

PRO-POOR HPAI RISK REDUCTION STRATEGIES PROJECT

PROCEEDINGS OF THE KENYA MULTI-STAKEHOLDER WORKSHOP

July 8 - 9, 2008

International Livestock Research Institute (ILRI), Nairobi; Kenya

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Introduction

Kenya is one of several African and Asian countries participating in a research project funded by the Department for International Development (DFID) of the United Kingdom to identify and promote pro-poor Highly Pathogenic Avian Influenza (HPAI) risk reduction strategies. The International Food Policy Research Institute (IFPRI), International Livestock Research Institute (ILRI), Food and Agricultural Organization (FAO), Royal Veterinary College, and University of California at Berkeley, are implementing the project with national partners in respective countries that, besides Kenya, include Ethiopia, Ghana and Nigeria in Africa; and, Cambodia, Indonesia, Thailand and Vietnam in Asia. Background papers by potential national partners were commissioned in selected countries.

This report is a record of the proceedings of a workshop held to introduce the project to the stakeholders; present and discuss the main findings of the Kenya HPAI background paper; identify the major knowledge gaps to help design targeted research projects; and, map the institutional structures and value networks of poultry. The workshop was attended by public and private sector stakeholders in the poultry industry in Kenya comprising members of the National Task Force on Avian Influenza and other key stakeholders.

Official opening speech

Dr. R. M. Murithi, representing the Director of Veterinary Services, opened the workshop. He thanked all participants for attending and conveyed the apologies of the Director of Veterinary Services who was held up by other official duties before proceeding to read the Director's speech:

Ladies and gentlemen,

It is observed that in Kenya, like in many other developing countries especially those in Sub-Saharan Africa, poultry production is one of the main sectors in the livestock sub-sector.

The livestock sub-sector is the mainstay of most rural households and contributes significantly to livelihoods of the national population. It accounts for 12% of the entire GDP, about 47% of the agricultural GDP and employs about 50% of the agricultural labour-force. The total livestock population in Kenya is estimated to be slightly over 60 million, half of which are poultry. Over 80% of the poultry population are indigenous chicken and are kept under the free-range system also known as Sector 4 in the FAO classification system.

Poultry production is one of the most important enterprises in rural poor households' food and nutrition security where they are kept mainly for supply of domestic protein, income generation and for social purposes and contributes significantly to the national economic growth. The indigenous chicken is a major source of ready income for 90% of the rural households and anything that will affect their rearing especially HPAI, would cause huge economic and social losses as was apparent during the bird flu scare that was experienced in the late 2005 to early 2006 despite the fact that there was no disease.

The effects of that scare were felt not only in the poultry sector but also in other livestock sub-sectors with financial losses estimated at Kshs. 2.5 billion. The DVS is concerned about this and has made every effort to put measures in place that will prevent entry and control of HPAI should it enter into the country. But a lot of work still needs to be done in several areas, some being;

- Improving the bio-security in sector 4 and along the value chain
- Improving of surveillance and reporting
- Strengthening of public-private sector linkages in prevention and control of diseases
- Prevention of entry and spread of HPAI and other poultry diseases through marketing slaughter of birds

I see participants in this workshop are drawn from several sectors and I hope you will identify areas of research that will help decision makers in formulating control strategies that are cost effective and enhance livelihoods of poultry producers, especially the small-scale producers. As we deliberate during the two days, let us remember to use an integrated and multi-sectoral approach, including other poultry diseases and various interrelated sectors in our research agenda setting.

I want to take this opportunity to express my appreciation to DFID for their continued support to our country (they also supported the Avian Influenza FAO Project) and to ILRI and I look forward to many such collaborations in the future.

With those few remarks, I wish you all fruitful deliberations and declare the workshop officially opened.

Workshop objectives

Dr Amos Omore, who facilitated the workshop, thereafter elaborated the objectives of the workshop as follows:

- To introduce the project to stakeholders so that they can fruitfully interact with the project as it unfolds, especially on how to achieve the over-arching aim of balancing effective disease control while safe-guarding the welfare of the poor
- To review the background paper prepared by Dr. John Omiti and Dr. Sam Okuthe
- To provide opportunity for the Director of Veterinary Services and other major actors in HPAI control in Kenya to share updates on their efforts
- To identify knowledge gaps that the DfID funded HPAI research in Kenya should focus on and where possible
- To map the institutional structures (organisations and rules of the game) and value networks of poultry production and marketing in Kenya

Dr. Omore then proceeded to invite the stakeholders to make presentations as follows:

- 1) HPAI situation in Kenya (Director of Veterinary Services)
- 2) Introduction of the pro-poor HPAI Risk Reduction Strategies Project (Devesh Roy and Marites Tiongco)
- 3) Presentation of the background paper: Summary of key findings (Dr. John Omiti and Dr. Sam Okuthe)
- 4) Socio-economics of HPAI (Dr. Nicoline de Haan, FAOK)
- 5) SPINAP – AHI (Dr. Nesru Hussein, AU – IBAR)
- 6) Perspectives from the FAO/DFID Emergency Preparedness Project (Dr. Paul Rwambo)
- 7) Perspectives from CDC – K (Dr. Mark Katz)
- 8) Strengthening Preparedness, Prevention and Control against HPAI and other Priority Diseases (Dr. Sam Wakhusama, USAID)
- 9) Stakeholder Mapping (Dr. Marites Tiongco and Dr. Serge Nzietchueng)

Matters arising from the background paper and other presentations

Following the presentations, the floor was opened up for discussions. The discussions were interactive with participants making observations and comments. A summary of the main issues raised, questions, comments and responses during the discussions are as follows:

Issue 1: The information given by various presenters e.g., on poultry population in the country is conflicting and there is a big difference between the poultry population figures. What are the right figures?

Related comments and responses:

- 1) Accurate data is important and is a direct input for planning various activities. For example, budgeting for vaccinations, compensation and other activities would be difficult in the absence of accurate and verifiable data.
- 2) Much of the data quoted is derived from estimates obtained from the field by the Department of Livestock Production. A census for livestock in the country, poultry included is long overdue and should be planned and budgeted for just like the human census is planned and carried out every ten years.
- 3) The development of a poultry policy is underway and census is one of the issues that would be addressed.
- 4) In the absence of a livestock/poultry census stakeholders should adopt similar working figures for uniformity in order to avoid the use of figures that differ widely from one forum to another.

Issue 2: Traceability of livestock including poultry should be carried out in order to curb illegal livestock trade, which is rampant especially for poultry and birds in general in the face of HPAI threats.

Related comments and responses:

- 1) An international joint approach should be explored to help curb illegal trade in livestock and their products. Some countries like India and Bangladesh among others had gone ahead and introduced the use of micro-chips to trace livestock movements especially across borders. However, this may not be feasible for poultry, especially in poor countries due to the large numbers involved and inadequacy of resources.
- 2) Micro-chips have been used by wildlife authorities in several countries to manage endangered species of animals. The population of such animals is low and such application is possible as expenses are low.

- 3) Efforts should be made to educate and create awareness amongst border communities and personnel on the dangers of illegal cross-border trade. Veterinary officials of neighbouring countries should develop networking channels to share information that can lead to the control of illegal trade in livestock and livestock products.
- 4) Regional initiatives like the FAO Regional Animal Health Centres can help in bringing countries together for a regional approach.

Issue 3: A manual outlining compliance mechanisms should be produced to make the exercise easier and understandable should it become necessary.

