Emergency Centre for Transboundary Animal Diseases (ECTAD)

Interim Report on the Global Programme for Control and Eradication of Highly Pathogenic Avian Influenza (HPAI)

Special Fund for Emergency and Rehabilitation Activities (SFERA)

September 2006

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)

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ABBREVIATIONS and ACRONYMS

AFRING	African Bird Ringing Unit
AI	Avian Influenza
AGAH	Animal Production and Health Division of FAO
AusAID	Australian Government's Overseas Aid Programme
CIRAD	Centre de Coopération Internationale en Recherche Agronomique pour le Développement
CMC	Crisis Management Centre
CVO	Chief Veterinary Officer
DOC	Direct Operating Costs
ECTAD	Emergency Centre for Transboundary Animal Diseases
FAO	Food and Agriculture Organization of the United Nations
GEOSS	Global Earth Observation System of Systems
GLEWS	Global Early Warning and Response System for Major Animal Diseases
GoI	Government of Indonesia
HPAI	Highly Pathogenic Avian Influenza
IFAD	International Fund for Agricultural Development
LPAI	Low Pathogenic Avian Influenza
NGO	Non-governmental Organization
OFFLU	Joint OIE/FAO worldwide scientific network for the control of avian influenza
OIE	World Organisation for Animal Health
OMPO	Oiseaux Migrateurs du Paléarctique Occidental
ONCFS	Office National de la Chasse et de la Faune Sauvage
RAP	FAO Regional Office for Asia and the Pacific
RNE	FAO Regional Office for the Near East
SFERA	Special Fund for Emergency and Rehabilitation Activities
STS	Supervisory Technical Services
TAD	Transboundary Animal Disease
TCE	Emergency Operations and Rehabilitation Division of FAO
TCP	Technical Cooperation Programme
ToR	Terms of Reference
TSS	Technical Supervisory Services
UNDP	United Nations Development Programme
UNICEF	United Nations Children’s Fund
USAID	United States Agency for International Development
WFP	World Food Programme
WHO	World Health Organization
WWT	Wildfowl and Wetlands Trust

EXECUTIVE SUMMARY

Since the outbreak of highly pathogenic avian influenza (HPAI) in several countries in Southeast and East Asia in late 2003 and early 2004, the disease has spread rapidly to other countries in Europe, the Middle East and finally Africa in early 2006. The disease continues to be found in Asia, and worldwide there are now more than 50 countries where HPAI type H5N1 has been found in the domestic and/or wild bird populations. This interim report details how FAO has utilized its technical expertise in animal health and operational capacity to respond to the HPAI emergency, and how it works collaboratively with United Nations agencies under the umbrella of the UN System Influenza Coordinator (UNSIC).

Since HPAI was first reported in Viet Nam in December 2003, FAO, together with the World Organisation for Animal Health (OIE), has taken a lead role in coordinating the international response to the spread of the disease in animals. Through its Emergency Centre for Transboundary Animal Diseases (ECTAD), FAO has been supporting surveillance and disease control efforts in infected countries and has assisted non-infected countries to reduce the likelihood of becoming infected and to prepare a rapid and effective response if infected. At the onset of the HPAI crisis in Asia, FAO initially allocated US$5.5 million of its own funds to begin assisting in combating the disease through the implementation of 14 emergency projects. To date FAO has deployed approximately US$10 million of its own resources in support of the global effort against HPAI.

ECTAD, which brings together technical and operational expertise into one unit, utilizes other coordination platforms within its structure for an effective HPAI global response. Include the Global Early Warning and Response System (GLEWS), the OFFLU network of laboratories, global wildlife surveillance programmes and the Crisis Management Centre (CMC). FAO has emphasized to donors the nature of the threat posed by HPAI and the importance of preventing a possible human pandemic by combating the disease in its avian hosts.

To better address the spread of HPAI and global response capabilities, in 2005 FAO and OIE developed a joint global master coordination plan called the FAO/OIE Global Strategy for the Progressive Control of Highly Pathogenic Avian Influenza (HPAI). At the first International Pledging Conference on Avian and Human Influenza, held in Beijing on 17-18 January 2006, FAO presented a proposal for a Global Programme for the Control and Eradication of HPAI which had been developed in close consultation with OIE and the World Bank. Key components of the programme include the coordination and management of the international response at the global and regional level; provision of support to infected countries in their efforts to control and eradicate the disease; assistance to countries at risk in their efforts to be prepared to face an incursion of the disease; and technical support to newly infected countries. FAO works hand-in-hand with OIE and regional organizations, and because of the threat to human health, the World Health Organization (WHO). FAO also works with the United Nations Children's Fund (UNICEF) in grassroots communication. All UN agencies work under the umbrella of UNSIC and FAO is a partner in the Consolidated Action Plan for Contributions of the UN System.

The Global Programme presented and accepted at the Beijing conference included a budget of US$476 million over a projected three-year cycle, which represented the total estimated needs for the animal health sector. FAO is the lead technical agency for this Global Programme. It was estimated that FAO would need US$130 million to fulfill its global and regional mandate and to meet a growing number of country requests for assistance.

The spread of HPAI to Central Asia, Europe, Middle East and Africa increased the global threat posed by the disease. Member countries infected with HPAI and at risk for the disease look to FAO for technical expertise and requested support. Therefore FAO revised the Global Programme to take into account the changing circumstances in particular in Africa and the extension of the Programme to Latin America and the Caribbean. FAO now estimates that US$882 million is required for HPAI activity in the animal health field, a figure which excludes compensation costs and FAO proposes to implement activities within this budget of US$308 million. These estimates are based on requests already received from FAO member states and the likelihood that as the disease spreads, more countries will request assistance.

As of 30 September 2006 FAO had received or had agreed with donors US$94.4 million, with an additional US$39.5 million in the pipeline, giving a total funding envelope of US$133.9 million to respond to needs at the global, regional, and national levels.

The following donors have contributed to or pledged funds to global, regional or country projects under FAO's Global Programme: the United States of America, Japan, Sweden, Germany, the Asian Development Bank, France, Norway, Switzerland, the United Kingdom, Australia, the UNDP Administered Donor Joint Trust Fund for Viet Nam, the European Commission, Saudi Arabia, the OPEC Fund for International Development, Spain, the People's Republic of China, the Netherlands, New Zealand, Ireland, the United Nations Development Programme, the United Nations Development Group Office, Greece, Jordan and the Office of Coordination for the UN Assistance Programme to Afghanistan.

For maximum efficiency in allocating funds, FAO utilizes its Special Fund for Emergency and Rehabilitation Activities (SFERA) to provide HPAI technical assistance to Member Nations. SFERA is a donor funding mechanism that is not earmarked by country or type of intervention to respond to countries' needs in a flexible and rapid manner to avian influenza. While FAO appreciates donor priorities, contributions to the SFERA programme are preferred because un-earmarked funding allows the timely allocation of resources according to actual needs and priorities which may change over time.

The receipt of untied funds allows FAO to channel funding to the geographical and thematic areas of greatest need, to pool resources and allocate them more promptly, therefore enabling a programmatic, rather than piecemeal approach to combat diseases. This more flexible and efficient approach serves as a guide for the technical and operational units in FAO and the governments of countries in which the Organization works.

SFERA enables FAO and the international community to achieve the ultimate goal of avoiding a human pandemic by rapidly attacking HPAI at its source and addressing the extreme unpredictability of its outbreaks.

Donors had contributed US$24.9 million to the SFERA for HPAI operations as of 30 September 2006. This represents almost of FAO's total funding portfolio (funds agreed and agreement signed but funds not received) for HPAI activities. There are currently eight donors to SFERA: Sweden, France, Switzerland, Norway, Saudi Arabia, the People's Republic of China, Greece and Jordan.

As of 30 September 2006 FAO had spent or committed US$13 253 555 of these SFERA funds provided by the eight donors to assist 94 countries. This funding has been mobilized for

a range of operational and technical activities, including veterinary infrastructure development, training and capacity building, technical expertise, organization of meetings and conferences and supporting the development of the CMC. Since the start of 2006, FAO staff and consultants have carried out more than 160 field missions to assess country needs and analyze the disease situation. These missions have usually been carried out in conjunction with partner agencies such as OIE, WHO and the World Bank.

FAO's vital role lies in providing rapid technical assistance and the necessary operational support to the governments of newly affected countries. This encompasses all facets of the disease prevention and response and assistance to all affected production systems and livelihoods – including emergency preparedness planning, control and surveillance activities, disease intelligence, diagnostic capacity, communication, socio-economic issues, marketing and trade. The Organization has also supported networking and promoted a coordinated and harmonized technical approach to HPAI control. While emergency and short-term assistance is indispensable, FAO is committed to long-term assistance to secure the control and eradication of the disease and better preparedness for future zoonoses. In this regard the Organization has developed substantial thematic work in partnership with UN agencies and specialized institutes.

FAO has been active in providing direct country support to combat HPAI since the international awareness of the issue (123 countries via all funding sources). In general FAO has provided technical expertise to countries, depending on their disease status, to help them prepare for, prevent, quickly detect, rapidly respond to or eradicate HPAI. In those countries where the disease has become endemic, FAO experts help to manage HPAI and minimize the rippling effects of the disease throughout the animal health sector and the associated stakeholders. This expertise includes surveillance, adequate laboratory capacity and expertise, appropriate veterinary infrastructure and knowledge, control method implementation such as culling, control movements, vaccination, effective biosecurity on farms and throughout the production chain, evaluating the socio-economic effects on the animal health sectors and the people directly and indirectly affected, and effectively communicating with the appropriate target audience.

This interim report aims to provide an overview of FAO activities and results under the Global Programme, in particular through the catalytic influence of the SFERA mechanism. This report covers activities supported by SFERA as well as other donor funds which will be further elaborated in more detailed reports in the future.

Special Fund for Emergency and Rehabilitation Activities

Interim Report on the Global Programme for Control and Eradication of Highly Pathogenic Avian Influenza (HPAI)

1. FAO's Global Programme for the Control and Eradication of Highly Pathogenic Avian Influenza

Since HPAI was first reported in Viet Nam in December 2003 FAO, together with the World Organisation for Animal Health (OIE), has taken a lead role in coordinating the international response to the spread of the disease in animals. FAO and OIE developed a joint global coordination plan to address the issue of HPAI - the FAO/OIE Global Strategy for the Progressive Control of Highly Pathogenic Avian Influenza - which is updated regularly to reflect the evolving disease situation.

FAO provides policy advice, strategy design, technical information and guidelines, contingency planning and technical assistance, training, equipment and supplies such as laboratory equipment, vaccines, agency and donor coordination and public advocacy. FAO works hand-in-hand with OIE and regional organizations, and, because of the threat to human health, the World Health Organization (WHO). FAO also works with the United Nations Children's Fund (UNICEF) in grassroots communication. All UN agencies work under the umbrella of the United Nations System Influenza Coordinator (UNSIC) and FAO is a partner in the Consolidated Action Plan for Contributions of the UN System (July 2006).[1]

Through its Emergency Centre for Transboundary Animal Diseases (ECTAD), established in December 2004, FAO has been supporting surveillance and disease control efforts in infected countries and has assisted non-infected countries to reduce the likelihood of becoming infected and to prepare a rapid and effective response if infected. At the onset of the HPAI crisis, FAO initially allocated US$5.5 million of its own funds to help combat the disease through 14 emergency projects under the auspices of FAO's Technical Cooperation Programme (TCP). The TCP supports FAO Member Nations through small projects which address specific problems in the agriculture, fisheries and forestry sectors. To date FAO has deployed US$10 million of its own resources under the TCP in support of the global effort against HPAI. FAO also utilizes its Special Fund for Emergency and Rehabilitation Activities (SFERA). SFERA funding is a valuable tool to fund FAO's emergency programs. SFERA allows FAO to channel funding to the geographical and thematic areas of greatest need, to pool resources and allocate them more promptly, therefore enabling a programmatic, rather than piecemeal approach to combat diseases. ECTAD utilizes other coordination platforms within its structure for an effective HPAI global response. These are the Global Early Warning and Response System (GLEWS), the joint OIE/FAO worldwide scientific network for the control of avian influenza (OFFLU), global wildlife surveillance programmes and the Crisis Management Centre (CMC).

FAO and OIE co-organized an Emergency Regional Meeting on Avian Influenza Control in Animals in Asia in collaboration with WHO and with the support of the Government of

[1] http://www.undg.org/documents/8123-Avian_and_Human_Pandemic_Influenza__Consolidated_Acton_Plan_for_Contributions_of_the_UN_System.pdf

Thailand and the Japanese Livestock Technology Association (JLTA) on 26-28 February 2004 in Bangkok, Thailand, to assess the situation faced by affected and neighbouring Asian countries, to evaluate the achievements of control activities put in place two months after the beginning of the crisis and to elaborate control strategies with measures adapted to the local situations. The Second FAO/OIE Regional Meeting on Avian Influenza Control in Asia, in collaboration with the Government of Viet Nam and WHO was held in Ho Chi Minh City, Viet Nam, on 23-25 February 2005 to assess the current avian influenza (AI) situation; to evaluate the achievements of control measures implemented in the previous 12 months; to review recent scientific advances in the understanding of avian influenza; and to advise on new control measures if warranted and to identify future research needs.

FAO, together with WHO, OIE and the World Bank cosponsored a meeting on avian influenza (AI) and human pandemic influenza on 7-9 November 2005 at WHO headquarters, Geneva. The meeting discussed shared responsibilities of the international community, technical organizations and agencies in assisting affected countries and countries at risk, assessed national, regional and global needs with broad indications of resources required in the short and medium term, reviewed current bilateral and multilateral initiatives to avoid duplication and identify potential synergies and outlined coordination mechanisms necessary at national, sub-regional, regional and global levels to ensure effective and rapid mobilization of resources and oversee the impact and progress in implementation.

At the subsequent International Pledging Conference on Avian and Human Influenza, held in Beijing on 17-18 January 2006, FAO presented a proposal for a Global Programme for the Control and Eradication of HPAI. This Global Programme, developed in close consultation with OIE and the World bank, is regularly updated and is based on the following : coordination and management of the international response at the global and regional level; provision of support to infected countries in their efforts to control and eradicate the disease; assistance to countries at risk in their efforts to be prepared to face an incursion of the disease; and technical support to newly infected countries.

The Global Programme presented at the Beijing conference included a budget of US$476 million over a projected three-year cycle, which represented the total estimated needs for the animal health sector. FAO is the lead technical agency for this Global Programme. It was estimated that FAO would need US$130 million to fulfil its global and regional mandate and to meet a growing number of country requests for assistance.

However, since the Beijing conference, HPAI has spread to Africa, considerably increasing the challenge faced by FAO and its partners and putting many more countries with limited veterinary capacity at risk of infection. These African countries infected with HPAI and at risk for the disease look to FAO for technical expertise and support. Therefore FAO/OIE revised the Global Programme to take account of the changing circumstances in Africa and the extension of the Global Programme to Latin America and the Caribbean. FAO now estimates that US$882 million is required for HPAI activity in the animal health field, a figure which excludes compensation costs. FAO's component of the Global Programme, covering activities which FAO proposes to implement, is now estimated at US$308 million.. These estimates are based on requests already received from FAO Member Nations and the likelihood that as the disease spreads, more countries will request assistance. For FAO's implementation responsibilities of the Global Programme, as of 30 September 2006 US$94.4 million had been received or agreed with donors, with a further US$39.5 million in

the pipeline, giving a total funding envelope of US$133.9 million to respond to needs at the three levels (global, regional and national).

The main components of the Global Programme were subsequently revised to allow for more accurate planning, integration of activities, budget monitoring and reporting. The structure of the Global Programme budget for monitoring purposes is now broken down into two categories: global coordination and country activities. Global coordination involves support for ECTAD headquarters and technical supervisory services (TSS), the CMC, GLEWS, global wildlife surveillance and OFFLU. Country activities are comprised of two parts: ECTAD regional coordination and specific country activities (countries at risk of HPAI, newly infected countries, infected countries and contingency planning). While it is very important to provide immediate assistance to countries that have outbreaks of HPAI, it is also imperative to prepare countries that may be at risk of becoming infected by the disease while also continuing to help countries where the disease has become endemic. Working in concert with and building on these specific country activities, the regional coordination led by ECTAD and performed by the ECTAD regional animal health centres is at the heart of the overall Global Programme with the aim to provide a successful international HPAI response, and in the longer term, for immediate and efficient response to any transboundary animal disease, including zoonotic diseases.

From the very outset of the crisis FAO encouraged donors to contribute funds to HPAI-related operations, preferably through the SFERA. Previous emergencies, such as the Desert Locust crisis of 2004-2005, have shown that the level of resources needed to tackle a crisis successfully can increase substantially if adequate donor funding is not forthcoming at an early stage. FAO was therefore keen to stress to donors from the start of the emergency the importance of responding rapidly to appeals for financial assistance. The SFERA enables such rapid response. This capacity will be further enhanced by the CMC, which was officially launched on 12 October 2006.

Given the nature of HPAI, needs change over time and it is difficult to predict shifting logistical patterns and the budgetary requirements to meet them. FAO's vital role lies in providing rapid technical assistance and the necessary operational support to the governments of newly affected countries. This encompasses all facets of disease prevention, response and assistance to all affected production systems and livelihoods – including prevention, (culling, biosecurity and movement control, vaccination, surveillance, laboratory capacity, preparedness) and control of the disease, communication, socio-economic issues, marketing and trade, and mid- and long-term assistance as producers, communities, countries and regions grapple with how to deal with HPAI. While emergency and short-term assistance is indispensable, FAO is also committed to long-term assistance to secure the control and eradication of the disease and better preparedness for future zoonoses.

2. Funding mechanisms

As of 30 September 2006, donor funding received in support of FAO's Global Programme amounted to US$73.6 million, of which FAO had contributed US$9.2 million through the Organization's TCP projects. Donor funding agreed but not yet received by FAO amounted to US$20.8 million (for a total of US$94.4 received and agreed). Furthermore, negotiations are taking place with donors for an additional US$39.5 million of pipeline funds. The cumulative total current funding envelope as of 30 September 2006 was US$133.9 million.

Donors frequently earmark funds for particular countries or regions according to their policy priorities and the nature of the emergency in question. Out of the US$94.4 million funds received and agreed, US$25.8 million has been earmarked for specific countries, US$43.7 million for regional activities and US$24.9 million earmarked for global (SFERA) activities.

2.1 The SFERA

The idea of a special fund to enhance FAO's rapid reaction in emergency situations developed from a review of the Organization's emergency programmes in 2002. A proposal for the Special Fund for Emergency and Rehabilitation Assistance was developed and approved by the FAO Finance Committee in May 2003. The SFERA officially came into existence in April 2004.

The SFERA has three separate elements, the first of which is a revolving fund to support FAO's efforts in needs assessment, technical assistance coordination and early establishment of an emergency coordination unit. The second element is working capital, which is mobilized to initiate project activities quickly when agreements have been signed with donors, the funds then being transferred back to the SFERA on receipt of donor funds. Thirdly, there is a programme component, which supports emergency operations related to specific crises, such as the Indian Ocean tsunami and the spread of HPAI.

The Finance Committee decided in May 2006 to authorize the director of the Emergency Operations and Rehabilitation Division (TCE) to commit funds from the SFERA when an agreement has been made with a donor. This allows SFERA to be even more flexible and responsive to emergency situations and has enabled an early start of avian influenza projects even before funds have been received, which is crucial for expedient and effective HPAI response and control.

The SFERA has proven to be a very valuable asset in funding FAO's emergency programmes, which have in turn contributed to slowing down the worldwide spread of HPAI and so far avoiding a human pandemic situation. While FAO appreciates donor priorities and political frameworks, contributions to the SFERA programme component are preferred because unearmarked funding allows the timely allocation of resources according to actual needs and priorities which may change over time.

The SFERA mechanism has played a pivotal role in shaping FAO's initial emergency response to the HPAI crisis. The receipt of untied funds has helped FAO to develop a strategic programmatic response that is more flexible and more efficient, and which serves as

a guide for the technical and operational units in FAO and the governments of countries in which the Organization works.

3. Donor contributions to the SFERA for HPAI activities and overall donor contributions to the Global Programme

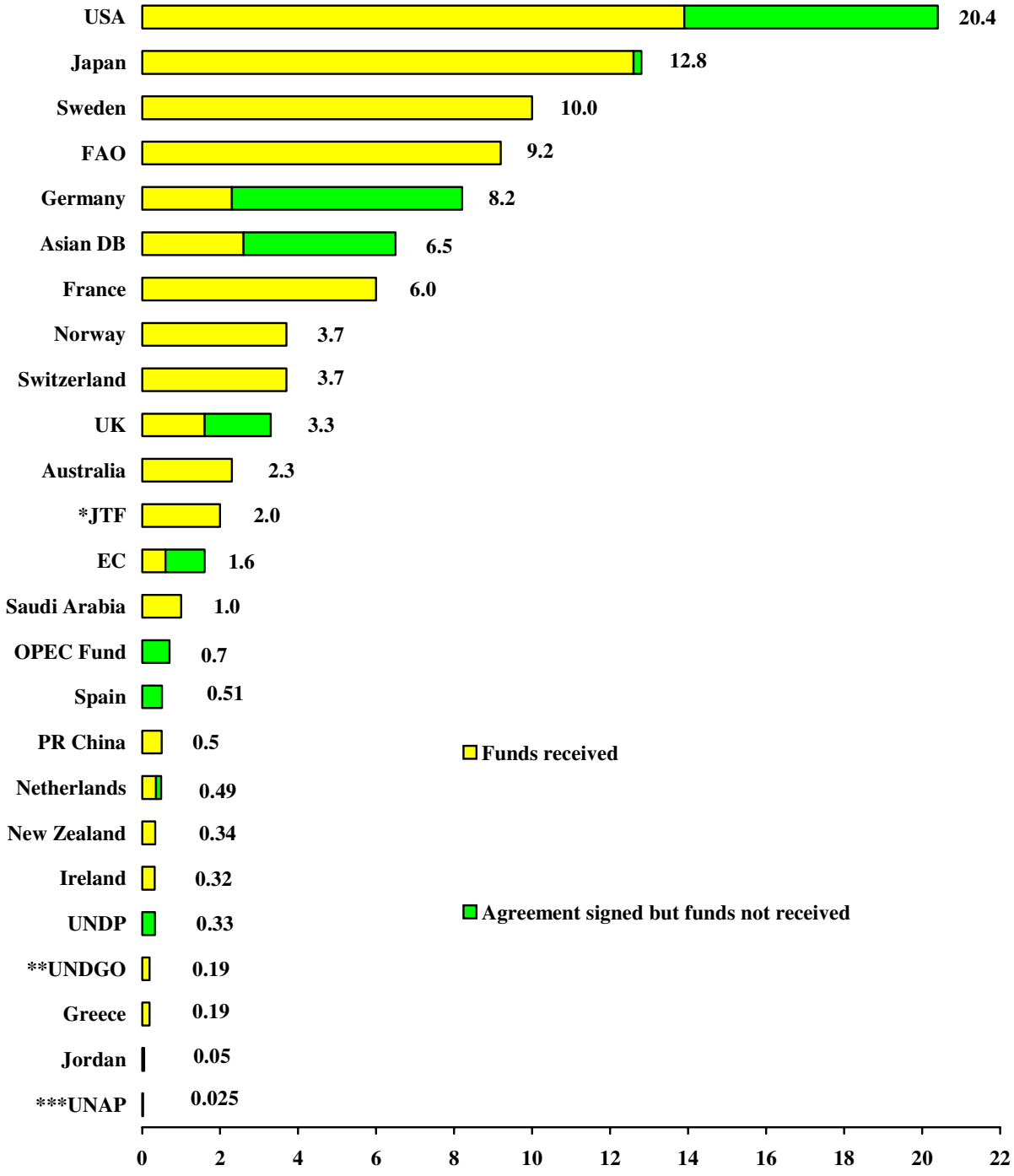
The SFERA is being used to support and accelerate FAO's efforts, in collaboration with the Organization's partners, to combat the spread of HPAI. Donors had contributed or pledged approximately US$25 million to the SFERA for HPAI operations as of 30 September 2006. This represents almost a quarter of FAO's total funding portfolio (funds received and agreed) for HPAI activities.

The SFERA has received funds for HPAI activity from eight countries. The table below indicates the donors and the amount they had contributed to the SFERA as of 30 September 2006.

Country	**Amount**
FRANCE	5 930 420
GREECE	188 442
JORDAN	50 000
NORWAY	3 506 326
P. R. CHINA	500 000
SAUDI ARABIA	1 000 000
SWEDEN	10 015 797
SWITZERLAND	3 696 573
TOTAL	**24 887 557**

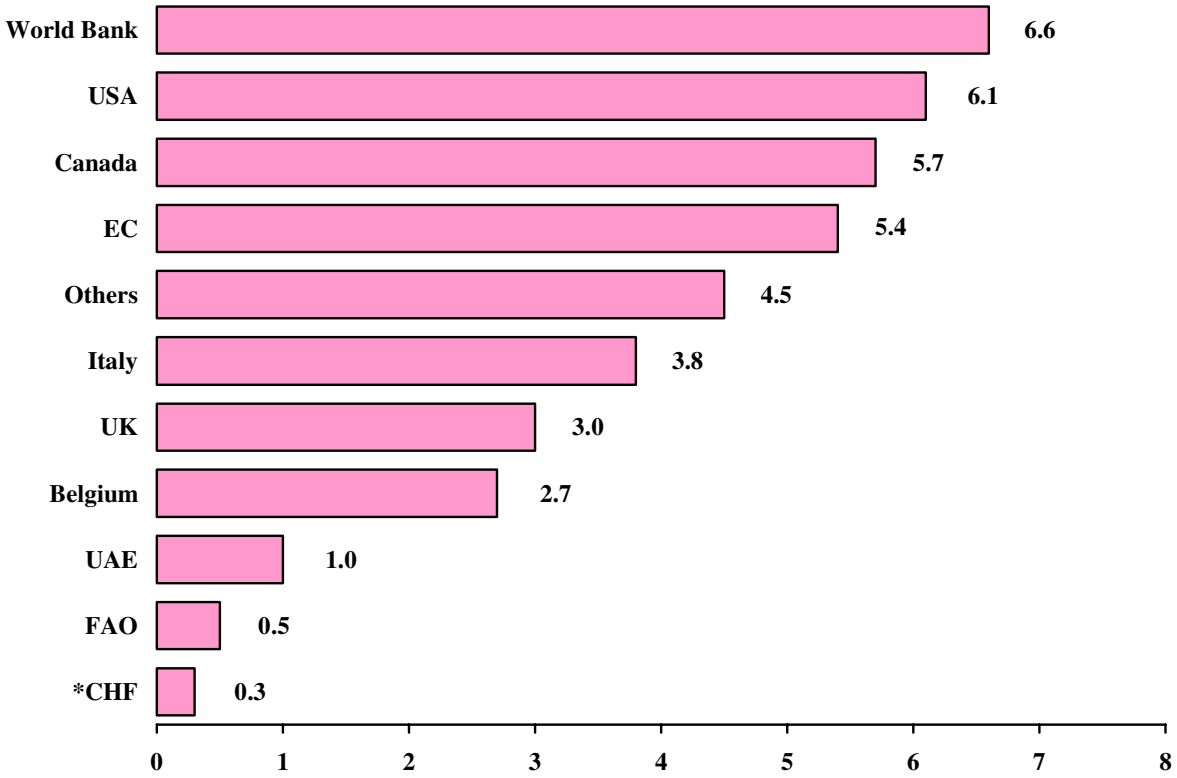
SFERA funding has been mobilized for a range of operational and technical activities including the provision of laboratory supplies, veterinary equipment and other HPAI disease control essentials, recruitment of technical experts for country field missions, travel costs, organizing meetings and conferences and supporting the development of the CMC. Since the start of 2006, FAO staff and consultants have carried out more than 160 field missions to assess country needs and analyze the HPAI disease situation. These missions have usually been carried out in conjunction with partner agencies such as OIE, the WHO and the World Bank.

