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منظمة
الاعذية
والزراعة
للأمم
المتحدة

技术合作计划

TECHNICAL COOPERATION
PROGRAMME

PROGRAMME DE
COOPÉRATION TECHNIQUE

PROGRAMA DE
COOPERACIÓN TÉCNICA

برنامج التعاون الفني

Region: **Eastern Africa (12 Countries)**
(Botswana, Ethiopia, Kenya, Malawi, Swaziland, Madagascar, Mozambique, Sudan, Tanzania, Uganda, Zambia and Zimbabwe)

Project title: **Emergency assistance for early detection and prevention of avian influenza in eastern and southern Africa**

Project symbol: **TCP/RAF/3017 (E)**

Starting date: **November 2005**

Completion date: **April 2007**

Government counterpart responsible for Project Execution: **Ministries of Agriculture**

FAO contribution: **US\$400 000**

Signed:

(on behalf of Government)

Signed:

Jacques Diouf
Director-General
(on behalf of FAO)

Date of signature:

Date of signature:

I. PROJECT BACKGROUND AND JUSTIFICATION

In line with the FAO/OIE Global Strategy for the Progressive Control of HPAI, this project has been developed to provide support to the regional grouping of Eastern Africa countries to strengthen emergency preparedness against the eventuality of HPAI being introduced into this currently free area. There is growing evidence that the avian influenza which has been responsible for serious disease outbreaks in poultry and humans in several Asian countries since 2003 is spread through a number of sources, including poor biosecurity at poultry farms, movement of poultry and poultry products and live market trade, illegal and legal trade in wild birds. Although unproven, it is also suspected that the virus could possibly be carried over long distances along the migratory bird flyways to regions previously unaffected (Table 1) is a cause of serious concern for the region. Avian influenza subtype H5N1 could be transported along these routes to densely populated areas in the south Asian subcontinent and to the Middle East, Africa and Europe. Until recently, outbreaks have been restricted primarily to the Southeast and East Asian countries of Indonesia, Viet Nam, Thailand, Lao PDR, Korea, Japan, Malaysia, Cambodia and China, but since late early 2004, HPAI H5N1 has been diagnosed in a variety of captive and wild bird species, progressing in north-westerly direction from Hong Kong (January 2004) via Japan, Korea, China, Mongolia to Kazakhstan and Russia (August 2005).

It has long been known that wild birds are a reservoir host for avian influenza viruses worldwide. Outbreaks of HPAI originating from low-pathogenic avian influenza (LPAI) viruses transmitted by wild birds to domestic poultry have occurred relatively frequently over the last decade, but during the last 40 years, spontaneous HPAI outbreaks have not been reported in wild birds. However, recent surveillance studies in Europe have isolated several H5 and H7 influenza A viruses from dead wild birds and illegally imported live wild birds, illustrating the potential.

Table 1. Reported cases of HPAI in wild birds in 2004/2005

COUNTRY	SPECIES	TYPE AI	DATE
Hong Kong SAR	Peregrine Falcon, Grey Heron, Black headed gull, little egret, captive greater Flamingo ¹	H5N1	Jan 2004
Cambodia	Wild birds in a zoo collection ¹	H5N1	Feb 2004
Japan	Crows ²	H5N1	Mar 2004
Republic of Korea	Magpies ²	H5N1	Mar 2004
Thailand	Pigeons ² , Open-Bill Storks, Little Cormorant, Red-collar Dove ² , Scaly Breasted Munia ² , Black Drongo ²	H5N1	Dec 2004
China	Grey Heron	H5N1	Dec 2004
China	Bar-headed geese, Great black-headed gulls, Brown-headed gulls. Ruddy Shelducks and Great cormorants	H5N1	Apr 2005

¹ captive specimen are not migrating and cannot be responsible for disease transmission

² resident species

Mongolia	Bar-headed geese and Whooper swan near lake.	Influenza A subtype H5	Aug 2005
Russia (Siberia)	Wild birds	H5N1	Aug 2005
Kazakhstan	Wild birds	H5N1	Aug 2005

Sources: OIE, country reports, GPHIN, ProMED

Further spread of avian influenza beyond the presently identified foci of infection in Russia and Kazakhstan seems highly possible. Wild birds until recently nesting in the recently HPAI-affected areas of Novosibirsk and Altai are now beginning the 2006 winter migration season, and rest on their way to Africa and Europe. These regions, as well as the West Asian countries (Caspian Sea area) along the flyways, could become a potential gateway for the virus to establish in new areas. It is plausible that HPAI H5N1 virus could be spread via migratory flyways from Siberia to the Near East and Africa in the foreseeable future. This progressive spread of HPAI into new regions will require proactive intervention by the countries at risk, especially those situated along wild bird migration routes. Migratory birds from Western/Central Siberia and Central Asia fly along the eastern leg of the East Africa-West Asia flyway to rest or over winter along the river systems crossing the Arabian Peninsula and the Nile. Birds from Eastern Europe/Caucases (Balkans, Black Sea) traverse the Peninsula along the Black Sea-Mediterranean flyway to reach these same wintering areas. Seasonal seeding of influenza viruses into backyard poultry systems by waterfowl migrating in the east and central Asian flyways (recognised migration routes from northern China/Siberia to south-east Asia and south and west Asia) allows regular addition of new viruses to the diverse domestic poultry virus pool and may explain some of the geospatial features of regional virus distribution. Although the epidemiology of wild bird transmission dynamics remains unclear, there is no denying, given the data currently available, that wild water fowl play a role in the avian influenza cycle and could be the prototype for HPAI viruses passing from resident water fowl to domestic fowl, particularly domestic ducks. Improved wild birds surveillance, including free-ranging migratory birds as well as the trade in wild birds and exotic poultry, could only serve to increase the understanding of the epidemiology of avian influenza for the current H5N1 situation, improve capacity, and enhance communications networks for future AI and other avian pathogen surveillance and control strategies.

