elaborate the methodology for the study and its own work programme to ensure the execution of the comprehensive assessment and to reach the objectives required by these Terms of Reference, before travelling to Asia. While doing this, the mission team should work in close contact with the EC services, in particular the Delegations concerned in Bangkok, Vientiane and Hanoi. The programme of the assignment should be agreed with the EC Headquarters (coordinator AI external response in DG External Relations) and with the Delegation involved before the start of the mission to Asia.

Should the mission team not be able to produce a methodology / work programme acceptable to the Commission, the mission could be at that stage interrupted with the remaining working days cancelled.

3. Profiles of the experts

3.1 Category I expert –Team Leader - Gender specialist

The expert should be educated at masters degree level and have at least 15 years of professional experience in the field of gender or alternatively be a public health specialist with 15 years proven and documented experience in gender issues (at expert level).

A post-graduate in development, sociology, socio-economy or any discipline closely-linked with the specificity of the assignment would be advantageous.

This expert should also have experience of working on the Asian continent and preferably in South-east Asia.

He/she will have overall responsibility to: manage the mission team, carry out the terms of reference detailed in this document, manage logistical and financial arrangements for the mission, ensure the timeliness and quality of tasks undertaken by the mission team, ensure the timeliness, quality, consistency and appropriate content of reports and documents, and liaise with the interlocutors in the three countries visited in Asia and with the EC services (Delegations and Headquarters).

3.2 Category I expert –Animal health specialist

The expert should be educated at the level of doctorate in veterinary medicine and have at least 15 years of professional experience in the field of animal health and production in development. In addition a post-graduate of agricultural economics/ gender in development would be advantageous.

This expert should also have expertise on Asia.

Please note that, for this mission, the expert should be a veterinarian and not an agro-economist or animal scientist.

Under the authority of the mission leader, he/she will have the responsibility to address all technical issues related to animal health, the impact of the avian influenza crisis from the veterinary and economic viewpoints. He/she will also be the key-facilitator in the contacts with animal and human health authorities.

3.3 Category II experts

The third and fourth experts should be educated at degree level and have at least 10 years of professional experience in the field of veterinary medicine, human health, development, sociology, gender or a closely-related specialty. Gender-awareness and gender-mainstreaming (or gender studies) experience should be demonstrated.

Very advantageous:

Excellent knowledge of Thai and/or Lao of Vietnamese language as well as experience in Asia in areas related to the assignment.

A gender-balanced team would obviously be an advantage.

All experts should be fluent in written and spoken English.

4. Duration and Location

Activity	***/Man-days***				***Indicative date***	***Place/Remark***
	Cat.1 TL	***Cat.1***	***Cat.2***	***Cat.2***		
Travel to Brussels and briefing EC Headquarters	1	1			01 March 2008	CHAR 13/106
Return to base and preparation of methodology / work programme	3	3			02-04 March	Consultants' base/ Coordination with delegations
Clearance on methodology / work programme by Commission HQ and Delegations					Deadline 07 March COB	Brussels/ Action RELEX H1 / Delegations Bangkok, Hanoi and Vientiane / Allow 3 working days
Travel to Bangkok	1	1			08 March (Saturday)	Travel
Briefing EC Delegation Bangkok / Documentation	1	1	1	1	10 March	EC Delegation Bangkok
Field work Thailand	6	6	6	6	11-16 March	To be defined
Debriefing EC Delegation Bangkok / Travel to Hanoi	1	1	1	1	17 March	EC Delegation
Briefing EC Delegation Hanoi / Documentation	1	1	1	1	18 March	EC Delegation
Field work Vietnam	6	6	6	6	19-25 March	To be defined
Debriefing EC Delegation Hanoi / Travel to Vientiane	1	1	1	1	26 March	EC Delegation
Briefing EC Delegation Vientiane / Documentation	1	1	1	1	27 March	EC Delegation
Field work Laos	6	6	6	6	28 March-2 April	To be defined
Debriefing EC Delegation Vientiane and travel to Bangkok	1	1	1	1	3 April	EC Delegation
Debriefing Bangkok	1	1	1	1	4 April	EC Delegation
Travel to Europe	1	1			5 April	Travel

Activity	*/Man-days*				*Indicative date*	*Place/Remark*
	Cat.1 TL	*Cat.1*	*Cat.2*	*Cat.2*		
					(Saturday)	
Preparation and submission of draft report	9	9			Deadline 18 April	Consultants' base
Clearance draft report by Commission HQ and Delegation					Deadline 3 May	Brussels / Action RELEX H1 / Delegations Bangkok, Hanoi and Vientiane / Allow 10 working days
Travel to Brussels - Debriefing and possible presentation -Travel back to base	2	2			5-6 May	CHAR 13/106 or to be defined
Preparation and submission of final report	3	3			7-8 May	Consultants' base
Clearance final report by Commission					Deadline 16 May	Brussels / Action Commission / Allow 5 working days
	45	45	25	25		

The Consultants should acknowledge or respond to this time schedule in their offer. The final date for launching the mission will be decided at the beginning of 2008. The Commission reserves the right to ask for modifications of the calendar in the course of the mission, according to its development. Headquarters or Delegation staff may decide to join the Consultants' as observers during part of their assignment.

TIMEFRAME

Foreseen starting date: March 2008
Assignment duration: 90 days

5. Reporting

A mid-mission aide-mémoire will be submitted to EC Headquarters by e-mail from Hanoi, under the responsibility of the mission leader. An end-of-mission aide-mémoire, of maximum 5 pages, will be prepared and discussed with the EC Delegation in Bangkok and EC Headquarters before the main part of the drafting of the report begins. The draft report will be submitted in 10 copies within the period foreseen in the work programme here above: four copies will be sent to EC headquarters and two copies to each of the EC Delegations in Bangkok, Vientiane and Hanoi.

The report will include:

- An executive summary of the mission activities and conclusions;
- The assessment and recommendations as according to these terms of reference

All supporting documentation (i.e. these terms of reference, itinerary, list of people contacted, aide-mémoire, list of documents consulted, relevant reports by other agencies, economic and other figures) should be enclosed as annexes to the report.

Following a subsequent de-briefing meeting in Brussels and the approval of the draft report by the Commission, the final report will be submitted in 10 copies within eight working days as follows: two copies to each of the EC Delegations and 4 copies to EC headquarters (DG External Relations).

An electronic copy of all files composing the report, including annexes, should be transmitted by e-mail, simultaneously with the submission of the draft and final documents to EC Headquarters. **Paper**

copies of the report will always be sent by express courier, with the electronic copy of all files sent in parallel to Brussels. **Please note that only the reception of paper copies will be considered as official transmission (including for the respect of deadlines). Electronic transmissions are not accepted as official submission of reports.**

The reports should be written in English and presented in an engaging way. Excessive jargon and overly academic style are both to be avoided. As mentioned above, the report should include an executive summary. **The absence of an executive summary will result in the document being automatically refused**. Annexes should include a glossary of acronyms. Acronyms related to the European institutions should be standard ones (e.g. EC for European Community, COM for European Commission, EU for European Union, etc.).

6. Administrative information

During all contacts with the national authorities or any other organization, the Consultants will clearly identify themselves as Consultants and not as official representatives of the European Commission. All documents and papers produced by the Consultants, including the aide-mémoire will clearly mention on their first page a disclaimer stating that these are the views of the Consultants and do not necessarily reflect those of the European Commission.

These Terms of Reference may be elaborated further by the Commission and/or be completed at the briefing in Brussels. Attention is drawn to the fact that the Commission reserves the right to have the reports redrafted by the mission, as many times as necessary and that financial penalties will be applied if deadlines indicated for the submission of reports (drafts and final) are not strictly adhered to.

ANNEX II

ITINERARY

II. ITINERARY

March	
2	***Travel home base – Brussels***
3	Briefing at EC Headquarters with Dr. Vandersmissen and Dr.Symoens. ***Travel back to home base.***
4 - 6	Preparation of methodology.
12	***Travel home base - Bangkok, Thailand.***
13	***Arrival of team in Bangkok.***
14	***First team meeting.*** Briefing at the EC Delegation with Ms Harmer and Ms Brisonneau.
15	***Visit to poultry section of Chatachuk weekend market.***
16 - 17	Preparation and finalising guide questions and questionnaires for meetings with organisations and farmers.
18	***Meeting at District Livestock Office, Suphan Buri district, with Drs Santamanas and Santi and Mrs Anusorn and Watchara.***
18 - 19	Field visits Suphan Buri district. Interviews with the commercial poultry farmers Mr. Vikarn, Mr and Mrs Piroj, and Mr Samran, and backyard poultry raisers the families Sinchai, Aiem, Maliwan, Wang, Suparb, Supalerk, Mala and Chom.
19	Bangkok: Meetings at the Gender Development Research Institute with Ms Bullard and at the Focus on the Global South with Dr Suteera. Attending the UN Systems Partnerships session of the United Nations System workshop on Avian and Pandemic Influenza, Asia and the Pacific.
20	***EC Delegation. Meeting with Dr. Vandersmissen.***
21	***Meetings at the International Federation of the Red Cross with Ms Smith and Mrs McElroy and King, the Asian Disaster Preparedness Center with Ms Lauza-Ugsang and Dr Hussain and Mr. Sitchon , the Bureau of Disease Control and Veterinary Services of the Department of Livestock Development with Drs Chaisakdanugull and Chaitaweesub and Mr Thanapongtharm, the UN System Influenza Coordination Office with Ms Lehtinen and Dr Neu, and the FAO with Drs Gleeson and Kalpravidh.***
22	Visit to Khlong Toei wet market. Report writing.
24	Meetings at WHO with Dr Peerapakorn and AUSAID with Mr Escolar, Ms Landford and Dr. Aung. Travel to Hanoi, Vietnam.
25	Meeting at AVSF with Mr Hoang Hai Hoa, Mr. Lagree and Mr.Wessling. Briefing at the EC Delegation with Ms Van Neck.
26	Meeting at the Department of Animal Health with Dr Nguyen Van Long, at UNICEF with Ms Tran Phuong Anh and at UNDP with Mr Blanco.
27	Meeting at the Department of Livestock Production, Small Livestock Section, with Mr Nguyen Anh Tuan and at the IFRC with Mr Cewers. Visit to Ha vi poultry wholesale market, and Ha Dong wet market and meeting with Mrs Nguyen Thi Thep, backyard poultry raiser in Tu Nhien commune.
28	Meeting at the Vietnamese Women's Union with Mrs. Hmong and Mrs. Hong and the Department of Agriculture and Rural Development with Drs Tam, Tam and Hong.