Overall donor contributions to Global Programme as of 30 September 2006



* UNDP Administered Donor Joint Trust Fund.
** United Nations Development Group Office Service and Support UNDG/EXECCOM Secretariat.
*** Office of Coordination for UN Assistance Programme to Afghanistan

FAO and donor pipeline funding (US$ million) as of 30 September 2006



* The Common Fund for Humanitarian Action in Sudan.

4. SFERA support to countries

FAO has been active in providing direct country support to combat HPAI. In general FAO has provided technical expertise to countries, depending on their disease status, to help them prevent, quickly detect and rapidly respond to incursions of HPAI. For those countries where the disease has become endemic, FAO experts help manage HPAI and minimize the rippling effects of the disease throughout the animal health sector and the associated stakeholders. This expertise involves a wide range of areas including strategy design, surveillance, laboratory diagnostics, capacity building, the provision of appropriate veterinary infrastructure, support to culling, movement control, effective biosecurity on farms and vaccination. Furthermore, this expertise focuses on all aspects of the production chain, assessing socio-economic effects on the animal health sectors and the people directly and indirectly affected. Communication of appropriate disease prevention strategies is also a vital part of FAO's work.

FAO initially allocated US$5.5 million of its own funds to help combat the disease through the implementation of 14 TCP emergency projects. To date FAO has deployed approximately US$10 million of its own resources to support the global effort against HPAI. In total 23 TCP projects have been implemented (14 in Asia, two in the Middle East and North Africa, two in Africa, one in Europe, three in Latin America and one in the Caribbean) with a maximum amount of US$500 000 each and a maximum timeframe of 18 months.

Since February 2006, in addition to the TCP projects and funds earmarked by donors for specific countries, ECTAD has deployed SFERA funds directly in support of country assistance to a total of 94 countries (see Annex 1 for the list of countries receiving support from the SFERA). Many countries have asked FAO for specific assistance with HPAI. Additionally there is a need (as part of the Global Programme) to streamline and improve efficiency as part of a concerted effort to combat the disease. Therefore SFERA funded projects (with some additional funds donated by some specific countries) have been used to, and will need to continue, the efforts begun by TCP projects and build on them by developing regional plans. While technical assistance has been designed according to the specificity of each country, this country support has in general been delivered through rapid assessment missions, emergency assistance (immediate and interim) and regional workshops and meetings (see Annex 2 for specific projects and activity descriptions in each country). More specifically most of these country allocations have been used to purchase urgently needed equipment and supplies and to support national and local training on disease surveillance and reporting, laboratory diagnostics as well as biosecurity practices. Support was also provided for public awareness workshops and communication campaigns.

Rapid assessment missions

Experience has shown that responding rapidly at the onset of any animal health disease will more effectively and more expediently bring the situation under control, with less animal loss and at less financial cost. The sooner a zoonotic disease is controlled or eradicated, the less potential there is for human harm. Since the emergence of HPAI in late 2003 FAO has utilized rapid assessment missions to bring immediate technical animal health and scientific expertise to those areas infected or at high risk of being infected. The missions provided assistance, at the request of Member Nations or international organizations (with the full acceptance of the countries concerned). These missions assess the national response capacity (by assessing the national HPAI preparedness and contingency plans, and evaluating their level of functionality), assist in strengthening preventive measures and providing technical and operational support for the containment of HPAI outbreaks (see also 5.2 CMC for further discussion). Since May 2006, with the planned establishment of the CMC, FAO has worked with its partners to improve the assessment methodology and to introduce the incident command system through which the rapid assessment missions have been providing assistance to governments in Africa, Central Asia and Europe.

VIET NAM

Study and learn

“Dr Bui Quang Anh, Director-General of the Department of Animal Health, Viet Nam, recalls “FAO and OIE sent experts at the beginning of the outbreak to help us draw up an emergency plan. We had never had this problem before.” Dr Anh also says he benefited from an FAO-sponsored avian flu study trip to the Netherlands in 2003, after the disease had broken out in that country but before it had erupted in Viet Nam.”

Emergency assistance

In the context of FAO's Global Programme for AI control and eradication, ECTAD has provided immediate assistance by procuring, with SFERA funds, supplies and equipment to countries. The variable level of assistance has been based on the current AI situation, level of urgency and the countries' response capacity. A series of emergency kits were procured for countries to assist in disease surveillance and outbreak containment. This emergency assistance includes personal protective equipment, sample shipping boxes, autopsy kits, vaccine carriers, disinfectants, knapsack sprayers and avian influenza diagnostic reagents. Additionally, in an ongoing effort to assist countries in their efforts to prevent and control HPAI, FAO has developed country specific projects for interim emergency assistance in many infected countries to strengthen veterinary services and build human and physical resource capacity to appropriately respond to HPAI outbreaks. These projects are implemented within the framework of regional action plans that are consistent with the FAO/OIE Global Strategy for the Progressive Control of HPAI.

These projects are being implemented in close collaboration with FAO Representatives in recipient countries, under ECTAD's supervision. It is intended that the projects be implemented as a dynamic process with the necessary flexibility to address the extreme unpredictability of avian influenza outbreaks. The projects' management will be able to modify objectives, priorities and work plans in response to new circumstances, opportunities and challenges facing countries and regions.

Regional workshops and meetings

In addition to focused country support, FAO has trained national staff by organizing and conducting regional training workshops in contingency planning, laboratory diagnosis, epidemiology and wildlife. Following requests by Member Nations, FAO has also planned future desktop simulation workshops as a crucial tool for improving countries' contingency and operational plans for HPAI control. Training and discussions provided by FAO regional workshops and meetings builds synergy and efficiency in overall international disease control and fosters transparency and an open dialogue between neighbouring countries.

4.1 Direct country support

Since the outbreaks of HPAI in several countries in Southeast and East Asia in late 2003 and early 2004, the disease has spread rapidly to other countries in Europe, the Middle East and finally Africa in early 2006. The disease continues to be found in Asia, and worldwide there are now more than 50 countries with HPAI type H5N1 found in the domestic and/or wild bird populations. The discussion below gives a general overview of, and some examples of, FAO's direct support to countries in chronological order of the disease progression from Asia to Central Asia, the Middle East, Europe, and Africa and preparedness activities in Latin American and the Caribbean. For specific country assistance see Annex 2.

Southeast and South Asia

FAO has been working with affected countries and countries at risk throughout Asia to strengthen the capacity for early detection and early warning of HPAI outbreak. FAO has done this by reinforcing national veterinary services and through community-based field

surveillance and effective disease outbreak investigations. Furthermore, FAO's intervention has enhanced capacity for rapid and effective disease outbreak investigations and promoted public awareness and education on HPAI. FAO responded quickly to the first outbreaks in Asia by providing its own funds through TCP emergency projects to control the further spread of the disease in the Asia/Pacific region, with national projects in Cambodia, Indonesia, Lao PDR, the People's Republic of China, Pakistan and Viet Nam, as well as several projects to promote sub-regional networks. FAO's TCP projects, although relatively small in terms of their financial input, helped to initiate emergency response activities in Asia while other donor contributions were sought. The contributions to the SFERA by various donors have been timely and allowed immediate financial support for newly infected countries and countries at risk before other large donor funds were committed in 2005-2006.

Country specific contributions complemented by the SFERA funds paved the way for expanded post-emergency support in infected and at-risk Southeast Asian countries. FAO strengthened its interventions in Bangladesh, Bhutan, Cambodia, India, Indonesia, DPR Korea, Lao PDR, Mongolia, Malaysia, Maldives, Myanmar, Nepal, Papua New Guinea, the Philippines, the People's Republic of China, Sri Lanka, Thailand, Timor-Leste and Viet Nam with additional technical assistance and operational funds for rapid detection, surveillance, response and diagnostic activities. These projects have helped reduce the risk of AI, prevent transmission of disease to humans and enhance safe poultry and livestock production.

In October 2005 FAO initiated a drive to assist the Indonesian Ministry of Agriculture (MoA) to control HPAI under the auspices of a regional project funded by the United States Agency for International Development (USAID). This pilot project was focused on improving knowledge of the extent and location of HPAI in Indonesia by using participatory approaches at the grass roots level. This approach extended FAO techniques developed in the Horn of Africa and adapted in Pakistan, for the successful control of rinderpest under the Global Rinderpest Eradication Programme. These community-based programmes are part of the national strategy defined and implemented by the national authorities. While the pilot Participatory Disease Surveillance and Response (PDS/R) programme was being set up in Indonesia, FAO worked with the MoA and other stakeholders to develop a National Strategic Plan for the Progressive Control of Avian Influenza both to guide control programmes and to position the Government of Indonesia (GoI) for the Beijing Pledging Meeting in January 2006. This was a very successful exercise; the plan was adopted by the MoA and remains the country's strategic blueprint. AusAID, the Australian Government's overseas development agency, added its support to the programme and also provided other technical expertise to FAO to start making inputs to implement the strategic plan.

Beginning in 12 districts in Java, trained teams of veterinarians from provincial and district veterinary services very soon demonstrated that HPAI was far more widespread and prevalent than detected by the conventional disease reporting system. Overall, in the first phase of the project, 8.4 percent of village interviews detected the presence of HPAI (78 outbreaks) in two months. USAID contributed significant funding to expand into a second phase and the results of the pilot have been very promising. The Government of Japan is investing to considerably expand the programme through FAO, as are the World Bank, USAID and AusAID with technical guidance from FAO. By early 2007 it is anticipated that the programme will have been scaled up to cover 159 of the 440 districts in Indonesia. Other agencies and NGOs will expand the programme further, hopefully under FAO's technical coordination. WHO and the Indonesian Ministry of Health (MoH) have now embarked on using these participatory

techniques to improve human case findings; FAO is training WHO/MoH personnel thus linking FAO/MoA and WHO/MoH programs. This is a dramatic achievement in less than nine months of implementation but more needs to be done. The community-based PDS/R programme addresses the rural village/suburban poultry owners with an important small-scale production sector. However, it is only one of the tools needed to control HPAI in Indonesia and we need now to concentrate on all the other control issues. Indonesia is probably the key country in terms of managing the risk of a possible global pandemic. It has the most serious disease problem and yet it has not established a systematic control programme.

VIET NAM

Support for vaccination pays off

“In 2004–05, bird flu was ravaging Viet Nam with outbreaks in nearly every region, millions of birds culled to contain the disease, and the death of 42 people who had contracted the virus. The government, acting on technical advice from FAO, decided to vaccinate all of the country’s 220 million poultry.

Today, the success of Viet Nam’s vaccination campaign can be measured by the fact that in 2006, up to May, there had not been a single outbreak among poultry, nor had anyone died from H5N1.

Thanks to a massive information campaign, Viet Nam’s farmers were enthusiastic about vaccination. In the rural north of the country in April, hosts of backyard farmers could be seen on their scooters or trekking along village roads, carrying their chickens to be vaccinated at the vaccination point.

A Vietnamese farmer brings chickens to be vaccinated against bird flu (FAO/H. D. Nam)

In An Thuong village, north of Hanoi, District Veterinary Director Pham Cong Van explained, “We have 168 vaccination points in the district. By using posters and broadcast media we let people know where we will vaccinate and when and we make sure people are aware of the benefits of vaccination and the dangers of not getting their poultry vaccinated.”

Nguyen Thi Binh, a backyard farmer in her 60s, arrived at the vaccination point with 70 chickens and ducks, which she carried in two wicker baskets balanced by a pole over her shoulder. “My chickens and ducks are mainly food for the family, but I do sell a few of them.”

She said: “While there’s never been a case of bird flu in this village, we want to make sure to keep it that way. I’m very happy with this service from the government, especially that it’s free.”

How the vaccination campaign unfolds differs between north and south. In the north, people bring their chickens to a central vaccination point, but in the south animal health workers must go from house to house vaccinating. They are paid the equivalent of three US dollars a day plus a small amount for each bird vaccinated, paid for by FAO’s partner donor, USAID.

On FAO’s role, Dr Nam says that “from the very beginning of the first bird flu outbreaks we got a lot of help from FAO, which recruited and funded a consultant with extensive experience about the H5N1 virus from the early years when it first surfaced in China and Hong Kong. They also gave us funding from their Technical Cooperation Programme TCP, both before and during the vaccination campaign.”

FAO also provided cold boxes to ensure the cold chain of the vaccine, and protective clothing and gear for the vaccination teams. More recently, it has provided Global Positioning System (GPS) devices, which show exact latitude and longitude, to help map and study outbreaks of the disease.

Now, with advice from FAO, the country is reorganizing poultry farming to ensure better biosecurity, with a close eye on poor farmers’ livelihoods, and policies to mitigate negative consequences.”

Central Asia

ECTAD's Central Asia area covers nine countries: Afghanistan, Azerbaijan, Iran, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Uzbekistan and Turkmenistan.

At the onset of the crisis, all countries in the region were targeted with a standard FAO avian influenza emergency kit. FAO has now developed a Central Asia Regional Network project to sustain activities to combat the HPAI virus. The framework of this regional network provides for a common vision to prevent and control HPAI across the region and is consistent with the FAO/OIE Global Strategy for the Progressive Control of HPAI and with the Strategic Framework for HPAI Prevention and Control in Asia and the Pacific. SFERA funds are being programmed in support of this regional project while the Asian Development Bank is co-financing the project. Under this project, regional and country-based activities will strengthen capacity building in animal disease surveillance, reference laboratory services, rapid response, coordination, early warning procedures and impact/risk assessment (including wildlife and socio-economics). A regional coordinator for this network project, based in FAO's country office in Tehran, Iran, began work on 1 August 2006. A second expert based in Baku is covering Azerbaijan and the Caucasus. During August and September 2006, the regional coordinator and ECTAD staff conducted identification and needs assessment missions in Afghanistan, Iran, Kyrgyzstan, Pakistan and Uzbekistan. HPAI questionnaires are being developed following these missions and are due to feed into the preparation of an inception workshop which was planned from 30 October to 2 November 2006.

The main objective of this regional inception workshop is to discuss the principles and strategic considerations developed under the Global Strategy and the Strategic Framework for HPAI prevention and control in Asia and the Pacific. Those principles will lead to the promotion of surveillance activities at the regional level and to the development of a shared approach for controlling HPAI. It is likely that the requirements needed to carry out activities within a common framework will vary among countries and a sub-objective of the workshop is to identify needs to fulfill such requirements. Additionally a delegation from ECTAD comprising technical, wildlife and operations officers attended the Central Asia Regional Conference convened by the European Commission and the Asian Development Bank in Almaty, Kazakhstan on 12-13 June 2006. During the conference contacts were made with Kazakhstan and Turkmenistan, where FAO did not have ongoing animal health projects. ECTAD's participation in this event, which was made possible by SFERA funding, strengthened relations with the World Bank regarding that institution's plans in the region. SFERA funds have been used for this regional network project. This includes emergency funds for local expenditures, project management and rapid response in Afghanistan (see more details in Annex 1), the procurement of emergency kits and emergency funds for the regional coordination office establishment, recruitments and workshop organization.

Middle East and North Africa

Countries and territories under the Middle East and North Africa (MENA) cluster include the Maghreb (Algeria, Libya, Mauritania, Morocco and Tunisia), the Middle East (Egypt, Iraq, Jordan, Lebanon, Syria and West Bank/Gaza Strip), and the Arabian Peninsula (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, the United Arab Emirates and Yemen). The MENA region is at particularly high risk because of the large wild bird flocks crossing the region, with increased opportunities to spread the infection among domestic poultry due to movement of poultry, humans and fomites.

Following the HPAI outbreaks in Asia, FAO developed and implemented two regional TCP projects in the MENA region. These projects were developed to assist the countries at risk at that time (some have since reported infections of HPAI) in preparation for the disease and training for disease surveillance and to establish subregional epidemiology and laboratory networks in order to build the countries' internal, as well as the regional, capacity for HPAI detection and response.

The cluster of Jordan, West Bank Gaza Strip (WBGS), Iraq and Egypt reported HPAI outbreaks with different degrees of geographical spread in each country. The outbreaks in Jordan, Iraq and WBGS indicated a high risk for the surrounding countries. The wide spread of HPAI in Egypt and fatal human cases have shown how quickly the H5N1 virus can be transmitted and become firmly established in poultry. This led to a revision of HPAI emergency preparedeness and response in all countries of the region. No positive cases of HPAI have as yet been identified in the Maghreb cluster countries, but the reported infection cases in Europe to the north and Egypt to the east alerted to the needs to strengthen the surveillance and diagnostic capacity in this subregion.

To strengthen veterinary services and build human and physical resource capacity to respond to HPAI outbreaks in the MENA region, FAO procured and dispatched to 12 countries and territories (Algeria, Egypt, Iraq, Jordan, Lebanon, Libyan Arab Jamahiriya, Mauritania, Morocco, Syrian Arab Republic, Tunisia, WBGS and Yemen) kits of basic laboratory and veterinary supplies and equipment. Furthermore, support was also provided for addressing urgent training needs in disease surveillance and reporting, laboratory diagnostics, biosecurity practices and public awareness. This assistance amounted to US$1 8 million out of which US$1.4 million was provided through SFERA (see Annex 2 for specific country assistance).

In response to these requests and as a first step to develop the capacity required to respond rapidly to avian influenza emergency situations and manage properly the threat from the disease, a two-day regional workshop was organized in order to discuss basic requirements and strategic considerations for developing and implementing contingency plans, compensation programmes and communication activities.

At the regional level, activities were also initiated to promote regional coordination and to support socio-economic activities, farming systems, epidemiology and wild bird studies. A total of US$400 000 was earmarked for this purpose from funding sources other than the SFERA.

The required funding for the region, over two years, is estimated at US$11 274 000, which includes programme management from two platforms, regional support, national support and contingency funds to be used in countries facing new outbreaks. The budget planned through SFERA funds and other donor funding sources for the region is about US$4.6 million.

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An example of SFERA-funded regional workshops

Workshop for the Middle East and North Africa on Avian Influenza: Contingency Planning, Compensation and Communication, Beirut (Lebanon), 27-28 June 2006

"Aware of the importance of contingency planning to manage animal health emergencies, veterinary authorities in many countries within the MENA region have requested FAO's assistance to review their preparedness plans and assist them in developing a concrete plan for compensation of stock losses should an outbreak of avian influenza occur. In response to these requests and as a first step to develop the capacity required to respond rapidly to avian influenza emergency situations and manage properly the threat from the disease, a two day regional workshop was organized in order to discuss the basic requirements and the strategic considerations for developing and implementing contingency plans, developing compensation programs, and improving avian influenza communication.

The aims of the workshop were:

- to provide the attendees with the tools for contingency planning for avian influenza, based on a practical and methodological approach to identifying critical issues for developing, reviewing and implementing these plans;
- to capture requirements and options for conducting simulation exercise to test contingency plans on HPAI;
- to develop with the attendees the key areas and requirements to be addressed for developing and implementing compensation strategies;
- to discuss the principles and strategic considerations for developing, implementing, managing and evaluating communication campaigns on avian influenza; and
- to share experience and lessons learned from handling HPAI outbreaks and map out the way forward in facing the threat from avian influenza

The workshop was attended by more than 30 representatives from 15 countries from the Maghreb, Gulf States, Middle East, Sudan and Djibouti. The workshop was also attended by representatives from OIE, World Bank, the United Nations Industrial Development Organization (UNIDO), UNICEF and the United States Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS)."

Eastern Europe and the Caucasus

In Europe, FAO's presence has been limited to some Eastern Europe countries and the Balkans. The core of FAO's contribution has been technical assistance, especially in training local veterinary services in disease diagnosis and modern diagnostic techniques, and promoting countries' participation in regional networks. There is a significant regional risk of re-introduction of the disease into countries so regional networks and coordination are very important for this area.

In addition to technical assistance, FAO provided basic emergency equipment to upgrade existing laboratory capacity to Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Kosovo, the Former Yugoslav Republic of Macedonia, Moldova, Montenegro, Romania, Serbia and Ukraine. A total of eight emergency missions and ten assessment missions were undertaken in the region. Additionally FAO participated in two joint missions with the World Bank and others to Romania and Kosovo to evaluate preparedness and response capacity with regard to HPAI. FAO also contributed technical expertise to a UN country team meeting in Moldova on 28-31 August 2006 on emergency assistance and preparedness to Moldova and other countries in the region. FAO has fielded four consultants to conduct coordination and emergency activities in this region. They are present in Azerbaijan (coordinating the South Caucasus HPAI activities), Kosovo (coordinating Balkan activities), Turkey and Hungary (coordinating activities in Eastern

Europe). From Azerbaijan, an infected country with human cases, the regional coordinator for South Caucasus also supports Armenia and Georgia.

Two workshops have been organized in Azerbaijan and one is planned for Armenia. In Turkey FAO hired a consultant to develop a longer-term strategy for the country's HPAI control, restocking and biosecurity plans. An expert from FAO headquarters carried out a mission to Turkey from 30 April to 10 May 2006 on socio-economic related aspects to support the development of effective HPAI medium- and long-term strategies. SFERA funds enabled FAO, working closely together with Turkey's MoA, to achieve control and eradication of HPAI in the country within three months without widespread culling or vaccination. The regional coordinator for the Balkans is developing an adequate preparedness strategy for this region.

Africa

The main support FAO has given to Africa has been regionally based, primarily concentrating on laboratory training and networking, epidemiology, HPAI disease recognition and wildlife surveillance training. Country specific projects have benefited from SFERA funds based on whether the country has been infected or at high risk of infection. Using the experience of other important programmes such as rinderpest and through two regional TCP projects in Africa, FAO started to work on networks and transboundary animal disease surveillance. When HPAI was detected in Nigeria, Egypt and then in other parts of Africa (February 2006), FAO was able to deploy technical assistance and material support to affected countries from SFERA funds. SFERA enabled the extension of various preparedness activities initiated under the TCPs to cover most of the continent. SFERA funds were used to ensure that representatives of almost all African countries were able to participate in the inception workshops (held in January 2006) of the TCP projects. These meetings were a first opportunity for African countries to share and discuss preparedness strategies and to set the basis for regional coordination and harmonization with particular focus on poultry and wildlife surveillance and on HPAI disease diagnosis. SFERA funds also supported the participation of FAO staff members and other stakeholders in these meetings.

Three regional training workshops (one week each) on laboratory diagnostic techniques were organized in Bamako, Dakar and Nairobi. One additional regional workshop was scheduled for October 2006 in Garoua and three further workshops in other cities in Africa have been scheduled. The SFERA contributed to the payment of travel cost of participants, FAO staff and other stakeholders, and to payment of contracted training institutions. At least one person in every country in Africa will have benefited from this laboratory training.

Three regional training workshops (one week each) on HPAI epidemiology and wild bird handling were organized in Lilongwe, Ougadougou and Kigali. The SFERA contributed to the payment of travel cost of participants, FAO staff and other stakeholders and to payment of contracted training institutions.

Through contracted organizations paid under the SFERA, wild bird samples have been collected from selected sites in several countries including Chad, Ethiopia, Kenya, Malawi, Mali, Niger and Senegal. National officers were also trained in sampling techniques.

SFERA funds supported the participation of country representatives, FAO staff and other stakeholders in a strategic planning meeting for Africa held in Libreville on 20-21 March 2006 in conjunction with WHO, the United Nations Development Programme (UNDP) and other international organizations.

After HPAI was declared in Nigeria in February 2006, FAO initiated the procurement of standard sets of equipments for neighbouring countries to allow them to react promptly should an outbreak be suspected. The equipment was intended to facilitate post-mortem examinations, sampling and shipment of samples and preliminary diagnosis. Personal protective equipment was included in this 'package' of supplies. As HPAI spread to other countries in the region it was decided to procure sets of such basic equipment to all sub-Saharan countries. The package was enhanced with the addition of disinfectants and sprayers to be used in case of confirmed outbreaks. Basic laboratory supplies were also provided.

When HPAI was detected in Abidjan, Cote D'Ivoire, in view of the high risk of spread of the disease FAO immediately fielded technical assistance and supported the government's vaccination campaign by providing vaccines and other equipment to the national veterinary service as well as supporting the development of a national strategy to combat the disease.

A detailed description of activities in African countries can be found in Annex 2.

AVIAN INFLUENZA IN SUDAN

The presence of HPAI was declared in Sudan on 18 April 2006 with OIE notification following soon after. The outbreak initially involved three states, Khartoum, Gezira and River Nile in the northern part of the country. More than 200 commercial farms, mostly smallholdings, were affected. More than 1.8 million birds died or were culled. Major control measures were culling, sanitary carcass disposal, disinfection, quarantine and movement control. Vaccination was limited to breeder flocks. In early July two new outbreaks occurred in Khartoum state involving commercial farms with a total of 30 000 birds affected. In late July, for the first time, cases were reported in South Sudan in backyard flocks and were confirmed on 8 September 2006 at the OIE reference laboratory in Weybridge, UK. Investigations into the outbreak continue.

The FAO Representation in Sudan has been assisting the Government of Sudan in its effort to combat and eradicate HPAI. FAO has provided technical assistance in the form of international experts to advise the government on control measures. FAO also helped in the formation of an effective national body to coordinate control activities. Emergency kits consisting of personal protective equipment, laboratory reagents, sample collection sets and autopsy kits were provided. Three projects to address short- to medium-term needs for HPAI control have been launched with FAO as the implementing partner, collaborating with the Government of Sudan. One of these is a SFERA project funded jointly by France, Jordan, Norway, Sweden and Switzerland. This project will strengthen emergency preparedness in Sudan by funding activities for surveillance of domestic and migratory birds, communications and public awareness and laboratory improvement. Additionally an RT-PCR machine will be purchased for Sudan's laboratory, enabling samples to be tested in-country and allowing for quick confirmation of cases with a high level of sensitivity and specificity. Two other projects funded by USAID and UNDP will complement the SFERA project with activities directed at laboratory capacity strengthening, surveillance and emergency preparedness activities such as contingency planning and vaccination strategy planning.

