

Avian Influenza Control and Eradication

FAO's Proposal for a Global Programme

March 2006

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Foreword

This document presents FAO's vision of the global needs for control of the current panzootic of highly pathogenic avian influenza. It addresses the livestock component of a complex issue, which is closely linked to human health and welfare concerns. This Proposal was developed following extensive discussion between FAO, OIE and World Bank partners all of whom are playing a substantial global role in support to the livestock sector. It is an elaboration of a plan presented at a stakeholders' conference in Geneva in November 2005 and to a donors' pledging conference in Beijing in January 2006. The plan presented the projected budgets of recipient countries and the two international agencies involved in the animal health sector, FAO and OIE. This document elaborates on those budgets and indicates estimated costs for FAO to fulfil its role. It is important to note that estimates of the cost of the global programme included in this proposal are valid now but they may change according to the evolution of the avian influenza situation. This document will therefore be periodically updated, in the light of changes in the global situation which will be presented in regular news bulletins and on the FAO website.

Executive summary

Since highly pathogenic avian influenza was first reported in Vietnam in December 2003, it has been identified in several countries in the region. It is still defying attempts to control it in PR China, Thailand, Vietnam and Indonesia. The occurrence of human cases of infection with the H5N1 virus responsible for this panzootic and evidence that it has spread with migrating wild birds as far as Eastern Europe and Africa has caused global alarm. A meeting in Geneva in November 2005 confirmed the determination of national authorities and international donors and agencies to bring the disease under control.

FAO has been active in providing support to disease control efforts in infected countries and in assisting non-infected countries to prepare for a rapid and effective response, should the disease become introduced. Together with the Office International des Epizooties (OIE), FAO has responsibility for coordinating the international effort from the livestock perspective. The UN System Coordinator for Avian Influenza has taken responsibility for ensuring a harmonised approach to address the concerns for human health and those relating to poultry production and the livelihoods of producers, especially those in developing countries.

This proposal presents FAO's perspective for a Global Programme for Avian Influenza control and eradication. It identifies the need to address global and regional coordination of the programme, support to infected countries in their efforts to control the disease, assistance to countries at risk of introduction of the disease and finally, provision for immediate support for any newly infected country to ensure a quick and effective control programme. These four components to the Programme are presented with a brief description of their goals, objectives, activities, proposed projects, expected impact and budget estimations. Annexes to be included later in the document will describe each sub-component in more detail. The projected budget is summarised as follows:

Component	Year 1		Year 2	Year 3	Total
	1 st 6 m	Full Year			
1. Coordination	25 305 057	47 745 391	42 314 991	41 918 390	131 978 772
2. Infected countries	79 700 000	180 500 000	63 500 000	60 500 000	304 500 000
3. Countries at risk	32 769 560	42 557 871	59 896 262	55 167 610	157 621 743
4. Newly infected countries	21 591 720	58 356 000	84 292 000	145 328 587	287 976 587
Total	159 366 338	329 159 262	250 003 253	302 914 587	882 077 102

Nota bene: These figures exclude compensation costs.

This budget is a revision, due to rapid expansion of the Avian Influenza, of the budget developed jointly by FAO, OIE and the World Bank, in preparation for the Geneva Conference, at which time emergency funds of US\$60 million were sought for the first six months and a projected estimate of needs for a three-year programme were US\$494 million (see Page 8). The important budget increase (from US\$496 in Geneva's projection to US\$882 million) is mainly due to the fact that the Avian Influenza expanded in an unexpected way to other continents (Europe and Africa) increasing dramatically the number of infected countries and countries at risk.

Within the document is presented FAO's proposed role in participating in the Programme (see page 24). It proposes that FAO will assume a major part of the responsibility for the global and regional coordination described in this Programme. OIE has a complementary role in strengthening veterinary services for mid- to long-term capacity to improve prevention and

control of transboundary diseases. This specific OIE role was identified within the budget prepared for the Geneva Conference and not included in this current proposal. FAO anticipates an involvement in implementing 25 percent of donor-assisted projects in infected countries and 50 percent of assistance to non-infected countries in preparedness for outbreaks. Full responsibility is proposed for managing a contingency mechanism for a rapid response to introduction of disease into a new country, with only funds for the first 6-months be sought at this stage. The proposed budget is as follows:

Component	Year 1		Year 2	Year 3	Total
	1st 6 m	Full Year			
1. Coordination	27 217 944	47 745 391	42 314 991	41 918 390	131 978 772
2. Infected countries	16 134 184	40 342 246	18 271 899	17 510 855	76 125 000
3. Countries at risk	9 390 061	21 278 935	29 948 131	27 583 805	78 810 871
4. Newly infected countries	21 591 720	21 591 720	-	-	21 591 720
Total	74 333 909	130 958 292	90 535 021	87 013 050	308 506 363

FAO is seeking donor support for implementation of this Programme. Contributions will be welcomed on the basis of:

- development of projects to match specific donor funding interests, and
- by contributing to a multi-donor Special Fund for Emergency and Rehabilitation Response (SFERA), established and operational at FAO since 2003.

Contributions to the SFERA are preferred because they maximise the efficiency of allocating funds to priorities which will change over time.

Background

This document represents FAO's proposal for the global control and eradication of the H5N1 highly-pathogenic avian influenza (HPAI) that is currently panzootic in several countries in Asia and presents FAO's role in that programme. The United Nations has accepted an overall coordinating role for the human health and animal health needs to combat the disease in poultry and the consequences of human infection with the avian influenza virus, or a derivative of it. This coordination is implemented through the UN Coordinator for Avian Influenza, attached to UN Headquarters. FAO recognises its mandate for coordinating the Animal Health Component of this response, together with OIE, in line with the FAO/OIE/WHO Global Strategy for the Prevention and Control of HPAI, developed in early 2005.

