

# **SECOND REAL TIME EVALUATION OF FAO's WORK ON HIGHLY PATHOGENIC AVIAN INFLUENZA**

## **REGIONAL REPORT: ECTAD NAIROBI (EASTERN AFRICA)**

**23 OCTOBER 2009**

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### **I. INTRODUCTION**

When highly pathogenic avian influenza (HPAI) spread to Africa, the Middle East, Central Asia and Europe early in 2006, FAO decided to establish regional ECTAD units in the affected regions. In Africa and the Near East, FAO and OIE agreed jointly to establish Regional Animal Health Centres (RAHCs)<sup>1</sup> on the basis of soon-to-be created FAO ECTAD offices and OIE (sub-) regional representations.

The first regional ECTAD office for Africa was established in Bamako at the end of 2006; that in Nairobi was established in July 2007. These units were not reviewed in detail by the First Real Time Evaluation (RTE), as they had hardly been established. The first RTE report noted the early start of “regional activities” using TCP funding in Africa and the Near East. Their report qualified this move as “a very positive strategy during that early phase when donors and others are not yet moving, and early in the disease spread when key advice can have a much greater impact.”

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<sup>1</sup> ECTAD Functions, Structure and Instruments (2007)

Prof. Brian Perry, Dr Emmanuel Camus from CIRAD and Dr. Humphrey Mbugua visited the ECTAD Nairobi office on 23<sup>rd</sup> October as part of the Second Real Time Evaluation of FAO's Work on Highly Pathogenic Avian Influenza. In line with the evaluation's terms of reference and the inception report, the focus of the visit was to evaluate the relevance, efficiency, effectiveness, sustainability and likely impact of the assistance provided by ECTAD Nairobi in the past few years. The Office of the Regional Manager prepared a programme of meetings (see annex 1), provided documentation and materials relating to the office's work (annex 2) and made logistical arrangements for the mission.

ECTAD Eastern Africa was established to facilitate the sharing of information and to ensure the provision of technical assistance to FAO member countries before and during animal disease outbreaks. The centre supports trans-boundary animal diseases prevention, control and eradication campaigns in the region in close collaboration with regional epidemiology and laboratories networks. ECTAD Eastern Africa has its headquarters in Nairobi, Kenya and covers ten countries namely: Burundi, Djibouti, Ethiopia, Eritrea, Kenya, Rwanda, Somali, Sudan (South and North), Tanzania and Uganda.

According to the ECTAD Eastern Africa website (<http://www.fao-ectad-nairobi.org/>), the role of the RAHC is designated as:

- The establishment and maintenance of working networks with Government Ministries, NGOs, Research organisations, Universities, other relevant institutions (AU-IBAR, RECs), and donors
- Prepare concept notes and proposals for the prevention and control of HPAI and other trans-boundary animal diseases within the region
- Provide technical backstopping on epidemiology, laboratory, socio-economics and coordination of HPAI and other trans-boundary animal diseases in the region, through the identification and filling of gaps in laboratory diagnosis and surveillance capacities
- To review and develop poultry sector analysis and the harmonisation of relevant legislation for the improvement of poultry production.

Within the RAHC, the ECTAD unit provides countries with expertise in the following areas:

- Epidemiology
- Preparedness and contingency planning
- Disease surveillance and control
- Veterinary laboratories
- Animal production
- Socio-economics (livelihoods, value chain and trade flows analysis and impacts of animal diseases and their control programmes.)
- Communication (risk communication in particular) and
- Implementation of operations (management of full project cycle)

Initially established to strengthen FAO's capacity to respond effectively to the HPAI crisis, the ECTAD unit, particularly in non-HPAI infected regions, gives support to economically important TADs such as PPR, FMD and RVF, in close coordination with the specific roles of OIE (standard setting) and AU-IBAR on policy.

In carrying out its assessment the evaluation team has taken into account the responsibilities assigned to ECTAD sub-regional units as defined in the ECTAD Functions, Structure and Instruments Charter (see annex 3) and relevant strategic documents for the region.

## II. OVERVIEW OF ACTIVITIES

In 2006-2007, a regional TCP/RAF/3017 (US\$ 400,000) was implemented covering eastern and southern Africa to “strengthen the capacity for generating and sharing HPAI disease intelligence and using this to mount emergency preparedness planning against the eventuality of HPAI being introduced into the region, specifically in relation to migration of and trade in domestic and wild birds.” About US\$ 65,000 were also allocated through project OSRO/RAF/612/USA to “support laboratory capacity to conduct Animal Disease Surveillance and Diagnosis in Burundi, Djibouti, Somalia and South Sudan”. These two activities took place before the establishment of ECTAD Nairobi, but, particularly the regional TCP, provided a diagnosis and a preliminary assessment of the regional situation, thus laying the ground for the development of the current portfolio.

**Funding.** In 2007-08, FAO mobilized SFERA funds and its own resources to partially cover operating costs of the newly established regional structure for HPAI and other TADs. Also in the same period donors such as the OPEC Fund (US\$ 700,000), USAID (US\$ 1,209,600), Canada (US\$ 150,000) and the European Commission (Euro 1,680,000) agreed to fund inter-country programmes. A complete list of regional and national projects in eastern Africa largely implemented and/or backstopped by ECTAD Nairobi can be found in tables 1 and 2.

**Staffing and location.** In 2006-07 FAO had an international regional co-ordinator (Epidemiologist) based in Rome who was responsible for five TCP projects and a regional coordinator based in Nairobi (AU-IBAR) for TCP/RAF/3017. Following the progressive implementation of donor-funded activities and the arrival of the Regional Manager in July 2007, the unit’s staffing increased after one year of operations to nine full time employees (one senior staff member/regional manager, five specialized consultants, one operations officer, one administrative assistant/secretary and one logistician/driver).

ECTAD Nairobi has technical and functional linkages with staff at HQ (in AGA and TCE), but particularly with FAO’s CVO, as well as in decentralized offices such as the FAO Sub Regional office for Eastern Africa (SFE) located in Addis Ababa, the FAO Representative in Nairobi, Kenya and the Regional Office for Africa of the FAO Emergency Division (TCE) also located in Nairobi, Kenya. Of particular importance for the functioning of ECTAD are the technical contacts with AGA staff in SFE and HQ, and, for operational and fundraising purposes, TCE staff in Nairobi and Rome. There is also daily contact with the TCES Food Chain Crisis – Emergency Management Unit in relation to other TADs of importance (such as RVF, PPR, etc.).

Currently the ECTAD Eastern Africa office is headed by a regional manager, working with a multidisciplinary team consisting of two epidemiologists, one person in livestock production and biodiversity (mostly poultry), one in socioeconomics, an operations staff member (to be transferred from Rome to Nairobi), and a communications expert (whose contract in ECTAD was ending at the time of the RTE team visit). The ECTAD team is housed within the offices of AU-IBAR in Nairobi. FAO makes financial contributions to common services and utilities.

**Coverage:** The office currently covers ten countries namely: Burundi, Djibouti, Ethiopia, Eritrea, Kenya, Rwanda, Somalia, Sudan (South and North), Tanzania and Uganda. Two of these countries, Djibouti and Sudan, have reported cases of HPAI. Djibouti reported one non-fatal human case of H5N1 in 2006.

