SECOND REAL TIME EVALUATION OF FAO's WORK ON HIGHLY PATHOGENIC AVIAN INFLUENZA

REGIONAL REPORT: ECTAD-RAP

4 – 6 NOVEMBER 2009

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Acknowledgements

The evaluation team is very grateful to all the FAO staff and partners encountered, and particularly to the ECTAD-RAP Regional Manager, Dr Subhash Morzaria and his staff, for their candid comments on the regional avian influenza programme.

I. INTRODUCTION

Early in 2004, FAO initiated country-specific, as well as sub-regional, TCPs to provide: a) immediate assistance to -affected countries, and b) to establish sub-regional networks for surveillance and diagnosis to improve disease diagnosis, and the collection and analysis of epidemiological data. With these limited funds, the Organization held several expert meetings and consultations with the aim of developing guiding principles for HPAI surveillance and diagnostic networks in the region. In 2005, and following the spread of HPAI across Asia to Europe and then to the African continent, funds started to flow in for emergency responses and capacity building, but mainly for country level activities.

The ECTAD Regional Unit for Asia ("ECTAD-RAP") was officially established in December 2005 at the FAO Regional Office for Asia and the Pacific (RAP) with ToRs matching those of ECTAD at FAO headquarters. The new unit was given major responsibility for regional work with the rational that being closer to the field would allow a more timely assistance and provision of support to forty three HPAI-affected or at risk countries in the Asia Pacific region. The First RTE considered being too early to assess the work of ECTAD-RAP, and just noted that this unit was in the "*process of taking over the responsibility of coordinating [sub-regional HPAI surveillance and diagnostic] networks [established in Southeast Asia, East Asia, and South Asia]*".

Prof. Brian Perry, Dr Trevor Ellis, Mr. Shashi Kapur and Mr. Carlos Tarazona visited the ECTAD-RAP office from 4 – 6 November as part of the Second Real Time Evaluation of FAO's Work on Highly Pathogenic Avian Influenza. In line with the evaluation's terms of reference and the inception report, the focus of the visit was to evaluate the relevance, efficiency, effectiveness, sustainability and likely impact of the assistance provided by ECTAD-RAP in the past few years. Since the contribution of ECTAD-RAP to national programmes has been captured in the country reports, the evaluation team focussed its assessment on the regional activities conducted. The office of the Regional Manager prepared a programme of meetings with key people (see Annex 1 for the complete list), and made logistical arrangements for the mission as well as provided the team with documentation and materials developed by ECTAD-RAP since 2005 (see annex 2).

II. OVERVIEW OF ACTIVITIES

With a portfolio of over US$ 152 million in the period 2004-09, the Asia region is the main recipient of avian influenza grants to date. Funding levels reached their peak in 2007 and although they have decreased the levels of delivery in the past two years have remained higher than at the start of the response (see table below).

Table 1. HPAI Funding allocation for Asia

Approval Year	Total Budget (DWH)	Contribution received
2004 Total	$5,693,275	$5,692,743
2005 Total	$15,959,430	$15,915,576
2006 Total	$36,115,810	$47,573,214
2007 Total	$42,784,887	$17,232,104
2008 Total	$20,138,588	$7,628,277
2009 Total	$32,003,079	$18,436,440
Grand Total	**$152,695,069**	**$112,478,354**

Source: HPAI Global Programme: Operational Briefing Note, October 2009

ECTAD-RAP has reportedly provided backstopping services to most HPAI projects (over 60) in the region and as of October 2009 it had directly supported the implementation of 24 regional and national projects with a budget allocation of US$ 10 million (see the full list of HPAI projects in annex 3). In the period 2007-April 2009 it has organized or supported 26 HPAI-related workshops and events (see full list in annex 4). The size and type of activities conducted in support of regional prevention and control of HPAI H5N1 can be broadly differentiated in three stages:

The Initial Response to HPAI H5N1 in the Region (2004-05): In this period, avian influenza activities in Asia were handled by the Animal Health and Production Group in RAP. As reported by the First RTE, "*three sub-regional HPAI surveillance and diagnostic networks were established to assisting member governments in Asia to put in place effective, harmonised frameworks and policies to support enhanced epidemiological surveillance and diagnostic capability*". The evaluation went on to say that "*[TCP] projects have ended [in early 2006] and new funding will be necessary to maintain network activities*."

The strengthening of the Regional Response to Avian Influenza (2006-08): In early 2006 FAO mobilized extra-budgetary funds for regional work (particularly from the Asian

Development Bank), which allowed the establishment of ECTAD-RAP and the subsequent appointment of a Regional Manager in January 2006. A Regional Strategy for Asia for the period 2006-08 was also developed. In this period, the newly formed unit largely focussed on backstopping national projects while mobilizing funds for getting the regional strategy underway. In late 2007, the staffing of the regional unit was at its peak with nine (two of them part-time) international technical staff and four operations officers fully dedicated to HPAI matters based in Bangkok. The 2006 Regional Strategy had called for 9 full time international [technical] positions based in Bangkok, 11 full time international [technical] positions based throughout the region and 9 short term specialists. The short-term nature of most of the funding received and the emergency situation of affected countries (which diverted attention from senior staff) were acknowledged as reasons for not having put a full team in place. The shortage of staff during this period was mainly felt at field level in countries such as Cambodia, which reportedly experienced less in the way of backstopping/oversight when compared to countries such as Indonesia or Vietnam. In late 2008, the operational branch of ECTAD-RAP was re-organized following the arrival of an International Senior Emergency Coordinator and a Senior Operations Officer in order to mirror the ECTAD HQ structure.

The Stabilization of Avian Influenza and focus on other Emerging infectious diseases, EIDs (2009-present): In spite of continuous shortage of staff[1], ECTAD-RAP managed to continue to mobilize resources, organize regional workshops and training, and provide technical backstopping to national HPAI projects.

Currently ECTAD-RAP is headed by a regional manager, and in the past few months it has filled in various senior coordinating staff positions: These include: Senior Regional Emergency Coordinator, Senior Operations Officer, Regional Project Officer, Animal Health Officer, Regional Veterinary Epidemiologist, Regional Coordinator for Wildlife Avian Influenza, Regional Public Private Partnership Coordinator, and Advocacy and Communication Coordinator. With a view of increasing long-term sustainability and move towards building regional capacity, recent recruitments have mainly been from countries in the region at different levels.