The panzootic has developed after HPAI outbreaks were first identified in rapid succession in six Asian countries in December 2003 and early 2004. The countries affected were Vietnam, Thailand, PR China, Lao PDR, Cambodia and Indonesia.

Other avian influenza outbreaks have also occurred in recent years, most notably in Pakistan where endemic infection with a different strain of virus (H7N9) has been present since 1995.

However, two factors have caused increasing international concern over the disease caused by the H5N1 virus in Asia. *Firstly*, since late 2003, cases of human infection with the avian influenza virus have been identified in several affected countries where to date more than 90 fatalities have occurred. *Secondly*, spread of the virus by migrating birds has caused outbreaks of disease in wild birds and/or poultry in several provinces of PR China, in Russia, Kazakhstan, Mongolia. As from October, 2005 new countries were infected including in a chronological order Romania, Turkey, Ukraine, Croatia, Nigeria, Italy, Greece, Azerbaijan, Iran, Germany, India, Egypt, Austria, Niger, Albania and Cameroon.

The threat of further spread is clear and it could also occur from the legal or illegal movement of poultry or poultry products.

In November 2005, a conference in Geneva confirmed the need for a concerted and coordinated donor response to combat the disease on a global basis. This proposal for a global programme is a development of an outline of FAO's vision and costing estimates presented for that conference, with details developed to document the goals, objectives, activities and projected budgets for the components of the programme.

FAO's vision of its role in combating HPAI is the facilitation of direct technical and resource assistance to the efforts of national governments and provision of global leadership to the channel assistance provided by donor and other implementing agencies. FAO will develop the appropriate responses at the global and regional level in collaboration with OIE and with other agencies and assist regional and national authorities in developing appropriate HPAI prevention and control plans and strategies. FAO will also implement technical support activities and coordinate and integrate the inputs of participating implementing agencies.

This is a programme that is already being implemented with substantial donor support. However, it needs massive scaling up to address the expanding threat of avian influenza. Because of the nature of the panzootic, needs will change over time and it is difficult to predict such change and the logistics and the budget requirements to meet them. This

document is presented to provide the best current estimate of these needs, for the next three years.

The programme will be implemented following the concepts, approaches and general organisation of the FAO-OIE Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs). It is also directly developed from the FAO-OIE Global Strategy for the Progressive Control of Highly Pathogenic Avian Influenza (HPAI), prepared in June 2005 and revised in October 2005.

This proposal includes budget estimates for needs for donor support. This includes emergency needs for the first six months and first year and additional needs for a following two years. The estimation of emergency needs take into account the budgets which are already committed or pledged by several donors as well as resources met by individual government budgets, such as those of Vietnam and Indonesia. Cambodia and Lao PDR have their emergency needs already met by existing donor support.

For additional information on the current status of avian influenza, refer to the following key documents, available from the websites indicated:

1. A global strategy for progressive control of highly pathogenic avian influenza (HPAI). FAO/OIE, November 2005.
<http://www.fao.org/ag/againfo/subjects/documents/ai/HPAIGlobalStrategy31Oct05.pdf>
2. FAO recommendations on the Prevention, Control and Eradication of Highly Pathogenic Avian Influenza (HPAI) in Asia. September, 2004.
<http://www.fao.org/docs/eims/upload/165186/FAOrecommendationsonHPAI.pdf>
3. Guiding principles for highly pathogenic avian influenza surveillance and diagnostic networks in Asia. FAO Expert Meeting on surveillance and diagnosis of avian influenza in Asia. Bangkok 21-23 July, 2004.
<http://www.fao.org/ag/againfo/subjects/en/health/diseases-cards/Guiding%20principles.pdf>
4. FAO/OIE Global framework for the progressive control of transboundary animal diseases (GF-TADs)
<http://www.fao.org/ag/againfo/subjects/en/health/diseases-cards/cd/documents/GF-TADs24May2004.pdf>
5. FAO AIDNews Avian Influenza Disease Emergency in the FAO Avian Flu website
<http://www.fao.org/ag/againfo/subjects/documents/ai/AVIbull039.pdf>

Geneva Cost Estimates

The following table summarises the estimated costs for the livestock component of a Global Programme for Avian Influenza control, developed jointly by OIE, FAO and the World Bank for presentation at the Geneva Conference, 5-7 November 2005. It included costs estimated by both OIE and FAO for their roles in implementation of the Programme.

Component	Year 1		Years 2 & 3	Total
	1st 6 m	Full Year		
International				
1. Support to Global Animal Health Fund		2 000 000	2 500 000	4 500 000
2. Support to OFFLU Network		430 000	300 000	730 000
3. Support for GLEWS		1 000 000	2 000 000	3 000 000
4. Epidemiological investigations		3 000 000	2 500 000	5 500 000
Sub-total, International		6 430 000	7 300 000	13 730 000
Regional				
1. OIE-FAO Regional Quality Centres		16 000 000	26 000 000	42 000 000
2. Support to Regional Networks		6 500 000	10 000 000	16 500 000
Sub-total, Regional		22 500 000	36 000 000	58 500 000
Sub-total, International and Regional	15 000 000	28 930 000	43 300 000	72 230 000
National				
1. Infected countries	14 000 000	40 050 000	85 000 000	125 050 000
2. Countries at risk	16 000 000	37 500 000	34 500 000	72 000 000
3. Support for Newly infected countries	15 000 000	75 000 000	150 000 000	225 000 000
Sub-total, National	45 000 000	152 550 000	269 500 000	422 050 000
TOTAL	60 000 000	181 480 000	312 800 000	494 280 000

Notes:

1. Budget for Global Animal Health Fund includes US\$1 500 000 for OIE
2. Budget for OIE-FAO Regional Quality Centres includes US\$21 000 000 for OIE

It is important to underline that this analysis was done considering the situation at the time of the Geneva Conference where it was foreseen that the problem would be contained in Asia. The expansion of the Avian Influenza to Africa, Europe and Latin America was not included.

