RESPOND
YEAR THREE QUARTERLY REPORT

EMERGING PANDEMIC THREATS PROGRAM

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ACRONYMS

AET	Applied Epidemiology Training
AFENET	Africa Field Epidemiology Network
AFRO	WHO – Regional Office for Africa
ANPN	Agence Nationale des Parcs Nationaux
AOR	Agreement Officer's Representative
ARO	Alert and Response Operations
ASEAN	Association of Southeast Asian Nations
ATVCO	L'Association des Techniciens Veterinaires au Congo (Association of Veterinary Technicians of Congo)
AU-IBAR	African Union Interagency Bureau for Animal Resources
BVM	Bachelor in Veterinary Science
CAHW	Community Animal Health Workers
CBDS	Community Based Disease Surveillance
CCC	Country Coordinating Committee
CCN	Cooperating Country National
CDC	Centers for Disease Control and Prevention
CED	Control of Epidemic Diseases
CMOA	Ministry of Agriculture (DRC)
CMOE	Ministry of Environment (DRC)
CMOH	Ministry of Health (DRC)
COVAB	Makerere University College of Veterinary Medicine, Animal Resources and Biosecurity (Uganda)
DNP	Department of National Parks, Wildlife and Plant Conservation (Thailand)
DoA	Department of Agriculture
DoF	Department of Forestry
DoH	Department of Health
DRC	Democratic Republic of Congo
DTRA	Defense's Threat Reduction Agency

DVO	District Veterinarian Officer
E&E	Ecology & Environment, Inc.
EID	Emerging Infectious Disease
EPT	Emerging Pandemic Threats Program
EZD	Emergency Zoonotic Diseases
FAO	Food and Agriculture Organization of the United Nations
FAS	Field Accounting System
FEAT	Field Epidemiology Association of Thailand
FESC	Field Epidemiology Short Courses
FE(L)TP	Field Epidemiology (Laboratory) Training Program
FETP-V	Field Epidemiology Training Program – Veterinary Component
FOREST	Forest Ecology and Stewardship Training
FUE	Federation of Ugandan Employees
FUS	Fédération Une Santé
GEMP	Good Service Management Practice
GOARN	Global Outbreak and Alert Response Network
IBAR	Inter-African Bureau for Animal Resources
IDSR	Integrated Disease Surveillance and Response
IEM	Institut d'Enseignement Médicale
IFC	International Finance Corporation
IGAD	Inter-governmental Agency for Development
INDOHUN	Indonesia One Health University Network
ISTM	Institut Supérieur des Techniques Médicales
ITAV	Institut de Technique Agro-Vétérinaire
ITM	Institut Techniques Médicale
KKU	Khon Kaen University
KKUVMS	KKU School of Veterinary Medicine
LOW	Line of Work
M&E	Monitoring and Evaluation
MAAIF	Ministry of Agriculture, Animal Industries and Fisheries (Uganda)

MAFF	Ministry of Agriculture, Forestry and Fisheries
MENTOR	Mentoring for Environmental Training in Outreach and Resource Conservation
MINAGRI	Ministry of Agriculture and Animal Resources
MISRZ	Multidisciplinary and Integrated Surveillance and Response to Zoonotic Diseases
MOA	Ministry of Agriculture
MoAF	Ministry of Agriculture and Forestry
MOF	Ministry of Forestry
MOH	Ministry of Health (Uganda)
MoNRE	Ministry of Natural Resources and Environment
MOPH	Ministry of Public Health (Thailand)
MOU	Memorandum of Understanding
MPH	Master of Public Health
MVPM	Masters of Veterinary Preventive Medicine
MUSPH	Makerere University School of Public Health
MYOHUN	Malaysia One Health University Network
NAC	Nabong Agricultural College
OAA	Office of Acquisition and Assistance
OH	One Health
OHCC	One Health Core Competency
OHCEA	One Health Central and Eastern Africa Network
OIE	World Organization for Animal Health
PDSR	Participatory Disease Surveillance and Response
PHI	Public Health Institute
PI	Principal Investigator
PPE	Personal Protective Equipment
Pro-MED	Program for Monitoring Emerging Diseases
RFA	Request for Applicants
RFP	Request for Proposal
ROC	Republic of Congo
RRT	Rapid Response Team

