THE FIRST REAL-TIME EVALUATION

of

FAO's Work on Highly Pathogenic Avian Influenza

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Abbreviations

ADB	Asian Development Bank
ADG	Assistant Director General
AfDB	African Development Bank
AG	Agriculture Department
AGA	Animal Production and Health Division
AGAH	Animal Health Service of AGA
AGAL	Livestock Information, Sector Analysis, and Policy Branch of AGA
AGAP	Livestock Production Service of AGA
AI	Avian influenza
APHCA	Animal Production and Health Commission for Asia and the Pacific
ASEAN	Association of Southeast Asian Nations
CGIAR	Consultative Group on International Agricultural Research
CMC	Crisis Management Centre
CVO	Chief Veterinary Officer
DOAH	Department of Animal Health
DFID	Department for International Development (UK)
ECTAD	Emergency Centre for Transboundary Animal Diseases
EMPRES	Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FAOR	FAO Representative
FPMIS	Field Programme Management Information System
GF-TADs	Global Framework for Progressive Control of Transboundary Animal Diseases
GLEWS	Global Early Warning and Response System for Major Animal Diseases, including Zoonoses
GS	Global Strategy
HPAI	Highly Pathogenic Avian Influenza
HQ	Headquarters
IGO	Inter-Governmental Organization
JTF	Japanese Trust Fund
LEAD	Livestock, Environment and Development Initiative
MARD	Ministry of Agriculture and Rural Development
MDG	Millennium Development Goals
MENA	Middle East and North Africa
MOA	Ministry of Agriculture
MOU	Memorandum of Understanding
NARS	National Agricultural Research System
NGO	Non-Governmental Organisation
ODG	Office of the Director General
OCHA	Office for the Coordination of Humanitarian Affairs
OFFLU	OIE/FAO Network for Avian Influenza Expertise
OIE	World Organisation for Animal Health
OSRO	Designation for emergency projects (from "Office for Special Relief Operations," the old name for TCE)

PBE	Office of Programme, Budget and Evaluation
PBEE	Evaluation Service of PBE
PPE	Personal Protective Equipment
RAP	Regional Office for Asia and the Pacific
RNE	Regional Office for the Near East
SARS	Severe Acute Respiratory Syndrome
SFERA	Special Fund for Emergency and Rehabilitation Activities
TADs	Transboundary Animal Diseases
TC	Technical Cooperation Department
TCE	Emergency Response and Rehabilitation Division
TCEO	Emergency Operations Service of TCE
TCES	Special Emergency Programmes Service of TCE
TCP	Technical Cooperation Programme (or Project)
TCIP	Asia and Pacific Service, Investment Centre Division
TOR	Terms of Reference
UN	United Nations
UNDP	United Nations Development Programme
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations Children's Fund
UNSIC	United Nations System Influenza Coordinator
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization

Executive Summary

A. Introduction

1. The current panzootic of highly pathogenic avian influenza (HPAI) was first positively identified in December 2003 in Asia and has spread widely through Asia, Europe and Africa since then. The occurrence early on of virulent human cases has caused a very substantial reaction from the international community fuelled by the fear of a global pandemic of human influenza caused by a modification of the avian virus.

2. FAO responded within weeks of the initial outbreaks by implementing small regional and national Technical Cooperation Programme projects (TCPs) with its own funds while seeking to raise donor funds. However, there was virtually no donor support before late 2005 when the virus reached the doors of Europe. At the international level, FAO, in collaboration with OIE and WHO, has worked to develop technical strategies for controlling the disease. A UN System Influenza Coordination (UNSIC) office was established at UN Headquarters in 2005. Western donor countries finally pledged US$1.9 billion to fight the disease in January 2006, resulting in a massive scaling up of FAO's activities. The Global HPAI Programme has become a major programme for FAO, characterised by high exposure, the need for complex coordination with other agencies, the difficult management challenge, and the very large amounts of extra-budgetary funding involved.

3. With FAO's intervention already having spanned almost three years and with a strong donor interest in monitoring progress, it was decided to begin a three year programme of evaluation exercises of this large effort. This document represents the first stage of that programme.

4. The first Real Time Evaluation undertook to review the entire HPAI programme, with 123 projects covering nearly 100 countries and with an active budget of around US$ 120 million. Such a wide-ranging evaluation was found to be an overambitious goal for this type of RTE and has led to some gaps in the information gathered and delays in the completion of the evaluation. However the gaps have been highlighted in the report of a Peer Review Panel convened to validate the evaluation's work, and will serve as a basis for future iterations of the evaluation process.

B. Findings of the evaluation

5. The Real Time Evaluation team has come to the end of this lengthy evaluation exercise **with a generally positive view of the work which FAO has undertaken** in the context of its response to the Highly Pathogenic Avian Influenza crisis over the past three and one half years. While there have been many issues, delays, weaknesses, mistakes and obstacles during this effort, the net result is that FAO has confirmed itself as an important player in the HPAI crisis. However, there clearly remains much more to be done and much room for improvement.

6. A key issue is that **in spite of greatly improved response capacities at both global and national levels, the H5N1 virus continues to re-infect cleared countries and spread to new ones**. It has become apparent that use of the veterinary disease containment and control approach, though it continues to be essential, will not be sufficient to master the HPAI crisis in the long run. As stressed repeatedly at the recent June 2007 technical meeting on HPAI at FAO, for long-term success in combating this disease, **the effort must widen to incorporate all the elements contributing to its resilience and spread, many of which are not directly related to veterinary measures**. While the emergency response capability remains a key element of FAO's actions, it is not enough in itself to contain and eradicate the disease, or to prevent or mitigate future disease crises of this kind.

7. This RTE has ultimately raised as many or more questions about FAO's work in HPAI as it has been able to answer. The complexity of the HPAI response, the sheer size of the effort (over US$120

million and about 100 countries assisted at writing), the lack of useable monitoring and evaluation data, the many longer-term implications, and other factors have made this more a launching pad for the rest of the HPAI evaluation programme than a definitive judgement on FAO's response.

8. A number of factors have contributed (positively or negatively) to the evolution of FAO's response to the HPAI crisis. The evaluation would like to highlight a few key ones as follows:

Measuring success

9. Generally across the entire programme, the evaluation found that there was very limited setting of clear targets (neither of outputs nor of outcomes/impact), no effort to identify indicators of success, and consequentially, very little monitoring of the results of all the activities being carried out. It was at times unclear what desired outcomes the programme activities were to be measured against. There was a tendency to equate activities with outcomes and outputs with impact ('if we are doing a lot of things, we must be having an impact'). This has been remarked on in several places in this report, and merits immediate corrective action for all future programme action.

Country-level governance in emergencies

10. In the three cases that stand out as the most difficult ones to master at the present time (Indonesia, Egypt and Nigeria), a key contributing factor to this difficulty is weak or divided governance at the country level of the emergency response and follow-up. As a neutral inter-governmental institution, FAO has to tread carefully in addressing problems of internal governance in member countries. However, in the face of a crisis like HPAI which poses a serious threat to global public goods which also come under the purview of FAO, the organization needs to be able to act.

Management of FAO's response

11. A major factor in both the positive and the negative aspects of FAO's response has been the issue of governance, management and leadership. FAO's HPAI response, in particular through ECTAD, does not have a consolidated strategy on its own, having instead developed over time (but mostly in 2007) a series of guiding principles, systems and tools, adapting to evolving situations or new needs. This has resulted in frequent confusions in roles and responsibilities and in service delivery. In addition, FAO lacks a clear corporate strategy for managing emergency response. Both of these issues are currently being worked on, but the lack of a management strategy has weighed heavily on the HPAI response until now.

Donor priorities and timescales

12. One of the main constraints for HPAI control by FAO is the lack of sustainable funding. Virtually all of the funding on which this now very large programme is functioning comes from extra-budgetary sources in the form of short-term, non-renewable grants. Although FAO was very quick to react to HPAI in Asia in early 2004 under its own meagre funding resources (TCP projects), overall it was slow to get going with avian influenza response, taking 18 months before it had a significant programme to fight the disease. The reason: no funds. The donors, subject to interests of their constituents at home, did not show an interest in HPAI until the day it reached their own doorstep. FAO (like other agencies) was not able attract lukewarm donors to fund the effort before then.

13. The same situation is likely to present itself at the opposite end of the crisis, when donor funding runs out in time to the diminishing media attention to HPAI, but well before the situation is back to normal. This later funding phase is not likely to be the immediate priority of the press or the voting public, and is likely to entail difficulties for FAO in obtaining adequate funding.

Of strategies and priorities

14. A recurrent issue throughout this evaluation has been the need for FAO to have (and to make public) a clear strategy for its HPAI work, and a programme to implement it. While there is of course

the FAO/OIE Global Strategy document, FAO's own organization of its work programme has not been closely tied to that strategy. Weak prioritisation, a related issue, is also underlined in the report at the levels of both global strategy and country strategy. Part of the reason for this problem is surely the speed and intensity with which the HPAI crisis has ballooned over the past 18 months. Recent efforts to rationalise the management structures are a good step in that direction. More needs to be done with regard to country interventions and global coordination.

The SFERA fund: a positive factor

15. The Special Fund for Emergency and Rehabilitation Activities, or SFERA, stands out as a particularly positive contributing factor to the effectiveness of FAO's response to the HPAI crisis. Its use for rapid intervention in a rapidly changing landscape as the disease spread through the Near East and Africa afforded FAO a flexibility to respond and react better than others and was seen as having been an excellent tool in avoiding more extensive and damaging spread of HPAI. It is important to continue using the SFERA, especially for action at country and regional level (though a portion of it is still necessary to cover FAO-HQs global coordination work which other funds cannot).

Evidence of impact from country visits

16. Contrary to the current situation in Southeast Asia where a large number of donors are active in various ways, FAO interventions in many of the more recently infected or threatened countries, such as those in Africa and in the Near East, were carried out in near isolation, especially at the beginning. In many of the countries visited in these latter regions, FAO was the first and for quite a time the only agency to intervene in assisting government to respond to the outbreak or the threat of HPAI. These efforts were not uniformly successful in achieving the desired outcomes, but they had a significant impact on the countries' response.

17. In some countries, FAO's rapid mobilisation of funding drew the attention of senior authorities in the government to the seriousness of the situation, leading to unusually rapid action. FAO's mobilisation of funds was also cited repeatedly as a major factor in drawing the attention of other donors to the problem and the need to react quickly.

18. The ECTAD office in Asia has reportedly improved the capacity of member countries to respond to disease emergencies. Vietnam and Indonesia sources reported a significant improvement in ability to prepare and respond to outbreaks as a result of assistance (though not only FAO). The same is true in the Near East, which reported similar improvements. Trainees were able to develop a strategy for responding to suspected outbreaks in urban areas, a problem that was considered far too complicated to achieve one year ago. FAO played a key role in clearing HPAI from Turkey, and the regional coordinator for the Balkans is also developing a preparedness strategy for that region.

Likelihood of overall impact on incidence of the disease

19. The evaluation team took note of the visible overall change in HPAI response around the world. Although it was beyond the capacity of this evaluation to attach precise figures to FAO's role in the change, there can be no doubt that this is having a significant impact on slowing and blocking spread of the virus in most countries where outbreaks have occurred. A June 2007 technical meeting in Rome (after this report had been completed) sought to identify the impact that FAO, OIE and their partners have had on decreasing the incidence of HPAI outbreaks. It generally concurred with this evaluation that quality and timeliness of response to outbreaks have improved significantly over just one year ago. It also recognised that FAO was an important player in this transformation. The meeting also reported, however, that the number of outbreaks had increased dramatically in 2007 compared to 2006, supporting the main conclusion of this evaluation that FAO must look more widely than just the veterinary disease control response.

C. Recommendations

20. The main recommendations made in the report are summarised here by theme and grouped where appropriate. The greatest priority goes to the first two themes (A and B) on reorienting and restructuring the programme.

A. Consolidating then Reorienting the Global Programme and Global Strategy

21. As the HPAI crisis matures, FAO in particular must consider its response more widely within its overall mandate for agricultural and rural development, food security and poverty alleviation. As a result of the increased awareness, response capacity, contingency planning and preparedness, FAO can now **shift emphasis to the longer term issues**, which are mainly related to:

- the broader context of globalisation of trade and food chains, impact of market driven restructuring of production systems at all levels, environmental issues, changing land use and urban sprawl, etc.;
- restoring rural development processes and livelihoods, and
- rethinking the poultry sector to make it less vulnerable now and in future.

> **FAO now needs to adjust its overall approach to begin to gradually move from the early mainly 'fire-fighting' emergency mode to include a longer-term perspective which seeks the solution to the continuing HPAI crisis in terms of the larger development and economic context.**

22. The Global Programme has not been updated since March 2006 and still has some important weaknesses. FAO's "Proposal for a Global Programme" is not officially approved or fully functional, and FAO's HPAI response thus often appears opaque to outsiders (including donors).

> **FAO needs to revise the format and content of the Global Programme with wider participation (and buy-in) inside and outside FAO. Following revision, FAO needs to approve, publicly present and widely distribute this revised Global Programme.**

23. The FAO/OIE Global Strategy document suffers from two major weaknesses with respect to achieving its goals: (1) while it discusses their importance, it does not provide any specifics nor strategic direction for work on production systems, socio-economics, rural anthropology, livelihood analysis/support, or communication; and (2) it lacks the tools and indicators to assess progress, quality and impact of the actions proposed.

> **The Global Strategy needs to be revised to provide direction and structure to the longer term work above and in addition to the immediate disease control response. In orchestrating the conceptual aspects of the shift from emergency to rehabilitation and development, the experience and collaboration of TCER would be most valuable. The Strategy also needs to indicate means of measuring progress toward its goals.**

24. Many non-veterinary factors have had a role in the emergence, spread and resistance to control of HPAI, including, for example, increasing incomes and demand for livestock products, rapid urbanization, density of peri-urban livestock, marketing systems, and cultural practices.

> **FAO needs to focus sufficient resources in both the Global Strategy and the Global Programme on better understanding these factors and developing specific strategies to address them. This work should be done with leadership from AGAL.**

B. Management, management structures and ECTAD

25. Current management structure of HPAI response overwhelmingly centred on disease control; other activities (production, socio-economic, trade) are peripheral and subject to priorities of animal health. Long term view of HPAI in Global Strategy implies more emphasis on non-veterinary issues.

> **Starting with an in-depth re-examination of the <u>functions</u> required for FAO's HPAI efforts, FAO will need to renew the management structure of its HPAI response along**

the lines described in Section III.6.F, in order to incorporate the non-animal health aspects into the structure on an equal footing with animal health and emergency response work, and to strengthen the existing management arrangements in areas where they have been inadequate.

26. This structure should be leaner, decentralized and functioning on a cross-organizational model. The evaluation team envisages the functions to be **(1) Early Warning, (2) Emergency Response, (3) Provision of Veterinary Expertise (CVO function),** and **(4) Non-emergency activities in support of disease control, including:**

- Non-veterinary approaches for long-term disease containment, control and eradication
- Post emergency support for rehabilitation of livelihoods;
- Longer term development issues related to control of epizootics.

The RTE suggests that the structure would take the form of an HPAI Coordination Unit under the leadership of an HPAI Director at D2 level, funded with extra-budgetary funds. The Coordination Unit would be small, with no more than 3-4 staff in addition to the director. ECTAD would continue its role in emergency response, under the coordination of the HPAI Director.

27. Evolution towards this future structure should come in two distinct stages, the first one to **consolidate and accompany the consolidation of the present ECTAD** and the second is to **migrate the FAO HPAI effort towards the new institutional structure** mentioned above, leaner, decentralized and functioning in an organization model of a type described in Section III.6.F, which also contains details of how the two stages should be carried out.

C. Prioritising

28. At the global level, neither the Strategy nor the Programme indicate priorities or rationale for targeting one or the other of the poultry production sectors 1, 2, 3 or 4, though each sector has its own role in the HPAI crisis.

FAO needs to have a clear position with regard to its own interventions which articulates the reasons for targeting or not targeting each of the poultry production sectors. Governments of affected countries in many cases have different priorities and FAO needs a clear rationale for its approach in relation to its mandate.

29. In country assistance, prioritisation of countries for intervention did not appear to be as effective as it should be, given that not all interventions are equally efficient.

Clear criteria need to be set for deciding on priorities for country assistance in the HPAI campaign. Improvements should be made to the existing system for categorising countries that are at greatest danger of new outbreaks, where there is a risk that the disease would become endemic or become an international threat, and also according to the amount/type of resources required in case of an HPAI outbreak. This would be a dynamically updated priority list of countries for HPAI response. For each country, brief contingency plans should be prepared, of which the FAO regional and national representations must have full awareness and ownership.

D. Communication and Information Sharing

30. Communication has a vital role to play in the Global Strategy and Programme, and needs to be integrated with technical components of a response strategy. Four key roles of communications that should be addressed are: (i) policy advocacy, (ii) programme communication, particularly for awareness and behaviour change, (iii) social mobilization and partner building, and (iv) capacity building in communication.

It is recommended that FAO develop an HPAI Communications Team to focus more on the 4 roles with the goal of controlling HPAI . There should be a clearer distinction between the public good objectives of the information activities of FAO and the HPAI communication activities.

31. Provision of key information and development of platforms for the exchange of information has been a positive contribution of FAO. The information sharing activities of these platforms could expand beyond the current mainly technical content.

As part of this communications strategy, FAO together with OIE and WHO should take the lead in coordinating and launching a platform for the exchange of information not only on HPAI control strategies and programmes, but also on donor commitments and government policies and positions.

E. Funding and independence

32. The flood of money coming in for the HPAI effort, especially as of late-2005 following the arrival of the disease in Europe, placed a major strain on the capacity of the organisational structures to function effectively.

During the course of such a crisis, FAO, as with other partners, should be realistic with donors as to its delivery capacity and counsel donors on the strengths of a measured response, on occasion delaying acceptance of funds where expectations are unrealistic. At the same time, it needs to be accepted by all that, in an emergency, there is a greater level of inefficiency than in more planned situations.

33. Donor directives: donors fund for their own interests (e.g. to get protection for their countries from HPAI) and according to political pressures in their own country. FAO will not say no to an offer of funds. This can lead to less than optimal use of resources.

FAO needs to have its own set of priorities beyond the availability of money, and be willing to challenge donor priorities when they are not coherent with FAO's vision of the best way to do the work. In support of requests for funding, FAO could also clarify how its programme addresses the UN Millennium Development Goals, an important element in the decision-making of many donors.

34. The SFERA fund is an alternative allowing FAO to intervene rapidly in crisis situations following its own technical judgement. Continuous donor support to the SFERA fund is crucial if FAO/ECTAD is to keep its "freedom" in intervening rapidly in priority countries and those at risk.

The RTE highly recommends that donors use the SFERA fund to the maximum amount possible. As a corollary however, the RTE highlights the importance for FAO to continue to build the confidence of donors in its technical expertise and efficiency and effectiveness in using these funds.

F. Governance at national and international level

35. The rapid containment and subsequent management model of disease control has failed in certain countries due to weak or difficult governance. FAO needs to continue efforts to better understand and address the complex issues surrounding country-level governance.

In assisting member countries where governance is an issue, FAO's strategy needs to explicitly confront obstacles and identify possible pragmatic 'work-arounds' (which may not be to everyone's liking) in order to do a better job responding to HPAI. FAO should not hesitate to bring in the assistance of a sister agency or outside expertise that has more specific experience and capacity in this area.

36. International governance of an emergency like HPAI is a difficult issue to approach without getting sidelined by the complexities of institutional, global and regional politics. But the initial difficulties with other institutions with overlapping responsibilities, and continued issues on division of tasks among stakeholders lead to the conclusion that FAO could do better at studying and understanding the international governance issues in HPAI response.

FAO and its partners must better address issues of international governance and institutional architecture pertinent to the control of trans-boundary animal diseases and in particular HPAI.

37. The RTE heard frequent references to tensions between FAO and OIE. It cannot go into what is also a political issue dependent on decision of the member countries of the two institutions, but:

The RTE strongly recommends that a high-level review of the international architecture for animal health and transboundary animal diseases be carried out to rationalise the relations between FAO, OIE and others when facing this type of zoonotic crisis.

G. FAO and Research

38. FAO's role is that of "knowledge management organization," rather than creator of new scientific knowledge. In the view of the RTE, it is not within the Organization's interest nor mandate to develop such research capacity.

FAO/ECTAD should distinguish the results of its own investigative work as informal applied research, not formal research with rigorous testing of results. For that, it must (continue to) partner with others. FAO has a major role to play in managing, using and making available to others the knowledge emerging from research, rather than in generating it. UNSIC encourages FAO linkages with IFPRI and the World Bank. FAO should work to ensure that post-HPAI-crisis socio-economic rehabilitation is addressed in the research work of those institutions.

H. Vaccination

39. Vaccination has been strongly recommended by FAO as a tool in the fight to control and eradicate the HPAI virus. Missing from FAO's recommendation is a set of guidelines as to when and where vaccination is appropriate, and how it could be used with other tools.

The Global Strategy should position responsibility for vaccination programme design largely at the country level (with outside advice if desired), including major decisions regarding when and if vaccination is appropriate. The public good nature of animal health means that to some degree this will also need to be tempered by regional priorities and constraints. A more clearly worded set of guidelines for vaccination is needed that directs attention to three levels of recommended use: newly infected, sporadically infected, and endemic countries.

I. Some general issues for AGA and FAO

40. The global public goods issue: Veterinary public health is a topic that is paid little attention in most developing countries, and this had important effects on slowing the ability to counter HPAI. Response has generally ignored the policy dimension of veterinary public health, although veterinary associations are calling out for more public debate and dialogue. The HPAI crisis illustrates the **global public good** nature of strengthened national capacities and policies in veterinary public health, and donors should be made (more) aware that it is in their direct interest to support this strengthening.

FAO needs to promote greater country level and international dialogue on the strengthening of veterinary public health policy and its direct impact on global public goods as exemplified by crises like HPAI.

41. Weakness of FAO bureaucratic processes in emergencies: Despite (or possibly because of) the presence of a multiplicity of structures such as ECTAD, CMC, EMPRES, GLEWS, etc., there still are unacceptable bottle necks in the current system that result in delays and inefficiencies. Examples include: delays in recruiting short term personnel; delays in budget approval; micromanagement of funds for fear of weak government; full-time staff called for brief duty to cover for inexperienced new short term staff; and staff under FAO's '11 month' contract limit leave for renewable posts elsewhere.

FAO needs to improve its own processes and mechanisms for rapid response in the context of protracted emergencies, of which HPAI is a prime example.

42. Emergency versus regular programme: Attention to HPAI was reported to have shifted the resources of permanent staff away from other responsibilities with resulting loss of programme activities in these other areas.

FAO needs to define an institutional policy indicating how technical department resources should be allocated between addressing emergencies and the regular programme activities. In the case of the HPAI crisis, FAO needs to assess the loss of regular programme activity in AGA and compensate for it.

SECTION I – Background to the Evaluation

1. Background information

D. Introduction

43. The current panzootic of highly pathogenic avian influenza (HPAI) was first positively identified in South Korea in December 2003 and within a few weeks its presence was recognised in several other Asian countries, including PR China, Thailand and Indonesia. From early in 2004, cases of infection of humans with the avian influenza virus were identified, especially in Viet Nam and Thailand, with mortalities reaching over 50% amongst reported cases. The occurrence of human cases caused a very substantial reaction from the international community, with international human health sources identifying the potential for a global pandemic of human influenza caused by a modification of the avian virus.

44. FAO responded in early 2004, within its limited budgetary capacity, by implementing small regional and national Technical Cooperation Programme projects (TCPs). With the exception of some funding from Japan, there was virtually no donor support available for the FAO response to avian influenza before late 2005. At the international level, FAO, in collaboration with OIE and WHO, provided technical advice to donors and other stakeholders through workshops and conferences, and embarked on initiatives to raise funds for greater support to countries and to develop technical guidelines and strategies for controlling the disease. A UN System Influenza Coordination (UNSIC) office was established at UN Headquarters.

45. The HPAI virus spread through migrating wild birds, trade and other means, moving in 2005 through Russia, eastern European countries, the Near East and into Western Europe. In early 2006 it reached the African continent, where it currently continues to spread. In anticipation of further spread, the now gravely concerned Western donor countries pledged US$1.9 billion to fight the disease in January 2006, resulting in a massive scaling up of FAO's activities. In mid-2006 FAO started working in Latin America and the Caribbean to prepare for the worst, although the infection had (and has) not yet crossed the Atlantic.

46. FAO's Global HPAI Programme has now become a major programme for the Organization, characterised by:

- a high exposure of the Organization because of concerns in the international community for spread of HPAI and possible development of a human influenza pandemic;
- the need to coordinate management of the programme between many implementing agencies, in particular OIE, WHO, UNSIC and the World Bank;
- a complex management challenge because of multi-disciplinary technical demands, geographic extent and the effort to retain central strategic decision making in a decentralised environment;
- negotiation of very large amounts of extra-budgetary funding, representing more than 90% of FAO's support for this programme; and
- uncertainties resulting from factors such as the nature of the emergency including its duration, spread and control; the ultimate outcome both for the poultry sector and concerning the possibility of a human influenza pandemic; and the continuation of donor support.

47. With FAO's intervention already having spanned almost three years and with a strong donor interest in monitoring progress, it was decided to begin a three year programme of evaluation exercises of this large effort. This document represents the first stage of that programme.

E. The Evaluation Process

Purpose of the Evaluation

48. This first Real Time Evaluation (RTE) is to serve the following purposes:

1. Provide immediate feedback and guidance to FAO Management on strategic and operational achievements and constraints in order to improve relevance, effectiveness and efficiency of FAO's work on HPAI;
2. Promote accountability to member governments, donors and other stakeholders on the use of resources to reinforce participation, transparency, and communication;
3. Identify gaps or unintended outcomes, with a view to improving the FAO strategy and programme approach, orientation, coherence, coordination and implementation.
4. Make a first assessment on the validity of the institutional setup put in place for the HPAI response (ECTAD, CMC, etc.).

Scope and Methodology of the Evaluation

49. This RTE covered FAO's entire Global Programme for HPAI to assess:

- management and coordination of the Global Programme at the level of FAO Headquarters and the Regional Office for Asia, including working relationships with major implementing partners and working relationships with Governments;
- the implementation of the Programme in countries infected early in the panzootic (sample countries: Thailand, Viet Nam and Indonesia) and newly-infected countries (Egypt and Nigeria);
- support to at-risk countries in preparedness for HPAI (Ethiopia and Regional TCPs).

50. The evaluation began in February 2007 and was completed in May 2007. It was conducted by a team of eight members led by Dr. Tony Wilsmore of the UK.[1] As part of this exercise, the RTE methodology included:

- An evaluation of the French contribution to the HPAI work in Africa through SFERA[2]
- A preliminary desk study which provided:
  - An overview of the Programme;
  - A documentary review
  - An assessment of a sample of major projects in countries that would not be visited by the team and of other relevant evaluations including that of the French assistance;
  - A short brief on specific issues to be addressed in each country to be visited.
- Individual and focus group discussions at Headquarters with all divisions concerned;

[1] The team members were:

- Dr. Tony Wilsmore, Director of PAN Livestock Services;: Dir. of the Veterinary Epidemiology and Economic Research Unit, University of Reading (Team Leader)
- Jean Ayoub, past Director of Disaster Management, IFRC, now Senior Management Consultant, Geneva
- Dr. El Sayed Badawi, Professor of Poultry Hygiene, Cairo University, Egypt
- Dr. David Hall, Consultant Livestock Economist and Veterinarian, Canada
- Dr. Robert Pym, Senior Lecturer in Poultry Science, University of Queensland, Australia
- Daniel Shallon, Evaluation Officer, FAO, Rome
- Dr. Jean-François Valarcher, FMD Surveillance and Group Leader of Epidemiology of Vesicular Diseases, OIE/FAO World Reference Laboratory for FMD (Institute of Animal Health - Pirbright, UK)
- Dr. Colin Wilks, Professor of Veterinary Virology, University of Melbourne, Australia

[2] Team members: Dr. Yves Leforban, Inspector General of Veterinary Public Health, Min. of Agriculture, Food, Fisheries and Rural Affairs, Paris; Daniel Shallon, Evaluation Officer, FAO, Rome.

- The constitution of a Consultative Group (CG) in Rome composed of representatives of the key groups of stakeholders, including the Director of TCE, Chief AGAH, Evaluation Service Chief (chair), donor representatives, representatives from infected countries and one representative each from OIE, WHO and UNSIC. The CG provided advice on different aspects of the evaluation and will advise on implementation of the full Evaluation Programme, ensuring that it is independent and meets requirements of all stakeholders.
- Visits to the FAO Regional Office for Asia and the Pacific (RAP) as the only currently fully established decentralized ECTAD unit, and to a sample of countries where FAO provided assistance;
- Visits to key partners: World Bank, UNSIC, OIE, WHO, UNICEF and major donors (US, France, Sweden);
- A simple and short questionnaire survey of member countries on their satisfaction regarding FAO's support;
- A Peer Review of external experts to consider the draft report and recommendations and make comments on the report and on progress with FAO's avian influenza programme as indicated by the outcome of evaluation. Members of the Peer Review group were also engaged electronically in providing advice at other times during the evaluation process.
- Final Report drafting by a reduced team in Rome, with discussion of the draft with FAO stakeholders, and a second review by the Peer Review Panel.
- Presentation of the report to the Consultative Group on the Avian Influenza Evaluation Programme in mid-2007.