The complex overlapping of major flyways and the lack of information on migratory species potentially involved in the spread of HPAI make simple associations of wild bird flyways with outbreaks of AI difficult and confounds a realistic analysis of the risks of introduction. To counter this deficit, countries considered at risk need to initiate a specific appraisal of wild waterfowl migration and enhance their surveillance of domestic poultry and wild birds for influenza viruses. Raising public awareness and strengthening surveillance and laboratory diagnostic services are important components to be addressed. With the information provided, sound risk analysis will then feed into developing realistic, science-based emergency preparedness procedures with contingency action plans to strengthen early warning of and early reaction to HPAI introduction if this occurs.

Migratory Waterbirds - Human Interactions

Although the epidemiology of wild bird transmission dynamics remains unclear, there is growing evidence, given the data currently available, that migratory waterbirds play a role in the avian influenza cycle and could be the prototype for HPAI viruses passing from resident

waterbirds to domestic fowl, particularly domestic ducks. The 12 countries representing the TCP for Eastern Africa Region are host to 300 million poultry and 287 million people; a nearly one-to-one ratio, with an important rice production (Table 2). It is to be emphasised that correlation between the rice production and the outbreak of AI has been observed in Asia, the linking factor apparently being the keeping of free-ranging ducks in ‘traveling groups’ in these rice fields. An estimated 60 to 70 percent of poultry in the region is kept under backyard, free ranging conditions, allowing for exposure to migratory birds, with the potential of HPAI transmission. South Africa, the home to 47 million humans and 121 million poultry with significant migratory birds and wetland sanctuaries, is the only African country to date that has reported deaths in ostriches due to HPAI (H5N2). It is also the only country to be declared free from Notifiable Avian Influenza as of Saturday 10 September 2005. Although to date, no further cases have been reported, the weak human health and veterinary services infrastructures in some of these countries are conducive to HPAI becoming established, should outbreaks occur. Baseline data collection on migratory bird - domestic poultry and human interactions to be undertaken under the Project, will need to map human concentrations in relation to avian wildlife habitats and domestic poultry concentrations, in order to gain a better understanding of the interactions involved.

Table 2— Rice production, Poultry and Human Populations in Eastern Africa Region

Eastern Africa Region by Country	Poultry Population (mln birds)	Human Population (000)	Rice production (metric. Ton)
Botswana	4.0	1 795	
Ethiopia	39.0	68 961	15 500
Kenya	28.0	31 540	50 000
Malawi	15.2	12 337	86 882
Madagascar	32.8	17 901	2 800 000
Mozambique	28.7	18 537	200 439
Sudan	38.5	32 878	15 000
Tanzania	31.3	36 276	640 189
Uganda	33.0	25 004	120 000
Zambia	30.0	10 924	12 000
Zimbabwe	22.1	12 932	600
Total	302.6	286 986	3 940 610

Source: FAOSTAT, 2004 census

Wetlands in Eastern Africa

Eastern Africa holds some of the most significant wetlands in the world. They support internationally important assemblages of plants and animals, and are a vital source of livelihood and water for many societies. Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda have an area of about 5.6 million km² of which 4.5 percent is open water/wetlands.

The Nile is the longest river in the world, combining the Blue Nile that rises in the highlands of Ethiopia, and the White Nile, which rises in the Equatorial Great Lakes region of East and Central Africa. The 3.2 million sq kilometers of the river basin contains all or part of the territory of ten countries - Burundi, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda, totaling at least 140 million people. Countries

upstream are well watered while many of those downstream remain arid and heavily dependent on the Nile, a situation which has led to conflict over centuries.

The Rift Valley lakes in the Eastern Africa Region hold some of the most significant wetlands in the world. It supports internationally important assemblages of plants and animals, which are a vital source of livelihood and water. The area is about seven million km² of which 4.5 percent is open water/wetlands. A large variety of resident and migratory wetland birds frequent the Rift Valley lakes and scattered local wetlands.

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Botswana is home to the Okavango delta, which is the largest inland delta system in the world. It is home to many wildlife species common in Africa, including 450 bird species. Bird life is spectacular with peak populations during the spring and summer months from October through to March when the intra-African and European bird migrants are resident.

Mozambique is 80 percent semi-arid, 15 percent sub-humid two percent arid and three percent humid and being a coastal country, and has five wetland ecosystems. These include: marine, estuarine, riverine, palustrine and lacustrine systems.

Uganda has made considerable strides in wetlands management. With 13 percent (30 000 km²) of the country's area covered by wetlands, 30 percent are used for agricultural purposes. Some of these include Nabugabo (near Masaka), Kirinya (near Jinja) and Nakivulo (Kampala). Lake Victoria is the second largest lake in the world, with a surface area of about 68 800 km². It represents a unique reservoir of tropical biodiversity as well as a fundamental socioeconomic resource for the 30 million persons living within its catchment. With more than 2 000 animal species, half native to its basin.