Related comments and responses:

- 1) Compensation maybe linked to bio-security so that payments are commensurate with bio-security measures the farmer has put in place. This may eventually enhance the adoption of bio-security as a tool for disease control.
- 2) The private sector (poultry sectors 2 and 3 in Kenya) should be encouraged to invest in bio-security and general disease control. If the indigenous (sector 4) poultry, characterised by low bio-security are affected by HPAI it follows that sectors 2 and 3 are likely to be affected as well with huge losses as they have invested substantially unlike in sector 4 where the individual investments are minimal.
- 3) A review of the poultry sector is underway during which an analysis of the bio-security measures especially for sectors 3 and 4 will be carried out. Issues on disease response and containment, policy and cross-border trade would also be addressed.
- 4) Discussions are underway to designate the Central Veterinary Laboratories at Kabete to be a regional reference laboratory for HPAI diagnosis with a support laboratory located in Ethiopia.

Issue 4: Research should be carried out to determine the full potential of the indigenous poultry in production.

Issue 5: The possibility of indigenous poultry being genetically resistant to avian influenza should be explored.

Issue 6: The country has not been mapped for risk levels of the zoonotic diseases. Would it be possible to carry out such mapping to inform proposals of control measures?

Response:

All stakeholders should take advantage and ride on the preparedness measures being put in place for HPAI to develop plans for the management of other zoonotic diseases. USAID funds are largely used for food security and activities that promote trade with no funds set aside specifically for research.

Issue 7: Figures indicated for possible human deaths should there be a HPAI pandemic appear to be too high. This is in the face of improved health services and hygiene standards unlike in the past pandemics.

Response:

The levels of human interaction have been enhanced by international travel that now take a much shorter time coupled with a higher human population globally. These and other factors may result in higher numbers of human deaths should there be a pandemic.

Issue 8: During the height of the HPAI scare in 2005 collaborators worked hard and mounted several educational campaigns. These have now slowed down and both consumers and producers have gone back to their former practices. The education campaigns should continue with a focus on public education and awareness creation in disease control on a broad base so that other diseases can also be controlled with the help of the public.

Issue 9: A web site should be developed so that all information from various stakeholders can be posted and made available to everyone who needs it.

Issue 10: Public – private sector linkages should be strengthened so that both sectors can work in support of each other for effective disease control.

Related comments and responses:

- 1) An analysis should be done to establish the public and private roles to avoid duplication of efforts and to establish areas that are best handled by either of the two.

- 2) A comprehensive gap analysis should be done to establish what has been done and what has not been done by various stakeholders in the poultry sub-sector. Areas that have not been tackled should be identified and urgent action taken.
- 3) A qualitative bio-security assessment has been carried out and gaps identified. Some of the constraints to the implementation of bio-security measures include cultural, social and economic factors. Low bio-security is largely associated with poultry sectors 3 and 4 and choice of disease control strategies depend on the bio-security measures that are in place.

Issue 11: Lessons learnt from countries that have been affected by HPAI should be used to address issues in Kenya so that the country is better prepared for an outbreak.

Related pertinent questions

- 1) What factors have made HPAI endemic in both Nigeria and Egypt?
- 2) Why is it that the disease affected neighbouring Sudan and then wore off without spreading to other areas?
- 3) Do economic systems have a bearing on disease outbreak?

Group work to identify research gaps

The participants were randomly split into two groups to discuss the background paper, with the main aim of identifying research gaps.

Group Tasks:

Group 1: Discussion on disease risk and veterinary institutional findings and identification of research gaps.

Group 2: Discussion on economic and livelihood findings and identification of research gaps.

Group 1: Members of the discussion group on disease risk, veterinary institutional findings and related research gaps

1. Grace Gachacha
2. Rosemary Ngotho
3. Nasim Kungu
4. Frank Kamau
5. Sam Okuthe
6. Josephine Mugambi
7. Nesru Hussein
8. Joseph Litamoi
9. R. M. Murithi
10. Peninah Munyua
11. Paul Rwambo
12. Humphrey Mbugua
13. Nicholas Dondi
14. Cathryn Wanjohi
15. Benson O. Ameda
16. Marites Tiongco

Group 1 report summary

Research gaps identified in relation to disease risk:

- Identification of the potential channels for disease entry and spread
- Design the pathway for each channel of introduction and spread
- Identify risk factors that cause endemicity of HPAI H5N1/NCD diseases
- Assessment of the knowledge, attitude and perception (KAP) of producers and other actors on disease risk and control measure
- Quantitative bio-security assessment of each poultry production system
- Develop appropriate bio-security packages for each poultry production sector
- Use the current disease control measures as an entry point to improve on bio-security (NCD, worms, Gumboro)
- Assessment of the current poultry vaccination programs
- Assess the current system of manure and by product (gizzards, legs, necks) disposal
- Evaluation of the efficiency of Gumboro vaccine and characterization of field strains

- Exhaustive investigation of wild bird die offs

Research gaps identified in relation to veterinary institutional linkages

- Effective partnership between private and public veterinary sectors should be strengthened (disease surveillance, reporting, information dissemination and funding)
- Modelling to facilitate the restructuring of each poultry sector
- Estimation of cost-benefit/cost-effectiveness strategy based on NCD vaccination
- Develop a framework for poultry production sector in relation to regulatory framework
- Information sharing model across the stakeholders (surveillance, reporting early warning)

Group 2: Members of the discussion group on economic and livelihood findings and related research gaps:

1. Nicoline de Haan
2. Frank Hansen
3. Samuel Wakhusama
4. Serge Nzietchuen
5. Davesh Roy
6. Philip N. Nyaga
7. John Omiti
8. Lydia Ndirangu
9. Tabitha M. Kimani
10. David Ojigo
11. Wairimu Kariuki
12. Paul K. Ndang'ang'a
13. Rezin Ochieng Odede

Group 2 report summary

- Focus on Sector 3 and 4. Very small farmers might not have significant livelihood impacts but have externalities.
- Other people in the poultry chain are also affected; people lose their jobs when there is a scare. Labourers and small-scale traders are really vulnerable. They are sizeable (IOM study on traders). Report done by KARI funded by FAO and DFID. KAP study by UNICEF.
- Some sections of value chain might have more men involved. Disaggregating the impact is important. Regional variation is important. More women are involved in sector 3.

- Role of insurance
- Socio-cultural role
- Peri-urban areas – integration with dairy production to feed dairy animals on chicken manure
- Nutrition: for those affected by HIV AIDS poultry provide the main source of animal protein.

Methods

- Representativeness of the survey
- Regional decomposition
- Gender and age disaggregation

Matters arising from both group discussions and identified research gaps

Issue 12: The private sector handles a lot of poultry diseases but a lot of the data is not passed on to the Director of Veterinary Services resulting in underestimation of requirements.

Issue 13: There are numerous reports of deaths of wild birds. Most of the time it is reported that the cause of death is not HPAI without giving the actual definitive diagnosis/cause of death.

Issue 14: It is common to see poultry carried in public service vehicles in many towns and in the rural areas. We need to explore the possibility of designating vehicles for transportation of poultry only.

Response

This may be feasible when birds are ferried to markets in large numbers. Challenges would be encountered when only a few birds (sometimes only one) have to be carried for individual use e.g. birds given as presents. It is necessary to explore ways of tackling such issues also.

Issue 15: What models should be given to decision makers to help influence policy and decision making for improvement of the poultry sector?