Components of the Programme

Overall Goal

FAO's goal is to coordinate and manage, in collaboration with OIE, the international effort in assisting countries to control and ultimately eradicate avian influenza from the poultry producing sectors and to prepare non-infected countries for a rapid detection of, and response to, incursions of the disease.

There are four components to the Programme which are elaborated in this document.

1. Coordinate and manage the international response, at the global and regional level.

From the start of the panzootic of HPAI, FAO has implemented several projects, of which many under its Technical Cooperation Programme, to support efforts at the global and regional level, particularly for the establishment of regional networks of laboratories and epidemiological surveillance teams. FAO has established an Emergency Centre for Transboundary Animal Disease (ECTAD) Unit in FAO Headquarters, to coordinate the response at the global level. The Plan is to substantially strengthen this. The first ECTAD decentralised Regional Support Unit has been established in the Regional Office for Asia and the Pacific in Bangkok to coordinate the response in Asia, where the major control efforts have been taking place. Presently this Unit is being strengthened and others are being established to support disease control efforts in infected countries and preparedness activities in other parts of the world that are considered particularly at risk.

FAO is seeking support to strengthen the already established networks of national laboratories and surveillance teams in Asia and to establish such networks in other regions of the world considered to be at particular risk of disease incursion. Capacity for social, economic and policy studies will also be developed to assist countries in their efforts to rehabilitate affected poultry sectors and improve biosecurity.

FAO proposes to assume a major role in coordinating, together with OIE, global support given to control efforts through its ECTAD at HQ and its regional units. Crisis Management Centres (CMC) will be integrated in centralised and decentralised ECTADs, for rapid and efficient intervention. The Global Early Warning and Response System (GLEWS) will provide the CMC at HQ with information related to the rapid identification of new outbreaks of HPAI. This will enable the CMC to assist countries in effectively responding to these outbreaks. A network consisting of reference laboratories and centres of expertise will provide the countries with the best diagnostic support and technical advice available throughout the world.

Network of centres of excellences in social, economic and policy analysis of avian influenza will also be established with FAO's assistance. This network will facilitate the assessment of social, economic and production sector. It will also elaborate recommendation on policy issues affecting successful control of HPAI at the national and regional level and communicate findings effectively to regional and national policymakers.

FAO communications' messages for the general public and specific risk groups related to HPAI will be adapted to the prevailing conditions by the decentralised ECTADs and disseminated through the appropriate structures in the different countries. The development of communication strategies aim at influencing human behaviours to reduce the risk of the

spread of HPAI among animals as well as between animals and humans. These activities will be conducted in close collaboration with especially WHO and UNICEF.

2. Provide support to infected countries in their efforts to control and eradicate the disease.

FAO technical and operations staff have been stationed in some of the currently affected countries to assist authorities in the implementation of their control activities. With the rapid increase of infected countries the decentralised Regional Support Units will have an important role providing assistance to all of them. Support has been provided through several projects of FAO's Technical Cooperation Programme as well as donor-funded projects. In Vietnam, a Joint UN Task Force of WHO, FAO, UNDP and UNICEF has been established to coordinate the human health and livestock sector needs with government, multilateral development institutions and the donor community, which could serve as a model for other countries. Thailand and PR China are largely able to meet their resource needs without additional external funding. Project activity is being supported by FAO, and additional support is proposed, in Vietnam and Indonesia. FAO is also supporting disease control, eradication and prevention activities in Cambodia and Lao PDR, for which donor commitments are sufficient to meet their emergency needs, although additional needs are identified for the longer term.

3. Assist countries at risk in their efforts to be prepared to face an incursion of the disease.

FAO has mobilised its own resources to launch nine regional projects to assist countries in preparing for outbreaks of HPAI, in Africa (three projects), the Middle East, in Eastern Europe and the Caucasus and in Latin America (four projects). Regional projects supporting countries affected and at risk in South Asia have already been implemented. In all of these regions, these projects should have a catalytic effect to encourage the additional support that is required to ensure that countries are properly prepared for an incursion of HPAI. In addition the ECTAD decentralised Support Units should as soon as they become operational, assist countries at risk in advising on their emergency preparedness plans.

4. Support to newly infected countries

For countries at risk, the main focus of the programme is on preparedness for outbreaks of HPAI. Nevertheless, anticipating the possibility that outbreaks of HPAI will occur in those countries at risk, there is a need for a strong and effective capacity for immediate response from the international community. In case of the introduction of the virus into a new country the regional CMCs will send its Rapid Response Teams to assist the country in its efforts to control the disease and prevent its further spread. It is necessary to plan for this, requiring an effective approach to contingency funding. FAO has a Special Fund for Emergency and Rehabilitation Activity (SFERA) which has been established for such investment and has been used successfully in the recent past for funding emergency plague locust control and recovery from tsunami damage. This is proposed as an effective mechanism for managing contingency funds for avian influenza control.

1. Global and regional coordination

FAO and OIE have responsibilities at the global, regional and national levels to respond to the HPAI epidemic with effective collaboration, coordination, communication, provision of technical advice, and assistance with identifying and mobilising resources to combat the disease. The focal point of the FAO response is the Emergency Centre for Transboundary Animal Diseases (ECTAD). This comprises the Animal Health Service, Animal Production Service and Livestock Policy Branch of the Animal Health and Production Division together with Emergency Operations Service of the Emergency Operations and Rehabilitation Division, under the direction of FAO's Chief Veterinary Officer. Partners include OIE, WHO, regional organisations, national governments, donors and international research centres. The response to the HPAI panzootic follows the WHO/FAO/OIE Global Strategy and the overall coordinating mechanism of the Global Framework for the Progressive Control of Transboundary Diseases (FAO/OIE GF-TADs).

