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منظمة
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技术合作计划

TECHNICAL COOPERATION
PROGRAMME

PROGRAMME DE
COOPÉRATION TECHNIQUE

PROGRAMA DE
COOPERACIÓN TÉCNICA

برنامج التعاون الفني

Region: **Middle East**
(Iran, Iraq, Jordan, Lebanon, Syria and Yemen)

Project title: **Emergency assistance for early detection and prevention of avian influenza in the Middle East region**

Project symbol: **TCP/RAB/3005 (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:

1. PROJECT BACKGROUND AND JUSTIFICATION

In line with the Food and Agriculture Organization of the United Nations (FAO)/World Organization for Animal Health (OIE) Global Strategy for the Progressive Control of Highly Pathogenic Avian Influenza (HPAI), this project has been developed to provide support to the regionally cohesive Middle East grouping of 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) which 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 Cambodia, China, Indonesia, Japan, Korea, People's Democratic Republic of Lao, Malaysia, Thailand and Viet Nam, but since late early 2004 HPAI H5N1 has been diagnosed in a variety of wild and captive bird species, progressing in north-westerly direction from Hong Kong, People's Republic of China (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
China (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	H5N	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
Romania	Swan	H5N1	Oct 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 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 countries 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 overwinter along the river systems crossing the Arabian Peninsula and the Nile. Birds from Eastern Europe/Caucuses (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 (recognized migration routes from northern China/Siberia to Southeast 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. The movement of non-domestic avian species for the purposes such as the exotic bird trade and hunting may serve as potential routes for the spread of HPAI or LPAI as demonstrated by the birds of prey imported from Thailand to Belgium and found positive for H5N1 HPAI.

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 bird 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 Avian Influenza (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 confound 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.

Human and Poultry Populations in the Middle East

The Middle East Region has a substantial poultry population of over one billion and a human population of over 250 million, of which the vast majority of domesticated poultry comprises chickens (Table 2). A large proportion of these are commercial poultry, kept under confinement, to which on-farm biosecurity measures can be applied.

Informal domestic poultry trade within and among countries in the region may also contribute to the dispersal or spread of HPAI and needs to be assessed and monitored.

Table 2 - Human and Poultry Populations of Recipient Countries ('000s)

Middle East Region	Chickens	Ducks	Turkeys	Geese	Total Poultry	Humans
Bahrain					470	739
Iran	280 000	1 500	200	1 000	282 700	69 788
Iraq	23 000				23 000	25 856
Israel	30 000	2			30 002	6 560
(Palestinian Authority)						
Jordan	24 000	2 000			26 000	5 614
Kuwait	325 000				325 000	2 595
Lebanon	35 000				35 000	3 708
Saudi Arabia	135 000				135 000	24 919
Syria	30 000	50 000	250	50 000	130 250	18 223
Yemen	34 800				34 800	20 733
Total	916 800	53 502	450	51 000	1 022 222	178 735

Source: FAOSTAT, 2004

Justification

Justification for regional emergency assistance to the Middle East 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; (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. The Middle East regional countries at new risk encompass a substantial poultry sector, holding more than one billion poultry. 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 not (or 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.

2. 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; (d) establishing information and technology network linkages with other regions (Global Livestock Early Warning System – GLEWS, and the Network of Reference Laboratories, Epidemiology Centres and Groups of Experts on Avian Influenza - OFFLU) in the global system for HPAI surveillance.

3. EXPECTED MAIN OUTPUTS

- Baseline data on migratory birds and domestic poultry, will be mapped for use in targeted surveillance and HPAI control;
- disease surveillance and monitoring for HPAI in domestic and migratory birds will be strengthened;
- documentation of wild bird trade and other movement of wild bird species;
- laboratory capacity to support HPAI diagnosis will be strengthened;
- timely, regional disease information exchange will improve regional early warning disease intervention, technical information and technology transfer;
- national action plans will be developed to form the framework for national HPAI control plans and a regional strategy in line with the FAO/OIE 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.

4. 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 (ToRs in Annex 11);