Response

Models should be based on diseases that producers can associate with, for example Newcastle disease, which is experienced almost all the time with massive losses. This can then be used to develop models for diseases that have not been experienced in Kenya yet like HPAI whose effects are devastating.

Issue 16: The government machinery takes a long time to mobilise funds and other resources for response during disease outbreak. Other local stakeholders are usually in a position to help. There is however, no system within government structure to enable such stakeholders to contribute funds directly towards planned interventions.

Issue 17: There should be participatory approach during development of extension packages for bio-security so that the farmers' stand point can be understood. Messages can then be tailor made for specific production sectors.

Issue 18: It is important to disaggregate the impact of HPAI for the livelihoods of both men and women as they are affected differently.

Issue 19: The role of insurance in the livestock industry should be studied with emphasis on compensation for losses incurred due to disease.

Related comment

Issues of insurance for livestock are complicated by several factors that include diseases, climatic factors and many others. These cause premiums paid to be quite high such that most farmers are unable to afford the service.

Issue 20: Any surveys involving the poultry sub-sector and the livestock industry in general should take into account the heterogeneous nature of the Kenyan society that bring socio-cultural issues into play and which cannot be ignored.

Related comments

- 1) Impact studies or surveys should also take gender and age disaggregations into account.
- 2) Interactions in the poultry value chain are complex and should not be taken on face value. More often than not poultry, especially in sector 4, is owned by women while the men own the land and other resources and these may for example complicate compensation issues. Interventions should thus be considered carefully to avoid conflicts during implementation.
- 3) Questionnaires limit the amount of information that can be collected. Case studies are likely to collect more information to better inform decision-making.

Response

The methods to be used in the proposed projects will apply both methods to come up with concrete information.

Issue 20: During HPAI outbreaks it is only farmers who get compensated while other stakeholders are equally affected but do not get compensated at all. This constitutes inequitable treatment.

Response

Compensation is for losses incurred by farmers for birds or animals that get culled for disease control purposes and is based on existing laws under Chapter 364 of the Laws of Kenya. Compensations for other losses incurred by for example feed manufacturers are presently not covered by the law.

Issue 21: Livestock insurers require strict keeping of credible records which most of our farmers are unable to do. Due to the high risks based on several factors the premiums are very high and few farmers consider it an option in the management of their livestock enterprises.

Issue 22: Most discussions concerning the poultry industry are based on sectors 3 and 4. Incentives should be put in place for the other sectors, especially sector 2 so that they can also contribute to interventions in the industry, as they would also be affected during disease outbreak.

Issue 23: It is necessary to study the impact that one-day market closures is likely to have in breaking disease spread from live bird or livestock markets.

Group work on network-mapping

Participants were split into two groups according to expertise, interest or institutional affiliation and given network-mapping exercises as follows:

Network-mapping questions:

Group 1: "Who can influence the risk communication and response to disease risk such as HPAI?"

Group 2: "Who can influence the movement of disease such as HPAI and the flow of information about the disease in the value chain?"

The groups were instructed to follow these four steps:

- 1) Who is involved: Write actors on stickers and distribute on map; color according to kind of actor
- 2) How are they linked: Draw arrows of different color depending on the type of link; color = kind of link, arrow heads = direction of flow
- 3) How influential are they: Build influence towers; Higher influence = higher tower
- 4) Discuss: What kind of information do they need and in which format? What can we (all) do to improve the network? Where and in what format can research findings enter the system?

Group 1 (risk communication and response) participants:

- 1) Grace Gachacha
- 2) Samuel Okuthe (Rapporteur)
- 3) Nicholas Dondi
- 4) Paul Rwambo
- 5) H. C. W. Mbugua
- 6) Benson Oduor Ameda
- 7) Rosemary Ngotho-Esilaba
- 8) Josephine N. Mugambi
- 9) Serge Nzietchuen
- 10) Reece M. Murithi
- 11) Peninah Munyua
- 12) Cathryn Wanjohi
- 13) David Ojigo
- 14) Tabitha M. Kimani
- 15) Serge Nzietchueng (Facilitator)

Actors and acronyms used

BCC	-	Behavioural Change Communication
CAHW	-	Community Based Animal Health Workers
CBO	-	Community Based Organisations
CDA	-	Community Development Assistant
DAE	-	Department of Agriculture Extension
DLP	-	Department of Livestock Production
DP	-	Development Partners
DPH	-	Director of Public Health
DVS	-	Director of Veterinary Services
FBO	-	Faith Based Organisations
ILRI	-	International Livestock Research Institute
KALT	-	Kenya Association of Livestock Technicians
KARI	-	Kenya Agricultural Research Institute
KVA	-	Kenya Veterinary Association
KWS	-	Kenya Wildlife Service
MoA	-	Ministry of Agriculture
MoE	-	Ministry of Education
Mol	-	Ministry of Immigrations
MoL	-	Ministry of Livestock
MoPH	-	Ministry of Public Health
NGO	-	Non-Governmental Organisation
NMK	-	National Museums of Kenya
PA	-	Provincial Administration
PAHSP	-	Private Animal Health Service Providers
SMS	-	Short Messages

Group 1 (risk communication and response) report summary

The first part was to identify the institutions, organisations and individuals who can influence risk communication that includes the following stakeholders.

- 1) Department of Veterinary Services
- 2) Feed millers
- 3) Ministry of Public Health (MOPH), just hived from the bigger Ministry of Health
- 4) Farmers

- 5) Traders
- 6) Media
- 7) Private Animal Health Service Providers (PAHSP)
- 8) Provincial administration (PA) of the Office of the President (OP)
- 9) Ministry of Agriculture
- 10) Farmers associations e.g. Kenya Poultry Farmers Association (KEPOFA)
- 11) Community Based Organisations (CBOs)
- 12) Non Governmental Organisations (NGOs)
- 13) Hatcheries
- 14) Kenya Veterinary Association
- 15) Research Institutions e.g. Kenya Agricultural Research Institute (KARI) and International Livestock Research Institute (ILRI)
- 16) Ministry of Immigrations
- 17) Kenya Revenue Authority through the Customs Department
- 18) National Museums of Kenya
- 19) Kenya Wildlife Service
- 20) Politicians
- 21) Faith Based Organisations (FBOs)
- 22) Ministry of Education
- 23) Ministry of Special Programmes

Colour codes used in Group 1 net mapping exercise.

	Colour / line	Description
1.	Black (full)	Advocacy communication
2.	Blue	Reporting
3.	Black dotted	Dissemination of information i.e. behavioural change
4.	Red	Consultative meetings

The identification of the stakeholders was followed by quantification or ranking using the net mapping procedure that was fully depicted in the Net Map.