CÔTE D'IVOIRE

"The first outbreak of HPAI in Côte d'Ivoire in Anoumabo (District of Abidjan) was officially declared on 4 May 2006 after confirmation by an OIE/FAO reference laboratory. Prior to this FAO had provided US$45 000 in SFERA funds to the FAO Representation in the country, which were used to assist the Cote d'Ivoire veterinary services to set up an active surveillance network, purchase laboratory equipment, disinfectants and laboratory reagents, produce and disseminate information/communication material and organize sensitization workshops.

In addition to this, procurement actions had been initiated by FAO headquarters to supply Côte d'Ivoire with sampling kits, autopsy kits, shipping boxes, reagents, PPE, disinfectants and sprayers for a total value of approximately US$30 000.

Following the first outbreak, the immediate response focused on fielding a FAO rapid response mission to Côte d'Ivoire to assist the Government of Côte d'Ivoire in implementing rapid control measures to contain the outbreak including culling, market closures, transport control, compensation and communication. The rapid response mission assessed the urgent needs of the country to control HPAI and US$300 000 was immediately made available through SFERA to cover these. Multiple missions by FAO staff, externally recruited consultants and a consultant seconded to FAO through an agreement with the United States Department of Agriculture followed up on the initial rapid mission and response.

Following a request from the Government of Côte d'Ivoire, FAO purchased and delivered to the government 12.1 million doses of vaccines as well as syringes and vaccine carriers for a total value of just over US$412 000 in order for the government, to carry out a vaccination campaign in the District of Abidjan and on high value farms. FAO technical assistance was provided to prepare the vaccination schemes, logistics of the vaccination campaign and to design a post-vaccination surveillance protocol.

Other significant results of FAO's investment from the SFERA in Côte d'Ivoire include: repair of the cold rooms of the national veterinary laboratory in Bingerville (LANADA); reinforcement of the Bingerville laboratory's diagnostic capacity through the supply of laboratory material; preparation, in collaboration with national authorities, of a detailed six-month action plan defining urgent activities to be carried out including a budget, a work plan and a matrix identifying contributions by various donors to avoid duplication and set priorities; training of personnel to carry out the vaccination campaign; training of personnel to carry out culling activities as well as disinfection of infected premises; the production of 12 000 posters to build public awareness; and the development of an HPAI country website (www.infogrippe-ci.org).

Overall, in response to the crisis in Côte d'Ivoire, FAO has disbursed nearly US$800 000 from SFERA funds to support the country's response to HPAI. FAO's intervention has also involved liaising with the donor community to secure funds for further assistance to Côte d'Ivoire. In this context FAO was able to assist the Government in designing and formulating a project with a budget of €600 000 (US$734 537) for funding from the European Community."

Latin America and the Caribbean

Continuing a proactive approach to HPAI prevention, FAO allocated US$2 million for the implementation of four TCP projects in May 2006 to Latin American and Caribbean countries, and used additional funding from SFERA to support the activities planned within the scope of the four TCP regional projects. This additional funding made it possible to increase the number of participants from the beneficiary countries attending training workshops, as well as enabling the procurement of equipment and supplies deemed essential for successful implementation of project activities.

These activities were executed in close collaboration with other international organizations including OIE, the *Organismo Internacional Regional de Sanidad Agropecuaria* (OIRSA), the Inter-American Institute for Cooperation on Agriculture (IICA), the Caribbean Community and Common Market (CARICOM) and the Pan American Health Organization (PAHO).

SFERA funding supported the elaboration, translation and publication of various documents on avian influenza. A document entitled "Preparing for Highly Pathogenic Avian Influenza. A Manual for Countries at Risk" was translated into Spanish and it is available on the FAO Regional Office for Latin America and the Caribbean's website (http://www.rlc.fao.org/prior/segalim/animal/aviar/pdf/Manualliap2.pdf). A handbook entitled "Guide to the prevention and control of avian flu in small-scale poultry farming in Latin America and the Caribbean" was published in Spanish.

A regional website on avian influenza issues was designed and is currently online. The website contains updated information about the activities undertaken within the TCP regional projects as well as several documents and news. The website is planned to be used as a communication platform among the National Coordinators and the project staff. The website can be found at http://www.rlc.fao.org/prior/segalim/animal/aviar. SFERA funds supported the design, maintenance and regular updates of this activity.

The participation of various FAO and national experts in several regional conferences and workshops has also been supported by SFERA

SFERA funds were allocated for the purchase of equipment, and collaboration in the field of public communication and awareness with "Interagency Avian and Pandemic Influenza Communication Task Force for the Americas" held at PAHO Headquarters in Washington (24-25 July 2006). SFERA supported field activities of FAO emergency operations officers, such as field visits and participation in the launching workshops of the TCP regional projects in Buenos Aires, San Salvador, Lima and Bridgetown.

4.2 ECTAD regional coordination

Regional coordination is vital to the success of controlling and eradicating not only HPAI but other transboundary animal diseases (TADs). These diseases do not acknowledge borders. Disease in one country affects not only the animal health and potentially the human health of surrounding countries, it also affects the economies of surrounding countries via regional markets and trade flows. Therefore it is vital that there is a concerted organized effort of networking between countries and organizations. Lessons learned from a disease experience in one country are a valuable tool for other countries' preparedness and response to the same disease. This can only be accomplished when there is a transparent exchange of disease information among countries and a collaboration of efforts across areas. This collaboration across borders and boundaries harmonizes national priorities in disease control efforts (enabling all communities to prevent, control or eradicate TADs) and builds synergy and efficiency in terms of laboratory infrastructure, epidemiological expertise and overall disease control. It is also a very important component of the mid- and long-term implementation of the FAO/OIE Global Programme.

TURKEY/NIGERIA

Think regional to act local

“In order to predict disease spread, Turkey needed help with regional information, according to Dr Musa Arik, head of Animal Health Services: “FAO helped us understand the bird flu situation in countries that border Turkey, something we could not always do on our own.”

In West Africa, working with the African Union’s Programme for the Control of Epizootics (PACE), FAO provided funding from its own resources to set up specific regional networks of laboratories and surveillance teams, and organized regional workshops on bird flu control, exchange of animal health personnel between countries and information sharing.

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NIGERIA

Lessons from elsewhere

“In Nigeria in 2006, animal health authorities profited from experiences brought to their attention by FAO from distant Asia. “FAO plays a part in bringing advice from other continents,” says Dr Junaidu Maina, Acting Director of the Federal Department of Livestock and Pest Control Services. “For example, they alerted us to the fact that we will need an ‘exit strategy’ to help some farmers hit by bird flu who will not return to chicken keeping.” He praises FAO for its timely technical and policy advice and technical assistance such as training of 600 animal health technicians and the provision of protective clothing, disinfectant and lab materials.

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4.2.1 Support for ECTAD regional centres and regional animal health centres

The establishment of these combined technical and operational units is intended to support work on TADs in general and HPAI control efforts at a regional and national level in particular. A decentralized regional substructure for ECTAD, with regional animal health centres based in various locations around the world, is at the heart of the Global Programme and the FAO/OIE Global Framework on Transboundary Animal Diseases (GF-TADs) on which it was based. SFERA funds have been used for these regional activities. There is currently one regional ECTAD office fully operational, in Bangkok, which coordinates and implements FAO's HPAI related activities in South and East Asia. Another is now open in Bamako. Centres will soon open in Beirut, Tunis, Gaborone, Ankara and Nairobi; others are planned for Latin America and Eastern Europe. These units are being established in partnership with OIE and in Africa with the African Union's Inter-African Bureau for Animal Resources (IBAR) as well. These centres will enhance ECTAD's ability to monitor the disease situation, build capacity, take pre-emptive steps to prevent infection and help countries to manage outbreaks. They will be centres of technical and operational excellence, feeding into and responding to ECTAD headquarters. A key role of these centres will be to establish and strengthen regional networks of national diagnostic laboratories and epidemiological surveillance teams. These networks will themselves contain centres of expertise for studies on socioeconomic and policy issues, industry rehabilitation and structural change. Additionally for mid- and long-term efforts to effectively combat HPAI (and future TADs) most FAO training activities are regionally based.

This decentralized structure will reduce the necessity for regional and sub-regional offices to refer directly to ECTAD for administrative and basic operational matters, and allow them to direct HPAI operations as appropriate, based on overall management and policy guidelines from ECTAD at FAO headquarters. The centres will enable ECTAD to be even more responsive to the changing global disease situation, working with regional and national structures to deliver timely technical and operational inputs in support of the overall goals of the Global Programme. Furthermore, as ECTAD's decentralized activity grows, the Global Programme foresees the CMC at headquarters being replicated on a smaller scale within the framework of the regional animal health centres.

These regional animal health centres will enable ECTAD to be even more responsive to the changing global disease situation, working with regional and national structures to deliver timely technical and operational inputs in support of the overall goals of the Global Programme.

4.2.2 Epidemio-surveillance and laboratory networks

Establishment of the networks

Because of the transboundary nature of HPAI a regional approach is necessary in order to focus assistance to infected countries and countries at risk. This has been made possible through the establishment of networks for avian influenza surveillance as part of the FAO-ECTAD strategy to control HPAI. The objective of these networks is to improve the quality of and the transparency of information. They accomplish this by strengthening and

harmonizing diagnostic and surveillance capacities at national and regional levels and improving dialogue, information sharing and the common efforts of countries within a region.

Since 2004, FAO has worked with affected and at risk countries in Asia to facilitate information sharing, networking and local capacity building, using emergency funding through TCP projects and funds from FAO's regular programmes and projects. FAO has supported countries in Asia through the creation of sub-regional epidemiologic surveillance and diagnostic networks with the aim to rapidly detect, diagnose, control and identify avian influenza risk factors with the aim to prevent future outbreaks.

Considering the spread of HPAI to other regions outside Asia and in order to provide emergency assistance to countries of these regions at risk, sub-regional TCPs for have been implemented since early January 2006 for the early detection and control of HPAI in North, West, East and Southern Africa, the Middle East, Eastern Europe and the Caucasus region and Latin America. These projects focus on the improvement of surveillance (including wildlife issues), laboratory diagnosis, set up/strengthening of laboratory networks and assistance in the development of contingency plans.

In the framework of these TCPs, sub-regional training workshops were organized on two mains issues:

- Workshops on AI epidemiology and wild bird handling were organized in Malawi, Tunisia, Burkina Faso, Jordan, Croatia and Ukraine for countries participating in the respective TCPs. Training was conducted by FAO's collaborating centres - Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD) and the Royal Veterinary College - for veterinary and wildlife staff of the countries. It included epidemiological surveillance strategies, risk management and practical field exercises.
- Workshops on laboratory diagnostic techniques including sampling, shipment serology, virology and molecular diagnosis. This training was conducted in Iran, Rabat, Budapest, Dakar and Nairobi.

Thanks to SFERA funds, FAO was able to respond quickly to the increasing demand of countries which were initially not part of the regional TCPs and to extend these two training courses to countries in the Central African region through workshops in Rwanda and Cameroon.

The designation of regional support laboratories for HPAI diagnosis allows immediate assistance to countries in the subregion in the diagnosis of HPAI. This has started in West Africa and will need to be finalized for the other sub-regions. These regional laboratories will need to be upgraded to be able to cope with large amounts of samples and will need to undergo regular performance testing.

Regional wild bird surveillance within the TCPs enabled samples to be taken on wild birds in areas at risk and further sampling was made possible through SFERA funds (see also 5.4.2 wild bird surveillance).

Epidemiological studies carried out at the regional level through the networks

At present, the efforts in risk assessment of HPAI and response strategies are to a large degree hampered by:

- the lack of comprehensive understanding of the ecology of AI, particularly in relation to agricultural systems, poultry, wild birds, biophysical and biochemical environments; and

- the fact that geospatial datasets used for risk assessment and reduction strategies are often out-of-date and at coarse spatial (e.g. national or provincial) and temporal (e.g. at annual) resolutions.

Geospatial technology (remote sensing, geographical information system, and global positioning system) and the emerging Global Earth Observation System of Systems (GEOSS) could potentially play an important role in providing dynamic and real-time information to support risk assessment and early warning of HPAI.

Four challenging issues have been identified and need to be addressed for better understanding of the ecology of HPAI, namely:

- agricultural systems (e.g. cropping intensity, crop calendar, paddy rice, irrigation) and domestic poultry distribution;

- wetlands distribution and seasonality, and distribution of small water bodies;

- migration pathways and timing of wild waterfowls; and

- land surface temperature that affects survival rate of HPAI virus and triggers migration of wild waterfowls.

SFERA funds have been utilized to address some of these challenges and are building on the work accomplished by the TCP projects. The SFERA funds have been used to sign two Letters of Agreement (LoAs) with specialized institutions in remote sensing and ecology to pave the way for a more in-depth analysis of the ecology of HPAI in the context of agricultural systems, poultry, wild waterfowl migration and biophysical environment for Asian countries (e.g. Southeast China, Indonesia, Thailand and Viet Nam) and, depending on data availability, also in Nigeria. These LoAs were signed in April and May 2006 respectively.

The first LoA is with the Université Libre de Bruxelles in Brussels, Belgium to integrate geospatial databases on rice, cropping, wetlands, water bodies, land surface temperature, poultry and wild birds (with the aim to construct a spatially explicit epidemiological model) and to define how this model may be applied to support early warning of HPAI in Asia. The second LoA is with the University of New Hampshire in the United States to undertake remote sensing based avian influenza risk assessment through the development of geospatial datasets of agriculture, wetlands and biophysical variables, and to apply this data in risk analysis.

By gathering and using outbreak data and by analysis and modeling of remote sensing data, experts can better understand what ecosystems are more likely to harbour HPAI. The overall goal is to better understand the spatial patterns and temporal dynamics of HPAI outbreaks and

to develop a data-model integration system that provides ecology-based risk assessment and early warning of HPAI.

In an ongoing effort to address some of these issues, SFERA funds supported a workshop of 30 participants in Bangkok in July 2006 to review the spatial and temporal distribution of HPAI outbreaks in Thailand in relation to the poultry production environment and agro-ecological conditions, and to explore the use of these tools in future risk assessment and targeted surveillance and control in Asia and the Pacific.

As a follow up to the Bangkok workshop and utilizing the information gained with the two LoAs in remote sensing and ecology, a workshop was scheduled to be held in China in November 2006. The goal of both these workshops and the two LoAs was to define how model results may be applied in real time early warning at both country level and internationally, and geospatial data in risk analysis can be integrated in order to potentially predict geographical hotspots and 'hot-times' of HPAI. FAO will be responsible for convening a third follow-up technical workshop in Rome towards the end of the projects in order to integrate the HPAI predictions of hotspots and hot-times in FAO's early warning functions.

While the above mentioned projects will significantly enhance the international community's efforts to understand and predict HPAI, more funds are needed to improve epidemiology networks, particularly in the areas of more surveillance in specific at risk countries (e.g. China, Indonesia, Nigeria, Africa), to conduct more field investigations and in tracking wild bird migration.

4.2.3 Socio-economic activities

Estimates of global HPAI loss from the outbreaks since 2003 run into billions of dollars (Commission of the European Communities: "Impact Assessment Avian Influenza (COM(2005)171). When planning and executing a comprehensive HPAI control programme in a country or a region the social and economic dimensions of the entire process need to be taken into account. Decisions made at each stage of an HPAI programme, from prevention of the disease through to the entire control and eradication response, have the potential to significantly affect livelihoods and to have a negative impact on the long term sustainability of the poultry sector. These socio-economic issues fall into four broad categories: social and economic impacts of HPAI outbreaks and control measures at all levels; strategies, costs and financing of AI control; trade impacts and market shocks; and strategies and technical guidelines for safe poultry production.

At the International Pledging Conference on Avian and Human Influenza held in Beijing in January 2006, US$2.5 million was identified as needed for socio-economic issues as part of FAO's Global Programme over a three-year period to cover mostly Asia. To date US$1 079 895 has been pledged. Following the arrival of HPAI in Africa, the anticipated budget needs for socio-economic activities were updated to US$6 million but this figure does not reflect the current estimated needs. This issue will be discussed at the Senior Officers' Meeting and pledging conference in Bamako, Mali, on 6-8 December 2006.

In 2005 ECTAD convened a Rome-based working group on socio-economics, policy and farming systems. This multidisciplinary team is made up of a core group of FAO, WFP and

IFAD experts in livestock economics, policy, markets, trade, poultry production, livelihoods, food security, communication and knowledge management who work in collaboration with others in the UN System, the donor community, NGOs, the private sector, national counterparts and expert consultants to address the socio-economic and policy issues related to HPAI. The group has since been expanded to include regional and country level membership.

The mandate of the working group is to assess the human dimensions of HPAI impact on markets, households, livelihoods (with particular attention on the small poultry producer), food security, and the related institutional challenges of delivering sustainable and cost-effective disease control within poultry production and marketing systems that are evolving and, in some cases, systematically being restructured. While the immediate focus has been on emergency response, the working group increasingly aims to assess and anticipate the longer term implications of HPAI disease control measures. Responding to specific needs that are raised from member countries and other partners, this working group undertakes various studies, and reviews as well as prepares technical guidelines and recommendations. This is all with the goal in mind of assessing information that affects everyone in the event of HPAI from the small producer to the community, country or region, and then all stakeholders, including the global community, using that information to mitigate and minimize the socio-economic impacts on current and future HPAI affected areas.

SFERA funds have been directly contributing and playing a catalytic role for the implementation of various activities under four broad clusters of outputs:

1. Addressing the social and economic impacts of HPAI outbreaks and control measures at all levels. The main activities of this cluster are:

- reports on livelihoods and equity impacts, particularly for small scale producers and those dependent on the poultry sector;
- analysis of food security and nutrition impacts;
- advice on approaches to rehabilitation; and
- analysis of impacts of possible changes in the structure of the sector.

Example: A report was prepared exploring the food security impacts of HPAI and its control. This was used in preparation of a paper for the Committee on World Food Security (32nd session) Rome, 30 October – 4 November 2006. This can be found at the following link: ftp://ftp.fao.org/docrep/fao/meeting/011/j8096e.pdf.

2. Analyzing costs and financing of avian influenza control strategies. The main activities of this cluster are:

- advice on compensation strategies appropriate to national situations;
- advice on alternative livelihoods support when compensation programmes alone are insufficient; and
- costs and funding mechanisms for HPAI control strategies using alternative approaches to control, and with a range of assumptions about disease epidemiology.

Example: Guidelines have been developed for designing a compensation strategy.
Example: Multiple presentations have been made on compensation in the context of regional discussions on good practice. Some specific presentations are: one made at an APEC meeting in Viet Nam to a group of veterinary officers from Asian countries and one made at a regional workshop in Lima, Peru to stakeholders from Latin America animal health systems and the poultry sector. Regional workshops have also been held in West Africa and the Middle East. SFERA funds pay for the attendance of FAO's expert on compensation at these workshops.

Example: Country reports advising on design and revision of compensation strategies, based on missions to individual countries that have requested assistance. Missions have been made to Kosovo, Nigeria, Niger, Mauritania, WBGS and Serbia.
Example: An e-consultation is under way on compensation and the report will be available by the end of October 2006. More than 100 individuals have signed up to the e-consultation, representing every continent. Members are from research bodies, 15 different governments from developed and developing countries, including several chief veterinary officers, inter-governmental organizations and non-governmental organizations, product boards and industry associations. The consultation aims to gather practical and operational experience on compensation processes. The results will be published on the FAO website and will contribute to a joint FAO/World Bank paper on issues and good practices in HPAI control for the use of animal health planners and decision makers.

3. Assessing the trade impacts and market shocks of HPAI and other joint activities such as:

- reviewing national and local shocks in a variety of markets, in terms of price changes and demand fluctuation;
- suggesting measures that could be taken to mitigate local and national shocks; and
- assessments of economic implications of international market shocks, in terms of trade flows and price fluctuations.

Example: A case study on market shocks in Egypt and one in Turkey will be completed by November 2006. Additionally a conceptual paper will be ready for a November symposium to be held in Rome on Markets and Trade Dimensions of Avian Influenza Prevention and Control, within the InterGovernment Group (ICG) on Meat and Dairy. The ICG includes a wide range of industry representatives and the symposium will explore the extent to which market shocks from disease outbreaks can, or cannot, be mitigated by market practices and government policies.

4. Formulating strategies and technical guidelines for a safe poultry production. The main activities of this cluster are to:

- review the poultry sector structure, the poultry farming systems, the functioning of the predominant poultry market chains and their importance to producers and different stakeholders (including rural communities);
- support the epidemiology/disease intelligence group to identify risks and linkages along the poultry market chain (including the production, distribution and marketing of live poultry and poultry products) that may be critical for HPAI infection of poultry and humans; and
- assess the socio-economic impacts of poultry sector restructuring on small poultry producers and provide guidance in formulating appropriate policy recommendations for HPAI control that respect the needs and conditions of these producers.
- investigate and develop strategies for arranging the conservation and protection from culling measures of valuable indigenous poultry genetic resources.
- support the animal health group in identifying opportunities and promote community involvement in the improvement of bio security for AI control and prevention strategies and raise awareness about the disease through community structures.
- Support the animal health group in developing technical guidelines on measures to reduce health risks from smallholders' poultry production and provide technical guidance for a safe poultry production across various farming systems, marketing and processing facilities.

In particular the use of SFERA funds has facilitated the production of some technical guidelines on practical and affordable husbandry methods for smallholders and safe and affordable poultry handling for traders and market operators, as well as enabled national poultry sector reviews in seven countries (Ghana, Nigeria, Togo, Benin, Mali, Senegal, and Cameroon), a regional poultry review for Western Africa and a duck farming systems review in Viet Nam and Indonesia.
Example: Following impact studies in Viet Nam, technical guides in local language and in English were also developed that propose technical advice in order to upgrade the husbandry practices on the farms and households of small poultry producers. The guides propose various scenarios in relation to the threat or the presence of HPAI, and give very practical and simple messages to protect poultry flocks from the disease. Duck farming systems have been pointed out as being an important threat for the circulation of the HPAI. Therefore a particular study was conducted in Vietnam and in Indonesia in order to look more in depth at these duck husbandry practices (duck free range systems and mixed species farming systems) and analyze where exactly are risky production practices in relation to HPAI disease. The results of this study can be found at the following link: http://giitest.fao.org/Avianflu/

Most of the SFERA -funded socio-economic projects mentioned above obtained information on specific countries and have looked at the impacts of HPAI on all stakeholders along the chain, but especially how HPAI outbreaks affect the most vulnerable. This information is useful to understand what a country goes through when dealing with a zoonotic disease such as HPAI. With country information gleaned from some projects, such as Viet Nam, FAO and the international community has been able to apply the lessons learned more broadly to regions. In essence national experience builds on regional approaches, which in turn contribute to global guidance that could potentially be used anywhere there are new outbreaks of HPAI and ultimately other zoonotic TADs.

In addition to the above activities of the working group, a visit was made to UNSIC in New York to establish the basis for a UN knowledge network on avian influenza socio-economics. The objective is to improve effectiveness of collaboration within the UN system by sharing of knowledge on activities, methods and outputs, to the benefit of countries and development partners. The network has recently been launched as a restricted email list. In October/November 2006 FAO will use SFERA funds to hire a consultant to develop a suitable platform so that this network can be expanded to a wider audience.

ECTAD has utilized funds other than SFERA funds for socio-economic activities. The earliest HPAI socio-economic study, begun in 2004, utilized FAO's TCP funds to look at impacts and possible long-term consequences of the first wave of HPAI outbreaks in five countries. Findings from this study, together with a workshop funded by FAO's regional programme in December 2004, have guided the design of the socio-economics part of the Global Programme. A project funded by Germany has just begun. It will be used to examine livelihoods impacts of HPAI and its control as well as biodiversity issues in three countries. The countries and studies are being selected to build on work funded by SFERA and others in areas where more detailed analysis is needed.

While much has been learned on socio-economic issues, more work is needed in this area, including:

- continuing to work on the issue of compensation with more countries;
- developing more tools to help the small poultry producer especially in the areas of helping them understand HPAI, and how to best reach and communicate with them;

- exploring gender issues at the household level in order to provide better access to services, information and training; assess the socio-economic impacts of poultry sector restructuring on small poultry producers and provide guidance in formulating appropriate policy recommendations for HPAI control strategy implementation that respect the needs and conditions of these producers;
- providing support to animal health groups by gaining a clearer picture of poultry biosecurity in affected countries with the goal of helping producers upgrade and improve their facilities;
- identifying opportunities and promote community involvement in the improvement of biosecurity for avian influenza control and prevention strategies and raise awareness about the disease through community structures;
- developing technical guidelines on measures to reduce health risks from smallholders' poultry production and provide technical guidance for a safe poultry production across various farming systems, marketing and processing facilities; and
- working with countries moving into long-term HPAI in order to help them plan their investment and mitigate some of the impact on all stakeholders.

TURKEY

UN partners hone art of grassroots communication

ANKARA, TURKEY – When bird flu first broke out, FAO and UNICEF swung into action honing messages designed to save the lives of lower-income women and children, the people most likely to be raising poultry at home. FAO provided specialized knowledge about bird flu, while UNICEF contributed years of communication expertise gained through its grassroots programmes to improve children's health and education.

Promoting life-saving behaviour is not as simple as broadcasting a message or handing out a brochure. It is important that authorities have a unified message and know how to deliver that message to the people who most need it. Different styles and channels of communication may be needed to reach people in distant places, and those with different social and cultural backgrounds. Too many messages can result in confusion.

According to Sema Hosta, UNICEF's communication officer, "The only medium to reach all Turkish families is television. Often children will relay the messages they see on television to their parents who may not be watching. Some adults in remote areas of the country may not even understand Turkish all that well and in that case reaching them through their children becomes even more crucial."

The communication programme works with government ministries on Turkey's Child Intersectoral Board, other relevant government ministries, the national broadcaster, the Turkish Red Crescent and non-governmental organizations.

4.2.4 Communication activities

As part of a coherent UN System response, UNICEF has been charged with taking the global lead on communications and other supportive measures that inform, educate and enable families and communities to protect themselves from illness and death caused by HPAI. UNICEF's communications activities are guided by expertise provided by FAO, WHO and UNSIC. To save lives and protect livelihoods, FAO considers communication an integral component of the global AI prevention and control strategy. FAO's activities play a fundamental role in the international struggle to avoid, or at least prepare for, a human pandemic and therefore works closely with the other UN agencies to ensure that its messages do not contradict but rather complement the others. In terms of public information, FAO's basic message is that the response to the crisis should be centred on containing, if not eradicating, the disease among animals as the best way of reducing the global risk to human health, and of protecting the livelihoods of millions of small farmers. In this context, FAO is working closely with OIE.

ECTAD's communication team has been working on the design of a strategic communication framework and plan in support of the FAO's Global Programme. The plan emphasizes the important role communication can play in achieving the objectives of the technical AI programme. For its own regional and subregional offices, FAO has prepared key messages for different audiences – ranging from poultry keepers, veterinarians, traders and culling teams to the general public – regarding recommended best practices to follow that will minimize the risk of spreading avian flu. These messages are intended as advice concerning the types of messages that should be used by countries and, where necessary, adapted to fit local situations.