29	Field visit Dong Anh district. Meeting at district veterinary station with Dr Hoang Gia Tuc and Mr To Thi Kim Oanh. Interviews in Co Loa commune with the small-scale commercial poultry farmers Mrs Nguyen Van Quoc, Nguyen Van Dao. and Dong Dao Huy and Mrs. Dong Dao Huy, and the backyard poultry farmers Mrs Nguyen Van Kieu, Dao Xuan Te, Duong Van Thang, and Dang Dinh Dung, and Ms Vu Chi Phuong.
31	Hanoi. Meeting at PAHI with Mr Payne and Ms Trang and at CARE with Mss Sabbe and Pham Thi Bich Nga. Field visit Gialam district. Meeting at the district veterinary station with Mr Le Minh Dat. Interviews in Co Bi commune with the following backyard poultry farmers Mrs Nguyen Van Cuu, Nguyen Van Tac, Phan Van Hoa, Dinh Van Phi, and Nguyen Van Xoang, Mrss Bui Thi Gai, Dinh Thi Ngan, Nguyen Thi Lien, Nguyen Thi Duc, and Nguyen Thi Bam, Mr and Mrs Cao Thi Lich.
April	
1	Meeting at the Ministry of Agriculture and Rural Development with the World Bank VAHIP project Deputy Director Dr Lai Thi Kim Lan, and at WHO with Dr Smith, Ms De Hovre and Dr Tobin
2	Meeting at the Ministry of Health with Dr Duong and at the AED with Ms De Guzman and Mr Le Thanh Hai. Debriefing at the EC Delegation with Ms Van Neck. Travel to Vientiane, Laos.
3	Briefing at EC Delegation with Mr. Straniero and Mr. Jones. Meetings at the FAO with Dr Mondry and Ms Houssiere, at UNDP with Ms Moldogazieva, and at CARE with Ms Kempster and Ms.Spedding.
4	***Meetings at the ADB with Ms Suga and Mr Miller, at NAHICO with Dr Bounlay Phommasack and Ms Souphavanh Phoonsavanh.***
5	Visit to Khou Din wet market. Report writing.
6	***Report writing.***
7	***Meetings at WFP with Mr Bonnaud, at UNICEF with Mr Powell, and at the National Center for Laboratory and Epidemiology, MoPH, with Dr Bouaphanh Khamphaphongphane.***
8	***Meetings at the Ministry of Information and Culture with Mrs Vayolinh Phrasavath and Somsavath Phongsa, at the EC Livestock Farmer Support Project with Dr Handlos, at the National Animal Health Centre with Dr Bounloam, at the Lao Women's Union with Mrs. Phiulavanh Luangvanna and Mrs. Soudala Chanthavithong, and at the Ministry of Health with Mr Phoumy Bodhisane.***
9	Field visit. ***Interviews in Sisatanak District, Vientiane with the owners of a commercial layer farm Mr and Mrs Khamsinh Chanrath and with the backyard poultry raisers in Dongsavath village, Hatsaiphog District, Vientiane with i.a.Mrs Seuth Thongsaly, Mr. Khamla, Dr. Ratsamy Vongkhamsao, and Ms. Phonesavanh Phimphaphone***
10	Debriefing at EC Delegation with Mr Straniero, and meetings with Dr Williams, FAO and Ms Souphavanh Phoonsavanh, NAHICO. Travel to Bangkok, Thailand.

11	***Debriefing at EC Delegation with Ms. Harmer, Ms.Brisonneau and Mr De Loof.***
12	Second visit to Khlong Toei wet market. ***Team members travel to home base.***
14 - 30	Report writing.
June	
1	Travel home base - Brussels
2	Debriefing and presentation at EC Head quarters. Travel back to home base.
3-5	Preparation and submission of final report.

ANNEX III

PERSONS MET

III. PERSONS MET

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ANNEX IV

DOCUMENTS CONSULTED

IV. DOCUMENTS CONSULTED

1. Agrifood Consulting International/FAO: The impact of avian influenza on poultry sector restructuring and its socio-economic effects. Poultry Sector Rehabilitation Project – Phase I. 2006.

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ANNEX V

GUIDE QUESTIONS FOR INTERVIEWS

V. GUIDE QUESTIONS FOR INTERVIEWS

A. Guide Questions for Stakeholder Agencies: Government, Donors, and NGOs

1. Please summarise the area of work of your organisation/agency and your strategic objectives?

2. What key strategies do you employ in AI prevention, preparedness and control?

3. Do you think the AI crisis has gender implications?
   If yes, can you give specific examples?

4. Are gender considerations taken into account in your AI actions?
   Do you carry out gender assessment/analysis in your AI programming?
   If yes, how?
   If not, why?

5. Do you have gender-specific data and information in your AI strategy programmes? If yes, how are they collected and used?

6. What do you think are the current gender gaps in AI actions? How can they be addressed?

   If none, why do you think so?

7. Do you have any suggestion on the process by which gender can be systematically integrated in AI actions? How can they be measured or monitored?

8. Do you have any suggestions or comments on the European Commission's strategic role in mainstreaming gender in the Asia regional strategy in AI preparedness and control?

B. Questionnaire for Farm Poultry – Raisers

1. General

1.1 Name of farmer/producer _____

Age _____ years

1.3. Sex ☐ male ☐ female

1.4. Formal education
elementary school: _____ years
secondary school: _____ years
college/university: _____ years

1.5. Household size: _____
number of children male _____
female _____

1.6. Head of household ☐ male ☐ female

1.7. What types of poultry/fowl do you raise/own?

☐ chicken
- ☐ hens ☐ cocks ☐ chicks
- ☐ laying ☐ meat chickens ☐ fighting cocks

☐ ducks
- ☐ duck ☐ drake ☐ ducklings ☐ muskovy
- ☐ laying ☐ meat ducks

☐ other birds
- ☐ geese ☐ pigeons ☐ quails ☐ singing birds

1.8. Do you own other livestock/animals, if so which (including cats, dogs, fish)?

_____

1.9. Type of poultry/fowl and number raised?

		last year	this year
chicken	:	_____	_____
ducks	:	_____	_____
other birds	:	_____	_____

Note for the interviewer: If significant y-o-y change, ask why:

_____

1.10. Why / for what specific purposes do you raise them this year?

☐ home consumption
How much (proportion)? _____
☐ selling
How much (proportion)? _____
☐ Marketing
How much (proportion)? _____
☐ barter
How much (proportion)? _____
☐ gifts
How much (proportion)? _____
☐ religious festivals
How much (proportion)? _____
☐ game
How much (proportion)? _____

1.11. Where and how do you keep your poultry?
- ☐ free range
  - ☐ with night housing
  - ☐ without night housing
- ☐ fenced backyard
- ☐ special coop

2. Household income

2.1. Specify the sources of household income

_____
_____

2.2. How important is poultry–raising in your family livelihood and well being? Can you rank its importance vis-a-vis to your other household livelihood activities?

most important	(4)	☐
very important	(3)	☐
important	(2)	☐
not important	(1)	☐

3. Roles and responsibilities of women, men and children in poultry-raising and marketing

Who does what in poultry-raising in your household?

3.1.1 feeding: ☐ mostly women ☐ mostly men ☐ both equally ☐ mostly children

3.1.2 collecting eggs: ☐ mostly women ☐ mostly men ☐ both equally ☐ mostly children

3.1.3 cleaning and maintenance of the poultry living surroundings or quarters:
☐ mostly women ☐ mostly men ☐ both equally
☐ mostly children

3.1.4 disposal of manure:
☐ mostly women ☐ mostly men ☐ both equally
☐ mostly children

- if sold: transport to the market, and the actual selling
☐ mostly women ☐ mostly men ☐ both equally
☐ mostly children

3.2. Who keeps the income from the sales of poultry and egg / game-winnings?
☐ mostly women ☐ mostly men ☐ both equally
☐ mostly children

3.3 When used for food: who is responsible for
slaughtering: ☐ mostly women ☐ mostly men ☐ both equally ☐ mostly children
cooking: ☐ mostly women ☐ mostly men ☐ both equally ☐ mostly children

3.4 What is the level of involvement of women and men in decision-making on the following?

Who decides?
type of poultry/fowl to be raised:
☐ women ☐ men ☐ both

- use of poultry:

	women	men	both
food			
market			
game			

- what and when to sell, and for how much
☐ women ☐ men ☐ both

- use of income from poultry-selling or from game-winnings/prize money:
☐ women ☐ men ☐ both

3.5. What do you do with the chicken/bird(s) you brought to the market if it/they cannot be sold?
☐ stay in the market until it/they is/are sold
☐ bring back home and try to sell it/them in the market some time later
☐ bring back home

4. Knowledge about bird flu

4.1. What do you know about bird flu, what information did you get?
_____
_____

4.2. Who gave the information? How did you get the information?
_____
_____

4.3. Are you following those guidelines?
☐ yes ☐ no
If not, why? _____

4.4. Training
- attendance in training poultry production and health care: ☐ yes ☐ no
  If yes,
  ☐ women ☐ men ☐ both
  days: _____
  location: _____
  organizer: _____

- attendance in training in AI prevention and control: ☐ yes ☐ no
  If yes,
  ☐ women ☐ men ☐ both
  days: _____
  location: _____
  organizer: _____

- involvement in AI prevention and control: ☐ yes ☐ no
  If yes,
  ☐ women ☐ men ☐ both
  ☐ forced (If yes, explain who how: _____
  _____
  _____)
  ☐ voluntary (If yes, explain who how: _____
  _____
  _____)

4.5. What (livelihood and health) risks would you likely face in an event of AI outbreak and crisis in your community? How will this affect the well-being of your family?

_____
_____
_____
_____

4.6. Did you receive compensation payments during the outbreak?

☐ no

☐ yes

If yes, specify

type

☐ per bird

☐ other, _____

When received?

_____

Who received payments?

☐ women ☐ men ☐ both

Who spent compensation payments?

☐ women ☐ men ☐ both

What was the compensation spent on?

_____

_____

_____

4.7. Do you think women and men would be affected differently with AI outbreak and crisis?

☐ no; if no, why_____

☐ yes

If yes:

- How will it affect men?

☐ household level _____

☐ household-local authority _____

☐ others _____

_____

- How can these issues be addressed?

_____

_____

4.8 Do women and men have different needs/interests in terms of AI protection and prevention?

☐ yes ☐ no; if no, explain why _____

If yes, can you give specific examples?

_____

_____

4.9. Do you think there is a need for planners to take into account gender considerations when developing strategies/actions for AI preparedness and control?

☐ yes ☐ no

If yes, can you give specific examples and how can they be made effective?

_____

_____

4.10 How can women and men poultry-growers be encouraged to participate and support AI preparedness and control strategies?

_____

_____

4.11 Do you have any further suggestions, which you think can improve effectiveness of your sub-district's strategy in AI preparedness and control?

_____

_____

ANNEX VI

COUNTRY FIELD VISIT REPORTS

VI. COUNTRY FIELD VISIT REPORTS

A. THAILAND

The area where the field visits were conducted is Amphur Mueang Suphanburi province. The interviews can be divided into three different parts, a meeting at the Provincial Livestock Office, Suphanburi province, and interviews with commercial, and with backyard poultry farmers. Interview results are summarised.

Interview with Dr Wannee Santamanat, DVM, Head, PLO, Suphanburi province. Provincial Livestock Office (PLO), Suphanburi province.

1. Please summarise the area of work of your organisation/agency and your strategic objectives?

The PLO, Suphanburi province, is engaged in several active and passive measures to combat the HPAI epidemic in Suphanburi province, which include prevention, surveillance and control.

The first measure, prevention, is driven by activities to strengthen the awareness of stakeholders, thus reducing risk factors and hence the probability of contracting HPAI.

The next area of work is surveillance, which consists of active control and passive control measures. An example of active control is the so-called x-ray approach, i.e. going from door to door to conduct interviews and carefully observe the situation on the spot once or twice a year. These x-rays are added to the work load of health volunteers (♀) and livestock volunteers (♂) in each village, who visit each household and farm and take samples of poultry to test whether there is a disease in the sample or not. If the laboratory results are positive, a disease report will be written in order to obtain the order to cull all the suspected poultry as well as control movement of all poultry in that area (so-called spot culling). An example of passive control is the establishment of an information network to channel information about the HPAI situation in each village to backyard farmers, small and large producers and the community. This is deemed very important given the insufficient numbers of officers at the sub-district (amphur) level.