Tanzania. Lake Tanganyika is among the most biodiverse freshwater ecosystems in the world. It also provides freshwater for domestic, agricultural and industrial use and up to 200 000 tons of fish annually. Burundi, D.R. Congo, Tanzania and Zambia have already embarked on a process to sustainably manage Lake Tanganyika's resources, in order to ensure local livelihoods and the conservation of the biodiversity. The Ruvuma river marks the international boundary between Tanzania and Mozambique. The Ruvuma drains an area of about 155 400 km² on either side of the border. The Ruvuma Basin marks the interface between the Eastern and Southern Africa biogeographical regions and includes lowland coastal forest, diverse types of woodlands, important wetlands and mangrove forests. The Rufiji river basin in southern Tanzania is the largest in the country, covering 20 percent of the total land surface. The Rufiji Basin contains half of all mangroves in Tanzania, and the floodplain, forests and woodlands are home to a rich floral and faunal diversity of national and international importance. The Rufiji features a dozen lakes, dotted along the northern shores of the river, which not only support a productive fishery but help keep the lowland coastal forests green and moist all year round.

An inventory of wetland resources was carried out in Lake Baringo and neighbouring Lake Kijirtit. The purpose of this field study was to determine "critical areas" for conservation of water birds in Baringo District. The study found that the most important areas for conservation of water birds in central Rift Valley were Lake Baringo, Lake Bogoria, Lake Kijirtit and the upland wetlands along Rivers Pekerra, Ol Arabel and Mukutani. The study showed that the diversity and abundance of water birds in Lake Baringo had decreased by 30-40 percent between 1980 and the year 2000. Water dependent species, such as Great Crested

Grebe, Greater Cormorants, Kingfishers, African Darters and African Fish Eagles were negatively affected by the declining lake water levels and deteriorating water quality in Lake Baringo. The lake was apparently transforming into a swamp and the changes in water quality (increasing salinity) were having profound impact on the structure and productivity of the fisheries in the lake.

Madagascar. Lake Alaotra is Madagascar's largest lake, and forms the centre of the island's most important rice-growing region. It is a rich habitat for wildlife, including relatively many endemics and a number of rare and endangered species, as well as an important fishing ground. Lake Alaotra and its surrounding wetlands cover 7 225 km², and include a range of habitats, including open water, reedbeds, marshes and rice paddies. The fertile plain surrounding Lake Alaotra is Madagascar's most important rice-producing region. The lake is also an important but increasingly threatened habitat for waterbirds including the endangered Meller's Duck (*Anas melleri*). Two waterbird species indigenous to the lake, the Madagascar Pochard (*Aythya innotata*) and Alaotra Grebe (*Tachybaptus rufolavatus*, (also known as Delacour's Little Grebe or Rusty Grebe) are critically endangered, and possibly extinct. Other lakes are: lake Tsimanampetsotsa (456km²) and complex lakes Manambolomaty (75km²).

Justification

Justification for Regional emergency assistance to the Eastern Africa Region is fourfold: (a) the potential human health hazards resulting from an AI virus transmission chain from migratory birds-to-poultry-to-humans, as took place with several human fatalities in Southeast Asia, (b) the potential impact on livelihoods of local communities, economic losses to the poultry sector caused by deaths, culling, export and marketing bans, and also to avian wildlife-generated tourism, and (c) veterinary infrastructures unfamiliar with addressing migratory bird-domestic poultry interactions and (d) likelihood for scientific identification of species of migratory birds spreading or not spreading HPAI to inform prevention strategies in this and other regions. Eastern Africa Regional countries at new risk encompass a substantial poultry sector, and poultry meat is one of the principal sources of dietary animal protein. The emergency assistance is designed to be preventive as well as proactive. Where required, National Action Plans for the Prevention and Control of HPAI will be developed, as has been done in projects covering other regions. Experience indicates that the veterinary services in many of the Regional countries involved are not well-structured to meet the challenge of controlling epidemic diseases. Early warning networks, emergency response, timely reporting and feedback, the epidemiology of wild bird-domestic bird interactions and diagnostic capacity in the face of an emerging epidemic are often weak. Government compensation for losses is rarely available, nor is the emergency response system, needed to support stamping out exercises. Obtaining clear and concise baseline data and information on migratory flyways, the role of wild bird species, disease mapping, and the epidemiology of AI are matters of basic importance that need to be strengthened to prepare for potential outbreaks.

II. OBJECTIVES OF THE PROJECT

The **primary objective** of the proposed project is 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 wild birds.

To accomplish this objective, **secondary objectives** will entail: (a) generating an understanding of migratory bird movement into and within the region and the potential for their contact with domestic poultry, (b) building public awareness of the issues relating to the risks, (c) strengthening HPAI field surveillance and laboratory support for diagnosis, and (d) establishing information and technology network linkages with other regions through GLEWS, OFFLU and PACE in the global system for HPAI surveillance.