Another distinctive feature of this period has been the greater engagement with regional organizations (ASEAN, SAARC) and donors (EU, USAID, ADB) and the implementation of operations not only on HPAI but also on other animal diseases. Between February and July 2009 a second strategy ("The FAO Regional Strategy for HPAI and other EIDs of animals in Asia and the Pacific") was prepared through a consultative process that involved a regional meeting in Pattaya (February 2009), regional consultations with country teams (June-July 2009) and consultations with regional organizations (ASEAN, OIE, donors) and country CVOs. The regional strategy considers the evolving disease situation, characterized by the spread of HPAI to South Asia, the establishment of endemic zones, the need for long term approaches and stronger regional co-operation as well as the emergence of new diseases. Besides a regional focus on the Gangetic Plains, the Great Mekong sub-region and Indonesia, the strategy advocates greater engagement with countries such as China and India for HPAI prevention and control and "an expansion of attention from HPAI to include other influenza viruses and EIDs".

An issue that was brought to the attention of the evaluation team was the need to strengthen the interface between ECTAD-RAP and the Animal Health and Production Group in RAP. There is clearly a need to have a strong link between the regular development programme of

[1] In March 2009 ECTAD-RAP only had seven international technical staff and four full time operations officers to implement the regional programme and support the country programmes.

the region and that carried out with extra-budgetary resources mainly by ECTAD. The epidemiologist in RAP with a major role in GF TAD animal health projects is a member of ECTAD who works in the field, is given specific country responsibilities, and has played a very judicious role of ensuring at least good communications between the ECTAD and the GF TADs framework, the regional control of FMD, and other longer term and established initiatives in the region. This interaction has been satisfactory and should be substantially enhanced over time.

III. ROLES, RESPONSIBILITIES AND IMPACTS IN THE REGION

Roles and responsibilities:

The ECTAD-RAP office plays a variety of different roles within the region and at country level. These have been summarised by the office itself as follows.

At regional level:
- Maintain a functional Regional ECTAD and mobilize resources;
- Develop regional strategies on HPAI, TADs and EIDs;
- Implement regional projects; and,
- Coordinate partners (international, regional, INGOs and donors)

At country level:
- Assist in preparation of proposals and mobilization of resources;
- Provide technical and operational backstopping;
- Promote inter-country coordination;
- Provide operational training;
- Quality clearance and clearance of reports;
- Recruitment; and,
- Procurement.

Discussions on the **ECTAD functions** and structure (in terms of staffing and location) over the past few years have been presented in the previous section. Mobilization of resources by ECTAD-RAP in co-ordination with ECTAD Rome and country offices had reached US$ 179 million by November 2009. This includes 87 projects out of which 38 were still ongoing. Over 90% were OSRO and TCP emergency projects. Major country programmes in the region were Indonesia (US$ 50 million) and Vietnam (US$ 18m). Funding for regional activities stood at around US$ 30m.

As indicated earlier the ECTAD-RAP unit had produced **a regional strategy** in 2006 and has recently developed an updated Regional Strategy for highly pathogenic avian influenza and other emerging infectious diseases of animals in Asia and the Pacific for the period 2009-2015. The revised strategy has developed a vision, a goal and a strategy based on two major "thrusts". These are to a) continue to support measures specifically addressing HPAI prevention and control, and b) to broaden "appropriate components" of the support to embrace the needs for other EIDs that are of international importance or of high national priority. The revised regional strategy has identified planned outcomes to meet four key objectives. The document also goes on to list indicators for the assessment of progress against the planned outcomes. This is a very progressive development, and the indicators will be valuable tools for future real time evaluations.

Clearly the strategic approach for HPAI prevention and control envisaged in the Regional Strategy focus on regional perspectives but within them, the following have in the view of the evaluation team the greatest relevance:

a) Identification of regional epidemiological hotspots. The strategic designation of focus areas within the region (Indonesia, the Gangetic plain, and the Greater Mekong sub-region) that are epidemiologically distinct, or that demand different approaches in preparedness and response, is highly appropriate. The justification for these groupings is reported by the office to include animal/poultry population, production system, market and trade between/among the countries, and shared international borders. It is unclear however what the particular characteristics that make them mutually exclusive are.
b) South Asia cross border project. This is a well led and constructive initiative dissecting out the pressures driving poultry movements across borders in the South Asian region, through market and values chain analysis and other tools, and looking for incentives for trade in healthy poultry products.
c) Greater Mekong sub region focus. This looks at the dynamics between production and consumption clusters and infection risks through potential movement corridors in the closely knit cluster of countries in South East Asia and China. Its activities appear to extend well beyond the Mekong, and include the Red River basin. This seems a highly valuable focus on an area that includes both endemic and high risk countries; the RTE team also noted the role played by virus characterization exercises in defining the need for a sub regional focus.

In the past few years ECTAD-RAP has implemented a number of regional projects in the following thematic areas: epidemiology, regional surveillance and laboratory networks, HPAI in wildlife, advocating and communicating for HPAI prevention and control, Public-Private Partnerships and, more recently, surveillance for novel influenza A subtype H1N1 viruses. Capacity building[2] has been a major feature in all these activities; over 40,000 people are considered to have benefited from capacity building activities in the Asia region between January 2008 and September 2009. These have been carried out in co-ordination with country and HQ level staff. Each project in the region has dedicated technical and operational staff at ECTAD-RAP, ECTAD HQ and in the field. Other forums for discussion and co-ordination include stakeholders workshops[3] (such as the USAID partnership meetings), annual regional/strategic ECTAD meetings, and internal venues such as the weekly ECTAD-RAP meetings, the twice weekly ECTAD Management and Operations meetings with HQ, the monthly brief with ADG of RAP, backstopping missions to countries and (de-) briefings with consultants. These various thematic activities have been supported by several donors, including USAID, the Asian Development Bank and Japan.

An assessment of the activities under all regional projects supported by ADB, Japan, Sweden, FAO (TCP), and USAID is provided below.

Epidemiology capacity building

This activity has been supported by all the regional projects. A Regional Epidemiology Network within ECTAD-RAP has been established to foster the development of

[2] :ECTAD-RAP has been gathering information since January 2008 and on a quarterly basis relating to capacity building exercises (mainly training, fellowships and study tours) conducted in the region.
[3] 15 regional workshops with the participation of FAO and partner organizations were conducted between November 2008 and October 2009.

epidemiological expertise within the region. The regional epidemiological network has been in place since 2004. FAO has been facilitating epidemiological information sharing through the AI-Network-Asia email circulation list starting in 2006. Recently, a regional framework for molecular epidemiology of HPAI was formulated and agreed upon by the member countries in the region. Other activities included organizing training workshop on the Computer Software for Animal Disease Surveillance using several shareware available online and promote the used of TADinfo system in some countries, which lack computerized animal health information systems.