SCOM	Steering Committee Meeting
SEA	Southeast Asia Regional Office
SEAOHUN	Southeast Asia One Health University Network
SOW	Standard of Work
TAMIS	Technical and Management Information Systems
TOR	Terms of Reference
TOT	Training of Trainers
TRG	Training Resources Group, Inc.
TUSK	Tufts University Science Knowledgebase
UMA	Uganda Manufacturers Association
UMN	University of Minnesota
UNIKIN	University of Kinshasa
UNILU	University of Lubumbashi
USAID	U.S. Agency for International Development
USAID/W	USAID Washington
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USG	U.S. Government
VETCAP	U.S. Army Veterinarian Civil Action Project
VMKKU	Veterinary Medicine Khon Kaen University
VMS	Veterinary Medical School
VPH	Veterinary Public Health
WWF-DRC	World Wildlife Fund-Democratic Republic of the Congo
WHO	World Health Organization
WILD	Wildlife Investigation and Livestock Disease

EXECUTIVE SUMMARY

RESPOND's focus during Quarter Three of Year Three (April 1 to June 30, 2012) was continuing support to the development of One Health University Networks in Central and Eastern Africa and Southeast Asia. The majority of subactivities undertaken furthered the goals of OHCEA (One Health Central and Eastern Africa) and SEAOHUN (Southeast Asia One Health University Network). While the project continues with a considered focus on Networks, the structure of the current report follows the Year 3 original work plan. Each subactivity is listed individually and progress reports on each of RESPOND's objectives are included.

OBJECTIVE 1 – IMPROVE TRAINING CAPACITY FOR SKILLS NECESSARY TO RESPOND TO SUSPECTED OUTBREAKS.

During this reporting quarter, capacity-building progress for RESPOND was accomplished by several events and workshops. Two One Health Core Competencies (OHCC) workshops were carried out to plan for OHCC country-specific workshops and curriculum mapping for SEAOHUN, slated to happen next quarter. Four country-specific workshops will be held, starting in the next quarter (July 1 to September 30, 2012), in the SEAOHUN member countries: Indonesia, Malaysia, Thailand, and Vietnam. The major goals of these workshops will be to have country-level One Health domains determined and institutional strengths shared across the Southeast Asia network to promote collaboration.

Another highlight during the reporting period was the Public Health Institute (PHI), held at University of Minnesota (UMN), in May 2012. Eleven participants from both Africa and Southeast Asia travelled to UMN and had the opportunity to attend courses and interact with their American colleagues to discuss several areas of collaboration, including outbreak response, risk assessment, wildlife medicine, food safety, among other subjects. Details on the PHI activities can be found in **Appendix II – Success Stories and Region Highlights**.

In the African Region, One Health sensitizations continued to happen in two of the OHCEA member universities (University of Nairobi and University of Rwanda), and a number of events were carried out by the Uganda Regional Office, including presentations at One Health-related conferences, facilitation of One Health courses and workshops, and discussions for future member universities' partnerships. Capacity building events were also carried out by the DRC Regional Office, including a pre-service training held in Lubumbashi, the One Health MISRZ (Multidisciplinary and Integrated Surveillance and Response to Zoonotic Diseases), and a training for 13 Master Trainers, with the objective of disseminating their knowledge to a group of 30 teachers and faculty to test training materials and evaluate the process for future curriculum implementation.

Another highlight was the WILD training in Ghana, held in May 2012. Representatives of 10 countries participated in the ten-day training, which covered One Health subjects ranging from interconnectivity of wildlife to the importance of a multidisciplinary approach in addressing health issues. More details about the WILD training can be found in **Appendix II – Success Stories and Region Highlights**.