III. EXPECTED MAIN OUTPUTS

- Baseline data on migratory birds and domestic poultry mapped for use in targeted surveillance and HPAI control
- Disease surveillance and monitoring for HPAI in domestic and migratory birds strengthened
- Wild bird trade and other movement of wild bird species documented
- Laboratory capacity to support HPAI diagnosis strengthened.
- Regional early warning disease intervention, technical information and technology transfer improved through timely regional disease information exchange
- National Action Plans developed to form the framework for national HPAI control plans and a continental strategy in line with the FAO/OIE/WHO Global Strategy for the progressive control of HPAI.

Project impact will be threefold: improved **regional** disease information exchange and strengthened HPAI early warning and control measures; **national** strengthening of the public sector involved in livestock agriculture, natural resources and tourism, to address potential HPAI outbreaks, and **locally** increased health security and food safety for consumers, and production security for commercial and non-commercial poultry producers.

IV. WORK PLAN

The project will have a duration of 18 months. The objectives and activities presented are subject to final review and adjustment during the launching workshop at the start of project implementation.

The following is a tentative work plan that will be adjusted to the needs and priorities resulting from the interaction between national counterparts in participating countries, FAO staff and project stakeholders.

Months 1-2:

- Appointment of the National Project Coordinators (NPC) to supervise on the government side the project activities in each recipient country;
- Recruitment of the International Project Coordinator (IPC). She/he will be stationed at FAO/AGAH in Rome and will be assigned fulltime to oversee the five Regional TCPs of which the Eastern Africa Region is part.
- Recruitment of the Regional Project Coordinator (RPC). She/he will be stationed at the AU-IBAR/PACE Office in Nairobi, Kenya, to oversee the Project, and will be contracted as a National Consultant of one of the recipient countries.

- Set up in each recipient country a National Steering Committee (NSC), chaired by the CVO, with representatives of the relevant participating ministries and agencies. The NSC will provide facilitation to the RPC where and when needed
- The Launching Workshop will be organized by the RPC, at the AU-IBAR/PACE Office in Nairobi, Kenya. Representatives from each beneficiary country (CVO, Epidemiology/Laboratory, Wildlife/Natural Resources) will attend. South Africa and Namibia will be invited as a non recipient country. The workshop's principal objective will be to define and agree on final project content, the work plan and implementation timetables. During this workshop, the FAO/OIE global strategy for the progressive control of HPAI control will be presented and discussed in view of developing a continental strategy (Africa).
- Signature of the letters of agreement with 3 specialized institutions (wildlife, epidemiology and laboratory training) to carry out field studies and deliver capacity building workshops and training under the 5 regional TCP projects (North Africa, East Africa, West Africa, Near East and Southern Europe).
- Regional networking will be established utilizing existing information networks in the participating countries. The AU-IBAR/PACE Office in Nairobi, Kenya, will act as the hub for regional disease information networking. Liaison and linkage will be established with an OIE/FAO Reference Laboratory and an epidemiology collaborating centre.
- Finalizing the list of project inputs (laboratory equipment and supplies, communication and data management equipment, etc) for tender call and procurement.
- Recruitment of GIS expert for data collation and mapping. This work will be carried out in close collaboration with the groups collecting the baseline data and analyzing it.

Months 3 to 6:

- Conducting a five day workshop for technical staff from Wildlife/Natural Resources institutions and epidemiology services in the recipient countries to cover the following topics: epidemiological techniques, disease surveillance in domestic poultry and both free-ranging and captive avian wildlife, disease monitoring, emergency preparedness and biosecurity, data management and analysis, HPAI virus interactions between domestic poultry and migratory birds. This workshop will be delivered jointly by contracted institutions on wildlife and epidemiology in close collaboration with the RPC, the IPC and AGAH. This workshop could be held immediately following the Launching Workshop if identification of appropriate participants is made during Months 1-2.
- Conducting a one week laboratory training on HPAI diagnostic techniques for selected laboratory staff from participating countries. The training will be delivered by a contracted OIE Reference Laboratory within the facilities of the Regional Laboratory to be identified in the subregion.
- Procurement and delivery of project equipment and supplies.
- Start of commissioned studies relating to water birds migrations including determination of migratory patterns, timing and important locations, as well as the trade and human movement of wild species of birds, risk assessment of migratory bird-domestic poultry and human interactions. Baseline data collection on migratory bird patterns and prevalence, together with the domestic poultry infrastructure, will be mapped to produce for each country a clear oversight of locations and potential risk areas for targeted surveillance and intervention.
- First backstopping mission.

- Participation to a regional conference to develop and define a continental strategy for control of HPAI.

Month 7 to 18:

- Continue targeted disease surveillance and wildlife field investigations as appropriate.
- Participation of representatives from recipient countries to an international meeting on wildlife and the role of migratory birds in transmission of HPAI
- Second backstopping mission
- Analysis of results available from the above investigations and consolidation of findings by contracted institutions
- Presentation at a regional workshop of main findings and provision of recommendations for longer-term plans when TCP ends.
- Final technical report and terminal statement writing.

The project will be operated in close collaboration with:

- AU-IBAR/PACE
- OIE and WHO.
- OFFLU Reference Diagnostic Laboratories and Epidemiology Collaborating Centres
- Organizations involved in the wetland management and wild bird conservation such as Wetlands International and Birdlife International. Efficiency can be gained by integrating capacity building within this project and other projects in the areas such as the GEF Flyways Project which will be start end 2005, in which Wetlands International is the lead contractor.