**Table 1. Regional Projects in Eastern Africa**

<b>Project symbol</b>	<b>Project Title</b>	<b>Donor</b>	<b>Total budget</b>	<b>Delivery</b>	<b>EOD</b>	<b>NTE</b>	<b>Beneficiary countries</b>
OSRO/RAF/802/EC	Avian Influenza Regional Response	EC	2,173,349	102,714	10-Jun-08	09-Jun-11	Burundi, Kenya, Rwanda, Tanzania, Uganda
OSRO/RAF/718/USA	Strengthening capacity of the eastern Africa sub-region to prevent and control HPAI	USAID	1,209,600	958,975	01-Oct-07	30-Sep-10	Burundi, Djibouti, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda
OSRO/GLO/702/CAN Child	Contribution of the Government of Canada to FAO's global programme for HPAI control and eradication in support to Africa other regions	Canada	2,609,120	1,732,648	14-Mar-07	13-Apr-10	All Eastern Africa
OSRO/RAF/722/SWE	Support for the control of HPAI in Sub-Saharan Africa	Sweden	2,246,215	1,552,395	28-Nov-07	31-Dec-09	All Eastern Africa
OSRO/GLO/605/OPF	"Socio-economic support to livelihoods of smallholder farmers by strengthening avian influenza control strategies and capacities in East Africa"	Opec Fund	700,000	661,907	01-Feb-07	31-Dec-08	Burundi, Kenya, Rwanda, Tanzania, Uganda, Sudan, Somalia, Eritrea, Djibouti, Ethiopia
OSRO/GLO/504/MUL Baby 4	Emergency assistance for the control and prevention of avian influenza	France	1,976,807	1,956,650	01-Jan-2006	30-Apr-2007	All Eastern Africa
OSRO/GLO/601/SWE Baby 2	Emergency assistance for the control and prevention of avian influenza- AI activities in Africa South of Sahara	Sweden	1,139,349	1,136,129	28-Apr-2006	31-Dec-09	All Eastern Africa
OSRO/GLO/604/UK Child	To support the implementation of the "Avian Influenza Response Programme" through the "Special Fund for Emergency and Rehabilitation Activities (SFERA)" in the countries affected by the epizooty	UK	1,796,218	1,479,962	29-Mar-07	31-Mar-10	All Eastern Africa
OSRO/RAF/612/USA Baby01	Supporting laboratory capacity to conduct Animal Disease Surveillance and Diagnosis	USAID	65,000	58,347	01-Jul-06	30-Mar-09	All Eastern Africa
GCP/INT/010/GER	Promoting strategies for prevention and control of HPAI that focus on smallholder livelihoods and biodiversity	Germany	340,026	296,469	15-Aug-06	15-Nov-09	Uganda
TCP/RAF/3017	Emergency assistance for early detection and prevention of avian influenza	FAO	363,101	363,101	1-Nov-05	30-June-07	Eastern and Southern Africa
Total			<u>14,618,785</u>	<u>10,299,297</u>			

**Table 2. National Projects in Eastern Africa (backstopped by ECTAD Nairobi)**

<b>Project symbol</b>	<b>Project Title</b>	<b>Donor</b>	<b>Total budget</b>	<b>Delivery</b>	<b>EOD</b>	<b>NTE</b>	<b>Beneficiary countries</b>
OSRO/KEN/601/UK	“Early detection, prevention and control of avian influenza in Kenya”	UK	1,683,607	1,669,887	01-Jul-06	31-Aug-08	Kenya
OSRO/ETH/601/MUL	“Urgent Intervention for the Early Detection, Prevention, and Control of Avian Influenza in Ethiopia”	UK, USA	2,163,231	2,035,461	01-Mar-06	30-Apr-10	Ethiopia
OSRO/UGA/603/UK	“Funding proposal for a Consultancy Mission to Develop a National Strategy and formulate an Implementation Project for HPAI Preparedness, Prevention and Response in Uganda”	UK	43,013	25,431	20-Feb-06	13-Mar-06	Uganda
OSRO/UGA/604/USA	“Emergency assistance for the implementation of the surveillance and communication components of the National Plan of Action for Preparedness and Response to Avian Influenza in Uganda”	USA	375,000	363,999	01-Aug-06	31-Mar-09	Uganda
OSRO/UGA/711/USA	“Support the implementation of surveillance and communication components of the National Plan of Action for Preparedness and Response to HPAI in Uganda”	USA	417,850	276,066	01-Dec-07	30-Jun-10	Uganda
Total			<u>4,682,701</u>	<u>4,682,701</u>			

### III. ROLES, RESPONSIBILITIES AND IMPACTS IN THE REGION

**Roles and responsibilities:** The technical role of ECTAD Eastern Africa in the region is focussed on five interrelated disciplinary areas. These are:

- Epidemiology (in particular through the recent establishment of an Eastern Africa Epidemiology Network, EAREN),
- Livestock production and biodiversity,
- Socio-economic assessments,
- Diagnostic laboratory capacity development and networking (under the auspices of the Eastern Africa Regional Laboratory Network, EARLN),
- Communications (recently suspended; the ECTAD unit has been seeking funds for a more stable position for a communications officer).

Activities on wild bird surveillance have also been conducted in the region (particularly in Ethiopia, Kenya and Sudan) in partnership with CIRAD and Wetlands International; these have largely been managed from FAO HQ with little involvement of ECTAD Nairobi.

#### *Epidemiology:*

This activity has been supported by OSRO/RAF/718/USA, OSRO/GLO/702/CAN Child, OSRO/RAF/802/EC and OSRO/RAF/722/SWE.

The EAREN is a relatively new initiative, trying to emulate the interchange of information and methodologies on disease occurrence achieved in many regions of the world, but until recently absent in the eastern African region. EAREN recently held an inauguration workshop in Mombasa, Kenya in which the goals and activities were discussed among the different regional countries represented<sup>2</sup>. The objectives of the workshop were to establish contacts as part of building and bonding epidemiology teams, to refresh and / or update participants' knowledge on HPAI, to receive updated country reports on current HPAI status and national epidemio-surveillance systems, activities and plans, to review the findings of questionnaires on national epidemio-surveillance systems for HPAI and other TADs among others. The workshop made strong recommendations that were specifically targeted for various stakeholders involved in the control of Trans-boundary Animal diseases in the Eastern Africa region.

The network aims to:

- Revitalize national epidemio-surveillance networks through emulation of models and exchange of relevant information, and the training of national network officers (regional focal points).
- Harmonize the structure of the networks (notably articulation between field level surveillance and diagnosis) and support the setting up of realistic and operational strategic surveillance plans (including performance indicators).

The epidemiology team has also been involved in developing contingency plans and running simulations for HPAI preparedness. This included a table-top regional simulation and national level simulations undertaken in Tanzania, Kenya, Ethiopia and Uganda with separate USAID funding. The team is also engaged in strengthening the contributions of participatory disease

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<sup>2</sup> [http://www.fao-ectad-nairobi.org/IMG/pdf/FAO\\_Networking\\_Mombasa\\_Workshop\\_-\\_F.pdf](http://www.fao-ectad-nairobi.org/IMG/pdf/FAO_Networking_Mombasa_Workshop_-_F.pdf)

surveillance (PDS) to national mechanisms. Regular consultations were maintained between FAO ECTAD Nairobi and ILRI on the implementation of PDS training or refresher, field and laboratory activities in collaboration with NGOs in Kenya, Sudan (North and South) and Tanzania. A letter of agreement (LoA) has been developed between ILRI and FAO.