The last aspect of work in the Suphanburi PLO is to control the disease through the following activities/measures: surveillance, movement control, sanitization, culling and public relations.[41]

In some cases, such as in the case of fighting cocks, the information network approach has not worked well. Hence, the new training objective is to educate children, who in turn would pass on the right information to their parents. This reflects the interviewee's point of view that measures should be targeting specific groups (including professional and income groups) based on their risk exposure rather than gender. The office receives funds from the PLO and headquarters to train 1,183 people (i.e. 1 person per village). In addition, there is also a mobile veterinary team, which visits community schools twice a month, to train students from grade 1 to grade 6, which are perceived groups most at risk.

The interviewee is aware of the fact that there are still problems with the way ducks are raised. A new act will be passed to limit associated risks. Ducks are commonly raised in the rice field because it is much cheaper. By law, areas for raising ducks are restricted and permits are required for transport.

[41] There were two outbreaks of HPAI in Suphanburi, namely in 2004 and 2005. During the first outbreak in 2004, the activities in the area of control followed the guideline of the Department of Livestock (also guided by the FAO). These required pre-emptive culling of poultry within a 5 km radius from the suspected area. During the second outbreak in 2005, the activities in the area of control also followed the guideline of the Department of Livestock, but required pre-emptive culling of poultry only within a radius of 1 km compared to 5 km previously. At present, only spot culling is required.
For poultry backyard farmers a case is established if more than 10% (5% defined restrictively) of the total poultry population suddenly dies. The remaining poultry will then be culled within 2 days. For commercial farmers, a 1% threshold applies.
Regarding prevention of the disease, samples are taken and sent to laboratories. Masks, gloves and other protective gear are worn when culling or otherwise touching poultry. The authorities do not take samples themselves but get these from farms.

2. What key strategies do you employ in AI prevention, preparedness and control?

The strategic plans of the PLO, Suphanburi province, are to prevent, control and detect by establishing an information network for HPAI.

Prevention and control of HPAI

- poultry farms: enhanced bio-security by cleaning and spraying of disinfectant about 4 times a year (by poultry farms)
- poultry backyard farmers: disease control through cleaning and disinfecting about 4 times a year (conducted by representative government officers and livestock volunteers); recommended model poultry house (the cost of constructing is about 3,000 baht per house and fencing). The country targets two demonstrations per district (amphur). Suphanburi province plans at least 30 demonstrations for 10 amphurs. Each demonstration must establish a network of at least 30 members (poultry backyard farms).

Establishing an information network for HPAI. The network for HPAI epidemic will be constructed on the basis of administrative criteria.

3. Do you think the AI crisis has gender implications?
If yes, can you give specific examples?

In Suphanburi province gender issues are balanced. Men and women are equally exposed to risk. Activities dominated by males are e.g. cock fighting, the purchase of live poultry, slaughtering poultry. Women primarily are responsible for feeding and raising poultry, preparing poultry for cooking and cooking the poultry. Interviewee again stressed that educational levels reduce risk factors of HPAI and that income levels are very important with respect to the appropriate behaviour to protect oneself from HPAI. Poor and uneducated households in remote areas might still cook chickens found dead, while in urban areas this would not be the case. In other words, there is an information gap between rural and urban areas in Thailand.

4. Are gender considerations taken into account in your AI actions? Do you carry out gender assessment / analysis in your AI programming?
If yes, how?
If not, why?

There are few gender considerations in AI actions. It is acknowledged that in culling suspected poultry, spraying disinfectants (by livestock volunteers) or vaccinating poultry for backyard farmers (Newcastle disease), primarily men are at risk. Women in the DLO are mainly engaged in documentary or secretarial work, communication and collection of data. Women as health volunteers in villages however are most exposed to human-to-human infection.

Workers in export slaughterhouses, which must meet hygienic standards and where about 30,000 chickens are killed per day, and small slaughter houses, many of which do not meet have high hygienic standards and where 500 to 1,000 birds are killed per day, are again mostly men.

5. Do you have gender-specific data and information in your AI strategy programmes? If yes, how are they collected and used?

Within the whole system, there are 3 female heads of PLOs (Phang-Na, Chaiyaphoom, and Suphanburi), and 3 heads of the 9 regional offices are female. Twenty years ago, female entry into related study programmes was restricted by quota (not more than one-forth of students could be female). This quota was abolished and more and more women have entered this field due to their better results in the National Entrance Examinations. Today, 70 percent of the students are female. However, upon graduation most of them will open their business (e.g. animal clinic).

In the Suphanburi PLO, there are 87 officers, of which 40 are civil servants and 47 government employees (1 out of 38 is a female officer; including field staff). Three officers are responsible for one

district, with only one veterinarian going to the field. This is the reason why it is necessary to construct an information network about the disease.

6. What do you think are the current gender gaps in AI actions? How can they be addressed? If none, why do you think so?

As mentioned, gender issues are deemed balanced and any potential gender gaps are currently not considered in AI actions.

7. Do you have any suggestion on the process by which gender can be systematically integrated in AI actions? How can they be measured or monitored?

At present, there is no specific programme targeting females with respect to how to prepare and prevent themselves from contracting HPAI.

Interviewee found the idea of establishing specific training or education to reduce HPAI risk factors for females appealing.

8. Do you have any suggestions or comments on the European Commission's strategic role in mainstreaming gender in the Asia regional strategy in AI preparedness and control?

No suggestions or comments on the European Commission's strategic role in mainstreaming gender were given due to the fact that the PLO has followed the strategies of the Department of Livestock in Bangkok. The PLO only seeks to control HPAI, but not to formulate policies.

Farmer interviews

Commercial Poultry Farmers

Four commercial poultry farmers were interviewed, Mr. Vikarn, Mr and Mrs Piroj, and Mr Samran. The collected information is summarised following the specific parts of the questionnaire, I. General information; II. Household income; III. Roles and responsibilities of women, men and children in poultry-raising and marketing; and IV. Knowledge about bird flu.

1. The first questionnaire – Layer farm

I. General Information

The farm is owned by a male, aged 54 years, with a vocational degree; the household size is 5 people, 2 males and 3 young females. The head of the household is male.

Farm characteristics:

- open farm with in 2007 about 25,000-30,000 laying hens, with the objective of selling them (see annex VII)
- all of the laying hens are raised in special coops (8 coops in total)
- in addition, there are 3 dogs
- 6 migrant labourers (3 couples, relatives and Burmese migrant workers) living and working for 3-4 months on the farm, then move on to other job; one couple has a child aged 12 years who helps his mother on the farm, but is not paid
- working hours: 7 am to 4.30 pm; salary of each couple: 12,000 Baht for one couple and 8,000 for the other couples
- the farmer buys the ready-raised completely vaccinated layers (about 4.5 months) from a big company, to raise these for another 2 weeks before they will provide eggs; about 15 to 16 months later the laying hens will be sold as broiler to nearby villagers or the middlemen
- the farm will be empty for at least 21 days
- chicken manure is sold in sacks of 20 to 30 kilos; 50 to 60 bags are collected once every 10-15 days; manure is used to make fertilizer (cassava plantation) and for fish food (fish ponds)
- 70% of eggs are sold to wholesalers, which come to the farm, and about 30% to retailers
- the farmer prepares his own feed

II. Household income

Most of the household income comes from selling eggs. The rank is “very important”. Besides the income from egg sales there is the government salary of the wife.

III. Roles and responsibilities of women and children in poultry-raising and marketing

In this farm, both male and female labourers are involved equally in the process of raising layer hens, including feeding, collecting eggs, cleaning and maintaining the surrounding and quarters as well as disposal of manure. The head of household, his wife has a government job, keeps and manages the income from sale of eggs and manure. The male farmer is the only one taking care of the farm and there are no successors because his children have other occupations.

IV. Knowledge about bird influenza

The farmer has some knowledge about HPAI. e.g. he knows that he has to bury the dead poultry in the ground, but does not know how deep this should be. He attended training organised by the PLO and is involved in HPAI prevention and control as a volunteer. The farmer supplied masks and boots, but both staff and farmer only used those during the 2005 AI outbreak and during disinfection measures. To date neither staff nor owner uses any protection as it is thought to be uncomfortable. The farmer, whose house is in town, not on or close to the farm premises, does not wash and change clothes before returning home. In his opinion, HPAI does not affect the well-being of his family. However, during the first outbreak he was scared and lost profit. During that time, he received compensation. Moreover, he believes that women and children have more probability to be infected with the disease than men.

2. The second questionnaire – Broiler farm

I. General Information

This farmer is male, aged 40 years, with a vocational degree. The household size is 6, of which 2 are male and 4 female. The head of household is male, i.e. the farmer himself.

Farm characteristics:

- ventilated export farm with 2 houses (see annex VII)
- closed farming system with 36,000 meat chickens (broiler) per round of 42 days; raising 5 batches per year (approximately 180,000 birds/year), this is approximately the same as in 2007
- contract farmer with the Scottish-based Grampian Foods Siam
- the house and the farm are separated from each other
- 4 Thai labourers (2 couples aged between 22 and 23 years, one couple per poultry house); one couple has a child
- the labourers are trained by the farmer himself
- during the raising time (40 days) the labourers are not allowed to leave the farm except in the case of emergency
- the salary is 15,000 baht per couple per round
- job description of a labourer: work every day to check the poultry house, especially with respect to sudden deaths and temperature, cleaning by picking the chaffs off the ground of the poultry house, feeding the broiler by pouring chicken food by hands into the pots, and vaccinating chicken against e.g. diarrhoea
- prior to entering the farm, staff members and visitors have to clean and change clothes and disinfect
- if an infectious disease is detected, the salary of labourers will be cut
- in general, his wife will not enter the poultry house, but he will enter twice a day to check the labourers as well as the status of the poultry house
- manure: about 5 tons in each poultry house which will be sold to the buyer directly to make fertilizer (to use in cassava and sugar production); the buyers will take the manure by themselves

II. Household income

The household income comes from sale of broilers. The level of importance is hence “very important”.

III. Roles and responsibilities of women and children in poultry-raising and marketing

In this farm, both male and female work equally in terms of raising broiler. Both male and female equally decide on the type of poultry raised and how to market the poultry.

IV. Knowledge about bird influenza

The farmer has good knowledge about HPAI. He is aware of symptoms and causes of the disease. The primary source of information is neighbours and PLO officers. The farmer follows the guidelines provided by the livestock officers. As far as training about poultry production, health care and HPAI prevention and control is concerned, both male and female participated in the training organised by the PLO. Both male and female are seen to share the same risk, depending upon who is closest to the chickens. His suggestions to improve the effectiveness of control measures are spraying chemicals, getting rid of the infection in backyard chicken farms, reducing the 21-day empty period to 14 days, and restricting animal movement.

3. The third questionnaire – Broiler farm

I. General Information

The interviewee is female and the wife of the afore-mentioned farmer (2). She is 38 years and has a degree from a commercial technical college. She worked as a banker before taking up the management of the farm.

The household size is 6, of which 4 are male and 2 female; this includes the parents of the husband and the two sons (grades 11 and 12) of the couple. The head of the household is male (grand father), but the farm belongs to the couple..

Farm characteristics:

- farm characteristics are given in 2.2
- the woman manages the business, does not usually enter the poultry house

II. Household income

The household income comes from sale of broilers to Grampian Foods, fish farming and sale of cooking oil. Poultry production compared to the other sources of income is classified as “important”.

Due to stricter bio-security regulations, i.a. the increase of empty periods between rounds of production from 4 to 21 days, the number of production rounds per year has decreased from 8 to 5 and thereby the annual income from poultry.