The Global and regional needs for the livestock sector of HPAI control were estimated and presented at the Geneva Conference (7-9 November 2005) and are shown in the Table on page 8. This proposal, that was later reviewed and readjusted to the present situation, presents, *inter alia*, the specific projected role of FAO but in the context of an evaluation of the global needs for the recipient countries and the other lead agency, OIE, that is involved in the prevention and control of HPAI in livestock.

Overall Goal

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.

Objectives

1. To coordinate and collaborate with donors, international and regional organisations, other agencies and national governments, and provide technical advice, to ensure an effective and efficient response to the HPAI epidemic.
2. To facilitate information exchange between donors, agencies, regional organisations, national governments and the international community.
3. To develop a cadre of experts to undertake international rapid response and assessment missions to evaluate veterinary services, identify gaps (i.e., infrastructure, operational or structural), provide assistance, and develop projects in conjunction with the host country institutes with the aim of seeking grant or credit support. It will also allow rapid deployment teams to answer to emergencies (assess emergency and provide early assistance for its control).
4. To provide technical advice to national governments and regional organisations to enable them to plan for early warning, efficient detection and early response to avian influenza and to implement their national plans.
5. To promote and support 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.
6. To insure that the general public and specific risk groups obtain accurate information on the HPAI. Communication on HPAI pays special attention to influencing human behaviours with the aim of reducing the risks of HPAI spread among animals and from animals to humans.

Activities

Related to objective 1.

- Development of Regional Support Units for coordination and harmonization of prevention and control strategies¹.
- Assist with the process of national planning and responses.
- Harmonise technical approaches to HPAI control between lead agencies and countries and advocate for donor support for identified needs.

Related to objective 2.

- Coordinate, collaborate, backstop, provide technical advice and develop information and communication strategies at global and regional levels (FAO and OIE headquarters and OIE-FAO Regional Quality Centres).
- Develop the capacity for early detection of HPAI outbreaks and effective international response through the Global Early Warning and Response System (GLEWS), which is one component of the GF-TAD's initiative, to be implemented jointly by FAO, OIE and WHO.

Related to objective 3.

- Establish rapid response plan and capacity within ECTAD.
- Establish Crisis Management Centre (CMC) for Emergency Response
- Launch a mechanism to access and deploy teams of international rapid assessment and response expert missions.

Related to objective 4.

- Establish and strengthen regional networks of national diagnostic laboratories and epidemiological surveillance teams
 - 3 sub-regional networks for South, South-East and South Asia
 - networks in Middle East, Africa (2), Eastern Europe and the Caucasus and in the Americas
- Establish centres of expertise within these regional networks, for studies on socio-economic and policy issues, industry rehabilitation and structural change.
- Strengthen the OIE/FAO Networks of Expertise on Avian Influenza (OFFLU).
- Strengthen regional capabilities for economic and policy analysis related to HPAI control.

Related to objective 5.

- Undertake studies on HPAI epidemiology and disease control issues, socio-economic policy, industry restructuring and rehabilitation
 - investigations into the role of migratory birds in disseminating HPAI virus to new regions
 - applied research and field trials or pilot projects in the field of vaccination, diagnostic tests and epidemiology studies
 - animal husbandry studies to improve biosecurity including development of training tools and public awareness strategies

¹ Regional Support Units will provide technical support in the areas of epidemio-surveillance, awareness and response to outbreaks. These technical support units will be based in the OIE-FAO Regional Quality Centres, the FAO Regional Representations or in Regional Organisations according to their ability to accommodate them at the time of implementation of the projects.

- Participate with in UN System Coordinator for Avian Influenza in establishing preparedness for appropriate public health needs in response to a human pandemic of influenza.
- Negotiate with producer(s) means of obtaining protective equipment, laboratory test and vaccines at short notice

Related to objective 6.

- Develop clear messages on HPAI that aim at creating awareness about the disease, the importance of reporting as well as influencing behaviour to reduce the risk of HPAI spread among animals and from animals to human
- Elaborate communication strategies

Expected impact

Related to objective 1.

- Improved coordination and collaboration will increase the efficiency of the global response and thus increase the likelihood of a successful outcome to control efforts. It will ensure that donors understand current and planned implementation activities so that their contributions will be complementary.

Related to objective 2.

- Improved communication and awareness will ensure that national governments, regional organisations, donors and agencies are well informed of the current HPAI situation. The global community will be exposed to factual and unbiased information that will ensure a balanced public attitude to the impact of HPAI in poultry and the threat of it escalating into a human pandemic. Individual countries will understand the immediate threat of HPAI incursions and consumers and other stakeholders will better appreciate their role in containing the spread of disease.

Related to objective 3.

- The support should greatly improve the speed of response and the capacity to control and eradicate outbreaks before the disease becomes established and increases exposure of humans.

Related to objective 4.

- An improved capacity to respond to needs will ensure that countries under threat of infection will have the best opportunity to plan appropriately and so minimise the impact of an incursion. Infected countries will have access to advice and assistance available to them to plan and implement technically appropriate and effective responses.
- Broader knowledge of wild bird spread of disease is essential for improved prediction of risk of disease incursion.

Related to objective 5.

- Restructuring of poultry sectors will be an important part of long term prevention and research is required to determine economically feasible options. Successful restructuring will play a critical role improving biosecurity to prevent spread during the current epidemic and reduce risk of outbreaks as a long-term measure.

Related to objective 6.

- General public informed on proper behaviours regarding HPAI and therefore potential risk for further spread of the virus is reduced

Budget

The Table below indicates the projected budget. It is to be noticed that the budget differs from the one presented at the Geneva Conference in November 2005 as it had to be readjusted to the rapid development of the Avian Influenza in the world.