V. CAPACITY BUILDING

The project is designed to strengthen the capacities of the recipient countries to address the avian influenza threat. National experts will gain capacity in laboratory diagnosis, emergency preparedness, epidemiologically-based disease investigation and surveillance in domestic poultry and both free-ranging and captive avian wildlife, as well as data management and analysis.

Disease emergency preparedness plans, disease surveillance and wildlife investigation studies will be managed and implemented by qualified staff at the national level.

VI. INPUTS TO BE PROVIDED BY FAO

Inputs are open to review to ensure the best possible use of limited resources depending on the specific circumstances and developments over time. For cost effectiveness and to ensure a better coordination of activities to control avian influenza, a number of inputs are common to four others similar projects in neighbouring regions.

The beneficiary countries are all countries in the region with emphasis on those presenting the potential risk for HPAI incursion such as: Botswana, Ethiopia, Kenya, Malawi, Madagascar, Swaziland, Mozambique, Sudan, Tanzania, Uganda, Zambia and Zimbabwe. South Africa will be invited to attend the inception workshop at no cost to the project, in order to share technical information on experience gained in controlling the H5N2 outbreak in ostriches in

2004. A selected South Africa's diagnostic laboratory could serve as regional and training points on HPAI diagnostic technology transfer. Namibia will be also invited to attend the inception workshop as non-recipient country.

To the possible extent and where most appropriate, taking into account each country situation (risks and needs), the project budget will support the following:

Personnel

International experts

- An international Projects Coordinator based in Rome will be recruited for 18 months to be shared with four other regional projects (20 percent each). She/he will coordinate project activities and provides technical support as and when needed. ToRs in annex 1.
- A GIS consultant will be recruited for six months to organize into a GIS system data related to ecosystems, wild bird migration patterns, avian influenza outbreak data, and poultry population, areas of interaction between domestic poultry and wild birds; and produce maps identifying potential areas for targeted surveillance ToRs are in annex 6 and costs will be shared with the other four regional TCP projects on HPAI (20 percent each).
- An operations consultant will facilitate actual and swift delivery of project inputs. Twelve person-months to be shared with four other regional projects (20 percent each). ToRs in annex 8.

National consultant

A Regional Coordinator, based in Nairobi, will be responsible for implementation of all project inputs and outputs (11 months). The RCP will be stationed at the AU-IBAR/PACE Office in Nairobi, Kenya, with frequent travel to the region. He will ensure coordination and synergy of the project with PACE activities. ToRs in annex 2.

FAO technical support services

Provide overall guidance and assist in all technical aspects of the project. Promote and facilitate coordination of activities in the region in line with the FAO/OIE global and regional strategies to address the avian influenza. Facilitate linkage with international reference laboratories and epidemiology collaborating centres. Provide recommendations for medium- and long-term proposals for the region. These services will include two field backstopping missions specific to this project (ToRs in annex 7) and the costs will be shared with the four other regional projects (20 percent each).

Contracts

- A Letter of Agreement will be signed with a specialized institution with experience and expertise in avian ecology and wild bird diseases to carry out and train national professionals in conducting case control studies in one or more countries/districts where data quality allows, assess the role of wild fauna versus other risk factors in the context of avian influenza and provide recommendation and guidance to participating countries (ToRs in annex 3). The contract will include the five subregions with the costs shared among the five TCP projects.
- A Letter of Agreement will be signed with a specialized institution to prepare and deliver five capacity building training workshops (five days each) in the field of surveillance and epidemiology including and provide guidance and technical assistance as required to

participating countries (ToRs in annex 4). The contract will include the five subregions with the costs shared among the five TCP projects.

- A Letter of Agreement will be signed with an OIE/FAO Reference Laboratory on HPAI to prepare and deliver five capacity building laboratory training (one week each) on diagnosis and testing of HPAI (ToRs in annex 5). The contract will include the five subregions with the costs shared among the five TCP projects

Travel

Duty travel will include travel of international consultants, FAO support staff from Rome and travel for the regional coordinator and national staff and logistics within the recipient countries.

General operating expenses

Support costs related to telephone, photocopy communications, utilities, vehicle rental, drivers, casual labourers and other miscellaneous expenses.

Expendable equipment

Laboratory consumable and reagents. The final list will be completed at the launching workshop.

Non-expendable equipment

Laboratory equipment for laboratory upgrading and strengthening. Communication and data management equipment for networking and information sharing. The final list will be completed at the launching workshop.

Direct operating expenses

Seven percent of the budget will cover miscellaneous expenses at FAO headquarters and Field Offices related to project implementation and servicing.

Training

To the possible extent and where most appropriate, the project will support travel expenses of nationals from participating countries to attend the following workshops:

- Launching meeting.
- Epidemiology and wildlife capacity building workshop.
- Laboratory training.
- International conference on wildlife and the role of migratory birds in transmission of HPAI
- Regional conference on the continental strategy for control of HPAI.

VII. GOVERNMENT CONTRIBUTION AND SUPPORTING ARRANGEMENTS

The Governments of recipient countries will provide local transport, office accommodation and laboratories and will facilitate access by the project personnel to official documents and meetings with government officials, the private sector and academia, as required. A qualified and experienced NPC will be assigned to lead the project and facilitate involvement and collaboration with relevant national staff. In particular, he will ensure that the government counterpart contribution and support arrangements, as specified under the General Provisions annexed to the project agreement, are provided in a timely and expeditious manner.