The epidemiology team has also been engaged in a pilot evaluation of digital pen technology (DPT) disease reporting in Kenya. This built on the concept that form-filling discourages the collection of epidemiological data and that application of modern communications tools e.g. mobile phones, could speed up surveillance reporting and hopefully trigger much faster action at field level. A field monitoring of the DPT trial was undertaken by a combined team from the Department of Veterinary Services (DVS) Kenya and FAO-ECTAD to the five trial districts. A workshop to evaluate the outcome of the trial was held in Machakos, Kenya from 16 – 18 September 2009. Workshop participants were drawn from DVS Head Office, Pilot districts, ECTAD – Eastern and Southern Africa and Kenya FAO Representation Office. Following technical presentations and group work discussions especially on comparison of the current DVS disease reporting system vis-à-vis the use of DPT for similar purpose, the workshop strongly recommended the adoption of the DPT animal disease reporting in Kenya and urged both the DVS and FAO to mobilize resources for the up-scaling of implementation of DPT in support of disease prevention and control, although questions of the sustainability of the technology were raised.

#### *Diagnostic laboratory capacity:*

This activity has been supported by OSRO/GLO/702/CAN Child and OSRO/RAF/612/USA Baby01.

The Eastern Africa Regional Laboratory Network (EARLN) was launched in Debre Zeit, Ethiopia in June 2008. The meeting was attended by participants from Burundi, Ethiopia, Kenya, Somalia, Sudan, Rwanda, Tanzania and Uganda, FAO Headquarters, FAO-ECTAD-Nairobi, OIE/FAO Reference Laboratory, Padova (Italy), AU-IBAR and PANVAC. The purpose of the workshop was to receive updated country reports on current HPAI status and activities, refresh and/or update participants' knowledge on HPAI laboratory safety codes, basic and molecular methods for Avian Influenza diagnosis as well as sample collection, processing, storage and shipment. Discussions held were designed to arrive at consensus on the following broad topical issues:

- Harmonization of standardised laboratory protocols for HPAI throughout the network
- Organization and participation in inter-laboratory exercises such as competency and proficiency tests as well as arrangements for implementation of such tests.
- Mechanisms of sharing of information useful to the network
- Appointment of specific national and regional focal points to be linked to the network
- Considerations on stakeholder roles including that of the ECTAD unit of the Regional Animal Health Centre (RAHC) for Eastern Africa in the network
- Mapping out ways and means to operate and sustain the network
- Training equipment and other material needs
- Criteria and road map for designation of regional AI laboratories

As a basis for selection of regional laboratories, an evaluation of the status of central veterinary laboratories in the region has been undertaken. So far the CVLs in Burundi, Ethiopia, Kenya, Tanzania, southern Sudan, Djibouti, and Somalia have been completed. The

assessments were carried out by IZSve, OIE/FAO reference laboratory Padova, Italy in collaboration with ECTAD Nairobi.

Laboratory personnel from Ethiopia, Kenya and Tanzania have been sponsored to attend advanced course in diagnostic techniques for HPAI and Newcastle disease at the OIE/FAO reference laboratory in Padova, Italy. A PCR *in situ* training was conducted for CVRL, Khartoum personnel by a scientist from IZSve, Padova, Italy.

Four CVLs (Ethiopia, Kenya, Sudan and Tanzania) have participated in proficiency/inter-laboratory ring trials for HPAI and Newcastle disease diagnosis in November 2008. The tests involved were serological and molecular (PCR) procedures. The results were mixed and important lessons were learned and these will act as guides in the design of targeted training for individual or group trainings.

The Annual Coordination meeting for EARLN was held in Kigali, Rwanda in July 2009. The purpose was to receive updated country reports on current activities of national AI diagnostic laboratories and future work plans, update participants on the status of HPAI and Influenza H1N1 in the region as well as to review the overall progress and activities of the laboratory network in the previous one year. The workshop also discussed findings of laboratory proficiency/competency tests and assessments that have so far been carried out in the region. The workshop offered an opportunity to exchange information on the existing diagnostic laboratory and epidemio-surveillance network in West and Central Africa. Perspectives on linking epidemio-surveillance and laboratory networks as well as modalities of integrating the laboratory network into the organs of the RECs were discussed.

#### *Livestock production and biodiversity*

These activities have been supported by RAF/718/USA; RAF/802/EC; 702/CAN and the closed OPEC project; they can be conveniently divided into four main groups:

1. Training workshops on safe poultry production in sectors 3 and 4 have been conducted in Kenya and Tanzania (2008) and in southern Sudan (2009). Each workshop was attended by 25 participants including field veterinarians, para-veterinarians, farmers and poultry production associations (where available). The coverage of the workshop was general poultry production with emphasis on biosecurity practices on the farm and markets. The workshops were conducted through collaboration between Ministries responsible for livestock; higher learning institutions involved in animal health and were backstopped by FAO ECTAD unit at RAHC.
2. Review and analysis of the poultry sector in the countries within the region. Country poultry sector reviews have been accomplished in seven countries in the region namely, Burundi, Ethiopia, Kenya, Rwanda, northern Sudan, Tanzania and Uganda. Five reports (Burundi, Ethiopia, Kenya, Tanzania and Uganda) have already been published by FAO. The Rwandan country poultry sector review is complete but is currently being translated into English from French. The northern Sudan report is being finalized in Rome. A consultant is currently working on the poultry sector review for southern Sudan.

Specific studies to evaluate Poultry Biosecurity in Kenya, Tanzania, Ethiopia and northern Sudan were commissioned. The Kenya, Tanzania and Northern Sudan studies



are at different stages of technical review, while the one in Ethiopia has been completed.

3. Production and distribution of literature for safe poultry production. Two main publications were produced to assist stakeholders in safe poultry production.
  - There is the farmers guide in simple language and plenty of illustrations titled “How to Grow Healthy Chickens – Improve your Income”.
  - The second publication is a manual for trainers and producers titled “Good Practices in Small Scale Poultry Production: A manual for trainers and producers in East Africa”
4. Backstopping for field testing of the Hay Box Brooder Technology. A simple technology for artificial brooding for chicks in small-scale poultry sector developed at the Jimma University (Ethiopia) was tested in the field in Ethiopia, Kenya and Tanzania. FAO financed the testing and provided backstopping during implementation. The testing has been concluded in Ethiopia and Kenya and is nearing completion in Tanzania.