- recruitment of the International Project Coordinator (IPC). She/he will be stationed at the FAO Animal Health Service (AGAH) in Rome and will be assigned fulltime to oversee the five regional TCPs on avian influenza of which the Middle East region is part;
- recruitment of the Regional Project Coordinator (RPC). She/he will be stationed at the OIE Regional Office for the Middle East in Beirut, Lebanon, to oversee the project in close collaboration with the FAO Representative in Lebanon and the FAO Regional Office for Near East (RNE) in Egypt. The RPC will be contracted as a national consultant;
- set up in each recipient country a National Steering Committee (NSC), chaired by the Chief Veterinary Officer (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 OIE Regional Office for the Middle East in Beirut, Lebanon or another venue to be identified. Representatives from each country (CVO, epidemiology/laboratory, wildlife/natural resources) will attend. Bahrain, Kuwait, Oman, Qatar, The Kingdom of Saudi Arabia, United Arab Emirates (UAE), West Bank and Gaza Strip and Israel will be invited at no cost for the project. 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 regional strategy (Middle East);
- signature of the letters of agreement with three specialized institutions (wildlife, disease surveillance and laboratory diagnostics) to carry out field studies and deliver capacity building workshop and training under the five regional technical cooperation projects (TCPs) (North Africa, East Africa, West Africa, Middle East and Southern Europe/Caucasus);
- regional networking will be established utilizing existing information networks in the participating countries. The OIE/FAO Regional Office in Beirut 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, computer and data management equipment, etc) for tender call and procurement;
- recruitment of a Geographic Information System (GIS) expert for data collation and mapping. This work will be carried out in close collaboration with the groups collecting the baseline data and analysing 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: 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, and 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 each participating country. The training will be delivered by a contracted OIE reference laboratory on HPAI within the facilities of the regional laboratory to be identified in the subregion;

- procurement and delivery of project equipment and materials;
- start of commissioned studies relating to waterbirds 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;
- customization of Transboundary Animal Diseases information system (TADinfo) and provision of on-the-job training of staff (TCDC - Technical Cooperation among Developing Countries - consultant mission).

Month 7 to 18:

- continue targeted disease surveillance and wildlife field investigations as appropriate;
- participation of representatives from the 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 surveillance and wildlife 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.

5. 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.

The project will be operated in close collaboration with:

- the OIE Regional Office in Beirut;
- the FAO Regional Office for the Near East in Cairo (RNE);
- the Arab Organization for Agricultural Development (AOAD);
- the World Health Organization (WHO).

The project will also be implemented in collaboration with:

- OFFLU reference diagnostic laboratories and epidemiology collaborating centres;
- international and regional organizations/institutions dealing with wildlife in the region, 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 start at the end of 2005, in which Wetlands International is the lead contractor.

6. 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 Kingdom of Saudi Arabia, Kuwait, Oman, Qatar, United Arab Emirates, Israel and West Bank and Gaza Strip will be invited to attend the inception workshop and regional coordination meetings at no cost to the project. Field investigations under the project could be carried out in these countries, as appropriate.

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 provide technical support as and when needed. ToRs in Annex 1;
- a GIS consultant will be recruited for five 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 to produce maps identifying potential areas for targeted surveillance. The cost will be shared with four other regional projects (20 percent each). ToRs in Annex 6;
- an international consultant will be recruited for ten days for customization of TADinfo and digitalization of maps. ToRs in Annex 9;
- 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 10.

Technical Cooperation among Developing Countries (TCDC)

A TCDC consultant will be recruited for TADinfo installation at the regional level and subsequent training (ten days). ToRs in Annex 8.

National consultant

A regional project coordinator will be responsible for implementation of all project inputs and outputs (11 work months). The RCP will be stationed at the OIE Regional Office in Beirut, with frequent travel to the region. He will ensure coordination and synergy of the project with OIE activities and will work in close collaboration with the FAO Regional Office in Cairo. 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 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 trainings (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 and TCDC 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 within the beneficiary countries.

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. The final list will be completed at the launching workshop.

Two computers PC for TADinfo use and data analysis for regional networking and information sharing.

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.

7. REPORTING

The RPC will be responsible for preparing quarterly progress reports (in English) under the supervision of the IPC in Rome for submission to 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 TCEO, headquarters, and AGAH.

8. 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 attached to the project agreement, are provided in a timely and expeditious manner.

The governments 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.

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

Region: Middle East (Iran, Iraq, Jordan, Lebanon, Syria and Yemen)
(Bahrain, Israel, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates, West Bank and Gaza Strip being associated at no cost for the project)

Project title: Emergency assistance for early detection and prevention of avian influenza in the Middle East region

Project symbol: TCP/RAB/3005 (E)