The FETPV concept developed from FETP, which is a well established global public health programme. Other related national efforts include AVET in the Philippines and in Viet Nam. Thailand FETP is the host of the Regional FETPV through a formal collaboration with the Thailand Department of Livestock Development (DLD) and the Ministry of Public Health. In addition, capacity building for emergency preparedness and response for veterinarians and community animal health workers has been conducted, including training on outbreak investigation. This has been undertaken through FETPV, a number of regional workshops and by directly supporting national training courses. Other regional and national initiatives for enhancing emergency preparedness and response include the development of harmonized approaches and Standard Operating Procedures based on international standards and country experiences. The concept is to build a training programme appropriate for the needs of the countries of the region. In addition there is some formal undergraduate and graduate training in epidemiology at universities in Asia, but this is very limited and clearly inadequate for the demands of the region. The ECTAD-RAP has developed a programme for an initial FETPV cohort in Thailand, in collaboration with DLD, and has ASEAN interest and approval.

The Regional FETPV is a user-driven regional training programme intended to improve early detection and early response to animal health and related public health emergencies by providing practical knowledge of epidemiological concepts, outbreak investigation, disease surveillance and communication. The curriculum stresses both zoonotic as well as animal-specific diseases. The first group of trainees enrolled in the FETPV programme have come from Thailand, Myanmar, Indonesia and China.

Regional surveillance and laboratory networks

This network has two components, one on epidemiology (surveillance) and one on laboratory functions. These networks form part of the Southeast Asia Regional HPAI Surveillance and Laboratory Network which contribute on a daily, weekly and monthly basis to EMPRES-i. An information platform (ECTAD Asia) has been set up in collaboration with the FAO ECTAD Office in China as a discussion forum for disease tracking information and as a repository for HPAI related documents. The laboratory network is more ambitious, and sets out to not only build capacity, but also ensure adequate standards through proficiency testing processes and protocols. More recently, and in collaboration with OFFLU, AAHL in Geelong and other partners, the ECTAD is initiating a molecular epidemiology project which aims to gain a much greater insight into the evolving patterns of the influenza viruses in the region.

ECTAD-RAP had a major coordination role in strengthening capacity in laboratory diagnosis in Cambodia, China, Laos, Myanmar and Vietnam. This role was extended to providing enhanced disease control capacity for HPAI by strengthening the networking for sharing field and laboratory information on HPAI through the Southeast Asia Regional HPAI Surveillance and Laboratory Network project, which is coordinated through the ECTAD-RAP and includes

8 ASEAN Countries (Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand and Vietnam). This initially involved nominating country focal points for informal communication and involving the International Reference Laboratory for the region at CSIRO-AAHL, Geelong. A consultative meeting for a Regional Laboratory Network for HPAI Diagnosis in Southeast Asia was held in Bangkok on 23-24 June 2009 including representatives from major partners (FAO, OIE, AAHL, the ASEAN Reference Laboratory - VRI Malaysia, NIAH Thailand, USDA and OFFLU). A follow up regional workshop and training was jointly organized with OIE in Bangkok on 28-30 September 2009.
More recently, and in collaboration with OFFLU, AAHL in Geelong and other partners, the ECTAD is initiating a molecular epidemiology project which aims to gain a much greater insight into the evolving patterns of the influenza viruses in the region.).

Progress on avian influenza disease diagnosis capacity in the involved ASEAN countries has been demonstrated with national laboratories in all 8 countries now having the ability to conduct serological testing by HI test and virus detection by avian influenza Matrix and H5 specific RT-PCR tests. These countries also have access to a laboratory for virus isolation in chicken embryos or MDCK cell culture so further virus characterisation can be undertaken, including molecular characterization by gene sequencing, either in-country of by submission to international influenza reference laboratories. Four countries have a national laboratory with ability to conduct AI virus gene sequencing; it has been proposed that other countries acquire gene-sequencing equipment. This needs to be considered carefully, especially if they have access to gene sequencing at other facilities within the country, as this equipment is expensive to purchase and maintain, and requires well-trained dedicated staff to get accurate and consistent results.

The Regional Laboratory Network (RLN) was established in July 2004 and has been further strengthened after the consultative meetings among ASEAN member countries and key international partners including AAHL, FAO, OIE and USDA in June and September 2009 with the expected outcomes of ensuring international standards are achieved with testing; biosecurity and biosafety procedures associated with sample collection, shipment and testing; sharing of materials and information between laboratories and international bodies such as OIE and GLEWS; and sustainable capacity and activity in these laboratories. A programme of regional team visits, including staff from the international (AAHL) and regional (VRI Malaysia) reference laboratories with the FAO technical specialist, has commenced. These visits will foster network team building and look at technical issues such as laboratory biosecurity, Quality Assurance and proficiency testing, test troubleshooting, and facilitate provision of reference reagents and in-country training.

ECTAD-RAP has promoted and facilitated sharing of virus isolates with international reference laboratories and OFFLU to enhance molecular epidemiological analysis, and to provide information for a better understanding of virus persistence and spread over time. This analysis also assists in determining if the currently used diagnostic reagents and vaccines are appropriate for the viruses circulating in the region.

HPAI in wildlife species in Asia

ECTAD Rome has an overarching programme in wildlife influenza surveillance, involving 30 countries globally. This includes both migration and disease ecology studies.

In the Asia region, there are ongoing activities in China, Mongolia, Myanmar, Vietnam, Cambodia, Korea, Philippines, Indonesia, Thailand, Bangladesh and India largely funded by country projects. The regional programme has a vision to build more generic wildlife knowledge and skills capacity to support regional capacity building, including understanding of the role of bats in the ecology of Hendra, Nipah and Ebola Reston, and the socioeconomics of wildlife trade issues in the region.

Recognising the importance of the human-livestock-wildlife interactions with respect to H5N1 HPAI and other recently emerging infectious disease, ECTAD has a stated policy of integrating wildlife issues into prevention, control and response to transboundary animal diseases. Since 2003, with the death of the large number of wild birds and extensive geographic expansion of H5N1 HPAI, there has been major interest in investigating the role of wild birds in persistence and spread of this infection. FAO has been a major partner in establishing collaboration and networks to promote, coordinate, finance, technically support and implement activities to address this question.

Activities conducted include training and capacity building for over 1,000 people from over 100 countries in wild bird biology, ecology and monitoring and surveillance techniques, disease epidemiology, sample collection and preservation. A number of technical manuals to support this training have been produced in 12 languages. Wild bird avian influenza surveillance is conducted in over 30 countries worldwide, including 8 countries in the Asian region (China/Hong Kong, India, Korea, Myanmar, Indonesia, Japan, Kazakhstan and Mongolia). Wild bird migration and disease ecology projects along major migratory flyways in China, India, Kazakhstan and Mongolia are using satellite telemetry, other spatial and temporal analysis tools, as well as molecular epidemiology to study the relationship between wild bird habitat use, movements and HPAI disease outbreaks.