In the context of cooperation with other agencies, FAO, WHO and UNICEF organized an *ad hoc* meeting in Geneva in March 2006 to identify priority behaviors and the necessary enabling factors, in the campaign to control avian flu. The meeting agreed that communication about behavioral interventions would have to be adjusted as more evidence becomes available regarding the spread of the virus in birds and the specific risk factors that have led to human infection.

FAO has recently recruited and established two teams of communication specialists, one at FAO headquarters in Rome, and the other at the FAO Regional Office for Asia-Pacific in Bangkok (RAP). The headquarters team consists of a Communication for Development specialist, an information officer, and a web specialist. The RAP team consists of a reporting and communication officer and an information officer (currently assigned to Jakarta). The teams have developed and initiated several streams of advocacy and communication work, focusing on animal health issues, AI prevention and control measures, and socio-economics/livelihoods issues. Key activities to date, including work-in-progress, are:

- development and dissemination of key messages and information on the prevention and control of HPAI, with a focus on the most at risk populations, as well as the media, frontline extension-workers, the scientific community, and Ministries of Agriculture and Livestock.
- participating in backstopping and technical assistance missions; rapid country assessment missions; and providing communication input to training workshops.
- building and strengthening partnerships with UNICEF, WHO, the World Bank, NGOs, specialized communication agencies, poultry producers, farmer associations and communication teams of Ministries of Agriculture in various countries.

- providing technical input and partnering in the development of inter-agency communication toolkits, guides and materials.
- contributing to the development of communication research/evaluation methodologies, and community based surveys and participatory action research studies on AI; and
- development of a global strategic communication framework and plan based on emerging lessons, to support the FAO-OIE Global Strategy.

To date, these have primarily been supportive activities, of an emergency nature, driven by requests from a number of countries in various regions (Southeast Asia, Africa, Central Asia, and Europe), and other AI partners (including UNICEF, WHO and the World Bank). SFERA funds have been utilized for some of the above activities.

The supportive interventions have helped countries, and Ministries of Agriculture in particular, to recognize the need to strengthen rapidly communication capacities, and as far as possible, develop communication strategies which are evidence-based. Much work remains to be done in the area of communications. There is a need to enhance public engagement in order to stop HPAI at its source and thereby potentially avoid a human pandemic. Most national communication plans have been in the nature of outbreak crisis response and evidence has shown that perception of risk drops rapidly after the immediate crisis is over. Communication strategies are needed to address animal health issues (especially regarding biosecurity and production practices that control the spread of HPAI from flock to flock and wild birds to domestic poultry), deep-rooted socio-cultural and livelihood practices and longer-term socio-economic implications. All these messages need to be effectively delivered and consistently communicated to those who need it most.

Working towards this goal, FAO aims to strengthen its communications team through the deployment of additional resources (human and financial), as well as expanding the scope of its strategic partnership with UNICEF, WHO and other specialist communication agencies, at global, regional and national levels, to provide technical assistance to high-priority countries in the development, implementation, management and evaluation of large-scale communication campaigns.

5. SFERA support for global coordination

GLOBAL

FAO's global reach

"As the epidemic went global, FAO's strengths as an international organization became evident: experienced multilingual staff, rosters of international experts and offices in 90 countries. It has tried to keep ahead of the disease, preparing countries as far away as Latin America for possible outbreaks. In the period from January 2004 to October 2006, FAO fielded a total of 392 missions to assist countries in confronting bird flu. FAO plays a strong role in promoting regional cooperation as well."

5.1 Support for ECTAD headquarters and Technical Supervisory Services (TSS)

In November 2004, the FAO Director-General established ECTAD, the Emergency Centre for Transboundary Animal Diseases. ECTAD is under the leadership of the Chief of the Animal

Health Service, who is also the Organization's Chief Veterinary Officer (CVO). All staff from the Animal Production and Health Division (AGA) and from the Emergency Operations and Rehabilitation Division (TCE) directly concerned with HPAI operate under the overall guidance and management of the CVO.

AGA is a multidisciplinary unit with a wide range of technical expertise in animal health and related matters. This expertise is made available to countries requesting ECTAD's assistance. AGA's role in ECTAD is to help Member Nations to develop strategies for the prevention and progressive control of animal diseases. AGA does this by liaising with national and regional animal health authorities, assessing national capacities through field presence and missions, analyzing disease intelligence and advising on livelihood and socio-economic issues. AGA's multidisciplinary team is at the heart of the strategic, programmatic approach represented by the Global Programme.

The AI crisis caused a surge in requests for FAO technical assistance and technical capacity. Since 2004 most of the technical staff of AGA have been working primarily on HPAI response, in addition to their regular programming responsibilities on other important TADs. Technical Supervisory Services (TSS) is utilized to reimburse the costs of the regular programming staff that are, in addition to their regular duties, assisting with HPAI response.

TCE is the programming and operating arm of FAO, responsible for the planning, implementation and execution of emergency operations and rehabilitation activities. In conjunction with their technical colleagues, operations staff at headquarters and in the field devise projects, solicit donor funding and organize and oversee operational activities.

ECTAD is based at FAO headquarters in Rome. This unified operational and technical command is essential. It enables effective coordination of response and preparedness operations against HPAI outbreaks, ensures a consistent approach to country assistance and donor relations, and strengthens FAO's working relationship with partner organizations. This consistency and coordination provided by ECTAD enables FAO to significantly contribute to and enhance the global community's efforts of controlling and eradicating this disease and potentially avoiding a human pandemic.

FAO has the lead role within the UN System for the animal health component of the global effort against avian influenza. As such, the Organization plays a crucial part in ensuring that the disease is progressively controlled in animals so that the possibility of a human pandemic is limited. FAO's objective is to provide leadership, in close collaboration with OIE, in the coordination of donors and agencies, collaboration and communication with all stakeholders and technical and resource support to regions and countries undertaking HPAI control. Both organizations' role in global coordination is guided by their General Agreement of May 2004, which established GF-TADs.

While the majority of donor funds received go directly into supporting country preparedness and response efforts at a regional and national level, approximately 13 percent of Global Programme funding is allocated to assist FAO in meeting global coordination objectives. The Global Programme is regularly revised to take account of the evolving disease situation and progress in the international response. A workshop involving senior managers from FAO and OIE will take place in late 2006 to update the Global Strategy and Global Programme ahead of the Senior Officers' Meeting and pledging conference in Bamako, Mali, on 6-8 December 2006.

FAO's success in successfully implementing the Global Programme depends on attracting highly skilled experts to work with and on behalf of ECTAD. The Organization has developed a cadre of technical and operational experts to undertake international rapid response and assessment missions to evaluate veterinary services, develop projects in conjunction with Member Nations and donors and provide technical advice to national governments and regional organizations to enable them to plan for a variety of scenarios.

SFERA funds have been used to support FAO's role in global coordination, enabling FAO and ECTAD to recruit international and national experts including veterinarians, livestock production specialists, social economists, wildlife specialists, and communications specialists, to name a few, as well as operational staff. Additionally SFERA resources have been deployed to support the associated costs of staff seconded from Member Nations.

Furthermore, ECTAD includes communications and information specialists, who facilitate information exchange between donors, agencies, regional organizations, national governments and the international community. FAO seeks to ensure that the general public and specific risk groups obtain accurate information on HPAI, paying particular attention to influencing human behavior with the aim of reducing the risks of HPAI spread among animals and from animals to humans. ECTAD uses several tools in pursuit of this objective. A website devoted to HPAI has been developed as a sub-site of the Organization's home page. ECTAD regularly produces and disseminates technical and operational material, including FAO in Action, AIDE News, press releases, disease updates and operational briefing notes. These products are aimed at diverse audiences, including donors, Member Nations and FAO's partners.

FAO seeks to enhance its global role in coordination by promoting and supporting applied research on global questions and issues to improve the quality of technical tools, methods and strategies available to decision makers for combating HPAI and rehabilitating poultry industries. Since the onset of the emergency, ECTAD staff have organized and participated in a number of key international meetings to share technical expertise and best practice. In May 2006, FAO and OIE organized the International Scientific Conference on Avian Influenza and Wild Birds. The conference, which was hosted by FAO in Rome, brought together more than 300 veterinarians, virologists and conservationists from around the world. They debated the role that wild birds play in the transmission of disease and related issues such as migratory bird flyways, poultry farming systems and global trade. They concluded that the answer to the cycle of avian flu outbreaks lies in a combination of all three. Because of this conference the collective group of scientists gained better insight into possible mechanisms by which H5N1 HPAI is spread and what role wild birds play in the movement of the disease. Most importantly, this meeting identified gaps in scientific information related to wildlife and avian influenza virus and as a result, has provided FAO and other partners a better understanding of infrastructure, surveillance and research needs related to wild birds and this disease. SFERA funds were used to support the organization of the meeting, and to pay for the participation of experts and officials from many countries affected by or at risk from avian influenza.

HPAI has been the subject of many international conferences. In addition to FAO's central role at the conferences in Geneva, Beijing and Vienna, FAO experts have participated in a large number of other international meetings in order to provide technical expertise in the international efforts to combat HPAI, to explain their role in the animal health component of controlling this disease, with the ultimate goal of avoiding a human pandemic and advocating

for needs of the worldwide animal health sector, small producer and communities affected by HPAI. The Organization is currently involved in planning two major conferences. An international conference on vaccination, hosted by FAO in collaboration with OIE, is scheduled for March 2007, and is intended as a follow-up to the conference on wild birds in May 2006. FAO staff is also integrally involved in the preparation of the Bamako pledging conference, advising IBAR on the development and articulation of a strategic plan for the continent. This process involves several missions throughout Africa in the latter part of 2006 to consult widely and better define funding needs. Additionally FAO experts will participate in a special event during the Committee on World Food Security (33rd Session) in Rome in early November 2006. HPAI has had a direct effect in terms of poultry death and culling, and has also affected the poultry market. FAO experts are working to understand the possible impact of HPAI on poultry producers and consumers, as well as other stakeholders groups that are poor, so that those groups vulnerable to food insecurity are identified and the situation is properly addressed.

5.2 Crisis Management Centre

The main purpose of the CMC is to enable FAO and OIE to strengthen their joint capacity for rapid assessments and responses to assist beneficiary countries which suffer outbreaks of HPAI and other transboundary animal diseases (TADs), as well as countries threatened by outbreaks. The CMC is being set up to have the capacity to be operational 24 hours a day, seven days a week, when needed. It currently comprises a rapid deployment team (RDT) of six experts that can be deployed to countries within a short time period. This core team can be strengthened when needed by a roster of international experts. The RDT provides assistance, at the request of Member Nations or international organizations (with the full acceptance of the countries concerned), assessing the national response capacity and assisting in strengthening preventive measures and providing technical and operational support for the containment of HPAI outbreaks. The CMC operates in collaboration with the WHO, and emergency missions to countries integrate animal and human dimensions as appropriate.

The CMC is based around an incident room allowing FAO to gather, consolidate and analyze disease information, determine the current disease risk and to communicate and coordinate with OIE, WHO and other partner organizations and the regional animal health centres. The official inauguration of the CMC occurred on 12 October 2006.

The CMC is responsible for reviewing and verifying requests from countries, identifying suitable experts, defining terms of reference for individuals and missions, hiring individuals, briefing them, organizing travel and obtaining security clearance, and supporting them while they perform short to medium term emergency missions to countries or regions. Depending on the needs of individual countries, CMC missions assess the disease situation, assist in the implementation of emergency measures, assess the capacity of the country to respond to HPAI and other TADs, identify the gaps and needs, and prepare project proposals for short, mid- and long term programs for prevention and control of HPAI and other TADs.

The CMC mission team includes CMC core staff and short term experts from the OFFLU network or other experts made available by member countries as appropriate. The duration of CMC missions and the single expert depends on the nature of the disease situation and the country's existing capacity to respond. Depending on the context, a provision for rotation of appropriate experts is foreseen. The CMC is also required to undertake urgent procurement

and logistics actions in order to supply required materials (such as vaccines and reagents) and equipment to countries in need in a timely manner.

The funding made available through the SFERA, in particular the advance funding, has been key for fielding the first RDT missions and to initiate the establishment of the CMC. Since May 2006, the RDT has been providing assistance to governments in Africa, Central Asia and Europe on both FAO missions as well as joint missions with the WHO, OIE and World Bank. The initial SFERA funding is being progressively supplemented by donor cash and in-kind contributions. Unearmarked contingency funding like SFERA is paramount for rapidly deploying assessment missions and will be even more essential following CMC's inauguration to fully provide a fast and flexible funding mechanism for effective rapid response missions. To date about 20 experts have been fielded on RDT missions to infected countries and those at risk, comprising Afghanistan, Burkina Faso, Ivory Coast, Liberia, Malawi, Niger, Romania, Sierra Leone, Serbia, Kosovo and Turkey. SFERA funds have been utilized for commitments and expenditures for the set-up of the CMC and its activities discussed above.

5.3 GLEWS - Global Early Warning System for Major Animal Diseases

GLEWS is based on the notion that diseases do not recognize geographical or species borders.

GLEWS was jointly launched in July 2006 by FAO, OIE and WHO. It is a joint early warning system conceived with the aim of predicting and responding to animal diseases including zoonoses worldwide. A GLEWS core team responsible for data integration, disease analysis and monitoring for early warning purposes was established at FAO headquarters and includes nine animal health officers with backgrounds in epidemiology, disease ecology and mapping. The overall aim of GLEWS is to improve the early warning capacity to animal disease threats of the three sister organizations for the benefit of the international community and to provide technical support to countries on issues at the animal/human interface of outbreak control. More specifically, GLEWS should:

- allow Member Nations to better prepare themselves to prevent incursion of animal diseases/infection and enable their rapid containment;
- improve the detection of exceptional epidemiological events at country level;
- improve timeliness and sensitivity of alerts;
- improve transparency among countries and compliance with reporting to OIE;
- improve the quality and timeliness of field animal health information;
- improve national surveillance and monitoring systems;
- strengthen networks that include public health, medical and veterinary laboratories working with zoonotic pathogens;
- improve international preparedness for animal and zoonotic epidemics and provide rapid, efficient and coordinated assistance to countries experiencing them;
- improve the capacity of the three organizations for early detection of new emerging disease threats, including zoonoses;
- provide technical support to regions and nations on issues at the animal/human interface of outbreak control; and
- investigate and substantiate rumors of animal disease events.

GLEWS and the CMC are linked insofar as GLEWS is the disease intelligence warning arm of FAO. The CMC is the mechanism arm to respond to new emergency situations (outbreak

occurrence and high risk of occurrence) and ECTAD is the mechanism arm for response. Additionally GLEWS builds on the added value of combining the alert and response mechanisms of FAO, OIE and WHO, enhancing the early warning and response capacity of disease outbreaks for the benefit of the international community. Through sharing of information on disease alerts, unnecessary duplication of efforts is avoided and the verification processes of the three organizations are combined and coordinated. For zoonotic events, alerts of animal outbreaks can provide direct early warning so that human surveillance can be enhanced and appropriate preventative action taken. Similarly, there may be cases where human surveillance is more sensitive and alerts of human cases precede known animal occurrence of disease.

SFERA funds have been used to contribute to the establishment of the GLEWS core team in Rome by creating one position of a GLEWS analyst officer. Because of the inherent intertwining of GLEWS, wild bird surveillance and epidemio-surveillance, the SFERA-funded GLEWS-related activities that have been implemented are discussed later in this report.

Through SFERA funds, FAO has recruited epidemiologists and information specialists who have developed both a database and mapping systems which are important for disease tracking. The use of SFERA funds has helped gather and integrate information in to provide a more in-depth analysis of the current situation of HPAI. GLEWS integrates data with OIE and WHO, and from other sources (media reports, consultant mission reports, etc) and this information is shared with all stakeholders, including member countries using different methods of communication (mailing lists, websites, etc). The end result is that GLEWS helps provide the most up to date scientific information being available, and therefore providing a basis for more accurate risk assessments to be conducted by the international scientific community, with the ultimate goal of contributing to the prediction of HPAI disease patterns. This will improve international preparedness for epidemics and provide rapid, efficient and coordinated assistance to countries experiencing them.

The GLEWS initiative was just recently launched in July 2006. Additional funds are needed to continue the establishment of the GLEWS platform which will be at the core of the system and will provide the necessary link between the GLEWS community of users. Additionally, the implementation of the GLEWS work plan for the first five years of activities will require the organization of various technical meetings of the task force and the working groups as well as the management committee that will guide and implement the GLEWS initiative.

5.4 Support for OFFLU network and global wildlife surveillance

5.4.1 OFFLU

OFFLU is the name of an international network of expertise on avian influenza established by OIE and FAO. It was established to increase information sharing regarding HPAI's molecular and biological characteristics, viral ecology and disease epidemiology, and aspects of diagnosis, vaccine development and research. This network includes OIE/FAO reference laboratories, epidemiology collaborating centres and expertise groups in AI. The Istituto Zooprofilattico Sperimentale delle Venezie (IZS) in Italy has been assigned as the coordinator and the secretariat of this network.

Support initially was provided to the OFFLU network through a contractual agreement (LoA) utilizing TCP funds. Subsequently SFERA funds have been used to extend the LoA to continue and build upon the initial work, specifically for the OFFLU component. The LoA has three basic aims. In addition to providing support to OFFLU and promoting laboratory networking, the other purposes of this agreement are to assist FAO in building national and regional capacity of AI laboratory diagnosis and evaluating the efficacy of an inactivated H5N2 influenza vaccine in domestic ducks under field conditions. Specifically the LoA arranged for the following activities:

- conducting molecular epidemiological studies on virus isolates from infected countries;
- testing of samples from wild birds from non-infected countries with limited capacity for in-country testing;
- assisting with the training of personnel from national laboratories;
- assisting with the training of field staff for epidemiological surveillance and specimen collection; and
- providing reference reagents and advice for laboratory testing quality assurance.

The regional activities carried out by IZS as part of this LoA, while not being technically part of OFFLU, are discussed here due to the interrelated nature of the efforts. Under this LoA support was also provided to conduct field vaccination studies. In this regard, a vaccine trial was conducted in Viet Nam from February to August 2006 to evaluate the efficacy of an inactivated H5N2 influenza vaccine in domestic ducks under field conditions. This trial used two different vaccines in two different farming systems and on two different waterfowl species. Full laboratory testing is still being completed, but preliminary results have shown that there appears to be some passive immunity transferred from vaccinated breeders to their offspring. Immune response after vaccination was lower than in a prior laboratory trial conducted by IZS and this could be caused by several factors under field conditions. Additional field trials and work are needed to determine what level of antibodies is needed to achieve adequate vaccination protection against H5N1 in waterfowl. This information will then be helpful in determining appropriate improved schemes for waterfowls in field conditions to prevent HPAI.

Also under the LoA laboratory training was carried out from April to July 2006 in the Middle East, North Africa, West Africa, East Africa, Eastern Europe and Causasus on serology, virology and molecular diagnosis, sampling and shipment of samples and personnel safety. The combined activities under this LoA have been funded by three sources: TCP, SFERA and USAID contributions.

In addition to the LoA, in March 2006 and in response to the outbreaks in Nigeria, FAO utilized SFERA funds to conduct training in basic laboratory techniques to personnel from Senegal, Niger, Chad, Central African Republic, Guinea Bissau, Mauritania, Burkina Faso, Guinea, Côte d'Ivoire, Cameroon, Togo and Mali.

In summary, SFERA funds have been used to strengthen the OFFLU network which in turn has greatly improved the diagnostic capability of national veterinary laboratories in many countries, significantly contributed in monitoring the course of HPAI and has ensured that the plans for disease control in infected countries and that the surveillance and preparedness in non-infected countries are all based on sound scientific knowledge. While OFFLU has made great strides, much more work remains to be done.

5.4.2 Wild bird surveillance activities

In 2005, following the spread of HPAI to Russia, Kazakhstan and Central Europe, FAO decided to initiate a programme of HPAI surveillance in wild birds in order to track the evolution and possible spread of the virus along migratory routes.

These activities were initiated through TCPs and extended to key ecological sites thanks to France's contribution to the SFERA.

A first campaign of surveillance was conducted in a total of 14 countries between mid-January and mid-May 2006.

This surveillance programme was coordinated by CIRAD in collaboration with Wetlands International. Implementation of the field operations were organized in partnership with national wildlife and veterinary services and in collaboration with international conservation and research organizations such as the African Bird Ringing Unit (AFRING), Oiseaux Migrateurs du Paléarctique Occidental (OMPO), Office National de la Chasse et de la Faune Sauvage (ONCFS), De Vereniging SOVON Vogelonderzoek Nederland, Wildfowl and Wetlands Trust (WWT), local ornithological non-governmental organizations NGOs, national hunting associations and safari operators.

Geographical distributions of sampling sites as well as sampling periods have been selected to cover the seasonal patterns of water bird migration over Eastern Europe, the Middle East and Africa, and target natural sites where water birds of various geographical origins congregate and mix.

A total of 5 288 samples were collected - 70 percent were from dead birds provided by hunters, 20 per cent from fecal material and 10 percent from live caught birds. As of today, laboratory testing and results are available for more than 3 400 samples. No HPAI and no H5N1 virus have been detected. A total of 4.2 percent of all samples (type A+) were low pathogenic avian influenza (LPAI) strains and five viruses have been isolated. LPAI viruses were detected in water birds in Africa, showing that the virus is able to circulate in a tropical environment during the northern winter.

A second round of surveillance was to be carried out from September 2006 to January 2007 in 17 countries (including five additional sites). The objectives of the surveillance are to:

- evaluate the AI carriage, in particular highly pathogenic strains, among wild bird populations within the regions of Eastern Europe, the Middle East and Africa;
- evaluate if HPAI H5N1 virus is perpetuated in wild bird populations in countries where HPAI H5N1 outbreaks have occurred;
- improve understanding of the host ecology of AI viruses, in particular in sub-tropical and tropical regions, which should contribute to the prevention and the control of avian influenza; and
- provide technical support to national surveillance programmes through capacity building of national counterparts on sampling techniques during field operations, and standardize field procedures for AI surveillance in wild birds between countries of the TCP regions.

5.4.3 Other wildlife activities

International conference on wild birds

SFERA supported the FAO/OIE International Scientific Conference on Avian Influenza and Wild Birds, held at FAO headquarters in Rome on 30-31 May 2006. The conference brought together more than 300 veterinarians, virologists and conservationists from around the world. They debated issues such as migratory bird flyways, poultry farming systems and global trade, and concluded that the answer to the cycle of avian flu outbreaks lies in a combination of all three. They also agreed that it is crucial to know if wild birds can act as permanent reservoirs of HPAI.

The conference provided a multi disciplinary forum for the exchange of the latest scientific information on avian influenza and the role of wild birds. It aimed to identify the major knowledge gaps for understanding the role of wild bird in the epidemiology of HPAI, and to assess the risk of the spread of HPAI by wild birds to currently uninfected areas and risk mitigation measures.

The main topics were: ecology and virology of the virus; surveillance, sampling and analysis; risk analysis; and improvement of tools for disease management. More than 20 invited keynote speakers provided presentations distributed over five sessions.

It was argued at the conference that only a concerted global effort to monitor the situation will help throw light on much of the mystery still surrounding the reasons for the appearance of the disease in some locations and not in others. It was further recognized that wild birds play a role, albeit unclear, and therefore must share some of the responsibility for the current concern surrounding outbreaks of the deadly H5N1 strain of highly pathogenic avian influenza (HPAI), but participants were united in their conviction that the key to controlling the disease lies above all at the level of poultry.

Support to L'Ecole Inter-Etats des Sciences et Médecine vétérinaire (EISMV)

SFERA has been used to develop and implement a project in collaboration with EISMV, which is based in Dakar, Senegal.

The aim of the project was to produce a toolkit to be used to increase public awareness of the dangers posed by HPAI to animal health by communicating key messages about the disease to them. The toolkit was produced in French on a CD-ROM and is being distributed to through FAO country offices to 29 francophone beneficiary countries in Africa and the Indian Ocean. The CD-ROM includes several different information tools, including audio and video recordings, textual aids, posters, training guidelines and presentation material. Two hundred copies of the CD-ROM have been produced under SFERA funds. The CD-ROM is being aimed primarily at those working on national HPAI campaigns, including technicians and animal health workers.

The agreement for this project, which has been partly funded by the SFERA was signed by FAO on 28 June 2006.

Semimar on migratory species

Through donor contribution to the SFERA, FAO sponsored the organization of a scientific seminar to review the latest scientific studies concerning the evolution and spread of avian influenza and its impact on wild birds and the wider environment.

In mid-2005, concerns about the role of migratory birds as potential "vectors and victims" of H5N1, which was spreading north-westwards from its origins in poultry farms in Southeast Asia, led the United Nations Environment Program (UNEP) Convention on Migratory Species (CMS) to establish a scientific task force. The Scientific Task Force on Avian Influenza (STF), which was established in August 2005, now comprises 13 UN bodies, wildlife treaties and specialist non-governmental organizations (NGOs). The STF focuses on obtaining the best scientific advice on the conservation impact of the spread of H5N1, assessing the role of migratory birds as vectors of the virus, and issuing advice on the root causes of the epidemic as well as technically sound measures to combat it and develop early warning expertise.

The STF has already begun synthesizing and disseminating the latest scientific assessments to governments, the media and the wider public. STF members have consistently emphasized that HPAI is being spread in a variety of ways including trade in poultry and its products; legal and illegal trade in wild and captive bred birds; human movements; and cross-infection (in both directions between poultry and migratory water birds). The relative importance of each main method of transmission remains open to discussion and key questions still remain unanswered.

One of the most recent STF projects was to organize a scientific seminar to review the latest scientific studies concerning the evolution and spread of avian influenza and its impact on wild birds and the wider environment. This seminar was held on 10-11 April 2006 at UNEP headquarters in Nairobi and was jointly organized by the CMS, the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) and the UNEP Division of Early Warning and Assessment (UNEP/DEWA).

The main objective of the seminar was to assemble the best scientists and best research available to produce a balanced and up-to-date status report on the H5N1 epidemic, with emphasis on the environmental and conservation aspects, including further advice on preventing or mitigating the spread of H5N1 and similar viruses.

The seminar was attended by several high level experts in virology, epidemiology, human and animal health, poultry farming, ecology and migration. Several institutions and organisations were represented including the Wildlife Conservation Society, Birdlife International, the International Council for Game and Wildlife Conservation, the Convention on Biological Diversity, Wetlands International as well as FAO, the OIE and the WHO.

THAILAND

Guiding the way to success

“These days, everyone is breathing a cautious sigh of relief, hoping that the country may have successfully brought bird flu under control, in large part thanks to advice from international partners like FAO.

Dr Oraphan Pasavorakul of the Bureau of Disease Control, explains that “as the first wave of avian influenza hit Thailand in 2004, we turned to FAO, OIE and WHO for guidance on ways to contain outbreaks we faced and they gave us strong guidance and support that has helped us get where we are today.”

“Gaining the upper hand over avian influenza took the cooperation of many sectors in Thai society as well as assistance from international organizations like FAO, OIE and WHO.”