Accounts	Input Description	Sub/Child Account	Main/Parent Account
5013	Consultants		111,800
5542	Consultants – International	61,000	
5543	Consultants – National	49,500	
5544	Consultants - TCDC/TCCT	1,300	
5014	Contracts		79,000
5650	Contracts Budget	79,000	
5020	Overtime		-
5652	Casual Labour - Tempo assistant	-	
5021	Travel		25,845
5661	Duty travel others	10,912	
5684	Consultants – International	8,615	
5685	Consultants – National	-	
5686	Consultants - TCDC/TCCT	2,690	
5692	Travel - Technical Support Services	3,628	
5023	Training		68,724
5920	Training Budget	68,724	
5024	Expendable Equipment		32,000
6000	Expendable. Equipment Budget	32,000	
5025	Non Expendable Equipment		21,000
6100	Non Expendable Equipment Budget	21,000	
5027	Technical Support Services		22,500
6111	Report costs	1,850	
6116	Evaluation	1,000	
6120	Technical Support Services (Honorarium)	19,650	
5028	General Operating Expenses		12,963
6300	General Operating Expenses Budget	12,963	
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 the Emergency Operations Service (TCEO), the technical supervision of the Chief, Animal Health Service (AGAH), FAO headquarters, in collaboration with the FAO Regional and Subregional Offices and the FAO Representatives in the region 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 five 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 subregional disease surveillance networks;
- assisting in planning and holding the wildlife conference and the role of migratory birds in HPAI transmission.
- 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 the present project)

Qualifications: The international projects coordinator will be a veterinarian graduated from a recognized university with a postgraduate degree (M.Sc. 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 Middle 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 the Emergency Operations Service (TCEO), the technical supervision of the Chief, Animal Health Service (AGAH), FAO headquarters, in collaboration with the international projects coordinator in Rome, the FAO Regional Office in Cairo (RNE), the World Organization for Animal Health (OIE) Regional Office in Beirut and the FAO Representatives in the recipient countries, The Regional Project Coordinator (RPC) will be responsible for the following activities:

- develop and oversee periodic work plans;
- organize workshops;
- supervise contracted consultants and institutions;
- provide technical and financial management;
- liaise closely with the international coordinator at FAO headquarters, AGAH, RNE Office and the Chief Veterinary Officers (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. He/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. Arabic would be an asset.

Duty station: The OIE Regional Office in Beirut, with travel to the beneficiary countries.

Duration: 11 months to be worked on a duration of 18 months.

Terms of Reference**Migratory Bird Ecology and Avian Influenza Transmission in the Middle East****Letter of Agreement****Assignment**

The FAO Animal Production and Health Division (AGA) wishes to contract a specialized institution [the Recipient Organization (RO)] with expertise in migratory bird ecology with specific reference to migratory bird-borne avian influenza and its transmission to domestic poultry. The RO will develop, under the supervision of the FAO Animal Health Service (AGAH), and in close collaboration with the World Organization for Animal Health (OIE) Regional Office in Beirut, the Regional Coordinator and the Chief Veterinary Officer (CVO) of each beneficiary country, baseline data on migratory bird ecology for each country.

Specifically, the RO will:

- attend launching meeting and provide at least two days of training during the epidemiology and wildlife regional technical workshop;
- collect 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, and 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 the Emergency Operations Service (TCEO) and AGAH in Rome.

Qualifications: The RO 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 the Middle East will be an asset.

Duty station: Selected areas within the participating countries. Workshop at the OIE Regional Office in Beirut or another venue to be identified.

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 the Middle East****Letter of Agreement****Assignment**

The FAO Animal Production and Health Division (AGA) wishes to contract an epidemiology collaborating centre [the Recipient Organization (RO)] of the World Organization for Animal Health (OIE)/FAO with expertise in veterinary epidemiology with reference to domestic poultry and migratory birds, laboratory diagnosis of HPAI, and national emergency preparedness planning. The RO will organize, under the supervision of FAO Animal Health Service (AGAH), in close collaboration with the OIE regional Office in Beirut, the Regional Coordinator and the Chief Veterinary Officer (CVO) of each beneficiary country, a regional workshop for technical representatives of the recipient countries under the region in conjunction with wildlife expert firm. Specifically, the RO 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 surveillance dealing with domestic poultry, migratory wildlife, HPAI diagnostics and emergency planning;
- prepare training materials for distribution to the participants in the workshop;
- the RO 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 RO should be and OIE/FAO collaborating centre (Network of Reference Laboratories, Epidemiology Centres and Groups of Experts on Avian Influenza - OFFLU) with proven expertise in veterinary epidemiology and diagnosis of avian influenza and preventive measure thereof, with specific reference to HPAI transmission by migratory wildlife. Previous experience in the Middle East would be an asset.

Duty station: The OIE Regional Office in Beirut, with travel to the recipient countries.

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

Terms of Reference**Regional Laboratory Training and Laboratory Capacity Strengthening
in the Middle East
Letter of Agreement****Assignment**

The FAO Animal Production and Health Division (AGA) wishes to contract a Reference Laboratory [the Recipient Organization (RO)] of the World Organization for Animal Health (OIE)/FAO with expertise in laboratory diagnosis and testing of HPAI and other poultry diseases. The RO will organize, under the supervision of the FAO Animal Health Service (AGAH), in close collaboration with the OIE regional Office in Beirut, the regional coordinator and the Chief Veterinary Officer (CVO) of each beneficiary country, a regional laboratory training for laboratory staff from the recipient countries under the region. Specifically, the RO 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 RO'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 for selected laboratory staff in the diagnosis of HPAI;
- the RO will leave behind technical manuals and other materials for distribution to the participants;
- the RO 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 the participating laboratory in virus isolation and characterisation during the period of the project.