FAO has been a major partner in the establishment of the Scientific Task Force on Avian Influenza and Wild Birds and is a supporting partner in existing wild life networks and collaborated on multi-lateral environment agreements relating to wildlife and disease emergence. A regional wildlife coordinator post has been established at ECTAD-RAP since 2007 to coordinate wild life activities in the region and this position provides support to country level wild life surveillance, participates in regional wild bird surveillance activities, supports training for wild life surveillance and facilitates and participates in partnerships with NGO's and Universities conducting wild life studies in the region.

Advocating and communicating for HPAI prevention and control

The communication unit of ECTAD in Rome was established in 2007 and less than a year later a regional capacity was set up in Bangkok. Good communications are an essential component of regional disease control initiatives. This unit is responsible for coordinating ECTAD communications activities in the region, liaising with and harmonising activities with HQ ECTAD Communications Unit and providing support, guidance and backstopping to the different countries of the region, helping to develop communications packages, and drawing on the different experiences in the region and beyond. The unit has activities in capacity building, coordination, partnership development and advocacy. They aim to take a multisectoral, multidisciplinary, regional-cluster approach to communication and use monitoring and evaluation of communication activities to review and revise communication messages.

The evaluation team was informed of the valuable guidance provided by this unit in the development of communication activities in Cambodia and Indonesia. It also noted that the unit is small and has very limited resources. This has resulted in limited involvement in communications activities with the private sector and some other regional projects (cross-border projects, PPP, Biosecurity/Decontamination and Capacity Leadership projects). In its meeting with the evaluation team the Communications adviser outlined a very full programme of activities at ECTAD-RAP along the lines of the Regional Strategic Framework for Communication, but there was no indication that resources for full implementation were readily available.

Enhancing Public-Private Partnerships

The inter-regional Public Private Partnership (PPP) project (OSRO/INT/805/USA) operates in Egypt, Indonesia and Bangladesh; activities in the last two countries are regionally coordinated from Bangkok. The RTE team met with FAO staff engaged in this project in both Egypt and Bangladesh, and made a detailed assessment of PPP activities in those countries in the relevant country reports. The objective of the project is "the formation of a functional efficient and reliable animal health system led by official veterinary services and based on a strategic/integrated partnership". It is a short lived project, which also receives support from ECTAD Rome, which hopes to define (and strengthen) the roles of public and private stakeholders, build capacity, understand where there are duplications of responsibility, and enhance communication. It is a very broad and by all means relevant project, but while FAO is probably a good choice to facilitate such a process, it clearly has an uphill battle to overcome some of the traditional barriers between public and private sectors in livestock production and health.

Surveillance for novel influenza A subtype H1N1 viruses in pig and poultry populations

At the request of ASEAN, a new project (TCP/RAS/3211(E)) has been established within ECTAD Bangkok to provide emergency assistance for surveillance of novel influenza A subtype H1N1 viruses in pigs and poultry production sectors in high risk Southeast Asian countries. The goal is to promote better understanding of animal influenzas in the region and their significances at the human-animal health interface, to inform policy, to strengthen laboratory and epidemiology networks in the field of influenza viruses, and to strengthen emergency response capacities. An inception workshop for this project was held in September 2009. This is a small initiative that marks the broadening in scope of ECTAD Bangkok to other TADs, and building on infrastructures which have been provided by other existing and pre-existing HPAI projects in the region.

In carrying out the above activities ECTAD-RAP has devoted substantial time and efforts to coordinating its work with regional partners (see section below). With regards to activities at country level, ECTAD-RAP has reportedly assisted in the following:

Preparation of proposals and mobilization of resources:

Although ECTAD-RAP has contributed to (and lately revised and cleared) virtually every project proposal prepared in the region[4], its more tangible results have been in the form of raising funds for cross-border activities (e.g. project OSRO.RAS/701/USA) and for countries

[4] In 2009 this included 4 concept notes, 17 proposals for national projects, 4 for regional projects and 4 TCPs.

without national projects (such as Myanmar, Mongolia, China, DPR Korea, Sri Lanka, India, Bhutan and till recently Timor Leste and Bangladesh).

The case of Myanmar is a good example of how country-level activities conducted by ECTAD-RAP (through projects OSRO/RAS/602/JPN, OSRO/RAS/604/USA and OSRO/RAS/701/USA) were instrumental to develop a portfolio of national projects (OSRO/MYA/702/USA, OSRO/MYA/601/AUS, OSRO/MYA/801/WBK) to support the country response to avian influenza infection. The particular conditions of the country also favoured the development of an integrated avian influenza programme, with the above national projects directly contributing to components of the country's National Strategic Plan.

Project Title	**OSRO/MYA/702/USA**	**OSRO/MYA/801/WBK**	**OSRO/MYA/601/AUS**
Start Date	1st phase June 2006; 2nd phase February 2008; 3rd phase January 2009	April 2008	1st phase: July 2006 2nd phase: April 2009
Finish Date	December 2009	March 2011	March 2011
Budget USD	750,000 (1,750,000 for three phases)	1,315,353	650,000 (975,000 for two phases)
Component			
1	Strengthened cross-sectoral coordination at the national level	Strengthened surveillance capacity and systems, including improved mobility and capacity in the field	Surveillance, extension, outbreak investigation, rapid response
2	Strengthened capacity in HPAI disease surveillance and response in the field	HPAI Diagnostic Capacity is enhanced	Laboratory Support
3	Strengthened capacity in HPAI laboratory diagnosis	HPAI Outbreak Containment in Animals is improved	Strategy analysis and development
4	Enhanced risk management measures including biosecurity improvement among the high risk poultry population and selected live bird markets	Biosecurity among High Risk Poultry Populations Including Ducks and Quail is improved	Project Management and Coordination
5		Veterinary services are strengthened	

The resources mobilized have mainly been translated into personnel and procurement expenditures. As of October 2009 eight countries in the region had more than 10 staff members working for the HPAI programme, with Indonesia (81) and Vietnam (81) on the top. Procurement in the region has also increased from US$ 100,000 in 2006 to US$ 6.7m in 2009.

ECTAD-RAP is well positioned to continue mobilizing resources in partnership with recipient countries and regional organizations (such as ASEAN and SAARC). At the time of the evaluation team visit there were projects worth US$ 14 m in the pipeline (including US$ 11.2 m from the EU for a regional project with OIE, ASEAN and SAARC and US$ 3.6 m from the World Bank for projects in Cambodia, Bangladesh and Mongolia). ECTAD-RAP

has identified a number of funding opportunities for longer term financial sustainability of the programme. The key among these are from the recently launched USAID Emerging Pandemic Threats Programme, the forthcoming International Ministerial Conference on Avian and Pandemic Influenza in Viet Nam, the EU programme on Highly Pathogenic Emerging Infectious Disease Programme and the AusAID programme on EIDs.