SECTION II – Overview of FAO's Response to Avian Influenza

1. The Context: the Avian Influenza Crisis and the Global Response

A. Chronology of events and key factors

51. The current panzootic began with the positive identification of a new outbreak of highly pathogenic avian influenza (HPAI) of the type H5N1 (Asian strain) in South Korea in December 2003. By early 2004 this form of highly virulent avian influenza virus had been isolated in eight countries (Cambodia, PR China, Indonesia, Japan, the Republic of Korea, Lao PDR, Thailand, and Vietnam) (Blancou *et al.*, 2006). Although avian influenza is not a new disease of poultry, the H5N1 strain of virus isolated in these recent outbreaks is known to be zoonotic (an animal disease which can infect humans). Recently virus isolation data has led to the hypothesis that this particular HPAI H5N Asian strain probably emerged from PR China in 1996. (Sims, L.D. *et al.*, 2005)

52. In early 2004 several fatal cases of human infection with avian influenza virus H5N1 Asian strain were confirmed and international concern began to grow of a newly emerging threat to human health from poultry. This concern was greatly amplified by the concern that mutation of the virus following human infection with H5N1 could lead to human to human transmission of the disease, an event which has not to date been documented.

53. By 2005 it was also well established that the virus could be spread by migrating birds, as was the case in parts of PR China, Russia, Mongolia and possibly Kazakhstan. This pattern of disease spread has also been implicated in other parts of Europe and the recent outbreaks in Africa. However, wild birds are certainly not the only vector for spread of the virus. At least two other major routes have been identified: movement of infected birds from place to place; and, movement of infected birds and poultry products from market to farm or home. As well, a number of other sources of infection have been noted including fighting cocks and pet birds.

54. From late 2005, isolated cases of HPAI in migratory birds and/or poultry were identified in several western European countries and the spread continued to Africa. Throughout 2006 to early 2007 outbreaks continued in Asia, Europe, and Africa, including countries in which the disease was thought to be well under control (e.g. Vietnam and Thailand). Details of the 60 countries that have been reported with avian influenza H5N1 and dates of recent occurrence can be found in Table 1 (Annex 6). To date, it is estimated that up to 300 million poultry have been culled or died due to avian influenza H5N1. Asian and global economic losses due to lost birds and input markets are not well established but have been estimated at more than USD10 billion globally, and could rise to as much as USD800 billion (World Bank, 2005).

55. As shown in Table 2 and Figure 1 (Annex 6), the majority of the world's poultry (47%) are located in Asia, followed by North America (17%). China has the world's largest number of poultry (4.74 billion birds) followed by the US (2.07 billion), India (1.25 billion), Brazil (1.12 billion) and Mexico (0.55 billion). The largest population in Europe is in France (265 million birds) which ranks 10th in terms of global poultry populations. It is no surprise then that the commercial poultry producers of Asia, North America, and Europe are concerned about the threat of HPAI H5N1 entering their production systems.

56. Also significant are the figures for density of poultry per person (Figure 2, Annex 6), an important factor in transmission of the virus to humans. The density of poultry based on the agricultural population varies much more globally than does the density of poultry based on the total population. This is a reflection on the tremendous density of rural populations in developing countries, whereas in developed countries with sparser rural populations but large poultry industries, the ratio of poultry to agricultural population is much higher.

57. Human deaths have also continued; as of April 11, 2007 there had been 291 confirmed human cases of infection with avian influenza virus H5N1 Asian strain, of which 172 had been fatal (a case fatality rate of nearly 60%). The majority of cases and fatalities have been in Asia. Details of human cases by country and by year are in Table 3, Annex 6.

B. The global response

58. Early donor response to the HPAI crisis in Southeast Asia was poor, with very little funding being offered between the outbreak in late 2003 and last quarter of 2005, a space of over 18 months. It was only when HPAI began creeping westward to Europe, first appearing in Russia in July 2005, then in Turkey, Romania, Croatia, and the Ukraine, that the donors became seriously concerned. By late 2005 donor support for HPAI control in Southeast Asia had increased considerably. A UN System Influenza Coordination (UNSIC) office was established at UN Headquarters, and a multi-donor Government of Vietnam UN Joint Programme (with the joint UN participation of UNDP[3], FAO, WHO, and UNICEF) was launched in Vietnam. The US began to play a significant role in responding to HPAI and a USAID supported regional control programme for Southeast Asia was begun. At the international level, FAO in collaboration with the World Organisation for Animal Health (OIE) and WHO provided technical advice to donors and other stakeholders and embarked on initiatives to raise funds for greater support to countries.

59. By 2006 HPAI had infected birds (mostly wild birds) in 26 countries in Europe – more than half of the continent. The first outbreaks on the African continent were identified in January and February 2006. By mid-2006 the virus was also isolated from birds in Burkina Faso and Nigeria and later in six other African countries. The concern for further spread prompted the international community to strengthen fund-raising efforts, resulting in a massive scaling up of activities.

60. A formal statement of support from the Secretary General of the UN and the Directors General of relevant specialized agencies committed the UN to support both national and international responses to avian influenza and human influenza of avian origin. This was presented as UN System Strategic Approach to Avian and Human Pandemic Influenza[4] (AHI), released by the UN Development Group on 10 January, 2006, just before an International Pledging Conference on Avian Influenza in Beijing.

61. As of the first half of 2007 the virus continues to cause outbreaks in Southeast Asia in countries that were showing good progress in controlling infection (Vietnam and Thailand), and continues to infect countries previously not infected (Bangladesh, Ghana); new cases of human illness and death are still being reported. The risk of infection in birds in North and South America remains a concern for governments and addressing the threat of a global pandemic remains a high priority for the WHO as well as for many countries.

C. The inter-organizational architecture of the response

62. The international response to the avian influenza crisis is being led by six main agencies and institutions in the global development community: the UN agencies FAO, WHO, and UNICEF; the World Organisation for Animal Health (OIE); and The World Bank and the Asian Development Bank. Significant assistance is also being provided by five other UN agencies (OCHA, UNDP, UNHCR, and WFP), and by strong input in financial resources and advice from the donor community. Funding for global activities is being led by the governments of Australia, Belgium, Canada, the European Commission, France, Germany, Japan, Norway, Saudi Arabia, Spain, Sweden, Switzerland, the United

[3] The United Nations Development Programme (UNDP); the World Health Organization (WHO); the United Nations Children's Fund (UNICEF).

[4] The strategic approach can be accessed on the web at: http://www.undg.org/documents/7610-Avian_and_Human_Pandemic_Influenza__UN_System_Contributions_and_Requirements_-_A_strategic_Approach.pdf

Kingdom, and the United States. Table 1 below shows the top ten donors (accounting for 82% of total donations of US$196 million) to FAO's HPAI response as at 31 May 2007:

Table 1: Top ten donors to FAO HPAI response, ongoing + pipeline (FPMIS, 31 May 07)

Donor	No. of Projects	Amount (US$)
United States of America	35	62,271,868
World Bank	11	17,309,357
Australia	7	13,881,089
Japan	3	12,832,676
Canada	2	11,972,566
United Kingdom	5	10,173,228
Sweden	2	10,015,795
Germany	6	8,234,153
European Commission	6	8,035,603
Asian Development Bank	1	6,490,000
Total (top ten)	**78**	**161,216,335**

63. Coordination for the efforts of the UN agencies is being provided by the United Nations System Influenza Coordinator (UNSIC), based in New York which has developed an action plan (UNSIC, 2006a and 2006b) that is updated twice annually. However, there is no global coordinating body that holds regular meetings to discuss strategy and programme with the key agricultural, public health, development, and donor agencies as well as government representatives. By default, many of the concerned institutions, countries and donors are represented at international meetings, but these generally are biased towards donor led issues or technical (scientific research) issues.

64. Much of the pledging for the global response to HPAI was offered following discussion and consultation at a donor pledging conference, 17-18 January 2006 in Beijing, China. At this meeting donors agreed to support integrated country programs, and that the bulk of funds would go to countries. Efforts at the global level were to be led by FAO, OIE, and WHO. As of October 2006, the latest date for which detailed figures were available, of the US$1.9 billion pledged, US$1.4 billion had been committed and US$722 million (51% of commitments) had been disbursed. This represented a rapid global response for funding followed by a rapid disbursement.

65. On top of these donor pledges, the development banks, in particular the World Bank (WB), the Asian Development Bank (ADB) and the African Development Bank (AfDB) are contributing significant amounts to combat HPAI. The banks have mandates to address poverty alleviation and help member countries develop economically through a range of activities, and although animal health is typically an extremely small component of their portfolios, HPAI has raised the level of concern due to the broader implications of damage to livelihoods and impact on weaker economies.

66. The WB and ADB in particular have launched major programmes to address the control of HPAI. WB has two main mechanisms (WB, 2007): the global funding program, the Global Program for Avian Influenza (GPAI) which will provide US$500 million (part loan, part grant), and the multi-donor trust fund "Avian and Human Influenza Facility" (AHIF), which currently totals another US$75 million. FAO is expected to be one of several agencies relied on for providing technical implementation of activities. By March of 2007, projects were active in 14 countries.

67. The ADB has pledged US$470 million in loans, refinancing agreements, and grants, US$70 million of which will be in the form of grant assistance. Of this, US$38 million was approved in March 2006 for the regional grant Prevention and Control of Avian Influenza in Asia and the Pacific. It is expected that regional activities will be implemented by ASEAN, FAO, and WHO.

68. The African Development Bank is also becoming more active in support to African countries infected or at high risk. At writing, US$5.5 million had been pledged for Niger, Nigeria, Sudan, and Togo.

2. FAO's Response to the Crisis

A. Chronology of FAO's activities in the HPAI campaign

69. In January 2004, FAO launched its campaign to assist affected and at-risk countries in the regions, launching seven TCPs (another four were launched a month later) including a regional one to help with networking, information exchange and identification of regional policies. Within the UNSIC response, FAO is assigned the core role of control of the virus in the global poultry population. This role has two dimensions: (i) technical support to policies and instruments to fight the disease at all levels; and (ii) an efficient operational platform to support and coordinate action when and where needed.

70. The number of projects supporting the control, monitoring preparation for and study of the disease had increased by the end of May 2007 to a total of 109, for a total value of US$123.3 million. Another 20 projects for US$72.8 million were in the pipeline. Work had stretched around the globe to include not only East and Southeast Asia but also the rest of Asia, Africa, Eastern Europe, the Caucasus, the Middle East, Latin America and the Caribbean, with interventions in nearly 100 countries.

71. Annex 4 provides a general chronology of how this effort grew and developed over the three years of implementation, including major events and actions by FAO - often with its partners OIE and WHO - as well as main funding events and larger project approvals.

72. FAO's response started with the TCPs initiated early in the crisis to assist countries with understanding, planning and response to the disease outbreaks, including provision of laboratory supplies, training of technical staff, improvement of surveillance capabilities and networking. FAO was also able to organise an international meeting on HPAI in February 2004, within a few short weeks of the reappearance of the disease. This was a very rapid response, though it suffered from some issues as detailed elsewhere in this report, and it was unfortunately not followed up quickly by additional non-FAO funds.

73. As the crisis deepened, FAO together with OIE and WHO sought to mobilise significant amounts of donor funds to expand the efforts. Initially there was some confusion and competition between the three agencies with regard to respective roles, and WHO generally sought to take a coordinating role as it was the only one with qualified staff already in place in the countries affected. FAO was not able to place qualified full-time staff in place in the countries and at regional level until sufficient funding was made available, relying instead on short-term consultant and staff missions (106 missions fielded during 2004), weak on follow-up and of uneven quality at times.

74. In an effort to strengthen response capability to HPAI, FAO in December 2004 established the Emergency Centre for Transboundary Animal Diseases (ECTAD), a corporate platform for the integrated delivery of FAO's livestock programme related to animal health crises such as avian influenza. This mechanism combines the technical animal health aspects from the Animal Production and Health Division (AGA) with the programme delivery capabilities of FAO's Emergency and Rehabilitation Division (TCE).

75. Funding was slow to come in, though there was an early start with a Japanese contribution of US$1.6 million in March 2004. After that however, no significant donor funding came to FAO until April 2005 with a modest Netherlands contribution of US$495,000. Finally in late 2005, more than one and a half years after the start of the crisis and after the outbreak of HPAI in countries closer to Europe in mid-2005, the funding situation finally began to improve. The USA approved a US$6 million contribution in September 2005, followed in November and December of that year with another US$11.5 million from various donors. This funding delay has been a serious issue for FAO in getting its programme up to speed.

76. FAO's work during 2004 and 2005 focussed on operating the field (country and regional) activities responding to the immediate disease control issues. The need for FAO to play a strong coordinating role became more evident as the situation grew more complex, the infected countries increased, and the number of actors grew. FAO went about creating networks and bringing together a wider range of stakeholders, including the scientific community, other UN agencies and research institutes. The joint FAO/OIE Global Strategy document prepared in collaboration with WHO was a long time in preparation however, reported by interviewees in the three agencies to reflect a degree of confusion in the face of unexpected behaviour of the virus and lack of agreement on the best approach to prevent, contain and eradicate HPAI. The first full strategy document reflecting some agreement only came out in November 2005, nearly two years after the start of the crisis.

77. During this period, FAO was one of the earliest players to begin giving importance to the socio-economic issues related to HPAI and the consequences of the response, in terms of livelihoods, food security, markets, international trade, animal movement, diets, etc., as well as the impact of social, cultural and economic practices on the effectiveness of the campaign. Meetings were held and studies were undertaken on this topic, though with little direct impact on FAO's global strategy which remained very much animal health based.

78. By the start of 2006, FAO's response efforts were progressing much better, with more funding, more flexible funding mechanisms (in particular the Special Fund for Emergency and Rehabilitation Activities - SFERA), an agreed upon global strategy and a strengthened human resource situation. The outbreak of the disease first in the Middle East and then in Africa starting in January 2006 gave a new urgency to the campaign, and at a HPAI pledging conference in Beijing that month, donors pledged US$1.9 billion for the fight against the disease. FAO's SFERA fund received, in the same month, contributions for nearly US$11 million. FAO took advantage of the flexibility of the SFERA mechanism and diverted significant funding to rapid reaction in Africa. FAO by then had operations in countries on three continents, continuing the Asia work since the disease, while under much greater control, was still present, especially in Indonesia where it had become endemic.

79. Over the course of 2006 the work accelerated fast, with funding rising rapidly and human resources going from some 40 professionals at the end of 2004 to over 400 by the end of 2006. The USA became by far the largest and most active donor to FAO's work, approving some 21 projects during the year with a value of over US$15 million. In October 2006 FAO together with OIE launched the Animal Health Crisis Management Centre (CMC) in FAO's Rome headquarters to allow even faster intervention times (within 48 hours) in cases of new outbreaks anywhere in the world.

80. In an effort to stay ahead of the disease, FAO launched in May 2006 a series of sub-regional TCPs in Latin America and the Caribbean, where HPAI had not yet arrived, focussing on bringing the experiences from Asia and Africa to strengthen national and regional preparedness in case of an outbreak.

81. A further half-billion dollars was pledged by donors at a pledging conference in Bamako, Mali in December 2006, attended by 72 countries. FAO continued work with OIE on revising and updating the Global Strategy. By the first quarter of 2007, FAO had provided HPAI control and preparedness support in the form of services and/or supplies to 125 countries.

82. The start of 2007 was characterised by a much lower level of new outbreaks around the world than a year earlier. Nonetheless, funding continued, reaching a total by April of US$113 million in donor funds given to FAO since the start of the crisis, in addition to over US$30 million promised and another US$80 million in the pipeline. FAO moved forward with the establishment of its sub-regional ECTAD teams in North, West, East and Southern Africa, in the Near East and in Central Asia. Work continued in the three endemic countries of Nigeria, Egypt and Indonesia, as well as preparedness exercises for at-risk countries and continued monitoring and surveillance in previously infected countries.

B. FAO's mandate and the HPAI response

83. While reducing the threat of HPAI is mainly the task of national authorities, the transboundary nature of the disease and the limited capabilities of many countries to combat it makes it a threat to major global public goods and calls on the international community and FAO and OIE in particular to encourage, strengthen and coordinate the response efforts.

84. The overall mandate of FAO is to raise levels of nutrition, improve agricultural productivity, improve the lives of rural populations, and contribute to the growth of the world economy. FAO's efforts are directed to achieving food security for all by increasing regular access to sufficient levels of high-quality food to allow people to lead active, healthy lives. Low income countries are typically furthest from achieving these goals, and much of FAO's work is targeted at poverty reduction and development of the food systems of poorer countries. Livestock production, including animal health, is an important part of agricultural production and of rural livelihoods, and fall directly under FAO's mandate.

85. As an international development institution, FAO concentrates its activities in four main areas:

1. Putting information within reach
2. Sharing policy expertise
3. Providing a neutral meeting place for nations
4. Bringing knowledge to the field

86. In the context of HPAI, FAO has a mandate to address the following facets of the avian influenza crisis:

- assist in the control and eradication of the virus;
- facilitate understanding of the disease ecology of the crisis;
- assist with mitigation of the impact of the crisis on livelihoods and food security;
- assist in minimising disruption of markets and trade, and
- help prevent compromises in food safety.

87. Each of these facets of the HPAI crisis can be addressed by the four main areas of FAO's activities. This has been achieved with varying degrees of success – quite well in some areas, only with preliminary activities in others.

88. Several key players in the response to HPAI have similar goals to be achieved although through different mandates. The WHO has a mandate to protect and improve the health of all people of the world by reducing human diseases where they occur and by minimizing the risk of disease occurring and spreading. The WHO has been the strongest voice expressing concern of the risk of a global pandemic of influenza in humans of avian origin. OIE has a mandate to ensure standards and safety in livestock products and assist with the strengthening of veterinary services. Its focus is exclusively on the animal health and avian disease control aspects of the crisis. FAO's much wider mandate gives the Organization a bigger role in the longer-term consequences of the avian flu crisis, especially those not directly connected to animal or human health.

C. Funding and financial resources

89. As noted, the funding of FAO's HPAI campaign got off to a slow start. Although there was an initial meeting to which donors were invited in Bangkok in late February 2004, FAO still had no strategy or clear plan to propose, and disagreements between FAO, OIE and WHO on approaches and responsibilities were not reassuring. Only Japan, the only donor feeling directly threatened at that point, made a significant contribution.

90. As recorded in the chronology above, the first full-scale donor pledging conference was held in Beijing only in January 2006, over two years after the initial outbreak. The second pledging conference was held in Bamako, Mali in early December 2006, and a third is planned for New Delhi,

India in December 2007 (though the Delhi meeting has not yet been officially designated as a pledging conference). The first two conferences resulted in pledges of US$2.4 billion.

91. From this, FAO has attracted 104 donor-funded projects worth US$186 million, of which 85 projects (worth US$ 114 million) are already approved, with the other 19 (US$72 million) at various points of the pipeline. FAO also financed 25 projects (one in the pipeline) with US$10 million from its own TCP funds. Half of these projects were for regional and global activities, while the rest were for direct assistance to specific countries. At the end on May 2007, the financial situation of FAO's HPAI effort was as follows:

Table 2: Summary of FAO HPAI Funding Situation at 31 May 2007 (US$ millions)

Donor funds received	83.3	85 projects
Donor funds agreed but not received	30.5	
FAO TCP funds	9.5	24 projects
Total of funds received and agreed	**123.3**	**109 projects**
Pipeline funds (of which one TCP)	72.8	20 projects
Total funding envelope	**196.1**	**129 projects**

92. Compared with the three-year FAO request of at least US$308.5 million (assuming few new infections) which FAO developed through consultations with member countries and analysis of needs at global level, there is still a shortfall of US$112.4 million. More detailed analysis of the budget is presented in Section III.5.A.

3. FAO Global strategy and programme

93. There have been two approaches to outlining and documenting FAO's planned response to the global spread of HPAI. The first was a Global Strategy document of November 2005 (FAO, OIE, and WHO, 2005), recently revised in March 2007 (FAO, OIE, and WHO, 2007), and the second was FAO's proposals for the Global Programme. The Global Programme is mentioned in many documents and meetings prior to 2006, but the first formal document outlining FAO's contribution to it did not appear until March 2006 (FAO, 2006a). There is also a Consolidated Action Plan covering all UN agencies responding to HPAI (UNSIC, 2006a; UNSIC, 2006b). Although it briefly summarizes the role of FAO and other UN agencies, it does not mention a Global Programme with the exception of a brief reference to a separate document prepared by the World Bank (World Bank, 2005b) used to streamline disbursement of its pledge of US$500 million. The reference is dropped in the updated Consolidated Action Plan (UN, 2006b).

94. There is no overall template, action plan, or outline of coordinated efforts between IGOs, NGOs, regions, countries, and all of their partners in responding to HPAI . There is a need for a well outlined action plan detailing important elements of the global response including constraints, strategies, players, outputs, and funding needs, developed in consultation with all of these stakeholders. The UN Consolidated Action Plan attempts to deliver this for the international agencies but does not include non-UN stakeholders.

95. This section of the evaluation report will discuss the Global Strategy and Global Programme documents developed by FAO, working in collaboration with the OIE and WHO.

A. FAO global and regional strategies

96. The original global strategy reference document titled *A Global Strategy for the Progressive Control of Highly Pathogenic Avian Influenza* (FAO, OIE, and WHO, 2005)[5] covers the period 2003 to 2007. It was revised in late 2006 and circulated between agencies for comments and finalisation until March 2007. The evaluation team did not gain access to this updated Global Strategy document titled *The Global Strategy for Prevention and Control of H5N1 Highly Pathogenic Avian Influenza* (FAO, OIE, and WHO, 2007)[6] until late in the evaluation process.

FAO's 2005 Global Strategy

97. The November 2005 FAO/OIE/WHO Global Strategy (GS) was a document indicating that the global HPAI situation was well known at the time of presentation of the document in (FAO, OIE, and WHO, 2005). This is a rather long-winded document, to the extent that it acts as a barrier to understanding the strategy proposed. The very thorough and detailed description of country situations makes it difficult for the reader to extract the key messages of the GS. This was not helped by a verbose executive summary which did not clearly lay out a strategy, the length of the text with little use of diagrams to clarify activities and objectives, and the lack of general structure in the plan. In addition, the document was not supported by any scientific references that would enable the reader to judge the quality of some statements (*e.g.* use of vaccines and persistence in ducks, vaccine efficacy, and the role of wild birds). A brief logframe of the GS is provided but details of performance indicators and targets are especially weak.

98. The GS took more than 18 months to formulate and present as a public document (an early draft version discussed in September 2004 was never officially released). Such a long time lag between initial response of FAO and presentation of a strategy is not acceptable, as was noted by stakeholders interviewed for this evaluation. Future strategy updates should be issued on a regular basis.

99. Three technical areas of the 2005 GS were in need of more emphasis:

i) Targeted/mass vaccination (considering choice of vaccine, route of administration, number of injections for protection). The details of targeted and mass vaccination were not well laid out.
ii) Surveillance. Weak capacity in surveillance can be strengthened by (e.g.) good communication and public information to increase passive surveillance and by focusing active surveillance on focal points (e. g. markets, roads, middlemen).
iii) Socio-economics and communication. The HPAI socio-economics group had developed a working outline of areas of activity, but this was not referenced in the GS. In particular, understanding of the impact of HPAI at different levels of the poultry sector is needed. This is needed to help target the response to HPAI both in terms of economic efficiency and in terms of poverty alleviation.

100. The stated goal of the GS is to prevent human death caused by a global influenza pandemic, while the objective of the strategy is to arrive at this goal through progressive eradication of HPAI from poultry sectors in phases.

101. It is quite difficult to understand how the GS budget (titled Required Investment) was derived. It is discussed briefly in one paragraph, with associated tables, but the following details that are essential to sound derivation of a programme budget were completely missing:

- consultation with recipient countries to understand needs and identify constraints
- assessment of priority areas
- assessment of comparative strengths of FAO and its partners
- realistic assessment of delivery of outputs
- potential activities and their impact
- costing by activity, country, and level of infection

[5] http://www.fao.org/docs/eims/upload//210745/Glo_pro_HPAI_oct05_en.pdf
[6] http://www.fao.org/docs/eims/upload/210745/glob_strat_HPAI_apr07_en.pdf

102. If and when the new 2007 strategy or a later iteration develops a budget, it should keep these items in mind.

The 2007 Revised Global Strategy

103. An advance copy of the revised GS (FAO, OIE, and WHO, March 2007) was shared with the evaluation team in late March. There are many improvements over the original GS of November 2005: the revised GS is briefer and more clearly laid out; it outlines an understandable vision, priorities, and strategy; socio-economics and communication are more specifically addressed as elements of the strategy; and, a set of milestones and expected outputs are mentioned. Less attention is given to lengthy description of the HPAI situation and issues.

104. Importantly, the revised GS no longer states complete eradication of HPAI H5N1 as the goal, but rather "a greatly reduced threat of H5N1 virus infection in poultry." The Strategy states its vision as "Reducing the Threat – Mitigating the Impact," where FAO and OIE, over the next 10 years, should "work towards significantly reducing H5N1 virus infection in poultry, as the necessary basis for:

- reducing the risk of human exposure to H5N1, thereby diminishing the threat of pandemic human influenza
- mitigating the negative impact of the disease and its control on production, markets and trade in poultry products
- supporting the livelihoods of poor communities heavily dependent on poultry for income and food security."

105. Interestingly, although the importance of the social and economic consequences of the disease are recognised in this vision, *the focus of the strategy is only on reducing infection,* indicated as the means to mitigate the larger socio-economic impact of the crisis and to protect and restore livelihoods of the poor.

106. For the realisation of this vision, the definition of HPAI country status has been reduced to three priority categories: endemically infected, suffering from sporadic outbreaks, and at (high) risk of incursion. Again the strategy recognizes the need for global, regional, and national levels of approach, acknowledging that different areas may require quite different approaches to control. The GS thus identifies three "domains" of action:

- In the **global domain**, the goal is to provide *global leadership and coordination* for the generation and delivery of technical and policy advice, for the harmonisation of national, regional and global plans, and for improvement of the effectiveness and efficiency of disease prevention and control.
- In the **regional domain**, the goal is to enhance *cooperation and collaboration among regionally-grouped countries* for a harmonized and coordinated approach to control and eradication of HPAI
- In the **national domain**, after defining the status of countries within the priority categories, the goal is to progressively *eliminate H5N1 virus circulation* in poultry populations using livelihoods-sensitive approaches. In those countries in which HPAI is currently endemic, the disease will either be eradicated or greatly reduced in incidence.

107. A list of strategic objectives and of main activities is provided for each of the domains. The activities remain similar to those in the previous GS, though they have evolved based on the experience of the intervening 18 months.

Regional implementation strategy for Africa

108. HPAI was reported first reported in Africa in Nigeria in January 2006, followed closely by Niger and Egypt in February 2006. By April 2006 eight African countries had reported HPAI, six of

them in sub-Saharan Africa. In contrast to Asia, human deaths were only reported in two countries (13 in Egypt and 1 in Nigeria). At the time of writing, Ghana had just confirmed the presence of HPAI, indicating continuation of the spread of the disease. Africa is particularly at risk for the introduction and the spread of HPAI due both to the extent of illegal and non-controlled trade, and to the presence of large populations of migrating birds as a potential source of introduction.

109. FAO has developed a technical strategy and programme that needs to be applied to control HPAI in Africa (FAO, 2006b). The strategy and programme have been set up to enable the regional, sub-regional, and national structures assisted by FAO, OIE and AU/IBAR in the framework of the World Bank ALive Platform and GF-TADs to detect and control HPAI in Africa through existing institutions. The technical strategy and the programme are designed for the control of HPAI in a small number of countries and to prepare through detection and response all the African countries for the incursion of HPAI.

110. The strategy seeks to achieve the following:

a. effective control of HPAI; expansion of the disease stopped
b. national veterinary services brought to compliance with international standards (OIE)
c. affected countries have sound strategic plans in place for progressive control programmes
d. all countries have emergency preparedness plans in place in case of introduction of infection
e. a Regional Committee guides the continental preparedness and control programme
f. sub-regional committees monitor and review progress
g. sub-regional Animal Health Centres drive and facilitate capacity development for epizootic disease control with a focus on HPAI

111. The programme will seek to achieve these objective using several activities. FAO will support infected countries their efforts to achieve control of HPAI. It will also work on long term strengthening of capacities, providing regional support through OIE/FAO/IBAR Regional Animal Health Centres and networks of laboratories and epidemio-surveillance teams. International support will be provided collaboratively by FAO working with OIE in collaboration with WHO and UNICEF. According to the presence or absence of HPAI and the incidence of the disease, a set of control measures are presented to help countries in their fight

Regional implementation strategy for Asia

112. FAO is also drafting a strategic framework to be applied to control HPAI in Asia (FAO, 2006c). The strategic framework addresses the main challenges that need to be addressed to control HPAI in Southeast Asia, which it identifies as:

- building the technical and logistical capacity in all countries to be able to respond to the HPAI epidemic in a technically sound, sustainable, and socially responsible way; and,
- coordinating the efforts of the many national and international institutions involved in responding to HPAI.