Overall, in the African region, a total of 414 people were reached through capacity building events. . For more details on the activities held in Africa, see subactivities 1.2.2 EC, 1.2.3 EC, 1.2.4 EC, 1.5.4 EC, 1.2.1 WC, 1.2.3 WC, 1.3.1 WC, 1.5.1 WC, and 1.5.5 WC, in the African Region section of this report.

For the Southeast Asia region, activities included continued discussions about the establishment of SEAOHUN's Secretariat Office. Also, faculty from member universities received support to attend One Health-related conferences and meetings, and two country-level One Health networks were established: INDOHUN (Indonesia One Health University Network) and MYOHUN (Malaysia One Health University Network).

Two Emerging Zoonotic Diseases (EZD) workshops were held in Vietnam and Malaysia, where a total of 78 participated. A full report on the EZD workshop in Vietnam can be found in **Appendix VI – Other Materials.** Other capacity building events in the Southeast Asia region included twinning activities between VMKKU in Thailand and NAC in Lao PDR; an applied field training for wildlife veterinarians of the Department of National Parks in Thailand; and continued support for Master Degrees in Epidemiology using collaborations with 4 universities in Thailand (Prince Songkla, Chaing Mai, Kasetsart and Mahidol Universities).

A total of 493 people were involved in capacity building activities this quarter in the Southeast Asia region. More detailed information can be found in subactivities 1.2.1 SEA, 1.2.2 SEA, 1.5.2 SEA, 1.5.5 SEA, and 1.5.6 SEA, in the Southeast Asia section of this report.

OBJECTIVE 2 – IMPROVE CROSS-SECTORAL LINKAGES TO SUPPORT COORDINATED OUTBREAK RESPONSE.

In the period between April-June, 2012, various events contributed to the progress of RESPOND's cross-sectoral collaboration objective. All of these events happened at the Global level and involved mainly the Extractive Industry Working Group, through collaborative work between EPT's RESPOND and PREDICT.

EPT's Extractive Industry Working Group submitted the Audit and Planning Tools to USAID this quarter. These tools are expected to be included in the International Finance Corporation's (IFC) guidelines on Health Impact Assessment.

Also, in collaboration with PREDICT, RESPOND's Louise Flynn attended several extractive industry meetings and conferences to raise awareness about emerging infectious diseases, including the **Workshop on Conservation and Mining in the TRIDOM**, in Brazzaville, Republic of Congo, and the **First International Union of Forest Research Organizations (IUFRO)-Forestry Research Network of Sub- Saharan Africa (FORNESSA) Regional Congress, 25–29 June 2012 (Nairobi, Kenya)**.

Other abstracts and papers from the same group were submitted during this quarter and are expected to be presented in meeting and conferences during Quarter 4.

OBJECTIVE 3 – IMPROVE THE CAPACITY TO CONDUCT INVESTIGATIONS OF SUSPECTED OUTBREAKS.

Both RESPOND regions contributed to continued progress of this objective, and many of the activities during this quarter revolved around trainings, field activities and equipment procurement and donation to strengthen disease outbreak investigations.

This quarter, RESPOND's project epidemiologist, Jenny Tegelvik, travelled to Geneva to attend a series of technical meetings at WHO's headquarters to continue collaborative work between EPT and WHO-AFRO to

develop a framework to be used by countries in Africa to support the development of national emergency preparedness and response guidelines.

The Uganda Regional Office focused on trainings for diverse groups, through funding to AFENET, including District Rapid Response Teams, District Laboratory Focal Persons, and RESPOND-sponsored Master candidates in Veterinary Preventive Medicine. Also, another major development led by this office was the signing of a peer-educator curriculum for the private sector by Uganda's Ministry of Health. With this endorsement, RESPOND continues to support UMA (Uganda Manufacturers Association) and FUE (Federation of Ugandan Employers) to improve response to disease outbreaks in the private sector. In addition to the curriculum endorsement, UMA and FUE conducted training of 19 Master Trainers, who were exposed to facilitation techniques and training materials to conduct training of peer educators from July to September, 2012.