Figure 1: Net mapping of stakeholders and ranking for risk communication and response

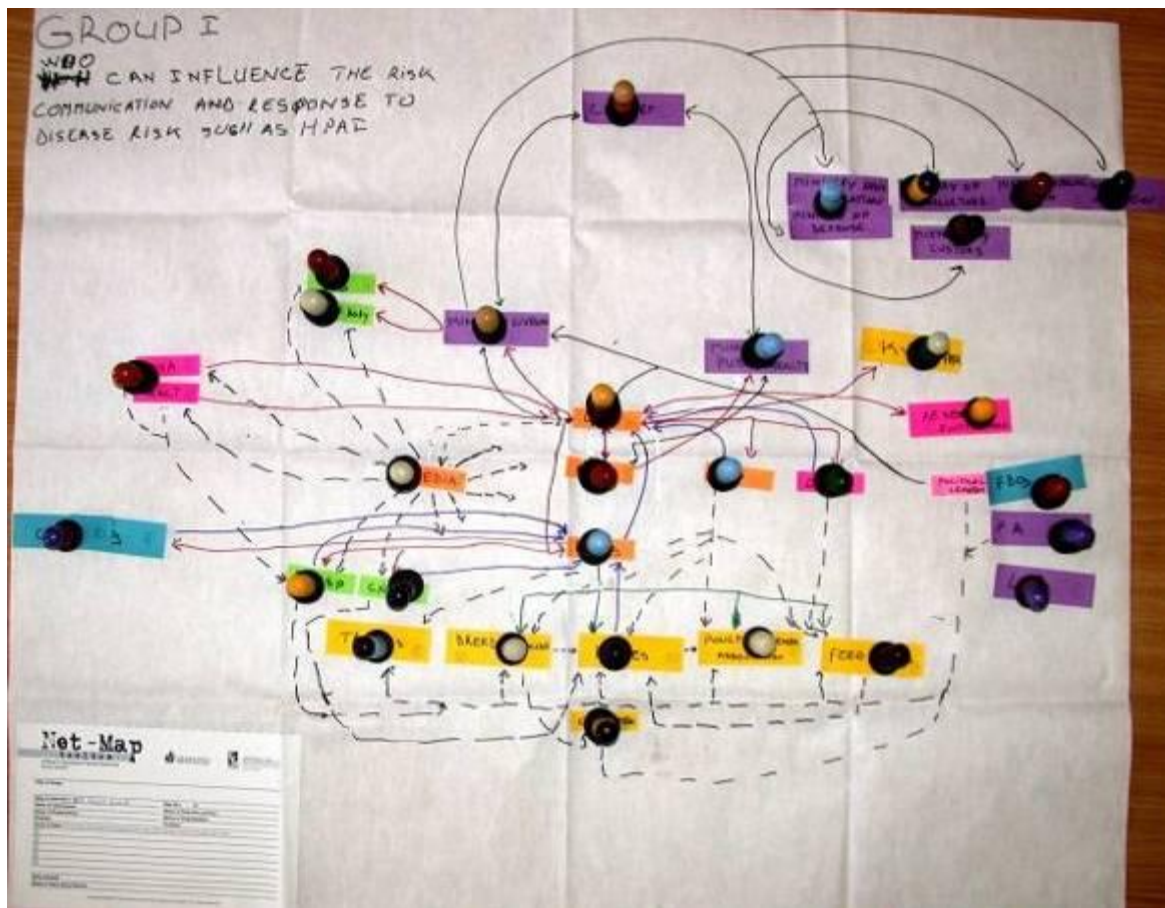
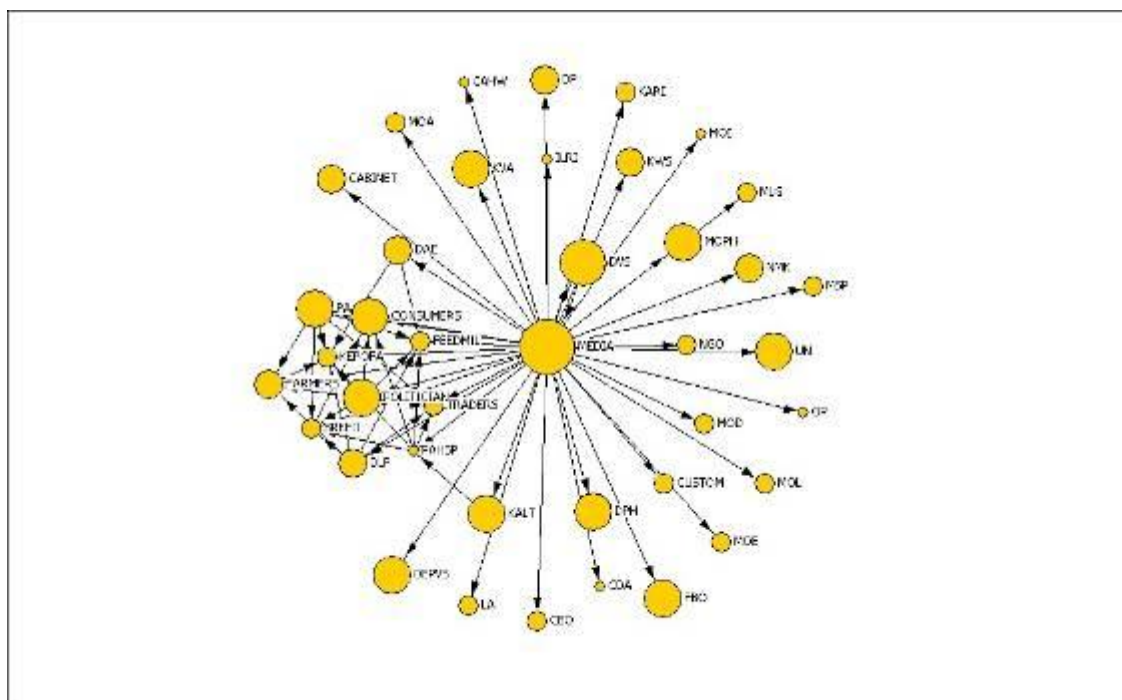
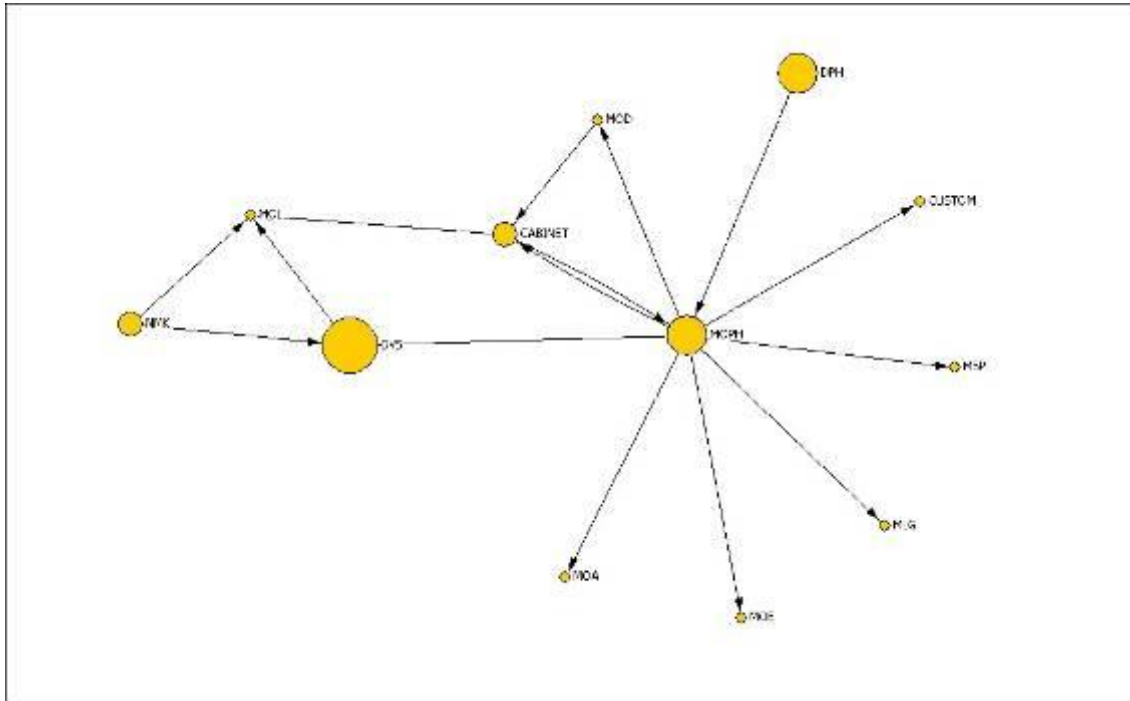


Figure 2: Flow of information dissemination



Note: larger node size means higher influence in terms of information dissemination. The group perceived that the media has the highest influence, having the largest node size and having the highest degree of centrality.