The Government of the recipient countries will be also responsible also for:

- making available collaborating technical personnel as may be necessary for the successful implementation and completion of the project;
- providing necessary financial support beyond that provided by the project to facilitate full participation in the training courses;

The Ministries of Agriculture of recipient countries will be the counterpart agencies responsible for project execution.

VIII. REPORTING

The RPC will be responsible for preparing quarterly progress reports (in English) under the supervision of the International projects coordinator in Rome and in close collaboration with the AU-IBAR/PACE Office in Nairobi for submission to the Animal Health Service (AGAH), and the Emergency Operations Service (TCEO). These reports will contain progress against preset targets; identify constraints together with their mitigating resolution.

Consultants and consulting institutions will submit as above their reports within one month of completion of their assignments.

The RPC will be responsible to prepare, in collaboration with NPCs in the recipient countries, a draft technical report and draft terminal statement (both in English) in FAO format for submission to the Emergency Operations Service (TCEO), the Animal Health Service (AGAH).

**INDICATIVE BUDGET COVERING FAO INPUTS
(US Dollars)**

Region: Eastern Africa (12 Countries)
(Botswana, Ethiopia, Kenya, Malawi, Madagascar, Mozambique,
Swaziland, Sudan, Tanzania, Uganda, Zambia and Zimbabwe)
and South Africa and Namibia as non-recipient countries

Project Title: Emergency Assistance for Early Detection and Prevention of Avian
Influenza in Eastern Africa Region

Project symbol: TCP/RAF/3017 (E)

Accounts	Input Description	Sub/Child Account	Main/Parent Account
5013	Consultants		92,000
5542	Consultants – International	59,000	
5543	Consultants – National	33,000	
5544	Consultants - TCDC/TCCT		
5014	Contracts		33,750
5650	Contracts Budget	33,750	
5020	Overtime		-
5652	Casual Labour - Tempo assistant	-	
5021	Travel		35,480
5661	Duty travel others		
5684	Consultants – International	11,880	
5685	Consultants – National	16,400	
5686	Consultants - TCDC/TCCT	-	
5692	Travel - Technical Support Services	7,200	
5023	Training		111,908
5920	Training Budget	111,908	
5024	Expendable Equipment		40,000
6000	Expendable. Equipment Budget	40,000	
5025	Non Expendable Equipment		25,000
6100	Non Expendable Equipment Budget	25,000	
5027	Technical Support Services		22,500
6111	Report costs	1,850	
6116	Evaluation	1,000	
6120	Technical Support Services (Honorarium)	19,650	
5028			13,194
6300	General Operating Expenses Budget	13,194	
5029	Support Cost		26,168
6118	Direct Operating Costs	26,168	
Grand Total		400,000	400,000

Terms of Reference

International Consultant: International Projects Coordinator (Rome)

In the framework of the FAO-EMPRES Emergency Centre for Transboundary Animal Diseases (ECTAD), under the general supervision of TCEO, the technical supervision of the Chief, Animal Health Service, FAO Headquarters, in collaboration with the FAO Regional and subregional Offices and the FAORs in the region and recipient countries, and in close collaboration with the Project Regional Coordinators and other consultants, the International Projects Coordinator will be responsible for:

- Overall implementation of the regional TCP projects on HPAI in Middle East, North Africa, West Africa, East Africa, and Southern Europe/Caucasus;
- Preparing, implementing and backstopping, in collaboration with others, Letters of Agreement under the 5 regional TCPs through qualified institutions;
- Assisting in planning and holding the project workshops and training;
- Establishing, in collaboration with other international and Regional Project Coordinators, the sub-regional disease surveillance networks;
- Assisting in planning and holding the Wildlife conference on the role of migratory birds in HPAI transmission.
- Assisting in planning and organising a regional conference on the continental (Africa) strategy for control of HPAI
- Preparing a Technical Project Report (in English) for submission to TCEO and AGAH
- Preparing, in collaboration with the Regional Project Coordinators, a draft Terminal Statement for submission to TCEO; and
- Carry out any related tasks as directed by the Chief, AGAH.

Duty Station: Rome.

Duration: 18 work months (3.6 months under present project)

Qualifications: The international Projects Coordinator will be a veterinarian graduated from a recognized university with a postgraduate degree (MSc level) in veterinary epidemiology, diagnostic laboratory / field disease diagnosis, poultry health or poultry production. He/she will have at least seven years of relevant field experience. Strong poultry experience and with work experience in Africa and/or Near East are preferred.

He/she will have level C proficiency in English.

Terms of Reference

National Consultant: Regional Project Coordinator

In the framework of the FAO-EMPRES Emergency Centre for Transboundary Animal Diseases (ECTAD), under the general supervision of TCEO, the technical supervision of the Chief, Animal Health Service, FAO Headquarters, in close collaboration with the AU-IBAR/PACE main epidemiologist, the International Projects Coordinator in Rome and the FAORs in the participating countries, the Regional Project Coordinator will be responsible for the following activities:

- Develop and oversee periodic workplans
- Organize workshops
- Supervise contracted consultants and institutions
- Provide technical and financial management
- Liaise closely with the International Coordinator at FAO headquarters, AGAH, the AU-IBAR/PACE and the CVOs of beneficiary countries
- Provide any additional facilitation that contributes to the timely and effective implementation of the TCP.
- Assist in the preparation of technical specifications and procurement of project inputs and their delivery to final destinations
- Prepare periodic project progress reports
- Identify and remedy in timely project implementation constraints

Qualifications. The RPC will be a national of one of the recipient countries, and fluent in English. Good communication skills are essential. H/she will be a veterinarian with at least seven years of specialization of poultry diseases. Knowledge of avian wildlife ecology, and experience in project management would be an asset. H/she will have level C proficiency in English.