One more highlight for the office during Quarter 3 was the training of community animal health workers in Uganda. The training, facilitated by the U.S. Army Veterinarian Civil Action Project (VETCAP), and supported by RESPOND, trained participants to better monitor animal and human health, and refer animal health cases in their specific communities. The opening sessions were attended by the U.S. Embassy Deputy Chief of Mission and officials from both Ugandan and American armies. For more details on this event, see **Appendix II – Success Stories and Region Highlights.**

In the DRC Regional Office, activities related to Objective 3 involved the procurement and donation of IT equipment to the Ministry of Agriculture and Rural Development, as well as the official handover of transportation and communication equipment and materials to the Ministry of Public Health and the Ministry of Environment, Nature Conservation and Tourism. More information can be found in **Appendix II – Success Stories and Region Highlights.** Also, the AFENET joint grant between the Uganda and DRC regional offices was signed, and a short course on disease outbreak investigation and response is planned for September, 2012.

More Information on Objective 3 for the Africa region can be found in subactivities 3.2.0.4 EC, 3.2.0.5 EC, 3.2.2 EC, 3.4.7 EC, 3.1.1 WC, 3.4.1 WC, and 3.4.4 WC, in the African Region section of this report.

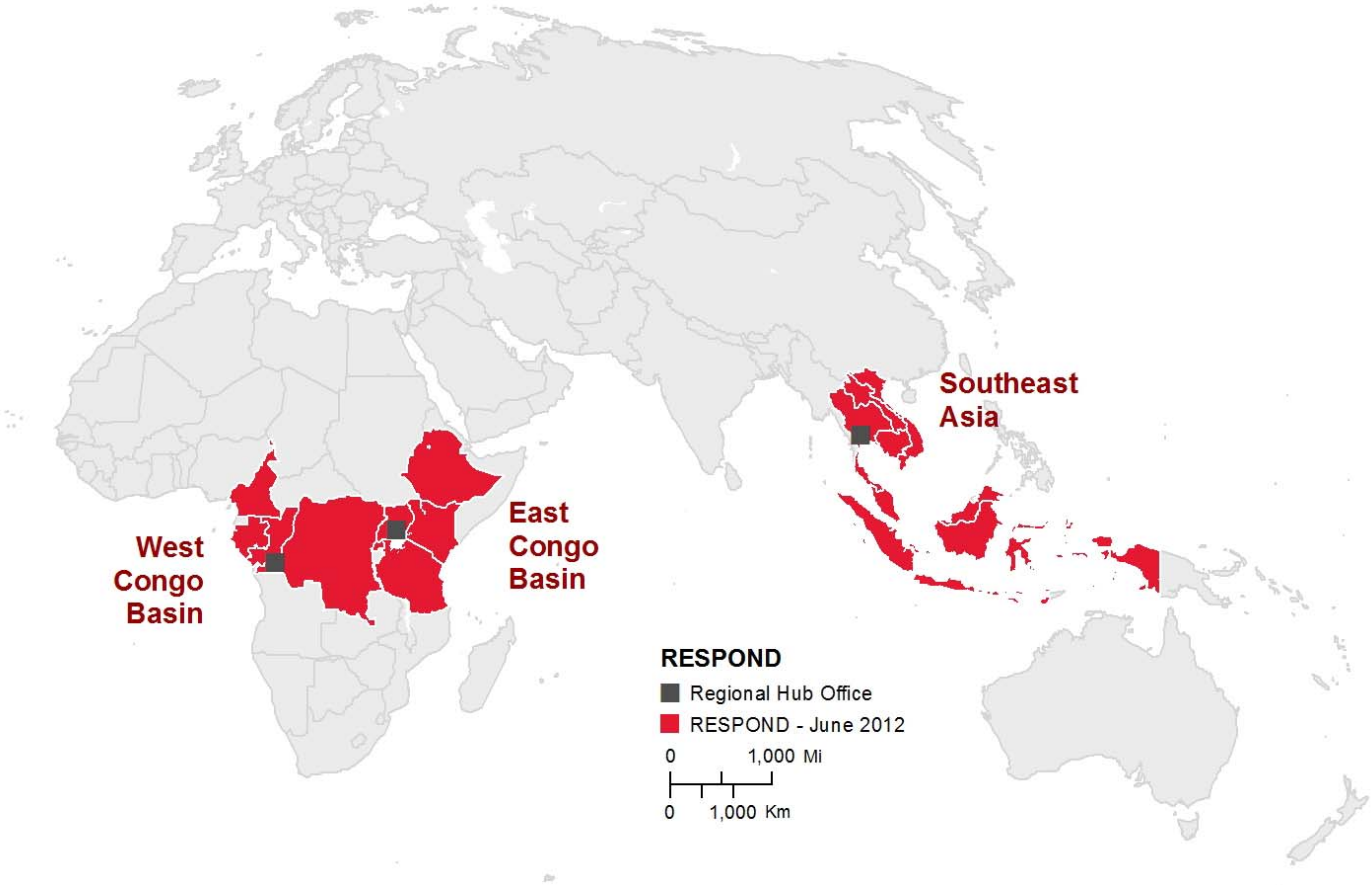
In the Southeast Asia region, events related to Objective 3 involved mostly workshops to strengthen One Health epidemiological teams. In Cambodia, participants developed plans to investigate specific zoonoses of concern to their specific provinces. Workshops with the same focus were planned this quarter in Indonesia and Vietnam, to be carried out from July to September, 2012. Another activity in the Southeast Asia region was the development of protocols for joint field investigations and fieldwork activities in Thailand, especially in provinces where the likelihood of zoonoses is high.