113. The purpose of the strategic framework for Southeast Asia is to provide robust country-specific and sector-specific technical options for prevention and control of HPAI in poultry; to build the capacity to implement and maintain these options and strategies; and to provide analytical and logistical support to ensure that the technical options can be implemented in a sustainable, technically-sound and socially-equitable way. The strategic framework for Southeast Asia identifies nine interlinked components which constitute a comprehensive response to HPAI in Southeast Asia:

1: Prevention of disease incursion
2: Emergency preparedness and rapid response capability
3: Control of endemic disease
4: Research and development
5: Consideration of socio-economic aspects of disease control and production systems
6: Raising of public awareness and improving communication

7: Strategy development and national coordination
8: Managing partnerships
9: Development of policy and legislation

B. FAO's proposal for a Global Programme

114. In March 2006, FAO and OIE produced a document entitled "Avian Influenza Control and Eradication: FAO's Proposal for a Global Programme". Although this document has not yet been officially approved as FAO's plan for the global HPAI campaign, it is the *de facto* programme document for FAO as part of the Global Programme.

115. The proposed Global Programme (GP) presents FAO as a major global and regional actor in coordination and delivery of HPAI control activities. OIE has complementary role in strengthening of veterinary services. The GP indicates that FAO is seeking funds for specific projects and for contributions to the multilateral SFERA fund.

116. In this document, FAO's stated vision of its role in combating HPAI is (1) the **provision of global leadership and coordination** to channel assistance provided by donors and other implementing agencies, and (2) the **delivery of direct technical and resource assistance** to the efforts of national governments. As the focus of the programme is almost exclusively on the animal health aspects of the HPAI crisis, FAO develops the appropriate responses at the global level together with OIE, and in close interaction with WHO in its work on the human health aspects, as well as in collaboration with other agencies. With these partners, FAO assists regional and national authorities in developing appropriate HPAI prevention and control plans and strategies, and seeks to coordinate and integrate the inputs of participating implementing agencies.

117. The programme is already being implemented though it continues to be scaled up to address the expanding threat of avian influenza. The programme follows the concepts, approaches and general organisation of the May 2004 FAO/OIE Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs) and the November 2005 FAO/OIE Global Strategy for the Progressive Control of HPAI. It has not yet been updated to reflect the latest version of the Global Strategy of March 2007.

118. The Global Programme states its overall goal to be: *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.*

119. There are four components given for implementation of the Programme which divide the work into the categories of global coordination, support to ongoing work in infected countries, preparedness, and emergency intervention in newly infected countries. The tools used for this work have been capacity building, information sharing, provision of technical advice and networking. The areas in which FAO has focused this assistance are:

- strengthening disease intelligence and emergency preparedness,
- strengthening field surveillance and laboratory capabilities,
- reinforcing global avian influenza surveillance and early warning capabilities,
- examining the role of migratory birds in disease spread,
- supporting broad risk awareness creation (information) and exchange of knowledge and experience (communication), and
- analysing and giving advice on the social and economic consequences of both the disease and its control.

C. The global socio-economics programme

120. While not entirely a separate programme in its own right, ECTAD's socio-economic programme is discussed here because of its importance both in the current HPAI crisis landscape (where it is the most important programme of its kind in the world) and in the future proposed by this evaluation.

121. The economic impact of the global HPAI crisis is already estimated to have surpassed US$10 billion (Brahmbhatt, 2006; World Bank, 2005b); estimates of the cost of a potential global human pandemic are between one and four percent of global GDP, meaning more than US$2.1 trillion. For comparison, the impact of SARS on Southeast Asian economies was around two percent of the affected countries' GDP. Clearly there are long term economic consequences to be considered.

122. In the short to medium term as well, socio-economics plays an immediate and critical role. At the global level, socio-economic advice is needed as input to developing sound strategies and programmes which consider the livelihoods and development issues surrounding the fight against HPAI, assisting to evaluate the impact of decisions at the highest level. At the regional level, socio-economics contributes understanding to the regional impact on trade and markets of potential control strategies. At the country level, socio-economics can provide focused advice and guidance for sensible and appropriate control and eradication policies which consider impact on lower income groups, means of ensuring support rather than resistance from target sectors, and other factors.

123. For ECTAD's HPAI socio-economic programme, core staff are drawn from FAO-HQ in all three branches of the Animal Production and Health Division (AGA) but led by the Livestock Information, Sector Analysis and Policy Branch, AGAL. Staff are also placed or to be placed in FAO's Regional Offices for Asia and the Pacific (RAP) and for the Near East (RNE), and in Bamako for West Africa and in Nairobi for East Africa. Some input was also provided by one interested staff member from the Commodities and Trade Division (ESC, now EST) and another from the Gender and Population Division (SDW, now ESW).

124. The group has developed a draft strategy document (FAO, 2006d). The strategy is very straightforward, identifying objectives which in summary address strengthening of government capacity in policy formulation, managing the transition between emergency and long term response to HPAI, minimizing negative impacts of disease, addressing coping mechanisms for stakeholders in the poultry sector, and developing a more sustainable bio-secure poultry sector. The objectives are broad enough that they cover key areas well without going into detail. The five main areas of activity are:

1. markets and trade
2. costs and financing (including compensation)
3. communications
4. impacts on livelihoods, food security, nutrition, and gender
5. safe poultry production

125. The work programme was developed prior to the incorporation of communications (activity 3) into the strategy, so that the work programme outlines four broad clusters of outputs:

1. social and economic impacts of HPAI outbreaks and control measures;
2. strategies, costs, and financing of avian influenza control;
3. trade impacts and market shocks; and,
4. strategies and technical guidelines for safe poultry production.

D. Global and regional coordinating initiatives

OFFLU

126. In April 2005, OIE and FAO created and endorsed a joint network of expertise on avian influenza for the benefit of member countries. The originally stated objectives of this network, the **O**IE/**F**AO Network for Avian In**flu**enza Expertise (OFFLU), were to develop research on avian

influenza, offer advice and veterinary expertise to member countries, and collaborate with the WHO animal influenza network. Since the network was established, the highest priority tasks have become exchanging scientific data and virus isolates (both within OFFLU and in liaison with the WHO network) and providing experts to assist with missions to affected countries. Developing research activities remains an essential need and is pursued by individual participant institutions, either alone or in partnerships, but it is not the highest priority task for OFFLU itself.

127. The core of OFFLU is its scientific committee. Its members represent most of the world's expertise on avian influenza. The network is supported by a secretariat, currently located at an OIE/FAO reference centre on avian influenza in Padova, Italy. The core network is built around the OIE and FAO reference laboratories for avian influenza, but it is not limited to laboratories. Epidemiologists in particular, as well as other qualified persons and institutions, are invited to register with the network as scientific collaborators. In addition, the network seeks to establish links with field experts with knowledge and experience of the global poultry industry and the control of infectious diseases, as well as with ornithologists and experts in wildlife diseases.

128. Though WHO is not officially part of OFFLU, the network collaborates also with the WHO influenza network on issues relating to the animal-human interface, highlights avian influenza research needs, promotes their development, and ensures co-ordination. The collaboration between these three agencies will be instrumental to assisting with preparation of human vaccines, for example.

GF-TADs and GLEWS

129. The Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs) was signed by FAO and OIE in May 2004, and is an inter-agency collaboration system for TADs. It was joined by WHO in June 2005. The Global Early Warning and Response System for Major Animal Diseases, including Zoonoses (GLEWS) was officially launched in July 2006. However it had already been a part of the GF-TADs for some time prior to that. GLEWS was noted in the original Global Strategy (FAO, Nov 2005; p.20) as an intended output, although it was not assigned a set of activities or related outputs, nor was budget clearly allocated to this task (US$3 million was allocated to GF-TADs in general including GLEWS, but no breakdown was given).

130. In the FAO proposal for a global programme (FAO, March 2006) the primary purpose of GLEWS is identified as providing information to the CMC at FAO-HQ with information related to the rapid identification of new outbreaks of HPAI. This is a part of a network of reference laboratories and centres of diagnostic and technical expertise.

131. In FAO GLEWS is managed by EMPRES staff (7-8 people). GLEWS gathers information on behalf of EMPRES using many sources including the Global Public Health Intelligence Network (GPHIN), information from projects, and information from FAO country and regional offices. WHO and OIE contribute from their own information networks.[7] GLEWS staff in Rome validate, consolidate and geo-reference the information and then share it back with OIE and WHO. There are standard procedures for distribution of the information. The GLEWS Taskforce meets every six months and its next meeting is scheduled for July 2007. A representative of GLEWS presents latest figures and data at the weekly ECTAD meetings. Other outputs of GLEWS include ECTAD HPAI updates (2/3 per week) and the EMPRES-i ("information, intelligence, intervention").

132. In an update of FAO's HPAI activities (FAO, Feb 28 2007) the achievement of the following milestones related GLEWS are recorded:

- establishment of the GLEWS technical core team through recruitment of epidemiologists and information specialists

[7] The OIE gathers information through feedback from CVOs, though legal restrictions on the organization prevent it from contributing its information as freely would be desirable.

- development by the GLEWS technical core team of database and mapping systems important for disease tracking and trend analysis
- gathering and integrating information to provide a more in-depth analysis of the HPAI situation in infected countries, especially China, Egypt, Indonesia, and Vietnam

133. It is then noted that additional funds are needed for GLEWS "to continue establishment and improvements in the activities of the GLEWS platform," though the amount is not specified nor are specific activities or outputs.

134. FAO has indicated that GLEWS will be managed by an FAO/OIE/WHO management committee, and an FAO/OIE/WHO task force addressing implementation for the next five years. A GLEWS taskforce meeting was held in January 2007 to establish TORs for three working groups. The first two working groups are to be organized in April 2007 in Rome (FAO) and Paris (OIE). The working groups are concerned with: (1) Early Warning; (2) GLEWS electronic platform, and (3) GLEWS response.

Regional laboratory and epidemiology networks

135. As part of its response to the HPAI epidemic FAO has collaborated with regional partners in Asia, Eastern Europe, Africa, and Latin America to establish sub-regional networks of national diagnostic laboratories and epidemio-surveillance teams dedicated to coordinating disease surveillance and diagnostic capacity. Starting in early 2004, with its own and donor funds, FAO assisted in establishing 14 such sub-regional networks located in Asia (4), the Middle East (1), Eastern Europe and Caucasus (1), Africa (4) and Latin America (4).

136. These networks support coordination of early warning, disease surveillance, and disease diagnosis at sub-regional levels and assist governments to prevent or control HPAI by putting in place harmonized and effective surveillance and diagnostic tools and methodologies. Activities have included exchange and analysis of data and experiences, proficiency testing, and capacity building activities such as training and technical assistance. Bringing together these regional experts in epidemiology and in laboratory diagnosis is expected to have a synergistic effect that will improve competencies and assist in standardizing expertise at the regional level.

137. All these networks are integrated in FAO's global response to HPAI control and eradication. The sub-regional networks are coordinated through decentralized ECTAD units[8] and ECTAD Regional Coordinators, which are in the process of taking over the responsibility of coordinating these networks as they become operational.

138. In ***Asia*** three of these sub-regional HPAI surveillance and diagnostic networks in Southeast Asia, East Asia, and South Asia are assisting member governments to put in place effective, harmonised frameworks and policies to support enhanced epidemiological surveillance and diagnostic capability. These projects have ended and new funding will be necessary to maintain network activities. When they were established in 2004, their objectives were stated to be:

- To detect clinical disease and infection.
- To understand the epidemiology and ecology of AI, as well as its socioeconomic impact, to help to design effective control programs for poultry production systems.
- To assess the temporal and spatial patterns and thereby to improve the effectiveness of control efforts.
- To understand the evolution in Asia of HPAI virus variants.
- To help define and control risks to public health.
- To monitor for antigenic drift in AI viruses.

[8] Two ECTAD decentralized offices are now operational. The first started operations in early 2006 and is based in Bangkok, Thailand (FAORAP). The second is based in Bamako, Mali and began operations at the end of 2006. Recruitment is at various stages of completion for further ECTAD decentralized offices in Nairobi, Gabarone, Cairo, Tunis, and Beirut.

- To maintain the viability of subsistence level poultry production and help assure food security.
- To demonstrate freedom from clinical disease and absence of infection in a country or compartment and thereby facilitate trade.
- To assess the efficacy of vaccination (where used).

139. In ***Africa, the Middle East, and Eastern Europe*** five regional projects have been set up for emergency assistance for early detection and prevention of avian influenza (see Table 7, Annex 6). These projects focus on:

- the improvement of surveillance (including wildlife issues)
- laboratory diagnosis and set up/strengthening of laboratory networks
- contingency planning, compensation, and communication, and
- contingency planning development and simulation exercises.

140. 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.

141. In ***Latin America and the Caribbean***, four projects have been set up covering 33 countries for emergency assistance for early detection and prevention of avian influenza. Workshops were conducted to identify gaps and establish the time-table for activities addressing preparedness plans for introduction of the virus in the region, including laboratory detection, improved understanding of risks, and epidemiology. The preparedness and emergency veterinary plans were reviewed, and simulation exercises are planned. The diagnostic system was found to be the main limitation for early detection; therefore the projects conducted two technical training sessions to cover epidemiology and sample collection from wild birds and backyard chickens. In addition, training in a basic for general diagnosis, in molecular epidemiology was given, and information on compensation, vaccine and vaccination, and guidance on biosecurity for small producers were provided.

142. In ***Central Asia***, the principal objective of preventing H5N1 from spreading is being addressed by strengthening early detection and response capacities. Countries benefiting from this network include Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Iran, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan. As most of the beneficiary countries of the network are going to have projects implemented through World Bank grants, coordination is made with FAO to avoid duplication and provide inputs in a synchronized manner.

143. Under this sub-regional 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 and risk assessment. For this purpose, workshops were held on basic diagnostic capacity, and principles and methods of surveillance systems, and a manual on surveillance and outbreaks investigations was prepared.

SECTION III –Assessing the Quality and Effectiveness of FAO's Response

1. Work at Global and Regional Level

A. Quality and Appropriateness of the Global Strategy and Programme

Strategy

144. In revising the Global Strategy (GS) in early 2007, FAO and its partners, particularly OIE and WHO, were acknowledging that the global strategy is an evolving process. This was a wise approach – no one should expect to eradicate a disease as complicated as HPAI in a few years, and the limited current knowledge of the etiology of HPAI requires that the approach to its control be based on continuously revised knowledge of the disease and of its consequences.

145. It is useful then to use the revised GS to reflect on the several lessons that have been learned for FAO and how those lessons have influenced changes made in the GS. The main lessons for FAO are:

- Countries with well developed veterinary services, strong disease detection, and strong response capacities can effectively control and eliminate HPAI .
- Countries that have had the most difficulty controlling HPAI have included those in which there are several of the following factors: (a) a dense human population living closely with poultry; (b) weak governance of veterinary services; (c) weak systems of bio-security; (d) a significant backyard poultry production sector; (e) a significant element of duck production and possibly other non-traditional poultry (fighting cocks, fancy birds); (f) a high level of uncontrolled or illegal trade; and (g) a high density of migratory bird routes over the country.
- Control and eradication of HPAI is not going to be a short term process. HPAI H5N1 is now endemic in some countries despite continuous pressure on eradicating outbreaks.
- Outbreak containment alone is insufficient to control HPAI. Many other factors, often not directly related to health or biosecurity, play a major role in the continued spread of the disease.
- Other elements of the response to HPAI must be taken into account beyond an initial emergency response, including use of socio-economics and communications.

146. And, reflecting these lessons, the main changes made in this latest strategy are:

1. Countries with weak capacity in veterinary services will be assisted by OIE and FAO in strengthening this capacity.
2. Understanding and addressing mitigation of risk factors contributing to the spread of HPAI will be increased (e.g. through increased support for research and increased FAO activities in epidemiology, socio-economics, and communication). Surveillance plans and response systems will be a particular focus for strengthening capacity of veterinary services.
3. FAO plans to define the length of time likely needed for control of HPAI in countries ranging from short (1-3 years) to medium (3-7 years) to long term (7-10 years).
4. Over this time period, FAO plans to engage more intensively with authorities and institutions that are in a position to influence technical and policy response to improved HPAI control at the global, regional, and national level. A positive step in this direction is the establishment of regional ECTAD centres to assist at the regional and national level.
5. Surveillance, socio-economics and communications are evolving to be more central elements of FAO's GS.

147. Nevertheless, some concerns still remain:

- There is no indicative budget of any sort in the revised GS; one is left to presume there are no budget changes from the March 2006 proposal for a Global Programme, although the omission is surprising. As it stands the strategy is to be implemented "as funds become available".

- The 10 year projection for the campaign is not consistent with the 2006-08 timeframe of the Global Programme. The two documents need to be updated together
- It is not clear how the GS fits in with other key players – WB, ADB, USAID, etc. – which are missing completely from Annex 3 to the GS on Partnerships and Implementation

148. The breakdown of the strategy by global, regional, and country level domain is a sensible approach although the presentation is cluttered. Tables would add clarity of presentation in future versions. A more detailed approach to outlining the purpose of the GS, outputs expected, activities (and especially, with associated **quantifiable indicators and milestones**), and costs is needed for the GS to stand up to scrutiny by stakeholders. In order for it to remain relevant, the GS will be in need of frequent updating, which preferably should be issued biannually.

149. ***Africa regional strategy:*** Control measures in affected areas are in line with the global strategy and appropriate as animal control measures. These consists mainly of movement control measures based on disease surveillance/ early detection, stamping out, cleaning, disinfection, bio-security, compartmentalization and focal or mass vaccination. When veterinary service capacities are limited, increasing the awareness through an appropriate communications strategy is necessary to be able to receive reports of any outbreaks at an early stage.

150. This strategy is clear and well written and gives technical and implementation information well adapted to the African situation. Even if some of the measures might be difficult to implement because for example of the lack of capacities, infrastructure, necessary policy or the inadequacy of the compensation, these control measures are very appropriate for the control of HPAI if African conditions are taken in account. However, some concerns exist regarding the sustainability of the different activities and structures developed during the African project. The strategy needs to address this aspect more fully.

151. ***Asia regional strategy:*** The regional implementation strategy for Asia is being presented as a geographically more specific strategic framework for Southeast Asia that builds on the broader strategy presented in the revised Global Strategy. The strategic framework for Southeast Asia underlines that the relative priorities placed on the different components in individual countries will vary depending on disease situation, state of national strategies and action plans, and capacity to implement the technical options.

152. The strategic framework for Southeast Asia makes it clear that there is value in framing the response to country epidemiologic status in the context of a regional unified approach to responding to HPAI. But in also trying to define the current epidemiologic status of individual countries and discussing appropriate technical responses. the strategy loses strategic focus and moves into specific tactics. The strategic framework for Southeast Asia would serve better as regional strategy if it presented the interlinked components of the environment in which the disease develops and a portfolio of technical options, giving only suggestions to derive country level tactics (rather than prescribing these tactics). This latter exercise should be done as a separate step in developing a country level strategy, led by country partners with assistance from FAO, OIE, and other international organizations.

> ***It is recommended that the strategic framework for Southeast Asia (and other regional strategies) avoid prescribing specific tactics for countries, but instead present a portfolio of options that are consistent with the components of the comprehensive response.***

The Global Programme

153. The document "FAO's Proposal for a Global Programme" (FAO, March 2006) is a proposal lacking a clearly defined follow up in terms of implementation. At this stage, now in the fourth year of the global campaign against avian influenza, FAO appears from institutional documents to have no formally approved programme for implementation of the global strategy. This is in contrast to the

World Bank, the Asian Development Bank, USDA and AUSAID. This situation needs to be addressed if FAO's HPAI response is to avoid appearing opaque to outsiders (including donors).

Following revision and with highest priority, FAO needs to approve, publicly present and widely distribute a revised Global Programme document to clarify its actions to beneficiaries, donors and all stakeholders.

154. The Global Programme states much more clearly FAO's (and OIE's) willingness to coordinate and collaborate with the stakeholders involved in HPAI control than had been done in the preceding Strategy. In proposing to coordinate the global effort to control HPAI, FAO and OIE are addressing the expectations of donors that they are likely in a good position to provide technical direction to the work of other agencies and bi-laterals, as well as in the case of FAO to be a project implementing agency. The strategy to classify countries by risk status and respond accordingly is reasonable.

155. However, the 3-year time frame proposed for the GP seems too brief or at least optimistic given the stated goal of controlling and ultimately eradicating HPAI, and considering that HPAI is still spreading and still not under reasonable control in many countries after three and half years of efforts. Given the uncertainty of the HPAI situation and the difficulty in containing outbreaks, particularly where wild birds or non-bio-secure sectors may be a factor, a longer term programme would seem more appropriate to indicate the longer time horizon expected to be needed for global control and eradication of HPAI . A longer term forecast of expected needs and outcomes would be a useful guide to donors and implementing agencies, and should be included as a separate statement in the proposed GP.

156. There are some further comments about the structure and content of the proposed GP that need to be addressed. Some of the content of the proposed GP might be considered redundant in light of the content of the GS. Both contain detailed outlines of goals, outputs, and activities, without specifically pointing out the linkages between the GP and the GS. This needs to be elucidated. A logical framework could be included with the proposed GP to help achieve this, including mention of how it fits into the strategy. To some extent this is a matter of institutional terminology, but as it stands the relationship between the proposed GP and the GS needs to be clearer.

157. The proposed GP also should clarify what indicators will be used with which to measure achievement of the objectives and what are the indicator target levels. While a careful job has been done to lay out the goals, objectives, and activities, without objectively-verifiable indicators and target levels it is difficult to evaluate progress towards goals.

The format and content of the Global Programme need to be revised with wide participation inside and outside FAO, careful attention to the Strategy documents, clearer definition of FAO's role in relation to other major actors, more careful consideration of budget needs, and especially the identification of clear indicators of success and means of measuring them.

Priority setting

158. It is important when setting strategy and programme objectives to have a process of prioritization in order to have impact that achieves stated objectives. It appears that in developing the Global Strategy, no such prioritization process was followed with regard to the technical nature of the response and the characterization of the recipient countries and sub-sectors. The proposed Global Programme indicates that there is an effort to prioritize only by the nature of the epidemiologic need. However, the proposed GP also leaves the reader in the dark with regard to derivation of these conclusions. There is no indication that a process of consultation with the wider group of stakeholders (including recipient countries) was followed for generation of the GS and the GP, though such a process should have been a part of their formulation. Questions arise concerning the appropriateness of the formulation with regards to this targeting, especially in terms of its impact on the spread of avian influenza in relation to the economic strata of the stakeholders.

159. Neither the Strategy nor the Programme indicate priorities or rationale for targeting one or the other of the poultry production sectors 1, 2, 3 or 4 (going from highly bio-secure modern production to backyard free-range production), though each sector has its own role in the HPAI crisis. FAO needs to have a clear position with regard to its own interventions which articulates the reasons for targeting or not targeting each of the sectors. Governments of affected countries may have different priorities and FAO needs a clear rationale for its approach in relation to its mandate.

B. The Regional TCPs

160. As noted in the chronology of FAO's activities (Section II.2.A and Annex 4), FAO's first reaction to the HPAI crisis, before donor funding became available, was to set up regional (or sub-regional) Technical Cooperation Programme projects (TCPs) rapidly in order to be on the ground quickly and provide initial support to affected and at-risk countries. Altogether there have now been 13 of these projects, covering Southeast, East and South Asia, the Middle East, North, West and Central, and Eastern and Southern Africa, Eastern Europe and the Caucasus, the Caribbean, Central America, the Andean Region, and the Southern Cone of Latin America. Table 7, Annex 6 provides a summary of the planned activities and the budget breakdown by thematic area for each of these projects.

161. The projects were each for about US$400,000 (the upper limit for TCP projects) until early 2006, when the TCP limit went up and the Latin American TCPs were funded at US$500,000.

162. In general, these TCPs were all for regional coordination, technical advice and regional training activities, and supply of small amounts of equipment (protective clothing, laboratory consumables and reagents, etc.). Development of national action plans and contingency plans was another of the activities carried out by most of these TCPs. Some also produced regional plans. The one exception was the set of Asian TCPs, most of which were more specifically focussed on diagnostic laboratory networks for surveillance and early detection.

163. The effectiveness of the regional TCPs has in large part been dependent on the capacities and experience of the project leader. In cases encountered by the evaluation in West Africa, Southeast Asia and North Africa, the reviews were mixed. Whereas the support provided by the West Africa TCP (based in Bamako, Mali) was reported by several sources to have brought rapid and authoritative assistance to countries in the region, the North Africa TCP was reported to have been ineffective, engaging in short-term training activities with little lasting impact. In the case of the Southeast Asia TCP, the support was reportedly well appreciated, but in a much more crowded field of agencies providing assistance, its impact was harder to distinguish from other activities going on.

164. Overall, the decision by FAO to launch very early multi-country TCPs in affected or at-risk regions was a very positive strategy in during that early phase when donors and others are not yet moving, and early in the disease spread when key advice can have a much greater impact. Although not all the TCPs were equally successful, this approach should continue to be an important instrument in FAO's emergency intervention activities for animal disease crises. Lessons learned from the early experiences need to be fed into the design of new ones.

C. Assessment of FAO's Global Socio-economics Programme

165. The socio-economics and production component of FAO's response to avian influenza has made several positive contributions to understanding the nature and impact of the disease, particularly in South East Asia and more recently Egypt. It is poised to extend some of the useful work it has done in other regions and other countries, particularly where HPAI outbreaks are causing and threaten to cause high economic damage to the poultry sector.

166. The socio-economics programme is primarily focused on microeconomic issues such as the impacts of HPAI on household food security, safe poultry production methods, compensation

strategies and costs of financing control programmes. This is certainly needed and the evaluation team supports these outputs. However, in line with FAO's role as a global agency, the work programme should be expanded to take into account the broader picture. This is especially important as the HPAI response moves into the longer term perspective and goes beyond issues limited to animal health and disease control.

167. Important areas not sufficiently explored by the work programme include examination of the key factors that led to the current crisis (livestock intensification, rapid rise in urbanization, factors that have encouraged raising waterfowl in or near populated areas, etc.), global trends in agricultural development that have been influenced by bio-security shocks (shifts in resource allocation between production sectors due to shocks, etc.), examination of alternative country level approaches to achieving food security (how can food systems be restructured to minimize the impact of animal health crises?), and consideration of the best options for achieving the Millennium Development Goals (at the country and regional level, where does poultry production help countries contribute to global development objectives?).[9]

168. The draft strategy document is a good start to defining the approach of FAO in providing socio-economic support to member countries during the response to HPAI. The framework for intervention in socio-economic issues is presented in three main stages of response: initial planning in the short term; lessons learned in the medium term; and, planning for the long term. Two major elements of a strategy are still missing: clear linkages between the strategy and programme activities (development of programme activities in a structured planned manner); and a clearly outlined process of consultation with stakeholders that leads to funding requests followed by targeting of specific issues and needs by member countries.

169. At the country level, the ECTAD socio-economics group is only now in the process of developing programmes for key countries, the first of which will be Indonesia. This has been a bit long in coming, as the first studies were conducted three years ago, but this is due no doubt to the fire-fighting approach of the emergency work being done until now by the rest of the HPAI programme.

170. Comparing the draft programme for Indonesia to the global programme, the national process is more clearly driven by consultation with other stakeholders including government and other IGOs, and shows a degree of planning needed to develop a strong and appropriately targeted country socio-economics programme. However, the activities and outputs of the proposed programme will also need to be clearly linked to the global ECTAD socio-economics strategic plan objectives, clusters of outputs, and framework for intervention.

171. The funding sources for most activities in the Indonesia programme are not identified. As general funds have increased for the FAO HPAI programme, opportunities have increased to use these funds for thematic areas that have received the smallest portion of total funds during the last three years (i.e. socio-economics and communications). However, this approach, even though funding is needed for work in socio-economics, appears to have been based more on the fungibility of funds provided than on convincing donors of the importance of funding this aspect of the HPAI response. As discussed elsewhere in this report, donors need to be made aware of the larger and longer-term socio-economic issues coming to the fore in the HPAI crisis, and of FAO's intention to pursue these issues in line with its mandate. If the programme is to continue to expand (as it should), it will need to get **explicit** support from donors.

172. The socio-economics programme requested budget in January 2006 (before HPAI reached Africa) was US$2.5 million. The revised budget presented in Bamako in December 2006 was US$6 million (including Africa and the Near East) and is expected to grow.

Donors should now begin to focus funding on the longer term issues of HPAI, including in particular the issues being worked on under the socio-economics programme.

[9] Many of these issues have very recently begun receiving attention in the context of the DFID-funded collaborative effort in socio-economic research between FAO, ILRI and IFPRI.

Socio-economics research

173. The full potential of the socio-economics programme is hampered by lack of a clearly focused research and capacity building strategy. The assessment and research work FAO can mostly do is short term work aimed at producing specific practical information rather than longer term in depth studies. FAO's role should be to come up with quick assessments and turn to universities and research institutions for more extensive work under FAO's agenda and strategy. As the programme now stands FAO has one of the world's few socio-economic research agendas dedicated to addressing HPAI, and it has a budget that has very recently been expanded considerably. This presents the two non-health units in the Livestock Production and Health Division, AGAL and AGAP,[10] with a point of great opportunity. An objective and deep-reaching research agenda supporting appropriate methodologies driven by a clear research and capacity building strategy, would improve the quality of information coming out of the socio-economics programme. In this respect, UNSIC encourages the linkages that have developed between IFPRI and World Bank, of which FAO is recently becoming a part.