Component 1	Year 1		Year 2	Year 3	Total
	1st 6 m	Full Year			
1. Global component					
Support for Global coordination	1,225,569	2,423,550	3,042,550	3,033,900	8,500,000
Establishment of CMC including GLEWS	7,000,000	10,500,000	7,500,000	7,500,000	25,500,000
Support for OFFLU network	619,714	883,300	308,900	307,800	1,500,000
Global wild bird surveillance	2,049,737	3,278,950	803,950	417,100	4,500,000
Sub-total, Global component	10,895,020	17,085,800	11,655,400	11,258,800	40,000,000
2. Regional component					
Support for Regional coordination/CMC	5,374,630	12,583,666	12,583,666	12,583,666	37,750,998
Communication	2,000,000	3,500,000	1,838,888	1,838,888	7,177,776
Regional Networks diagnosis & epidemiol.	5,141,167	10,615,667	12,692,666	12,691,666	35,999,999
Regional Networks social & economic	1,275,455	2,561,048	2,994,974	2,993,979	8,550,000
Sub-total, Regional component	13,791,252	29,260,381	30,110,194	30,108,199	89,478,773
Contingency	400,000	833,333	833,333	833,334	2,500,000
Total	25,086,272	47,179,514	42,598,927	42,200,333	131,978,773

2. Infected countries

Introduction

The current panzootic of highly pathogenic avian influenza was first reported from Vietnam in December, 2003. The disease was probably present there and in neighbouring countries prior to that time, without being recognised or reported. Over the following months, the disease was reported in Thailand, PR China, Indonesia, Cambodia and Lao PDR.

As from October, 2005 new countries were infected by the Avian Influenza including in a chronological order Romania, Turkey, Ukraine, Croatia, Nigeria, Italy, Greece, Azerbaijan, Iran, Germany, India, Egypt, Austria, Niger, Albania and Cameroon.

Although some assistance is currently being provided to China, it can essentially support its own disease control efforts, as does Thailand. Assistance is being provided to Vietnam, Indonesia, Cambodia, Lao PDR, DRK and Romania.

It should be noted that Pakistan also has endemic avian influenza, which has defied control efforts for several years. The disease is caused by a different virus than the panzootic strain and no associated human illness has been described. To maintain consistency in focussing on the current panzootic, Pakistan has therefore been excluded from consideration as an infected country. It is however included in the Central Asia cluster for consideration of assistance as a country at risk of infection with the panzootic H5N1 virus.

This proposal outlines donor requirements for all currently infected countries in need of immediate support.

Overall Goal

To assist disease control authorities in infected countries to develop and implement strategies to control avian influenza.

Objectives

1. To assess the current disease situation and its epidemiology in each country and assist in the development of appropriate control strategies.
2. To assist government in identifying needs for improved disease control, including resource requirements, veterinary infrastructure and capacity, legal powers and political support.
3. To assist in implementing programmes to control, eradicate and prevent re-introduction of the disease.

Activities

Related to objective 1.

- Emergency preparedness
 - o assist in the development of functional disease control plans and in simulation exercises;
 - o advocate for political and legislative support and veterinary service strengthening;
 - o promote engagement of private enterprise in disease control endeavours;
 - o assist in development of contingency plans for the prospect of a human pandemic of influenza of avian origin.
- Active surveillance and monitoring

- assistance with planning and implementing surveillance activities;
- provide technical guidance to monitoring progress of disease control.
- Communication and public awareness
 - provide expert advice for the development of effective public awareness and behaviour change campaigns; Develop and provide publicity materials.

Related to objective 2.

- Laboratory support
 - provide essential equipment and consumables, including specific diagnostic reagents;
 - assist with the implementation and standardization of diagnostic procedures;
 - provide reference laboratory support for confirmatory and advanced diagnostic applications.
- Analysis and studies
 - assist with the analysis of surveillance and monitoring data to map the course of the epidemic and disease control progress;
 - undertake targeted studies to improve technical knowledge of particular issues, including those relating to the pathogen and the disease, vaccine efficacy studies, wild bird studies and socio-economic studies of the poultry industries.

Related to objective 3.

- Disease control
 - provide inputs, including equipment, vaccine and other consumables;
 - assist government authorities in the implementation of disease control.
- Capacity building, training and education
 - identify training needs and assist authorities in undertaking training initiatives;
 - private specialist training, including that for laboratory staff;
 - assess the needs and provide support for longer term strengthening of veterinary services, to combat transboundary animal diseases and meet other regulatory requirements.
- Poultry industry restructuring
 - identify the opportunities and determine the potential for re-structuring poultry industries to reduce their vulnerability to avian influenza;
 - assist in the rehabilitation of poultry production, slaughtering, processing and marketing to enable stakeholders to recover from losses associated with avian influenza.
- Coordination and technical support
 - identify needs for donor support and advise them on priorities;
 - advocate the needs of national authorities to the donor community;
 - assist government in coordinating the inputs of all donors and agencies.

Projects

- Support to the control of avian influenza in Vietnam
- Support to the control of avian influenza in Indonesia
- Support to eradication of avian influenza from Cambodia
- Support to confirming and maintaining freedom from avian influenza in Lao PDR

Expected Impact

It is expected that within the next three years, avian influenza control will significantly improve in affected countries in the commercial poultry sectors. The expectation is that Lao PDR and Cambodia will be free of the disease. In Vietnam, the prevalence of the disease will be greatly reduced, with most of the larger commercial enterprises free from avian influenza. In Indonesia, a well-structured national control campaign will have had a major impact in

reducing virus load and limiting spread. The reduction in incidence of avian influenza and increased public awareness will have greatly reduced the incidence of human infection occurring from contact with birds.

Budget – Country Needs

The following budget estimates are those projected for donor support to infected countries. FAO may, or may not, be requested to assist with support to which such funds may be directed.

There are two different types of country's need estimations considered here:

- The first covers 4 countries (Indonesia, Vietnam, Lao PDR and Cambodia) where global need assessments were done and FAO's projects are already been implemented. It should be noted that for Vietnam, estimates presented at the Geneva Conference were significantly higher. These estimates have been subjected to careful scrutiny and are believed to be the best estimate at this time.