An animal health worker disinfects a cargo of chickens at a road-side inspection station north of Bangkok (FAO/B. Ismoyo)

Annex 1: List of inputs provided by SFERA funds

Of the 94 countries which had received financial assistance from SFERA funds as of 30 September 2006, most have received a basic veterinary pack containing reagents, diagnostic equipment, sampling equipment, personal protective equipment and other items designed to assist national veterinarians in their efforts to survey domestic and wild birds and to identify HPAI.

Many countries have received substantial additional resources, which have covered the cost of the provision of technical experts, Field Budget Authorizations (FBAs) for in-country procurement, the supply of vaccines and other equipment and general operating expenses such as travel costs, courier services and administration.

As of 30 September 2006, procurement of major inputs from SFERA funds was the following:

Major Input	Total
Human resources	4 432 943
Contracts and LoAs	1 364 834
Laboratory and veterinary supplies and equipment	6 059 574
Training	527 002
Operating costs (courier services, internal transport, delivery of goods, superintendence, vehicle operational and maintenance, etc)	356 093
Support costs (operational and technical)	513 109
Grand Total	**13 253 555**

List of All Countries Receiving Direct Financial Support from the SFERA

Beneficiary	Amount (US$)
Côte d'Ivoire, République de la	815 874
Nigeria	391 889
Turkey, Republic of	222 834
Mali	216 853
Jordan, Hashemite Kingdom of	201 837
Afghanistan	199 272
Syrian Arab Republic	195 215
Sudan	189 757
Yemen, Republic of	185 815
Egypt	172 636
Cameroon, Republic of	152 858
Burkina Faso	133 101
Azerbaijan, Republic of	127 998
Niger	120 050
Iran	119 609
Thailand, Kingdom Of	113 173
West Bank and Gaza Strip	113 056
Benin, Republic of	112 161
Sierra Leone	109 709
Chad	108 070
Liberia	99 252
Rwanda	97 338
Lebanon	96 890
Mauritania	90 316
Senegal, Republic of	88 488
Mozambique	80 600
Algeria	79 885
Togo	78 012
Guinea-Bissau	77 889
Morocco	77 833
Myanmar, Union of	77 485
Guinea	74 726
Tunisia	74 150
Gambia, Republic of	73 256
Ghana	72 943
Georgia, Republic of	72 925
Congo, Democratic Republic of	71 674
South Africa, Republic of	70 169
Djibouti	65 583
Madagascar	65 330
Armenia, Republic of	54 453
Romania	52 886
Iraq	51 471
Bangladesh	51 298
Ukraine	51 293
Croatia, Republic of	50 377
Ethiopia, Federal Democratic Republic of	48 421
Lesotho	47 429

Beneficiary	Amount (US$)
Bulgaria	45 559
Gabon	44 051
Congo, Republic of	43 762
Namibia, Republic of	42 966
Timor-Leste, Democratic Republic of	42 681
Angola, Republic of	41 900
Central African Republic	41 859
Zambia	41 382
Maldives	40 660
Eritrea	40 324
Serbia, The Republic of	39 078
Libyan Arab Jamahiriya	38 082
Malawi	37 013
Somalia	36 692
Indonesia	36 394
Kyrgyz Republic	35 989
Swaziland	34 929
Botswana, Republic of	34 423
Bhutan	34 346
Burundi	33 817
Equatorial Guinea	32 700
Bosnia & Herzegovina	32 638
Tanzania, United Republic Of	32 025
Zimbabwe	31 874
Macedonia, FYR	31 683
Moldova, Republic of	31 531
Kazakhstan, Republic of	31 306
Sri Lanka	30 653
India	30 550
Uganda	29 638
Seychelles	29 513
Tajikistan, Republic of	26 364
Turkmenistan	26 028
Nepal	26 022
Kenya, Republic of	25 978
Albania, Republic of	25 644
Uzbekistan	25 597
Pakistan	23 189
Kosovo - UN Administered	20 861
Viet Nam	19 145
Montenegro	18 642
Cape Verde	14 034
Sao Tome & Principe	13 386
Mauritius Republic of	6 854
Comoros	6 828
Hungary	1 002
Grand Total	7 403 731

The information provided in this report is for project monitoring and evaluation only, not to be considered as an interim or final financial report

Annex 2: SFERA specific country assistance

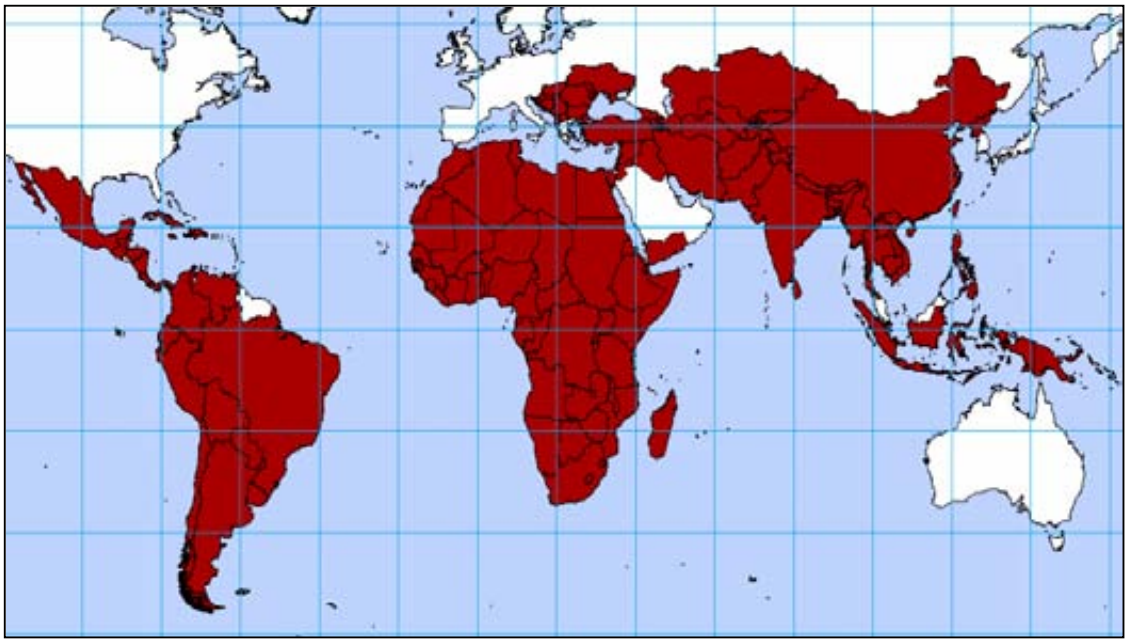
Global procurement

ECTAD has used SFERA funds to procure kits of basic emergency laboratory equipment and supplies to support the veterinary services of 94 countries These kits included essential goods to be used for surveillance activities and early diagnostic and shipment of samples such as personal protective equipment , autopsy equipment, cold boxes, disinfectants, generators, motorcycles, motorized knapsack sprayers, laboratory equipment such as Polymerase Chain Reaction (PCR), reagents, refrigerator/freezers, sampling kits, shipping boxes, sprayers, starter kits, syringes and vaccine carriers. The kits were sent to affected countries as well as to countries at risk to enable them to take action whenever there was a suspicion of HPAI infection.

Through a range of training activities in several regional workshops and the deployment of technical assistance when requested, FAO helped to establish linkages between countries and international reference laboratories where samples could be sent for analysis. The Organization established a contract with World Courier for shipment of hazardous biological samples as well as guidelines for collection and manipulation of samples.

This activity represented a relatively small expenditure but had a high impact in promoting safe and efficient diagnostic methodologies and building on networks and joint work at a regional level.

Since February 2004 FAO has supplied (or is currently supplying) goods and services to the 123 countries shaded on the map below:

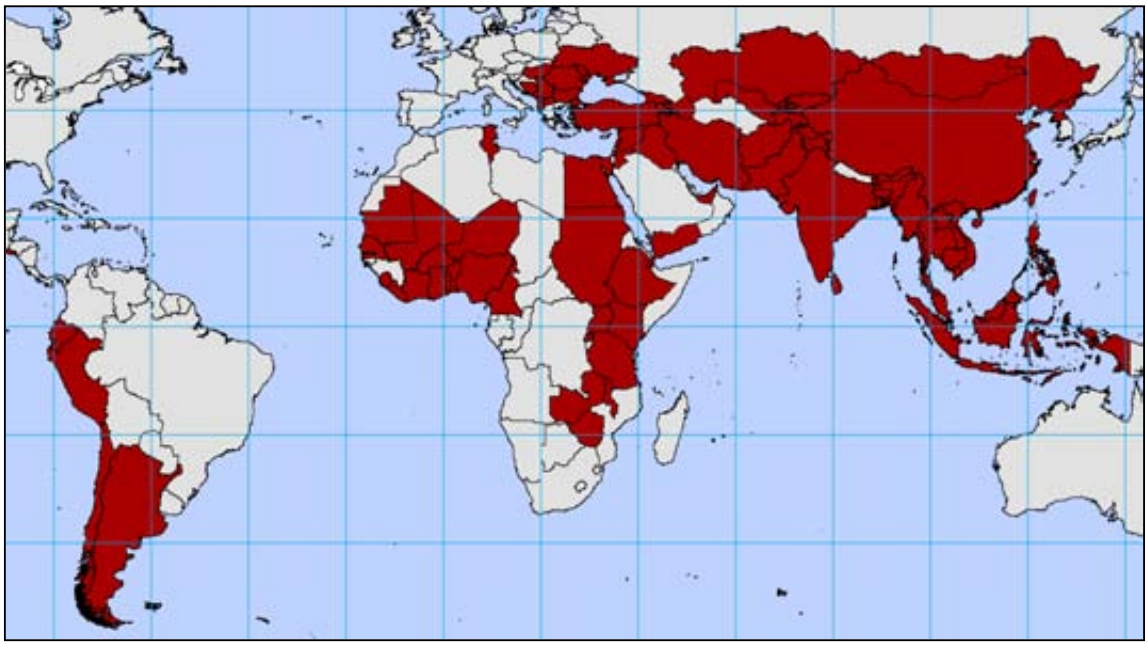


Technical assistance

During the spread of HPAI through Asia and beyond, FAO received many requests from Member Nations to field assessment missions and give advice on the development of preparedness plans and national strategies. FAO staff and consultants have participated in more than 390 missions related to HPAI in collaboration with partners including the World Bank, WHO, UNICEF and OIE.

More than 170 such missions have taken place in 2006 so far. FAO's multidisciplinary approach and skills base have enhanced the quality of technical assistance made available to countries. In addition to veterinary advice FAO has provided guidance on operational planning, socio-economics and livelihoods, communication and enhancing awareness as well as other components of the Global Programme. The Organization has also deployed SFERA resources to FAO Representations in many countries (typically US$45 000) for the support of locally organized activities, procurement and recruitment of national personnel.

Since February 2004 FAO staff and/or consultants have carried out (or are currently carrying out) missions in 71 countries shaded below:



Asia and the Pacific

South-East and East Asian countries have been severely affected by HPAI since the emergence of a new virulent strain of the virus was identified in southern China in 1996. Since 2003, HPAI has been spreading rapidly in the region and beyond, mostly through the live poultry trade, but also migratory birds. Emerging control activities to eliminate new outbreaks of HPAI and to stop the spread have centred on measures of stamping out the disease.

The economic consequences of the disease on the Asian poultry industry and sector are estimated at around US$10 billion. Despite rigorous control measures in some countries the disease continues to spread, causing further economic loss and threatening the livelihood of hundreds of millions of people. As well, it has had a devastating impact on smallholder entrepreneurship and commercial poultry production. It has seriously impeded regional and international trade and market opportunities, and is having a significant negative impact on the economies of the affected countries. The close contact between poultry and people in parts of Asia creates a favorable situation for the evolution of a human pandemic strain. The H5N1 strain of the virus has already demonstrated its ability to infect and kill people.

FAO has been working with affected and at risk countries throughout Asia to strengthen the capacity for early detection and early warning of HPAI outbreaks through community-based field surveillance and effective disease outbreak investigations; enhance the capacity for rapid and effective response to outbreaks of HPAI; and promote public awareness and education on HPAI. FAO is supporting activities in Bangladesh, Bhutan, Cambodia, Democratic Republic of Timor-Leste, India, Indonesia, Lao PDR, Mongolia, Myanmar, Nepal, People's Republic of China Philippines, and Viet Nam.

Bangladesh

In its efforts to assist the Government of Bangladesh improve its national laboratory and veterinary capacities, FAO has undertaken a two-month mission to review the diagnostic laboratory capacities in the country, focusing mainly on the urgent identification of laboratory diagnosis deficiencies and the institutional constraints to initiate Bangladesh's national HPAI contingency plan.

Furthermore, SFERA funds paid for an international consultant to conduct a four-week mission to Bangladesh to assist the Department of Livestock of the Ministry of Fisheries and Livestock. The consultant's role was to assess the government's capacity to make emergency preparedness plans for controlling and eradicating HPAI in the event of an outbreak in the country. The consultant developed a three-year project plan, which attracted funding from USAID. A national consultant, funded initially from SFERA resources, joined the project in May 2006 on an 11-month contract. The total of SFERA funds committed to Bangladesh is US$51 298.

Bhutan

FAO fielded a veterinary mission into Bhutan to review the current surveillance activities and the country's HPAI contingency plan and review the capacity and capability of the animal health laboratory system to respond to HPAI outbreak.

Cambodia

FAO is working closely with the Government of Cambodia in implementing its national control planning and management for HPAI. Activities focus on field early detection and reporting system, effective outbreak containment and contingency planning, and improvement of bio-security for poultry production. FAO is active in six provinces, including Battambang, Banteay Mean Chey, Takeo, Kampot, Prey Veng and Kampong Cham. FAO fielded a Chief Technical Advisor to provide technical advice and support to national counterparts and coordinate the national control planning and project management activities. To date, nearly 1 500 veterinary animal health workers have been trained in field early detection, reporting, sample collection and submission, outbreak containment. Training has also been provided to nearly 500 farmers on bio-security improvement and good practices for avian influenza prevention. Furthermore, laboratory equipment and supplies and Personal Protective Equipment have also been supplied to veterinary workers.

Democratic Republic of Timor-Leste

While Timor-Leste is still free from HPAI, in Indonesia (the country's nearest neighbor with whom it shares a land border) the disease is endemic in 28 of the 33 provinces. Timor-Leste may be only a relatively small part of a large archipelago but it is a special case because of farming systems that include close contact between people, poultry and other animals. FAO is providing support to the Government of Timor-Leste and community efforts to prevent and control HPAI and other serious animal epizootic diseases. Achieving this goal will significantly reduce the threat of human epidemic in Timor-Leste and help safeguard the livelihoods of the rural and peri-urban population. to safeguard human health by improving public awareness and information on HPAI, hygiene and food safety; improve poultry disease control and surveillance by increasing contact between Directorate of Livestock personnel, poultry farmers, poultry traders, NGOs and CBOs; and ensure the dissemination of effective communication and education material.

A consultant with expertise in HPAI visited Timor-Leste in December 2005 to draft a preparedness plan for HPAI in the country. The mission and associated costs were financed by US$5 909 from the SFERA The preparedness plan contained a project proposal, which has since attracted funding from USAID. An additional US$36 772 from SFERA funds were used to purchase laboratory and veterinary equipment to support Timor-Leste's preparedness and response capacity.

India

FAO is commencing activities under a new project funded by the United States of America to provide immediate technical assistance to strengthen emergency preparedness for HPAI. The project will focus mainly on strengthening the capacity of HPAI disease surveillance and diagnostic laboratories; containing any cases of HPAI outbreaks and improving bio-security measures. Additionally, a socio-economic assessment will be carried out along with a communications and public awareness campaign.

Indonesia

Indonesia became infected with HPAI in mid-2003. Since then, the disease has been constantly present and spreading through the archipelago. FAO has been providing highly

specialized technical experts to support national efforts to coordinate disease control measures and early detection of disease outbreaks. Activities include enhanced disease surveillance and rapid response using community based approaches and strengthening of capacity of national laboratories. FAO is carrying out 16 projects in Indonesia to improve implementation and control measures of avian influenza at the field level. More specifically, FAO's support projects plan to improve control strategies at the field level with the involvement of participatory surveillance and response (PDS/R) teams to search for the disease and respond in a timely manner. FAO has seen that PDS/R activities have proven to be an effective means of disease control.

Local district veterinarians and para-vets are under going training to function as participatory disease surveillance and response teams and improve the reporting and analysis of data. FAO has also concentrated its efforts to improve the vaccination policy and monitoring, and on training to enhance the veterinary and laboratory diagnostic capacities in Indonesia. Vaccination strategy is also part of the PDS/R activities and the current vaccination strategy involves ring vaccination around infected premises and focal culling of sick and in-contact birds. Promoting biosecurity to farmers, poultry workers and the general public is also done through biosecurity awareness training within PDR activities.

FAO contracted a senior avian influenza surveillance expert to travel to Indonesia for a 20-day mission to advise the national authorities in March-April 2006. This was paid for by SFERA funds. Furthermore, additional funds were also committed to pay for the cost of travel to Indonesia for an FAO staff veterinarian, who conducted a backstopping mission in May 2006. The total committed from SFERA funds to Indonesia is US$ 36 394.

Lao People's Democratic Republic

In Lao PDR, there is a total poultry population of approximately 20 million birds, and 80 percent of these birds are kept by smallholders or subsistence farmers. The first outbreak of HPAI occurred in early 2004, mainly in commercial farms around Vientiane, Savannaket and Pakse. It is believed that the disease did not establish itself to the extent it has in neighbouring countries mainly due to the extensive nature of poultry keeping. FAO is assisting the government in its national control planning and management of HPAI, field early detection and reporting system, effective outbreak containment and laboratory diagnosis. FAO is focusing on four high risk provinces and include Luang Prabang, Champasak, Savanakhet, and Vientiane. Currently, FAO has a Chief Technical Advisor collaborating with international and national consultants to coordinate/participate in the national control planning & project management. To date, over 620 village veterinary works have been trained on field early detection, reporting, sample collection and submission, as well as outbreak containment. Personal Protective Equipment and veterinary and laboratory equipment and supplies have also been procured. These teams are actively conducting surveillance in the four high risk provinces and carrying out on-the-job training for laboratory diagnosis. Communication material is also being produced in collaboration with UNICEF and the Academy for Educational Development.

Maldives

SFERA funds have paid for the recruitment of an international consultant for eight months from April to November 2006 in Maldives. The consultant is advising the director of agriculture and senior officers on implementation of the agricultural component of the

National Avian Influenza Contingency Plan, and developing an animal disease surveillance and reporting system with special focus on poultry, fish and goats, in accordance with OIE guidelines. The total committed from SFERA funds to Maldives is US$40 660.

Mongolia

FAO has recently fielded a Chief Technical Advisor to Mongolia to coordinate HPAI preparedness and planning activities, including the development of standard operating procedures for outbreak response; cross-sectoral coordination and communication to target groups. Plans are also in place to strengthen animal and wild bird surveillance activities; and evaluate schemes for reporting of suspected cases or outbreaks.

Myanmar

A Chief Technical Advisor for Myanmar has recently been fielded to assist in effective cross-sectoral coordination and communication for the overall HPAI control programme. Activities also include re-examination of the national contingency plan for HPAI outbreak containment. The feasibility and needs for adopting emergency ring vaccination to contain HPAI outbreak will also be reviewed and recommendations provided for the actions required as a preparedness plan for any future outbreaks. Risk based surveillance will also be the focus of HPAI activities. Laboratory equipment and veterinary supplies will be procured and training conducted to increase the national capacity in laboratory diagnosis.

In addition, SFERA funds were used for the local procurement of lab equipment and supplies to help the Livestock Breeding and Veterinary Department to carry out field surveillance work. Furthermore, three additional activities are in the pipeline: workshops on vaccination and wild bird monitoring and surveillance; and an HPAI show booth at the veterinary ministry's annual conference. SFERA funds have also been used to cover the cost of a national consultant's honorarium and travel expenses. Commitments to Myanmar from the SFERA so far total US$77 485.

Nepal

FAO is commencing activities under a new project to provide immediate technical assistance to strengthen emergency preparedness for HPAI. The project will focus mainly on strengthening the capacity of HPAI disease surveillance and diagnostic laboratories; containing any cases of HPAI outbreaks and improving bio-security measures. Additionally, a socio-economic assessment will be carried out along with a communications and public awareness campaign.

People's Republic of China

FAO is supporting the People's Republic of China in their efforts to increase capacities for rapid field detection, disease reporting and tracing in target provinces and strengthen HPAI epidemiological investigation and disease in formation analysis within the Animal Health and Epidemiology Centre. FAO is implementing provincial inception workshops for decision makers at provincial and county level, training in general principles of epidemiology and disease surveillance and disease outbreak investigation techniques. FAO is also providing diagnostic equipment and advice on correct laboratory setup at provincial laboratories as well

as transport containers for samples to be submitted to the National Reference Laboratory for diagnosis.

Philippines

The dependence of rural communities on poultry extends throughout the Philippines. It is a source of food and income for rural villagers. On the other hand, the commercial sector in the country is firmly established and an outbreak of H5N1 would devastate the poultry industry. FAO is assisting the Government of the Philippines in its efforts to continue HPAI surveillance and strengthen veterinary services capacity especially in field and diagnostic surveillance of HPAI and other diseases that may emerge in the future.

Sri Lanka

Although Sri Lanka still maintains its HPAI free status, the poultry industry has been facing a severe economic burden due to lack of consumer confidence in national poultry products. A strong veterinary service system for diagnosis and surveillance of HPAI is essential to maintain consumer confidence on a sustainable basis. FAO is complementing the Government of Sri Lanka's national capacity for early detection and early response of HPAI and keep the disease out of domestic poultry and prevent establishment, spread and development to epidemic proportions of HPAI after entry, through synergistic strengthening of early warning and early reaction capacity.

SFERA funds have supported the recruitment and emoluments of an international consultant who conducted a two-week mission to assess the government's capacity to make emergency preparedness plans for controlling and eradicating HPAI in the event of an outbreak in the country. The mission assisted authorities in Sri Lanka to develop a project proposal, which is now being funded by USAID. Of the total US$30 653 committed from SFERA funds to Sri Lanka, US$6 396 was spent on human resources and US$24 257 was used to purchase laboratory and veterinary supplies and equipment to complement the government's emergency preparedness plan.

Viet Nam

Between 2004 and 2005, HPAI became endemic in Viet Nam. More than 40 million birds died or were culled to contain the disease and 42 people contracted the disease and died. To combat this threat, the Government decided to vaccinate all of the country's 200 million poultry. FAO has been assisting the Government of Viet Nam's HPAI preparedness/planning efforts from the start. FAO has provided support to develop a focused vaccination strategy and to conduct post-vaccination monitoring. Laboratory reagents and supplies have been procured. Technical assistance for the standardization of laboratory techniques in the different laboratories in the countries has been provided and a network for the sharing of laboratory results and feeding into the national information system has been set up. SFERA funds were used to support a vaccine trial in Viet Nam carried out by the OIE/FAO reference laboratory in Italy. FAO plays a key role in cross-sectoral coordination and communication to help restructure the poultry industry. FAO is also helping to strengthen animal surveillance activities and evaluate the current suspected case/outbreak reporting schemes. Standardized guidelines for disease reporting are under preparation, training has been carried out and mechanisms are being placed to strengthen the animal health information system by using the Transboundary Animal Diseases Information System (TAD*info*) developed by FAO. More

than 123 animal health staff has been trained to use this information system for improved epidemiological data collection and analysis. FAO is also facilitating communication at the provincial and district levels between human and animal health teams for outbreak containment and support animal health staff at all level to effectively respond to the outbreaks.

Central Asia

ECTAD's Central Asia region includes nine countries: Afghanistan, Azerbaijan[2], Iran, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Uzbekistan and Turkmenistan.

At the onset of the HPAI crisis, all countries in the region were provided with a basic emergency kit for avian influenza for an average amount of US$36 000 per kit and a total amount for the region of US$288 000.

FAO has developed a Central Asia Regional Network project to sustain activities to combat HPAI in the region. The project is based on a common vision to prevent and control HPAI across the region, and is consistent with the FAO/OIE Global Programme and the Strategic Framework for HPAI Prevention and Control in Asia and the Pacific. The anticipated total investment in the project is US$3 300 000 over three years. SFERA resources totaling US$1 500 000 are being deployed in support of this regional project and the Asian Development Bank is co-financing the project.

Under this project, regional and country-based activities will strengthen capacity building in animal disease surveillance, reference laboratory services and rapid response, coordination, early warning procedures and impact/risk assessment (including wildlife and socio-economics).

A regional coordinator for the project was appointed and began his assignment on 1 August 2006. He is based in FAO's country office in Tehran, Iran. A second expert is to begin an assignment in October 2006 in Baku, Azerbaijan, to support that country and neighboring countries in their efforts against HPAI.

The regional coordinator and ECTAD staff conducted identification and needs assessment missions in Afghanistan, Iran, Kyrgyzstan, Pakistan and Uzbekistan during August and September 2006. HPAI questionnaires were then developed following these missions and were due to feed into the preparation of the inception workshop planned from 30 October 2006 to 2 November 2006.

The main objective of this regional inception workshop was to be the discussion of the strategic considerations developed under the Global Programme and the Strategic Framework for HPAI Prevention and Control in Asia and the Pacific. These considerations include the promotion of surveillance activities at regional level and the development of a shared approach for controlling HPAI. It is likely that the requirements needed to carry out activities

[2] Azerbaijan was until end of September 2006 considered under FAO's Europe-Caucasus geographical zone. Specific activities implemented in Azerbaijan or regional activities involving Azerbaijan conducted prior to that date are reported above under the Caucasus. Future activities in Azerbaijan from October 2006 will be reported under the Central Asia zone.

within a common framework will vary among countries and a further objective of the workshop was to identify needs to fulfill such requirements.

A delegation from ECTAD comprising technical, wildlife and operations officers attended the Central Asia Regional Conference convened by the European Commission and the Asian Development Bank in Almaty, Kazakhstan on 12-13 June 2006. During the conference, contacts were made with Kazakhstan and Turkmenistan, where FAO did not have ongoing animal health projects. ECTAD's participation in this event, which was made possible by SFERA funding, strengthened relations with the World Bank regarding that institution's plans in the region.

SFERA funds expenditures to date for this regional network project amount to US$487 000. This includes US$126 000 of emergency funds for local expenditures, project management and rapid response in Afghanistan; and US$73 000 of emergency funds for the regional coordination office set-up, recruitments and workshop organization.

Afghanistan

HPAI infection was confirmed in Afghanistan in early 2006 in Kabul, Logar, Nangarhar, Kapisa, Parwan and Laghman provinces. The first detected cases were found in samples submitted to the Central Veterinary Diagnostic Laboratory on 2 March 2006. Implementation of control measures (culling and disinfection) could only start on 22 March 2006 because of a lack of appropriate protective equipment to carry out field operations.

Various missions to Afghanistan for backstopping purposes and assessments, in particular following the outbreaks of HPAI in March and April 2006, led FAO to mobilize SFERA funds to support the country's rapid response activities for avian influenza. The initial pledging estimated at US$300 000 has now been merged into the regional network project. Some of the missions to Afghanistan were conducted jointly with the World Bank as part of a plan to develop an overall national HPAI strategy and intervention.