174. A recent planning exercise of the FAO socio-economic programme has identified more than 100 activities (projects, programme elements, etc.) up to 2008 with a budget of nearly US$5.7 million (3.5 from FAO sources, 2.2 from other sources). Research is to be done in collaboration with academic and research institutions, with some FAO participation but where FAO has more of a strategic and coordinating role. Subjects covered include: impact, costs and financing, markets and trade, safe poultry production, and sustainable development. Acquiring funding to this degree for HPAI socio-economics in FAO has not been an easy task and the socio-economics team are to be commended for their dedication and hard work. Nevertheless, for such a large programme with an annual budget that exceeds that of some university agricultural economics departments, there is a need for a more focused approach to overall strategy, goals and objectives, through planning of a carefully directed programme of research and implementation activities.

175. FAO must ensure that commissioned or collaborative research is done to high scientific standards, with economists directing the economic analysis work, sociologists/anthropologists directing sociological analysis, etc., not experts trained in other disciplines as has occasionally happened. Some suggested research-related areas for the socio-economics programme to develop with collaborating research bodies include the following:

- identification of the policy issues to be debated leading to clear policy advice
- recognition and measurement of macroeconomic change due to HPAI
- degree to which the root causes of the avian influenza crisis being investigated, e.g.:
    - is there a causal relationship between rising demand and increased density of poultry production, concurrent changes in human population density, and outbreaks of HPAI?
    - to what extent has trade contributed to HPAI outbreaks?
    - have food safety standards contributed to human cases of HPAI?
- a long term approach to monitoring impact using trend or time series data as opposed to ex-post analysis of point data
- sophisticated analysis on reform of the poultry sector without seeking to eliminate the poultry backyard sector (as several countries wrongly try to do to combat HPAI)
- a robust methodological approach to assessing impact on areas other than the poultry sector (e.g. erosion of grain producer welfare as a result of lost sales, erosion of consumer welfare due to rising prices of substitutes)
- assessment of comparative economic damage caused by temporary banning of sector 4 as opposed to imposed economic shutdown of sector 2 or 1, and coincident impact on epidemiology of the disease

[10] AGAL: the Livestock Information, Sector Analysis and Policy Branch; AGAP: the Animal Production Service.

- assessment of the most economically efficient ways to control avian influenza taking into consideration:
    - sectoral resources (labour, capital, alternate farm activities, etc.)
    - trends in poultry growth in the region
    - food demand
    - comparative and competitive advantages
    - knowledge of preference rankings and change strategies
- options for alternative (non-poultry) livelihoods and methods of transition
- support for passive restructuring rather than short term enforced restructuring

176. Although the socio-economics programme is quite young, there are already at least two very good studies that indicate the robust approach and (at least by preliminary results) good quality of results that are possible. These two studies are the market chain work conducted in Indonesia and the market impact study conducted in Egypt. Both studies have the following strengths:

- focus achievable research on smaller discrete elements of the larger problem
- present preliminary information that will lead to further collaborative study and research
- go beyond the simple snapshot approach and recognize the complexities of the problem

FAO needs to clearly define its role in relation to identifying, commissioning or in appropriate cases, carrying out social science research, and the resources it is willing to commit to this.

The HPAI socio-economics programme should develop a clear strategy to support research and build capacity of economics and social science programmes working on HPAI-related issues in targeted countries. *A more detailed assessment of the socio-economics programme is needed including examination of TORs and project proposals of planned activities.*

Inter-departmental collaboration on socio-economics

177. The evaluation found that, while there was some interaction mainly at the level of individual technical officers, FAO's Economic and Social Department (ES) and the former Sustainable Development Department[11] were not been drawn actively into the work on HPAI. This collaboration is important particularly with regards to communication and change, trade and markets, and rethinking sustainable poultry and short-cycle livestock production's contribution to food security. In assessing the relevance of HPAI control programs with regard to development goals of countries affected, there are a number of cross-departmental issues that address sustainable development, economics, trade, production, and animal health. A brief list could include:

a. macroeconomic impact in light of country development goals and poverty reduction strategies
b. options for alternative livelihoods and coping strategies
c. food security impact at local, national, and regional levels
d. impacts on markets and trade
e. sectoral impact of industry restructuring proposals.

178. Additional collaborative work with social scientists in other departments of FAO (mainly ES) should be encouraged.

[11] now incorporated into the Natural Resources Management and Environment Department and into ES

D. Coordination and information sharing through OFFLU

179. The level of coordination and cooperation between FAO and OIE in OFFLU is stronger than that between those agencies and WHO, which has its own laboratory and expert network. The agencies have agreed that transparency needs to be improved on each network through appropriate meetings between the three organizations and networks representatives.

Some recommendations can be made to strengthen the OFFLU network:

- ***formal one-to-one partnering between highest quality (reference) laboratories and lesser quality regional or local laboratories (e.g. provincial laboratories with limited capacity) should be established within the OFFLU network to strengthen the lesser laboratories and improve the information flow between laboratories (similarly to the OIE 'twinning' of laboratories)***
- ***these formal partnerships should include research and scientific exchange programmes to build understanding of the disease and capacity to respond***
- ***support should be provided to local, regional, and national governments to support and develop in-country and in-region laboratory networks so that HPAI sample and disease information flow is improved***

It is recommended that FAO, OIE, and the WHO take the lead in coordinating and launching a platform for the exchange of information not only on HPAI control strategies and programmes, but also on donor commitments and government policies and positions.

E. Effectiveness of communication

180. Communication plays a vital role during a response to a disease threat such as avian influenza, and as such needs to be integrated with technical components of a response strategy. Four key roles of communications that should be addressed during FAO's response to the HPAI crisis are:

1. policy advocacy
2. programme communication, particularly for awareness and behaviour change
3. social mobilization and partner building, and;
4. capacity building in communication.

181. Up to now the work in communications in FAO's response to HPAI has been at two levels. First, FAO has been active in working with its partners, particularly with UNICEF, to assist countries in launching an HPAI awareness communications campaign for the general public. This awareness and prevention campaign has used the communications experience of UNICEF with technical input from FAO and WHO and backstopping/assistance from UNDP. The start of the awareness campaign experienced some difficulties with regard to technical input and questionable targeting, but all agencies have considered this a learning experience in working with other stakeholders. It is generally agreed by all agencies that the awareness campaign is now more effective due to a clearer message and better targeting of the intended audience. The impact of this campaign is yet to be measured by UNICEF, which it intends to do in at least one country (Indonesia). UNSIC has also has a role to play at this level, to improve coherence, synergy and coverage of the communication messages of all the UN agencies involved.

182. Secondly, FAO has been gathering momentum slowly to develop a communications element in the ECTAD structure. While a position for a Communications Officer exists and TORs have been detailed[12], the technical support activities of the position have not yet really been launched.

[12] It is important to note that the original TORs read more along the lines of an Information Officer rather than a Communications Officer. The TC Division recently contracted a consultant for 11 months to fill this role. The consultant has redrafted the TORs for a Communications Officer and has developed a communications strategy. The consultant will be rehired for another 11-month period; a full time position has not been requested.

Nevertheless, it is clear that momentum is building for FAO's capacity in communications during the HPAI campaign. Recently, the USDA sponsored the FAO/OIE International Animal Health Communicator's Roundtable workshop, held in Rome from April 16-19, 2007. The final recommendations of the meeting included the need to:

- advocate the importance of communication in managing animal health;
- ensure the integration of strategic communication in the veterinary infrastructure;
- establish an international network of animal health communications experts;
- develop a comprehensive communication action plan to address HPAI ;
- ensure consistency in messaging and accuracy of technical information, and;
- develop a multi-sectoral and multi-disciplinary approach to communication.

183. This meeting and these recommendations illustrate the level of importance FAO and OIE now attach to communication process which goes well beyond information assembly and distribution. Very recently the evaluation team learned that plans are underway to substantially fund an AI Communication Team structured within ECTAD with leadership at FAO-HQ and possibly with representation at regional and country levels.

184. FAO has done generally a good job of implementing *information* activities in the form of press releases, electronic publishing, and public relations. This is sometimes confused with communication although the two are separate concepts. There are two main areas where improvement is needed: the speed at which information is prepared and presented is not always acceptable (for example, the new website that was recently prepared took many months to launch), and media information and particularly information on websites regarding avian influenza (as opposed to human infection with influenza of avian origin) is sometimes represented better by other sources, especially WHO. A frequent comment from stakeholders with whom the evaluations team met was that it is easier to find information they need more quickly from sources of information other than FAO. The comparison with WHO's website was often mentioned.

185. Finally, it has been observed by a few FAO staff members that the time spent by FAO Information and Communications Officers working on HPAI information is perhaps too driven by a need to relay information to (a) the donors who are interested in knowing how funds are being spent and (b) media sources who are interested in knowing the latest information about HPAI . Information is in high enough demand from these important partners that insufficient time is left over for the Information and Communications Officers to address true communications issues. The evaluation team feels the latter are very important for addressing the broad mandate of FAO. As FAO moves its work into the mid- to long-term of the HPAI campaign, it will need to invest in longer-term communications strategy, including strengthening communications capacities of key ministries in member countries - agriculture/livestock, human health, but also information/communications, trade and commerce, tourism, etc.

It is recommended that FAO press forward with the development of an HPAI Communications Team to focus more on policy advocacy, programme communication, social mobilization, and communication capacity building with the goal of controlling HPAI . There should be a clearer distinction between the public good objectives of the information activities of FAO and the HPAI communication activities.

2. Work at country level

186. Of the 123 projects listed in FAO's Field Programme Management Information System (FPMIS) at the end of March 2007, about half (61) were regional or global, while the other half (62) were country-specific, covering 37 countries.

187. Ten projects had closed. Three of the 12 TCPs originally launched had closed, as well as seven trust fund projects. Brief details of these projects are presented in Table 7, Annex 6. More detailed listings of other FAO HPAI project outputs are in Table 14, Annex 6. This table provides a list of projects from the FAO FPMIS system, listed by region, with details of project title, activities and outputs. Most projects have activities identified, but only half provide some clear indication of expected outputs. It is possible that deeper investigation, particularly at the country level where projects are to be implemented, will provide more details but these should be readily available from the FPMIS system. It will also be noted that most projects do not have verifiable indicators of impact available. This was an important shortcoming that ran through other aspects of the HPAI programme as well.

188. Observations of FAO response for countries at risk but not infected with HPAI, countries newly infected, and countries in which HPAI is considered to be endemic, are given for the countries visited by the evaluation,[13] based on a combination of a field visits results, interviews with stakeholders, documentation from FAO and other institutions, and the questionnaire circulated to CVOs.

A. Response in selected uninfected (at risk) countries

189. Predicting the occurrence of HPAI is difficult, particularly where the possibility is high of introduction through legal or illegal trade or movement by wild birds. In order to provide support to countries with weak capacities in HPAI preparedness, surveillance, and response, FAO funded with its own TCP resources thirteen sub-regional projects (Africa, the Middle East, Eastern Europe, the Caucasus, Latin America, and South Asia). The objective of these projects was to help countries strengthen capacity in areas such as epidemiology, surveillance, contingency planning, and laboratory support. The sub-regional projects did not have sufficient resources to operate in exclusion of other efforts and were intended to have a catalytic effect on building further support. An evaluation of FAO HPAI work in Africa in November 2006 found that this catalytic effect had in fact been achieved in some cases, though not always.

190. Extra-budgetary funds have been found for some countries such as **Ethiopia** in which the USA and the UK are co-funding a large project totalling US$2.3 million, which are being implemented to strengthen the surveillance and response capacities. The activities include strengthening surveillance and laboratory capacity (including materials and vaccines), preparing a strategy and national policy, and preparedness through simulations and other exercises.

191. The HPAI project in Ethiopia is an example of designed detection and planning for control at a very early stage of an outbreak. Collaboration with government, donor groups, and other stakeholders has been highly productive and has strengthened the high regard for FAO by government of Ethiopia and other agencies. Part of this is attributed to the strong performance of FAO in previous years in animal health matters. But more importantly to HPAI, it is also due to the fact that the FAO office in Ethiopia was prepared and proactive when there was an opportunity to secure funding and take a lead agency role in collaboration with all other parties. FAO has also been able to build on the success of the strengthened surveillance network, used to success in detecting and responding to Rift Valley Fever in Ethiopia. This is a good example of FAO using the technical and logistic resources that exist in a country to help prepare for other animal health emergencies.

192. Despite the satisfactory success achieved in deliverables, there are some concerns with the outcomes so far. More funding is necessary to make the surveillance activities effective as they are designed. This reflected the project intention to leverage additional funding. There was however still a lack of resources needed for operations (vehicles, fuel, internet connectivity, laboratory consumables), inappropriately targeted surveillance (heavy focus on wild birds and little on household poultry) and the lack of laboratory differential diagnosis, ultimately making the surveillance system inefficient. Furthermore, the laboratory is not fully operational and lacks funding to sustain HPAI surveillance activities. While funding issues are to be resolved between key stakeholders, most notable the World

[13] The countries were Vietnam, Thailand, Indonesia, Egypt, Ethiopia, Nigeria, Ivory Coast and Mali.

Bank and the Government of Ethiopia, questions remain about the approach used by FAO to prioritise and validate activities that might have lessened the severity of the current situation. Service delivery from FAO-HQs was also reported to be a bottleneck.

193. As noted several times in this report, the poor prioritisation of activities has been an issue for much of the work of FAO in its response to HPAI, in large part due to difficulties with efficiently processing the large sums of money coming it at peak times and donors' sometimes unrealistic expectations for rapid delivery.

194. **Mali** was another country visited by the SFERA evaluation team that was not infected and had benefited from FAO support in planning and preparedness. Geographically Mali is a high risk country as it borders on three infected countries (Burkina Faso, Niger and Ivory Coast) as well as being a favoured resting spot for migrating birds.

195. The funding came through the SFERA fund and the regional TCP for West Africa and supported training workshops, expert missions, travel by Malian officials to regional or global meetings, laboratory equipment and materials and other materials such as disinfectants and protective clothing. A survey of wild birds was also conducted in the country by CIRAD[14] with SFERA funding. An emergency plan, action plan and contingency plan were produced, and awareness of the disease, its risks and means of defence against it were widespread among animal production and health officials and staff in the country. FAO was the only donor to have significantly assisted Mali at mission time in November 2006. In addition, FAO funding served to 'leverage' an important further contribution for preparedness and early response capacity from the European Commission. The EC, by its own declaration to the evaluation mission, was induced by FAO's early intervention to set aside EUR2 million from another activity as an emergency fund for Mali in case of outbreak of HPAI.

B. Response in selected newly infected countries

196. Nigeria was the first country in Africa to report HPAI H5N1 in poultry (and in wild birds) on January 14, 2006; Egypt was the third to report the disease on February 17, 2006 (after Niger, February 6, 2006). For both Nigeria and Egypt, FAO provided a very rapid first response when HPAI was reported; in both countries experts were en route within two days of the reporting the disease.

197. In the case of **Egypt**, FAO has been able to show little impact until recently, despite the gravity of the epidemic (the highest rate of human cases - and deaths - outside of Asia). Following the occurrence of HPAI, funds, procurements, training workshops, and several missions were undertaken by national and international consultants as well as by officers from AGA to analyse the situation (e.g. on surveillance, compensation, poultry production, and market chain analysis; and including a long-term consultant to re-structure the veterinary services).

198. Some of these activities have generated well produced outputs that will add value to planning meaningful activities in the future (e.g. the socio-economic work on market chains and compensation). However, in spite of this level of activity, internal institutional issues (e.g., leadership of the national efforts by the Ministry of Health) and lack of clear initiative and responsibility on the part of FAO staff in the country - in spite of the presence of the FAO Regional Office for the Near East in Cairo - meant that FAO's response was inadequate in the face of the rapid diffusion of the disease in the country, accelerated by unfavourable demographic, geographic and socio-cultural factors. There were also some communication and coordination problems between the FAO HQ and the FAO representation at the country level reported in the SFERA evaluation. As a result, the response was considered slow by stakeholders and not proactive enough to help the Egyptian authorities raise funding to implement control measures.

199. Recently, however, more input has been provided by FAO-HQ and several activities and projects are underway. FAO HQ is also in the process of establishing a country level ECTAD team in Cairo and a smaller ECTAD unit at the governorate level. A positive highlight encountered by the

[14] Centre de Coopération Internationale en Recherche Agronomique pour le Développement, Montpellier, France.

evaluation was the intervention by the FAO DG at the highest levels of national government to seek to ensure that the Ministry of Agriculture and Land Reclamation and the General Organization for Veterinary Services (the name of the MoALR's veterinary department) were given a greater role in determining the course of the national response. This is an example of FAO's ability, as a UN organisation, to reach the highest levels of national government in exceptional cases to obtain the needed institutional support, very important in responding to disease crises like this one.

200. Only one year after the beginning of the epidemic, FAO may have been be in a better position to provide consistent support to the Egyptian authorities for the control of HPAI. However, at evaluation time there was still a long way to go before a strategy that is designed and resourced to meet the needs of Egypt will be fully implemented to bring HPAI under control. Although the FAO response in Egypt is beginning to pick up, as outlined, there is still much progress needed.

201. In **Nigeria**, the FAO response was noticeably stronger. However, the implementation of projects to carry out active surveillance has been delayed by the bureaucratic processes within FAO as well as the institutional difficulties in Nigeria, and due to multiple requests from the Nigerian government.

202. When HPAI was first diagnosed in February 2006 the government already had a preparedness plan in place. With strong leadership from the President, HPAI control was a priority issue for all appropriate ministries, UN agencies, donors, and partner organizations. The response of FAO was rapid at this stage and the assignment of an experienced officer for 5 weeks assisted the provision of technical support to the government, UN, and other agencies. Also, the assignment of an operations officer was significant in developing two projects with financial support from the EU, USAID, and UNDP to strengthen veterinary services and conduct active surveillance aimed at detecting and controlling the infection in birds.

203. FAO established a national HPAI team in Abuja and the team developed good collaboration with government, particularly the Federal Ministry of Agriculture and Rural Development (FMARD), and with other UN agencies, partners and donors. Its technical expertise is widely valued. FAO was identified as the lead UN agency in HPAI and as the key link with FMARD. Information exchange and synergy between the UN agencies within UN house is reportedly strong.

204. Since the HPAI outbreak in February 2006, FAO has received over US$2 million from the USA and the EC for assistance to Nigeria. However, progress was limited after the initial 3 months following the first outbreak. Of concern was the delay of two funded projects, particularly one on active surveillance, which aims to provide information critical to the implementation of any national control strategy. Whereas some of this delay was due to ongoing sequential negotiations with government about details of the projects, slow and cumbersome bureaucratic processes in FAO were also a major factor.

205. FAO has already provided some country support with supply of kits, reagents and training. However, there is dissatisfaction with delays and inappropriate material. The National Veterinary Research Laboratory hoped that FAO assistance would have expedited ordering of materials from outside the country but in fact it appears to have increased complexity and delays. FAO needs to consider the value of delegating sufficient authority to FAO country representatives for operational support and spending authority in crisis response situations.

206. Issues at national level with governance of emergency response have made implementation of the strategies and planning to the level of local government authorities within the states a difficult task. FMARD has strong control at the national level and FAO activities are possible only with their consent, but state level veterinary services are under the control of the state governor and not the national CVO. Even with a strong will to implement activities at the field level, the lack of a direct line of command within the veterinary services is a constraint.

207. The HPAI situation in Nigeria is considered as very serious and increased inputs by FAO are necessary as a matter of urgency. The FAO representation has to provide even greater efforts in its advocacy with government, in implementing projects and in ensuring provision of resources/activities

at the field level. There is also an urgent need for FAO HQ to strengthen the capacity of the national office (e.g. by establishing a country level ECTAD team) and to ensure that management systems are in place to facilitate response activities.

208. **Ivory Coast** was visited by the SFERA evaluation mission. This country first reported HPAI infection in April 2006, and FAO was extremely quick to respond, having release SFERA funds for initial action with 48 hours of the outbreak, as reported by the FAO country representative. The funds were spent on expert missions to assist the response (11 missions totalling 223 person/days between May and November 2006), purchase of various types of equipment and supplies (sprayers, protective equipment, disinfectant, slaughtering tools, etc.), workshops and the purchase of 12 million doses of HPAI vaccine. The reaction by government was rapid, with culling of infected chickens (two infection sites) and closing of poultry markets, and the disease was brought under control within days.

209. Issues arose however with the use of the vaccine purchased with SFERA funds. As the HPAI scare subsided following successful control measures, government priorities turned elsewhere and funding for carrying out the vaccination campaign evaporated. The vaccines languished until near their expiry date, but FAO did not want to be drawn into funding the vaccination campaign. The idea that was decided upon was that the teams carrying out the vaccination would also take samples from the farms they visited, which would then be used to try to better understand the extent, incidence and spread of the disease. The funds would in fact be paying for vaccination teams to go out and vaccinate as well as collecting samples, but it was easier for FAO to justify to donors that it was paying for the surveillance and further epidemiological studies than for the vaccination campaign (after giving the vaccine as a grant). Both things were true in any case. As this report was being written, a first round of vaccination had taken place, and another was planned. FAO activities were a key precursor to the start-up of a further US$720,000 project from the EC for continuation of the HPAI work.

210. FAO was the first and only major funding agency for the country's initial reaction. Issues were raised later regarding the wisdom of advising (and providing for) a vaccination campaign in a country where most chickens are backyard birds, infrastructure is poor and the security situation was unstable, making results of an attempt at large-scale vaccination uncertain at best. The evaluation did not take a position on this issue in view of the major uncertainties still surrounding the whole question of vaccination for HPAI (see Section III.4.B).

C. Response in countries in which HPAI is endemic

211. Thailand, Indonesia and Vietnam were visited by the evaluation, three countries where HPAI is endemic but under very different circumstances.

212. **Thailand** is a good example of a country that has managed to bring HPAI under reasonable control without the use of vaccination, and with relatively little input from FAO. Initially the advice from FAO was strong recommendation to use vaccination as a control method along with other methods including stamping out. The Government of Thailand, on advice of the large and powerful commercial poultry industry, chose not to accept FAO’s advice and managed to bring the disease under control without the use of vaccination. Thailand is now mainly free from HPAI except for sporadic outbreaks in poultry in sectors 3 and 4. Thailand does have a national preparedness/ contingency plan for managing outbreaks of HPAI, has conducted exercises to assess these plans, and has bio-security standards for the poultry industry.

213. The Thai Government benefited initially from the rapid reaction of FAO to the HPAI emergency by the supply of protective clothing and equipment supplied through a regional TCP. It also benefited from laboratory training and formation of a laboratory network through another regional TCP; the major outcome was identification of the well established National Institute of Animal Health (NIAH) as the regional reference laboratory for HPAI. The Thai Department of Livestock Development (DLD) within the Ministry of Agriculture and Cooperatives (MOAC) was particularly appreciative of the support it is getting, primarily in the form of technical advice from the Regional

Office and its Regional ECTAD Unit. The timeliness, adequacy, and efficiency of implementation of FAO support through its regional TCPs to provide protective clothing and equipment together with laboratory training and building a laboratory network were adequate. However, the Thai Government's decision to 'go it alone' with regard to subsequent HPAI control may in part be due to delays by FAO in preparation of strategies and formation of a regional ECTAD.

214. **Vietnam** first reported HPAI in January 2004 but the disease probably had been occurring since July 2003. Fifty six of 64 provinces and 2,600 out of 9,000 communes have been affected. Measures which included culling and vaccination were put in place by the Ministry of Agriculture and Rural Development (MARD) and have been successful in controlling the disease in poultry. Vietnam did not experience any new outbreaks of avian influenza for most of 2006; since then there have been at least two outbreaks, with unconfirmed reports of two more. The virus is clearly still present in Vietnam but it has made significant progress from early 2004.The role of waterfowl, particularly farmed ducks, is important in the spread of HPAI H5N1 but not well understood. The Government of Vietnam has made several unsuccessful policy attempts to contain ducks or remove them entirely. Ultimately, through a process of consensus with producers and Provincial Ministers of Agriculture, the Central Government has arrived at a policy whereby ducks are to be identified and vaccinated. This has allowed the important role of ducks in rice cultivation to remain in place.

215. FAO is assisting the Government of Vietnam through a country HPAI team with a Chief Technical Officer and staff in Hanoi, and a Technical Assistant in Ho Chi Minh City. FAO's recommended country strategy which is consistent with the Government's strategic plan includes surveillance, culling (stamping out), movement control, and strategic vaccination. Vietnam illustrates the case of a non-exporting country with endemic HPAI status where vaccination is a sensible option among several tools used to fight endemic disease.

216. FAO has also trained personnel in the use of the disease recording and reporting software TADInfo, and is planning to launch the disease information system in the future. TADInfo is also being used in other countries in Asia.

217. FAO was criticised as being late to start providing assistance to Vietnam by both UNDP and WHO. UNDP reported that in the early stages of the HPAI epidemic, leadership from FAO was not good; there were too many staff changes and FAO was locked into its own procedures rather than adopting local procedures. There was also a lack of sharing of its research outcomes. This may in part reflect poor relations between the UN agencies, as in fact, on examination of the documentation, the initial response was in fact quite rapid. A review mission conducted in November 2004 detailed that official communication of the HPAI outbreak arrived on January 13th, 2004, and a week later an FAO Regional Office officer was in Vietnam to prepare a TCP proposal. WHO reaction was faster, although WHO benefited from the experience gained from the SARS epidemic. The first TCP was operational on February 1st, 2004, only two weeks after the outbreak, for a total amount of US$ 390,000. However in subsequent months, there was intensive back and forth friction between the FAO representative, the FAO Regional Office and FAO-HQ. Unfortunately, this led to uneasiness with the relation between FAO and the Government of Vietnam. The situation change significantly for the better with the appointment of a new FAO Country Representative.

218. Following the arrival of significant amounts of funding in autumn 2005, all those met from government, donors and other agencies concurred that FAO had had a significant impact on Vietnam's ability to bring the disease under control by 2006, mainly through provision of sound technical advice, capacity building, technical assistance for the vaccination programme, and assistance with contingency planning and strategy design. FAO assistance played an important role in the rapid decrease in response time and increased effectiveness of government services.

219. In **Indonesia**, following devolution in 2001 of central government authority to the 33 provincial and 444 district governments, the Government Animal Health Services deteriorated, particularly with regard to communication of information and coordination of activities. With 30 provinces affected by HPAI, Java is the most heavily infected region (60% of its districts are affected). Indonesia also has the highest numbers of human infection of influenza of avian origin, and the highest number of

fatalities (64). The Government of Indonesia's strategy for control of HPAI has been selective depopulation, biosecurity, movement control, and poultry vaccination, introduced in 2004. Vaccination is provided free for sectors 3 and 4 (backyard and small-scale commercial). Problems include weak compensation programmes, insufficient numbers of vaccine, and lack of cooperation at some district levels.

220. FAO's strategic advice regarding HPAI for Indonesia is to support the CMU in its HPAI control activities through a control campaign which uses participatory techniques for HPAI surveillance and control, public awareness, support to laboratories, control of live bird markets (together with USDA), and training.

221. A major contribution of FAO, through the generous and continuing support of donors, has been the training of Participatory Disease Surveillance (PDS) teams. PDS teams have been established in 130 of Indonesia's 444 Districts together with Participatory Disease Response (PDR) teams. By the end of May 2007, the number of Districts with PDS/PDR teams will have increased to 159. This has resulted in better identification and reporting of HPAI outbreaks, with contribution to a faster more co-ordinated response. Concerns regarding the PDS/PDR programme are the high expense, limited penetration, reliance on local veterinary capacity, and questionable sustainability. Currently the DSAs of national veterinary officers and staff working for the PDS projects are paid by FAO out of project funds. This has absorbed a considerable amount of time of FAO consultants and staff and is simply unsustainable.

222. FAO also trains government and community vaccinators and conducts workshops on topics including decision making during HPAI outbreaks, marketing chains, undertakes relevant socio-economic studies, and engages in public communication. A particularly good example of a valuable socioeconomic study supported by FAO is the market chain work that has been conducted by UC Davis. This study has helped Indonesia to understand the complexities of the market chain, identify weaknesses relevant to the spread of HPAI, and highlight areas for further investigation. The Government of Indonesia has expressed a high level of satisfaction with the support it has received from FAO, and finds this support to be consistent with the objectives of the NSWP. Numerous donors and international partners also expressed satisfaction of work with FAO, particularly in implementation of projects.

223. A criticism has been made by the Government of Indonesia that FAO brings in too many international consultants, some of which it claims are inexperienced, without using local knowledge and technical training. There has also been the observation that the Ministry is not well informed of the outputs of consultancy through the reports of FAO.

224. A major constraint for the FAO programme has been that operational support has been lacking for the FAO Country Programme, which started with two consultants and the Technical Emergency Team for project implementation. Most staff were unfamiliar with FAO operational rules and regulations, slowing time to implementation. The first Emergency Operations staff position for the Country Programme was only posted on 1st January 2007. Recruitment and other administrative procedures are managed through FAO Headquarters in Rome and are slow. This has resulted in a large administrative backlog with much discontent at country level. For example, the National Project Coordinator's post was not filled for 10 months and the Area Co-ordinator, Bali took five months to recruit for a three month contract. The situation has now improved with the arrival of a financial controller and a project coordinator for the PDS/PDR programme.