Country	Year 1		Year 2	Year 3	Total
	1st 6 m	Full Year			
Indonesia	15 000 000	35 250 000	20 000 000	20 000 000	75 250 000
Vietnam	4 690 000	15 860 000	2 080 000	2 470 000	20 410 000
Lao PDR	1 199 787	2 400 000	1 250 000	453 000	4 103 000
Cambodia	1 330 477	2 620 000	1 307 000	729 000	4 656 000
Total	22 220 264	56 130 000	24 637 000	23 652 000	104 419 000

- The second set of tables reflects the estimates from the infected countries as from October, 2005 where a global budget is estimated but detailed need assessments are still to be provided.

Due to the rapid expansion of the Avian Influenza and the increasing number of infected countries it was decided to classify the latter into four categories according to their geographical dimension/situation, number of poultry and human population. The table *a)* shows the countries per category and the estimated funds needed per country per category for a total of three years' project implementation. As for the table *b)* it shows the detailed budget per year taking into account the current number of infected countries per category.

a) Infected countries per category and estimated cost per category

Categories	1	2	3	4
Countries	India	Egypt	Azerbaijan	Croatia
	Nigeria	Iran	DPK	Turkey
		Iraq	Malaysia	Romania
		Niger	Ukraine	
		Cameroon	Albania	
budget/country/category	45 000 000	15 000 000	5 200 000	3 027 000

b) Total estimated cost

Country/Categories	Year 1		Year 2	Year 3	Total
	1st 6 m	Full Year			
1	19 840 000	32 000 000	29 000 000	29 000 000	90 000 000
2	23 650 000	55 000 000	10 000 000	10 000 000	75 000 000
3	6 450 000	15 000 000	7 000 000	4 000 000	26 000 000
4	3 000 000	4 500 000	3 081 000	1 500 000	9 081 000
Total	52 940 000	106 500 000	49 081 000	44 500 000	200 081 000

Current FAO-implemented projects

1. FAO/USAID Trust Fund project - Immediate assistance for strengthening community-based early warning and early reaction to avian influenza outbreaks in Cambodia, Indonesia, Lao PDR, PR China and Vietnam. US\$6 million, to September 2006.
2. FAO/Germany Trust Fund project - Building capacity at the grass-roots level to control avian influenza. Lao PDR US\$2 910 990, 3-year project 2005-2008
3. FAO/Germany Trust Fund project - Building capacity at the grass-roots level to control avian influenza. Cambodia US\$3 141 510, 3-year project 2005-2008
4. FAO/UNDP Joint Trust Fund project – Strengthening the management of public health emergencies with focus on the prevention and control of diseases of epidemic potential in Vietnam. US\$1 372 785, 5 month project till 30 April 2006
5. FAO/Australia Trust Fund project - Australian emergency assistance for the control and prevention of avian influenza in the Democratic People's Republic of Korea. US\$192 000, one year project till end of June 2006
6. FAO/Norway Trust Fund project - Emergency assistance for the control and prevention of avian influenza in the Democratic People's Republic of Korea. US\$193 150, one year project till January 2007
7. FAO project - Emergency assistance for the control and prevention of avian influenza in Democratic People's Republic of Korea. US\$218 000, one year project till end August 2006.
8. FAO/Germany Trust Fund project - German Emergency assistance to control Avian Influenza in Romania. US\$141 000, 6 months project till end May 2006
9. 3 FAO regional projects in Asia - Diagnostic laboratory and surveillance network coordination for control and prevention of avian influenza in East and South Asia / Strengthening avian influenza control through improved transboundary animal disease information management system in Asia, total \$1,139,946

3. Countries at risk of infection

Introduction

Since December 2003 and early 2004, five countries in Asia have become endemically affected by avian influenza. These countries are defying control efforts to date and it is becoming accepted that it will take several years to either eradicate the disease or achieve a more satisfactory means of living with it. The continuation of human infections and fatalities with avian influenza virus, albeit relatively small in number, is of increasing concern. The reporting of cases of avian influenza in central and northern China, in Russia, Kazakhstan, Croatia, Turkey, Romania, Ukraine, Niger, Nigeria, Italy, Greece, Azerbaijan, Iran, Germany, India, Egypt and Austria indicates that the virus has spread with migrating wild birds and there is concern that the disease will further spread throughout the world.

The risk of avian influenza spreading across national borders with the legal or illegal importation of live birds or poultry products remains a classical and disturbing possibility. Most countries have banned the importation of poultry products from infected countries. However, the case of avian influenza in wild birds in quarantine in the United Kingdom, demonstrates that this is a real risk. The migrating wild birds have therefore played an important role spreading the disease in Africa, Eastern Europe, the Middle East and Central Europe. The Americas, particularly Latin America, is increasingly concerned with HPAI entry and the latter is equally in need of assistance. The recent outbreak in Africa (early 2006) illustrates the risk of boarder trade in spreading the disease from infected to non infected countries. In each region the programme will be implemented in partnership with other agencies presently working in the region to ensure appropriate coordination between countries and complementarity to other animal health programmes such as Association of Southeast Asian Nations (ASEAN) and the Pan-African Control of Epizootics (PACE) programme of African Unity – InterAfrican Bureau for Animal Resources (AU-IBAR).

Many of these countries are poorly prepared and equipped for an incursion of avian influenza. Support is required to assist with surveillance for the disease, planning disease control measures and improvement of veterinary services in order to be able to mount a rapid and effective control programme should the disease be introduced.

It should be noted that this component is directed toward support to surveillance for avian influenza and preparing countries to combat outbreaks of the disease. Should outbreaks occur, a requirement for substantial additional support is anticipated. This is addressed by Component 4 – Newly infected countries.

Overall Goal

The overall goal is to minimise extension of the current avian influenza panzootic, by ensuring that countries at risk have the capacity to rapidly detect and control outbreaks of the disease.