Figure 3: Flow of advocacy



Note: larger node size means higher influence in terms of information dissemination.

After the quantification, the information needed and channels of communication were identified by stakeholder groups as follows.

	Stakeholder(s)	Information needed / channel
1.	Media	<ul style="list-style-type: none"> • They need factual information that is simplified • They can be given information press releases, briefs and statements
2.	Director of Veterinary Services to departmental staff at lower levels	<ul style="list-style-type: none"> • Through meetings (workshops, trainings and seminars) • Through circulars
3.	Director of Veterinary Services to the Minister	<ul style="list-style-type: none"> • Through written briefs
4.	Minister to Minister	<ul style="list-style-type: none"> • Inter-ministerial memo
5.	Minister to Cabinet	<ul style="list-style-type: none"> • Cabinet memo
6.	Minister to UN bodies	<ul style="list-style-type: none"> • Through letters and meetings
7.	Minister to KVA and KALT	<ul style="list-style-type: none"> • Consultative meetings
8.	Minister to Associations	<ul style="list-style-type: none"> • Consultative meetings
9.	DVS to KWS and NMK	<ul style="list-style-type: none"> • Technical memos

10.	DVS to DLP , KARI,ILRI and DAE	<ul style="list-style-type: none"> • Letters
11.	Politicians to FBOs and Local Authorities	<ul style="list-style-type: none"> • Letters
12.	DVS to mainly primary stakeholders	<ul style="list-style-type: none"> • This is mainly through behavioural change communication • Face to face • Electronic (FM radio stations, TV and National radio stations) • Print media • Meetings / <i>barazas</i>
13.	DAE, DLP, PAHSP and CBAHWs to primary stakeholders	<ul style="list-style-type: none"> • Face to face • Meetings / <i>barazas</i>
14.	Department of Veterinary Services to CBOs/NGOs	<ul style="list-style-type: none"> • Through District Development Committees • Stakeholder forum • Through Community Development Assistants of the Department of Social Services

Improvement of Networks

1. The DVS should take leadership in its dealings with all stakeholders by associating with them equally without any bias. The role of each stakeholder should be clearly explained by the DVS
2. There is need for team building amongst the various organizations, institutions and groups.
3. The communication between the DVS and the media should be improved
4. Improve / strengthen behavioural change communication
5. Research from institutions to the primary users i.e. the farmers could be made more effective through the following
 - Involve the extension staff in research formulations from the beginning to the end
 - Sometimes the research findings could be delivered to the farmers directly
 - The researchers could also reach the farmers and extension staff through face to face meetings, print and electronic media, research extension liaison clusters and also trainings

Matters arising from Group 1 (risk communication and response) network-map

1. The role of consumer organizations in communication was asked. The Kenyan consumer Organization is very weak and somehow elitist without having any major impact in the country, hence its very insignificant influence. However it is known that consumers are generally very sensitive to anything that would affect them and almost completely stopped consuming poultry and poultry products during the HPAI scare of 2005 although the disease had not been reported in Kenya.

2. The role of SMSs (Short Text Message Service) should be exploited to the full to influence communication in case of disease risks
3. There is a hotline for reporting cases of suspect outbreaks of avian influenza that is on for 24 hours.
4. The use of toll free lines to allow reports of suspect avian influenza cases should be exploited.
5. Links between the Director of Veterinary Services and the media should be strengthened for exchange of correct information as the media has a big influence in public communication and sometimes gave wrong information with disastrous consequences.

Group 2 (movement of disease and information flow) participants:

- 1) Devesh Roy (Rapparteur)
- 2) Frank Hansen
- 3) Philip Nyaga
- 4) Lydia Ndirangu
- 5) Benson Adul
- 6) Wairimu Kariuki
- 7) Cathryn Wanjohi
- 8) Odede R. Ochieng
- 9) Marites Tiongco (Facilitator)

Main actors/institutions identified along the poultry chain (Figures 4 & 5):

- Input suppliers as breeders (supply parent stock), hatcheries (supply DOCs), importers of equipment and ingredients, importers of day-old-chicks, feed millers, drug companies, agro-vet shops.
- Sector 1 consists of integrated industrial poultry farms (with hatcheries and slaughterhouses) with high level of biosecurity, such as Kenchic farms that contract out small-scale farmers to maintain a steady supply of birds.
- Sector 2 consists of hatcheries (excluding Kenchic), hatcheries where poultry is hatched and bred for commercial purposes.
- Sector 3 consists of commercial poultry farms, mostly small-scale, that maintain 8,000 birds per broiler farm on average, and 5,000 birds per layer farm on average.

- Sector 4 constitutes the village poultry farms with farmers raising indigenous chickens and sourcing their chicken mostly from neighbours and their own produce.
- Collectors are those who collect chicken from several village poultry farms and sell them to local traders, retailers, and slaughterhouses.
- Local traders are those who buy chicken from village poultry farms and primary collectors, and sell at live markets.
- Border traders are those traders that buy chicken from backyard farms and sell them at cross-country borders.
- Illegal traders are those traders that trade goods illegally to avoid payment of custom duties
- Retailers are those who buy live chickens from primary collectors and sell them directly to consumers (rural or urban).
- Slaughterhouse is where live chicken is slaughtered and dressed.
- Butcheries are where dressed chicken are cut into choice cut poultry meat, and supply these products to hotels and restaurants.
- Transporters are those who transport live birds, fresh poultry meat, inputs, and necessary inputs.
- Consumers include rural and urban consumers, supermarkets, hotels and restaurants.

Main sources of information with regards to HPAI (Figures 4 & 6):

- Department of Veterinary Services (DVS) and its extension officers.
- Local authorities—town councillors
- Media
- Poultry farmers' association-KEPOFA
- Agro-vet shops
- Animal health providers
- International research institutions/donors

Links:

- Flow of live poultry and eggs—black (Figures 4 & 5)
- Flow of information about HPAI—red (Figures 4 & 6)

Explanation of the map:

- Throughout the discussion, the group agreed that disease spread would occur mainly through direct close contact with infective birds and its by-products, faeces, formites, and other means of mechanical transmission. Thus, in terms of disease spread, the group identified several critical points in the poultry supply chain where HPAI infection can occur. As shown in Figure 2, these hot spots are

sector 4 and live markets, followed by slaughterhouses; the most influential actors or those that highly contribute to the spread of HPAI are primary collectors, transporters, and border and illegal traders.

- In terms of the flow of information about HPAI, the group perceived that the most influential is the Department of Veterinary Services (DVS) as shown in Figure 3 as having the highest degree of centrality; it has the ability to reach the network without going through intermediaries. DVS is followed by the different associations such as KEPOFA, breeders association, feed millers association, and veterinary association, followed by the public administration chief, local authorities, agro-vet shops, and media. These groups of actors can serve as entry points for information dissemination about preventive measures to mitigate risk of HPAI.