Qualifications: The RO should be an OIE/FAO Reference Laboratory (Network of Reference Laboratories, Epidemiology Centres and Groups of Experts on Avian Influenza - OFFLU) for HPAI with expertise in laboratory diagnosis and testing of avian influenza.

Duty station: The regional laboratory (to be identified) with travel to the recipient countries.

Duration: Travel to recipient countries (diagnostic laboratories): 14 days.
Laboratory 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 Geographic Information System (GIS) 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 Avian Influenza (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 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: Beirut with travel throughout the subregion.

Duration: 14 days in two missions.

Terms of Reference

TCDC expert - TADinfo Expert

In the framework of the FAO-EMPRES Emergency Centre for Transboundary Animal Diseases (ECTAD), under the technical supervision of the FAO Animal Health Service (AGAH) and the general supervision of the Emergency Operations Service (TCEO), in close collaboration with the international projects coordinator in Rome, the national project coordinators and in full cooperation with the World Organization for Animal Health (OIE) Regional Office in Beirut, the FAO Regional Office in Cairo (RNE) and the FAO Representatives, the TCDC (Technical Cooperation among Developing Countries) consultant will undertake the following activities:

- install TADinfo software and train users in its use;
- submit a report after visiting each country;
- report to AGAH any problems that require attention;
- provide e-mail-based technical support to TADinfo users for the duration of the project;
- any other duties deemed necessary.

Duty station: one of the recipient countries (to be identified)

Duration: ten days

Qualifications: He/she will be a veterinary graduate from a recognized university with a proven capacity to work and relate with national authorities and development agencies. Prior experience with EMPRES database and detailed understanding of TADinfo Java functions is desirable.

He/she will have level C proficiency in English. Arabic would be an asset.

Terms of Reference

International Consultant - Software Engineer

In the framework of the FAO-EMPRES Emergency Centre for Transboundary Animal Diseases (ECTAD), under the overall supervision of the FAO Animal Health Service (AGAH) and the Emergency Operations Service (TCEO), and the direct supervision of the Senior Officer of the Information System and Technology Projects and Governance Service (AFIS/T), he/she will assist in the AFIS/T development team development, implementation and maintenance activities. In this context, his/her principle role will be to develop a Web-based version of TADinfo in compliance with the Organization's web-based applications standards (i.e. Java Servlets and JSP/XML/XSL) and its overall Web architecture. He/she is also expected to use and contribute to the library of reusable applications components. This will involve:

- customize TADinfo for [country]:
 - incorporate electronic maps into latest TADinfo database;
 - incorporate databases of villages into latest TADinfo;
 - test the system entering dummy data;
 - troubleshooting;
 - finalize and deliver the customized version of TADinfo as a CD-ROM;
- perform other tasks as required.

Duty station: Rome

Duration: ten days

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 (AGAH) 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;
- 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, organizing 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 Middle East project)

Qualifications: University degree in agriculture, economics, social sciences or other related fields. Three-five 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 country)

Duties: In close collaboration with the FAO Representative, the country Chief Veterinary Officer (CVO), the Regional Project Coordinator (RPC), 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, coordinate and carry out all the activities of the project according to the work plan;
- play an active role in collaboration with the FAO Representative and the RPC 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 services with postgraduate qualification in epidemiology (or an equivalent discipline) and conversant with animal disease surveillance and management. Level C proficiency in English.

Specifications of the computer and accessories for non-expendable equipment

Computers and accessories:

Desktop computer (high specification as main TADinfo computer)

Anti Virus software

Colour printer and consumables

UPS unit

Minimum specifications for the main computer:

- recommended WindowsXP or Windows 2000
- processor: Pentium 4, 2.5 GHz or higher
- RAM 512 MB or higher (at least 512 MB)
- hard disk 20GB or more
- 3.5" 1.44MB disk drive
- combo: CD+RW / DVD+RW
 - A drive writes to DVD+R, DVD+RW, CD-R and CD-RW media, as well as reads all these media types including CD-ROM and DVD-ROM.
- one USB port (at least one)
- monitor size 17 inch with 1280 x 1024 resolution
- optical mouse and keyboard
- 10/100 network card

NB: If additional budget is available, to purchase higher RAM is recommended.

Estimated cost US\$3 000.