The objective of the assistance is to improve the detection of outbreaks of HPAI in Afghanistan and to take prompt action. The main components are: the establishment of a central coordination unit; the dispatch of teams of veterinarians and veterinary paraprofessionals for collecting data from the field; and emergency response teams located around the country to respond to outbreaks.

At the start of the project, one national avian influenza coordinator and a regional coordinator were recruited for the two areas deemed to be at highest risk.

On 15 August 2006, FAO launched a national workshop which brought together the national avian influenza coordinator and the regional coordinator with their staff of 17 veterinarians and highly trained poultry experts to initiate a programme of active surveillance in hundreds of villages in the six provinces already infected.

The surveillance activities started soon after the workshop and were planned to last for two months. Information about the disease status of poultry is being collected by the poultry trainers in the villages.

Laboratory work to detect prior exposure to avian influenza and several other poultry diseases is also supported by the project. This activity is expected to confirm that Afghanistan is currently free of active H5N1 transmission. Additionally, the activity will study the disease status of poultry around wetlands and in live bird markets - two critical sources of possible re-introduction of disease into Afghanistan. This activity is the only activity currently underway that provides a mechanism for early warning for re-infections of HPAI into Afghanistan.

The most recent mission conducted by the FAO senior technical officer responsible for the region, from 12 to 23 August 2006, allowed further development and fine-tuning of the implementation plan and additional laboratory and testing items to be ordered for further surveillance activities.

The total amount committed to Afghanistan from the SFERA so far is US$199 272.

Middle East and North Africa

Several countries in the Middle East and North Africa (MENA) region have been infected by HPAI. Outbreaks have been reported across five countries and territories in the region with fatal human cases confirmed in Iraq and Egypt.

To strengthen veterinary services and build human and physical resource capacity to respond to HPAI outbreaks in the MENA region, FAO procured and dispatched kits of basic laboratory and veterinary supplies and equipment to 12 countries and territories (Algeria, Egypt, Iraq, Jordan, Lebanon, Libyan Arab Jamahiriya, Mauritania, Morocco, Syrian Arab Republic, Tunisia, WBGS and Yemen). Furthermore, support was also provided for addressing urgent training needs in disease surveillance and reporting, laboratory diagnostics, biosecurity practices and public awareness. The value of this assistance amounted to US$1 8 million out of which US$1.4 million was provided through SFERA

At the regional level, activities were also initiated to promote regional coordination and to support socio-economic activities, farming systems, epidemiology and wild bird studies. A total of US$400 000 was earmarked for this purpose.

The required funding for the region, over two years, is estimated at US$11.3 million, which includes programme management from two platforms, regional support, national support and contingency funds to be used in countries facing new outbreaks. The budget planned through SFERA funds and other donors approximately US$4.6 million.

Algeria

SFERA funds were used to finance a training course for two veterinarians from the “Institut Nationale de Médecine Vétérinaire” to attend an avian influenza diagnosis workshop in the Legaro Institute in Italy. Furthermore, SFERA was used to procure laboratories supplies and materials locally. Commitments to Algeria from the SFERA so far total US$79 885.

Egypt

SFERA funds were deployed to cover the cost of a mission by a consultant to Egypt in May 2006. The mission was to support the Egyptian government in enhancing epidemiological capability and control of HPAI.

Also in May 2006, FAO initiated a rapid assessment mission for country preparedness capabilities in Egypt, where the first case of HPAI had been detected on 17 February 2006. The mission identified shortcomings in the country's state of preparedness to tackle further outbreaks. Specifically the mission identified a shortage of veterinary staff and a need for training of existing staff in reporting, diagnosis and epidemiology. Moreover, the mission identified an urgent need to strengthen cooperation between central government veterinary laboratories, provincial laboratories, universities, research institutes and the private sector to develop a united response in the face of HPAI or any other epidemic outbreak. The mission's conclusions recommended the establishment of a coordination mechanism to strengthen the government's response. In addition the need for FAO/OIE intervention to improve national capacity to develop contingency plans and improve diagnostic lab capabilities was identified. It was further recommended that internationally accepted biosecurity regulations should be strictly applied when poultry farming activities recommence.

SFERA funds facilitated training workshops on field surveillance, disease definition and control, biohazard-free disposal of infected birds, disinfection and biosecurity of poultry farms and backyard flocks. These workshops were attended by veterinarians working in the private poultry sector, environmental law enforcement and other government officials (various ministries) and religious leaders. The ministry of agriculture praised the success of the training sessions and requested that they be replicated in other administrative zones not so far covered.

In addition, SFERA funds were provided for local procurement of five PCR sets, sterile tips and laboratory supplies and materials. Furthermore, nine public awareness workshops are scheduled to inform local institutions of facts and impact of HPAI.

Mauritania

A joint assessment mission involving experts from the WHO, WFP, UNICEF and FAO took place in Mauritania from 3-10 June 2006. The mission's aim was to help develop operational activities and improve the organization of tasks among the different participants in the national effort against HPAI. The FAO Regional Project Coordinator for North Africa participated in the mission with specific responsibility for evaluating operational measures existing and planned operational activity.

An additional mission to Mauritania took place from 27-28 March 2006, coordinated by an FAO international consultant, in order to assess local veterinary capacities and the needs of different veterinary institutions. The mission identified a desire among these institutions to modernize their laboratory structures and develop their diagnosis capacities.

A FAO staff member with expertise in socio-economic issues traveled to Mauritania from 27-30 March 2006 to help prepare a compensation plan within the framework of a national contingency plan. The FAO international consultant also took part in this mission to evaluate laboratory facilities and support required for the national laboratory to diagnose HPAI.

A mission was also undertaken by the regional project coordinator to support the government in the preparation of the operational plan for the prevention and control of HPAI, as well as defining the responsibilities of the different sectors implementing the operational plan.

An FAO consultant traveled to Mauritania for a rapid assessment mission from 4-11 January 2006 in response to Mauritania's request for assistance to review the status of the country's poultry industry, the efficiency of public veterinary services and the country's readiness in case of HPAI infection.

Furthermore, in response to a request from the government, FAO initiated a short assessment mission involving a series of meetings with senior veterinary officials and other stakeholders. The meetings included a presentation with background and information on HPAI and provided an overview on recommended early warning and rapid response measures specific to Mauritania. During this mission a visit was organized to one of the country's major wetlands (Parc National de Diawling) to analyze the risk of introduction of HPAI through migratory birds because Mauritania is an important resting zone for birds migrating along the western Palaearctic axis. A total of US$90 316 has been invested from the SFERA in Mauritania.

Morocco

SFERA funds were used to purchase audio-visual and computer equipment to help strengthen the national epidemiology and zoonosis laboratory's training capacity; to procure basic equipment and various supplies for the six regional veterinary research laboratories; to equip laboratories with reagents and other basic laboratory supplies for the diagnosis of HPAI; to hold training sessions on HPAI diagnosis, in which seven veterinarians participated; to produce a sensitization brochure in Arabic to be distributed in particular to people in rural areas; and to provide the necessary expendable equipment to support the national coordination with training sessions. A total of US$77 833 has been invested from the SFERA in Morocco.

Tunisia

SFERA funds were used to recruit a national consultant who assessed training needs, developed a training programme, helped organize a national workshop on HPAI and developed a project document to assist the Tunisian veterinary services in readiness, preparedness and surveillance in the fight against HPAI. SFERA funds were used to support a workshop, held in collaboration with the WHO, on 10-11 May 2006. The workshop dealt with several issues, including communication during an outbreak, migrating birds and HPAI transmission, the epidemiology of HPAI and the risks to public health and strategy in the fight again HPAI (culling or vaccination). Regarding regional activities, US$3 000 in SFERA funds were used to organize four regional 'training of trainers' workshops in September 2006. In total US$74 150 have been allocated to Tunisia from the SFERA.

Jordan

SFERA funds were used to organize a socio-economic impact assessment for HPAI; two training workshops for 30 veterinarians from the provincial veterinary laboratories on diagnosis of HPAI and implementation of a national plan for prevention and control of HPAI; and the local purchase of urgently needed supplies, materials and equipments for veterinary diagnosis laboratories. The total invested from the SFERA so far in Jordan is US$201 837.

Lebanon

SFERA funds (US$6 000) supported the organization of a regional workshop in Beirut dealing with HPAI contingency planning, compensation and communication strategy. The workshop was held on 27-28 June 2006 and representatives of 18 countries participated. The workshop was organized for technical staff dealing with disease control management.

FAO has proposed a Regional Action Plan to maintain and intensify activities launched under the Technical Cooperation Programme projects in the region by providing emergency assistance directly to countries at risk. The action plan foresees a common approach to prevent and control HPAI across the region and is consistent with the FAO/OIE Global Programme. The action plan's implementation will be supported by SFERA funds.

Furthermore, a contingency planning expert was recruited to present an interactive seminar on contingency planning development for avian influenza in Lebanon. The seminar included discussions on general principles of contingency planning, guidelines for drafting contingency plans and coordination and management arrangements. During the workshop, participants had the opportunity to discuss the proposed regional framework and refine the action plan.

Other funding from the SFERA allocated to Lebanon was deployed for the local purchase of biosafety cabinets for the diagnosis laboratories and for other urgently needed laboratory equipments and for in-country training for national veterinarians. US$96 890 has been invested in Lebanon so far from the SFERA.

Syria

Emergency funds for local expenditures and basic laboratory equipment were provided to Syria from SFERA resources. Also SFERA funds were used to organize three training sessions at the central and provincial levels for veterinarians and technicians. The training covered laboratory analysis and diagnostic techniques, field surveillance, inspection and public awareness. Four national consultants were recruited through SFERA resources to conduct local studies related to the socio-economic impacts of HPAI, market shocks and the poultry sector, the path of wild migratory birds in Syria, field survey measures and the Syrian national preparedness plan on HPAI. Furthermore, essential laboratory needs were locally purchased for the central diagnostic laboratory. Commitments to Syria from the SFERA so far total US$195 215.

West Bank/Gaza Strip

The most urgent priority following the outbreak of HPAI in the Gaza Strip was to procure essential emergency equipment. FAO, in a coordinated effort with the ministry, UN agencies and the World Bank, distributed personal protective equipment and liquid disinfectants and participated in advocacy and awareness campaigns for farmers. An FAO expert visited the West Bank/Gaza Strip to assess the disease situation, provide an overview of associated risks in the region, oversee the current implementation of disease outbreak control measures and advise and suggest improvements as needed. A concrete output of the mission has been the preparation of project proposals for donor funding to control and mitigate the impact of the disease.

Three national consultants (two in the West Bank, and one in the Gaza Strip), six national field coordinators and an international reporting officer were recruited with SFERA funds. A Letter of Agreement was signed with the Kimron Veterinary Institute in Israel to help build capacity by providing laboratory training and guidance to veterinary staff in West Bank and Gaza Strip. A total of US$113 056 has been allocated from the SFERA to the West Bank and Gaza Strip.

Yemen

SFERA provided Yemen with basic laboratory equipment and emergency funds for local expenditures. Commitments to Yemen from the SFERA so far total US$185 815

Eastern Europe and the Caucasus

The arrival of HPAI in Eastern Europe and the Caucasus has given FAO much cause for concern, particularly with regard to the state of preparedness of national animal health authorities to cope with the effects of outbreaks. As with other regions of the world, FAO organized the procurement and dispatch of basic emergency kits to 13 countries in the region to help strengthen national capacity.

FAO has been active in providing support to HPAI control efforts in infected countries and in assisting non-infected countries of the Central and Eastern Europe and the Caucasus to prepare for a rapid and effective response should the disease be introduced.

A regional TCP project covering Armenia, Azerbaijan, Bulgaria, Croatia, Georgia, Hungary, the Republic of Moldova, Romania, Serbia and Montenegro, The Former Yugoslav Republic of Macedonia, Turkey and Ukraine began in December 2005. The primary objective of the project was to strengthen the capacity for generating and sharing HPAI disease intelligence and using this to mount emergency preparedness planning in case HPAI was introduced into the region, specifically in relation to migration of and trade in wild birds.

The TCP project included four regional capacity building workshops: an inception meeting (Budapest, 15-19 December 2005), a workshop on epidemiology of avian influenza (Zagreb, 6-10 March 2006) a laboratory training workshop (Budapest, 22-26 May 2006) and an ornithology training workshop (Crimea, Ukraine, 4-6 September 2006).

The inception workshop was attended by 40 participants, representing 13 countries in the region. It was supported by experts from OFFLU, CIRAD, OIE and the European Community. The goal was to set up regional networks for disease prevention and surveillance. The workshop's principal objective was to define and agree on final project content, the work plan and implementation timetables. The workshop included country presentations which were followed by discussion and sessions on how to best encourage horizontal collaboration and information exchange (networks) for epidemiology and laboratory diagnosis. The sessions also aimed to define each country's needs and priorities for assistance related to the early detection and prevention of HPAI, including advanced epidemiology methodologies, surveillance strategies, classical and molecular diagnostics and generation and sharing disease intelligence aspects on avian influenza viruses.

The workshop on epidemiology of avian influenza was organized for 26 specialists from 13 countries. The training provided by CIRAD covered the following topics: epidemiological techniques, disease surveillance in domestic poultry, free-ranging and captive avian wildlife, disease monitoring, risk analysis, risk assessment and application to risk-based surveillance protocol design, data management and analysis. During computer-based practical sessions the participants were trained in sampling size calculation, Geographical Information Systems (GIS), disease surveillance and data management.

The laboratory training workshop was attended by 11 participants from 10 countries. OFFLU provided theoretical and practical training which covered serological, virological and molecular biological techniques.

The ornithology training workshop for the Eastern Europe and Caucasus regions was held in the Crimean Agro-Technological University in Simferopol, at a branch of the National Agricultural University in Ukraine, from 4-6 September 2006. The training was led by the CIRAD and Wetlands International. The workshop was attended by 12 participants from Armenia, Azerbaijan, Bulgaria, Croatia, Georgia, Hungary, Kosovo, The Former Yugoslav Republic of Macedonia, Moldova, Romania, Turkey, and Ukraine. The workshop was organized for technical staff from ornithology services or wildlife institutions and covered the following topics: ecology and the role of wild birds, birds migration, wild bird identification and census, disease surveillance in both free-ranging and captive avian wildlife, capture techniques and sampling of wild birds, sample handling, storage, and transportation, personal protection and safety. The field training programme was devoted to practical exercises with birds captured the previous night. Skills developed during the field training included bird identification, bird handling, sampling and trapping birds via mist-nets and walk-in traps. The practical training was held on Lake Sivash, Crimea.

Azerbaijan

An FAO expert conducted a mission in February 2006 to assess laboratory capacity and methods in Azerbaijan. The biosafety and biosecurity situation of the national laboratory was assessed with regard to HPAI and recommendations made to the national animal health authorities accordingly. The expert concluded that the national laboratory lacked basic techniques and knowledge for prompt and accurate diagnosis of HPAI. A further mission in Azerbaijan was conducted in March 2006 over five days. Two villages were visited in the Salyan region, both of which had reported human cases of the disease. The Azerbaijani authorities requested the provision of emergency laboratory equipment and supplies, which were made available by ECTAD, and furthermore requested technical assistance from an HPAI expert for a period of five months.

An international consultant epidemiologist was recruited with SFERA funds to support Azerbaijan, Armenia and Georgia for a period of five months. A national veterinary assistant was also hired and office supplies and equipment provided for the assistant. The consultant was tasked with assessing the capacity of national emergency preparedness plans for controlling and eradicating HPAI, and with conducting epidemiological investigations to help guide and monitor control programmes. The consultant trained national staff from the three countries in animal disease diagnosis, which was supported through the SFERA. Altogether, in addition to basic emergency equipment procured from ECTAD headquarters for a value of US$61 014, these activities take the total of SFERA funds disbursed in Azerbaijan to US$127 998.

On 8 June 2006 a conference on HPAI organized in conjunction with USAID and UNICEF was held in Azerbaijan for 40 participants during which communication and information materials were produced and distributed. These materials included Azeri- and Russian-language versions of a field manual on HPAI disease recognition and preparedness planning, a booklet on how to protect poultry from the disease, practical advice for veterinary doctors and farmers in preventing and fighting HPAI and posters, leaflets and cards containing basic information about HPAI.

Albania

US$25 644 were deployed from SFERA for basic emergency laboratory equipment procured for Albania from ECTAD headquarters.

Armenia

FAO conducted an assessment mission in Armenia on operational capacities and subsequently established an office in the country to support HPAI efforts and an operations clerk for Armenia was recruited for six months starting from July 2006. A national veterinary assistant will soon be posted. This activity supports the international consultant epidemiologist who was recruited with SFERA funds to support Azerbaijan, Armenia and Georgia for a period of five months. Basic emergency equipment including laboratory reagents was provided to the national veterinary service. The total of SFERA assistance to Armenia is US$54 453.

Bosnia and Herzegovina

US$32 638 were deployed from SFERA for basic emergency laboratory equipment procured for the authorities of Bosnia and Herzegovina from ECTAD headquarters. An assessment mission to report on the country's preparedness and response strategies was due to take place in October 2006.

Bulgaria

US$45 559 were deployed from SFERA for basic emergency laboratory equipment procured for the Bulgarian authorities from ECTAD headquarters.

Croatia

US$50 377 were deployed from SFERA for basic emergency laboratory equipment procured for Croatia from ECTAD headquarters.

Georgia

SFERA funds were used to hire an operations clerk for the country; and to conduct HPAI field monitoring operations in collaboration with the government. Georgia is also benefiting from the technical assistance provided by the expert epidemiologist working also with Azerbaijan and Armenia who also traveled to Georgia to provide support and advice to the local authorities. A further US$47 248 were committed for basic emergency laboratory equipment procured from ECTAD headquarters, bringing the total of SFERA assistance in Georgia to US$72 925.

Kosovo

An assessment mission for the prevention and control of HPAI in Kosovo was conducted in July 2006 as part of a wider assessment of the Balkan region. FAO experts in epidemiology, socio-economics and operations participated in the mission. A further US$3 800 of basic emergency equipment for Kosovo was procured from ECTAD headquarters, bringing the total of SFERA assistance to Kosovo to US$20 861.

The Former Yugoslav Republic of Macedonia

US$31 683 were deployed from SFERA for basic emergency laboratory equipment procured for the country from ECTAD headquarters.

Moldova

US$31 531 were deployed from SFERA for basic emergency laboratory equipment procured for Moldova from ECTAD headquarters.

Montenegro

US$18 642 were deployed from SFERA for basic emergency laboratory equipment procured for Montenegro from ECTAD headquarters.

Romania

FAO has conducted three missions to Romania since November 2005, two of which were joint missions led by the World Bank. SFERA funding has enabled FAO to provide technical assistance via international expert consultants and rapid assessment missions, and has allowed FAO to provide Romania with appropriate equipment and supplies to enable them to respond to outbreaks of HPAI.

A World Bank/FAO joint mission from 21 to 28 March 2006 was conducted to assess the situation of HPAI in Romania. SFERA funds were used to cover the costs of an FAO-appointed international consultant to assist the World Bank on the mission to Bucharest and the surrounding area.

The mission concluded that Romania was able to perform activities for timely outbreak management and that a compensation scheme was in place for poultry owners. The mission found that there was a significant need for improvement in the areas of biosecurity (especially considering the large amount of backyard poultry) and modern epidemiological studies. The mission further concluded that improving biosecurity measures in Romania's backyard poultry production would require a long-term process and significant financial support because the lack of biosecurity meant that Romania was not able to control and eradicate HPAI. It was determined that vaccination should be seriously considered in the event of further spread of the disease. Romanian authorities and veterinary experts believed that wild birds were the primary source and means of spread of the infection to domestic poultry in the country. Therefore strengthening research of wild bird ecology, particularly in the Danube delta was considered beneficial to the control of HPAI.

In addition to providing technical expertise on this joint mission, FAO also assisted with Romania's request for upgrading and improving diagnostic facilities in the Central Veterinary Institute and regional laboratories by providing diagnostic reagents and kits, sampling materials, and protective equipment as well as procuring culling, incineration, and decontamination equipment.

Following a request from the MoA of Romania to FAO for technical assistance after a recurrence of H5N1 in domestic poultry, FAO fielded a mission to assess the magnitude of the outbreak in May-June 2006. The mission was to advise on epidemiological investigations and assist in the set up of adequate epidemiological research and laboratory surveillance plans for the current outbreak. During this mission, field visits were made to affected areas to advise on the implementation of control measures. The mission visited the Local Crisis Centre in Brasov (where the most recent outbreaks had occurred), collected epidemiological information, and discussed the current situation, needs and problems. The Romanian authorities informed FAO about urgent needs they had identified, including stationary and mobile incinerators, rapid antigen detection tests, vehicles and the training of lab staff in PCR techniques.

The World Bank requested FAO's assistance to join its mission to Romania in July 2006 with a view to appraising the animal health component of a World Bank project. The objective of the mission was to appraise and review the detailed design of the technical components of the World Bank project (animal health, public health, and communications), proposed project management, procurement, disbursement, monitoring and evaluation arrangements. An FAO Animal Health and Production Officer was responsible for the appraisal of the animal health component, working closely with the veterinary authorities on the finalization of the activities supported by the project, the quantification and costing of the inputs required, the description of the outputs and key performance indicators. During the Animal Health and Production Officer's mission, the National Sanitary Veterinary and Food Safety Authority emphasized the need to improve knowledge and skills in epidemiology and emergency management of the country's veterinarians using international expertise and local experience. FAO is providing this requested assistance through the projects TCP/RER/3004 and OSRO/ROM/501/GER under which several training activities are being implemented.

The total of SFERA assistance provided to Romania is US$52 886.

Serbia

An assessment mission for the prevention and control of HPAI in Serbia was conducted in July 2006 as part of a wider assessment of the Balkan region. FAO experts in epidemiology, socio-economics and operations participated in the mission. Basic laboratory equipment for Serbia worth US$34 496 was procured by ECTAD headquarters, bringing the total value of assistance provided from the SFERA to Serbia to US$39 078.

Turkey

Turkey was severely affected by HPAI in the early part of 2006 and human deaths were reported. Through SFERA funds, FAO recruited a consultant for a mission in Turkey of six months. An epidemiological investigation of the HPAI situation in Samsun province, where the majority of HPAI cases were reported, was carried out, and an outbreak investigation manual relating to backyard poultry was prepared. The consultant assessed biosecurity

arrangements at commercial poultry companies and gave presentations on biosecurity to the poultry industry in general. A central database was established to record and analyze details of HPAI outbreaks. FAO also contributed to public awareness in Turkey by advising on the preparation and dissemination of information messages related to HPAI. Turkey is consequently well prepared for possible outbreaks in late 2006 and into 2007. Total SFERA assistance to Turkey amounts to US$222 834.

Ukraine

In addition to the US$42 863 basic emergency laboratory equipment procured from ECTAD headquarters for Ukraine, FAO experts participated in the World Bank-WHO-FAO-USAID project preparation team for evaluation of the avian influenza preparedness and response project of Ukraine from 27 April to 7 May 2006. An earlier assessment mission was undertaken in December 2005. The total SFERA commitment in Ukraine is US$51 293.

An FAO expert participated in a Naval Medical Research Unit 3 (NAMRU3) US Army training workshop on influenza surveillance and control and delivered presentations on epidemiology and control strategies and biosecurity of HPAI. The workshop was held in Kiev from 16 to 20 January 2006. The workshop's principal objectives were to promote epidemiological, laboratory and response capacities for pandemic influenza in public and animal health sectors in the former Soviet Union; to discuss non-pharmaceutical public health interventions, vaccines and antivirals related to pandemic influenza; to provide information for development of preparedness plans for pandemic influenza; to provide information for prevention and control measures for influenza in animals; and to ensure rapid sharing of appropriate technical information and strains related to pandemic influenza among national, regional, global and other relevant stakeholders.

Africa

SFERA funds enabled the extension of various activities initiated under the three regional Technical Cooperation Programme projects in Africa funded by FAO. SFERA funds were used to ensure that representatives of most African countries were able to participate in the inception workshops (in January 2006) of these TCP projects. These meetings were a first opportunity for African countries to share and discuss readiness strategies and to set the basis for regional coordination and harmonization with particular focus on poultry and wildlife surveillance and on diagnosis. SFERA funds also supported the participation of FAO staff members and other stakeholders in these meetings.

Three regional training workshops (one week each) on laboratory diagnosis techniques were organized in Bamako, Dakar and Nairobi. Another workshop was scheduled for the end of October 2006 in Garoua, Cameroon. The SFERA contributed to the payment of travel cost of participants, FAO staff and other stakeholders, and to payment of contracted training institutions. Three regional training workshops (one week each) on HPAI epidemiology and wild bird handling were organized in Malawi, Burkina Faso and Rwanda. The SFERA contributed to the payment of travel cost of participants, FAO staff and other stakeholders, and to payment of contracted training institutions.

Through contracted organizations paid under the SFERA, wild bird samples have been collected from selected sites in several countries including Chad, Ethiopia, Kenya, Malawi, Mali, Niger and Senegal. Also national staff were trained in sampling techniques.

SFERA funds supported the participation of country representatives, FAO staff and other stakeholders in a strategic planning meeting for Africa held in Libreville on 20-21 March 2006 in conjunction with the WHO, UNDP and other international organizations.

After HPAI was declared in Nigeria in February 2006, FAO initiated the procurement of standard sets of equipments for neighboring countries to allow them to react promptly should an outbreak be suspected. The equipment was intended to facilitate HPAI diagnosis through the supply of post-mortem kits, sampling kits, shipment boxes, cold boxes, basic laboratory supplies and reagents.. Personal protective equipment was included in this 'package' of supplies. As HPAI spread to other countries in the region it was decided to procure sets of such basic equipment to all sub-Saharan countries. The 'package' was enhanced with the addition of disinfectants and sprayers to be used in case of confirmed outbreaks.

Nigeria

The first outbreak of HPAI was confirmed in Nigeria in February 2006 in Igabi, Kaduna State. Following this outbreak, FAO fielded a first mission to Nigeria to carry out epidemiological investigations, conduct needs assessments, establish an effective coordination framework for external assistance, assist the Nigerian authorities in evaluating their short, medium and long term needs for the control and elimination of HPAI, provide supporting documents related to HPAI outbreak management and assess the risk of a spread to other states and neighboring countries. Subsequent missions were fielded with an increased focus on preparing project proposals for submission to the donor community and addressing socio-economic issues including compensation.

An amount of US$293 000 was disbursed to the FAO Representation in Nigeria from SFERA funds to assist the veterinary services in setting up active and passive surveillance systems, provide further technical assistance through the recruitment of consultants, procure reagents and other laboratory materials for diagnosis and develop and disseminate public awareness material. The funds allocated are also being used to set up an FAO-ECTAD office in Nigeria which will allow a timelier and better coordinated response to eventual new outbreaks.