#### *Socioeconomic studies*

These activities have been supported by OSRO/GLO/605/OPF, OSRO/RAF/718/USA, OSRO/RAF/802/EC and **TCP/RAF/3113 (E)**

Activities under the umbrella of socioeconomics have fallen into the following main categories:

- Poultry and livelihoods (understanding the dynamics, importance and roles).
- Poultry value chains and trade flows- mapping, characterization, and identification of biosecurity lapses, being undertaken in Kenya, Uganda, Tanzania and southern Sudan.
- Impact assessment of diseases and their programmes on livelihoods and national economies
- Economics of poultry production, (incomes, gross margins, net returns, will farmers invest in biosecurity?)
- Development of compensation strategies. These have been completed for Kenya and Uganda. The process is on for southern Sudan and Tanzania. In Kenya and Uganda they have now been adopted at the veterinary department level, but the funding of such schemes remains a big issue. In Tanzania disaster management funds are being considered, while in Kenya a livestock development fund is under consideration. Uganda is the only country of the region where the compensation plans have been adopted as policy.

#### *National project support*

The regional ECTAD has also provided some specific project support and backstopping to country projects in Ethiopia, Kenya, Uganda and the Great Lakes area. For Kenya, the project OSRO/KEN/601/UK, Early detection, prevention and control of avian influenza in Kenya, is an example, with a diverse set of contributions on surveillance, preparedness, communications and laboratory capacity development. For Uganda, two projects OSRO/UGA/604/USA & OSRO/UGA/711/USA were backstopped by this unit. In both cases

the timeliness and quality of the inputs provided by ECTAD Nairobi were reportedly key for the successful completion of these initiatives (see projects results chain in annex 4).

### *ECTAD Institutional environment*

The Eastern African ECTAD unit is housed in the AU/IBAR (Inter-African Bureau for Animal Resources) facilities. IBAR was created in 1951 to eradicate rinderpest. In 1965, IBAH (Inter-African Bureau for Animal Health, as it was then known) became a regional technical office of the OAU. In 1970 it took the current name of IBAR. In 2003, IBAR was put under the supervision of the AU Department of Rural Economy and Agriculture. IBAR is clearly identified by most as being the lead continental institution engaged in promoting livestock production and health, and has gained increasing credibility and recognition in this role, but it is still to emerge from its high dependency on project funding. At the continental level, IBAR is increasingly viewed by most stakeholders as the lead political institution in animal health and production; the weight of its recognition has regional differences, depending on the relative strength of other organisations. The close interface with the FAO is seen as extremely valuable. It is understood that OIE is soon to appoint a regional coordinator for Eastern Africa, to be housed under the same roof. The World Bank-sponsored ALive Initiative already has an officer hosted by AU-IBAR in Nairobi.

External to this partnership, but very important to the success of the ECTAD office, are the regional economic consortia (REC), which in eastern Africa are plentiful. They include the East African Community (EAC), the Common Market for Eastern and Southern Africa (COMESA), the Intergovernmental Authority on Development (IGAD), and on overlap (in the case of Tanzania) with the Southern African Development Community (SADC). This multiple and confusing membership creates duplication and sometimes competition in activities. It seems reasonable to assume that the regional capacities in animal production and health would be better positioned under a united regional economic community, should that ideal become a reality.

**Table 3. Membership of Eastern African countries to RECs<sup>3</sup>**

RECs / IGOs COUNTRIES	COMESA	IGAD	EAC	CEN-SAD	CEPGL	ICGLR	IOC	SADC	ECCAS	Total
Burundi	X		X		X	X			X	5
Comoros	X						X			2
DR Congo	X				X	X		X	X	5
Djibouti	X	X		X						3
Ethiopia	X	X				X				3
Eritrea	X	X		X						3
Kenya	X	X	X	X		X				5
Madagascar	X						X	X		3
Rwanda	X		X		X	X		X		5
Seychelles	X						X			2
Somalia		X		X						2
Tanzania			X			X		X		3
Uganda	X	X	x			X				4

<sup>3</sup> [http://www.uneca.org/ice/content/ICE-state\\_regional\\_integration-en.pdf](http://www.uneca.org/ice/content/ICE-state_regional_integration-en.pdf)

## IV. PARTNERSHIPS

The Eastern African ECTAD appears to have developed many institutional partnerships, so important in the building of relatively new regional capacity in the arena of animal health. These have included the governments and veterinary departments of the ten countries it serves, the regional economic communities to which its members belong (and particularly the EAC), the various donor agencies operating in the region, the multitude of NGOs operating in the region, and the international research organisations, such as ILRI. These partnerships are potentially rewarding, but their development and maintenance are time consuming, and have a cost to them.

There is an opportunity to further develop partnership with the RECs. The EAC, for example, has a working group on HPAI<sup>4</sup>, which has amongst its terms of reference to coordinate, review and harmonise the AI surveillance, national preparedness and action response plans, functions which are very similar to that of the RAHC. AU-IBAR also has its own specific projects of animal and human influenzas, such as the Support Programme to National Action Plans for Avian and Human Influenza (SPINAP-AHI<sup>5</sup>), the Emergency Relief Support to combat Avian Influenza (ERSCA<sup>6</sup>) from the African Development Bank, which involves Sudan and Djibouti within the eastern African region, and is part of the USAID supported Early Detection, Reporting and Surveillance – Avian Influenza in Africa project<sup>7</sup>

## V. CONTRIBUTION TO NATIONAL AND REGIONAL INITIATIVES

The Eastern African ECTAD has made very strong progress in a relatively short period of time in acquiring funds, developing sensible and supportive networking relationships with the countries it serves, and recruiting well trained and committed staff from the region to lead the different initiatives. Contributions have been strong in developing two networks (laboratory and epidemiology), which while could and should have been in place for years, have only emerged with the establishment of the ECTAD unit.

Beyond this the ECTAD has engaged in several bilateral partnerships with individual countries on specific projects in the different areas of disciplinary strengths.

## VI. SYNTHESIS AND DISCUSSIONS OF REGIONAL ECTAD'S CONTRIBUTIONS

*Co-ordination of regional and country activities;*

The young ECTAD unit has done extremely well in establishing communication with the 10 countries within the region, and providing technical backstopping, training and specific project support to them. It has not been so much in terms of “coordination”, but rather “facilitation”. Within this communication, it has focussed on a few key areas. One area which appears to have received less corporate attention has been that of communication. In a new regional initiative such as this, and particularly in an environment where the focus is widening from HPAI preparedness and response to building on capacities for other priority diseases of the region, good communications between FAO ECTAD and its various partners, as well as to the key beneficiaries, will be extremely important. This is also critical as new partnership opportunities are explored with the RECs of the region.

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<sup>4</sup> [http://www.eac.int/health/index.php?option=com\\_content&view=article&id=65&Itemid=121](http://www.eac.int/health/index.php?option=com_content&view=article&id=65&Itemid=121)

<sup>5</sup> [http://www.au-ibar.org/ach\\_animhealth/spinap.htm](http://www.au-ibar.org/ach_animhealth/spinap.htm)

<sup>6</sup> [http://www.au-ibar.org/ach\\_animhealth/ersca.html](http://www.au-ibar.org/ach_animhealth/ersca.html)

<sup>7</sup> [http://www.au-ibar.org/ach\\_animhealth/edrsaia.html](http://www.au-ibar.org/ach_animhealth/edrsaia.html)

### *Formulation and implementation of regional programmes/projects;*

This is an area in which the ECTAD unit has built on some of the more flexible funding to develop regional programmes of key relevance. Of particular importance are the initiatives on compensation and vaccine use policies for HPAI control. As the disease focus changes and/or widens to issues of Rift Valley fever, PPR, Newcastle disease, foot and mouth disease, etc. there will be a need for the ECTAD unit to provide strategic assistance to the regions as a whole. Of particular importance will be in the area of FMD control. The disease affects the entire region, and countries of the region have different aspirations as to how to address it, and better exploit regional market access opportunities. In this regard, the development of a strategic framework for ECTAD Nairobi that builds on the current and emerging regional programmes on HPAI and other TADs will be a valuable tool for long-term planning and will provide greater clarity in its interactions with regional partners and governments.