225. FAO's impact on actual spread of HPAI in Indonesia has been much less significant than in other countries, though it shares this shortcoming with all other actors involved. It is the largest country programme which FAO has had in HPAI at over US$10 million. Government and partners recognise FAO's advice and support to be authoritative and positive. Institutional weaknesses on both the FAO and the government sides have been a continued problem. In addition, the large influx of money led to a number of institutional issues with FAO's administration and management mechanisms which also had a negative impact on potential effectiveness. These issues illustrate the problem with donor expectations and FAO delivery capacity discussed elsewhere in this report.

3. Preliminary results and outcomes from country work

226. The First Real-Time Evaluation took place when the HPAI activities are still young, the earliest having begun three years ago but the majority having been funded only within the last year. As noted in the evaluation TOR, there is not yet sufficient evidence to be able to make unequivocal statements on the specific impacts of actions undertaken during implementation. Nonetheless, some evidence emerged from different aspects of the evaluation regarding the outcomes of FAO's efforts, and these are recorded here.

A. Evidence of impact from countries visited by the evaluation

227. Few if any objectively verifiable indicators of impact are available as a result of the above long list of activities and outputs. To comment on the results of these activities, the evaluation team has relied on interviews with FAO project personnel, government officials, and donor representatives, and on the results of the questionnaire circulated to CVOs. While most of the responses gathered from interviews were anecdotal, the evaluations team feels this is of value in developing an impression of the nature of results achieved. The questionnaire results help to reinforce those impressions. In future, FAO should expect a more rigorous impact assessment of results, using objectively verifiable indicators.

228. Contrary to the current situation in Southeast Asia where a large number of donors are active in various ways, FAO interventions in many of the more recently infected or threatened countries, such as those in Africa and in the Near East, were carried out in near isolation, especially at the beginning. The evaluation mission for the French contribution found that in all the countries visited (Egypt, Ivory Coast and Mali) FAO was the first and for quite a time the only agency to intervene in assisting government to respond to the outbreak or the threat of HPAI. These efforts were not uniformly successful in achieving the desired outcomes, for example in Egypt, but they were consistently identified by the government as well as by other donors and agencies as having had a significant impact on the country's response.

229. In Ivory Coast, FAO's rapid mobilisation of funding had two effects: first it provided direct assistance in the form of equipment, technical advisory missions and logistic support, and second the rapid influx of funds dramatically drew the attention of high authorities in the government to the seriousness of the situation, leading to unusually rapid action. In addition, both in Ivory Coast and in Mali (not yet infected), FAO's mobilisation of funds was repeatedly cited as a major factor in drawing the attention of other donors to the problem and the need to react quickly. In both countries the European Commission rapidly committed to providing large follow-up grants for the continuation and expansion of the initial FAO interventions.

230. FAO staff report that the ECTAD decentralized office in Asia (FAO-RAP) has had the result of improving the capacity of member countries to respond to disease emergencies. Judging from recent outbreaks in Lao PDR and Myanmar, FAO staff observed that the veterinary services in both countries organized emergency surveillance teams and confirmed the outbreaks in various locations rapidly. There was a significant improvement in response time compared to one year ago.

231. Both Government of Vietnam technical staff and FAO country office staff in Vietnam report a significant improvement in ability to prepare and respond to outbreaks as a result of assistance, but not exclusively due to FAO assistance. Furthermore, Government of Vietnam technical staff now feel they were trained well enough under FAO projects that they have been able to provide training and technical assistance to their counterparts in other countries.

232. In Indonesia, FAO country office staff report improvements in district veterinary officers ability to prepare and respond to outbreaks as a result of PDS/PDR assistance. This level of knowledge was not in place one year ago. Informal unstructured interviews with district veterinarians confirms this, although they expressed concern that insufficient village level workers existed for their work to have potential for high impact.

233. FAO project staff based in the Near East have reported similar improvements for Afghanistan. The response time for teams was markedly improved from one year ago, and there was improved appreciation for the concepts of disease control and containment. Furthermore, trainees were able to develop a strategy for responding to suspected outbreaks in urban areas, a problem that was considered far too complicated to achieve one year ago.

234. In Turkey, SFERA funds enabled FAO, working closely together with the MoA, as well as with the EC and WHO, to achieve control and containment of HPAI in the country within three months without widespread culling or vaccination. The regional coordinator for the Balkans is also developing an adequate preparedness strategy for that region.

B. Views of CVOs on results of FAO's assistance

235. Results from the questionnaire circulated to CVOs that are helpful in assessing results are presented in Tables 16 and 17 and in Figures 14-25.

236. An introduction to country confidence in HPAI response preparedness is important to understanding the need for FAO's response, reported in Annex 6, Tables 10-12 and Figures 14-18 in the Appendix. Roughly half (47%[15]) of those CVOs questioned indicated that their country had the resources to implement preparedness/ contingency plans while only one indicated no plan was in place. Overall almost the same proportion (46%) said they had assessed those plans; however, three-quarters of African country CVOs had not. Roughly half of respondents (48%) included restructuring of the poultry sector in their plans and a majority of countries (88%) with an active surveillance programme felt their programmes would detect HPAI outbreaks.

237. In terms of outcomes of FAO activities, the questionnaire only asked respondents to express an opinion on whether FAO-provided assistance "was useful", a rather weak indicator of impact. However this is one of the few elements available at this stage to give some indication of acceptance and appreciation of FAO HPAI support.

238. FAO has clearly been appreciated when assisting countries with planning and in developing capacity to respond to HPAI (Figures 19-25, Annex 6). For those countries where preparedness and contingency planning was provided by FAO 74% said the assistance was useful.

239. For those countries where assistance on training and materials for laboratory diagnostics was provided by FAO, 89% of respondents said assistance was useful.

240. More respondents seem to value the assistance on training and materials for laboratory diagnostics more than the preparedness and contingency planning, although both levels of assistance were appreciated by a majority of respondents. Delivery of both levels of assistance may need to be improved for application of deliveries to be of immediate use to the majority of countries.

241. Overall, respondents expressed satisfaction with FAO's assistance. Regarding FAO's assistance for preparing for HPAI control, 83% of respondents felt it was useful (Figure 22, Annex 6). A generally positive impression was expressed of FAO's Global Strategy and Global Programme; 79% of responding CVOs felt the GS and GP were sound and relevant to their country needs (Figure 24, Annex 6).

242. CVOs were asked to identify areas in which FAO could provide better assistance in national and international animal disease emergencies. The results are summarized in Annex 6, Table 13. The most frequent response, more technical assistance and training, is not unexpected. Nor is the third and fourth most frequently cited response, strengthening of laboratory capacity and mobilization of resources. But the second most frequent response was not expected: 9 of 60 CVOs identified greater facilitation of coordination, harmonization, and collaboration with technical agencies such as OIE,

[15] Questionnaires were sent to 91 CVOs; 60 useable questionnaires were returned. Occasional non-responses are taken into consideration in the results reported here. A more complete description of the questionnaire is in the appendices.

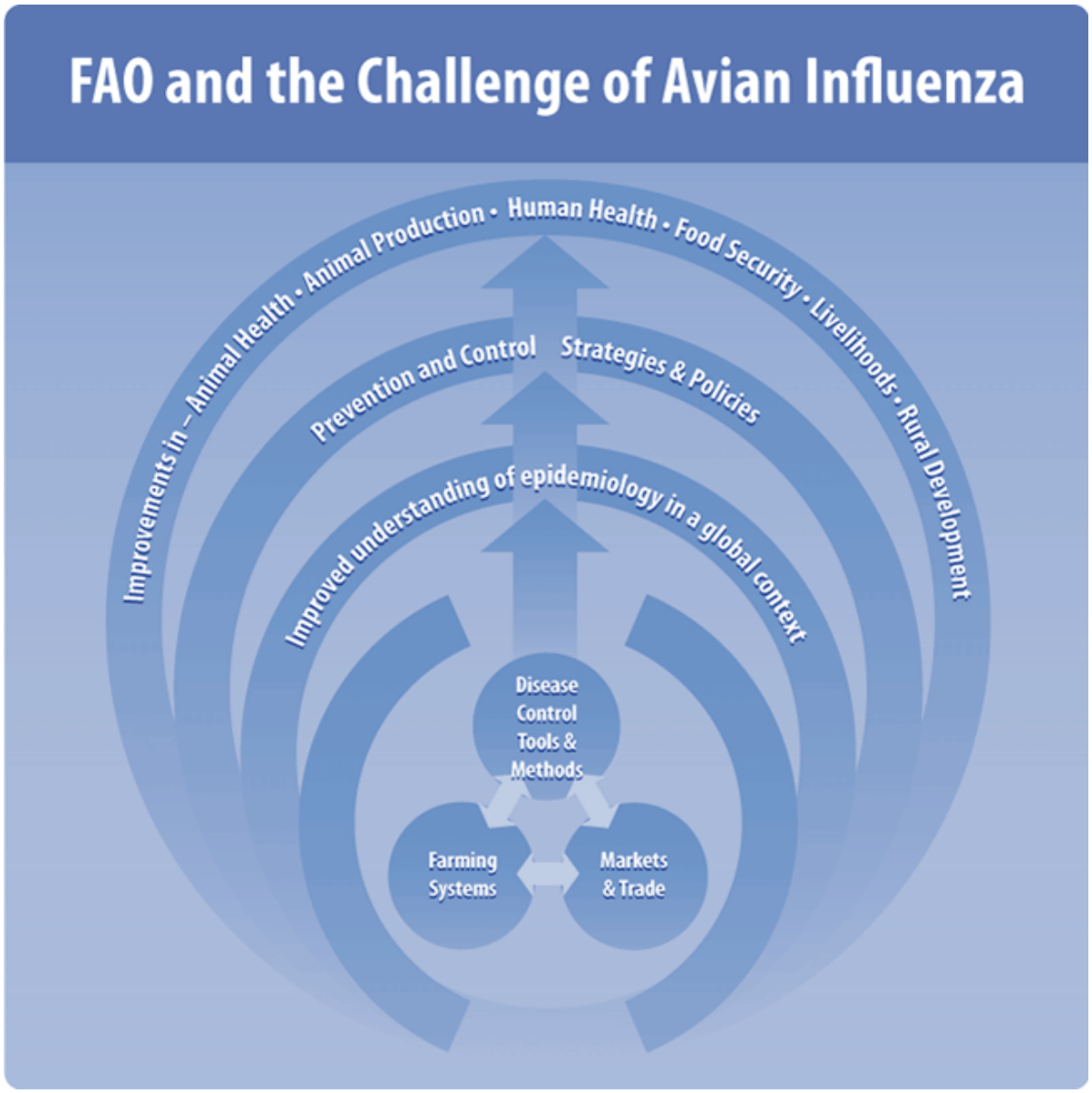
AU-IBAR as a need for further assistance. Clearly this important area of assistance needs further attention.

4. Some issues in FAO's HPAI response

A. The evolution of implementation and the longer term

243. As the HPAI crisis matures, FAO is having to consider the effectiveness of its response more widely within its overall mandate for agricultural and rural development, food security and poverty alleviation. In this FAO has a role which is clearly distinct from those of its major partners in the HPAI campaign, OIE and WHO. Whereas the two other organizations have more narrowly defined mandates dealing with health issues (animal and human), FAO's mandate goes well beyond this aspect. One way in which FAO has presented the parameters of its response graphically, and which captures its special role well, is shown in Figure 1 below (from the FAO Avian Flu website):

Figure 1. Parameters of FAO response to HPAI (FAO, 2007).



244. At the moment, most attention is still being given to the inner rings, related to the animal health aspect of the crisis. "Disease control tools and methods" are still the main instrument being deployed by FAO. However as the basic disease control reaction is mastered by affected and at-risk countries, assistance activities have been moving progressively toward a stronger emphasis on solidifying gains through putting in place the strategies and policies needed for effective national response (the second ring of the diagram).

245. The key issue here is that **in spite of greatly improved response capacities at both global and national levels, the H5N1 virus continues to re-infect countries where it has been eradicated and spread to new ones**. It has become apparent that exclusive use of the veterinary disease containment and control approach, though it continues to be essential, will not be sufficient to master the HPAI crisis in the long run. As stressed repeatedly at the recent June 2007 technical meeting on HPAI at FAO, for long-term success in combating this disease, **the effort must widen to incorporate all the elements contributing to its resilience and spread, many of which are not directly related to veterinary measures**.

246. FAO, as a multidisciplinary institution dealing with food, agriculture and rural development, is particularly well placed to be a leader in this widened effort at overcoming HPAI. What still remains in large part to be done is to move to the outer ring, the broader perspective where the predominant long-term activities are mainly related to

(1) addressing the control of HPAI in its broader context of globalisation of trade and food chains, impact of market driven restructuring of production systems at all levels, environmental issues, changing land use and urban sprawl, etc.;

(2) restoring rural development processes and livelihoods where they have been damaged by the response to HPAI, and increasing their robustness in the face of this type of crisis, and

(3) more specifically, rethinking the poultry sector to make it less vulnerable to this kind of disease crisis now and in future.

247. This requires understanding of farming systems, markets and trade, production technologies, environmental change, economic and social factors, political and policy environments and more. Achieving long-term impact implies a focus on changes in production and consumption systems but also in attitudes and behaviours. As noted, FAO is already working on many of these areas, though mainly in exploratory research mode. This work needs to be put into practice in FAO's field activities and gradually become more central to its HPAI response. As discussed in this report, **FAO at the current juncture should already begin moving on this major shift in emphasis**.

The broader perspective and the Millennium Development Goals

248. In the longer term HPAI strategy and programme where FAO and its partners are considering the broader goals of international development, there should be reference to the most widely accepted expression of these goals: the eight Millennium Development Goals (MDGs) of the UN Millennium Declaration (UN, 2000). If applied in a wider sense, the global response to HPAI addresses several of these goals, due to the role poultry production can play in nutrition, poverty and income generation, economic empowerment of women, etc, as well as implications of the campaign for the global partnership for development. In a more focused sense, the work of FAO especially addresses MDG 1 (eradicate extreme hunger and poverty) and Goal 6 (combat HIV/AIDS, malaria, and other diseases).

249. However, nowhere in the FAO literature on its response to HPAI are these goals addressed or mentioned. It would seem useful to do so, both in drawing attention to the links that exist between the disease and other development issues, and in providing donors with a strong rationale for longer-term support to the effort as part of general development assistance as well as disease prevention.

FAO needs to clarify how its programme for avian influenza addresses the UN Millennium Development Goals.

B. Evolving control strategies and the role of vaccination

250. Classical animal disease control measures adapted to specific countries have been recommended by FAO. In some countries these measures have been successful, in others they were less so, mainly because of the lack of country capacity and policy to implement them. Some measures have been difficult to implement, such as stamping out of poultry in and around the disease outbreak (with or without compensation), the control of animal movements and bio-security measures. Furthermore, lack of laboratory capacities, local epidemiological knowledge (e.g. reservoirs of virus, importance of wild birds) or use of vaccine (vaccination strategy and implementation; efficacy in different species, including ducks) might have contributed in some degree to some failures.

251. Some countries do not have the capacities to implement effective active surveillance, consequently strategies need to be adopted, such as intensive communication, to strengthen passive surveillance, participatory surveillance and/or focus the active surveillance to some restricted focal point (market, middlemen, crossroads). In some countries, in which HPAI is endemic and in which

stamping out is difficult to implement, vaccination might be a complementary measure to sanitary measures. Indeed, in many countries, owners of Sector 1 and 2 flocks have implemented their own vaccination and bio-security measures (at times somewhat chaotically, cf. Egypt).

252. However, even if vaccination might be a useful tool, its implementation might represent some difficulties, especially in Sector 4 (e.g. access to the backyards, cold chain, number of injections, reaction post vaccination, choice of vaccine, frequent renewal of naïve population, spread of infection by vaccinators moving from one site to the next). Because HPAI vaccines have a short shelf life, some countries that buy vaccines may lose their investment by not being able to deliver the vaccine before its expiry, as very nearly happened with a large order of vaccines (12 million doses) in Ivory Coast.

253. Several experts met by the evaluation mission suggested the importance of developing effective vaccine banks, including regional ones in addition to an improved OIE global bank, with procedures to provide rapid support for newly infected countries without asking them to keep large standby stocks.

Prioritizing vaccination recommendations

254. FAO has taken a strong position on recommending vaccination where possible and appropriate as an effective tool in the fight to control and eradicate the HPAI virus. Missing from this recommendation is a set of guidelines as to when and where vaccination is appropriate, and how it could be used with other tools including stamping out, targeted slaughter, market and movement controls, and restructuring.

255. In order to approach recommendations on vaccination with a wide scope FAO needs to first establish categorization of country epidemiologic/control capacity status. The state of knowledge of epidemiology and disease ecology is still at an early stage; there are so many unknowns among the variables needed to develop wide scoping recommendations that a long list of assumptions would be necessary to overcome knowledge constraints. Furthermore, to develop any simulation or even decision tree structure that might suggest options including vaccination along with other forms of HPAI control, the assumptions are likely to be unrealistic (e.g. that a highly effective easily administered single dose vaccine is available). Nevertheless, such structured and objective work has value in helping to understand the complexities of the policy issue of vaccination recommendation, and to help derive a framework for understanding joint control options, associated costs, and impact. Work from the ECTAD team in South East Asia suggests some of the fundamental variables needed:

1) epidemiologic status including knowledge of the virus
2) veterinary/volunteer capacity
3) poultry density
4) human density and frequency of contact
5) market activity/ market chains
6) funds available (national and borrowed/grants)
7) trade parameters (i.e. willingness to vaccinate)
8) smuggling routes
9) holidays and festivals schedules
10) sectoral patterns (sector 4 active/banned).

A more clearly worded strategy for vaccination is needed that directs attention to three levels of recommended use: newly infected, sporadically infected and endemic countries.

FAO vaccination policy needs to be presented more clearly in terms of a set of strategy options for least developed, less developed, and developed countries. Variables need to be identified that impact on decisions and a portfolio of associated control methods identified.

C. National response: the issue of governance

256. Governance can be defined briefly as the actions and policies that have influence on monitoring and presiding over longer term strategies of a nation, group of nations, organization, or particular group of citizens or stakeholders. The inputs to governance include activities, processes, traditions, and rules that define how a society or group of persons should act.

257. In the global response to HPAI, there is room to consider the role of FAO in addressing governance at four levels: global governance and regional governance of the HPAI effort, in-country governance issues in the national response, and in-house governance of FAO's own HPAI effort. Global, regional and in-house governance are examined in other chapters of this report.

258. At the country level, weak or divided governance of the emergency response and follow-up has been a major factor in leading to the current situation of poorly mastered infection in the three most troublesome HPAI countries: Indonesia, Egypt and Nigeria.

259. There are two aspects to the governance question: first, design of the support and response action by FAO must explicitly consider the governance issues and bottlenecks, and the possibility of 'work-arounds', methods to get the job done in spite of weak governance or even resistance at some levels. Second, FAO needs to examine the facilitator role it and its partners can play in strengthening governance at the national and sub-national level when assisting countries to implement HPAI control programmes. While FAO has made efforts to confront the governance issues, these have not been sufficient to overcome them in the difficult cases. More attention to this issue is warranted, including bringing in expertise from outside FAO (World Bank, UNDP, consultants) with more specific knowledge and capacity in this complex area.

260. In the case of Indonesia, assistance with governance is specifically identified as a need in the National Strategic Work Plan (NSWP) for the control of avian influenza. The central Government of Indonesia (GoI) has difficulty implementing national control plans due to the fragmented nature of communication and lines of authority between levels of national, provincial, and district government. Thus, governance is one of nine main themes identified in the NSWP. A problem has been that donors have been reluctant to engage in what they see as "nation building," preferring to leave this to the GoI.

261. The question for FAO and its partners is how can they assist the GoI to improve governance and efficacy of HPAI programme activities without interfering in democratic processes and without appearing paternalistic. Solutions to this problem could include thematic areas of response such as communications, information networks, and sharing of technical facilities including laboratories. This needs to be openly discussed between countries such as Indonesia and FAO and its partners. Currently Indonesia avoids this level of discussion, although it identifies the need in the NSWP.

262. In the case of Egypt, as noted in Section III.2 above, FAO has approached a major obstacle in the governance structure through political means: providing information and advocacy higher up in order to obtain policy change. In Nigeria, mistrust and resistances between federal and local government structures, as well as between government and the private sector, have made FAO's work quite difficult as it generally works through the central (federal) government.

263. FAO is of course well aware of these problems and has been seeking ways to work effectively under difficult governance conditions. In order to be more effective, FAO, probably with outside assistance, must continue improving its efforts to find 'realpolitik' ways around these obstacles which allow it to work effectively and with the appropriate stakeholders, without offending authority or sensibilities.

> ***In assisting member countries where governance is an issue, FAO's strategy needs to explicitly confront obstacles and possible 'work-arounds' (which may not be to everyone's liking) in order to do a better job responding to HPAI.***

Where this involves facilitating countries' own efforts at improving governance, FAO should not hesitate to bring in the assistance of a sister agency or outside expertise that has more specific experience and capacity in this area as part of its effort.

D. Weak priority setting in country assistance

264. The current strategy seems to be based on two components, neither of which is specifically targeted to the level of recipient country resources:

- send PPE kits (Personal Protection Equipment);
- recommend stamping out, with or without vaccination.

265. If FAO has a system of prioritizing resource usage following country requests for assistance, it is not apparent. The current system seems to design the response without regard for costs; then cost out the response; then seek donor funds. There are at least two important problems with this:

1. there can be no major response until donor funds are mobilized;
2. there is no attempt to introduce allocative efficiency or optimization of impact into this way of doing things.

266. The "country by country" approach currently used by FAO can be scaled up to generalize criteria to prioritise resource need on the basis of type of intervention, for example:

- related to risk of spread of virus (greater risk = greater need for rapid mobilization of human and technical resources);
- national technical capacity (greater capacity = more efficient use of technical resources = reduced need for supply from FAO).

267. Some recommendations in this regard:

In collaboration with the national and regional FAO representations, other UN agencies and OIE, FAO/ECTAD needs to develop a method for quickly categorizing countries that are at greatest danger of new outbreaks and where there is a risk that the disease would become endemic, and become an international threat. Categorization should also be according to the amount and the type of resources that would be required in case of an HPAI outbreak. FAO needs to have a dynamic priority list of countries that will need a major input if there is an HPAI outbreak to improve the speed of response.

For each country, a brief contingency plan should be prepared to enable a fast response in case an outbreak occurs. Ensure that each FAO regional and national representation has full awareness of this plan ahead of time, to be able to activate it rapidly in the event of HPAI being diagnosed in that country.

Focus the Global Strategy on ensuring that resources are provided to achieve ongoing support for the governments of countries (such as Egypt, Indonesia, Nigeria and now Bangladesh) deemed to be critical countries for the control of HPAI.

E. FAO's involvement in research and knowledge management

268. In the context of the HPAI campaign, worldwide knowledge of the disease, its behaviour and its impacts is weak enough that FAO, in the course of its efforts, has felt the need to generate additional knowledge in some cases. The research for this knowledge generation was done mainly by partner institutions, but on occasion FAO staff or consultants directly managed by staff undertook research as part of their field activities. Time pressure and temptation to 'do-it-yourself' led to the publication of few articles on such issues as wild birds and AI, effectiveness of vaccination, poultry market chains and their impact on HPAI, and others.

269. While this only concerns a limited number of cases overall, the question arose during the evaluation whether FAO, according to its mandate, should carry out scientific research itself or should instead be limited to enabling, commissioning, gathering and distributing scientific research by others when relevant to its work. The risk is that doing the research itself can in some cases lead to criticism of methodological weaknesses and lack of rigour in published studies.

270. FAO's role, as defined in its mandate and especially as redefined in the latest round of reforms launched in 2005, is that of "knowledge management organization," rather than creator of new scientific knowledge. To quote from the recent "Emerging Issues" document of the Independent External Evaluation of FAO, FAO's "role as the global hub for knowledge management in the fields of agriculture and natural resources does not mean that FAO should produce or control all such knowledge, but rather that it must serve as the organizer, negotiator, convenor and partner in knowledge systems to ensure the availability of relevant knowledge as a global public good." (FAO, April 2007, p.4)

271. If FAO were properly to carry out rigorous research, it would need to have the appropriate number of qualified staff and resources devoted to these activities and be prepared to lose these resources from other fields of activity. In the view of the evaluation, it is not within the Organization's interest nor mandate to develop such a capacity. FAO should therefore be careful to distinguish the results of its own investigative work in the context of field activities and strategy development as informal applied research, not formal research with rigorous testing of results. For that, it must continue to partner with research institutes, universities, etc. In the case of HPAI, research activities are still very necessary to improve the efficiency of control and follow-up measures. FAO's role should continue to be (as it has been in the majority of cases):

- to identify necessary research if it has already been done;
- to commission it if it has not been done, either from institutions or from individuals;
- possibly to combine others' relevant research results in support of policy recommendations;
- to rapidly implement research results where applicable;
- to carry out applied studies ("soft research") to answer specific questions emerging from results of others' scientific research and from field experience;
- to identify, verify, present and disseminate scientific research by others in 'layman's language' for a non-scientist audience of policy makers and the general public, including through technical and scientific meetings and conferences and other international events;
- in short, to "manage" and use the knowledge emerging from scientific research rather than generating it.

272. In support of collaborative work on HPAI research, in March 2007 the UK provided US$7.8 million in research funds for a joint initiative for socio-economic research between FAO (through the DFID/AGA Pro-Poor Livestock Policy Initiative), the International Livestock Research Institute (ILRI), the International Food Policy Research Institute (IFPRI) and two universities in the US and the UK, to conduct socio-economic and policy research on HPAI. This initiative will seek to promote the type of interaction between FAO and research institutes where FAO brings the problem and the implementation issues to the table and the research institutes pick up the scientific, rigorous research aspects to support FAO's technical assistance to countries.

5. Resources: mobilisation, allocation and sustainability

273. FAO's Global Programme to control HPAI has become a major programme for the Organization, one of the largest it has ever handled. This has been a windfall on the one hand for the organization's work in animal health, but on the other has been difficult to handle money coming in so fast and has led to some problems.

A. The rapid growth of funding

274. The budget FAO has requested of donors has changed rapidly, in response to the spread of avian influenza into Europe and later Africa, and reflecting only moderate success in controlling (and not eradicating) the disease from Asia, meaning the need to continue activities there. After a slow start during 2004 (see Figure 2 below), the OIE/FAO International Scientific Conference on Avian Influenza in Paris in April 2005 appealed for donor funds on the order of US$100-120 million over 3-5 years. This had changed dramatically by the Geneva Conference eight months later in November 2005 after a series of outbreaks on Europe's doorstep and in the Near East. Here the budget developed jointly by FAO, OIE, and the World Bank for FAO's and OIE's global activities was US$494 million for three years.

275. Another three months later, at the Beijing Pledging Conference of January 2006, after the outbreaks in Africa had begun and infection had spread in Western Europe, this budget had nearly doubled to US$882 million (Table 6). This figure did not include OIE, but only FAO and direct bilateral funding to governments.

Table 3. Funding Appeal of the March 2006 Beijing Conference for the global avian influenza response - FAO and direct donor assistance to countries (US$)

Component	Year 1	Year 2	Year 3	Total
1. Coordination	47,745,391	42,314,991	41,918,390	131,978,772
2. Infected countries	180,500,000	63,500,000	60,500,000	304,500,000
3. Countries at risk	42,557,871	59,896,262	55,167,610	157,621,743
4. Newly infected countries	58,356,000	84,292,000	145,328,587	287,976,587
Total	**329,159,262**	**250,003,253**	**302,914,587**	**882,077,102**

276. FAO's share of this figure was calculated to be at least US$308.5 million if there were no new outbreaks (Table 4 - counting only the first six months for emergency response), but potentially **up to US$575 million** if all US$288 million of line 4 of Table 3 were needed due to new outbreaks.