Further to this, FAO headquarters supplied Nigeria with sampling kits, autopsy kits and shipping boxes, reagents, PPE and sprayers for a total value of approximately US$40 000. The cost was met from SFERA funds.

Part of FAO's work in Nigeria has involved preparing project proposals to be presented to the donor community to secure further assistance to Nigeria. In this context FAO was able to assist the government in designing and formulating three projects. The first is a project funded by the European Commission (with a budget of €522 415, equivalent to US$653 019) whose main objective is to obtain reliable data on the status of HPAI disease and infection in Nigeria, including aspects of disease epidemiology that will enable the Nigerian authorities and the international community to plan more effective responses to HPAI outbreaks in Nigeria.

The project is to be funded by USAID and the UNDP (with contributions of US$1 000 000 and US$90 000 respectively). Its main objectives are to coordinate the response initiatives of the government, UN agencies and other partners by providing technical advice which ensures an effective and efficient response to the HPAI epidemic and other transboundary animal diseases (TADs) in Nigeria. Furthermore, the project aims to improve the ability of the government to control HPAI and other TADs through strengthening of the existing early warning and early reaction facilities; and to promote, help identify and support applied research on issues that will help improve the technical tools, methods, and strategies available to decision makers in the country for combating HPAI and rehabilitating the poultry industry. The total of investments from the SFERA to Nigeria is US$391 889.

Cameroon

The first outbreak of HPAI in Cameroon was confirmed on 21 February 2006 in Doualaré (Maroua, Extreme North province). Prior to the first outbreak, in an effort to assist Cameroon in its preparation efforts to combat HPAI, US$45 000 from the SFERA were allocated to the FAO Representation in Cameroon. These allocated funds were used to recruit a national consultant to collect information on HPAI situation in the 10 provinces, evaluate the country's political and legal framework to tackle HPAI and take a census of commercial poultry farms. The funds were also used to conduct training and information sessions for provincial delegates, purchase personal protective equipment (PPE) and some laboratory material, produce information material on HPAI for public dissemination and conduct a study on the country's poultry sector.

Further to this, FAO headquarters supplied Cameroon with sampling kits, autopsy kits, shipping boxes, reagents, PPE and sprayers for a total value of approximately US$47 000.

Following the first outbreak FAO fielded a mission to Cameroon whose main objectives were to provide overall and specific technical advice to the national veterinary service, carry out epidemiological investigations, conduct needs assessments, evaluate the national response capacity and assist the veterinary service in making the national plan operational.

FAO organized a laboratory training workshop in Bamako, Mali from 20 to 24 March 2006. One participant from Cameroon took part in this workshop.

Additionally FAO has recently allocated US$200 000 from SFERA funds for a project whose objectives are to avoid the spread of HPAI to commercial farms, to improve passive and active surveillance throughout the country, to improve response capacity in case of a new outbreak and to improve public awareness on the disease.

The total investment from SFERA funds in Cameroon is US$152 858.

Côte d'Ivoire

The first outbreak of HPAI in Côte d'Ivoire (Anoumabo village in the District of Abidjan) was officially declared on 4 May 2006 after confirmation by an OIE/FAO reference laboratory. Prior to the first outbreak, in an effort to assist Côte d'Ivoire in its preparation efforts to early detect and control HPAI, US$45 000 from SFERA funds were allocated to the FAOR in Côte d'Ivoire. These allocated funds were mainly used to assist the veterinary services to set up an active surveillance network, purchase laboratory equipment, disinfectants

and laboratory reagents and produce and disseminate information/communication material and organize sensitization workshops.

In addition to this, procurement actions were initiated by FAO headquarters to supply Côte d'Ivoire with sampling kits, autopsy kits, shipping boxes, reagents, PPE, disinfectants and sprayers for a total value of approximately US$30 000.

Following the first outbreak, the immediate response focused on fielding a rapid response mission to Côte d'Ivoire by FAO staff. The purpose of this missions was to assist the Government of Cote d'Ivoire in implementing rapid control measures to contain the outbreak including culling, market closures transport control, compensation and communication. An assessment of urgent needs for these activities was made and US$300 000 were immediately made available through SFERA to cover these urgent needs. Follow-up was provided by multiple missions by FAO staff, externally recruited consultants and a consultant seconded to FAO through an agreement with the United States Department of Agriculture.

Following a request from the Government of Côte d'Ivoire, FAO purchased and delivered to the government 12.1 million doses of vaccines as well as syringes and vaccine carriers for a total value of just over US$412 000 in order for the Government to carry out a vaccination campaign in the District of Abidjan and for high value farms with FAO's assistance. Technical assistance was provided to prepare the vaccination schemes, logistics of the vaccination campaign and to design a post-vaccination surveillance protocol.

Other main results of FAO's investment from the SFERA in Côte d'Ivoire include: repair of the cold rooms of the national veterinary laboratory in Bingerville (LANADA); reinforcement of the Bingerville laboratory's diagnostic capacity through the supply of laboratory material; preparation, in collaboration with national authorities, of a detailed six-month action plan defining urgent activities to be carried out and including a budget, work plan and a matrix identifying contributions by various donors to avoid duplication and set priorities; training of personnel to carry out the vaccination campaign; training of personnel to carry out culling activities as well as disinfection of infected premises; the production of 12 000 posters to build public awareness; and the development of an HPAI country website (www.infogrippe-ci.org).

Overall, in response to the crisis in Côte d'Ivoire, FAO has disbursed nearly US$815 874 from SFERA funds to support the country's response to HPAI. FAO's intervention has also involved liaising with the donor community to secure funds for further assistance to Côte d'Ivoire. In this context FAO was able to assist the Government in designing and formulating a project with a budget of €600 000 (US$734 537) for funding from the European Community.

Benin

Emergency funds of US$45 000 sent to Benin from the SFERA were deployed for the training of livestock agents in avian influenza surveillance and the training of forestry agents in wild bird surveillance. Resources were used to support an information campaign to sensitize poultry sector professionals (and others) and village associations on HPAI issues. A communications strategy was developed and implemented as well, and information on HPAI was assembled and distributed to stakeholders. Active surveillance of domestic poultry and wild birds was carried out and laboratory kits and equipment were procured. SFERA funds

were also used to meet the costs of a study on the poultry sector in Benin as well as a study on compensation issues in the event of culling. FAO sent a consultant to provide technical assistance to the government to finalize a national response plan and a simulation exercise was organized to test the plan. The total investment of SFERA funds in Benin is US$112 161.

Burkina Faso

Information workshops for local media, senior regional officials and stakeholders in the poultry sector were organized in Burkina Faso. Training sessions on general AI issues and epidemiological surveillance for officials from the ministries of animal resources, environment and health took place. Additional laboratory and basic emergency supplies were procured. Technical assistance missions have been sent to the country as soon as the first outbreak was reported to provide overall and specific advice to the national veterinary service, carry out epidemiological investigations, conduct needs assessments, evaluate the national response capacity, and assist the veterinary service in making the national plan operational. SFERA funds have contributed US$133 101 for this assistance to Burkino Faso.

Chad

SFERA funds have supported several communication related activities in Chad, including the establishment of a toll-free telephone line for the general public to report suspected cases and get information. A periodic HPAI bulletin is also being produced as part of a wider campaign to inform the general public about the disease. Surveillance activity around Chad's borders was initiated and resources were allocated to enable the collection of samples in areas considered to be at high risk. Training sessions for employees of the central veterinary laboratory were organized and further laboratory materials procured. FAO's critical role in assisting the authorities in Chad to take preventive measures against HPAI has been recognized in the form of a grant to FAO from the European Union of €4 000 000 for follow-up activities in the country. The total amount disbursed to Chad from SFERA is US$108 070 so far.

Democratic Republic of the Congo

SFERA funds were used to formulate and disseminate communications and information material for different sectors and stakeholders, including the general public, veterinarians and commercial farmers. These activities, in addition to basic laboratory supplies and equipment procured from ECTAD headquarters, brings the total SFERA investment in the country to US$71 674.

Gambia

In addition to the organization of a media campaign to promote public awareness of HPAI, clinical and sero-surveillance was carried out in commercial farms, poultry markets and communities bordering wet lands. Surveillance of wild birds in wetlands (by trapping birds and collecting samples for analysis) was undertaken.

Guinea

Resources were used to conduct training workshops for surveillance staff and to produce and disseminate questionnaires to aid surveillance activities. Regional centres were established to

support these surveillance activities. Laboratory materials were procured from ECTAD headquarters in support of the veterinary service's efforts to prepare the country for a possible HPAI outbreak. The total to SFERA assistance to Guinea is US$74 726.

Liberia

Following a mission by FAO technical and operational experts to Liberia in August 2006, a project was planned to enable Liberia's severely depleted veterinary service to take preventive measures against a possible infection from a neighboring country. A national workshop on preparedness will be the key activity to develop cohesion and coordination. Surveillance, laboratory training, procurement of equipment (including reagents) and the development of information material will also form part of the project. The value of SFERA assistance so far to Liberia is US$99 252. A project proposal for US$200 000 emergency assistance has been prepared to cover immediate needs for minimum capacity for early detection and control of HPAI

Madagascar

US$65 330 have been committed from the SFERA to Madagascar, which, in addition to covering the cost of essential emergency laboratory supplies, were used to carry out an information campaign to sensitize the rural population, especially in 12 sites considered to be of high risk, and to facilitate communication between livestock agents from central and regional offices.

Mozambique

US$80 600 have been deployed from SFERA funds to Mozambique so far for a range of planned activities including a workshop on veterinary epidemiology and emergency preparedness, a workshop to develop and present a communication strategy, the multiplication, distribution and impact monitoring of public information for public awareness campaigns on HPAI a poultry sector analysis, practical training in epidemiology, the procurement of rapid detection kits.

Niger

ECTAD procured PPE, disinfectant, sprayers and other essential equipment to assist the veterinary authorities in Niger, and organized a national workshop to address all aspects of HPAI. Additionally two technical assistance missions have been carried out in order to support the government in the outbreaks' response. The total of SFERA commitments to Niger is US$120 050.

Rwanda

In addition to emergency laboratory supplies and equipment procured by ECTAD headquarters using SFERA funds, a mission to assess the situation in Rwanda and consolidate prevention and control plans was conducted by FAO staff. The total of SFERA assistance to Rwanda is US$97 338.

South Africa

US$15 000 of funds were provided from the SFERA to support sample testing by the Onderstepoort Veterinary Institute for countries in the Southern African Development Community region. Added to supplies and equipment procured for South Africa, total assistance through the SFERA adds up to US$70 169.

Togo

Various activities are planned for Togo with funds committed from the SFERA, including improving preparedness by strengthening the country's surveillance capacity, conducting studies to better understand wild bird movement patterns and their interaction with domestic species, a census of bird species traded locally, sensitization activities for rural populations and sero-surveillance of commercial farms considered to be at risk. One mission has been conducted in Togo to assess the epidemiological situation, preparedness and provide technical guidance to the veterinary services. So far US$78 012 has been invested in Togo from the SFERA.

Latin America and the Caribbean

Funds from the SFERA have supported activities focused on the prevention of avian influenza at national and regional level prior to the implementation of the four Technical Cooperation Programme (TCP) projects funded by FAO and established in May 2006. These activities were executed in close collaboration with other international organizations including OIE, the Organismo Internacional Regional de Sanidad Agropecuaria (OIRSA), the Inter-American Institute for Cooperation on Agriculture (IICA), the Caribbean Community and Common Market (CARICOM) and the Pan American Health Organization (PAHO). Furthermore, additional funds from SFERA have been earmarked to support the activities planned within the four TCP regional projects (for example, increasing the number of trainees in workshops and procuring equipment and supplies).

SFERA funding of US$7 200 supported the elaboration, translation and publication of various documents on AI. A document entitled "Preparing for Highly Pathogenic Avian Influenza. A Manual for Countries at Risk" was translated into Spanish and it is available on the FAO Regional Office for Latin America and the Caribbean's website (http://www.rlc.fao.org/prior/segalim/animal/aviar/pdf/Manualliap2.pdf). A handbook entitled "Guide to the prevention and control of avian flu in small-scale poultry farming in Latin America and the Caribbean" was published in Spanish. The publication stresses the measures needed to ensure on-farm biosecurity and prevent contact between domestic poultry and potentially infected wild birds. Two thousand copies of this handbook have been printed so far. They are being circulated among the staff of local veterinary services and livestock technicians, national poultry associations and staff of international organizations. The publication has also been made available free-of-charge on FAO's website (http://www.fao.org/AG/AGAINFO/SUBJECTS/documents/ai/AI-Manual-spanish.pdf).
English, French and Portuguese versions of the handbook are under preparation.

A regional website on AI issues was designed and is currently online. The website contains updated information about the activities undertaken within the TCP regional projects as well as several documents and news. The website is planned to be used as a communication platform among the national coordinators and the project staff. The website can be found at

http://www.rlc.fao.org/prior/segalim/animal/aviar. SFERA funds supported the design, maintenance and regular update of this activity.

The participation of various FAO and national experts in regional conferences and workshops has been supported with US$32 600 from the SFERA. The FAO animal health officer in the Regional Office for Latin America and the Caribbean undertook missions to Rome, Italy (20-29 March 2006) and Cuzco, Peru (17-19 May 2006), both of which were financed by SFERA. The animal health officer also traveled to Rome to work jointly with other animal health and emergency operations officers in the preparation of the project documents of the four TCP regional projects. In Cuzco, Peru, the animal health officer attended the meeting "Strategic Communication on Avian Influenza / Human Influenza" organized by UNICEF and PAHO. The SFERA financed travel and lodging expenses of 11 participants in an avian influenza meeting held in Trinidad and Tobago on 4-7 April 2006 and organized by CARICOM. SFERA funded the travel and lodging for the animal health officer of the National Service for Quality and Animal Health in Paraguay to participate in a diagnostic laboratory training workshop organized by PAHO in Campinas, Brazil (8-19 May 2006). Furthermore, the SFERA financed the attendance of a field veterinarian from the Wildlife Conservation Society at a meeting with the FAO Regional Representative for Latin America and the Caribbean and the TCP international coordinator on avian influenza, in Santiago de Chile in August 2006 where they discussed the participation of the Wildlife Conservation Society in wild bird surveillance activities planned under the TCP regional projects.

US$9 550 from the SFERA were allocated for the purchase of laptop computers for the TCP regional project coordinators and the international project coordinator.

An FAO senior information officer participated in the "Interagency Avian and Pandemic Influenza Communication Task Force for the Americas" held at PAHO Headquarters in Washington (24-25 July 2006). This mission was co-funded by SFERA. During this meeting a framework was approved setting forth a common approach for communicating with the media, government officials, the private sector and the general public.

Two FAO emergency operations officers attended the launching workshops of the TCP regional projects in Buenos Aires, San Salvador, Lima and Bridgetown. Their missions were funded by SFERA. The operations officers presented FAO's TCP regional projects on avian influenza and participated in the preparation of the project work plans and implementation timetables. They also briefed the project staff in the field on operational issues and met representatives of other international organizations and donors to ensure proper coordination of activities at a regional level.

Ecuador

On 24-31 March 2005 an FAO expert on avian influenza travelled to Ecuador to assess the state of the government and the private poultry industry with regard to the prevention and control of avian influenza. Among other activities, the expert lectured in four workshops, visited diagnostic laboratories, evaluated biosecurity in farms throughout the country and assessed the national contingency and prevention plan for avian influenza.

Annex 3: France's contribution to the SFERA

Project: OSRO/GLO/504/MUL BABY 04

1. Financial contribution to Global Programme

In January 2006 the Government of France and FAO signed a SFERA agreement in support of the Global Programme amounting to €4.9 million. On 1 March 2006 the Government of France contributed a grant in aid of €3 333 333; subsequently an additional €1 230 000 were received on 24 April 2006 and € 333 000 on 17 May 2006. With the total amount of funds received (equivalent to US$5 880 000), FAO established the project OSRO/GLO/504/MUL BABY 04. The duration of the grant was limited to a six-month period. However, on 7 September 2006, the Government of France approved FAO's request for a six-month extension of the grant. The current ending date of the project is 31 December 2006.

2. Global Programme funded activities and state of execution of the budget

2.1 Budget allocated per components

The following table shows the amount of project funds allocated to the various component of the FAO AI Global Programme:

			Budgeted*	**Spent Committed Planned**
A)	**Global Coordination**		**1 084 958**	**1 518 236**
A.1	Support for Global Coordination (ECTAD HQ + TSS)		772 620	714 230
A.2	Establishment of CMC + GLEWS		79 506	73 006
A.3	OFFLU Networks & Global Wildlife Surveillance		232 832	731 000
B)	**Countries**		**4 845 462**	**3 921 119**
B.1		Regional Coordination	1 685 019	633 822
	B.1.1	*Support for Regional Coordination/CMC*	*743 159*	*156 817*
	B.1.2	*Communication & Socio Economics*	*220 860*	*79 185*
	B.1.3	*Epidemiology Networks*	*721 000*	*397 820*
B.2		At Risk Countries	1 962 481	2 163 820
B.3		Newly Infected Countries	320 748	320 748
B.4		Infected Countries	877 214	802 729
B.5		Contingency	0	0
Total			**5 930 420**	**5 439 354**

Source: BMS[3] as of 30 September 2006

[3] FAO Budget Monitoring Sheets - figures include executed, committed and planned activities

2.3 Beneficiary countries

The following table shows the list of project's recipient countries and the equivalent amount allocated to them.

Source of Funding OSRO/GLO/504/MUL BABY04

Recipient	Total
Afghanistan	4 167
Algeria	69 290
Angola, Republic of	23 620
Armenia, Republic of	3 666
Azerbaijan, Republic of	2 565
Benin, Republic of	105 724
Botswana, Republic of	24 165
Bulgaria	5 804
Burkina Faso	111 851
Burundi	31 107
Cameroon, Republic of	103 380
Central African Republic	28 468
Chad	102 077
Congo, Democratic Republic of	57 822
Congo, Republic of	39 212
Côte d'Ivoire, République de la	395 221
Croatia, Republic of	7 605
Djibouti	24 942
Egypt	85 746
Equatorial Guinea	24 825
Eritrea	37 066
Ethiopia, Federal Democratic Republic of	44 760
Gabon	38 205
Gambia, Republic of	67 127
Georgia, Republic of	1 626
Ghana	69 181
Guinea	71 946
Guinea-Bissau	74 821
Hungary	1 002
Iran	54 649
Iraq	47 526
Jordan, Hashemite Kingdom of	45 000
Kenya, Republic of	21 494

Recipient	Total
Lebanon	51 127
Lesotho	37 152
Liberia	81 458
Libyan Arab Jamahiriya	34 087
Macedonia, FYR	4 167
Madagascar	49 667
Malawi	26 104
Maldives	2 565
Mali	186 335
Mauritania	74 178
Moldova, Republic of	4 167
Morocco	68 429
Mozambique	72 477
Namibia, Republic of	36 604
Niger	107 712
Nigeria	53 152
Romania	5 963
Rwanda	92 976
Senegal, Republic of	74 721
Serbia, The Republic of	4 166
Seychelles	23 978
Sierra Leone	94 686
Somalia	36 475
South Africa, Republic of	47 169
Sudan	22 238
Swaziland	29 980
Syrian Arab Republic	53 604
Tanzania, United Republic of	21 888
Togo	73 201
Tunisia	66 114
Turkey, Republic of	13 925
Uganda	22 096
West Bank and Gaza Strip	20 667
Zambia	32 835
Zimbabwe	23 019
Regional activities and coordination	446 377
Grand Total	3 921 119

The information provided in this report is for project monitoring and evaluation only, not to be considered as an interim or final financial report

1. Major inputs

FAO's commitments from France's contribution to the SFERA can also be broken down into the following major input categories:

- Human resources: salaries and related costs of technical experts, joint field missions, travel expenses, recruitment;
- Contract (Letters of Agreement): diagnostic reference and training, field epidemiological studies, wildlife field studies;
- Training: laboratory, epidemiology, wildlife;
- Laboratory and veterinary supplies and equipment; and
- Other: General operating expenses, courier services, internal transport, technical support costs

Following the first outbreaks of AI in Africa in early 2006, emergency funds for an amount of US$45 000 were provided from the SFERA to enable the following countries to begin preparedness and prevention activities: Chad, Cameroon, Cote d'Ivoire, Gambia, Guinea, Guinea-Bissau, Mali, Niger, Burkina Faso, Liberia, Senegal, Sierra Leone, Togo, Ghana, Benin, Algeria, Mauritania, Tunisia, Morocco, Egypt, Iran and Lebanon. At a later stage Mozambique and Rwanda received respectively US$50 000 and US$60 000 for similar activities.

Following an outbreak of HPAI near Abidjan in Cote d'Ivoire, ECTAD sent a consultant from headquarters on a three-week assessment mission in May 2006. A further technical mission was undertaken by another FAO consultant for three weeks from mid-May and recruitment was initiated to post a consultant in Cote d'Ivoire for several months. Two FAO consultants visited the country in June 2006 to follow up the previous missions and assist the national authorities with planning a national vaccination campaign. FAO has provided or is providing equipment, goods and services worth more than US$760 000 (partially purchased with funds from France's contribution), more than half of which is for the procurement of vaccines (US$420 000). A further US$64 500 was committed as a field budget authorization for local procurement.

In North Africa:

- The regional networking project's inception workshop was held in Cairo, Egypt from 1-2 February 2006.
- A laboratory training workshop was held in Rabat, Morocco from 15-19 May 2006.
- An epidemiology and wild bird handling workshop was held in Tunis, Tunisia from 12-16 June 2006.

In West Africa:

- The regional networking project's inception workshop was held in Bamako, Mali from 23-27 January 2006.
- An emergency laboratory training workshop was held in Bamako, Mali from 20-24 March 2006 for francophone West African countries.
- An epidemiology and wild bird handling training workshop was held in Ouagadougou, Burkina Faso from 15-19 May 2006.
- A laboratory workshop was held in Dakar, Senegal in June 2006.

In Eastern and Southern Africa:

- The regional networking project's inception workshop was held in Nairobi, Kenya from 16-20 January 2006.
- An epidemiology and wild bird handling workshop was held in Lilongwe, Malawi from 24-28 April 2006.
- A laboratory training workshop was held in Nairobi, Kenya, 17-21 July 2006.

US$15 000 were provided to FAO South Africa to contract the Onderstepoort Veterinary Institute (OVI) to perform tests for avian flu diagnosis for countries in the region that cannot perform the tests themselves.

Missions by FAO staff and consultants have been undertaken under a FAO mandate or jointly with the World Bank in the following countries: Mauritania, Egypt, Nigeria, Niger, Cameroon, Burkina Faso, Benin, Togo, Sudan, Uganda, Zambia, Malawi, Senegal and Qatar.

Niger was among the countries which received emergency funds (US$45 000) through the SFERA. There were missions by FAO officers from the technical and operations divisions, which contributed to organization of control and eradication activities. These missions resulted in the preparation of a project with a cost of US$200 000, funded by USAID. FAO also advised donors and the government on the allocation of funds.

Funds from the French contribution to the SFERA were also used to support countries' and FAO experts' participation in various international conferences on HPAI in Africa, which were coordinated by regional and international organizations including the Economic Community Of West African States (ECOWAS), Union Economique et Monétaire Ouest Africaine (UEMOA), WHO and other UN agencies, OIE and IBAR.

2. Wild bird surveillance activities

In 2005, following the spread of HPAI in Russia, Kazakhstan and Central Europe, FAO decided to initiate a programme of HPAI surveillance in wild birds in order to track the evolution and possible spread of the virus along migratory routes.

These activities were initiated in the framework of the FAO Technical Cooperation Programmes (TCPs) of Emergency Assistance for Early Detection and Prevention of Avian Influenza in Eastern Europe, the Middle East and Africa, and they were extended to key ecological sites thanks to France's contribution to the SFERA.

A first campaign of surveillance was conducted in a total of 14 countries between mid-January and mid-May 2006.

This surveillance programme was coordinated by CIRAD in collaboration with Wetlands International. Implementation of the field operations were organized in partnership with national wildlife and veterinary services and in collaboration with international conservation and research organizations (such as AFRING, OMPO, ONCFS, SOVON, WWT), local ornithological NGOs, national hunting associations and safari operators.

Geographical distributions of sampling sites as well as sampling periods have been selected to cover the seasonal patterns of water bird migration over Eastern Europe, the Middle East and

Africa, and target natural sites where water birds of various geographical origins (breeding grounds) congregate and mix.

A total of 5 288 samples were collected - 70 percent were from dead birds provided by hunters, 20 percent from fecal material and 10 percent from live caught birds. As of today, laboratory testing and results are available for more than 3 400 samples. No HPAI and no H5N1 virus have been detected. A total of 4.2 percent of all samples (type A+) were LPAI strains and five viruses have been isolated. LPAI viruses were detected in waterbirds in Africa, showing that the virus is able to circulate in a tropical environment during the northern winter.

A second round of surveillance was to be carried out from September 2006 to January 2007 in 17 countries (including five additional sites). The objectives of the surveillance are to:

- evaluate the AI carriage, in particular highly pathogenic strains, among wild bird populations within the regions of Eastern Europe, the Middle East and Africa;
- evaluate if HPAI H5N1 virus is perpetuated in wild bird populations in countries where HPAI H5N1 outbreaks have occurred;
- improve understanding of the host ecology of AI viruses, in particular in sub-tropical and tropical regions, which should contribute to the prevention and the control of avian influenza; and
- provide technical support to national surveillance programmes through capacity building of national counterparts on sampling techniques during field operations, and standardize field procedures for AI surveillance in wild birds between countries of the TCP regions.

This activity has been initiated in the framework of the TCPs and partially funded by the French contribution (US$651 000)

3. GLEWS

The Global Early Warning and Response System for Major Animal Diseases including Zoonoses (GLEWS), builds on the added value of combining the alert and response mechanisms of the different organizations, enhancing the Early Warning and Response capacity for the benefit of the international community. Through sharing of information on disease alerts, unjustified duplication of efforts will be avoided and the verification processes of the three organizations will be combined and coordinated. For zoonotic events, alerts of animal outbreaks can provide direct early warning so that human surveillance could be enhanced and preventive action taken. Similarly, there may be cases where human surveillance is more sensitive and alerts of human cases precede known animal occurrence of disease.

GLEWS is based on the notion that infection does not recognize geographical nor species borders. The overall aim of GLEWS is to improve the early warning and response capacity to animal disease threats of the three sister organizations for the benefit of the international community and to provide technical support to regions/nations on issues at the animal/human interface of outbreak control.

A GLEWS core team has been established in FAO headquarters and now includes nine animal health officers with background in epidemiology, disease ecology and mapping.

Furthermore, a new position for a GLEWS analyst officer has been created through the contribution of France.

4. Support to OFFLU network

As part of ECTAD's strategy to control HPAI, regional networks for AI surveillance have been created. Strengthening laboratory and diagnostic capacities at national and regional levels has been a critical activity requiring intensive laboratory training for recipient countries which learned basic and state of the art techniques for the diagnostic of the disease both in wildlife and domestic poultry.