Workstation. AU-IBAR/PACE Office in Nairobi, Kenya, with travel to the beneficiary countries.

Duration: 11 months to be worked over a duration of 18 months

Terms of Reference
Migratory Bird Ecology and Avian Influenza Transmission in Eastern Africa

Letter of Agreement

Assignment

The FAO Animal Production and Health Division wishes to contract a specialized institution [the Recipient Organization (R.O)] with expertise in migratory bird ecology with specific reference to migratory bird-borne avian influenza and its transmission to domestic poultry. The R.O will develop, under the supervision of FAO/AGAH, and in close collaboration with the AU-IBAR/PACE main epidemiologist, the Regional Coordinator and the CVO of each beneficiary country, baseline data on migratory bird distribution and habitat utilization for each country and identify current gaps in that information.

Specifically, the R.O will

- Attend launching meeting and provide at least two days of training during the epidemiology and wildlife regional technical workshop.
- Collect and compile serial migratory bird data (recent historical data) in each country and collate these with national poultry sector infrastructure.
- Identify and map important migratory bird areas, highlight current gaps in the information and identify areas most at risk for transmission of HPAI to domestic poultry
- Work with RPC and national governments in region to identify markets and routes of trade in wild birds to contribute to geographic risk analysis
- Define possible risk factors related to the upsurge of avian influenza in the region (spatial, ecological, epidemiological).
- Carry out case control studies in one or more countries/districts where data quality allows the evaluation of risk factors for avian influenza occurrence in the various poultry systems and train National professionals in the techniques needed to conduct such studies.
- Assess the role of wild fauna versus other risk factors in the context of avian influenza.
- Present the results at a Regional workshop.
- Prepare a written report with databases (in English) for submission to FAO/AGAH in Rome.

Qualifications. The R.O will have proven expertise in migratory bird ecology and in investigating avian wildlife disease, especially avian influenza. Previous experience and well developed networks, both for gathering and compiling information and delivering capacity building in East Africa will be an asset.

Work Station. AU-IBAR/PACE Office in Nairobi, Kenya with travel to the recipient countries.

Duration. Final report to be delivered and workshop completed, within eight months of onset of the assignment.

**Terms of Reference
Workshop on Veterinary Epidemiology and Emergency Preparedness
in Eastern Africa**

Letter of Agreement

Assignment

The FAO Animal Production and Health Division wishes to contract an OIE/FAO epidemiology collaborating centre [the Recipient Organization (R.O)] with expertise in veterinary epidemiology with reference to domestic poultry, and national emergency preparedness planning. The R.O will organize, under the supervision of FAO/AGAH, and in close collaboration with the AU-IBAR/PACE main epidemiologist, the Regional Coordinator and the CVO of each country, a regional training workshop for technical representatives of the recipient countries under the Region in conjunction with wildlife expert firm. Specifically, the R.O will:

- Attend launching meeting and provide at least two days of training during the epidemiology and wildlife regional technical workshop.
- Present, during the workshop, practical instruction on epidemiological techniques for disease surveillance dealing with domestic poultry, migratory wildlife, and emergency planning.
- Prepare training materials for distribution to the participants in the workshop
- The R.O will prepare a report of its findings related to workshop outcome, with specific recommendations to the RPC as to the mitigation of identified problems.
- Assist in establishing subregional epidemiological networks for HPAI and migratory wildlife;
- Provide technical assistance to the participating countries in HPAI surveillance as required during the period of the project.

Qualifications. The R.O should be and OIE/FAO collaborating centre (OFFLU) with proven expertise in veterinary epidemiology and preventive measures thereof, with specific reference to HPAI. Previous experience in East Africa would be an asset.

Work Station. AU-IBAR/PACE Office in Nairobi, Kenya, with travel to the recipient countries.

Duration. Travel to recipient countries: 14 days.
Workshop: two-three days.
Preparation time: To be discussed.

**Terms of Reference
Regional Laboratory training
and Laboratory Capacity Strengthening
East Africa
Letter of Agreement**

Assignment

The FAO Animal Production and Health Division wishes to contract an OIE/FAO Reference Laboratory [the Recipient Organization (R.O)] with expertise in laboratory diagnosis and testing of HPAI, and other poultry diseases. The R.O will, under the supervision of FAO/AGAH, and in close collaboration with the AU-IBAR/PACE main epidemiologist, the Regional Coordinator and the CVO of each beneficiary country, organize a regional laboratory training for laboratory staff from the recipient countries under the region. Specifically, the R.O will:

- Attend the launching meeting and provide experts to the training with expertise in the laboratory diagnosis and testing of HPAI.
- Prior to the training the R.O's laboratory diagnostics expert will have visited selected diagnostic laboratories of recipient countries (to be identified by the RPC) to provide advise on HPAI upgrading.
- Provide a one week technical training in the diagnosis of HPAI for selected laboratory staff from the recipient countries
- The R.O will leave behind technical manuals and other materials for distribution to the participants.
- The R.O will prepare a report of its findings related to training outcome, with specific recommendations to the RPC as to the mitigation of identified problems.
- Assist in establishing a subregional laboratory network and provide technical assistance to selected laboratories in the recipient countries in virus isolation and characterisation during the period of the project

Qualifications. The R.O should be an OIE/FAO Reference Laboratory (OFFLU) for HPAI with expertise in laboratory diagnosis and testing of avian influenza.