During the AI outbreak in 2004, neighbouring farms were infected. Since the farm kept free from AI, birds were not culled but the farm was closed for three months and the birds could not be sold. This plus the increased vacant period and thus less production rounds per year, as well as the higher investment costs related to newly imposed government rules for commercial farms, has caused a drop in income, which has forced the couple to diversify. The farmer is contemplating to move the farm to the dry northern part of the country, where there is no duck raising in rice fields and the local government possibly allows vacant periods of one week only.

III. Roles and responsibilities of women and children in poultry-raising and marketing

In this farm, the work is equally divided between male and female labourers. However, cleaning of the buildings after sale of the birds and maintaining the surrounding (farm yard) and quarters, is considered a female chore, as women are better in cleaning than men. Manure is collected by the labourers and put in sacks, which are bought by Grampian.

The wife manages the farm income. Decisions are made mutually. Grampian delivers feed and decides the quantities it will buy. The wife decides on the income from poultry, the husband runs the business and decides on household money.

Own poultry is seldom consumed. If poultry is consumed the man slaughters, the wife cooks.

IV. Knowledge about bird influenza

Knowledge about HPAI is acquired through television, newspapers, and livestock officers, not through Grampian Feeds. Grampian does not organise meetings or trainings and if it does farmers who do not experience infections are not invited. No training what so ever has been attended.

In case a disease is spotted the livestock department is informed. She does not touch sick chickens bare handed and dead chickens are buried on the premises. The farm has been disease-free for eight years.

Gender: AI has no gender implications; both sexes are affected/at risk equally. There is however a difference in risk between adults and children. To prevent AI one should focus on the location and environment of the farm. At the farm, the female labourers are responsible for maintenance and cleaning of the premises, because women are better in those jobs than men.

Strategy suggestions:
Farmers male and female should be encouraged to follow hygiene guidelines. And guidelines should be set for all farmers not only a selected group. Interviewee is of the opinion that the Suphan Buri government does not support commercial farmers.

Different rules should be applied to infected and non-infected farms, e.g. vacant periods of 21-30 days and 7-10 days respectively. Compensation due to forced closure of the farm and non-ability to deliver.

4. The fourth questionnaire – Broiler farm

I. General Information

The interviewee is male, aged 68 years, with a grade 12 diploma. The household size is 2, of which 2 are male. The head of the household is the owner; his son is living and working in Bangkok.

Farm characteristics:

- ventilated farm
- contract farmer with Sunfood
- meat chicken (broiler); about 40,000 to 50,000 or 9-10 heads per square meter (with no significant y-o-y change)
- house and farm are separated from each other by a wall
- raising time: 45-48 days; resting period: 21-25 days
- 4 rounds per year; 25 tons produced per batch
- 2 temporary workers, which are male and female

II. Household income

90% of the household income is derived from broiler sales and 10 percent from sale of goods in a small grocery store. Income from broilers is ranked “very important” compared to the other source of income.

III. Roles and responsibilities of women and children in poultry-raising and marketing

In this farm, both male and female (the temporary labourers) work equally with respect to manure disposal. When transporting the manure to the market, both males and females are involved. The income from manure is 3,500-4,000 Baht per batch, with the ground only being cleaned once the broilers are sold (6-7 people are involved). Raising broilers, including feeding, cleaning and maintaining the surroundings and quarters, is mostly conducted by the owner.

The owner keeps the income from selling poultry. In this household, food is bought in the market. He also decides which type of poultry to raise and how to market the poultry.

IV. Knowledge about bird influenza

The farmer is aware of HPAI prevention and protective measures, HPAI symptoms as well as transmission of the disease. He obtained this information from the PLO officers, who visited his home, as well as Sunfood, the contracting company, which issued a booklet with regulations and guidelines.

In addition, he has also consulted the veterinarian, who comes once every 10 days during the raising period. The farmer also attended a training in poultry production and health care, including HPAI prevention and control, which is conducted once a year in the local school by Sunfood in collaboration with the government.

The farmer and his workers do a health check every year as stipulated by government regulation.

During the first outbreak, he considered himself very lucky because he had just sold all broilers and then simply waited for one year. Sunfood had heard about HPAI and immediately collected the chickens from his farm. The chicken were subsequently sent to laboratories and analysed. In addition, since he had reported his chicken to the government as required, he also received a compensation payment of about 5,000 Baht.

The farmer thinks that males are more affected by HPAI outbreaks, because males touch the poultry directly, whereas females only feed the poultry. When finding dead chickens, women will ask men to remove these. Both male and female labourers are afraid of HPAI, but the female labourer is much more concerned about HPAI than the male.

In Thailand, farm owners can join training courses and hence the interviewee thinks that gender does not matter. He suggests that guidelines can make HPAI control more effective.

Backyard Poultry Farmers

Eight farmers from six households with backyard poultry have been interviewed, namely Sinchai, Aiem, Maliwan, Wang, Suparb, Supalerk, Mala and Chom. The information collected is summarised with respect to each part of questionnaire.

I. General Information

The average age of male respondents is 48 years and of females 52. Average household size is five. Males play an important role as head of the family in all interviewed households. As for education, males were found to have higher levels of education than females.

Male respondents mostly raise fighting cocks, females mostly broilers. Both males and females raise their poultry in a free-range system with night housing. The main purpose of raising chickens is for sale and religious festivals/reasons, but poultry is also raised for home consumption and games.

Other animals in these households are dogs, cats, pigs, fish and singing birds. The information collected is summarized in the following table.

Table 1. Summary of information collected from male and female poultry backyard farmers

	Male			
Age	42	64	54	32
Highest education	Grade 12	Grade 12 Retired pharmacist	Grade 4	Grade 6
Household size	6	3	5	4
Children (Male)	1	1	2	1
Children (Female)	3	(2 married)	1	1
Gender of head	Male	Male	Male	Male
Type of poultry	fighting cock, broiler	fighting cock	Native breed	fighting cock, broiler
Other animals	5 dogs	14 dogs, 23 cats	3 singing birds, 5 dogs, 2 cats, fish	n.a.
Poultry raised last year	100	100	50	20-30
Poultry raised this year	100	100	50	20-30
Purpose of raising	33% selling, 33% consumption, 33% games	males for sale females for home consumption and sale	60% breeding, 40% sale and religious festivals	home consumption and sale
Method of raising	free range with night-housing	free range with night-housing (shed with mosquito netting)	free range with night-housing	free range with night-housing
	Female			
Age	56	51	39	61
Highest education	Grade 4	Grade 4	Grade 6	Grade 4
Household size	3	5	4	6
Children (Male)	1	2		2
Children (Female)	(2 married)	1	2	2
Gender of Head	Male	Male	Male	Male
Type of poultry	fighting cock	broiler	broiler	all types of chicken
Other animals	14 dogs, 23 cats	5 dogs	2 dogs	>10 singing bird, 1dog
Poultry raised last year	100	50	4	42
Poultry raised this year	100	50	30	42
Purpose of raising	sale	40% for selling and religious festivals	100% selling	home consumption, sale, barter, game
Method of raising	free range with night-housing (shed with mosquito netting)	free range with night-housing	free range with night-housing	free range with night-housing

II. Household income

The main source of income for both male and female interviewees is rice farming. Other sources of income are money from cock fighting, farming vegetables, sewing clothes and selling chickens. On average, income from poultry raising is deemed less important compared to the situation prior to the first outbreak. The information collected from households is summarised in the following table.

Table 2. Household income by gender

	Male			
Source of income	rice farming, fighting cocks	rice production for the market (43 rai)[42]	rice farming and vegetables; chicken sales	rice farming
Level of raising	important	important	not important (more hobby)	not important
	Female			
Source of income	rice production for the market (43 rai)[2]	rice farming and vegetables; chicken sales	rice farming	rice farming, sewing clothes
Level of raising	n.a.	not important	not important	important

III. Roles and responsibilities of women and children in poultry-raising and marketing

In the process of raising poultry males play a more important role than females with respect to feeding, collecting eggs, cleaning and maintenance, manure disposal, as well as transport and sale of manure. Furthermore, men are usually entrusted with the task of slaughtering, whereas women do the cooking.

In matters of income, females usually keep proceeds from poultry production and are responsible for decisions regarding use of income. The decision on what type of poultry to raise, the extent of home consumption, sale of poultry or use for games, is mainly made by men. The information collected is summarised in the following table.

[42] 1 rai = 0.16 hectare + 0.3954 acre (source: Delforge, I.: Thailand: From the kitchen of the world to food sovereignty, Focus on the Global South, 2004.

Table 3. The roles and responsibilities in poultry raising and marketing by gender

		Male			
poultry raising	feeding	Mostly men	Mostly men	n.a.	Mostly men
	collecting eggs	Mostly men	n.a.	n.a.	n.a.
	cleaning and maintaining	Mostly men	Mostly men	n.a.	Mostly men
	disposal of manure	Mostly men	Mostly men[43]	n.a.	Both equally
	transport and sale of manure	Mostly men	n.a.	n.a.	n.a.
Income	keeping income	Mostly men	Both	n.a.	n.a.
	use of income	Men	Women	Women	n.a.
Food	slaughtering	n.a.	Mostly men	n.a.	Mostly men
	cooking	n.a.	Mostly men	Mostly women	Mostly women
decision making	type of poultry	Men	Men	Men	Both
	home consumption	Women	Men	n.a.	n.a.
	selling in market	n.a.	Men	Men[44]	n.a.
	games	Men	n.a.	n.a.	n.a.
	what when how much to sell	Men	Men	Both equally	n.a.
		Female			
poultry raising	feeding	Only men	Mostly men	Mostly women	Mostly women
	collecting eggs	n.a.	n.a.	n.a.	Mostly women
	cleaning and maintaining	Mostly men	n.a.	Mostly women	Mostly men
	disposal of manure	Both equally[3]	n.a.	Mostly women	Mostly men
	transport and sale of manure	n.a.	Mostly women	Mostly women	Mostly women
Income	keeping income				
	use of income	Men	Women	Women	Women
Food	slaughtering	Mostly Men	n.a.	n.a.	Mostly men
	cooking	Mostly Men	Mostly women	mostly women	Mostly women
decision making	type of poultry	Both	Men	Both equally	Men
	home consumption	Men	n.a.	Both	Women
	selling in market	Men	Men	Both	Women
	games	Men	n.a.	n.a.	Both equally
	what when how much to sell	Men	Both equally	Men	Both

IV. Knowledge about bird flu

Backyard farmers are (roughly) aware of the symptoms of the disease. The information is acquired through livestock officers, TV, health volunteers, newspapers, veterinarians, and the local radio. One respondent remarked that the media exaggerate the seriousness of AI. Most of interviewees said to follow the guidelines of livestock officers. One farmer remarked that he did not follow the guidelines since he could eat dead chickens without any influence on his health. He was of the opinion that AI was transmitted by moaquitoes.

There is no training on poultry production and health care for backyard farmers. However, the PLO provides training on AI prevention and control twice a year.

[43] Used as fertiliser for the fruit trees around the house.

[44] Middleman comes to the house.

The AI outbreak has affected the well-being of backyard farmers through loss of income, fear of AI, and conflicts with neighbours (e.g. One couple reported that a farmer in their neighbouring village threw a dead and infected chicken into the canal, which was subsequently picked up by one of their dogs. This way the infection was introduced on the farm. Only four cocks were left; they neither died nor got culled and formed the basis of the present flock).