These activities have been implemented through a contractual agreement with the Istituto Zooprofilattico Sperimentale delle Venezie in Italy, OIE/FAO reference laboratory for AI and coordinator of the OIE-FAO AI Network (OFFLU).

The purpose of this agreement is to assist FAO in:

- building national and regional capacity of AI laboratory diagnosis;
- evaluating the efficacy of an inactivated H5N2 influenza vaccine in domestic ducks under field conditions; and
- providing support to the OIE-FAO AI Network (OFFLU) and promoting laboratory networking.

US$80 000 from the French funds were allocated to this activity

5. International conference on wild birds

The French contribution to the SFERA supported the FAO/OIE International Scientific Conference on Avian Influenza and Wild Birds, held at FAO headquarters in Rome on 30-31 May 2006. The conference brought together more than 300 veterinarians, virologists and conservationists from around the world. They debated issues such as migratory bird flyways, poultry farming systems and global trade, and concluded that the answer to the cycle of avian flu outbreaks lies in a combination of all three. They also agreed that it is crucial to know if wild birds can act as permanent reservoirs of HPAI.

The conference provided a multi disciplinary forum for the exchange of the latest scientific information on avian influenza and the role of wild birds. It aimed to identify the major knowledge gaps for understanding the role of wild bird in the epidemiology of HPAI, and to assess the risk of the spread of HPAI by wild birds to currently uninfected areas and risk mitigation measures.

The main topics were: ecology and virology of the virus; surveillance, sampling and analysis; risk analysis; and improvement of tools for disease management. More than 20 invited keynote speakers provided presentations distributed over five sessions.

It was argued at the conference that only a concerted global effort to monitor the situation will help throw light on much of the mystery still surrounding the reasons for the appearance of the disease in some locations and not in others. It was further recognized that wild birds play a role, albeit unclear, and therefore must share some of the responsibility for the current concern surrounding outbreaks of the deadly H5N1 strain of highly pathogenic avian

influenza (HPAI), but participants were united in their conviction that the key to controlling the disease lies above all at the level of poultry.

The conference was partly funded by US$10 000 from France's contribution.

6. Support to EISMV

Part of France's contribution to the SFERA has been used to develop and implement a project in collaboration with L'école Inter-Etats des sciences et médecine vétérinaire (EISMV), based in Dakar, Senegal.

The aim of the project was to produce a toolkit to be used to increase public awareness of the dangers posed by HPAI to animal health by communicating key messages about the disease to them. The toolkit was produced in French on a CD-ROM and is being distributed to through FAO country offices to 29 francophone beneficiary countries in Africa and the Indian Ocean. The CD-ROM includes several different information tools, including audio and video recordings, textual aids, posters, training guidelines and presentation material. Two hundred copies of the CD-ROM have been produced. The CD-ROM is being aimed primarily at those working on national HPAI campaigns, including technicians and animal health workers.

The agreement for this project, which has been partly funded by US$10 000 from France's contribution, was signed by FAO on 28 June 2006.

7. Conference on migratory species

Through France's contribution to the SFERA, FAO sponsored the organization of a scientific seminar to review the latest scientific studies concerning the evolution and spread of avian influenza and its impact on wild birds and the wider environment.

In mid-2005, concerns about the role of migratory birds as potential "vectors and victims" of H5N1, which was spreading north-westwards from its origins in poultry farms in South East Asia, led the United Nations Environment Programme (UNEP) Convention on Migratory Species (CMS) to establish a scientific task force. The Scientific Task Force on Avian Influenza (STF), which was established in August 2005, now comprises 13 UN bodies, wildlife treaties and specialist non-governmental organizations (NGOs). The STF focuses on obtaining the best scientific advice on the conservation impact of the spread of H5N1, assessing the role of migratory birds as vectors of the virus, and issuing advice on the root causes of the epidemic as well as technically sound measures to combat it and develop early warning expertise.

The STF has already begun synthesising and disseminating the latest scientific assessments to governments, the media and the wider public. STF members have consistently emphasised that HPAI is being spread in a variety of ways including trade in poultry and its products; legal and illegal trade in wild and captive bred birds; human movements; and cross-infection (in both directions between poultry and migratory water birds). The relative importance of each main method of transmission remains open to discussion and key questions still remain unanswered.

One of the most recent STF projects was to organize a scientific seminar to review the latest scientific studies concerning the evolution and spread of avian influenza and its impact on

wild birds and the wider environment. This seminar was held on the April 10-11, 2006 at the UNEP headquarters in Nairobi and was jointly organized by the CMS, the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) and the UNEP Division of Early Warning and Assessment (UNEP/DEWA).

The main objective of the seminar was to assemble the best scientists and best research available to produce a balanced and up-to-date status report on the H5N1 epidemic, with emphasis on the environmental and conservation aspects, including further advice on preventing or mitigating the spread of H5N1 and similar viruses.

The seminar was attended by several high level experts in virology, epidemiology, human and animal health, poultry farming, ecology and migration. Several institutions and organizations were represented including the Wildlife Conservation Society, Birdlife International, the International Council for Game and Wildlife Conservation, the Convention on Biological Diversity, Wetlands International as well as FAO, the OIE and the WHO.

This conference has been partly funded by US$10 000 from France's contribution.

8. Sector studies of poultry production structures in West African countries

A good knowledge of the poultry production systems that exist in a country is an important prerequisite for implementing effective disease control programmes. Such knowledge includes the contribution of different species and production sectors to the total poultry production and the numbers and locations of the population. Having such information at hand can enable a quick reaction to disease outbreaks. The outbreaks of HPAI in some West African countries in early 2006 highlighted the need for that information.

Using a common approach and standardized Terms of Reference, poultry sector reviews were commissioned and prepared by national consultants for six West African countries, including Benin, Cameroon, Mali, Senegal, Togo and Nigeria Except Nigeria for which work is ongoing, the reviews have been completed and summarized in a regional report. An available sector review from Niger was also incorporated into the regional summary.

Poultry population data by administrative region and the share of village and commercial poultry were compiled for all reviewed countries, sometimes for single years and sometimes over several years. A further separation into the FAO sectors 1-3 (commercial to semi-commercial sectors ranging from high (sector 1) to medium or low biosecurity (sector 2 and 3)) was only possible for Benin and Cameroon, but information indicate that the majority of commercial poultry farms fall into the sector three with low or non-existent biosecurity. The documentation of organizational structures of the commercial poultry producers and development initiatives for village poultry production in the reviewed countries will help the planning and organization of prophylactic measures and control programs for HPAI, if required. At present, control of Newcastle disease is still the most important veterinary intervention.

The reviews highlight that all countries have experience with commercial poultry production, although in different development stages. In all countries the concerned sectors are heavily dependent on imports of chicks, feed and veterinary products. In terms of population numbers, the village poultry production sector 4 (village poultry) is still more important than the commercial sectors. Initiatives for the control of Newcastle disease in village poultry have

been successful and show the positive response of poultry owners to disease control interventions, but larger poultry owners still need to be served by these initiatives.

The reviewed countries have developed actions plans for the control of HPAI but first experience shows that even the threat of the disease can result in market shocks with significant financial and social consequences. In order to develop the poultry sectors, several important issues need to be further investigated in these countries, including the competitiveness of the commercial sector versus imports, the role and future of small producers in peri-urban areas and necessary investments and needs for technical training. The focus on poultry production caused by the threat of HPAI may offer an opportunity to reverse the declining interest for supporting the development of poultry production in West African countries.

US$50 000 from France's contribution was allocated to this activity.

Annex 4: Greece's contribution to the SFERA

Project: OSRO/GLO/504/MUL BABY 07

1. Financial contribution to Global Programme

On 12 July 2006 the Government of Greece contributed an amount of €150 000 to the SFERA in support of the Global Programme. The duration of the grant was limited to a one-year period and it will be used for funding regional activities in Africa.

2. Global Programme funded activities and state of execution of the budget

2.1 Budget allocated per components

The following table shows the amount of project funds allocated to the various component of the FAO AI Global Programme:

			Budgeted
A)	**Global Coordination**		**33 431**
A.1		Support for Global Coordination (ECTAD HQ + TSS)	33 431
A.2		Establishment of CMC + GLEWS	0
A.3		OFFLU Networks & Global Wildlife Surveillance	0
B)	**Countries**		**155 011**
B.1		Regional Coordination	155 011
	B.1.1	*Support for Regional Coordination/CMC*	*155 011*
	B.1.2	*Communication & Socio Economics*	*0*
	B.1.3	*Epidemiology Networks*	*0*
B.2		At Risk Countries	0
B.3		Newly Infected Countries	0
B.4		Infected Countries	0
B.5		Contingency	0
Total			**188 442**

Source: BMS[4] as of 30 September 2006

[4] FAO Budget Monitoring Sheets - figures include executed, committed and planned activities

Annex 5: Jordan's contribution to the SFERA

Project: OSRO/GLO/504/MUL BABY 05

1. Financial contribution to Global Programme

On 03 January 2006 the Hashemite Kingdom of Jordan contributed US$50 000 to SFERA in support of FAO emergency response to the expansion of avian influenza from East and Southeast Asia to other regions. With the total of funds received, FAO has established the project OSRO/GLO/504/MUL BABY 05. The duration of the grant is limited to a 12-month period and the current ending date of the project is 31 December 2006.

2. Global Programme funded activities and state of execution of the budget

2.1 Budget allocated per components

So far, 92 percent of the funds has been spent to provide the Hashemite Kingdom of Jordan with all the necessary AI emergency sets comprise the following items: reagents, personal protective equipment, reagents kit, disinfectants, shipment boxes, mist blowers unit, sprayers unit, autopsy kit unit, syringes automatic sampling kit unit and vaccine boxes kit.

Annex 6: Norway's contribution to the SFERA

Project: OSRO/GLO/504/MUL BABY 01

1. Financial contribution to Global Programme

On 18 November 2005 the Government of Norway decided to contribute through SFERA to FAO's Global Programme. The Government of Norway has contributed a grant-in-aid in three allotments of NOK6 500 000 (November 2005), NOK7 500 000 (January 2006) and an additional NOK1 333 330 (May 2006). With the total amount of funds received (equivalent to US$3 506 326), FAO established the project OSRO/GLO/504/MUL BABY 01. The duration of the grant is limited to a 12-month period and the current ending date of the project is 30 November 2006.

2. Global Programme funded activities and state of execution of the budget

2.1 Budget allocated per components

The following table shows the amount of project funds allocated to the various component of the Global Programme:

		Budgeted*	Spent Committed Planned
A)	**Global Coordination**	**1 517 791**	**1 481 337**
A.1	Support for Global Coordination (ECTAD HQ + TSS)	1 190 648	1 200 973
A.2	Establishment of CMC + GLEWS	327 143	247 940
A.3	OFFLU Networks & Global Wildlife Surveillance	0	32 425
B)	**Countries**	**1 988 535**	**1 957 577**
B.1	Regional Coordination	1 055 044	1 018 825
B.1.1	*Support for Regional Coordination/CMC*	*896 058*	*622 673*
B.1.2	*Communication & Socio Economics*	*126 561*	*300 563*
B.1.3	*Epidemiology Networks*	*32 425*	*95 589*
B.2	At Risk Countries	108 925	110 492
B.3	Newly Infected Countries	432 698	432 698
B.4	Infected Countries	391 868	395 562
B.5	Contingency	0	0
Total		**3 506 326**	**3 438 914**

Source: BMS[5] as of 30 September 2006

[5] FAO Budget Monitoring Sheets - figures include executed, committed and planned activities

2.3 Beneficiary countries

The following table shows the list of project's recipient countries and the equivalent amount allocated to them. As requested by the donor, the beneficiaries of the projects are all ODA countries.

Source of Funding: OSRO/GLO/504/MUL BABY01

Recipient	Total
Côte d'Ivoire, République de la	413 851
Nigeria	336 074
Regional Latin America	59 829
Myanmar, Union of	45 832
Timor-Leste, Democratic Republic of	39 924
Djibouti	36 833
Indonesia	29 429
Mali	27 394
Viet Nam	19 145
Turkey, Republic of	14 306
Regional Asia & Pacific	13 652
Regional Africa	13 383
Angola, Republic of	9 923
Egypt	8 965
Niger	8 356
Burkina Faso	7 722
Lesotho	6 785
Lebanon	6 782
Regional Near East	5 550
Iran	4 744
Madagascar	4 724
Cape Verde	4 600
Sao Tome & Principe	4 600
Congo, Republic of	4 550
Zambia	4 124
Botswana, Republic of	3 927
Zimbabwe	3 909
Kenya, Republic of	3 670
Sierra Leone	3 487

Recipient	Total
Tanzania, United Republic of	3 322
Malawi	3 166
Ukraine	3 019
Benin, Republic of	2 889
Namibia, Republic of	2 802
Mozambique	2 784
Ethiopia, Federal Democratic Republic of	2 614
Uganda	2 360
Sudan	2 359
Central African Republic	2 072
Algeria	1 834
Togo	1 732
Azerbaijan, Republic of	918
Croatia, Republic of	918
Serbia, The Republic of	918
Armenia, Republic of	917
Cameroon, Republic of	917
Chad	917
Liberia	917
Macedonia, FYR	917
Moldova, Republic of	917
Mauritania	894
Regional Europe	603
Regional activities & coordination	770 801
Grand Total	**1 957 577**

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Annex 7: the People's Republic of China's contribution to the SFERA

Project: OSRO/GLO/504/MUL BABY 08

1. Financial contribution to Global Programme

On 25 July 2006 the Peoples' Republic of China contributed an amount of US$500 000 to the SFERA in support of the Global Programme. The duration of the above grant is limited to a one-year period and it is meant to cover Asian regional activities.

2. Global Programme funded activities and state of execution of the budget

2.1 Budget allocated per components

The following table shows the amount of project funds allocated to the various component of the Global Programme:

			Budgeted*
A)	**Global Coordination**		**82 682**
A.1		Support for Global Coordination (ECTAD HQ + TSS)	82 682
A.2		Establishment of CMC + GLEWS	0
A.3		OFFLU Networks & Global Wildlife Surveillance	0
B)	**Countries**		**417 318**
B.1		Regional Coordination	0
	B.1.1	*Support for Regional Coordination/CMC*	*0*
	B.1.2	*Communication & Socio Economics*	*0*
	B.1.3	*Epidemiology Networks*	*0*
B.2		At Risk Countries	0
B.3		Newly Infected Countries	0
B.4		Infected Countries	417 318
B.5		Contingency	0
Total			**500 000**

Source: BMS[6] as of 30 September 2006

[6] FAO Budget Monitoring Sheets - figures include executed, committed and planned activities

Annex 8: Saudi Arabia's contribution to the SFERA

Project: OSRO/GLO/504/MUL BABY 06

1. Financial contribution to Global Programme

On 16 March 2006 the Government of the Kingdom of Saudi Arabia contributed US$1 million to SFERA in support of the Global Programme. With the total of funds received FAO established the project OSRO/GLO/504/MUL BABY 06. The duration of the grant is limited to a 12-month period and the current ending date of the project is 31 January 2007.

2. Global Programme funded activities and state of execution of the budget

2.1 Budget allocated per components

The following table shows the amount of project funds allocated to the various component of the Global Programme:

		Budgeted*	Spent Committed Planned
A)	**Global Coordination**	**119 037**	**206 232**
A.1	Support for Global Coordination (ECTAD HQ + TSS)	114 037	206 232
A.2	Establishment of CMC + GLEWS	5 000	0
A.3	OFFLU Networks & Global Wildlife Surveillance	0	0
B)	**Countries**	**880 963**	**784 665**
B.1	Regional Coordination	391 277	303 879
B.1.1	*Support for Regional Coordination/CMC*	*364 577*	*13 744*
B.1.2	*Communication & Socio Economics*	*26 700*	*40 185*
B.1.3	*Epidemiology Networks*	*0*	*129 950*
B.2	At Risk Countries	453 700	432 692
B.3	Newly Infected Countries	0	0
B.4	Infected Countries	35 986	48 094
B.5	Contingency	0	0
Total		**1 000 000**	**990 897**

Source: BMS[7] as of 30 September 2006

[7] FAO Budget Monitoring Sheets - figures include executed, committed and planned activities

2.3 Beneficiary countries

The following table shows the list of project's recipient countries and the equivalent amount allocated to them.

Source of funding: OSRO/GLO/504/MUL BABY06

Recipient	Total
West Bank and Gaza Strip	91 684
Yemen, Republic of	77 115
Egypt	62 286
No country specific	39 402
Lebanon	38 060
Syrian Arab Republic	23 422
Mauritania	14 391
Sudan	8 759
Morocco	8 493
Jordan, Hashemite Kingdom of	8 068
Algeria	7 889
Tunisia	7 164
Afghanistan	6 186
Libyan Arab Jamahiriya	3 995
Iraq	3 945
Turkey, Republic of	3 000
Djibouti	2 762
Gambia, Republic of	1 833
Regional Activities & Coordination	376 211
Grand Total	**784 665**

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Annex 9: Sweden's contribution to the SFERA

Project: OSRO/GLO/601/SWE BABY 01 and 02

1. Financial contribution to Global Programme

On 8 May 2006 the Government of Sweden and FAO signed a SFERA agreement in support of the Global Programme amounting to SEK74 million (equivalent to US$10 015 795). This grant agreement covers a one-year period and it is meant for activities in Asia, the Middle East and North Africa for an amount SEK49 million (equivalent to US$6 600 494) and in Africa for an amount of SEK25 million (equivalent to US$3 415 301).

The allocation, expenditure and commitments are detailed in tables 1 and 2 below.

Table 1 - Budget and activities for Asia, Middle East and North Africa as per HPAI Global Programme's components (OSRO/GLO/601/SWE B01)

			Year One		
			Budgeted*	**Spent Committed**	**Balance**
A) Global Coordination			**509 480**	**334 480**	**175 000**
A.1 Support for Global Coordination			409 480	334 480	75 000
A.2 Establishment of CMC + GLEWS			0	0	0
A.3 OFFLU Networks & Global Wildlife Surveillance			100 000	0	100 000
B) Countries			**5 490 564**	**1 093 734**	**4 396 830**
B.1 Regional Coordination			1 822 369	300 749	1 521 620
	B.1.1	*Support for Regional Coordination/CMC*	*735 438*	*275,749*	*459,689*
	B.1.2	*Communication & Socio Economics*	*305 000*	*25 000*	*280 000*
	B.1.3	*Epidemiology Networks*	*781 931*	*0*	*781 931*
B.2 At Risk Countries			3 315 110	439 900	2 875 210
B.3 Newly Infected Countries			0	0	0
B.4 Infected Countries			353 085	353 085	0
B.5 Contingency			0	0	0
Total A+B			**6 000 044**	**1 428 213**	**4 571 831**

Source: BMS[8] as of 30 September 2006

[8] FAO Budget Monitoring Sheets - figures include executed, committed and planned activities

Table 2 - Budget and activities for Africa as per HPAI Global Programme's components (OSRO/GLO/601/SWE B02)

		Year One		
		Budgeted*	**Spent Committed**	**Balance**
A) Global Coordination		**215 202**	**153 902**	**61 300**
A.1 Support for Global Coordination		215 202	153 902	61 300
A.2 Establishment of CMC + GLEWS		0	0	0
A.3 OFFLU Networks & Global Wildlife Surveillance		0	0	0
B) Countries		**2 889 617**	**1 239 093**	**1 650 524**
B.1 Regional Coordination		962 784	696 834	265 950
B.1.1	*Support for Regional Coordination/CMC*	*708 770*	*442 820*	*265,950*
B.1.2	*Communication & Socio Economics*	*0*	*0*	*0*
B.1.3	*Epidemiology Networks*	*254 014*	*254 014*	*0*
B.2 At Risk Countries		852 518	264 105	588 413
B.3 Newly Infected Countries		1 066 804	270 643	796 161
B.4 Infected Countries		7 511	7 511	0
B.5 Contingency		0	0	0
Total A+B		**3 104 819**	**1 392 995**	**1 711 824**

Source: BMS[9] as of 30 September 2006

Out of the US$8.4 million allocated to countries' activities, US$4.6 million (55 percent) have been budgeted for country-specific emergency projects (details in table 3 below).

Table 3 – Emergency projects funded through SFERA, Sweden contribution

Country	**Funds budgeted**	**Status**
Cameroon	200 000	Ongoing
Eritrea	100 000	Being initiated
Liberia	231 000	Being initiated
Sierra Leone	200 000	Being initiated
Sudan	250 000	Ongoing
Afghanistan	300 000	Ongoing
Egypt	315 000	Ongoing
Jordan	320 000	Ongoing
Lebanon	160 000	Being initiated
Syria	320 000	Being initiated
West Bank & Gaza Strip	343 200	Ongoing

[9] FAO Budget Monitoring Sheets - figures include executed, committed and planned activities

Country	Funds budgeted	Status
Yemen	285 000	Ongoing
Central Asia - Regional Project	1 530 000	Being planned
Total	**4 554 200**	

Note: Similar projects have been funded under other SFERA contributions for Côte d'Ivoire, Madagascar, Mozambique and Rwanda.

Annex 10: Switzerland's contribution to the SFERA

Project: OSRO/GLO/504/MUL BABY 02

1. Financial contribution to Global Programme

On 20 March 2006 the Government of Switzerland and FAO signed a SFERA agreement in support of the Global Programme amounting to CHF4.8 million. With the total of funds received (equivalent to US$3 696 573), FAO established the project OSRO/GLO/504/MUL BABY 02. The duration of the grant is limited to an 18-month period and the current ending date of the project is 31 December 2007.

2. Global Programme funded activities and state of execution of the budget

2.1 Budget allocated per components

The following table shows the amount of project funds allocated to the various component of the Global Programme:

			Budgeted*	**Spent Committed Planned**
A)	**Global Coordination**		**1 043 567**	**884 396**
A.1		Support for Global Coordination (ECTAD HQ + TSS)	464 913	431 620
A.2		Establishment of CMC + GLEWS	403 654	277 776
A.3		OFFLU Networks & Global Wildlife Surveillance	175 000	175 000
B)	**Countries**		**2 653 006**	**2 703 570**
B.1		Regional Coordination	1 265 235	1 348 145
	B.1.1	*Support for Regional Coordination/CMC*	*713 158*	*800 129*
	B.1.2	*Communication & Socio Economics*	*360 000*	*452 939*
	B.1.3	*Epidemiology Networks*	*192 077*	*95 077*
B.2		At Risk Countries	1 093 983	1 079 214
B.3		Newly Infected Countries	108 451	103 279
B.4		Infected Countries	185 337	172 933
B.5		Contingency	0	0
Total			**3 696 573**	**3 587 966**

Source: BMS[10] as of 30 September 2006

[10] FAO Budget Monitoring Sheets - figures include executed, committed and planned activities

2.3 Beneficiary countries

The following table shows the list of project's recipient countries and the equivalent amount allocated to them.

Source of funding: OSRO/GLO/504/MUL BABY02

Recipient	Total
Regional Europe	244 382
Turkey, Republic of	191 603
Azerbaijan, Republic of	124 515
Thailand, Kingdom Of	113 173
Afghanistan	107 919
Georgia, Republic of	71 299
Bangladesh	51 298
Armenia, Republic of	49 870
Ukraine	48 274
Maldives	38 095
Serbia, The Republic of	36 994
Bhutan	34 346
Bosnia & Herzegovina	32 638
Myanmar, Union of	31 653
Kazakhstan, Republic of	31 306
Sri Lanka	30 653
India	30 550
Macedonia, FYR	26 599
Moldova, Republic of	26 447
Tajikistan, Republic of	26 364
Kyrgyz Republic	26 062
Turkmenistan	26 028
Nepal	26 022
Albania, Republic of	25 644
Uzbekistan	25 597
Iran	25 581
Pakistan	23 189
Kosovo	9 111
Indonesia	6 965
Timor-Leste, Democratic Republic of	1 834
Regional activities & coordination	1 159 559
Grand Total	**2 703 570**

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Annex 11 Global Programme funding table

	Donor																							
Recipient	Asian Development Bank (100%)	Australia (100%)	China Peoples' Republic (100%)	European Commission (100%)	FAO (100%)	France (100%)	Germany (100%)	Greece (100%)	Ireland (100%)	Japan (100%)	Jordan, Hashemite Kingdom of (100%)	Netherlands (100%)	New Zealand (100%)	Norway (100%)	Office Of Coord. For Un Assistance Programme to Afganistan (100%)	Saudi Arabia, Kingdom of (100%)	Spain, Kingdom of (100%)	Sweden (100%)	Switzerland (100%)	UNDP Administered Donor Joint Trust Fund (100%)	United Kingdom (100%)	United Nations Development Group Office (DGO) Service & Support UNDG/EXECCOM Secretariat (100%)	United States of America (100%)	Grand Total
Pakistan					389,370																			389,370
Philippines													340,000											340,000
Romania							141,000																	141,000
Sri Lanka																							400,000	400,000
Sudan																							200,000	200,000
Timor-Leste, Democratic Republic of																							242,000	242,000
Uganda																					43,013		375,000	418,013
Viet Nam					389,979				211,042											2,017,062				2,726,083
Zambia				218,750																				218,750
Afghanistan															25,000									25,000
Burkina Faso																							130,000	130,000
Cambodia, Kingdom of		83,897			389,073	51,450	2,191,910																	2,718,242
Central Asia					299,502																		1,000,000	1,299,502
China Peoples' Republic					389,097																			389,097
Côte d'Ivoire, République de la				734,517																				734,517
East Africa					400,000																		65,000	465,000
Eastern Europe					400,000																		700,000	1,100,000
Ethiopia, Federal Democratic Republic of																					1,543,058		600,000	2,143,058
Global			500,000			1,930,428	1,378,021	155,442			50,000			2,506,226		1,000,000		10,015,795	3,696,573					26,303,577
Global																					27,527			27,527
Indonesia		1,646,910			389,170		61,000																4,000,000	6,116,080
Iraq																						170,143		170,143
Kenya, Republic of																					1,683,607			1,683,607
Korea, Democratic Peoples' Republic of		192,000			218,000									193,131										603,131
Lao, Peoples' Democratic Republic of					384,125	52,000	2,910,990																	3,348,115
Latin America & Caribbean					2,000,000																			2,000,000
Malawi																							100,000	100,000
Middle East					400,000																			400,000
Myanmar, Union of		375,808																						375,808
Niger																							200,000	200,000
North Africa					400,000																			400,000
Regional Africa																	500,000						300,000	800,000
Regional Asia	6,490,000				1,498,911					1,610,093		486,584											6,300,000	16,385,588
South Asia					394,444																		2,680,000	3,074,444
South East Asia					398,207					11,225,593													2,865,000	14,488,800
Timor East																							27,128	27,128
West Africa					400,000																			400,000
Grand Total	**6,490,000**	**2,277,915**	**500,000**	**953,267**	**9,122,038**	**6,036,900**	**9,232,521**	**155,442**	**211,042**	**12,835,676**	**50,000**	**486,584**	**340,000**	**3,699,477**	**25,000**	**1,000,000**	**500,000**	**10,015,795**	**3,696,573**	**2,017,062**	**3,297,000**	**170,143**	**20,374,128**	**93,742,492**