Another aspect to highlight is that since the creation of ECTAD Nairobi, Governments, donors, partners and other FAO staff have noted a more efficient, timely and responsive operation, especially when compared to the situation in the absence of the unit. Back in those times, FAO had little visibility, low responsiveness and poor implementation capacity.

### *Promotion and coordination of regional networks;*

The Eastern African ECTAD has two networks that it is promoting (EARLN and EAREN), and both are in their infancy. Epidemiology and laboratory capacity are fundamental necessities within the region, and the RTE team gained the impression that these are off to a good start, broadening the horizons of national capacities in epidemiology and diagnostics, but also fostering interface and communications between countries, something that is surprisingly weak in eastern Africa. An important element of this is the evaluation of individual laboratories, bringing in objective international expertise into the evaluation process, in a progressive process of identifying a limited set of reference laboratories that meet the needs of all countries of the region.

Some partners met by the team raised the question of whether the ECTAD unit should be engaged in more network activities. While it is important to walk before running, there are several potential options to supplement the current set of networks. On the epidemiology side is the need to build the central capacity in each country with the overall responsibility for assuring data quality and sound analysis, potentially through regional courses which respond to priority needs in each country. This should ideally have a broader focus than HPAI, and this philosophy has been advanced by the ECTAD coordinator, but a move in this direction has been limited by funding restrictions. As part of this should be a greater understanding of the value of sound and well analysed epidemiology data in real time feedback mechanisms for decision makers such as CVOs, and advocacy for greater funding to develop good “institutional epidemiology”.

Closely linked to this is a need for a market chain approach to understanding disease risk, as a way of identifying critical control points for surveillance and control interventions for a variety of priority diseases, not just HPAI. This is becoming ever more important in eastern Africa, as livestock commodity trading patterns within and outside the region diversify.

On the laboratory side, inevitably the ECTAD needs to be re-assessing national needs in the region with regard to other priority diseases, and seeking to progressively build regional mechanisms to enhance diagnostic capacities for these.

*Advocacy and fund-raising for HPAI and Transboundary Animal Diseases interventions;*

This is a perennial challenge for the ECTAD, and must be tackled in partnership with FAO Rome, with individual countries, and with specific donors. Most funding goes to individual countries, but regional initiatives like this play key roles in raising awareness, in promoting collaboration and in allowing for continued dialogue at the technical level in areas where political level disagreements between countries sometimes compromise good communications. ECTAD Nairobi has engaged the donor community, resulting in funding from USAID, OCHA and the EC. Continuous efforts are being made to get funding for PPR prevention and outbreak control through the prism of common humanitarian needs, restoration of peoples' livelihoods and food security and not merely as a generic disease control action.

*The institutional and financial sustainability of the regional ECTADs and RAHCs;*

From an institutional viewpoint, the concept of having an "indigenous" regional capacity which can promote regional communication and collaboration, as well as demand-driven national level support in specific areas, is an ideal that few would contest. And the promotion of a central role of AU-IBAR also represents continued, some might argue long overdue, leadership in this area. The RTE evaluation team, while endorsing the initiative of FAO and OIE as international organisations who have responsibly responded to a particular crisis, questions as to whether these organisations should be mobilizing resources for the establishment of RAHCs on their own. The difficulty is, however, the weak institutional capacity of AU-IBAR, and the fact that it is still in the early stages of drawing up agreements on RAHC establishment in Bamako and Gaborone. A pragmatic way forward, at least for a few years, is probably a partnership arrangement in which FAO (and OIE, within its mandate) to provide the technical and some operational support to RAHCs, supporting the strong political leverage (at least in eastern Africa, but potentially growing in the other regions) of AU-IBAR.

Part of that comparative advantage is of course providing advice and support to proposals for ensuring the financial sustainability of these regional centres of expertise. This will be a critical area as the funding for HPAI wanes.

*The efficiency and adequacy of working arrangements within FAO (with HQ, regional and country offices)*

ECTAD Nairobi has established excellent relations with FAO HQ, SFE, the TCE office in Nairobi (Regional Emergency Office for Africa – REOA), and the FAO country representation in Kenya and other FAO country offices within the region. A main factor for this success is the presence of a well respected and motivated FAO team leader who is supported by a multidisciplinary team of scientists from the region, with epidemiologists, a laboratory specialist, animal production, socio-economics, communications (until recently) and operation specialists. It is very important that the standards of staff recruited to such regional positions is extremely high, that staff are seen to be drawn from many countries of the region, not just the host country, and that gender issues are considered in recruitment, if the regional ECTAD is to demonstrate clear comparative advantage over national institute capacity, as well as set high standards for the future. Skills should not only include high technical competence, but also good communications, facilitation and interpersonal skills.

## Conclusions and recommendations

The RTE team concludes that the sub-regional ECTAD for eastern Africa has set itself a sound institutional base, building a key partnership with AU-IBAR, sharing office accommodation with the pan-African institution. It is encouraged to understand that a sub-regional representation for OIE will soon be established within the same grouping. The ECTAD has built up a multi-disciplinary team covering the key areas of laboratory support, epidemiology, socioeconomics, livestock production and, until recently, communications. This team is well placed to handle both sub-regional projects, as well as provide coordinated support to national projects to the countries in the region.

The RTE team concludes that FAO is playing a most important role in building this embryonic but important regional leadership in livestock disease preparedness and control, and also concludes that stronger interface with the various RECs operating in the region could only be of advantage.

On this basis, the evaluation team recommends FAO the following priority actions:

### *At regional level:*

- Give greater priority to the formalization of partnerships with AU-IBAR and OIE in line with the original RAHC concept. This should be carried out in parallel to the development of a strategic framework and work plan for ECTAD Nairobi.
- For future funding and institutional strengthening of the RAHC, engage in discussions with the EAC, COMESA and IGAD concerning their specific sub-regional animal health priority demands, as well as longer term funding opportunities.
- Continue and expand research/development linkages with other partners in the region, such as ILRI, for support to capacity development in disease surveillance, value chain analyses and risk assessment, with the aim of providing stronger strategic support to the national veterinary services of the region.
- Enhance mobilization of resources from regional donors such as the EU, ideally in partnership with the RECs. The appointment of a permanent operations officer with programming and fundraising experience to help designing projects in the right format for each donor should also be considered.
- Continue to develop and promote the regional networks on epidemiology and diagnostic capacity and pursue the evaluation of laboratory capacity with a view to identifying regional reference laboratories, and explore modalities for their effective use.
- Consider expanding the epidemiology capacity development in the region to take into account the need for a greater understanding of the value of sound and well analysed epidemiology data in real time feedback mechanisms for decision makers such as CVOs, and advocacy for greater funding to develop good “institutional epidemiology”.
- Ensure that the communications position is re-introduced and assess on a regular basis the need for additional expertise based on regional needs (such as on wild bird surveillance).