All backyard poultry farmers received compensation on a per chicken basis during the first outbreak and both male and female respondents spent the compensation on living expenses and religious ceremonies. However, one fighting cock raiser built a new house from the compensation money. Compensation money was reported to be paid months after culling.

Most respondents think that there are no effects of AI outbreaks on gender. Nevertheless, when it comes to AI protection and prevention, most of them think that there is a difference between males and females (examples given: women are more afraid of AI than men or males are more interested in AI related issues than women).

To encourage participation of male and female farmers in preparedness and control, interviewees suggested training provided by government officers. Moreover, interviewees asked for the provision of protection suits, disinfectants and vaccination (for humans and poultry), especially for fighting cocks, as well as the establishment for the register for owners of fighting cocks. Spot culling in case of an infection is recommended by poultry backyard farmers. Further should the local government pay attention to the needs and problems of poultry farmers, which according to one respondent it currently does not.

B. VIETNAM

A two-day field study was carried out in Dong Anh and Gia Lam Districts, Hanoi Province. The fieldwork was preceded by a meeting at the Provincial Department of Agriculture and Rural Development (DARD), and short visits to the respective District Agricultural Offices before the actual field visits. Further, one of the mission members made a short visit to Ha Vi wholesale market and had subsequently a chat with a backyard farmer in Tu Nhien.

Three small-scale commercial farmers, and six family poultry and/or backyard farmer households were interviewed in Dong Anh district, and 10 family farms and backyard households in Gialam district.

Following are the summarised interview results.

Interview with Mr. Dao Duy Tam, vice head of DARD Hanoi, Mrs. Nguyen Thi Tam, head of the Livestock Production Office (LPO) and Mr. Hong, staff officer of LPO.

1. Please summarise the area of work of your organisation/agency and your strategic objectives?

The DARD Hanoi includes the Dept. of Agriculture, Dept. of Hydrology, Forestry, Aquaculture, Technological Processing, and Rural Development. It is the Hanoi provincial government's management organisation in agriculture, crops, animal husbandry, animal diseases investigation, detection, confirmation and surveillance, and gives the direction of animal disease prevention and control. One very important duty is AI control and prevention.

2. What key strategies do you employ in AI prevention, preparedness and control?

As soon as the National Committee in AI control and prevention was established, the DARD Hanoi and other provinces established Steering Committees to control and prevent AI from the city to the village (the chairman is the president of the People's Committee, the vice-chairmen are the director and vice-director of DARD, the members are the heads of related departments).

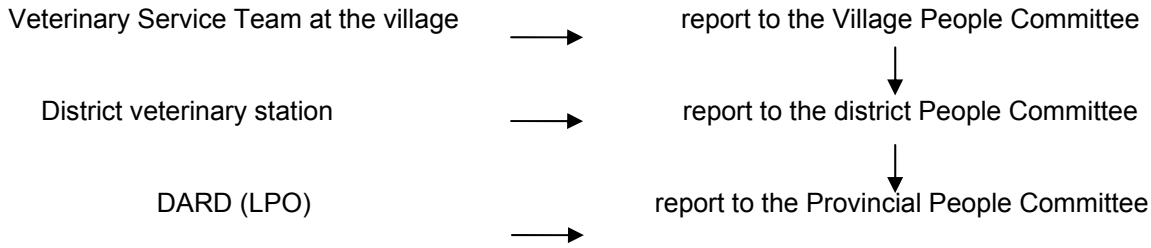
The main poultry production system in Hanoi specifically and in Vietnam in general is based on a backyard system. Therefore it is necessary to involve grassroots to implement AI control campaigns.

All related departments, offices and branch are called into the AI control campaign (private veterinary, veterinary companies, police, trade and market management forces, human health services, public transportation management force, customs, border control force, mass organisations, i.a. the Hanoi Women's Union and Youth Union.

DARD Hanoi has no specific strategy. The general strategy comes from the Government, MARD and Hanoi People's Committee. DARD Hanoi follows strictly the guidance of Government and MARD.

Hanoi province has implemented a bi-annual poultry vaccination campaign, and communication campaigns with participation of the Hanoi Television, Hanoi Voice, mass media agencies of local governments, loudspeakers, social organisations, and mobile advocacy teams. It further published leaflets, booklets, posters, TV spots, TV broadcasted messages, and radio messages, and organised training for stakeholders (local veterinarians, farmers, traders, school children, and members of the women's union. The budget for AI campaigns comes from the provincial government.

A reporting system has been established via the People's Committees through which, in case of AI outbreaks, daily telephone reports are submitted, every three days written reports, as well as weekly reports. If there are no outbreaks, then reporting takes place. The lines of reporting to and from the central level are the following:



Specific measures include control of free range waterfowl, in-door poultry raising, ban on movement and slaughter of live birds in urban areas; control of live bird markets in rural areas, encouragement of industrial farming development and application bio-security measures, strict control of poultry trade, movement, slaughter, and consumption either inside Hanoi or at the gate between Hanoi and other provinces.

Hanoi has cooperated with some international organisations in AI prevention and control as the participant in big projects conducted by MARD and the Government. Hanoi has no specific provincial programme with such organisations, since provinces cannot directly sign cooperation contracts with externally financed projects.

3. Do you think the AI crisis has gender implications?
If yes, can you give specific examples?

In an AI pandemic, men or women can not be separated, because they are both involved and at the same level of risk exposure. However, it is a fact that most backyard poultry raisers are women (70%), and therefore should get more education in AI prevention and control in order to protect themselves and their family. Nevertheless, up to now, most of the human cases in Vietnam show that they did not relate to poultry raising but to poultry meat consumption.

Hanoi is one of the provinces, where the gender balance is taken into account. Males and females have the same opportunity in getting a job if they have the same level of education, for example: the male and female staff numbers in DARD are equal, 50% male and 50% female. However, the rate of female in high positions is about 35%.

4. Do you have any suggestions or comments on the European Commission's strategic role in mainstreaming gender in the Asia regional strategy in AI preparedness and control?

DARD Hanoi has no suggestions to the EC.

Farmer interviews

Small-scale Commercial Poultry Farmers

Three commercial poultry farmers were interviewed, Mr. Nguyen Van Quoc, Mr. Nguyen Van Dao, and Mr. and Mrs. Dong Dao Huy. The collected information is summarised following the specific parts of the questionnaire, I. General information;II. Household income; III. Roles and responsibilities of women, men and children in poultry-raising and marketing; and IV. Knowledge about bird flu.

1. The first questionnaire - Waterfowl farm

I. General Information

Mr. Quoc (46 years old) is the head of the household. His education is elementary school with 10/10 years. There are 4 persons in his family (3 males and 1 female).

Farm characteristics:

- small-scale farm with 1,000 laying ducks and 1,500 of muscovy ducks (meat type).
- Large space of water (6 ponds: 10,000m^2) and the nearby river; can keep more birds at a time
- all layers arekept inside a fenced pond; muscovy ducks are raised on a fenced part of the river
- sale of eggs every three days to a middleman with tuk-tuk
- eggs kept in a open store
- ducks start laying at 6 months; sold at 2 years
- sale muscovy ducks: females at 60 days, body weight of 2.5 kg; males at 90 days, body weight of 4-4.5 kg.
- two male labourers (one for duck keeping and one for pig keeping), salary 1.5 million VND
- pig production with150 pigs (15 sows)
- biogas from pig manure; fish farming with duck manure

II. Household income

The household income is made up of sale poultry and eggs, pig production, fish farming and the salary of the wife, who is a schoolteacher. However since most of the household income is derived from sale of eggs, the income from poultry production is classified as most important.

III. Roles and responsibilities of women and children in poultry-raising and marketing

All activities related to poultry production are on this farm, carried out by men. The labourers are engaged in feeding, egg collection, cleaning, disinfection, disposal of manure, and slaughter. The head of the household keeps the income earned with poultry. It is used for replacement of the poultry herd, for farm construction and for home consumption. The owner himself decides on type of birds to be raised, marketing, use for consumption and sale. The wife prepares the food for the family (cooking).

IV. Knowledge about bird influenza

The farmer has good knowledge of AI. He mentioned that the AI outbreak is a pandemic and very dangerous not only for poultry but also for humans. He knows the symptoms of sick birds, how to dispose of dead birds. He got the information from the television, public voice, and the district veterinary station staff members and training courses. He mentioned to follow the guidelines such as wearing mask, boots, gloves and hat during the poultry work. He uses a glove or plastic bag to pick up dead birds and boils them before burying.

The farmer attended training courses on livestock production in general and specific AI prevention and control courses. These courses were organised by the Farmer Association in cooperation with the district veterinary station and the Women's Union. The farmer is also voluntary involved in AI prevention and control. He shares the acquired information (how to prevent and control, how to avoid risks) with his neighbour.

Until to date, there is no outbreak in this area but the farmer uses vaccines for all birds. AI vaccine is free of change. In future, if the Government would stop free vaccination, he would buy it by himself. The farmer did not get the compensation because there was no outbreak in this commune.

Regarding gender issues, he thinks there is no difference in AI risk between men and women, because they have the same bodily functions. But if an AI outbreak would happen he will lose his income. He likes to protect his family from risk, and therefore does not let his wife and children take care of the poultry.

Suggestion: The district and commune authorities should send the staffs to each farm or village to give guidance to poultry raisers, as well as a more strengthened communication campaign, so that every person can understand AI better and would be encouraged to report as early as possible.

2. The second questionnaire – Layer farm (see annex VII)

I. General Information

Mr. Nguyen Van Dao (56 years old) is the head of the household. There are four people in his family (2 females and 2 males). Both the man and his wife are the poultry owners.

Farm characteristics:

- 3,500 layers, same as 2007
- 6 poultry houses, construction of new houses away from family house
- 5 dogs, 1 cat
- eggs sold to middleman at farm gate, few eggs for household consumption
- hens after lay sold to private persons from neighbourhood in 1 day to 3 months
- female labourer for 8 hours per day, 30 days per month; salary 1.4 million VND/month
- all poultry work by labourer
- manure collection by labourer in reused feed bags (see annex VII), sold to collector at 35,000 VND/100 kg
- pens cleaned and disinfected 1x / year, waste water in tank for 24 hrs then released in canal. New litter placed after three weeks

II. Household income

Besides the income from egg sales egg, the farmer has additional income from rice production (240 m^2), but the income from chicken production is most important. Land for new poultry houses will be rented. Current rent from government, 100,000 VND for 60 years. Eggs are sold at the farm gate. Old birds are sold at the farm gate to neighbours and people in the commune who need a large quantity of poultry for a special occasion.

III. Roles and responsibilities of women and children in poultry-raising and marketing

The female labourer (no poultry at home), takes care of all poultry work (feeding, egg collection, cleaning of poultry houses, disposal of manure).

Both husband and wife have decision-making powers over the income from egg sales, however the man decides on all poultry related matters. Slaughter and cooking is done by both.

IV. Knowledge about bird influenza

The farmer has good knowledge of AI. Knows about the symptoms, how to detect AI in sick birds, how to react at sudden deaths, and how to protect himself and his family from the risks. He also has information about human health and is of the opinion that government information is incorrect, as according to government cooking poultry is safe, but people get infected by eating well-cooked chickens.

The farmer got his information from the TV, from a one-day training course at the district animal health station, from the commune veterinary worker, government staff, leaflets, and a handbook.