A grant to support training for One Health Epidemiological teams in Lao PDR was submitted to USAID this quarter, and is expected to be approved in the coming months. For more information about events in Southeast Asia for Objective 3, see subactivities 3.4.1 SEA, 3.4.2 SEA, 3.4.4 SEA, 3.4.5 SEA, and 3.4.7 SEA in the Southeast Asia section of this report.

OBJECTIVE 4 – INTRODUCE TECHNOLOGIES TO IMPROVE TRAINING, SURVEILLANCE AND OUTBREAK INVESTIGATIONS.

Progress related to Objective 4 during this quarter relates to the continued implementation of TUSK at UNILU and UNIKIN by Tufts University. At the moment, repairing and extending the universities' intranet to government entities and laboratories is underway, and an electronic infrastructure will be available to strengthen collaboration, and manage knowledge across sectors and disciplines. The implementation of the system will be completed under the OHCEA grant.

I. GLOBAL ACTIVITIES



The global map above displays where RESPOND currently works (in red). RESPOND Regional Hub Offices are located in Kampala (Uganda), Kinshasa (Democratic Republic of Congo), and Bangkok (Thailand), covering two regions considered hot-spot areas for the emergence and re-emergence of zoonotic pandemic threats.

GLOBAL ACTIVITIES SUMMARY

The development of Global One Health Core Competencies is proceeding on time and in coordination with the development of Southeast Asian regionally specific core competencies. A report on the complementary global and regional work related to the One Health Core Competencies will be produced during the next quarter.

RESPOND's work with the Extractive Industry Working Group has contributed significantly to the production of the Planning and Audit tools, and to the continued sensitization of logging and mining companies to the issues related to emerging infectious diseases and extractive industries. Additional opportunities to publicize the tools are planned for the next quarter, and a strategic engagement in the target countries (Gabon, Uganda, and Lao PDR) will be planned for Year 4 (2012-2013).