Entry points for research findings of the project:

- Research findings can be channelled through the DVS, and also to different associations, and farmers.

Figure 4: Net mapping of movement of disease and information flow along the poultry supply chain

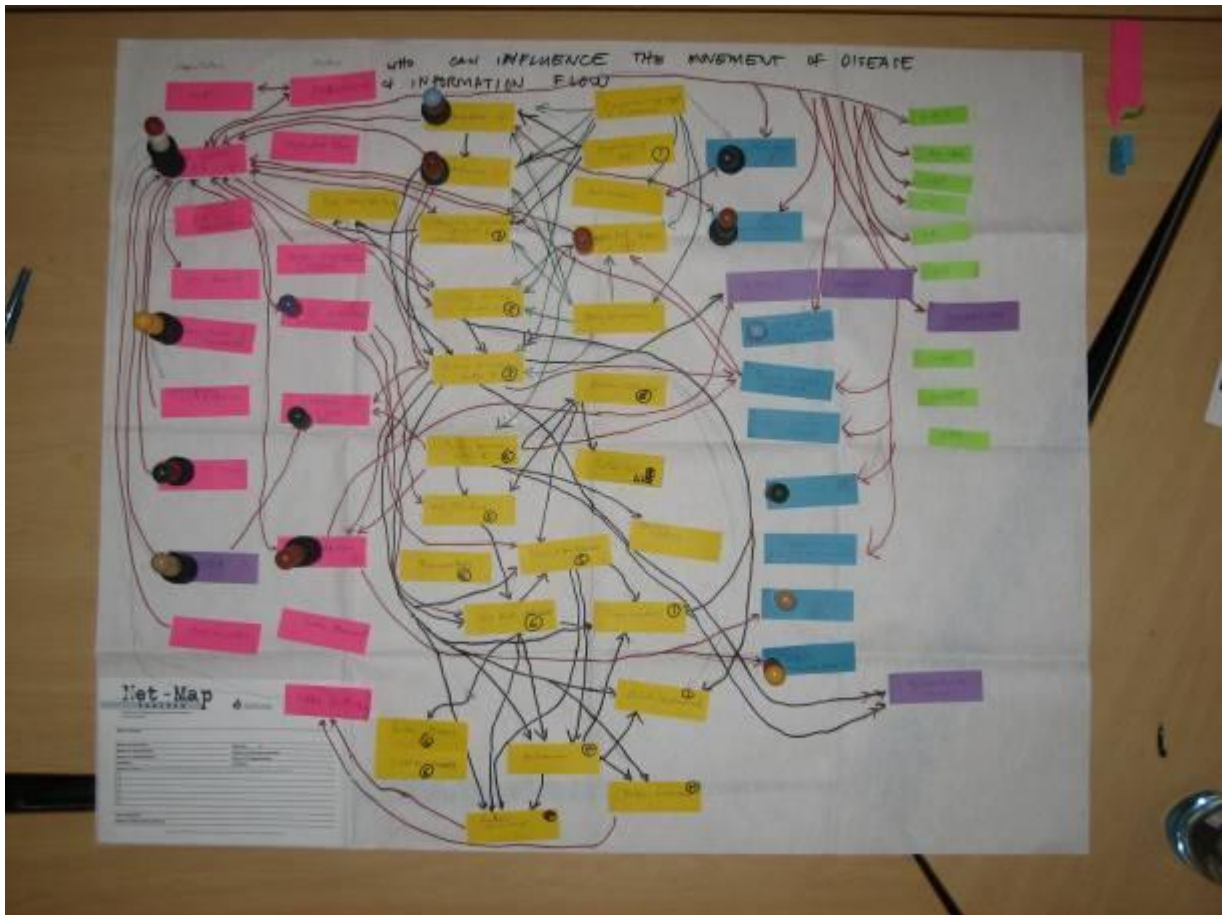
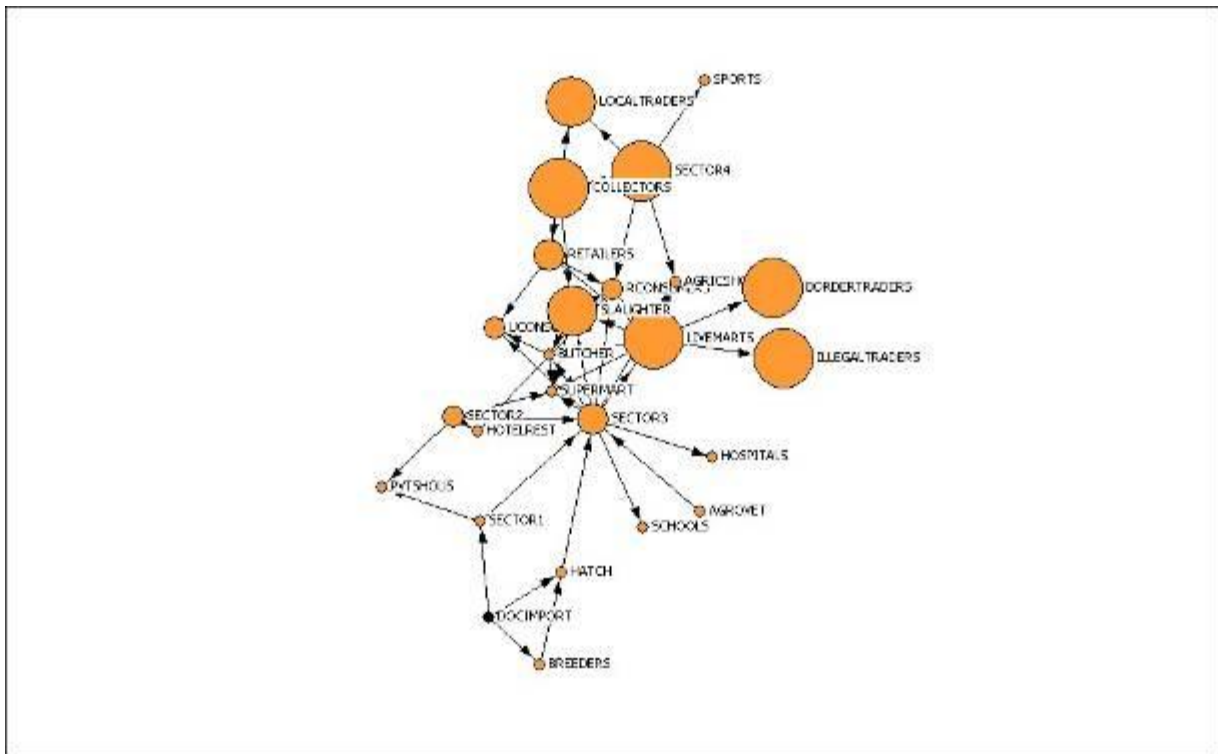