Training courses are organised by veterinary district station. Only the farmer as head of the household attended a training course on poultry production in general and a specific AI prevention and control course. When questioned about it, he said that he instructs his female labourer, who does

all the poultry work, based on the knowledge he acquired. The wife mentioned she would forget what she would have been taught should she attend a training course, if a men goes to training there is more knowledge in the family. According to the wife there is no VWU poultry group in the village; moreover she is too old to be a member. The farmer is of the opinion that, since he attended the training course, he should share the information with the women, his children and the neighbours (N.B. The neighbour has scavenging backyard poultry adjacent to the farm. The neighbour (female) was spraying the poultry plot with disinfectant given to her by Mr Van Dao without any protective clothing or mask).

The farmers strictly follows government guidelines such as not to touch the dead birds barehanded, not eating dead birds, washing hands after taking care of poultry, early reporting to local authorities of sick birds. And both of them voluntary participate in AI control campaigns.

Three years ago, there was AI in the district not on the farm. AI has a great effect on household income.

Suggestions: the Government should give the farmers the protective clothes, masks, gloves, boots free of charge and vaccinate all chickens not just some, as well as every month because the cycle of poultry is very short, if vaccination campaigns are only every 4 or 6 months, then the new born poultry are not vaccinated. More strict rules and control are required in the are in case of an outbreak.

3. The third questionnaire – Broiler farm

I. General Information

The head of household is the 55 years old Mr. Dong Dao Huy. He lives in Cau Ca, Co Loa commune, Dong Anh district. Both Mr Huy and his wife are the poultry owners and attended the secondary school (7/10 years). There are three people in the household (2 males and 1 female).

Farm characteristics:

- 1,500 chicken layers and broilers
- open poultry houses
- sale of eggs and chickens at farm gate

II. Household income

The general income is derived from sale of eggs and birds. Thus poultry production is classified as most important.

III. Roles and responsibilities of women and children in poultry-raising and marketing

In this farm, both male and female are working equally at all stages of the production chain such as feeding, cleaning and maintaining the surroundings and quarters, and disposing manure. Manure, approximately 6-7 ton/month, is sold at the farm gate for 2 million VND/ton.

The wide plays an important role in keeping the income from poultry sales. Women and children are in charge of slaughtering birds and cooking. Both husband and wife decide on use of poultry and poultry products for household consumption, the types and breeds to raise, sale of poultry and eggs and the use of earned income.

IV. Knowledge about bird influenza

Information about AI has been acquired through the television, public voice, a brochure and leaflet from the district veterinary station regarding vaccination and disinfecting campaigns (chemical spraying). The farmers mentioned strictly following the guidelines. Only Mr. Huy attended a training course on AI prevention and control organised by the district veterinary station. AI is a very dangerous disease, it can be transmitted from farm to farm, as well as from poultry to man. If an AI outbreak would happen, the farmer would lose his income. The impact of AI would not only affect his family but the community as well as people may die.

In the farmers' point of view, both man and women are equally at risk and do not think that gender issues should be taken into account by planers. Both males and females are equally interested in AI

and poultry raisers should take care of it themselves. No suggestions for the sub-district's strategy in AI preparedness and control were given.

4. Semi-commercial Family Farmers

Five owners of semi-commercial family farms have been interviewed in Co Loa commune, Dong Anh district, Mr. Nguyen Van Kieu Mr. Dao Xuan Te, Mr. Duong Van Thang, Mr Dang Dinh Dung, Ms. Vu Chi Phuong. The information collected is summarised with respect to each part of questionnaire.

I. General Information

Most household heads are male. One of the interviewees is the female (34 years old). The age of the male respondents ranges from 38 to 56. Family sizes vary from 2 to 7 people. The poultry owners and raisers are mainly male, there is one female. The birds are kept inside a poultry house. The farmers raise poultry for household income (sale). The educational level is generally high (secondary school from 7 – 12 years/12 years). Other animals kept on the farm are dogs, cats, pigs and fish.

Table 1. Summary of information collected from male and female family poultry farmers

	Male				Female
Age	38	56	47	47	34
Highest education	Grade 12	Grade 7/10	Grade 10/10	Grade 12	Grade 7/10
Household size	3	5	2	4	3
Children (male)	1	2	1	1	1
Children (female)		1	1	1	0
Head of HH	Male	Male	Male	Male	Male
Type of poultry	Layers	Layers	Layers and pigeon	Broilers[45]	New raiser, Layers[46]
Other animals	Dogs, fish	Dog	1Dog, 1cat	2 Dogs	3 Dogs
Poultry raised last year	700	1,500	1,000 laying chicken + 50 pigeon	1,000	0
Poultry raised this year	700	400 Layers + 500 growing chicken	1,000 Layers + 50 pigeon	400 (instable market prices and increasing input costs)	300
Purpose of raising	HH income (for sale) (98%) and home consumption (1-2%)	Sale 98% and home consumption 2%	Sale 99% and home consumption (1%)	Sale 98% and home consumption	Sale 97% and home consumption (3%)
Method of raising	Inside the poultry house	Inside the poultry house	Inside the poultry house	Inside the poultry house	Inside the poultry house

II. Household income

The main source of income for both male and female interviewees comes from sale of poultry and poultry products. Additional resources of income are derived from rice production, fish farming and the salary of the partner. But the income from poultry production is the most important.

[45] See Annex VII, semi-commercial
[46] See Annex VII, semi-commercial

Table 2. Household income by gender

	Male				Female
Age	38	56	47	47	34
Sources of income	Egg sales, old chickens after, rice, fish	Egg sales, rice production, salary from children	Egg sales, chickens and from leasing the land	Broiler sales, salary from wife	Egg sales, salary from husband, and rice for HH consumption only
Level of income from poultry	Most important	Most important	Most important	Most important	Very important

III. Roles and responsibilities of women and children in poultry-raising and marketing

In family farms, males play an important role in the whole production chain. Only in one farm, the wife and children have to clean the poultry house and sell the manure (man thinks it not a very heavy job and of less importance). If the woman is the poultry owner, then she must do all related work. N.B. This farmer had just started poultry production, while some of her colleagues would think of looking for other sources of income due to the AI threat. The female farmer has no previous livestock experience, but started after the factory she worker in was replaced. Birds were obtained from a relative who also provides advice. She thinks of expanding the farm with other species e.g. pigs. None of the producers need to transport the birds to the market, because they sell at the farm gate to middlemen.

The poultry owner, male or female, does all poultry related work including decision-making on type of poultry, sale of birds and eggs, replacing the herd and where to sell, slaughter, and use of income. However, females play an important role in deciding on use of chickens for home consumption and they usually cook, wile men perform the slaughter.

The collected information is summarised in the following table.

Table 3. The roles and responsibilities in poultry raising and marketing by gender

		Male				Female
Age		38	56	47	47	34
Poultry raising	**Feeding**	Mostly men	Mostly men	Mostly men	Mostly men	Mostly women
	Collecting eggs	Mostly men	Mostly men	Mostly men	Mostly men	Mostly women
	Cleaning and maintaining	Mostly men	Mostly women and children	Mostly men	Mostly men	
	Disposal of manure	Mostly men	Mostly women and children	Mostly men	Mostly men	Both equaly
Income	**Keeping income**	Mostly men	Mostly men	Mostly men	Both men and women	Mostly women
	Use of income	Mostly men	Mostly men	Both men and women	Both men and women	Mostly women
Food	**Slaughtering**	Mostly men	Mostly men	Mostly men	Mostly men	Mostly women
	Cooking	Mostly women	Mostly women and children	Mostly women	Mostly women	Mostly women
decision making	**Type of poultry**	Mostly men	Mostly men	Mostly men	Mostly men	Mostly women
	Home consumption	Mostly men	Mostly men	Mostly men	Both men and women	Mostly women
	Selling in market	Mostly men	Mostly men	Mostly men	Mostly men	Mostly women
	What when how much to sell	Mostly men	Mostly men	Mostly men	Mostly men	Mostly women

IV. Knowledge about bird influenza

All the farm owners know about AI, the symptoms of chickens, the fact that humans can be affected, the seriousness of it, how to protect themselves, about the vaccination campaigns, etc. They got their information from television, public voice, from veterinary workers, and commune staff members. The farm owners said to follow the guidelines and believe in vaccination, both for chickens and human heings. Farmers use protective clothes, gloves, boots and masks during poultry related activities. They spray disinfection around the poultry house. The chemical solution for disinfection they got from the sub-district veterinary office free of change. N.B. Disinfectant is discharged in the village sewage canals.

The farmers participate voluntary in AI prevention and control vaccination campaigns. Acquired information is shared with family members and neighbours.

Two farmers attended training courses on poultry production in general and in AI in particular organised by the district veterinary station in cooperation with the farmer's association and women's union.

Most farmers did not attend the training courses on poultry production and AI prevention and control, but they think that if an AI outbreak would happen their birds will be culled and they will lose their income even if they can receive compensation. An AI outbreak will affect the whole country, socially, economically, as well as the public health. The sale price for birds would drop even if the birds are healthy.

Regarding the gender issue, farmers think that men and women are equally at risk, but if an AI outbreak would happened the poultry raiser would lose his income and must find another job, which is not easy.

To encourage males and females in supporting AI preparedness and control activities, farmers thought that the government should implement a more in-depth communication campaign, which is easily to understand, and government should enforce regulations if poultry raisers do not follow guidelines. Further they should encourage the farmers to detect and report as early as possible to the local authorities if they detect abnormal levels of sick or dead birds. Moreover, they suggest that animal health staff should carry out disinfection campaigns more frequently, both at farms and in the village as a whole, e.g. commune roads and sewage system, and further to provide vaccine on a monthly basis, because the bird cycles are short. Government should inform as soon as possible about outbreaks in nearby villages. All vaccination, including small numbers (<20), should be done at the farm, not at village collection points.

Backyard Poultry Farmers

Eleven Backyard farmers were interviewed (6 females and 5 males) from Co Loa commune (Dong Anh district) and Co Bi commune (Gia Lam district). They are Nguyen Van Cuu, Mr. Nguyen Van Tac, Mr.Phan Van Hoa, Mr. Dinh Van Phi, Mr. Nguyen Van Xoang, Mrs. Bui Thi Gai, Mrs. Dinh Thi Ngan, Mrs. Nguyen Thi Lien, Mrs. Nguyen Thi Duc, Mrs. Nguyen Thi Bam, Mr. and Mrs. Cao Thi Lich.

The survey information is summarised as follow the parts of questionnaire.

I. General Information

The age of the female respondents varies from 45 to 76, the of the males from 40 to 55. Household sizes vary from 2 to 7 people. Among eleven interviewees, there are only 4 female heads of households, the rest are males. The respondents have nearly the same education level 7 years in school (except the oldest women).

The main characteristic of all the backyard systems is free range with fence. The farmers keep all types of chicken (meat, eggs, fighting cocks). In one family, the farmer keeps three different species in one place (chickens for meat and eggs, muscovy ducks for meat and geese for eggs and breeding).

The purpose of poultry-raising also varies from farm to farm. Some farmers raise poultry for home consumption only, but most of them raise poultry to supplement household income. Other animals in these families are dogs, cats, pigs, fish and pigeon. The results are summarized in the following table.