Provision of technical and operational backstopping:

As indicated earlier every regional and country level project executed in the region has a responsible technical and operational officer in Bangkok (Kathmandu in the case of Bangladesh, Nepal, Sri Lanka and India). Although ECTAD-RAP has always maintained good communications with countries, they have not received the same level of support. Countries like Vietnam (with more than 20 visits by ECTAD-RAP technical staff between 2006-08[5]), Indonesia (15) and Myanmar (13) were visited more than Laos (10) or Cambodia (8). In the case of Vietnam and Indonesia, the greater attention was largely justified in view of the complexity of the disease situation. In the case of Myanmar, ECTAD-RAP was leading the provision of inputs to the Government as well as conducting fundraising with local donors, which justified the relatively high number of visits made. The evaluation team was informed that the limited number of staff at ECTAD-RAP, particularly in 2006/early 07 and more recently between late 2008 and early 2009, coupled with priority being rightly given to the most affected countries, had in some cases resulted in staff being less available to support countries such as Cambodia and Laos. The evaluation team noted that this shortcoming was particularly true at the initial stages of the country-level response, and that since then it has largely been remedied following the establishment of stronger country teams.

Operational backstopping was on the other hand stronger in countries without an experienced or full time operations officer (such as Laos, Bangladesh, Myanmar, etc.). The limited relevance (and usefulness) of ECTAD-RAP for countries with experienced operations officers led some FAO staff to complain about the additional bureaucratic layer created since ECTAD-RAP was branded as the first "port of call" for technical and operational issues in the region although it has no real responsibility or decision making authority over national project budgets (FBAs) which were and are still approved in Rome.

Promotion of inter-country coordination:

ECTAD-RAP has promoted inter-country coordination mainly through regional meetings in south Asia, Southeast Asia, including the Indo-Gangetic plains and the Great Mekong sub-region. The holding of these meetings has been instrumental in facilitating discussion of cross-border issues; and will lead to the signing of MoUs for enhancing official cooperation among countries.

A related issue highlighted to the team is that although countries seem to have increased dialogue and communication through FAO sponsored regional and inter-country activities, the FAO country programmes have not taken enough advantage of potential cross-fertilization resulting from exchanging views with staff from other FAO programmes on successes and lessons learnt within the region. Reasons for this include the sometimes major socio economic differences among countries; and particularly among those considered endemic (Indonesia,

[5] As per the BTORs made available to the Second RTE team.

China, Vietnam and Bangladesh), the different epidemiological situations and risk factors found in each country.

IV. PARTNERSHIPS

There are a number of global, regional and national organizations working on avian influenza in the region. The list includes UN specialized agencies (such as UNSIC, FAO, UNICEF and WHO), regional trade blocks and specialized organizations (such as ASEAN, SAARC, APEC and SPC), international financing institutions (such as the World Bank and the Asian Development Bank), donor countries (such as JICA, AusAID and USAID) and national veterinary services. All of them have stakes and a specific mandate or interest in preventing further spread of HPAI. Most of these organizations and countries have developed their own strategies and institutional arrangements using reportedly as a basis the 2005 FAO/OIE Global Strategy for the Progressive Control of Highly Pathogenic Avian Influenza.

ECTAD-RAP has been very proactive in developing partnerships with most of these organizations. In particular it has developed strong relationships with regional blocks (such as ASEAN and SAARC), donors (ADB, USAID and the EU) and more recently with research organizations such as CIRAD and ILRI. It has supported the development of a Strategic Framework for ASEAN countries and the conduct of USAID Partnership meetings. The positive role played by FAO in strategy development has given the organization a prominent position with donors both at regional and country level with respect to avian influenza response. As of October 2009[6], the main donor for the region was USAID (US$ 88.6 m or 58% of the total) followed by AusAID (US$ 15.3 m or 10%), Japan (US$ 13.7 m or 8%) and the Asian Development Bank (US$ 7.9 m or 5%).

ECTAD-RAP relations with OIE have also been strong. However, the evaluation team was informed of duplications regarding the assistance provided by ECTAD-RAP and OIE for strengthening diagnostic capacity and establishing regional networks. The latter was particularly highlighted during the visit to Cambodia, where equipment donated by OIE was not being used (whereas FAO's equipment was up and running). A similar situation was reported in Laos. The issue of regional networks is not new, and will be addressed after the launch of the EU-funded project on Highly Pathogenic and Emerging and Re-emerging Diseases (HPED) in Asia that will establish a "Regional Support Unit" (RSU) in Bangkok, which will associate ECTAD-RAP and the OIE team to promote regional cooperation in the area of HPED control in Animal and Human Health. This RSU will include joint activities of OIE, WHO and FAO in epidemiology and diagnostic training, risk analysis and improvement of live bird and food markets. This program will be coordinated through the Regional Steering Committee of GF-TAD for Asia (the Secretary of the Committee is the OIE Regional Representative for Asia and the Pacific).

Also of relevance for future collaboration by ECTAD-RAP is the regional network on influenzas supported by the Wellcome Trust and involving Thailand, Viet Nam and Indonesia. It is coordinated through the Tropical Diseases Unit in Ho Chi Minh City, Viet Nam, and has an office in Bangkok.

V. CONTRIBUTION TO NATIONAL AND REGIONAL INITIATIVES

The ECTAD-RAP has made substantial contributions to regional activities, and provides a very sound interface with other organisations operating in the region. Key developments in this regard include the engagement with the UN system (chiefly with UNSIC and WHO) and

[6] HPAI GLOBAL PROGRAMME: Operational Briefing Note, October 2009

regional blocks (ASEAN and SAARC), the implementation with OIE of the new EU-funded programme on HPEID and the linkages established with programmes sponsored by IFIs such as the ADB programme on Food safety and security and the World Bank programme on Capacity Building.

The ECTAD-RAP unit has also made solid contributions to many of the national programmes, providing specific technical support to them generally in a timely fashion. The unit provides overall operational support for the regional projects, but most national programmes have their own operations staff now which has raised the question of what added value ECTAD-RAP operational support brings to these countries. ECTAD-RAP has also provided inputs to the development of strategic documents including the One World, One Health Initiative and is at the forefront in the implementation of the new Food Chain Crisis Management Framework in the region. ECTAD-RAP has also supported CMC-AH missions when requested including HPAI, rabies, Ebola Reston, FMD and brucellosis.

As noted in the country reports, capacity for avian influenza prevention and control in the region has been enhanced (for example grass root surveillance has been established in several countries; outbreak investigation capacity has been harmonized; FETPV programme is ongoing and has great demand; laboratories are now better equipped and manned; there is greater awareness of HPAI in the region and countries). Many players have been involved in addressing the HPAI crisis in the region. While there have been significant improvements in the broad capacity to control HPAI accompanied by a decrease in disease incidence over time, it is not possible to attribute specific impact to any one player.