Work Station. The regional laboratory (to be identified), with travel to the recipient countries.

Duration. Travel to recipient countries (diagnostic laboratories): 14 days.
Lab training one week .
Preparation time: To be discussed.
Laboratory assistance to beneficiary countries during project duration

Terms of Reference

International Consultant: GIS/Mapping

In the framework of the FAO-EMPRES Emergency Centre for Transboundary Animal Diseases (ECTAD), under the general supervision of the Emergency Operations Service (TCEO) and the technical supervision of the Chief, Animal Health Service (AGAH), FAO headquarters, in close collaboration with the National Project Coordinator and other consultants, the consultant will undertake the following activities:

- Identify and organize into a GIS system data related to ecosystems, wild bird migration patterns, avian influenza outbreak data, poultry population, areas of interaction between domestic poultry and wild birds;
- Process the above-mentioned data and produce maps identifying potential areas for targeted surveillance
- Present the results into a report that will be discussed with national authorities in support of their surveillance and control policy;
- Advise on additional data collection and requirements in order to improve the quality of the study and the understanding of AI epidemiological features
- Liaise with the institutions and collaborating centres that will have been identified in Annex 3 and 4;
- prepare a brief technical report (in English) for submission to TCEO, and AGAH; and
- carry out any related tasks

Duty Station: Rome

Duration: five work months (one month assignment under the present project)

Terms of Reference

Supervisory Technical Services (ATS)

FAO AGAH Officer

In the framework of the FAO-EMPRES Emergency Centre for Transboundary Animal Diseases (ECTAD), under the technical supervision of the Chief, Animal Health Service (AGAH), the general supervision of the Emergency Operations Service (TCEO) and the FAO Representative, the incumbent will undertake the following activities:

- assist the institutions and collaborating centre in assessing avian influenza situation in the field, the control practices and preparedness, and improving surveillance and laboratory diagnostic practices;
- participate in the workshops giving technical presentations;
- assist in the preparation of a report on the outcomes of the workshops; and
- carry out other related tasks as requested by the FAO Representative in the subregional office.

Duty station: Nairobi with travel throughout the subregion.

Duration: 14 days in two missions.

Terms of Reference

International consultant: Operations Officer

In the framework of the FAO-EMPRES Emergency Centre for Transboundary Animal Diseases (ECTAD), under the overall guidance of the Chief, Emergency Operations Service, the overall supervision of the Chief, Animal Health Service and the direct supervision of a Senior Operations Officer, the Operations Officer will perform the following duties:

- Handle day-to-day operational matters related to the implementation of the five regional TCP projects for Middle East, Northern Africa, Western Africa, Eastern Africa and Southern Europe/Caucasus;
- Appraise requests for assistance from individual countries;
- Prepare/present revised project proposals to the Senior Operations Officer, after technical scrutiny for financial support and/or presentation to interested donors;
- Liaise with the FAO technical units to ensure technical quality of project activities;
- Assist in implementation of the project, such as budget management, recruitment of consultants, organising training/workshops, preparing letters of agreements, procurement of goods and services, etc;
- Carry out field missions for operational backstopping and agricultural needs assessments;
- Perform other related duties as required.

Duty station: Rome, Italy

Duration: 12 months (20 percent time under the Eastern Africa project)

Qualifications:

University degree in Agriculture, Economics, Social Sciences or other related fields. 3-5 years of relevant experience in agricultural development work, including experience in emergency operations and with field projects for developing countries. Good administrative, financial and management skills. Ability to work under pressure and exercise sound judgement. Knowledge of FAO policy, procedures and information systems would be an asset. Level C proficiency in English and knowledge of other UN language(s) is an asset.

TERMS OF REFERENCE

NATIONAL PROJECT COORDINATORS

(Contribution of each participating countries)

Duties: In close collaboration with the FAOR in the country, Regional Project Coordinator, the International Coordinator in Rome in charge of the project and project consultants, the coordinator will:

- Liaise closely with the National Steering Committee established for the project.
- Initiate, co-ordinate and carry out all the activities of the project according to the work plan.
- Play an active role in collaboration with the FAOR, the Regional Project Coordinator others in the timely procurement of project inputs.
- Make suggestions and recommendations on effective project implementation to concerned parties from time to time, to ensure progress of project activities.
- Submit progress reports and a final report to FAO at the end of the project.
- Perform any other duties deemed necessary for the realization of project objectives

Duration: 18 months of Project implementation

Qualifications: Veterinarian from the veterinary Department with postgraduate qualification in Epidemiology (or an equivalent discipline) and conversant with animal disease surveillance and management. Level C proficiency in English.