Table 4. Funding Appeal Mar 2006: FAO component 2006-08. (US$)

Component	1st six months	Year 1 total	Year 2	Year 3	Total
1. Coordination	25,305,057	47,745,391	42,314,991	41,918,390	131,978,772
2. Infected countries	16,134,384	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 +??	(based on new outbreaks)	(based on new outbreaks)	21,591,720 +??
Total	**72,421,023**	**130,958,292**	**90,535,021**	**87,013,050**	**308,506,363**

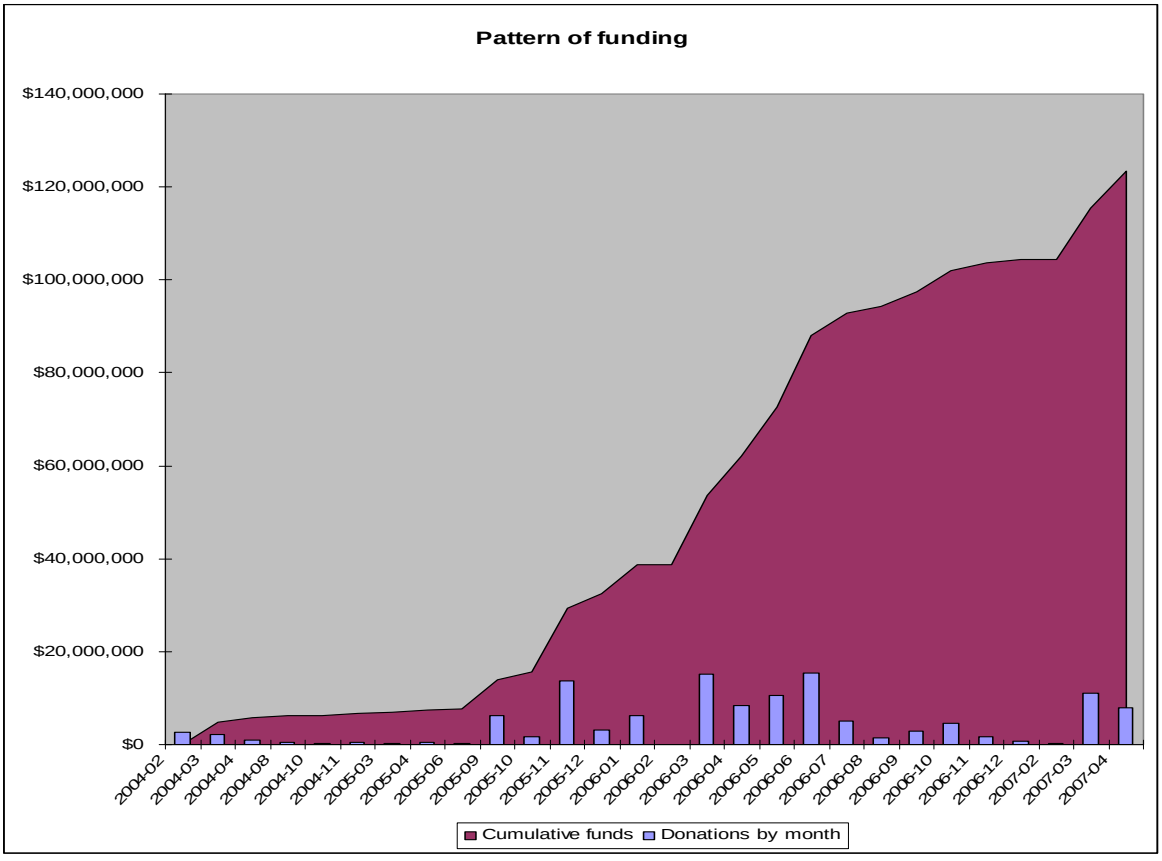
277. Budget details in Table 5 show funds approved and in pipeline to fund 129 projects at 31 May 2007, totalling US$196 million, leaving a shortfall of at least US$112.5 million and up to US$379 million depending on new outbreaks. Figure 8 shows the rate at which funds were received month by month by FAO, as well as the rapid climb of the cumulative total contributions. This indicates that funds only began to flow seriously in September 2005, after infection had reached countries in Eastern Europe.

Table 5: FAO Avian Flu Campaign 2004-2007: Funding Summary (signed and pipeline) by project status, at 31 May 2007

Fund Group	Number of Projects	Total Budget
Donor funded ACTIVE	78	111,901,480
FAO-TCP ACTIVE	21	8,374,685
Total - Active Projects	**99**	**120,276,165**
Donor funded CLOSED	7	1,904,691
FAO-TCP CLOSED	3	1,156,335
Total - Closed Projects	**10**	**3,061,026**
Total Signed Projects	**109**	**123,337,191**
Donor funded PIPELINE	19	72,283,632
FAO-TCP PIPELINE	1	500,000
Total - Pipeline	**20**	**72,783,632**
Grand Total	**129**	**196,120,823**

Source: FPMIS as at 31 May 2007 - (Financial Data in US$)

Figure 2. Cumulative and month-by-month funding RECEIVED for FAO's HPAI campaign, Feb 2004 to Apr 2007.



The correspondingly rapid growth of ECTAD human resources

278. As FAO received the large influx of funds for the HPAI campaign and the programme has expanded exponentially, the staff body has necessarily had to followed suit. Staff working under the

HPAI budget expanded from 40 to over 400 between 2004 and 2007. The growth was greatest during 2006 as the funds poured in from the European donors. Tables 6 and 7 below illustrate this expansion, showing that the staff brought on board for the campaign is about evenly divided between the technical divisions (AGA) and the operational division (TCE). Table 7 shows the effects of the growing decentralisation of the HPAI effort, as national staff numbers continue to grow as number of international staff seems to be beginning to drop (though they work under longer contracts).

Table 6: ECTAD staff (long and short-term) 2004-07 by supervising division (May 2007)

Supervising Division	2004		2005		2006		2007	
	no. under contract	full-time equiv.	no. under contract	full-time equiv.	no. under contract	full-time equiv.	no. under contract	full-time equiv.
Livestock Division AGA	24	11	46	18	209	84	196	92
Emergency Division TCE	15	5	17	7	175	73	195	98
Others	1	1	2	1	6	2	11	7
Grand Total	40	**16.4**	65	**26.1**	390	**158.7**	402	**196.3**

Table 7: ECTAD staff (long and short-term) 2004-07 by national or international contract (May 2007)

International/National	2004		2005		2006		2007	
	under contract	full-time equiv.	under contract	full-time equiv.	under contract	full-time equiv.	under contract	full-time equiv.
International	33	14.2	49	21.4	224	98.8	193	108.1
National	7	2.2	16	4.7	166	59.9	209	88.2
Grand Total	40	**16.4**	65	**26.1**	390	**158.7**	402	**196.3**

279. Overall, given the logistical and administrative headaches that this rapid expansion provoked, FAO appears to have managed reasonably well to fill needed positions and accomplish the work at hand without major problems. An issue, however, with the very rapid expansion of staff numbers which has weakened the effectiveness of the HPAI programme has been the difficulty in finding suitably qualified staff in sufficient numbers and with sufficient speed to keep up with the expansion of the programme. This was pointed out in several interviews with recipient countries. The result has been an unusually high number of complaints of inadequately prepared staff being rushed to a country to provide advice to national experts who may have more to teach the FAO expert than to learn from them (this particular comment came from Vietnam). High turnover was also reported to be an issue, as personnel hired under these conditions are less likely to be stable on the job.

B. Allocation of funds by thematic areas of activity

280. The evaluation team estimated the distribution of FAO's total project funds across thematic areas of response to determine the distribution of activities thus far. Funds examined were total funds and expenditures thus far. Based on examination of funding for 83% of the projects FAO has launched addressing HPAI, the distribution of activities were estimated following five themes. The five thematic areas of response are:

- epidemiology;
- surveillance;
- laboratory training and supplies;
- information and communications; and,
- socio-economics and policy.

281. All funds for each project included were allocated to one of these thematic areas of response. Project documents and descriptions were used as much as possible, but there was some element of

subjectivity, and results will have a modest margin of error. Nevertheless, a pattern of distribution is quite clear.

282. The majority of total project funds (agreed, transferred, expended) thus far have gone to the epidemiology (40%), surveillance (38%), and laboratory activities (8%), and a considerably smaller portion to information and communications (9%) and socio-economics and policy (5%). In aggregate, 86% of funding is directed at animal health activities and 14% at non-animal health activities. On the basis of funds actually expended so far (Figure 8), there is little disagreement by thematic area and no difference in aggregate for animal health spending. These figures are close to the targeted funding of these thematic areas identified in the proposed Global Programme, in which funds needed for communications and socio-economics total 11.9% of the total budget (see Figure 8 in Annex 6).

283. Distribution of total funds by region is consistent with the history of outbreaks: the majority of funding has gone to activities in Asia (US$70.0 million), with global activities a close second (US$53.4 million), followed by Africa (US$18.8 million), the Near East (US$8.2 million), Latin America (US$2.0 million), and Europe (US$1.1 million). Distribution of expenditures by region follows the same geographic order although funds are proportionately less.

284. These observations make it clear there is an overriding emphasis on animal health activities based on the distribution of funding, both total and used thus far.

In line with other recommendations of this evaluation, as the programme moves into the longer term perspective, the proportion of expenditure on animal health activities should decrease, while the proportion of spending on training, socio-economic rehabilitation and restructuring, or replacement of the small and medium scale poultry sectors (sectors 3 and 4), and larger economic issues of impacts on markets and trade of the HPAI crisis, should increase.

C. Donor expectations and FAO delivery capacity

285. As already noted at various points in this report and commented on by several interviewees, the flood of money coming in for the HPAI effort, especially as of mid-2005 following the arrival of the disease in Europe, placed unrealistic demands on all agencies involved in managing the spread of HPAI to deliver very quickly on control measures. In FAO's case, this led for example to a rapid build up of HPAI staff numbers - from 40 to 400 - with occasional weaknesses in terms of quality and dependability. This pressure to deliver resulted in issues, repeatedly mentioned by interviewees in beneficiary countries, such as uneven quality and rapid turnover of short-term personnel sent in to assist national responses, and an uncertain match between specific country needs and the materials and equipment sent.

During the course of such a crisis, FAO, as with other partners, should be realistic with donors as to its delivery capacity and counsel donors on the strengths of a measured response, on occasion delaying acceptance of funds where expectations are unrealistic.

At the same time, it needs to be accepted by all that, in an emergency, there is a greater level of inefficiency than in more planned situations. FAO needs to continue to develop standby contractual arrangements with suitable staff for all types of sudden onset emergency, in particular animal health and plant protection emergencies which require especially narrow technical expertise.

D. Sustainability of the funding response

286. One of the main constraints for AI control by FAO is the lack of sustainable funding. Virtually all of the funding on which this now very large programme is functioning comes from extra-budgetary sources in the form of short-term (6 months to 2 years) non-renewable grants. This generous extra-budgetary funding has allowed FAO to reach a first goal during the emergency phase: the spread of AI

is reduced worldwide and the number of human fatalities remained low. However, the available funds have been given on a short term basis, with the longest projects of the current funding envelope covering only the next 3 years, to April 2010). Following a rush of funds in the early months of 2007, new funding has levelled off and is currently pending decisions on pipeline projects.

287. The danger exists that structures and expertise that have been tediously built in and around ECTAD cannot be sustained at the end of these three years. Therefore continuous funding at all levels, in particular for the central and regional/sub-regional institutions must be secured. Extra-budgetary funding would ideally be replaced by regular allocation of funds to the new systems built, e.g. ECTAD, CMC, Regional centres. Even outside of the ten-year horizon of the HPAI strategy, these structures have their clear utility for upcoming epizootic and zoonotic emergencies.

E. Donor driven funding: concerns about donor directives

288. As is normal, donors fund for the interests of their constituents and the political pressures at home, often driven by media focus on certain issues. These interests, however, may or may not be in the best interests of the 'beneficiaries' of the support. For example, European donors only became really interested in funding the fight against HPAI when the disease came close to them: for nearly two years they let it develop in Asia with very limited concern, only to suddenly feel the urgency to invest large sums in HPAI response after mid-2005 when the disease broke out in Russia and Turkey.

289. At the same time, FAO is functioning at present in an atmosphere of pressing scarcity of core resources due to cuts in the FAO budget nearly every biennium for the past decade and a half. This means that FAO is incapable of saying no to (or delaying acceptance of) an offer of extra-budgetary support, whether or not it fits well into (in this case) the Global Strategy for HPAI.

> ***FAO needs to have its own set of priorities beyond the availability of money, and be willing to challenge donor priorities when they are not coherent with FAO's vision of the best way to do the work.***

290. For example, does FAO believe there should be such an exclusive focus of resources on HPAI, among all the animal health and zoonosis issues around? Does FAO agree with most donors (concerned mainly with the spread of the disease to humans) that the only issue is emergency disease control, or does FAO see and handle this in the context of wider development issues?

> ***FAO needs to provide guidelines and convincing, technically sound arguments seeking to orient donors with regard to use of their funds in the animal health domain (and all the related development issues). The SFERA fund (see next section) is one way to achieve this and should be used to the maximum amount possible.***

291. One often cited example of reportedly poor choices on basis of donor push is the CMC: there was an issue repeatedly raised with regard to the creation under donor pressure of a separate structure instead of increasing rapid response capability within the existing ECTAD structure. As the CMC had only very recently become functional at the time of this evaluation and was already changing management, it was not possible to investigate this structure in sufficient detail. This remains an issue to be investigated in the following stages of the evaluation programme.

F. The Special Fund for Emergency and Rehabilitation Activities: SFERA

292. 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 SFERA was developed and approved by the FAO Finance Committee in May 2003 and the fund officially came

into existence in April 2004. In May 2006 the Finance Committee went further and authorized the Director of TCE to commit funds from the SFERA as needed, making the fund even more flexible

293. 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.

294. The SFERA/HPAI enabled an early start of avian influenza projects even before funds have been received, which has been very important for FAO's HPAI response. While FAO is often subject to donor priorities and political frameworks as well as bureaucratic delays when accepting extra-budgetary funding, contributions to the SFERA programme component are much preferred because unearmarked funding allows the timely allocation of resources according to actual needs and FAO strategies and priorities, which also may change over time.

295. Nine donor countries and the OPEC Fund had contributed or pledged approximately US$32.5 million to the SFERA for HPAI operations as of April 2007 (see Table 8 below). This represents almost a quarter of FAO's total funding portfolio (funds received and agreed) for HPAI activities at this time. In addition, there are another US$10 million in the pipeline from Sweden expected in June or July 2007.

Table 8: SFERA fund donations by source, April 2007.

Country	Amount
SWEDEN	10 015 797
UK	6 876 228
FRANCE	5 930 420
SWITZERLAND	3 696 573
NORWAY	3 506 326
SAUDI ARABIA	1 000 000
OPEC Fund	700 000
P. R. CHINA	500 000
GREECE	188 442
JORDAN	50 000
TOTAL	**32,463,786**

296. SFERA funding has been used 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. Reporting to donors on the use of fund was found to be coherent and exhaustive, if rare. It also lacked information on outcomes.

297. An evaluation of the spending of French funds provided to SFERA/HPAI was requested by France in November 2006 and was a precursor to this RTE. The evaluation mission visited three African countries that received support from French funds through SFERA (Egypt, Cote d'Ivoire, and Mali), as well as the CIRAD in France.

298. In 2006, France gave $US5.93 million to SFERA of which $US3.92 million were spent in 68 countries mainly in Africa, and also in Central Europe and the Middle East. These funds were intended partly to directly support countries infected with HPAI or countries at risk and partly to fund studies on HPAI and wild birds as well as for coordination (ECTAD, GLEWS) and networking (OFFLU) activities. Funds spent at the country level were used for consultancies, workshops, provision of some

equipment and supplies (e.g. PPE, sampling materials, disinfectant) and some laboratory consumables and reagents, and to offer a small ($US45,000) but immediate emergency fund to interested FAO country representations for rapid start-up of preparatory activities or (where infection was present) to combat the disease. Over 30 of the FAO representatives took advantage of this fund.

299. FAO staff, member countries, and donor representatives have commented on this use of the SFERA funds to provide a small but early and flexible amount of cash to a large number of FAO country representations, in the form of rapidly administered direct transfers. While the specific usage of the funds in some individual countries has been questioned – relatively small direct transfers may not result in the most efficient and penetrating form of impact – there was wide consensus that this was an important, visible and valuable action to have taken at the time. FAO was seen as doing something to respond quickly to HPAI well before others. This generated immediate awareness among the recipients of the transfers that FAO was involved at the country and regional level in fighting HPAI, and that FAO was available for further assistance. And it had a pronounced catalytic effect on other local donors and development agencies. This last point was brought to the attention of the evaluation repeatedly both by the donors and agencies themselves and by government authorities.

300. ***The members of that evaluation strongly recommended to France and to other donors to carry on providing funding through SFERA***, as the flexibility it had afforded FAO to respond and react during a period of rapid expansion of the disease (outbreaks in the Near East and then in Africa) was an excellent tool in avoiding more extensive and damaging spread of HPAI. The team recommended continuing to use the SFERA mainly for action at country and regional level (rather than using it to fund FAO-HQs global coordination work), for both quick response and medium-term preventive activity such as surveillance, in order to help foresee probable evolution patterns of the disease ahead of time.

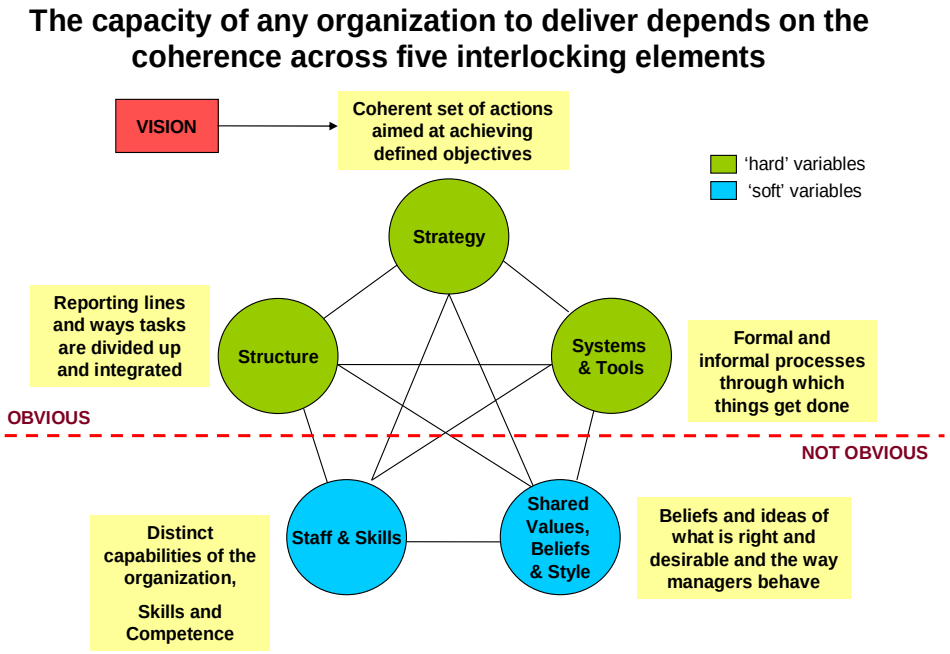
301. Overall, the creation of SFERA fund was instrumental in providing ECTAD with much needed non-earmarked funding to rapidly intervene and assist in response and service delivery. This has enabled FAO to prioritize support where and when needed without being overly concerned about geo-political issues and donor preferences.

> ***Ensuring continuous donor support to the SFERA fund is crucial if FAO/ECTAD is to keep the "freedom" to intervene in countries it judges at the time to be highest priority, either infected or at risk. The Evaluation Team recommends that donors should prefer this funding channel over project funding to the extent possible.*** **As a corollary however, the RTE highlights the importance for FAO to continue to build the confidence of donors in its technical expertise and efficiency and effectiveness in using these funds.**

6. Efficiency and Effectiveness of Programme Management

302. This section analyses the current management arrangements of FAO's HPAI response efforts by analysing the situation according to a framework developed by a management consultancy called Mckinsey, which rests on the analysis of coherence of an organisation across five different aspects of a work environment. Three of these are considered 'obvious' elements in that they are visible and explicit, while the other two are 'not obvious', relating to skill, capacity, shared values and beliefs. The following Sections A to E review current management of the HPAI response according to these categories. Figure 3 below illustrates this framework:

Figure 3: The Mckinsey Framework for Management Analysis



A. Management structures and tasks

303. At the time of the outbreak of HPAI, FAO already had the Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases (EMPRES) functioning as its technical and operational focal point for animal disease control interventions. However, the sheer size of the avian flu crisis led to the need for a formal structure bringing together the technical and operational strengths, respectively, of the Animal Production and Health Division (AGA) and the Emergency Coordination and Rehabilitation Division (TCE). The Emergency Centre for Transboundary Animal Diseases (ECTAD) was established by the Director-General of FAO in December 2004 following a proposal from the Director AGA and after consultations with other stakeholders at FAO. As part the same proposal, the DG nominated the chief of the Animal Health Service (AGAH) as the head of ECTAD and as FAO's CVO (Chief Veterinary Officer). The lead Senior Officer from TCE was made the Deputy Head of ECTAD and Head of Operations.

304. An interdepartmental senior management supervisory committee called the Oversight Committee was set up to enhance ECTAD's role and provide it with guidance, direction and policy level support. It is made up of two Assistant Directors General (ADG-Agriculture and ADG-Technical Cooperation), and two division directors (AGA and TCE). The committee originally included the CVO, the head of ECTAD operations (from TCEO), the EMPRES manager, and the CMC manager, but these now attend only as needed for the issues being discussed. The committee meets once a week to discuss issues put forward by ECTAD management. Above the Oversight Committee there is the corporate level management group comprised of the Deputy DG and all the ADGs, which meets twice a month and discusses all issues pertaining to FAO activities, including preparedness and response to HPAI.

Current management structures and tasks

305. At the time of the management evaluation, the ECTAD structure (and subsequently tasks within the structure) was undergoing changes following a March 2007 memorandum from Director of AGA on this subject.

306. ECTAD (General): ECTAD's structure in March 2007 appeared headed towards a phase of good functioning taking into consideration the actual challenges it is facing. The adjustments made by the Director AGA in his memo have injected many needed clarifications on who does what, more specifically at the level of the head of ECTAD and the deputy head (head of operations). Subsequent work done by those managers (April 2007) established a clearer division of work between them, cascading down in the ECTAD structure, thus creating a clearer modus operandi. During the same period, units within ECTAD were shaping their structures to adapt to the newly agreed division of labour. The units and their functions are the following:

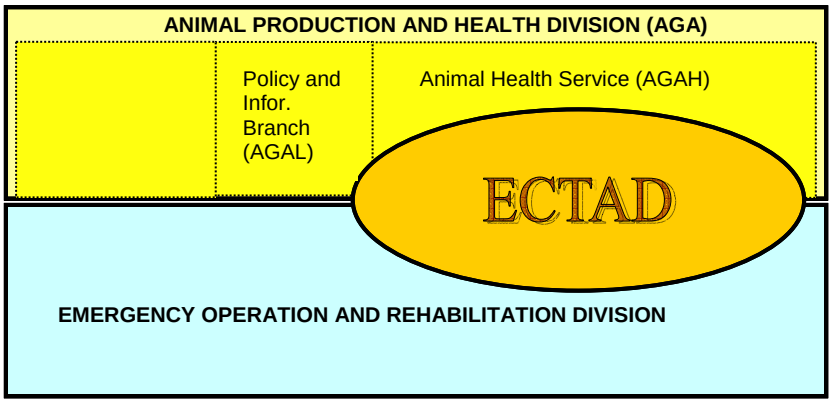
- Reporting and Advocacy Unit: Donor liaison; global reporting; advocacy
- Global Operations Monitoring Unit: Global financial control and monitoring; management of SFERA; Information and Communication Technology (ICT); procurement.
- Field programs Unit: Oversight of decentralized activities; support to country needs assessments; assistance to local authorities to formulate response strategies; formulation of projects; ensuring rapid mobilization of resources (now in consultation with CMC); support to the flow of information.
- Communications Unit: capacity building in planning for strategic communications; provide appropriate information for policy and advocacy; media relations; inter-agency and private sector coordination; capacity development of FAO/AI communication staff.
- Socio-Economic Unit: reviews and studies on socio-economic and production issues and develop recommendations on policies and implementation; provide inputs to ECTAD strategy documents.

307. In addition to those ECTAD units we can add the new Crisis Management Centre, EMPRES, and GLEWS. GLEWS and EMPRES provide ECTAD with much needed technical support and specialized human and material resources:

- CMC (Crisis Management Centre): 24/7 functionality; rapid deployment teams - RDTs - responsible for rapid response and assessment.
- GLEWS: The Global Early Warning and Response System (GLEWS) is a joint system that builds on the added value of combining and coordinating the alert and early warning mechanisms of OIE, FAO and WHO through sharing of information, epidemiological analysis and joint field missions to assess the outbreak, when ever needed. In FAO, GLEWS supports and is within EMPRES.
- EMPRES: The mission of EMPRES is to promote the effective containment and control of the most serious epidemic livestock diseases/Transboundary Animal Diseases (TADs) as well as newly emerging diseases by progressive elimination on a regional and global basis through international co-operation involving the four components of early warning, early reaction, enabling research and coordination.

308. As show in Figure 4 below, ECTAD is an interdivisional structure; these divisions are the Animal Production and Health Division (AGA) and the Emergency Operations and Rehabilitation Division (TCE). The head of ECTAD position represents AGA while the ECTAD deputy head represents TCE.

Figure 4: The position of ECTAD in FAO today



B. Strategy

309. The global strategy for prevention and control of HPAI advocates for uniformity of approaches on the global, regional and national levels. ECTAD, and outside papers and memos of organizational nature shaping ECTAD's units roles and responsibilities, does not have a consolidated strategy on its own, instead it has developed over the last recent years (but mostly in 2007) a series of guiding principles, systems and tools, adapting to evolving situations or new needs.

310. The absence of a strategy and a clear plan of action for ECTAD, and the absence of an overarching and continuous management support to its services, have resulted in frequent confusions in roles and responsibilities and in service delivery.

311. It is also worthwhile noting that FAO does not have an institutional/corporate strategy for emergency response that can be declined on departmental and divisional levels as the situation requires.

C. Systems & Tools

312. If an HPAI outbreak occurs in a country, FAO wants to be able to provide immediate support to limit the spread inside and outside of the country. For this purpose, FAO supplies technical and operational assistance through the CMC to assess the situation and to provide initial support. FAO also wants to be able to provide resources for immediate provision of emergency assistance. This is the function of the SFERA, which in some cases has been a very efficient mechanism to manage contingency funds for HPAI (cf. the case of Ivory Coast). ECTAD global and regional units will also need in some situations to provide support to national authorities for the establishment of a national integrated strategy, indispensable to raise funding.

313. Evaluating existing systems and tools was limited during this evaluation to interviews with managers and staff in Rome. The following issues emerged:

- For financial controls, ECTAD benefits from a good support system in place, providing transparency and timely reporting; but the system is administratively heavy and poorly adapted to emergency situations. There are recurrent problems with the slowness of recruitment and contract renewal processes in the organisation.
- Division of labour between the head of ECTAD/CVO and deputy (TCE) showing progress after many difficulties; agreement reached on most pressing management issues.
- Job descriptions and TOR are generic and not specifically detailed to formulate clearer responsibilities and state deliverables.

- ECTAD units currently formulating rules and procedures at their level to adapt to the Director's memo, with substantial progress already achieved.
- Lateral and vertical communications, outside a fixed schedule for multi and interdisciplinary management meetings, are very ad hoc and based on personal initiatives and situation. Some staff has "access" to higher management, some others are "confined" to normal communication channels. There is a need for clearer communication channels.
- ECTAD lacks, and should develop, a formal system to capture, analyse and disseminate management and institutional milestones and lessons learned.
- Generic definition of success for managers and staff is "winning the global fight against HPAI", but lack an overarching plan of action to fulfil this mandate, beyond the existing Global Programme document. No clarity on expected outputs, deliverables or time frames for all staff and units. This is also important for fund raising.

D. Staff & Skills

314. FAO has among its staff highly qualified technical people gathering a substantial expertise in diverse areas pertaining to the organization's mission and in case of need there is also a roster of international qualified technical professionals. Among its staff FAO also has people highly experienced in operations and program/service delivery. Many of the "technicians" have acquired a good level of operational expertise and likewise many "operational" people have a solid technical background and/or experience. This creates frequent antagonism between "technical" and operational" experts.

315. These differences are very much present today among ECTAD staff and in many ways it hampers the organization's capability to maximize efficiency by using existing human and material resources in the best possible ways. These differences are exacerbated by two major factors present within ECTAD working environment: overlapping responsibilities and sometimes unclear accountability coupled with weak management of staff expectations and their motivation. These differences are somehow diluted on the regional and country level, where turf and political pressure is more contained and where teams tend to be smaller and good communications and interaction are easier.

316. Differences of opinion and antagonism among staff from different backgrounds and levels of expertise is normal in a large organizations like FAO and that can hardly be avoided; If these "differences" are well managed and channelled, this ultimately provides for a healthier environment for constant improvement in service delivery.

317. Managing differences among staff and channelling differing competence and skills requires the organization to identify and catalogue these skills and competence using "talent review" or "talent prints". This done, a manager would have a clearer idea of the competence and skills existing in his/her team thus being able to better match with existing work load and challenges at hand. Ideally this will lead to a more stable working environment, turn antagonism into team work, clarify roles and responsibilities and raise motivation.

E. Shared values, Beliefs & Styles

318. An important and positive element is that most staff and managers interviewed showed a great deal of engagement and commitment in the fight against HPAI. They were clearly proud of the skills and expertise they are bringing to this action.