VI. SYNTHESIS AND DISCUSSIONS OF REGIONAL ECTAD'S CONTRIBUTIONS

Co-ordination of regional and country activities;

Countries visited indicated that they generally had effective communication and feedback from ECTAD-RAP, and they were satisfied with the coordination of regional and country activities in most instances. ECTAD-RAP has provided advice and expertise for the planning and development stages of national projects and assisted or actively sought funding for these projects, as well as providing technical and operational backstopping for country projects. Only in very few occasions FAO staff mentioned missions that were not as timely as they would had wished. Those cases were mainly linked to departure of backstopping staff or unavailability in the periods initially requested. Overall, the co-ordination role played by ECTAD-RAP was very supportive by in-country ECTAD staff.

The evaluation team noted that there is a need for some consistency in information on HPAI disease and its ecology and epidemiology, biosecurity and other control strategies, including vaccination, and the approaches taken in disease control or other projects throughout the region. The vetting and approval of project proposals, communications documents, other publications and other administrative matters is generally managed through ECTAD-RAP; however some matters have to be referred to ECTAD Rome for approval, and this can result in delays in approval of projects or publications at a National ECTAD level. This can end up giving the impression of inefficiencies at the country level. At the technical level, the situation has reportedly changed with responsibilities being recently delegated to the ECTAD-RAP Regional Manager, but with senior technical specialists and senior operations officers based in ECTAD-RAP, the evaluation team was concerned at the apparent duplication of administrative effort.

In reviewing some technical material, it is important to consider sources of expertise should it not exist at ECTAD-RAP. An example presented to the team was the biosecurity guidelines for small-scale and backyard poultry enterprises. Neither national nor ECTAD-RAP staff had identified the impracticality of certain recommendations, which would have benefited from input from poultry production experts. There is indeed inadequate poultry industry experience in both ECTAD-RAP and in the national ECTAD offices visited, which either requires positions established or the outsourcing of expertise when required.

With the diversity of poultry production systems, socio-economic factors, political factors and governance, and variations in the H5N1 disease ecology and epidemiology between country or sub-regions, the evaluation team considers that FAO requires more efficient linkages to, and understanding of, individual country ECTAD programmes if it is to be effective in the region. To undertake this, ECTAD-RAP requires a combination of a core of experienced technical specialists to service relevant country projects, staff with time to develop substantive strategic science-based approaches to their programmes and projects, making a clear effort to network with the multiple international research and development organisations in the region and beyond.

At present the current system of assigning technical responsibility for projects results in staff being spread too thinly and with no guidance or time to reflect on and promote cross-fertilization among national programmes. In addition, the evaluation team was concerned that there may not be the required technical expertise at ECTAD-RAP, nor enough manpower, in some key areas, particularly market value chain analysis, poultry production systems, poultry industries in the region, and quantitative epidemiology.

Another issue related to the molecular biology project initiated from ECTAD-RAP. There is a wealth of information on the genetic and antigenic characteristics of H5N1 avian influenza viruses within government and university laboratories within the Asian region (Hong Kong, China, Japan, Republic of Korea, India, etc.) and it should be an important part of this project to facilitate and establish links between these laboratories and share information and viruses to give the best return on this investment.

Formulation and implementation of regional programmes/projects;

ECTAD-RAP has been actively involved in setting up regional projects in various thematic areas such as epidemiology, laboratory diagnosis, cross-border market value chain studies and public-private partnership projects. This has involved planning and development of projects and sourcing funding for their conduct and then providing technical and operational support for these regional projects. From observations of the evaluation team and some feedback from country FAO staff, it is expected that the regional projects in cross-border market value chain studies, communications/advocacy, private-public partnerships, epidemiology, wildlife studies will provide useful information in future, but as they are mostly in an early phase, the practical benefits at the country level are not yet evident.

With respect to establishment of public-private partnerships in the region, the PPP project is seeking to develop models that may be applicable in the region. There will probably need to be several different models developed eventually for the large-scale commercial sectors and for the small scale village farm systems, among others. Other areas that also need to be addressed include biosecurity, compensation and vaccination. Innovative approaches are

needed to engage these parties and facilitate meaningful cooperation on specific matters that can improve control of HPAI or other Emerging Infectious Diseases.

Promotion and coordination of regional networks;

ECTAD-RAP has supported and allocated resources to develop and establish the Southeast Asia Regional HPAI Surveillance and Laboratory Network project which includes 8 ASEAN Countries (Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand and Vietnam), 3 SAARC countries (Bangladesh, Nepal, India) and China.

In support of the development of stronger epidemiology and laboratory networks ECTAD-RAP has been utilizing regional resources combined with other external resources in order to promote disease prevention and control. These networks also promote data gathering and generate useful regional epidemiological information. ECTAD-RAP provides some operational support to countries and is providing regional training including the TADinfo system and twinning arrangements among laboratories. The laboratory and epidemiology networks initiated in 2004 appear to have an active and useful programme but it is not possible at this stage to assess how effective and sustainable they will be.

Advocacy and fund-raising for HPAI and Transboundary Animal Diseases (TADs) interventions;

Under the emergency phase of HPAI response, large amounts of funding were made available from the donor community following fund-raising efforts by FAO/OIE/WHO. As seen in the table below, funding received in the past few years for activities dealing with other TADs (US$ 11.7 m) has been much less than funding for HPAI.

Table 2: Ongoing FAO and donor funded projects on TADs control and prevention

Project code	Project title	Budget (US$ million)
GTFS/INT/907/ITA	Controlling TADs in central Asian countries	4.9
TCP/MON/3101	Strengthening early warning of transboundary animal disease diagnosis	0.387
GCP/CMB/028/EC	Support to smallholder livestock production in Cambodia	1.8
GCP/PHI/049/AUL	Eradication of FMD in the Philippines	0.8
TCP/DRK/3104	Emergency assistance for early detection, response and control of FMD outbreaks	0.4
GCP/RAS/206/ASB	FAO-ADB project on the control of TADs in the Greater Mekong subregion	1.0
GCP/RAS/233/ASB	TAD control for poverty reduction in the Greater Mekong subregion	0.4
GCP/RAS/244/ITA	Subregional environmental animal health management initiative for enhanced smallholder production in SEA	1.4
OSRO/BGD/701/CHA	Emergency control of the spread of FMD	0.3
TCP/VIE/3104	Emergency assistance for early detection, response and control of PRRS	0.4
Total		11.78

Source: FAO (2009) Global and Regional Emergency Issues: Transboundary Animal Diseases in the Asia Pacific Region and Looking at the Environmental Factors Affecting their Occurrence.