Objective

To assist countries at risk in improving their early detection and early response capacity to highly pathogenic avian influenza.

Activities

- Project management;
- Risk assessment;
- Surveillance;
- National disease preparedness plans;
- Laboratory support;
- Provision of disease control equipment and supplies;
- Public awareness and technical information;
- Capacity building – upgrading of veterinary services;
- Research.

Projects

- Assistance to African Countries at Risk, in Preparedness and Surveillance for Avian Influenza.
- Assistance to Countries at Risk, in Eastern Europe, Central Asia, the Middle East and Arabian Peninsula, in Preparedness and Surveillance for Avian Influenza.
- Assistance to Countries at Risk, in South and East Asia, in Preparedness and Surveillance for Avian Influenza.
- Assistance to Countries at Risk, in the Americas, in Preparedness and Surveillance for Avian Influenza.

Expected impact

A strengthened early detection and response capacity will enable countries to be better prepared for an incursion of avian influenza. This will increase their capacity to detect and eliminate the disease in the earliest possible time, thereby minimising production losses and jeopardy to human safety.

Budget

The budget presented here is the costs projected to assist countries in preparing for outbreaks of avian influenza and undertaking surveillance to detect the disease. It should be noted that in the event of an outbreak, provision is made under Component 4, for additional support.

Project	Year 1		Year 2	Year 3	Total
	1st 6m	Full year			
1. Africa	13 107 824	17 023 148	23 958 505	22 067 044	63 048 697
2. E. Europe, C. Asia, M. East, A. Peninsula	8 113 162	10 536 574	14 829 253	13 658 522	39 024 349
3. S. Asia, E. Asia	8 113 162	10 536 574	14 829 253	13 658 522	39 024 349
4. Americas	3 435 412	4 461 574	6 279 253	5 783 522	16 524 349
Total	32 769 560	42 557 870	59 896 263	55 167 610	157 621 744

Current FAO-implemented projects

- Five TCP's in Africa, Europe & Caucasus and Middle East of a total of US\$2 million through the FAO's regular programme budget
- Four additional TCPs were approved early 2006 and will be shortly implemented in Latin America and the Caribbean of a total of US\$2 million through the FAO's regular programme budget

4. Newly infected countries

Overall Goal

To limit the global spread of avian influenza by assisting with rapid and effective control of disease incursions into new countries

Objectives

- To ensure that resources are available for immediate provision of emergency assistance to newly infected countries;
- To mobilise technical and operational support in the event of outbreaks of avian influenza in new countries.

Introduction

Since the current panzootic in poultry was first identified in late 2003 and early 2004, five countries have remained persistently infected with avian influenza (HPAI) (China, Thailand, Vietnam, Cambodia and Indonesia).

There is a risk of spread from currently infected countries to other countries, by legal or illegal importation of live poultry or of poultry products and/or through transmission by wild birds. This was the case in late 2005 and early 2006, when HPAI due to the Asian strain, H5N1, was reported in wild birds and/or in poultry in isolated regions of China, in Mongolia, Russia, Kazakhstan, Croatia, Turkey, Romania, Ukraine, Croatia, Nigeria, Italy, Greece, Azerbaijan, Iran, Germany, India, Egypt, Niger, Austria, Albania and Cameroon. A case in wild birds in quarantine in the United Kingdom, demonstrates the potential for spread by the movement of live birds.

There is concern that other countries could become infected. Most countries have imposed bans on the importation of poultry products from infected countries. This does not obviate the risk of importation by illegal means or through migratory activity of wild birds, which is currently a major concern for the entire international community.

Considerations

1. Birds migrating out of infected countries could be carrying highly pathogenic strains of H5N1 virus, transmitted to them from infected poultry. They can disseminate on their migratory routes and co-locate with other wild birds which subsequently disperse to other locations. The potential for spread through this complex network of migratory pathways is enormous. The virus could spread by this means to almost any location in the world into which wild birds migrate.
2. There is evidence that during the course of the current panzootic, highly pathogenic H5N1 has been transmitted from domestic poultry to wild birds. Wild birds are commonly carriers of non-pathogenic or low-pathogenicity (for poultry) strains of influenza virus that can become pathogenic for poultry by mutation or re-assortment of genes between different viruses. However, in the current situation the viruses already highly pathogenic for poultry are being transported by wild birds. The risk of highly pathogenic avian influenza in poultry due to contact with wild birds is substantially increased. In addition certain species of migratory birds have started dying from H5N1.
3. Many developing countries have a poor capacity to undertake livestock disease surveillance to rapidly detect and incursion of avian influenza. Even if they do, they lack the capacity and resources to mount a quick and effective response. Currently, support is being given to countries, including those in Asia, Eastern Europe, the Middle East and Africa to improve their preparedness. However, the need must be anticipated for the

international community to provide immediate support to many developing countries in which an outbreak of avian influenza occurs.

4. It is difficult to predict the outbreaks in non-infected countries. However, since October, 2005 a large number of countries have reported their first cases of HPAI. (see list in the FAO AIDEnews under country situation: <http://www.fao.org/ag/againfo/subjects/documents/ai/AVIbull039.pdf>), causing great concerns about the extend of the spread of the disease across continents, its socio-economic impact and the increasing threat of a human pandemic. The disease has also spread to countries with limited capacities to respond to the outbreaks.
5. Prompt action needs to be taken to contain outbreaks rapidly, as the disease can spread very fast and become extremely difficult to contain and ultimately to eradicate it. Given the possibility of human infection, it is crucial for countries to be well prepared.

Activities

- Establish means of holding and acquitting funds in trust account
 - o FAO has a mechanism for this through the Special Fund for Emergency and Rehabilitation Activity (SFERA) which has been an effective mechanism utilised in other emergency situations (locust plague control; tsunami recovery and rehabilitation).
- Negotiate with vaccine producer(s) means of obtaining vaccine at short notice.
- Establish a robust means for providing emergency assistance
 - o technical assistance for rapid assessment and advice on emergency control actions;
 - o rapid mobilisation of resources to enable to mounting of effective disease surveillance, control and eradication.