### *At national level:*

- Continue to provide demand-driven backstopping support to the countries of the region on issues such as national policy development.
- In close co-ordination with FAO country offices and Government Authorities provide support to strategic development processes (such as the development of INAPs) including playing a role in the mobilization of resources for plan implementation.

## ANNEX 1. List of People Met

List of People Met by the RTE team in Nairobi-FAO/ECTAD & AU-IBAR

	Name	Rank
1	Nouala Simplicie	Ag. Director; AU-IBAR
2	Samuel Muriuki	SPINAP Coordinator; AU-IBAR
3	Germain Bobo	ALive Coordinator; AU-IBAR
4	William Amanfu	Regional Manager-FAO ECTAD Unit, Nairobi
5	Peter Msoffe	Poultry Production Biosecurity/Biodiversity; FAO
6	Tabitha Kimani	Socio-economist; FAO
7	Joseph Litamoi	Veterinary Epidemiologist/Laboratory focal point; FAO
8	Samuel Okuthe	Veterinary Epidemiologist
9	Abdoulkarim Bah	Operations Officer; FAO Hqrs (to be transferred to Nbi)
10	Joseph Othieno	National Communications Consultant
11	Rose Kibanya	Administration Assistant
12	Alban Bellinguez	DG Technical Advisor, AU-IBAR

In addition, the evaluation team also interacted with representatives of partner organizations from the region such as ILRI, USAID, OIE, PANVAC, etc. as well as with FAO staff from the Kenya representation and the FAO Regional Emergency Office for Africa in the Regional Stakeholders Workshop held in Nairobi (see proceedings of the workshop).

## **ANNEX 2. Documentation Reviewed**

### **Technical Reports**

Omiti, J., Okuthe, S. 2009. Overview of poultry sector and status of HPAI in Kenya. Africa Indonesia Team Working Paper No 4.

Thurlow, J. 2009. Implications of avian influenza for economic development in Kenya. Africa Indonesia Team Working Paper No 22.

Siraw, B., Chaka, H. 2009. Qualitative risk assessment for the introduction of H5N1 into Ethiopia. Africa Indonesia Team Working Paper No 21.

Alemu, D., Degefe, T., Fereda, S., Nzietztcheung, S., Roy, D. 2009. Overview and background paper in Ethiopia's poultry sector: relevance for HPAI research in Ethiopia. Africa Indonesia Working Paper No 1.

### **ECTAD Staff Reports**

*Back to Office Reports of ECTAD Manager (BTOR)*

Mission to Amman 27 June-2 July 2008

Mission to Bamako 2-8 December 2007

Mission to Ethiopia 10-14 June 2008

Mission to Ethiopia 16-22 September 2007

Mission to France 4-7 February 2008

Chief Technical Advisors Meeting in Nairobi July 2008

Mission to Kampala 2-6 March 2008

Mission to Kampala 12-15 August 2008

Mission to Lusaka 8-11 July 2008

Mission to Paris 21-23 July 2008

Mission to Pretoria 7-8 April 2008

Mission to Tanzania 22-27 May 2008

Mission to Uganda 26-29 March 2008

### **BTOR and documents of Poultry Production Expert**

TOT Workshop Morogoro 21-23 July 2008

Ethiopia UMM 1 November 2007

Tanzania EAC UMM Meeting 3-7 June 2008

Uganda UMM Meeting 28 August 2007

SPINAP Workshop Kampala 13-15 August 2008

Workshop Proceedings of OPEC Project

Tot Manual OPEC Project

End of Contract Report, Poultry Production Expert

Final Project Report

First Progress Report

OSRO/605 Project Document

Ethiopia Poultry Sector Country Review

Kenya Poultry Sector Country Review

Tanzania Poultry Sector Country Review

Uganda Poultry Sector Country Review

Kenya Biosecurity Country Report

Tanzania Biosecurity Country Report

OPEC Project Training Manual

Arusha TADS

Bangladesh Poultry Country Farming



TOT Kenya Workshop Proceedings  
TOT Tanzania Workshop Proceedings  
Several Power Point presentations

**BTOR and documents of Epidemiology Expert**

BACK TO OFFICE REPORT ERITREA-Litamoi-final  
BTOR-TCP-SUD-3105-Okuthe  
Uganda, Soroti 17-21 Sep.08  
Uganda 25-26 Apr.08  
Tanzania 23-28 Sep.07  
FSNWG-Note for the File  
Ethiopia 8-14 Jun.08  
Ethiopia 8-14 Jun - HPAI Lab Network Report  
Ethiopia 5-16 Aug.07  
Eritrea 3-7 Nov.07  
Terminal Report Project TCP/3017  
Inception Workshop Report Project OSRO/RAF/718  
HPAI Laboratory Networks Report  
Several Power Point presentations

**Communications Reports**

Avian Influenza Communications Workshop Proceedings  
ECTAD-UNICEF Meeting 04.07.08  
BTOR\_Mali\_27\_07\_08  
Mali 27-31 Jul.08  
Uganda 15-19 Sep.08

**Operations reports**

End of contract report  
ToR communication for Mission to Dar and Arusha  
BTOR Tanzania  
GANTT - USAID Regional  
718 quarterly report 07 to 09 2008  
Narrative report 711 UGA  
Narrative report RAF 612  
Narrative report RAF 718

**Various BTOR and documents**

Adul - TOT Workshop - KENYA 2-4 Jul.08  
Mission of Antonnio Stocchi  
Nicolas- Kenya April 2008  
Rose- Harare.  
Taylor- Mission Report-Nairobi TCP-RAF-3113E  
AI coordination meeting - East Africa 15th September 2008  
ECTAD Unit Team Meeting 23rd June Final  
minutes from 29 November 2007 socio-economic meeting  
Minutes from OCHA meeting  
Minutes of DFiD meeting  
Minutes of ECTAD meeting with Sabrina 28 Feb. final  
Minutes of ECTAD Unit meeting Sept 5th

Minutes of ECTAD Unit team meeting Sept 30  
Minutes of USAID date setting meeting  
Minutes on Socio economic handover meeting  
RAHC weekly Corrected meeting 01 Oct 07  
Team Meeting Minutes 28 Jan 08  
RAHC-13 Sep  
RAHC-27th Aug

### **ANNEX 3: Terms of Reference ECTAD Units**

The terms of reference of ECTAD (sub-) regional units include the following responsibilities:

- ensure establishment of operational and technical capacities at regional, subregional and country level through efficient decentralized mechanisms;
- assist the heads of FAO Decentralized Offices with mainstreaming HPAI and TADs concerns into FAO's national, subregional and regional priority frameworks;
- gather and consolidate information on HPAI and other TADs and support, in close collaboration with the FAO Representative, country needs assessments;
- advise the CVO, with copy to the concerned heads of FAO Decentralized Offices, on the disease situation in the region including strategic recommendations on FAO's response;
- in consultation with the concerned FAO Representative, maintain links with member countries and advise the governments on the formulation of relevant response strategies;
- in close cooperation with concerned heads of FAO Decentralized Offices, (sub)regional institutions and partners develop a (sub)regional programme based on a (sub)regional strategy to be updated on a yearly basis;
- promote and foster, in collaboration with the concerned head of FAO Office, regional networks (epidemiology, surveillance, laboratories, wildlife and socio-economics);
- building on FAO's multidisciplinary and in consultation with the concerned heads of FAO Decentralized Offices, ECTAD Programming Unit, EMPRES and with partners, assist in the formulation of relevant programmes and projects;
- design and implement, in collaboration with heads of FAO Offices, a regional fund raising strategy and support FAO Representatives with country level fund raising initiatives concerning HPAI and TADs; promoting ECTAD programmes in the region with government partners, UN Agencies, NGOs and donors and facilitating partnerships;
- facilitate at regional and subregional level the programming of donors resources; take the lead for the development and implementation of Standard Operating Procedures for management of ECTAD operations at regional and country level;
- take direct responsibility for implementation (including reporting) of regional and subregional projects as well as projects in countries with no FAO Representative;
- carry out backstopping missions in support to country operations;
- continuously monitor implementation of HPAI and other TADs operations in the region;
- contribute to the mobilization of CMC/AH missions and collaborate with them in taking follow-up measures upon completion of the mission.
- participate, with guidance of the head of FAO Decentralized Office, in interagency/donor coordination meetings and programming exercises concerning HPAI/TADs;
- prepare regularly updated briefs, for concerned Headquarters units and heads of FAO Decentralized Offices, on regional/subregional projects and on country projects for countries where there is no ECTAD country team.

Annex 4a: Results Chain of project OSRO/KEN/601/UK “Early detection, prevention and control of avian influenza in Kenya”						
Goal	Objectives	Support areas	Services	Activities	Outputs	Outcomes
Address the short- and medium-term actions to be undertaken by the Government of Kenya to strengthen its capacity to rapidly detect the introduction of HPAI into the country and minimize its spread in the case of its occurrence.	(i) strengthen the capacity for surveillance and laboratory diagnosis of HPAI;	Disease Surveillance	Capacity building	<ul style="list-style-type: none"> <li>* Carry out a stakeholder analysis of the poultry value chain.</li> <li>* Hold workshops for veterinarians and animal health assistances on disease recognition, disease reporting, collection and submission of biological samples for laboratory diagnosis; and use of rapid antigen tests for avian influenza, Newcastle disease and infectious bursal disease.</li> <li>* Prepare a surveillance/risk assess manual.</li> <li>* Develop a surveillance strategy for HPAI for use in the training above.</li> <li>* Undertake a risk assessment for the main pathways of introduction and spread of AI.</li> </ul>	<ul style="list-style-type: none"> <li>* 777 participants, including 166 veterinarians and 169 animal health assistances, from the various stakeholder groups were trained on avian influenza, bio security, disease recognition, disease control, disease reporting, regulatory framework and import requirements to minimize risks of introduction of H5N1. This included five technical staff from different laboratories trained on the use of real-time reverse transcriptase polymerase chain reaction for H5N1 and Newcastle disease and on the use of enzyme-linked immunosorbent assay for sero surveillance of avian influenza. Almost 35 percent of the field veterinarians were trained on diagnosis of poultry diseases and surveillance.</li> <li>* A risk map for HPAI in Kenya developed using the risk assessment.</li> <li>* A surveillance and risk assessment manual developed.</li> <li>* A surveillance strategy for avian influenza in domestic and wild birds developed was developed to guide implementation of risk-based and targeted surveillance for avian influenza.</li> </ul>	<ul style="list-style-type: none"> <li>* Government capacity to make laboratory diagnosis and carry out surveillance of avian influenza and clinically related diseases of poultry has markedly improved (The Central Veterinary Lab now has the ability to give a diagnosis of H5N1 within 30 minutes using a RAT kit and within 24 hours using real-time RT-PCR instead of 2-3 weeks).</li> <li>* A preparedness plan with strategies and protocols to follow in case of infection were prepared.</li> <li>* There is a better understanding of socio-economic implications of an outbreak of HPAI.</li> <li>* Awareness and information on early detection, prevention and control of HPAI has improved on the part of poultry producers, the general public and poultry consumers.</li> <li>* Provided any initial outbreak of avian influenza in birds is notified quickly and multiple outbreaks do not overwhelm available resources, Kenya should be able in the short term to prevent the disease becoming endemic and reduce the risk of it spreading to humans. In the long term, this enhanced capacity would improve disease control and contribute to improved incomes at the household level.</li> </ul>
				[new] * Undertake a needs assessment for the procurement of laboratory equipment and supplies	* All Labs were provided with diagnostic reagents and other supplies. Regional Labs were also equipped with class II microbiological safety cabinets, while the Central Veterinary Lab was supplied with an automatic egg incubator, a gel documentation system and high precision digital pipettors.	
	(ii) develop emergency preparedness plans for HPAI	Emergency Preparedness	Policy advice	<ul style="list-style-type: none"> <li>* Develop contingency plans and standard operating procedures (SOPs) for the prevention and control of HPAI.</li> <li>* Assess the current use of bio security in the poultry value chain.</li> <li>* Review the regulatory framework for safe poultry production.</li> </ul>	<ul style="list-style-type: none"> <li>* A contingency plan for the prevention, early detection and rapid response to an HPAI outbreak developed and tested. This included the development of a clear chain of command and criteria for a compensation strategy.</li> <li>* Bio security guidelines that are appropriate to specific production scenarios were produced.</li> <li>* Review of the regulatory framework to make it more supportive of safe poultry production and marketing conducted.</li> <li>* Draft rules for implementation of compensation were developed for enactment by both Parliament and the Minister for Livestock Development.</li> </ul>	
	(iii) safeguard human health by improving public awareness and information	Support measure (communication)	Knowledge sharing	* Assess communication needs of veterinary and livestock extension staff.	<ul style="list-style-type: none"> <li>* Pilot models for rapid community-based communication (reporting) were developed and an HPAI communication strategy developed and included in the contingency plan.</li> <li>* Field livestock extension staff from the Department of Livestock Production were trained on avian influenza prevention and control methodologies, particularly in disease recognition, bio security guidelines for avian influenza and communication.</li> </ul>	
	(iv) undertake a comprehensive assessment of the socioeconomic impact	Support measure (socio-economics)	Policy advice / advocacy	* Assess socio economic impact of an outbreak of avian influenza	<ul style="list-style-type: none"> <li>* An study of potential impacts associated with the threat of HPAI in Kenya was conducted.</li> <li>* An analysis of trade flow of poultry in Nairobi and its environs to determine the distribution of live bird markets and the sources of birds was conducted.</li> <li>* An study of duck farming systems in urban and rural areas was undertaken.</li> </ul>	