Table 4. Summary of information collected from male and female poultry backyard farmers

Item	Male					Female					
Age	51	48	40	55	50	57	54	45	59	50	76
Highest education	Grade 7/10	Grade 7/10	Grade 7/10	Grade 7/10	Grade 8/10	Grade 5/10	Grade 7/10	Grade 7/10	College	Grade 7/10	Grade 3/10
Family size	5	4	4	6	8	5	3	4	6	4	4
Children (Male)	1	1	2	3	3	1	1	2	3	1	1
Children (Female)	1	1	0	1	3	2	1	0	1	1	1
Gender of head	Male	Male	Male	Male	Male	Female	Female	Male	Female	Female	Female
Type of poultry	Layers, broilers	Chickens, muscovy duck, goose	Broilers	Layers (cocks and hens)	Layers, broilers	Layers, broilers, chicks	Broilers	Broilers	Layers, broilers, pigeon	All kinds of poultry	Fighting cocks
Other animals	2 dogs, 1 cat	Fish	6 Pigs	No	Pig, dog	No	Dogs	2 dogs, 1 cat	No	5 dogs, 1 cats, > 10 pigs	2 dogs, 2 cats
Poultry raised last year	150	40 layers, 80 muscovy ducks, 3 laying geese	25	No data	200	25	25	30	50	50	100
Poultry raised this year	90 sold for lunar new year.	40 layers, 80 muscovy ducks and 3 laying geese	25	No data	120 (just sold)	26	9	30	20 (Renew)	40	50 (price of animal food is high
Purpose of raising	Selling 80%, home consump. 7% and gifts 13%	Sale 90%, home consump 10%	Home consump. 100%	Home consump. 100%	Home consump 30%, sale 70%	Home consump 98%, sale 2%	Home consump 50%, sale 50%	Home consump 20%, sale 70%, gifts 10%	Home consump 70%, sale 30%	Home consump 100%	Home consump 50%, sale 50%
Method of raising	Free range[47] with fence and night house	Free range with fence	In house	In house	Free range with fence	Free range with fence	Free range in the family's garden with night house	In house	Free range with fence	Free range[48], some go into stable at night some stay in	Free range with fence and night house

[47] See Annex VII
[48] See annex VII

										garden	

II. Household income

The farmers have several sources of income, from rice production, crop production, salary, pig raising, trade, restaurant, alcohol production, trade. The income from poultry for some families is important but for others it is not important, because they only raise chickens for home consumption. The information collected from households is summarised in the following table.

Table 5. Household income by gender

	Male					**Female**					
Age	51	48	40	55	50	57	54	45	59	50	76
Source of income	Sale of chickens, eggs, crops salary	Sale of, chickens, eggs, rice vegetables, fish, salary	Pig production, rice farming, services	Rice farming and trader	Sale of chickens, eggs, pigs, rice farming	Sale of chickens, eggs, rice, vegetables	Sale of chickens, rice farming, crops.	Sale of chickens, farm income salary, trade	Sale of chickens, salary	Salary, rice, card board trader, alcohol making	Sale of chickens, restaurant, salary,
Level of raising	Very important	Important	Important for consumption	Not important	important	Important	Not important	important	Not important	Important for H consump.	Not important

III. Roles and responsibilities of women and children in poultry-raising and marketing

The same situation as in family farm, if the male is the poultry owner, then he will be occupied in every stage of the production chain, but in some families the women have the duty to clean the poultry house and to dispose the manure. In some of those cases women keep the income from poultry, perform slaughter, and always play an important role in cooking poultry for food. The man takes the decision to replace the flock and the use of income for poultry production.

In contrast, if the woman is the poultry owner, then she will do everything in the poultry production chain (feeding, collecting egg, disposal of manure, sale of manure, transporting manure to the rice field, they further slaughter the birds, cook, and sell the eggs. The man sometime helps his wife by slaughtering the birds. The woman is also the person, who takes the decision in use of poultry for food, when and how much to sell, flock replacement, and use of poultry income for family expenditures. In some cases, there is a little difference (see table).

Table 6. The roles and responsibilities in poultry raising and marketing by gender

		Male					Female					
Age		51	48	40	55	50	57	54	45	59	50	76
poultry raising	**Feeding**	Mostly men	Mostly men	Mostly men	Mostly women	Mostly men	Mostly women	Mostly women	Mostly women	Both men & women	Mostly women	Mostly women
	collecting eggs	Mostly men	Mostly men	Mostly men	Both men & women	Mostly men	Mostly women	Mostly women	-	Both men & women	Mostly women	Mostly women
	cleaning and maintaining	Mostly men	Mostly men	Mostly men	Mostly women	Mostly women	Mostly women	Mostly women	Mostly women	Mostly women	N.A.	Mostly women
	disposal of manure	Mostly men	Mostly men	Mostly men	Mostly women	Mostly women	Mostly women	Mostly women	Mostly women	Mostly women	N.A.	Mostly women
	transport and sale of manure	N.A	Mostly men	Mostly men	-	Mostly men	Mostly women	Mostly women	Mostly women	Mostly women	N.A.	Mostly women
Income	**keeping income**	Both men & women	Mostly men	Not for sale	-	Both men & women	Mostly women	Mostly women	Mostly women	Mostly women	-	Mostly women
	use of income	Both men & women	Both men & women	-	-	Both men & women	Mostly women	Mostly women	Mostly women	Mostly women	-	Mostly women
Food	**slaughtering**	Mostly women	Mostly men	Mostly men	Mostly men	Both men & women	Mostly men	Mostly women	Both men & women	Mostly men	Mostly women	Mostly children (male)
	cooking	Mostly women	Mostly men	Mostly men	Mostly men	Both men & women	Mostly women	Mostly women	Mostly women	Mostly women	Mostly women	Mostly children (Male)
decision making	**type of poultry**	Mostly men	Mostly men	Mostly men	Both men & women	Both men & women	Mostly women	Mostly women	Mostly women	Mostly women	Mostly women	Mostly women
	home consumption	Both men & women	Mostly men	Mostly men	Both men & women	Both men & women	Mostly women	Mostly women	Both men & women	Both men & women	Mostly women	Mostly women

The farmers do not need to bring birds to the market because a middleman comes to the farm to buy poultry.

IV. Knowledge about bird influenza

All backyard farmers have knowledge about AI; they know symptoms of AI sick birds, they know that an AI outbreak is very dangerous, how to protect themselves and their families from disease, e.g not touching dead birds if they do not know its cause, to inform the authorities as soon as possible when they detected abnormal dead rates. Information is got from television, public voice, and leaflets, from the district veterinary workers as well as from neighbours. Because most farmers are afraid of this disease, they strictly follow guidelines given by local authorities and they voluntarily participate in vaccine campaigns. They have to bring their birds to the veterinary station in the village for vaccination, if the poultry numbers are small, and they call the veterinary worker to come to their farm to perform the vaccination, if they have more than 40 birds. Farmers bury dead birds with lime and do not eat dead birds. Farmers said not to sell sick birds in the market, but some killed and cooked all their healthy birds before the village was culled.

Few farmers attended training courses on AI prevention and control and poultry production organised by farmer association in cooperation with the women union, and the district veterinary station, but most of them did not attend any training course because they have no time, the timetable of the training course is not suitable for them to participate.

Farmers participate voluntarily in AI prevention and control, they pass on acquired information to their neighbours, they use chemicals to disinfect their poultry house, and they bury dead birds. All of them believe in vaccination.

The farmers think that if an AI outbreak would happen it would have a large impact on all the sites of life: social, economic, livelihood. They will lose of income. Food prices will go up and there would bean impact on human and public health. In some communes of this area, the backyard farmers received compensation at the first outbreak because the outbreak happened near by. They got the compensation after 1-2 months after reporting to the local authorities (about 5,000 VND/small chicken, 10,000 VND/growing chicken and 15,000 VND/adult chicken). This compensation was used for restocking, for the family expenditures and for food.

Regarding gender issues, few farmers thought that man should take over poultry raising, but most of them said that there are no differences between male and female risks and they one who is most exposed is more at risk. Therefore they should be more educated and take better care. They do not think it is necessary to take gender considerations into account developing strategy/actions for AI preparedness and control.

Suggestions were given by the respondents that Government and all related agencies such as the veterinary station, local authorities, women's union, farmers association should organise more training courses on AI prevention and control as well as other training courses on animal disease control. Further implementing communication campaigns at the convenient times for the farmers. The information should be short and easy to understand. The local Government should enforce regulations and let farmers report as early as possible about the abnormal deaths. The district veterinary workers should vaccinate monthly instead of 2 times/year, because the reproduction cycle of the birds is short.
Farmers require free chemicals for disinfection and government should give some incentive to encourage early reporting.

Market visit

Há Ví wholesale market is the most important poultry market for Hanoi. Here poultry from other provinces are brought and sold to traders who sell the birds in Hanoi and surroundings. The majority of traders (>90%) are women, some with their little children with them. To enter the market with birds one has to pass a veterinary checkpoint where the birds are checked and vehicles and motorcycles are disinfected (there was a rucksack sprayer standing on a table). However the market lies along two roads in the form of a Y and there is only a checkpoint at the leg of the Y. Motorcycles loaded with chickens and ducks have been observed by the team to enter the market via the arms of the Y. Birds can leave the market without further checks. All poultry transporters should be in the possession of a health certificate/travel permit from the DLD.

Traders were very reluctant to talk to the team, because a group of foreigners (like the team) had been there some weeks ago asking similar questions and this had caused a number of inspections to be taken place.

Business was said to have remained unchanged since the appearance of AI. Birds that are not sold remain in big cages on the market with a guard to prevent theft.

After the market the neighbouring village of Tu Nhien, was visited where the 78 year old grandmother, Nguyen The Thep, of one of the drivers lived. Tu Nhien has approximately 2000 households, all raising chickens for household consumption. Ducks are only raised if a lake or pond is present, not in the village. Ducks remain fenced in the pond otherwise they would be stolen.

Mrs. Thep lives with her son, daughter-in-law and two grandchildren a boy and a girl. The daughter-in-law raises pigs and sells pork.

Mrs Thep has 10 backyard broilers and three fighting cocks. Decades ago she last bought poultry in the market. She keeps chickens for household meat consumption. She or her son does the slaughter, the daughter-in-law cooks. Eggs are used for hatching not consumption or sale, as chickens bring up more than eggs. An egg sells for 3000 VND. Non-fertilised eggs are fed to fish in the lake near the village. The chicken pen is not cleaned but disinfected from time to time. Cockfights take place at village festivals. There is price money (200,000 VND) for the winner, gambling does not take place. All family members attend the fights

Up to the evening people come to Há Ví market. There has never been a disease outbreak at the market. “If there would be disease at the market, everybody in the village would know”.

Mrs Thep does not touch dead chickens barehanded. “A chicken is nothing, a human life being is valuable.” She learned about disease prevention from a government officer, who comes to check the chickens in commercial farms for disease. Government officers do not check small backyard farms. No training is required, Mrs. Thep has life-long experience, she learned poultry raising from mother and husband. Moreover she has no time to wait for the government officer. She also acquired AI information from the television. Mrs. Thep does not join the VWU, she is too old for that, but daughter-in-law is a member. However, the VWU does not have a poultry programme in Tu Nhien. According to Mrs. Thep there are to date much more diseases than in the old days.