Figure 5: Flow of live chicken and eggs along the poultry supply chain



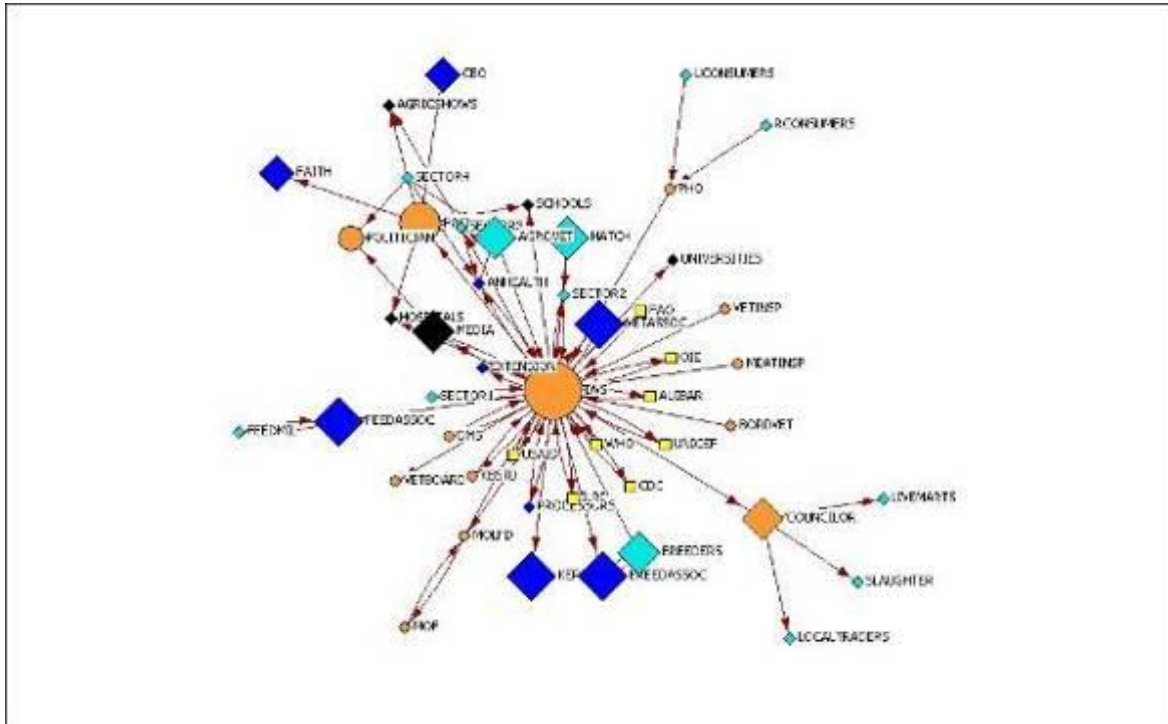
Note: larger node size means higher influence.

Legend:

level	actor	Relative powerP
■ intl	10	0
■ local	17	0.166666666666667
	23	0.333333333333333
	30	0.5
	43	0.833333333333333
	50	1

Links: black - flow of poultry product; red - flow of information

Figure 6: Movement of disease, information flow and advice about risk of HPAI



Note: larger node size means higher influence.

Legend:

actor group	level	Relative powerI	
actor	actor	actor	
formal	intl	10	0
informal	local	23	0.333333333333333
gov	nat	30	0,5
intl organisation		37	0,666666666666667
private instns		43	0,833333333333333
prvt poultry		50	1

Matters arising from Group 2 (movement of disease and information flow) network map

1) At what point does the illegal trade in pet birds link with the poultry value chain?

Response

Pet birds were not considered for discussions in the group deliberations. However the birds are usually kept in homes and any interactions with domestic birds may result in disease transmission if the birds carry disease-causing organisms. As the birds are brought in illegally they are usually not examined or tested for disease and could come into the country while incubating disease.

2) Institutional weaknesses (veterinary) at border points is likely to result into disease entry. The department is low on resources, both human and infrastructural and may not be in a position to mount adequate border inspections.

- 3) Slaughter personnel who move from one poultry farm to another to slaughter birds and dress carcasses for the market are likely to spread disease from one farm to another.
- 4) Many poultry slaughter facilities poorly dispose of their waste that include manure, legs, heads and other material that is likely to pose a danger to the public as disease maybe be spread this way.
- 5) Veterinary experts should define how far off poultry and pig enterprises should be kept apart in order to reduce the dangers of cross-transmission of the virus between birds and pigs.

Actors:

MOLFD	-	Ministry of Livestock and Fisheries Development
DVS	-	Department of Veterinary Services
DMS	-	Department of Medical Services
MOF	-	Ministry of Finance
VETBOARD	-	National Veterinary Board
KBSTD	-	Kenya Bureau of Standards
VETINSP	-	Veterinary Inspectorate
BORDVET	-	Border Veterinary Officers
MEATINSP	-	Meat inspectors
PHO	-	Public Health officers
TRANSPORT	-	Public Transport
PACHIEF	-	Public Administration Chief
NP	-	National Police
CUSTOMS	-	Border Inspection Services
COUNCILOR	-	Town Councillors
POLITICIAN	-	National Politicians
PDVS	-	Provincial Director of Vet Services
BREEDERS	-	Breeders
HATCH	-	Hatcheries
PVTSHOUS	-	Private slaughterhouse
SECTOR1	-	Integrated industrial poultry farms
SECTOR2	-	Large-commercial farms
SECTOR3	-	Small-scale farms
SECTOR4	-	Village poultry farms
LOCALTRADERS	-	Local traders also middlemen
BORDERTRADERS	-	Traders trading at the borders
ILLEGALTRADERS	-	Illegal traders
RCONSUMERS	-	Rural HH consumers
UCONSUMERS	-	Urban HH consumers

LIVEMARTS	-	Live bird markets
SUPERMART	-	Supermarkets
HOTELREST	-	Hotel and Restaurants
COLLECTORS	-	Primary collectors-collects from the farm
RETAILERS	-	Retailers
FEEDMIL	-	Feed millers
TRANSPORTERS	-	Transporters private
BUTCHER	-	Butcheries
SLAUGHTER	-	Slaughterhouses
DRUGS	-	Drug companies
AGROVET	-	Veterinary supply shop
DOCIMPORT	-	Importers of DOCs
IMPORTERS	-	Importers of equipment and ingredients
SPORTS	-	Poultry sports
KEPOFA	-	Poultry producers' association sector 3&4
FEEDASSOC	-	Feed millers association
BREEDASSOC	-	Breeders association
ANHEALTH	-	Animal health providers
EXTENSION	-	Extension service providers
VETASSOC	-	Veterinarians association
PROCESSORS	-	Processors--dressing and supplying choice cuts
FAITH	-	Faith based organization
CBO	-	Community based org
SCHOOLS	-	Schools private public
HOSPITALS	-	Hospitals private public
UNIVERSITIES	-	Universities
MEDIA	-	Media
AGRICSHOWS	-	Agricultural shows
FAO	-	Food and Agriculture Organization
USAID	-	United States Aid Development Agency
OIE	-	World Organization of Animal Health
ILRI	-	International Livestock Research Institute
AUIBAR	-	African Union Inter-African Bureau for Animal Resources
CDC	-	Centre for Disease Control and Prevention
UNICEF	-	United Nations Children Fund
WHO	-	World Health Organization

Closing Remarks

Dr. Omore thanked participants for having set aside time off their busy schedules to attend the workshop that he hoped would go a long way in helping focus the intended research and addressing the concerns of the poultry industry. He invited Dr. Cathryn Wanjohi of the Department of Veterinary Services to move a vote of thanks and officially close the workshop.