Annex 4b Results Chain, OSRO/UGA/604/USA "Emergency assistance for the implementation of the National Plan of Action for Preparedness and Response to Avian Influenza in Uganda"						
Goal	Objectives	Support area	Service	Activities	Outputs	Outcomes
Strengthen local capacity for emergency preparedness planning against the eventuality of HPAI being introduced into the region, through trade (legal and illegal) and migration of wild birds.	(i) Development and dissemination of the HPAI compensation policy and guidelines	Preparedness and prevention	Policy advice	*- Assist in the development of a compensation policy for HPAI and conduct policy sensitisation. * Print, disseminate and communicate compensation guidelines for all levels (in major languages).	Initiation of compensation policy and guidelines.	* Increased awareness resulted in greater efforts by medium and small scale poultry producers to comply with bio security measures. This has also led to a greater demand for [public] veterinary services which is in most of the cases unable to cope with it.
	(ii) Development, production and dissemination of HPAI guidelines for prevention and control		Knowledge sharing	* Printing guidelines (Standard Operating Procedures (SOPs)/Protocols) and diagnostic manuals for surveillance, response, sample collection, clinical and laboratory diagnosis, bio-security and bio-safety, decontamination and stamping out, and strategy for eventual vaccination based on OIE recommendations. * Disseminating the above guidelines and SOPs through eleven regional workshops and hand over of materials and guidelines (each covering seven (7) districts, six (6) people per district).	HPAI guidelines for prevention and control developed, produced and disseminated to 10 districts neighbouring Sudan.	
	(iii) Conducting simulations of the HPAI contingency Plan for Uganda		Capacity building	* Conducting eleven regional table top simulation exercises of the Contingency Plan (at the same time as dissemination of SOPs) with district staff and other stakeholders to cover seven (7) districts each. * Hold four (4) field simulation exercises with entire range of communication, outbreak response and sample collection.	Seven (out of 11) field outbreak simulation exercises were conducted covering 59 districts (out of 76).	
	(iv) Identification and operationalisation of Rapid Reaction Teams (RRTs)			* Identify Rapid Reaction Teams (Ministry level) and Disaster Preparedness Teams (Local Government level) and disseminate SOPs. * Train and equip Rapid Reaction Teams. * Provide financial support to national teams (Ministry level) to do “drop in” surveillance visits every three (3) months to monitor and train RRTs (Local Government level). * Provide financial support to RRT to do outbreak investigations and reporting.	76 District Rapid Reaction Teams (DRRT) formed. 9 regional workshops for DRRT conducted. US\$ 800 granted to each DRRT for operational expenses.	
	(v) Establishing, equipping and operationalisation of the National Command and Control Centre			* Strengthen the response command structure with efficient communication (PC, telephone hotline, communication guidelines, all SOPs) between Central and Local Government structures. * Provide technical support and supervision of local government activities. * Report writing to NTF, NSC, FAO, USAID and other partners.	National Command and Control Centre equipped (2 computers, 1 photocopy, etc.). 1000 PPEs procured.	
	(vi) Promotion of bio-security and hygiene in markets chains and the community	Protection (Bio security)	Policy advice	* Develop guidelines for safe keeping and transportation of domestic poultry from communities to markets. * Develop safe procedures and guidelines of selling domestic poultry in markets chains. * Develop bylaws to enforce these guidelines in markets chains.	Activities not undertaken (see follow-up project)	

Annex 4c: Results chain of project OSRO/UGA/711/USA "Support to implementation of surveillance and communication components of the Uganda Plan of Action"					
Goal	Objectives	Support area	Service	Activities	Expected Outputs
Improve the poultry production practices of smallholder farmers, contribute to the development of prevention strategies against HPAI, improve livelihoods and provide the relevant platform for collaboration on HPAI and other Transboundary animal diseases prevention.	(i) Enhance capacity in surveillance and communication for HPAI (ii) Strengthen veterinary services.	Preparedness and prevention	Capacity building	<ul style="list-style-type: none"> <li>* train laboratory staff in HPAI diagnosis;</li> <li>• provide public and private veterinarians with surveillance protocols and formats;</li> <li>• provide rapid detection kits to district veterinary offices;</li> <li>• train field veterinary staff in disease detection and reporting;</li> <li>• rehabilitate and equip the MAAIF laboratory to BSL-2 level; and</li> <li>• carry out regular risk-based surveillance of commercial and smallholder poultry and wild birds.</li> </ul>	HPAI epidemio-surveillance network, including laboratory diagnostics, strengthened
				<ul style="list-style-type: none"> <li>• support the command and control structure (hotline, fax, email);</li> <li>• provide technical support and supervision of local government HPAI activities;</li> <li>• enhance regional and international linkages and information networks; and</li> <li>• monitor the project and report to NTF, NSC, FAO, USAID and other partners.</li> </ul>	National command and control centre strengthened
				<ul style="list-style-type: none"> <li>• train local government technical personnel in rapid response and outbreak containment; and</li> <li>• conduct tabletop and field HPAI outbreak simulation exercises.</li> </ul>	Rapid response and outbreak containment capabilities enhanced
			Policy advice	<ul style="list-style-type: none"> <li>* finalize HPAI contingency plan and development of compensation policy;</li> <li>• establish operational modalities for compensation schemes;</li> <li>• assist local governments to develop bylaws to promote poultry registration and marketing;</li> <li>• promote the regulation of movement of poultry and poultry products (internal and external)</li> </ul>	
			Knowledge sharing	<ul style="list-style-type: none"> <li>• print and disseminate the HPAI contingency plan to local governments and stakeholders;</li> <li>• print and disseminate compensation-related policy and guidelines to stakeholders;</li> <li>• inform stakeholders on the compensation policy;</li> </ul>	Biosecurity and hygiene in market chains and community promoted
		Protection (Bio security)	Policy advice	<ul style="list-style-type: none"> <li>• conduct feasibility study for improving bio security in commercial and backyard farming systems;</li> <li>• develop guidelines for safekeeping, transportation and marketing of domestic poultry; and,</li> <li>• assist local governments to develop bylaws for enforcing these guidelines in markets chains.</li> </ul>	
			Know' sharing	<ul style="list-style-type: none"> <li>• print and disseminate bio security guidelines.</li> </ul>	
		Support measures (Communication and awareness)	Policy advice and advocacy	<ul style="list-style-type: none"> <li>• carry out knowledge, attitudes and practices (KAP) study on HPAI;</li> <li>• sensitize personnel who handle poultry and poultry products on HPAI (butchers and vendors, especially those on highway markets);</li> <li>• carry out impact assessment on disseminated messages; and participate in TV/radio programs..</li> </ul>	Communication and public awareness on AI improved [together with GCP/INT/010/ GER]
			Knowledge sharing	<ul style="list-style-type: none"> <li>• print and disseminate information, education and communication materials; and,</li> <li>• print and disseminate the Integrated National Action Plan (INAP) on HPAI.</li> </ul>	
		Support measures (socio-economic analysis)	Policy advice	<ul style="list-style-type: none"> <li>• determine the likely risk and consequence of outbreaks of HPAI;</li> <li>• assess social and economic impacts throughout the poultry value chain from inputs to consumers;</li> <li>• increase the understanding of poultry movement within the country, specifically looking at local and international trade and any formal and informal mechanisms;</li> <li>• derive risk and consequence assessment of the structure and livelihoods dependence of poultry production in Uganda; and</li> <li>• support policy development in defining control strategies for Uganda, through evidence-based policies and through the costing of options.</li> </ul>	Socio-economic impacts and livelihood analysis carried out to serve as entry point in mitigating impact of an eventual incursion of HPAI [together with GCP/INT/010/ GER]