Expected impact

The support should greatly improve the speed of response and the capacity to control and eradicate outbreaks before the disease becomes established and increases exposure of humans.

Budget

In supporting annexes that will be included later in this document, a rationale will be presented for developing cost estimates to make a reasonable provision for the possibility of countries becoming infected, that require emergency donor and agency assistance to combat the disease.

These estimates have been further developed from those presented at the Geneva Conference. Costs incurred for outbreaks occurring late in the three-year cycle will not all be realised within the three-year period.

Note that costs indicated in Year 3 are aggregated projected costs for all outbreaks occurring in the three-year budget period, including costs that would be incurred in Years 4 and 5.

Indicative estimates only

Year 1		Year 2	Year 3	Total
1 st 6 m	Full Year			
21 591 720	58 356 000	84 292 000	181 552 000	324 200 000

\$21.6 million emergency funding in the first 6 months.

Current projects

None

Summary of Global Programme Funding Needs

The following is a summary of the funding needs for implementation of the Programme taking the current situation into account. Due to the rapid and unexpected expansion of the Avian Influenza in Africa and Europe, and therefore the increase of countries at risk (including in Latin America), the FAO's perspective for a Global Programme was revised and updated.

Note that the estimate of funds needed does not include the OIE programme, which will complement the Programme as described in this proposal.

Indicative estimates only

Component	Year 1		Year 2	Year 3	Total
	1 st 6 m	Full Year			
1. Coordination	27 217 944	47 745 391	42 314 991	41 918 390	131 978 772
2. Infected countries	79 700 000	180 500 000	63 500 000	60 500 000	304 500 000
3. Countries at risk	32 769 560	42 557 871	59 896 262	55 167 610	157 621 743
4. Newly infected countries	21 591 720	58 356 000	84 292 000	145 328 587	287 976 587
Total	134 061 280	329 159 262	250 003 253	302 914 587	882 077 102

1. Coordination Budget estimates prepared for the Geneva Conference (see table on page 8) provided for US\$72 230 000 for this component. Adjusted to the new situation of a dramatic increase of infected and at risk countries this component would increase to US\$131 978 772. It was proposed that US\$15 000 000 would be required for this component in the first six months of emergency funding. The current projection of US\$27 217 944 is consistent with the above explanation and noting that the OIE-assigned amount is not included in this table.

2. Infected countries Provision was previously made for US\$125 050 000 over three years, with six-month emergency funding indicated as US\$14 000 000. The above table reflects the analysis of the current situation of a dramatic increase of infected countries in Asia, Africa and Europe. Therefore a total of US\$304 500 000 is required for the next three years from which US\$79 700 000 is needed in the first six months to efficiently intervene on the newly reported situation.

3. Countries at risk The estimates foreshadowed in Geneva of US\$16 000 000 for six-months emergency funding and US\$72 000 000 over three years, are now estimated as more than double due to the increase of the number of countries at risk (including countries in Europe, Africa and Latin America) since then.

4. Newly infected countries Estimates provided in Geneva were for US\$15 000 000 in six-month emergency funding and US\$225 000 000 over three-years. The estimates are speculative and the current budget has been carefully developed to provide a budget which is logical but is based on many unknown factors. Projected funding required for outbreaks occurring over the three-year period would extend for an estimated additional two years. The additional two year funding has been included in the Year 3 budget, explaining the high figure for that year. The estimate for six months is US\$21 591 720 and for three years is US\$288 million which is much higher than projected in Geneva. Under the funding provisions proposed, a call on funds would be made for the first six months only, with further calls dependent on what actually transpires in terms of outbreaks in new countries.

FAO's Role in the Programme

Within the Programme presented in this proposal, FAO anticipates a major role in its implementation. FAO has a mandate, in collaboration with OIE, to coordinate the international control effort at the global and regional levels. The budget for OIE needs has not been presented in this proposal and it is proposed that the total activities described for Component 1 should be implemented by FAO with the budget indicated.

There is a substantial amount of bilateral support going to countries that are currently infected and it is expected that this support will be maintained. FAO's implementing role in projects supporting the disease control efforts in these countries currently represents about 25% of donor investment and it is proposed that this proportion should be projected for the three years considered in this proposal.

FAO has commenced implementation of preparedness planning for countries considered to be at risk of infection. It is expected that FAO will continue to play a major part in these activities, because of its expertise and involvement over more than a decade in assisting countries with preparedness planning for transboundary diseases. It is projected that FAO will implement 50% of programmes required to support currently non-infected countries in preparing for outbreaks of avian influenza.

FAO is proposing a mechanism for ensuring funding and technical expertise are available to enable a rapid response to country requests for emergency assistance, in the event of outbreaks of disease in currently non-infected countries. The mechanism will involve special provision for contingency funding. It is proposed that FAO should take full responsibility for implementing this component of the Programme. However, a call for funds would only be made for the first 6-months emergency phase, for \$21.6 million. Further calls on funds would be based on periodic reviews of the perceived risk of non-infected countries becoming infected, based on actual occurrences of outbreaks and progress with control of HPAI in currently infected countries.

Projected budget requirements for FAO to implement its proposed activities

Component	Year 1		Year 2	Year 3	Total
	1st 6 m	Full Year			
1. Coordination	25 305 057	47 745 391	42 314 991	41 918 390	131 978 772
2. Infected countries	16 134 184	40 342 246	18 271 899	17 510 855	76 125 000
3. Countries at risk	9 390 061	21 278 935	29 948 131	27 583 805	78 810 871
4. Newly infected countries	21 591 720	21 591 720	-	-	21 591 720
Total	72 421 023	130 958 292	90 535 021	87 013 050	308 506 363