The long term control of HPAI in a number of endemic countries is highly dependent on improved veterinary surveillance systems and more risk management approaches to disease control; that still incorporates the rapid emergency response skills developed to date, but also better use of epidemiological analysis and risk management skills to control the disease.

ECTAD-RAP has been successful in raising funds to support development of laboratories, laboratory networks, field epidemiology training and epidemiology networks. The challenge is now to obtain funding to secure sustainable field surveillance and laboratory services that support diagnostic testing for other TADs as well as HPAI. It was indicated by various donors (USAID, AUSAID, ADB and WB) that they were more receptive now to project proposals that have a broader accent than just HPAI and that will build on gains made in surveillance and diagnostic skills as a result of HPAI.

The institutional and financial sustainability of the regional ECTAD

The strong technical and fundraising capacity of ECTAD-RAP and the now mature engagement with key partners are a good basis and requirement to achieve institutional and financial sustainability. There are some issues to resolve, such as the role of ECTAD and its relationships with FAO RAP in the ongoing transition from emergency to mid- and long-term programmes. There might also be operational issues resulting from ongoing reforms within FAO.

There is no doubt that HPAI work should be more integrated to FAO's other transboundary animal disease programmes/projects at regional (e.g. RAP Animal Health Unit) and country level (such as with the SLPP project in Cambodia). In the period 2006-08 there were cases of HPAI projects being treated as stand-alone projects, and thus separated from other livestock projects and country programmes. With the broadening of scope in the new regional initiatives FAO RAP and ECTAD-RAP should explore possibilities for an integrated approach to the management of animal health projects. Besides allowing for increased efficiencies, this approach will reinforce FAO credibility as an agency that works as "One FAO".

HPAI projects have so far been financially controlled by HQ and with few exceptions have not delegate budget holder (BH) responsibilities to regional or country offices. In some countries this arrangement was initially not well received; following the integration of national ECTAD units (particularly the operational and administrative aspects) within FAO country structures, this seems now to be less of an issue. The ongoing FAO reform that has given (as of 1st January 2010) higher responsibilities and decision making authority to FAO Regional offices over technical staff and operations in the region might revive this aspect, although at present the current reform package does not envisage the decentralization of BH responsibility for emergency operations.

The efficiency and adequacy of working arrangements within FAO (with HQ, regional and country offices)

As indicated earlier, working arrangements with FAO HQ have been fluid; relations with country offices have varied, being stronger in those countries that were given priority for assistance on technical and operational grounds. ECTAD-RAP also co-operates closely with

the sub-regional office for South Asia in Kathmandu, Nepal. The division of labour between these two ECTAD units is optimal and is largely based on geographic considerations.

VII. CONCLUSIONS AND RECOMMENDATIONS

The evaluation team concludes that the ECTAD-RAP is a very active and important regional centre for the coordination, management and mentoring of HPAI surveillance and response programmes within the Asia region. Furthermore, the team concludes that this importance will be sustained over the next few years as HPAI is progressively brought under control, as efforts expand to consider more fully other transboundary and emerging diseases of the region, and as funds focussed on national level responses become increasingly scant. On this basis, the evaluation team recommends FAO the following priority actions**:**

At regional level:

- Establish stronger linkages with the animal production and health group in RAP, particularly in view of the ongoing transition towards mid term initiatives beyond HPAI. In this regard, FAO senior management at HQ and RAP should promote greater integration of activities of these two units such as the formulation of regional initiatives and backstopping of national projects.
- Use the new Regional Strategy for HPAI and other EIDs to mobilize funds and serve as a platform for harmonizing activities conducted by other technical partners (such as OIE.), Regional Economic Consortia (ASEAN and SAARC) and the proposed RSUs.
- Give greater emphasis to the collection of data and indicators that will help measure the impacts of regional activities in controlling HPAI and other diseases, after taking into due consideration the M&E Manual for HPAI activities in southeast Asia developed by MEASURE, as well as ECTAD-RAP proposal on the roles and frameworks for monitoring progress.
- Consider further strengthening the human resource base of the ECTAD unit with dedicated staff in the following areas: market value chain analysis, poultry production systems, poultry industries in the region, and quantitative epidemiology. In selecting new staff, due consideration should be given to expertise from the region, but not at the expense of technical expertise and leadership qualities.
- Reinforce cross-fertilization and learning among countries in the region, with a focus on sharing information on innovative tools and technologies developed by FAO or other partners for HPAI prevention and control.
- Clarify operational responsibilities of ECTAD-RAP and assess, in the spirit of the ongoing FAO reform, which areas under the control of ECTAD Rome could eventually be further decentralized to ECTAD-RAP.

At national level:

- Following the attainment of a stronger working relationship with RAP, ECTAD-RAP should advocate for, and propose the development of, an integrated programme structure (not just one donor or subject) in countries with regional and national projects.
- Following the strengthening of the human resource base, ECTAD-RAP should reinforce backstopping arrangements in close consultation with the RAP animal production and health unit with a view of providing timely support to all countries in the region, not just on HPAI but in a broader set of TADs and EIDs.

ANNEX 1. List of People Met

FAO
He Changchui, Assistant Director General and Regional Representative,
Subhash Morzaria, Regional Manager, ECTAD RAP,
Rajendra Aryal, Senior Regional Emergency Coordinator,
Mostafa Nosseir, Senior Operations Officer,
Wantanee Kalpravidh, Regional Project Coordinator,
Carolyn Benigno, Animal Health Officer,
David Castellan, Regional Veterinary Epidemiologist,
Tippawon Prarakamawongsa, Programme Advisor for International FETPV,
Bryce Fieldhouse, Operations Officer,
Linda Muangsombut, National Operations Officer,
Rattanaporn (Tum) Tangthanaseth, National Operations Officer,
Pawin Padungtod, Regional Project Coordinator (Lab/Epi Network),
Kachen Wongsathapornchai, Regional Project Director, Epidemiologist,
Narit Puttekulangkura, Regional Value Chain Expert,
Acty George, Regional Coordinator for Wildlife Avian Influenza,
Loganathan Periathamby, Regional Project Coordinator (PPP),
Anthony Burnett, Advocacy & Communications Coordinator,
Ginna Geal, Information and Reporting Officer,

UN AGENCIES
Annu Lehtinen, Regional Avian & Human Influenza Coordinator UNSIC
John Stratton, Program Coordinator, OIE/AusAid Program on Veterinary Services in South East Asia.

GOVERNMENT
Tritsadee Chaosuancharoen, Deputy Director General, Department of Livestock Development,
Prasit Chaitaweesub, Director, International Animal Health Affairs, DLD.

EMBASSIES
Robert T. Tanaka, Senior Attaché for Asia, Avian Influenza Programme Coordinator,
Darunee Tuntasuvan, Poultry Health Specialist, both U.S. Embassy in Thailand.