Headquarters

A key highlight from the headquarters office is the launch of the EPT Central Desktop site. Central Desktop is an open-source enterprise content management system that provides a number of unique features to assist in the creation and sharing of ideas and documents. The primary goal of the site is to facilitate communication and information sharing across the program. The EPT site, of which RESPOND is an integral part, was officially launched on March 27, 2012, and has since grown to include 130 members and 9 active Workspaces.

Also, the RESPOND website was submitted to USAID for final approval and is expected to be launched in the next few weeks.

Details on the activities carried out at the Global level from April to June, 2012, can be found in the Activities Summary below.

ACTIVITIES SUMMARY

SUBACTIVITY 1.1.4 – DEVELOP EPT PROGRAM-WIDE DEFINITION OF ONE HEALTH CORE COMPENTENCIES

Two workshops, two days each, related to regional One Health Core Competency (OHCC) development and Curriculum Mapping were held during the reporting period. Through extensive teleconferencing, email, and in-person meetings, Dr. Mary Lee worked with Professor Ray Hyatt, Donna Qualters, and Margaret Morehouse to develop the agenda, format, and materials for the workshops. Considerable post-workshop debriefings and follow-up were carried out, including reviewing participant evaluation data, documenting the process including lessons learned, and having follow-up meetings (in person and via teleconferencing) to debrief the workshops.

One Health Core Competencies (OHCC) group during workshops to prepare for the next quarter's country-specific meetings in Southeast Asia.

Also within the scope of One Health Core Competencies, Mary Lee worked with Margaret Morehouse and Graeme Frelick of TRG to develop the agenda, format and content of the working group meeting. The meeting's goals were accomplished, and included:

- Create a common understanding of prior OHCC activities and their outputs;
- Identify the implications for our regional OHCC work, particularly in South East Asia, but also for partners in Africa;
- Develop criteria and definitions for draft global OH domains, and to identify initial Core Competencies as key examples under each draft Domain;

- Agree on next steps for the working group, including how to communicate with each constituency represented by the participants.

Planned Activities:

Four country-specific workshops are planned for next quarter in each SEAOHUN member country: Indonesia, Malaysia, Thailand, and Vietnam, and preparations involved OHCC data collection through country-based survey implementation during this reporting period. Tufts University laid the groundwork of the agenda, format and content of the July workshops based on the feedback from the workshops held in April, and input from the regional office in Thailand, as well as UMN. The Tufts/UMN team (Mary Lee, Ray Hyatt, Donna Qualters, Linda Olson and Karin Hamilton, with the assistance of Margaret Morehouse) finalized the agenda, format and content for the four three-day workshops.

The purpose of the July country-based workshops will be to present an overview of the role of competency development in OH and RESPOND; analyze country-level data (from the recently collected surveys) to develop specific OH domains and competencies; agree on country-level domains and competency examples; describe opportunities for OHCC course/program development, including identifying institutional strengths to be shared across the network.

Results of the four country-based workshops will be used to design follow-up support during August and September, and to design the October regional workshop.