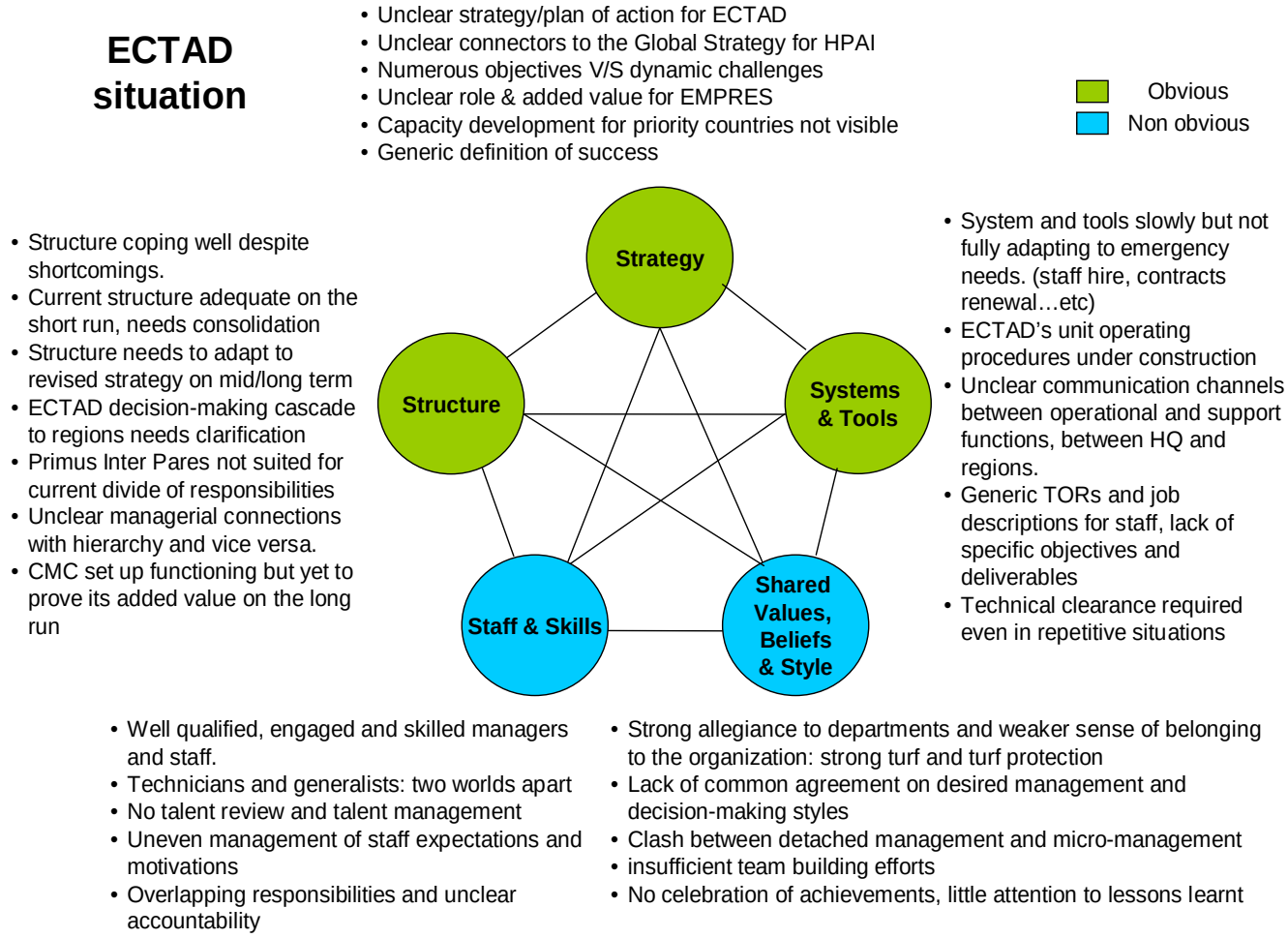
319. On the other hand and in many cases "balancing" that positive element, there appear to be constant turf fights between units and services, where the sense of belonging to a department/division/unit was stronger than allegiance to the organization.

320. When it comes to management styles, there is a wide array going from detached management to micro management. There are no clear attempts by senior management to differentiate management styles and approaches for better coherence.

321. One clear weakness felt almost in the entire ECTAD set, is the fact that team building efforts are very shy or non-existent. Staff seem to gather much more around meetings (and meetings again!) and problematic issues. Very few talked about shared values and fewer celebrated achievements.

322. Figure 5 below gives a short summary of the management situation in ECTAD today taking the Mckinsey management model:

Figure 5: Issues with the Current ECTAD management status



F. Some conclusions on the management structure

323. ECTAD since its creation, was more versed and focused on the "external" front and very little on the (FAO) internal one. This is due to the necessity to position the organization on the international scene and confirm its priority role, among other organizations, in the fight against HPAI.

324. Taking into consideration the lack of funding in late 2004 for the fight against HPAI, the very uncertain nature of the emergency, and the initial hesitation of donor support to FAO on the health issue, it is clear that ECTAD has done an excellent job.

325. It has taken the lead role on HPAI from the animal health perspective, offering its wealth of knowledge and expertise to countries at risk, establishing TCPs where needed across the globe, but also attracting donor confidence and longer term commitment at the time when donors were actively seeking a reliable partner and adviser for their contributions. The creation of the CVO position at Rome headquarters was also a successful decision, indicating more clearly the technical focal point for HPAI in the heart of the organization (the Chief of the Animal Health Service) and raising the status of FAO's institutional counterpart for national CVOs and for the OIE.

326. Although it was reported by a majority of interviewees to be still very tense, the coordination mechanism with OIE (and WHO) is to be considered something of a success as well and of a substantial added value to the individual work of each organization in the HPAI response. Yet another achievement, though late in coming, was the production with OIE and in collaboration with WHO of the Global Strategy for prevention and control of HPAI.

327. Overall, more than three years on, FAO has confirmed itself as a reliable and professional actor and partner on the HPAI crisis. Despite internal organizational weaknesses, FAO has substantially enhanced its corporate image in the field of animal health. Given the high levels of support FAO/ECTAD was able to deliver on the national and regional level, where and when needed, but also on the international level in terms of cooperation, partnership building and fundraising, the ECTAD track record and list of achievements is quite remarkable.

328. A "price" of those achievements, however, is their heavy toll on the internal managerial front of ECTAD structure, management and staff. This also affected other structures such as EMPRES. To better understand the complexity of the overarching challenge and try to comprehend what went wrong (or did not go at all) on the "internal front", it is useful to review ECTAD's declared challenge, objectives and operating principles, which are those of the Global Programme:

329. **Challenge**: providing technical content and the operational platform to guide the fight against animal diseases at all levels.

330. **Objectives**: Provide global and regional coordination and support to infected countries in disease control; countries at risk in preparing for incursions; and newly-infected countries in rapid response.

331. **Operating Principles**:

- Priority is effective and efficient programme delivery
- Simplicity of structure so as to communicate unequivocal program signals
- Functional clarity for all structural components without overlap of mandate
- Responsibilities for all those functions assigned
- People-independent decision making instruments (empowered deputies assigned)
- Decision cascade transparent covering all levels from senior management to working level
- Information flow continuous across decision cascade
- Response mechanism to include interdisciplinarity, especially with emergency, but with animal health as leader of the effort
- All meetings minuted with action/follow up responsibility agreed/communicated

332. The present set up of ECTAD, in terms of both organization and management, could not properly assume the responsibilities described above and the job at hand without sizable amendments to its current structure. It is fair to state that FAO management in general and ECTAD's in particular did not anticipate the huge requirements in terms of challenges, labour and efforts resulting from the correct positioning of the organization as a major actor and partner in the global fight against HPAI.

333. It was wrong to assume that having the CVO in place (and heading ECTAD) would be enough to tackle the job at hand, when the responsibility of the CVO proper as a global technical reference to country CVOs and manager of an important FAO unit is a full time job in itself. It was unrealistic to request the CVO to assume the responsibility for the entire engagement of FAO in the HPAI fight,

internally and externally. For these and other reasons pertaining to availability and management styles, It took nearly three years to reach a comprehensive frame for ECTAD to operate within and with an acceptable level of labour division among units and staff. There remain, however, still a fair amount of grey areas in terms of responsibility and accountability.

Suggestions for the way forward

334. Looking at FAO's position today, its role, its achievements and its long term commitments, looking at its current action in transboundary animal diseases and the high expectations placed on the organization, measuring the efforts it needs to invest to succeed in its cooperation and coordination roles and responsibility; not forgetting the much needed further funding and fundraising efforts, we can divide the "job at hand" in the following functional categories.

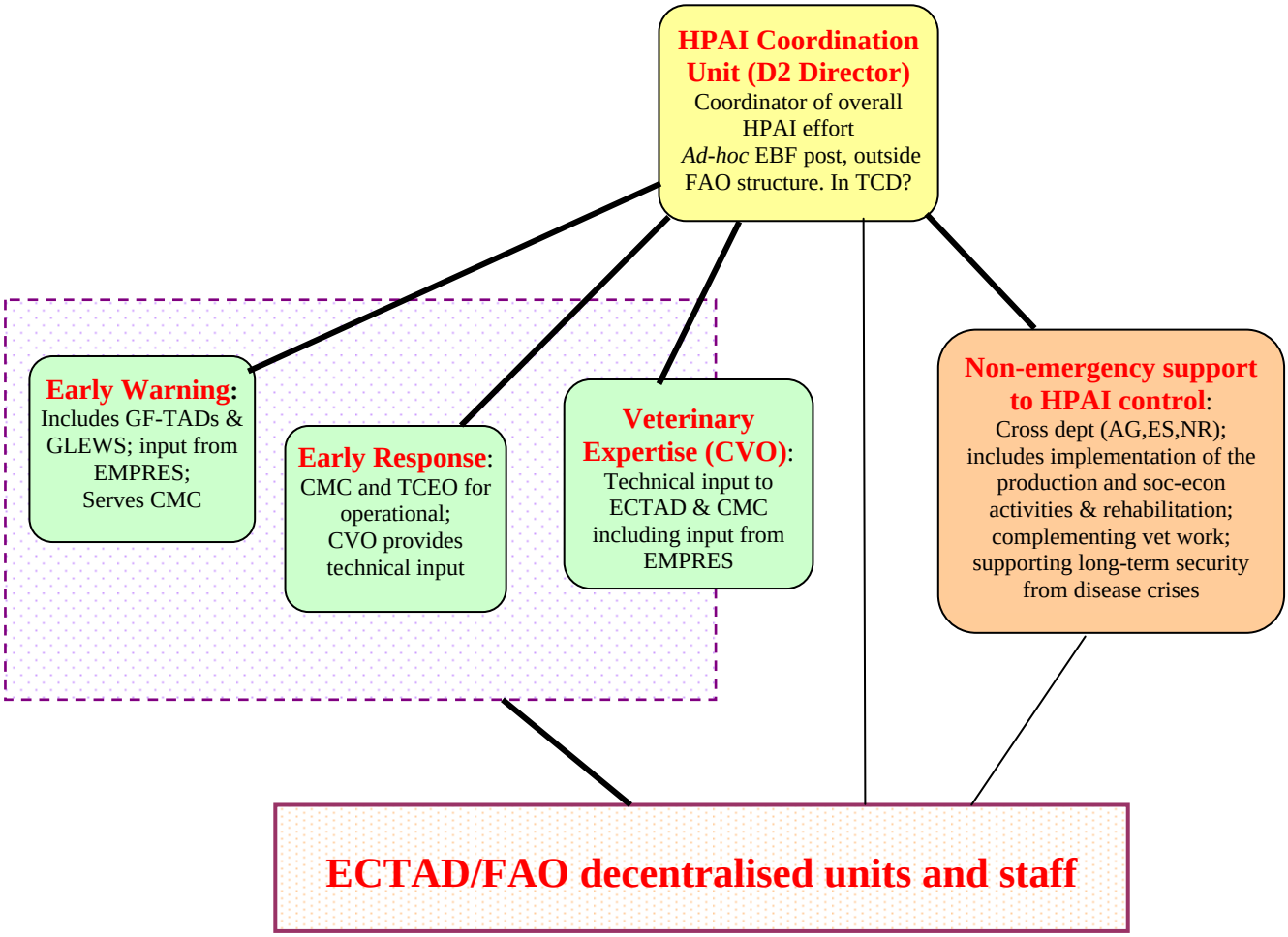
1. **Early Warning:** Intelligence gathering, early warning, guidelines for prediction and prevention, research and information sharing.
2. **Emergency Response:** Rapid response, crisis management, interventions and support, emergency funds management
3. **Provision of Veterinary Expertise:** Technical mastery, expertise and reference, policy development, central focal point for veterinary matters, knowledge sharing as well as technical representation; management of decentralised units/staff.
4. **Non-emergency activities in support of disease control:**
   - Non-veterinary approaches for long-term disease containment, control and eradication to supplement/complement where veterinary solutions have failed or been inadequate;
   - Post emergency support for rehabilitation of livelihoods and return to development for those who have been seriously affected;
   - Longer term development issues related to control of epizootics: institutional strengthening, capacity building and preparedness activities; strengthening of veterinary services; rethinking/restructuring of poultry sector; adjustments to marketing and trade policies; etc.

   This function with time will take on proportionately greater importance in HPAI-related activities and will include input from several FAO departments and divisions.

335. To maximize the efficiency and effectiveness in FAO, these different functions ultimately will need vision, strategy, coordination and high level management. This must include optimal management of existing skills and competence, management of material resources, decentralization management, corporate support services, high level representation, communication and fundraising.

336. The evaluation team recommends that this should be the responsibility of an **HPAI Coordination Unit** under the leadership of an **HPAI Director at D2 level.** This Director post would belong entirely to the Coordination Unit, without other responsibilities in FAO. It will require the creation of an *ad hoc* position, funded with extra-budgetary funds, possibly in TCD (rather than a technical department) to allow access to technical divisions across departments. The Coordination Unit would be small, with no more than 3-4 staff in addition to the director. **ECTAD would continue to function similarly to its current situation** for emergency response**,** under the coordination of the HPAI Director. On an organizational chart it could look similar to Figure 6 below:

Figure 6 : Possible future HPAI coordination structure



337. If carefully designed, **starting from a study of the functions to be carried out**, this set up should allow for maximum efficiency in delivery of services specific to different categories using the existing set of skills and competence among staff. Good design will do away with overlaps and duplication. It will maximize output and manage needed decentralization. Given the high level of responsibility and accountability involved, it is very important that the appropriate level of management (D2) is in place.

338. **Evolution towards the future** should come in two distinct stages, the first one to consolidate and accompany the consolidation of the present ECTAD and the second is to migrate the HPAI effort towards the new institutional structure, leaner, decentralized and functioning in a organization model similar to that described above.

Consolidation

339. After a period of fluctuation and uncertainty, ECTAD is being consolidated at the management, systemic and procedural level, and plans to consolidate regional presence through decentralised units is underway as well. A series of ECTAD team meetings held in Bangkok, Rome and Nairobi during the first half of 2007 involving field and HQ staff were a positive step in this process. **This work should continue and be supported but also be given a clear time frame to achieve that consolidation**. Meanwhile no major structural changes should happen in the short run as that will

diminish the positive effects of the consolidation taking place this year. This consolidation process should include the following:

a. **Develop and consolidate a strategy and a plan of action for ECTAD today**, this should fit with the institutional global strategy to fight HPAI, identifying with its declared strategic objectives and developing clear deliverables on the global, regional and country level with clear time frames
b. **A "talent review" or "competence print" should be conducted** within ECTAD set up as soon as possible, such an exercise can determine existing profiles, skills and competence which in turn when compared with the collective responsibilities of ECTAD can determine who is who, highlight strength and weaknesses and provide solutions for maximum efficiency. (of course this can be done where needed in FAO and is not limited to ECTAD)
c. While keeping the focus on the external front for continuous better positioning of the organization, **FAO/ECTAD should invest more time and effort on the internal front**, better managing staff and their expectations, defining clear responsibility and accountability lines as well as a fair division of labour with minimum overlap. Staff development, motivation and performance should be addressed in a systemic manner.
d. As a managerial responsibility at all levels, **enhance and consolidate FAO's corporate identity** enabling staff to develop a good sense of belonging to FAO, its mission and vision against loyalty to departmental and divisional set ups, where turf is often present.
e. **Better integrate and extract the added value of EMPRES and GLEWS** in the Global Strategy for HPAI.
f. **The Oversight Committee should assume total responsibility** to support and guide the consolidation work taking place within ECTAD, ensuring that the revised global strategy to fight HPAI is in the heart of ECTAD's consolidation work. The oversight committee should become the "guardian" of the strategy and the final arbitrator in cases of disagreeing interpretations of it.
g. **The concept of responsibility and accountability sharing of 'first among equals'** (*primus inter pares*) could be applicable to the two directors currently supervising ECTAD's work, i.e. the Director AGA and the Director TCE. In this arrangement, it is recognised that AGA and TCE equally share responsibility for the HPAI response, but between them AGA takes the lead.
h. **Use external consultants as a resource to accompany the consolidation** over the next few months. External resources provide an "outsiders" look and help carve through resistance to change and turf matters providing an objective and neutral support

Migration

340. Once the consolidation is done successfully, and taking into consideration the immensity of the job at hand described earlier, **ECTAD should migrate into the new coordination structure which is able to accommodate necessary change**, regrouping functions and responsibilities along new work categories and placing a Director (at D2 level but outside the FAO Regular Programme structure and on extra-budgetary funds) to head the new organization.

a. ECTAD should **migrate with a clear time frame to a different and lighter structure in headquarters** and as described above with a Director level management.
b. **Establish a global (decentralised) structure along the lines of the strategic objectives and main activities stated in the global strategy** for the prevention and control of HPAI. A special emphasis should be given to ensure that this "decentralized structure" is equipped with the appropriate capacity whether on the technical, operational or managerial side, to fulfil the objectives and conduct those main activities prescribed in the global strategy.
c. **Establish a decision making cascade system** clearly differentiating between issues needing central decision making and those that can be accomplished at regional and country level,

appropriate responsibilities and accountability should be designed to reflect such decision making system.

d. Develop a clear **strategy/plan of action to fund raise for the global strategy and the new structure**; the fundraising strategy should have a long term time frame with clear targets to meet, year after year.
e. The "migration" and transformation work **should be accompanied by external consultant resources** to provide an outsider's more objective look on the project.

7. Working with Others: Collaboration, Partnerships and Alliances

A. Alliances with OIE and WHO

341. The world's three largest institutions that work in animal and human health, FAO, OIE, and WHO, would seem a natural choice for a tripartite response to controlling zoonotic disease. It is surprising then that the level of collaboration between the three institutions was weak, according to visits to WHO country offices and observations from a number of one-on-one consultations, prior to the emergence of HPAI as a global threat. Prior to 2003, communication between particularly FAO and WHO was not good, OIE and FAO disagreed on division of responsibility, and information was not easily shared between institutions on the grounds of sensitivity to member countries wishes.

342. Collaboration has improved markedly between FAO and WHO since 2003, and has improved somewhat between FAO and OIE although division of responsibility is still the most important source of disagreement. The role of FAO and WHO is more clearly outlined in the UN Consolidated Action Plan For Contributions of the UN System (UN, 2006b) than the role of the OIE.

343. A product of the FAO, OIE, and WHO collaboration is GLEWS, discussed in more detail below. The GLEWS tracking information system is in need of further funding to make it a sustainable system; at least one donor has expressed strong interest. In the case of GLEWS the roles of each organization is clear, and there has been good synergy.

The partnership with OIE

344. OIE plays an important role in developing animal health and food safety standards for trade under the World Trade Organisation (WTO), as well as animal welfare and food safety. OIE is also concerned with the gathering and sharing of global animal health information. Lately OIE has been increasing its activity in assisting member countries address improvements in veterinary services. All of these areas of activity are clearly important to the control of HPAI. During a visit to OIE headquarters in Paris, staff members explained that they consider FAO as an implementing agency, particularly in helping countries improve gaps identified in veterinary services. It was also mentioned that OIE does not want to implement projects at the field level.

345. To assess strengths and weaknesses of veterinary services, OIE has developed a standardized tool known as Performance, Vision, and Strategy (PVS). PVS data remains confidential between OIE and the member country if the country so wishes, even in emergency cases. Typically, countries share these data with the World Bank to support programmes addressed at improving veterinary services. OIE receives support from the World Bank to perform PVS assessment, particularly in addressing preparedness against HPAI. PVS assessment has been performed in 8 countries of 40 that have requested it. FAO plays only a minor role in this initiative.

346. OIE also develops laboratory networking, by twinning developed and developing country laboratories to ensure a long term exchange (e.g. scientists, reagents) aimed at improving the efficiency of laboratories. FAO is not associated to this initiative either.

347. OIE is to play an active role in the CMC with a staff member appointed half-time.

348. OIE is also active in capacity building for improving surveillance and control measures through workshops (regional level) and scientific meetings (e.g. HPAI vaccination). OIE will also provide guidelines on vaccination against HPAI after the next general session. This would seem a most important topic for strong consultation and agreement with FAO, although no joint position paper has arisen since the beginning of the HPAI outbreaks in 2003.

349. Formally, communication does not appear to be well documented between FAO, OIE, and WHO. There have been only two Annual Tripartite Meetings, the last one in January 2007. Regular dialogue does occur on an informal basis and there is substantial dialogue between the communications and information departments of the organizations. The meeting minutes from January 2007 note that improvement has been made since the last FAO/OIE/WHO executive meeting, and that daily communication was very useful for the interventions during HPAI outbreaks in Turkey.

350. However there were incessant references to tensions between FAO and OIE at the higher levels relating to difficulties in agreeing on the limits of the two agencies' respective roles in the HPAI crisis and more generally in international animal health activities as a whole. A Memorandum of Understanding was signed between the two organizations in 2005, but this has not had a significant impact on the disagreements and misunderstandings between them. This tension prevents effective and constructive collaboration between the two institutions in many contexts. This evaluation was not in a position to go deeply into what is also a political issue dependent on decision of the member countries of the two institutions with regard to clarifying roles and limits of the mandates of each.

> ***This evaluation strongly recommends that a thorough high-level review of the international architecture for animal health and transboundary animal diseases be carried out in the near future in an effort to rationalise and improve efficiency of the division of labour and responsibility between FAO, OIE and other actors in this field.***

351. Collaboration between national laboratories and the FAO/OIE and WHO reference laboratories could also be better. The communication of false positive or false negative results has been a problem with some countries. FAO, OIE, and WHO need to strengthen this element of communication in order to avoid unconfirmed information reaching the media with consequentially negative impact.

352. The Global Strategy and the proposed Global Programme clearly identify that OIE is an important international partner in fighting HPAI. However, the individual and joint roles of these organizations are not clearly and explicitly identified. OIE does indeed work, as well as FAO, in many contexts related to controlling HPAI: strengthening of veterinary services; information gathering and sharing; laboratory networks; and, provision of diagnostic agents and test kits. But the specific leadership and roles of each institution is not apparent in the GS or the GP. It is also not apparent in the UN Consolidated Action Plan For Contributions of the UN System (UN, 2006b).

> ***The specific individual and joint roles of FAO and OIE must be clearly identified, outlined and <u>agreed upon</u> in the Global Strategy and the proposed Global Programme to control HPAI, as the current confusion and disagreement is an impediment to effective joint work.***

353. During a visit to the Paris headquarters, OIE staff also had recommendations for FAO to improve the response to HPAI. The main comments from OIE staff were: FAO does not have enough visibility and clarity in its internal structures and chain of command; FAO needs to provide a unique and coordinated technical message; due to lack of delegation it is sometimes very difficult to get a final decision from FAO staff members, particularly at meetings; and, there is a need to clarify the role of each agency in GF-TADs in some regions.

B. Other IGOs (Regional organizations, other UN)

AU-IBAR

354. IBAR (the African Union's Inter-African Bureau for Animal Resources) is the only institution in Africa that has a mandate and the resources to respond to the problems of animal resources at the continental level. The overall objective of IBAR is the improvement of animal resources of Africa. Three offices in Nairobi, Bamako, and Cairo will identify issues for coordination with FAO led TCP activities. It is expected that MOA's and departments for livestock development and/or animal health of each participating country will be active in executing country specific activities, epidemiological surveys, disease surveillance, emergency preparedness, and regional coordination mechanisms.

ASEAN

355. The Association for Southeast Asian Nations (ASEAN) represents Brunei Darussalam, Cambodia, Lao PDR, Myanmar, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Viet Nam. Its aims are: (i) to accelerate the economic growth, social progress, and cultural development in the region; and, (ii) to promote regional peace and stability through abiding respect for justice and the rule of law in the relationship among countries in the region and adherence to the principles of the United Nations Charter. ASEAN has a Sectoral Working Group on Livestock that advises on issues related to livestock development and trade. Currently, ASEAN has specifically created an Animal Health Trust Fund to tackle regionally the problem of transboundary animal diseases on a long-term sustainable way. The trust fund has had moderate success in the region addressing control of FMD.

356. ASEAN has not played a key role in the region addressing HPAI control, other than acting as host for a number of regional technical meetings on HPAI. Recently there have been discussions as to how that role might change. Considering the mandate of ASEAN and particularly with regard to economic development, it would seem clear that ASEAN could partner with FAO to assist member countries in controlling HPAI. FAO for its part might push harder for ASEAN to take a lead role in the region in addressing HPAI control. Under the second point of the ASEAN mandate identified above, ASEAN could be playing a larger role in promoting governance

Collaboration with the Rome-based UN Agencies

357. In 2005 ECTAD convened a Rome-based working group on socio-economics, policy and farming systems. The working group is made up of a core group of FAO, WFP and IFAD experts in livestock economics, policy, markets, trade, poultry production, livelihoods, food security, communications 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.

358. 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, which is in line with the priority recommended by this evaluation.

359. 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.

C. Working with donors and the development banks

360. Comments from the donor community were good regarding overall impression of working with FAO and FAO's technical ability to act as an implementing agency for projects. Donors commented that they respect FAO in terms of transparency and partnership, and are pleased to continue working with FAO on HPAI. Donors met recognized the need to address long-term control of HPAI but also acknowledge that funds for long term projects are difficult to establish in a short time frame.

361. Some donors (e.g. USAID - the largest HPAI donor) questioned FAO's efficacy in some cases with regard to HPAI projects. USAID questioned for example the utility of the CMC mission to South Korea. As well, the comment was made that FAO is sometimes better at coordination than at implementing projects. Indeed, the US avian influenza inter-agency group commented that FAO might consider coordinating more and implementing less, allowing for more time to coordinate with important bilateral donors.

362. Donors generally were pleased with country level contact through FAORs and feel they are a valuable resource. There were however some comments on poor choices for FAORs, whom it has taken considerable time to replace (Niger and Vietnam were examples encountered), which has slowed progress in the field. There was good feedback from donors working with the ECTAD team in Bangkok regarding contact and working relationships.

363. The World Bank and the regional development banks rely heavily on partners for project implementation, usually national governments or NGOs. In the case of HPAI emergency projects, FAO has in some cases been given responsibility to implement projects of the WB and the Asian Development Bank. Both of them commented to the evaluation team that they were pleased with the work of FAO and the way it works with them. However, both institutions also commented that FAO has different methods of procurement and financial management from their own, and that occasional disagreements over financial and operational control of projects slowed implementation of field activities.

364. The WB has commented that the WB/FAO Cooperative Programme Fund pays 5500 staff weeks annually to FAO. AGA might lobby for more of these funds from the FAO Investment Centre (which normally deals with the banks).

365. Communication with donors is achieved using regular meetings at country level, regional donor meetings with other UN agencies, meeting with donor representatives in Rome, and occasional international meetings for donor pledging or updating. Donors also receive occasional summary updates of HPAI activities and outputs. The last general update for all donors was February 20, 2007. Individual donor updates are also prepared by FAO Information Officers. However, FAO communications staff have observed that this may detract from more applied work in developing countries that could be achieved by Information Officers.

366. With regard to timeliness of information, several donors commented that it is difficult to get country level reports quickly due to the lengthy process for clearance by FAO headquarters which may take several months.

SECTION IV – Conclusions and Recommendations

1. Conclusions and identification of contributing factors

367. The Real Time Evaluation team has come to the end of this lengthy evaluation exercise **with a generally positive view of the work which FAO has undertaken** in the context of its response to the Highly Pathogenic Avian Influenza crisis over the past three and one half years. While there have been many issues, delays, weaknesses, mistakes and obstacles during this effort, the net result is that FAO has confirmed itself as an important player in the HPAI crisis, enhancing its own capacities as well as its corporate image in the area of transboundary animal health emergency response. This said, there clearly remains much more to be done and much room for improvement.

368. As more has become known about the disease, its ecology and its epidemiology, and as more experience has been gained in fighting it, the rapidity and effectiveness of response to new outbreaks have improved dramatically. Both previously infected countries with new outbreaks and uninfected countries facing their first outbreak have greatly increased abilities to rapidly identify, report and contain the disease, compared even with just one year earlier. While it is not always easy to attribute clear causality in the improvements, there is no doubt that FAO has played a key role in this evolution.

369. As a result of the increased awareness, response capacity, contingency planning and preparedness, FAO and others can now shift emphasis more towards the longer term issues in a disease crisis which is likely to be with us for many years to come. While the emergency response capability remains a key element of FAO's actions, it is not enough in itself to contain and eradicate the disease, or to prevent or mitigate future disease crises of this kind. These objectives will only be met if a longer-term and wider multidisciplinary perspective is applied.

370. This RTE has ultimately raised as many or more questions about FAO's work in HPAI as it has been able to answer. The complexity of the HPAI response, the sheer size of the effort (over US$120 million and about 100 countries assisted at writing), the lack of useable monitoring and evaluation data, the many longer-term implications, and other factors have made this more a launching pad for the rest of the HPAI evaluation programme than a definitive judgement on FAO's response.