C. LAOS

The area of the study in Lao PDR is the government authority at central level commercial farm and households in Sisatanak and Hatsaiphong district Vientiane Capital City, and the sample of the study can be categorized into three parts, namely the government authority like the National Avian and Human Influenza Coordination Office (NAHICO), the National Centre of Laboratory and Epidemiology (NCLE), Department of Mass Media, Ministry of Information and Culture (MMD, MOIC), the National of Animal Health Centre (NAHC), Lao Woman union (LWU) and Centre of Information Education and Health (CIEH, MOH), 1 commercial farm at Hatsaphong district, eight poultry backyard household in Dongsavath village, Sisatanak District, the effected area in poultry outbreak and first human case in Lao PDR last year, The results of each part are summarized as follows:

Part I: Government Authorities

Date/Month/Year	Time	Place to Visit	People to Meet	Remark
7/4/2008	**2:30PM-3:30PM**	National Center Laboratory and Epidemiology (NCLE)	M.D Bouaphanh Head of Epidemiology Division	
8/4/2008	**9:00AM-10:00AM**	Visit Mass Media Department, Ministry of Information and Culture (MOIC)	Mr Viyolinh Prasavath Deputy cabinet of Information and culture Ministry Mr Sisavath Technical officer, Mass Media Department	
	10:30 AM-11:30AM	National Animal Health Center (NAHC)	Dr Bounloam Head of NAHC	
	2:00AM-3:00AM	Visit Lao Woman Union	Ms Piewlavanh Director of Training Department, LWU	
	3:30PM-4:30PM	Visit Centre of Information Education and Health (CIEH)	Mr Phoumy Phothisane Deputy director of CIEH	

Part II: Commercial Poultry Farms
Day of the survey: 9 April, 2008
Interviewee: the owner of commercial poultry farm

One owner commercial poultry farm was interviewed, the owner name Mr Khamsinh Chittarath The information collected is summarized with respect to each part of the questionnaire.

2.1 The first questionnaire

I. General Information

The farm is owned by a male, aged 54 years (wife is 44 years old) whose education is secondary school (finished 12 years); the size of the household is 7 people, 2 young females; the head of the household is male.
Characteristics:

- open farm with about 2,500 laying chickens last year with the objective of selling them
- all of the laying chicken are raised in special coops
- in addition, there are 4 dogs and there are 4 fish ponds, 2 are operational at the time of interview, fish are only for home consumption
- chicken manure is sold in sacks, there will be collected at farm by people who want to buy

II. Household Income

Most of the household income comes from selling eggs. Once a week, a buyer comes from Vientiane (transport permit required) to purchase eggs. Poultry food is prepared by the farmer. The rank is “most important”. Use of income is a mutual decision.

III. Roles and responsibilities of women and children in poultry-raising and marketing

In this farm, both male and female are involved equally in the process of raising layer hens, including feeding, collecting eggs, but for cleaning and maintaining the surrounding and quarters as well as

weekly disposal and sale of manure are[49] responsible mostly men . The head of household keeps and manages the income from selling eggs and manure. Poultry is not consumed in this household for fear of AI. The family only eats fish. Decision making is a mutual business between man and wife, with the exception of the type of fowl to be raised, which is a male decision.

IV. Knowledge about bird influenza

The farmer has some knowledge about HPAI. e.g. he knows that he has to bury the dead poultry in the ground and how to protect himself - uses soap, protective clothing (boots, mask, gloves) for example put off dress or shirt which wear into farm. Twice a month the vet comes for surveillance, just visual inspection. Every other day he disinfects (premises, egg trays) by spraying. Eggs are only consumed from own chickens, never bought. He attended one day training (general poultry production and health care no AI) organized 4 times a year by the CP Company, from where he buys his feed. He is no contract farmer for CP. However, during the second outbreak he was scared and lost profit. During that time, he received compensation, used money together with private investment to build a new farm. Moreover, he believes that women and men have the same probability to be infected with the disease.

Suggestion to district authorities: better border control, and stop smuggling eggs from China which are sold at lower prices in the market, and application of the same regulations in the countryside as in Vientiane. If there is an outbreak in the country or neighbouring countries, provision of medication should be provided by government. Medicines in the market are of generally low quality and often expired.

Part III: The Poultry Backyard Farmers

Day of the survey: 9 April, 2008

Dongsavath village: approx. 2100 people (1204 ♀, 1171♂) in 475 households. Almost every household has backyard chickens on average 10-20 birds (min. 5, max. 60). Village lies in the red zone due to human victim. Some households still have chickens although it is officially not allowed.

There were eight respondents from eight households keeping backyard poultry. The information collected is summarized with respect to each part of questionnaire.

I. General Information

The average age of male is 48 years old compared to the average age of female of 47 years old. Average household size of male and female is 7, and males play more important role as head of the family than female in all households. Both male and female raise their poultry in a free range system with night-housing. The main purpose of raising chicken is for home consumption. Another reason for raising chicken is selling, religious festivals. As far as education among males and females is concerned, males are found to have higher education than females. Other animals in these households are dogs, cats, cow, and fish. The information collected is summarized in the following table.

[49] 4000 kip per wheel barrow, or 44,000 kip per cart. Manure is disinfected before transport.

Table 3.1 Summary of information collected from male and female poultry backyard farmers

	Male			
Age	28	57	62	48
Highest education	Secondary School, 11 Years	Secondary school, 12 years	Elementary school, 6 years	secondary school
Household size	3	14	4	7
Children Male	1	3		3
Children Female		3		2
Gender of Head	Male	Both	Male	Male
Type of poultry	Duck	Chickens, hens, cocks, chicks, ducks, other birds	Chickens, hens, laying, ducks, laying	Chicken, hens, laying, duck, meat ducks
Other animals		6 dogs, 1 cat, 1 goat		20 cows
Poultry raised last year	16 Ducks	30 chickens, 20 ducks, 100 other birds	21 chicken, 12 ducks	30 chicken, 15 ducks
Poultry raised this year				
Purpose of raising	Home consumption	50% home consumption, 50% selling, religious festivals	20% consumption and 80% selling	Home consumption, religious festival
Method of raising	Fenced backyard, special coop	fenced backyard	free range with night housing, fenced backyard	Free range, with night housing

	Female			
Age	49	53	53	36
Highest education	Elementary 3 Years	Elementary School, 7 years	6 years, secondary school	elementary school
Household size	5	13	9	5
Children Male		2		
Children Female		3	1	
Gender of Head	Female	Female	Male	Male
Type of poultry	Chicken, Duck	chicken, hens, cocks, chicks, ducks	Chicken, laying, Ducks, laying	Chicken, ducks, meat ducks
Other animals		2 dogs	4 cows	
Poultry raised last year	3 Duck, 3 Chicken	15 chicken, 30 ducks	6 chicken, 5 ducks	15 chicken, 16 ducks
Poultry raised this year			2 chicken, 6 ducks	
Purpose of raising	Home Consumption	30% home consumption, 70% selling	home consumption	home consumption, religious festivals
Method of raising	Free Range with night housing	fenced backyard	free range with night housing	

II. Household income

The main source of income for both male and female interviewees is salary from their own children. Other sources of income are money from rice field, construction work, cloth sewing, farming and sewing clothes.The information collected from households is summarized in the following table.

Table 3.2 Household income by gender

	Male			
Source of Income	Salary both man and woman	Son in law is construction worker, daughter sells poultry	salary, farmer, plant	rice field, construction
level of raising	Important	Vey important	important	NA
	Female			
Source of Income	Cloth sewing	from children who work in SOE	salary, cow	
level of raising	Very important	Very important	important	very important

III. Roles and responsibilities of women and children in poultry-raising and marketing

In the process of raising poultry male and female both equally in feeding, collecting eggs, cleaning and maintaining, disposing of manure, as well as transporting and selling of manure. However, as far as income is concerned, females play an important role in keeping income from raising chicken and making decision regarding the use of income. Furthermore, when it comes to slaughtering, males play a more important role, whereas mostly women are involved in cooking. The information collected is summarized in the following table.

Table 3.3 Roles and responsibilities in poultry raising and marketing by gender

		Male			
poultry raising	feeding	mostly women	all	both equally	mostly men
	collecting eggs	mostly men	all	both equally	mostly men
	cleaning and maintenance	mostly men	all	both equally	mostly men
	disposal of manure	mostly men	all	both equally	mostly men, fertilizer for vegetables
	transport and sell of manure	n.a	n.a	both equally	both equally
income	keeping income	n.a	both equally	both equally	mostly women
	use of income	n.a	both	both	both
food	slaughtering	mostly men	mostly men	mostly men	both equally
	cooking	mostly men	mostly men	mostly women	mostly women
decision making	type of poultry	both	men	men	men
	used of poultry-food	both	men	women	women
	used of poultry-market	n.a	men	women	both
	used of poultry-game	n.a	n.a	n.a	n.a
	what when how much to sell	n.a	both	women	both
		Female			
poultry raising	feeding	mostly women	mostly women	mostly women	mostly women
	collecting eggs	n.a	n.a	mostly women	mostly women
	cleaning and maintenace	mostly women	mostly women	mostly women	mostly women
	disposal of manure	mostly women	mostly women	mostly women	mostly women
	transport and sell of manure	n.a	n.a	mostly women	n.a
income	keeping income	n.a	n.a	mostly women	mostly women
	use of income	n.a	men	women	women
food	slaughtering	mostly women	mostly women	mostly men	mostly men
	cooking	mostly women	mostly women	mostly women	mostly women
decision making	type of poultry	women	women	women	women
	used of poultry-food	women	women	women	women
	used of poultry-market	n.a	n.a	women	n.a
	used of poultry-game	n.a	n.a	n.a	n.a
	what when how much to sell	n.a	n.a	women	women

IV. Knowledge about bird influenza

Backyard farmers are aware of the symptoms of the disease. The information was given by livestock officers, TV, health volunteers, newspapers, vets, and the local radio. One of the female respondents got information i.e. through her children (blue box). Most of them follow the guidelines of livestock officers. There is no training on poultry production and health care of poultry for backyard farmers. However, training on AI prevention and control is provided by the PLO twice a year. The AI outbreak has affected the well-being of backyard farmers through the loss of income, fear of AI[50], and cause conflicts with neighbours. Regarding compensation, all[51] backyard poultry farmers received compensation on a per chicken basis during the first outbreak and both male and female spent the compensation on living expenses and religious ceremonies. Most of them think that there are no effects of AI outbreaks on gender issue. One male respondent mentioned that 20% of the village would have been seriously affected, because those villagers have no other source of income. Nevertheless, when it comes to AI protection and prevention, most of them think that there is a difference between male and female (examples gives: women are more afraid of AI than men or males are more interested in related issues than women). To encourage participation of male and female in preparedness and control, interviewees suggested training provided by government officers. Moreover, interviewees asked for the provision of protection suits, disinfectants and vaccines (for fighting cocks). Spot culling in case of an infection is recommended by poultry backyard farmers. One male respondent mentioned strengthening of movement control, inspection of the source of the poultry and poultry safety quarantines.

[50] Male respondent said to be very afraid for the health of his family, especially with the human victim in the village. During the outbreak he killed his chickens, but because they were healthy the family ate them. He further destroyed the poultry house and disinfected his premises. N.B. He said that since he killed his birds himself, he did not get compensation. As soon as it is allowed he would start poultry raising again, although he wasn't really affected due to the other sources of income.

[51] One female respondent mentioned that she did not receive compensation because she killed the birds before culling. Said she buried the birds, did not eat them.

ANNEX VII

FARM VISITS

VII. FARM VISITS

Commercial farms: Layers

Thailand – Suphanburi

Vietnam – Co Loa, Dong Anh district

Laos – Sisatanak district, Vientiane

Disinfectants and spraying equipment

Cart for manure transport

Broilers

Thailand – Suphanburi

Vietnam – Co Loa, Dong Anh district

Backyard farms

Thailand – Suphanburi

Vietnam – Co Bi, Dong Anh district

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ANNEX VIII

POULTRY MARKETS

VIII. POULTRY MARKETS

THAILAND, Bangkok

Chatachuk weekend market

Khlong Toey market

Khlong Toey market

VIETNAM

Ha Vi, wholesale market

Ha Dong Market © C. Herberholz

LAOS, Vientiane

Khou Din market