INTERNATIONAL AID AGENCIES
John R. MacArthur, Infectious Diseases Team Leader, USAID,
Royce Escolar, Regional Program Manager/EIDs, AusAID.

Others
Iain A. Wright, Regional Representative, Asia, ILRI, New Delhi, India.
Jeffrey Gilbert, Project Coordinator, Zoonotic Emerging Infectious Diseases, ILRI, Laos,
Denise Johnson, Technical Director, MEASURE (audio-conference from Cambodia)

In addition, the evaluation team also interacted with representatives of partner organizations from the region such as ASEAN, ADB, OIE, AED, etc. in the Regional Stakeholders Workshop held in Bangkok (see proceedings of the workshop for the full list of participants).

ANNEX 2. Documentation Reviewed

ADB (2005) Avian Influenza and the Risk of an Influenza Pandemic
ASEAN Regional Strategy for HPAI 2008-10
ECTAD Functions, structure and instruments (2008)
ECTAD-RAP Avian influenza framework for Asian Development Bank (May 2006)
ECTAD-RAP organigram and list of staff
FAO Regional Coordination Role in HPAI Control in Asia (September 2008)
Outcomes from Workshop "Observations on Regional Issues" (September 2008)
The Inception Meeting for the OIE/Japan Trust Fund Programme for Strengthening Highly Pathogenic Avian Influenza Control in Asia (April 2008)
USAID Asia Fact Sheet (2009)

Reports and documentation of 26 regional meetings organized or supported by ECTAD-RAP, 10 End of Mission Reports of former staff, 20 BTOR of current staff, 15 weekly meetings minutes of the regional team; reports and documentation of projects funded by USAID, Japan, Germany, EC, Australia, and ADB in Bangladesh, Bhutan, Cambodia, China, DPR Korea, India, Indonesia, Laos and Vietnam.

ANNEX 3. List of projects operated by ECTAD-RAP in Asia as of October 2009

Project	EOD	NTE	Budget	Allocation (FBA)	Expenditures under Allocation
Regional - (OSRO/RAS/601/ASB)	28/04/2006	31/08/2010	8,768,496	1,305,750	1,150,206
National (GCP /CMB/027/GER)	01/12/07	31/03/09	3,506,892	305,674	303,255
National (GCP /LAO/014/GER)	01/04/06	31/05/09	3,210,033	267,383	263,961
National (OSRO/TIM/701/AUL)	01/06/07	30/06/10	3,731,614	80,222	81,338
National (OSRO/VIE/701/UNJ)	01/01/07	31/12/10	1,968,203	107,660	107,659
Regional – (OSRO/RAS/704/SWE baby02)	27/11/2007	31/12/2009	1,680,849	206,331	208,058
Global (OSRO(GLO/604/UK child)	29/03/07	31/03/10	5,388,655	47,538	40,705
OSRO/INT/602/USA	12/10/06	30/09/13	3,523,484	77,215	47,725
Regional - (TCP/RAS/3014)	10/03/2005	31/12/2007	289,738	71,581	66,898
Regional - (TCP/RAS/3008)	13/08/2004	31/07/2006	278,809	15,159	14,167
Regional - (TCP/RAS/3006)	29/03/2004	28/02/2006	320,156	158,778	158,778
Regional - (TCP/RAS/3010)	20/04/2004	30/09/2005	362,013	49,460	49,460
Regional - (OSRO/RAS/604/USA BABY05)	01/06/2006	30/09/2010	4,145,500	1,882,744	1,303,358
Regional - (OSRO/INT/602/USA)	12/10/2006	30/09/2013	2,383,637	77,215	47,725
Regional - (OSRO/RAS/505/USA)	25/09/2005	31/03/2007	6,000,000	397,061	377,152
Regional - (OSRO/RAS/604/USA BABY04)	01/06/2006	29/09/2009	805,000	24,564	23,491
Regional - (OSRO/RAS/604/USA BABY02)	01/06/2006	30/10/2010	2,800,000	215,595	215,593
Regional - (OSRO/RAS/604/USA BABY06)	01/06/2006	30/09/2010	8,400,000	553,428	551,653
Regional - (OSRO/RAS/604/USA BABY01)	01/06/2006	31/12/2010	4,050,000	547,913	538,372
Regional - (OSRO/RAS/604/USA BABY03)	01/06/2006	30/10/2010	3,984,990	256,991	256,089
Regional - (GCP /RAS/221/JPN)	30/08/2006	31/08/2011	658,658	255,546	147,905
Regional - (OSRO/RAS/401/JPN baby01)	29/03/2004	30/11/2005	334,068	29,898	94,903
Regional - (OSRO/RAS/602/JPN)	30/03/2006	31/12/2009	11,400,052	3,008,205	3,008,109
Regional - (TCP/RAS/3004)	09/02/2004	31/01/2006	362,331	9,573	9,573
Grand Total			78,353,178	9,951,484	9,066,133

Annex 4. List of Workshops and Events organized/supported by ECTAD-RAP

2007

1. FAO Asia Regional Technical Meeting (January 2007)
2. Avian Influenza Team Meeting (January 2007)
3. USAID Partners Meeting (April 2007)
4. Laboratory Workshop (July 2007)
5. OIE/FAO Regional Workshop on Trainers Training on HPAI Surveillance and Control (July 2007)
6. Avian Influenza and Wildlife Regional Surveillance and Research Priorities for Asia (September 2007)
7. USAID Partners Meeting (September 2007)
8. Training Workshop on Transboundary Animal Disease Information System (TADINFO) Level 2 (September 2007)
9. Poultry in the 21st Century (November 2007)
10. Regional Experience Sharing Workshop (November 2007)

2008

1. Team Meeting of the ECTAD-RAP Avian Influenza Control Programme for Asia (January 2008)
2. Research Activities on Avian Influenza and Other Transboundary Animal Diseases in South-East Asia Workshop (January 2008)
3. USAID Partners Meeting (March 2008)
4. Workshop to Establish vision and Core Competencies for FETPB (March 2008)
5. 2nd Workshop on the Sub-Regional Veterinary Laboratory Network for Southeast Asia (May 2008)
6. Workshop on Surveillance and Response Capacities (May 2008)
7. Workshop on Strategic and Legislative aspects (September 2008)
8. USAID Partners Meeting (October 2008)
9. Workshop on Avian Influenza Research Activities (October 2008)
10. FAO Regional Workshop on SOP Writing for Field Outbreak Investigation and Response (November 2008)
11. TADinfo Training Workshop - level 3 (December 2008)

2009

1. Annual Regional ECTAD Meeting (February 2009)
2. CAHWs workshop (February 2009)
3. Regional Gender Training (February 2009)
4. USAID Conference (March 2009)
5. Avian influenza-GMS Strategy Meeting (March 2009)