Vote of thanks and official closure of workshop

Dr. Wanjohi thanked all participants for having found time to attend the workshop and participating actively to make it productive. She further thanked ILRI for planning the workshop and ensuring that a wide spectrum of stakeholders in the poultry sub-sector were included as participants thus making it all inclusive. She reiterated that avian influenza had attracted a clique of people who were involved in nearly all functions and that it was good for ILRI to have invited who had not been attending such functions in the past but who also had a lot to contribute to the welfare of the farmers and the poultry sub-sector in general. Dr. Wanjohi further thanked ILRI for having arranged for the cocktail party at which useful informal interactions were made and useful information was exchanged.

Dr. Wanjohi wished all participants safe journey to their various destinations and officially closed the workshop.

Workshop Timetable: Kenya HPAI Multi-Stakeholder Workshop: 8-9 July 2008 - ILRI Campus Nairobi

Day 1: Tue July 8: <i>General exchange about HPAI Research Needs</i>	
08.30 hrs	Registration
09.00 hrs	Opening by Dr. P.M. Ithondeka, Director of Veterinary Services
09.20 hrs	Workshop agenda and objectives: A. Omore, ILRI – Kenya
09.30 hrs	Self introductions of participants
09.45 hrs	Presentation by Dr P.M. Ithondeka (or Rep) on the HPAI situation in Kenya
10.15 hrs	Introduction of the Pro-Poor HPAI Risk Reduction Strategies Project: Devesh Roy/Marites Tiongco
10.45 hrs	Coffee break
11.00 hrs	Presentations of the background paper: Summary of Key findings, Background paper team: Dr John Omiti (KIPPRA) and Dr Sam Okuthe (FAO-Kenya)
12.00 hrs	Viewpoints of development partners and key players working on AI in Kenya and the Region (FAO-Kenya, AU-IBAR/SPINAP, ILRI-PADSA; USAID-EA/REGI, Others (10 mins each)
13.00 hrs	Lunch
14.00 hrs	Feedback of stakeholders and participants on background paper and presentation and understanding on research gaps identified Parallel session 1: Group Discussion on disease risk and vet institutional findings: to be facilitated by Dr. Paulo Duarte and Dr. Samuel Okuthe Parallel session 2: Group Discussion on economic and livelihoods findings to be facilitated by Dr Devesh Roy and Dr John Omiti
15.30 hrs	Coffee break
16.00 hrs	Summary of key points of the group discussion on the disease risk and vet institutional findings – Dr. Paulo Duarte and Dr. Samuel Okuthe
16.30 hrs	Summary of key points of the group discussion on economic and livelihoods findings – Dr Devesh Roy and Dr John Omiti
17.00 hrs	Close Day 1
17.15 hrs	Cocktail
Day 2: Wed July 9: <i>Focus on network mapping and research approaches</i>	
09:00 hrs	Review of Day 1: Amos Omore
09.15 hrs	Introduction to network – mapping exercise: Marites Tiongco & Paulo Duarte
09:45 hrs	Stakeholder mapping including coffee break Parallel session 1: Mapping of institutions, disease control and response capacity (public and private), facilitated by Dr Duarte. Parallel session 2: Mapping of the market and value networks in Kenya, facilitated by Dr. Marites Tiongco.
13.00 hrs	Lunch
14.00 hrs	Presentations of the network maps, feedback from the participants and mapping of the entire poultry network with all the stakeholders
15.30 hrs	Workshop résumé
15.45 hrs	Closing stakeholders' workshop
16.00 hrs	Cluster leaders (or their reps) meet with researchers on next steps

List of Participants

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35	Dr. Amos Omoro	ILRI	-	a.omoro@cgiar.org

Workshop Evaluation

Please indicate the following:

a) What you liked about the workshop

- 1) Good interactive topics
- 2) Coming up with the list of research gap areas
- 3) Plenty of coffee/tea to keep us awake
- 4) Involvement of the Director of Veterinary Services as lead stakeholder
- 5) The workshop was informative
- 6) The facilitation was good
- 7) It was very participatory
- 8) It was good of ILRI to involve the stakeholders this early
- 9) The workshop was well attended from diverse set of stakeholders. It was managed very well in terms of logistics and home keeping. The atmosphere was very interactive
- 10) Communication to the participants and general organisation
- 11) The participatory net-mapping and flexibility in terms of time
- 12) The environment and working aids
- 13) I have never done network mapping, yet I consider myself experienced in value chain analysis. I liked this exercise most. It was worth the hours it was accorded.
- 14) Good overview
- 15) Representative audience
- 16) Interesting methodology
- 17) Interactive feature of the workshop
- 18) Good preparation on presentations
- 19) Representative stakeholders
- 20) Network mapping exercise – it was fun, conceptualised the risk communication system
- 21) Group discussion/participatory interaction

b) What you did not like about the workshop

- 1) We did not quite come up with what role workshop participants have in the research agenda
HPAI
- 2) Time to digest information was short
- 3) Timetable not respected
- 4) Delays in starting off

- 5) That some stakeholders left before the end of the workshop
- 6) Time was a constraint
- 7) We missed the representation of a group that had the maximum discussion about the small-scale farmers. But given that there was such a wide representation it is more a small shortcoming rather than something really crucial
- 8) Some sessions dragged on for too long
- 9) The report (research findings) should have been given earlier for internalising hence better participation
- 10) Residential workshop is better for concentration purpose. Consider it next time
- 11) Stakeholder analysis under a different name – more complicated and difficult to understand
- 12) No variation in the stakeholders – the net needs to be widened
- 13) We did not rank the research areas i.e. which should be immediate, short and long term research areas
- 14) Time management

c) *Your recommendation*

- 1) Try to ensure none of the stakeholder is left behind during further activities – data collection, analysis, result dissemination
- 2) Give materials or information to be used earlier
- 3) Let us consider time spent and value added and not just transport or fare spent
- 4) Please ensure that the information on the progress is communicated to all
- 5) I hope we will get a report on the workshop
- 6) Before the group sessions, there is need to give a detailed introductory presentation on the group discussion topics
- 7) We shall keep in touch with participants during the project
- 8) It would have been better to pass the background paper earlier before the workshop. The national partners views have to be highly considered
- 9) Continued stakeholder participation in the course of the project implementation
- 10) The next workshops for a duration of two or more days should be residential
- 11) The research should ascertain the net-work maps if the research findings or recommendations are to be effective
- 12) Restrict speaking time
- 13) Keep speakers concise
- 14) Share information generated with stakeholders

- 15) Include space for graduate students to be involved during execution of the project
- 16) Please send the workshop report
- 17) Let the national partners choose the main questions and activities to be implemented

Annex of Presentations

(Power Point files attachments)

- 1) HPAI situation in Kenya (Director of Veterinary Services)
- 2) Introduction of the pro-poor HPAI Risk Reduction Strategies Project
(Devesh Roy and Marites Tiongco)
- 3) Presentation of the background paper: Summary of key findings (Dr. John Omiti and Dr. Sam Okuthe)
- 4) Socio-economics of HPAI (Dr. Nicoline de Haan, FAOK)
- 5) SPINAP – AHI (Dr. Nesru Hussein, AU – IBAR)
- 6) Perspectives from the FAO/DFID Emergency Preparedness Project (Dr. Paul Rwambo)
- 7) Perspectives from CDC – K (Dr. Mark Katz)
- 8) Strengthening Preparedness, Prevention and Control against HPAI and other Priority Diseases
(Dr. Sam Wakhusama, USAID)
- 9) Stakeholder Mapping (Dr. Marites Tiongco and Dr. Serge Nzietchueng)