371. A number of factors have contributed (positively or negatively) to the evolution of FAO's response to the HPAI crisis. The evaluation would like to highlight a few key ones as follows:

A. Measuring success

372. Generally across the entire programme, the evaluation found that there was very limited use of logframes, little setting of clear targets (neither of outputs nor of outcomes/impact), no effort to identify indicators of success, and consequentially, very little monitoring of the results of all the activities being carried out. This made the work of the evaluation more difficult and uncertain, as it was at times unclear what desired outcomes the programme activities were to be measured against.

373. Much more importantly, this is part of a working culture that tends to equate activities with outcomes and outputs with impact ('if we are doing a lot of things, we must be having an impact'). This risks leading to less than optimum efficiency in the allocation of funds, as there is little review of activities to understand if they are really useful in reaching longer-term objectives. This has been remarked on in several places in this report, and merits immediate corrective action for all future programme action.

B. Country-level governance in emergencies

374. In the three cases that stand out as the most difficult ones to master at the present time (Indonesia, Egypt and Nigeria), a key contributing factor to this difficulty is weak or divided

governance at the country level of the emergency response and follow-up. As a neutral inter-governmental institution, FAO has to tread carefully in addressing problems of internal governance in member countries. However, in the face of a crisis like HPAI which poses a serious threat to global public goods which also come under the purview of FAO, the organization needs to be able to act.

375. At the country level FAO needs to examine the facilitator role it and its partners can play in assisting countries to implement HPAI control programmes through strengthening governance at the national and sub-national level, without interfering in the democratic process, and without appearing paternalistic. Where strengthening governance is not an alternative, FAO must find 'realpolitik' ways around the obstacles which allow it to work effectively and with the appropriate stakeholders, without offending authority or sensibilities.

C. Management and internal governance of FAO's response

376. A major factor in both the positive and the negative aspects of FAO's response has been the issue of governance, management and leadership of the structures that guide decisions, grant authority, identify needs, and activate responses. The global strategy for prevention and control of HPAI advocates for uniformity of approaches on the global, regional and national levels. FAO's HPAI response, in particular through ECTAD, does not have a consolidated strategy on its own, having instead developed over time (but mostly in 2007) a series of guiding principles, systems and tools, adapting to evolving situations or new needs.

377. The absence of a management strategy and a clear plan of action for ECTAD, and the absence of an overarching and continuous management support mechanism for its services, have resulted in frequent confusions in roles and responsibilities and in service delivery. In addition, FAO does not have a clear institutional or corporate strategy for managing emergency response that can be applied to departmental and divisional levels as the situation requires. Both of these issues are currently being worked on, the former currently on the basis of a memo by the Director AGA and the latter by the Rehabilitation and Humanitarian Policies Branch (TCER), but the lack of a management strategy has weighed heavily on the HPAI response until now.

D. Donor priorities and timescales

378. One of the main constraints for HPAI control by FAO is the lack of sustainable funding. Virtually all of the funding on which this now very large programme is functioning comes from extra-budgetary sources in the form of short-term, non-renewable grants.

379. FAO was very quick to react to HPAI in Asia in early 2004 and then each time it broke out in a new region, with staff on the ground within days under its own meagre funding resources (TCP projects). However, overall it can be and has been said that FAO was slow to get going with avian influenza response, due to the long delay of 18 months after the early outbreaks before it had a significant programme to fight the disease. The reason: no funds.

380. This slow start to funding is attributable both to the donors and to FAO. The donors fund in large part for the interests of their constituents and the political pressures at home, and did not show an interest in funding the fight against a disease which they perceived to be a distant threat, until the day it reached their own doorstep. FAO on its part, however, was slow to develop a sufficiently convincing strategy and programme to halt the disease, and thus (like other agencies) was not able attract lukewarm donors to fund it. It should be mentioned however that FAO was not alone in this situation. The agency with the most active (and alarmist) communications campaign at the time was WHO, which nonetheless was no more successful than FAO in raising funds from western donors.

381. The same situation is likely to present itself at the opposite end of the crisis, when donor funding runs out in time to the diminishing media attention to HPAI, but well before the situation is back to normal in terms of safety from disease and of rehabilitation of the poultry sector and poultry markets and trade. This later funding phase will also need to cater to other priorities, related to development issues surrounding the impacts of the HPAI crisis, and not only the health issues. These

are not likely to be the immediate priorities of the press nor of the voting public, and working with donors in that phase will require a different approach and expectation of difficulties in obtaining adequate funding.

E. Of strategies and priorities

382. A recurrent issue throughout this evaluation has been the need for FAO to have (and to make public) a clear strategy for its HPAI work, and a programme to implement it. While there is of course the FAO/OIE Global Strategy document, FAO's own organization of its work programme has not been closely tied to that strategy. Lack of prioritisation, a related issue, is also underlined in the report at the levels of both global strategy and country strategy. The speed and intensity with which the HPAI crisis has ballooned over the past 18 months is no doubt part of the reason that FAO has not managed to take the time to reflect and develop an implementable strategy and plan for its work. Recent exercises in rationalising the management structures of the FAO response are a good step in that direction. More needs to be done with regard to country interventions and global coordination.

F. The SFERA fund: a positive factor

383. The Special Fund for Emergency and Rehabilitation Activities, or SFERA, stands out as a particularly positive contributing factor to the effectiveness of FAO's response to the HPAI crisis. Its use for rapid intervention in a rapidly changing landscape as the disease spread through the Near East and Africa afforded FAO a flexibility to respond and react better than others and was seen as having been an excellent tool in avoiding more extensive and damaging spread of HPAI. It is important to continue using the SFERA, especially for action at country and regional level (though a portion of it is still necessary to cover FAO-HQs global coordination work which other funds cannot), for both quick response and some more medium-term preventive activity such as monitoring and surveillance to help foresee probable evolution patterns of the disease ahead of time.

G. Likelihood of impact on incidence of the disease

384. The evaluation team also takes note of the visible overall change in HPAI response around the world. As noted, speed and effectiveness of country response to outbreaks or threats of HPAI has very tangibly changed over the past three and a half years since the first appearance of this cycle of the disease in late 2003. This is especially true over the past year since the disease approached Europe, leading to a dramatic increase in the amount of funds available to the control efforts. Although it was beyond the capacity of this evaluation to attach precise figures to the change, there can be no doubt that this is having a significant impact on the ability of the virus to spread rapidly in most countries where outbreaks have occurred.

385. At the end of June 2007 (after this report had been completed) a global "*Technical Meeting on HPAI and Human H5N1 Infection*" was convened at FAO at which preliminary results of the HPAI campaign were discussed. The meeting sought to identify the impact that FAO, OIE and their partners have had on decreasing the incidence of HPAI outbreaks. Meeting speakers from various institutions reported indications supporting the overall observation of this evaluation that quality and timeliness of response to outbreaks have improved significantly over just one year ago. It was clear from these reports, as it had be during all the evaluation field visits, that FAO was an important player in this transformation of response capacity and awareness, though as noted this evaluation did not have the elements necessary to quantify FAO's role in comparison with that of other players, nor was it reliably quantified during the technical meeting.

386. At the meeting it was also reported, however, that the number of outbreaks had increased dramatically in 2007 compared to 2006, both in countries previously infected but then cleared, and in new countries. This again supports the main conclusion of this evaluation that in order to succeed in combating HPAI, FAO must look more widely than just the veterinary disease control response. Several of the recommendations emerging from the technical meeting were in fact close to the RTE:

- the need to be *strategic* about combating this disease (development of a better, more dynamic HPAI Strategy);
- the need to *monitor* what is being done on HPAI, defining and using measurable indicators, and monitoring for results and outcomes rather than for outputs;
- the need to move to the longer term and wider development picture, giving greater importance to non-veterinary issues: livelihoods, food security, restructuring, trade, policies, impact outside poultry sector, etc.;
- the need to consider regional and national governance issues; and
- the need to strengthen (the effectiveness of) the international architecture of institutions, donors, agencies

2. Recommendations

387. All of the recommendations that have been made throughout the text are gathered here by theme and grouped where appropriate. A greater priority goes to sections A and B.

A. Consolidating then Reorienting the Global Programme and Global Strategy

For both the Global Programme and the Global Strategy, the key change in the nature of the HPAI emergency is the *short* to *medium* and now to *long term* shift of the outlook for the campaign. The long term in particular will require investment not just in response to the emergency but in economic restructuring, restoration of markets and trade, livelihoods development especially for sector 3 medium-sized producers, options for sustaining livelihoods for 6 months when no birds are sold, modified production systems, etc.

A key issue is that **in spite of greatly improved response capacities at both global and national levels, the H5N1 virus continues to re-infect cleared countries and spread to new ones**. It has become apparent that use of the veterinary disease containment and control approach, though it continues to be essential, will not be sufficient to master the HPAI crisis in the long run. As stressed repeatedly at the recent June 2007 technical meeting on HPAI at FAO, for long-term success in combating this disease, **the effort must widen to incorporate all the elements contributing to its resilience and spread, many of which are not directly related to veterinary measures**.

1. **FAO now needs to adjust its overall approach to begin to gradually move from the early mainly 'fire-fighting' emergency mode to include a longer-term perspective which seeks the solution to the continuing HPAI crisis in terms of the larger development and economic context.**

The Global Programme has not been updated since March 2006 and still has some important weaknesses, including insufficient coherence with the updated FAO/OIE Global Strategy, lack of means and indicators for measuring success, overambitiousness in seeking HPAI eradication, and insufficient attention to non-animal health aspects of the crisis. As a document, FAO's "Proposal for a Global Programme" is not officially approved or fully functional, and FAO's HPAI response thus often appears opaque to outsiders (including donors). The Programme needs revision, strengthening, coherence with the strategy, and also active presentation to stakeholders and dissemination.

2. **FAO needs to revise the format and content of the Global Programme with wider participation (and buy-in) inside and outside FAO, careful attention to the March 2007 Global Strategy document, careful consideration of budget needs, identification of clear indicators of success and means of measuring them, and incorporation of the gradual change of emphasis of the campaign from the short-term to the longer-term. Following revision and with highest priority, FAO needs to approve, publicly present and widely distribute this**

revised Global Programme document to clarify its actions to beneficiaries, donors and all stakeholders.

The FAO/OIE Global Strategy document suffers from two major weaknesses with respect to achieving its goals: (1) while it discusses their importance, it does not provide any specifics nor even strategic direction for work on production systems, socio-economics, rural anthropology, livelihood analysis/support, or communication; and (2) it lacks the tools and indicators to assess progress, quality and impact of the actions proposed.

3. **The Global Strategy needs to be revised to provide direction and structure to the longer term work above and in addition to the immediate disease control response to avian influenza. In orchestrating the conceptual aspects of the shift from emergency to rehabilitation and development, the experience and collaboration of TCER would be most valuable.**

4. **The Global Strategy, as all design documents of the HPAI work, needs to indicate means of measuring progress toward its goals. A serious logframe exercise would be beneficial, and indicators for understanding success or failure as well as suggested means of measurement are essential. This might be achieved through a facilitated exercise with a planning and logframe expert.**

Many factors have had a role in the emergence, spread and resistance to control of HPAI, including for example increasing incomes and demand for livestock products, rapid urbanization, density of peri-urban livestock, marketing systems, and cultural practices.

5. **FAO needs to focus sufficient resources in both the Global Strategy and the Global Programme on better understanding these factors and developing specific strategies and policy recommendations to address them, as they will be a key element in achieving success with the return to 'normal' after the HPAI crisis. This work should be done with leadership from AGAL.**

B. Management, management structures and ECTAD

The current management structure of the FAO HPAI response is overwhelmingly centred on disease control, with other activities (production, socio-economic, trade, etc.) still having a peripheral role and subject to priorities of the animal health emphasis of the structure. The long term view of HPAI espoused by the Global Strategy implies increasing emphasis with time on non-veterinary issues.

6. **Starting with an in-depth re-examination of the <u>functions</u> required for FAO's HPAI efforts, FAO will need to renew the management structure of its HPAI response along the lines described below and in Section III.6.F, in order to incorporate the non-animal health aspects into the structure on an equal footing with animal health and emergency response work, and to strengthen the existing management arrangements in areas where they have been inadequate**

On the operational side, FAO has been running primarily the emergency response campaign in responding to HPAI outbreaks. There has been a move recently to increase attention to a longer horizon campaign which includes greater attention to prevention and capacity to respond. This evolution has been in response to the expanding threat of HPAI as it spreads further around the globe. While FAO will need to maintain its activities in emergency response to HPAI, at the same time it should continue to expand its work on the longer term strategy of planned, focused, country level preparedness, contingency planning and increasing the robustness of the poultry sector.

Considering FAO's position today in HPAI, its role, achievements and long term commitments; looking at its current action in transboundary animal diseases and the high expectations placed on it; measuring the efforts it needs to invest to succeed in its coordination and technical assistance roles and responsibilities; and not forgetting the much needed further funding and fundraising efforts: **a new super-structure needs to be created to carry out the "job at hand"**, which can be divided into the following categories (see a suggested organigram in Section III.6.F).

1. **Early Warning:** Intelligence gathering, early warning, guidelines for prediction and prevention, research and information sharing.
2. **Emergency Response:** Rapid response, crisis management, interventions and support, emergency funds management
3. **Provision of Veterinary Expertise:** Technical mastery, expertise and reference, policy development, central focal point for veterinary matters, knowledge sharing as well as technical representation; management of decentralised units/staff.
4. **Non-emergency activities in support of disease control:**
   - Non-veterinary approaches for long-term disease containment, control and eradication to supplement/complement where veterinary solutions have failed or been inadequate;
   - Post emergency support for rehabilitation of livelihoods and return to development for those who have been seriously affected;
   - Longer term development issues related to control of epizootics: institutional strengthening, capacity building and preparedness activities; strengthening of veterinary services; rethinking/restructuring of poultry sector; adjustments to marketing and trade policies; etc.

   This function with time will take on proportionately greater importance in HPAI-related activities and will include input from several FAO departments and divisions.

7. To maximize the efficiency and effectiveness in FAO, these different functions ultimately will need vision, strategy, coordination and high level management. This must include optimal management of existing skills and competence, management of material resources, decentralization management, corporate support services, high level representation, communication and fundraising. **It is recommended that this should be the responsibility of an <u>HPAI Coordination Unit</u>** under the leadership of an **HPAI Director at D2 level.** It will require the creation of an *ad hoc* position, funded with extra-budgetary funds, possibly in TCD (rather than a technical department) to allow access to technical divisions across departments. The Coordination Unit should be small, with no more than 3-4 staff in addition to the director. **ECTAD would continue to function similarly to its current situation** for emergency response**,** under the coordination of the HPAI Director (see suggested structure in Figure 6, Section III.6.F).

Evolution towards this future structure should come in two distinct stages, the first one to consolidate and accompany the consolidation of the present ECTAD and the second is to migrate the FAO HPAI effort towards a different and new institutional structure, leaner, decentralized and functioning in an organization model of a type similar to that described above. The two stages should be carried out as follows:

Consolidation

8. After a period of fluctuation and uncertainty, ECTAD is being consolidated at the management, systemic and procedural level, and plans to consolidate regional presence through decentralised units is underway as well. The recent ECTAD team meetings were a positive step in this process. **This work should continue and be supported but also be given a clear time frame to achieve that consolidation**. Meanwhile no major structural changes should happen in the short run as that will diminish the positive effects of the consolidation taking place this year. This consolidation process should include the following (see greater detail in Section III.6.F):
   a. Develop and consolidate a **strategy and a plan of action for ECTAD** today

b. Conduct a "talent review" within ECTAD **to determine existing profiles and skills**
c. Invest more effort on the internal front to, **better managing staff and their expectations**
d. Put accent on FAO's corporate identity for staff to **develop a sense of belonging to FAO**
e. Better integrate **the added value of EMPRES and GLEWS** in the Global Strategy
f. **The Oversight Committee must take on full responsibility** for the consolidation of ECTAD
g. Apply **'first among equals' concept of shared accountability but single leader** to the Directors of AGA & TCE
h. **Use external management consultants as resource** to accompany the consolidation process

Migration

9. Once the consolidation is done successfully, and taking into consideration the immensity of the job at hand, **ECTAD should migrate to the new coordination structure which is able to accommodate necessary change**, regrouping functions and responsibilities along new work categories and placing a Director (at D2 level but outside the FAO Regular Programme structure and on extra-budgetary funds) to head the new organization. This transformation process should include the following (see greater detail in Section III.6.F):
   a. **ECTAD must have a clear time frame** to migrate to the new and lighter structure.
   b. **Strengthen the decentralised structure** in line with the Global Strategy
   c. **Establish a decision making cascade system** clearly delegating downwards where possible
   d. Develop **a clear strategy for fundraising** for the global strategy and the new structure
   e. The transformation process **should be accompanied by external consultant resources**

C. Prioritising

At the global level, neither the Strategy nor the Programme indicate priorities or rationale for targeting one or the other of the poultry production sectors 1, 2, 3 or 4, though each sector has its own role in the HPAI crisis.

10. **FAO needs to have a clear position with regard to its own interventions which articulates the reasons for targeting or not targeting each of the sectors. Governments of affected countries in many cases have different priorities and FAO needs a clear rationale for its approach in relation to its mandate.**

In country assistance, the approach of FAO to prioritizing resource use following country requests is unclear. The current system seems to design the response without regard for costs, then cost out the response, then seek donor funds. There are at least two main problems with this: there can be no major response until donor funds are mobilized, and there is little efficiency of allocation or optimization of impact in this way of doing things. Prioritisation of countries for intervention did not appear to be as effective as it should be, given that not all interventions are equally efficient. For example, generalized criteria for resource need on the basis of type of intervention could be:

- related to risk of spread of virus (greater risk = greater need for rapid mobilization of human. financial and technical resources)
- related to national technical capacity (greater capacity = more efficient use of technical resources, reduced need for resources)

11. **Clear criteria need to be set for deciding on priorities for country assistance in the HPAI campaign: what concentration of which resources are to be used for which activities. In collaboration with the national and regional FAO representations, other UN agencies and OIE, FAO/ECTAD needs to improve the existing system for categorising countries that are at greatest danger of new outbreaks and where there is a risk that the disease would become endemic, and become an international threat. Categorization should also be according to the**

amount and the type of resources that would be required in case of an HPAI outbreak. FAO needs to maintain a dynamically updated priority list of countries that will need a major input if there is an HPAI outbreak to improve the speed of response.

12. **The Global Strategy should focus on ensuring that resources are provided to achieve ongoing support for the governments of high priority countries (at the time of this report, these were Egypt, Indonesia, Nigeria and possibly Bangladesh) deemed to be critical countries for the control of HPAI.**

13. **For each country, a brief contingency plan should be prepared to enable a fast response in case an outbreak occurs. Ensure that each FAO regional and national representation has full awareness and ownership of this plan ahead of time, to be able to activate it rapidly in the event of HPAI being diagnosed in that country.**

14. **In making recommendations on country interventions, regional strategic frameworks should avoid prescribing specific tactics for countries, but instead, as has been done in Asia, present a portfolio of options that are consistent with the components of the comprehensive response under the Global Strategy.**

D. Communication and Information Sharing

Communication has a vital role to play in a Global Strategy and Programme for response to a disease threat such as avian influenza, and as such needs to be integrated with technical components of a response strategy. Four key roles of communications that should be addressed as part of FAO's response to the HPAI crisis are:

- policy advocacy
- programme communication, particularly for awareness and behaviour change
- social mobilization and partner building, and;
- capacity building in communication.

15. **It is recommended that FAO press forwards with the development of an HPAI Communications Team to focus more on policy advocacy, programme communication, social mobilization, and communication capacity building with the goal of controlling HPAI . There should be a clearer distinction between the public good objectives of the information activities of FAO and the HPAI communication activities.**

Provision of key information and development of platforms for the exchange of information has been a positive contribution of FAO, in particular through the OFFLU network. The information sharing activities of these platforms could expand beyond the current mainly technical content.

16. **As part of an information strategy, FAO together with OIE and WHO should take the lead in coordinating and launching a platform for the exchange of information not only on HPAI control strategies and programmes, but also on donor commitments and government policies and positions.**

E. Funding and independence

The flood of money coming in for the HPAI effort, especially as of late-2005 following the arrival of the disease in Europe, placed a major strain on the capacity of the organisational structures to function effectively.

17. **During the course of such a crisis, FAO, as with other partners, should be realistic with donors as to its delivery capacity and counsel donors on the strengths of a measured response, on occasion delaying acceptance of funds where expectations are unrealistic.**

18. **At the same time, it needs to be accepted by all that, in an emergency, there is a greater level of inefficiency than in more planned situations. FAO needs to continue to develop standby contractual arrangements with suitable staff for all types of sudden onset emergency, in particular animal health and plant protection emergencies which require especially narrow technical expertise.**

Donor directives: donors fund for their own interests (e.g. Europe: to get protection from HPAI in countries nearby, the US: to keep HPAI away from the US) and according to political pressures in their own country. FAO will not say no to an offer of funds. This can lead to less than optimal use of resources. As an example, does FAO believe there should be such an exclusive focus of resources on HPAI, among all the animal health and zoonosis issues around?

19. **FAO needs to have its own set of priorities beyond the availability of money, and be willing to challenge donor priorities when they are not coherent with FAO's vision of the best way to do the work. FAO needs to provide guidelines and convincing, technically sound arguments seeking to orient donors with regard to use of their funds in the animal health domain (and all the other development issues)**.

20. **In support of requests for funding, it would also be important for FAO to clarify how its programme for avian influenza addresses the UN Millennium Development Goals, an important element in the decision-making of many donors.**

The SFERA fund is an alternative allowing FAO to intervene rapidly in crisis situations following its own technical judgement, as happened following unexpected appearance of HPAI in the Near East and in Africa. Donors wishing to enable FAO to prioritize support where and when needed without being hindered by unrelated geo-political issues and donor preferences should contribute through this mechanism. Ensuring continuous donor support to the SFERA fund is crucial if FAO/ECTAD is to keep that "freedom" in intervening rapidly in priority countries and those at risk.

21. **The RTE highly recommends that donors use the SFERA fund to the maximum amount possible. A precursor evaluation to the RTE which focused on SFERA also strongly recommended to donors that they carry on providing a maximum of funding through this mechanism, in particular for regional and country work. As a corollary however, the RTE highlights the importance for FAO to continue to build the confidence of donors in its technical expertise and efficiency and effectiveness in using these funds.**

F. Governance at national and international level

The rapid containment and subsequent management model of disease control has failed in at least one Asian country that is receiving heavy FAO assistance (Indonesia) and is risking failure in at least two African countries (Egypt and Nigeria) due to weak or difficult governance. FAO needs to continue efforts to better understand and address the complex issues surrounding country-level governance of HPAI response and country strategies, and develop approaches to achieve success even in these difficult conditions.

22. **In assisting member countries where governance is an issue, FAO's strategy needs to explicitly confront obstacles and possible pragmatic 'work-arounds' (which may not be to everyone's liking) in order to do a better job responding to HPAI. Where this involves facilitating countries' own efforts at improving governance, FAO should not hesitate to bring**

in the assistance of a sister agency or outside expertise that has more specific experience and capacity in this area as part of its effort.

International governance of an emergency like HPAI is a difficult issue to approach without getting sidelined by the complexities of institutional, global and regional politics. But the initial difficulties with other institutions with overlapping responsibilities, and continued issues on division of tasks among stakeholders lead to the conclusion that FAO could do better at studying and understanding the international governance issues in HPAI response.

23. **FAO and its partners must pay more attention to understanding and addressing issues of international governance and institutional architecture pertinent to the control of trans-boundary animal diseases and in particular HPAI.**

24. **More specifically, FAO and OIE must clearly identify their specific individual and joint roles in combating HPAI, which should be outlined and agreed upon in the Global Strategy and the proposed Global Programme to control HPAI, as the current confusion and disagreement is an impediment to effective joint work.**

The evaluation heard frequent references to tensions between FAO and OIE at the higher levels relating to difficulties in agreeing on the limits of the two agencies' respective roles in the HPAI crisis and more generally in international animal health activities as a whole. This evaluation was not able to go deeply into what is also a political issue dependent on decision of the member countries of the two institutions with regard to clarifying roles and limits of the mandates of each.

25. **Based on the experience with the HPAI response reviewed here, this evaluation strongly recommends that a thorough high-level review of the international architecture for animal health and transboundary animal diseases be carried out in the near future in an effort to rationalise and improve efficiency of the division of labour and responsibility between FAO, OIE and other actors in this field when facing this type of zoonotic crisis.**

G. FAO and research

FAO's role, as defined in its mandate and especially as redefined in the latest round of reforms launched in 2005, is that of "knowledge management organization," rather than creator of new scientific knowledge. In the view of the evaluation, it is not within the Organization's interest nor mandate to develop such research capacity.

26. **FAO/ECTAD should be careful to distinguish the results of its own investigative work in the context of field activities and strategy development as informal applied research, not formal research with rigorous testing of results. For that, it must (continue to) partner with research institutes, universities, etc. It should clearly define its role in identifying or commissioning research, and the resources it is willing to commit to this.**

27. **FAO has a major role to play (better than it is doing at the moment) in managing, using and making available to others the knowledge emerging from research, rather than in generating it. FAO should serve as identifier and disseminator of valid and useful research results pertinent to making policy decisions in dealing with HPAI.**

28. **The HPAI socio-economics programme should develop a clear strategy to support research and build capacity of economics and social science programmes working on HPAI-related issues in targeted countries. Work should be encouraged with in-country partner institutions where possible.**

29. **Collaborative work with economists and social scientists in other FAO departments should also be encouraged. Looking outwards, UNSIC encourages the linkages between IFPRI and World Bank, of which FAO has recently become a part. FAO should work to ensure that post-HPAI-crisis socio-economic rehabilitation is addressed in the research work of those institutions.**

H. Vaccination

Vaccination has been strongly recommended by FAO as a tool in the fight to control and eradicate the HPAI virus, although it has been successfully avoided in HPAI control programmes in some infected countries that have a well-structured and active veterinary service (for example, Hong Kong SAR, Japan, and Thailand). Missing from FAO's recommendation is a set of guidelines as to when and where vaccination is appropriate, and how it could be used with other tools including stamping out, targeted slaughter, market and movement controls, and restructuring.

30. **The Global Strategy should position responsibility for vaccination programme design largely at the country level (with outside advice if desired), including major decisions regarding when and if vaccination is appropriate. The public good nature of animal health means that to some degree this will also need to be tempered by regional priorities and constraints. A more clearly worded set of guidelines for vaccination is needed that directs attention to three levels of recommended use: newly infected, sporadically infected, and endemic countries.**

31. **FAO needs to present vaccination as one of several tools to use concurrently, and to be used only where there is a well-funded and responsive veterinary service with and appropriate levels of geographic coverage.**

I. Some general issues for AGA and FAO

The global public goods issue: Veterinary public health is a topic that is paid little attention in most developing countries, and this had important effects on slowing the ability to counter HPAI. Response has generally ignored the policy dimension of veterinary public health, although veterinary associations are calling out for more public debate and dialogue. The HPAI crisis illustrates the **global public good** nature of strengthened national capacities and policies in veterinary public health, and donors should be made (more) aware that it is in their direct interest to support this strengthening.

FAO could do more to encourage debate and facilitate policy formulation dialogue through workshops and conferences. Important discussion topics include:

- how to increase numbers of veterinary and para-veterinary staff
- capacity of veterinary institutions to regulate pharmaceuticals (e.g. HPAI vaccine) and to enforce standards
- training of village level community animal health workers (CAHWs) or para-vets
- question of privatization of veterinary services where appropriate to allow village level workers to earn income from vaccination

32. **FAO needs to promote greater country level and international dialogue on the strengthening of veterinary public health policy and its direct impact on global public goods as exemplified by crises like HPAI.**

Weakness of FAO bureaucratic processes in emergencies: Despite (or possibly because of) the presence of a multiplicity of structures such as ECTAD, CMC, EMPRES, GLEWS, etc., there still are unacceptable bottle necks in the current system that result in delays and inefficiencies in FAO's HPAI response. Among others:

- There are often delays of several months to recruit short term personnel
- Budget approval often takes very long
- Micromanagement of funds for fear of weak government infrastructure takes time and other resources away from project response
- Full-time staff are taken off other work to be parachuted in for brief duty to cover for as yet unprocessed or unapproved new short term staff
- Short term staff hired under FAO's '11 month' contract limit leave soon after appointment if they find 12 month renewable posts elsewhere

33. FAO needs to improve its own processes and mechanisms for rapid response in the context of protracted emergencies, of which HPAI is a prime example.

Emergency versus regular programme: Attention to HPAI was reported by many interviewees to have shifted the resources of permanent staff away from other transboundary animal diseases (CSF, FMD, Rift Valley Fever), with resulting loss of programme activities in these other areas. FAO may have had capacity to do both, but times are changing, nature of response is changing, donor interests are changing, and it is sometimes hard to reconcile the two very different types of activities under one roof (especially in one division).

34. FAO needs to define an institutional policy indicating how resources should be allocated between addressing animal health (or other) emergencies, other regular programme thematic areas, or both. In the case of the HPAI crisis, FAO needs to assess what loss of regular programme activity has resulted from the increased focus on HPAI and how work on other important TADs may have suffered.