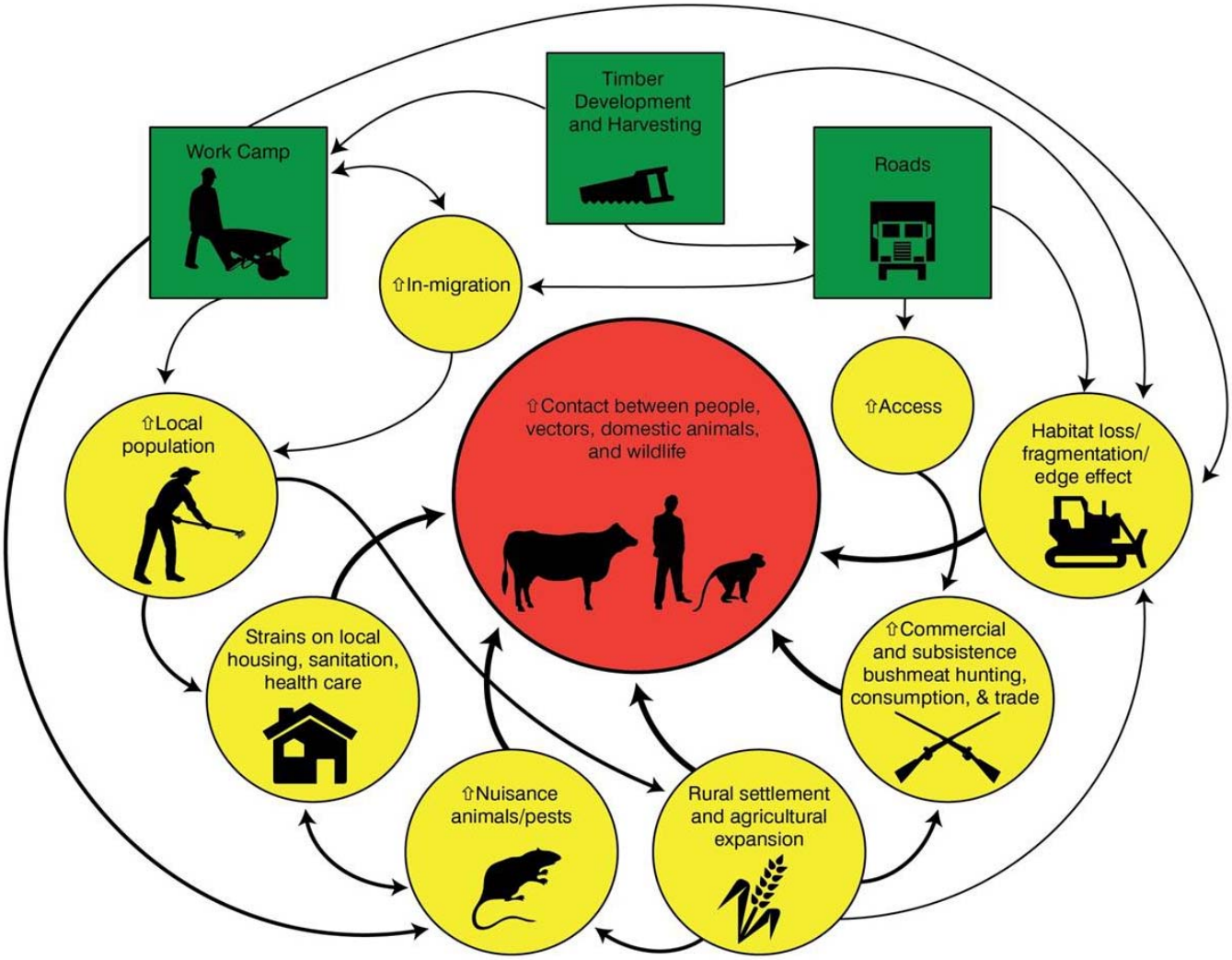
SUBACTIVITY 1.2.4 – GLOBAL NETWORK ORGANIZATIONAL DEVELOPMENT

This activity has been closed at the Global level. Organizational development activities will take place within each of the regional university networks, OHCEA and SEAOHUN.

SUBACTIVITY 2.2.1 – DEVELOP BEST MANAGEMENT PRACTICES RECOMMENDATIONS FOR EXTRACTIVE INDUSTRIES BASED ON PREDICT-IDENTIFIED VECTORS IN HOT SPOT REGIONS

The EPT Extractive Industry Working Group finished the Audit and Planning Tools and submitted them to Dennis Carroll for review on June 1. Louise Flynn and Anne-Elizabeth Kaitano, with Ecology & Environment, have had a leading role in developing the current drafts of these documents, which are proposed to be added to the International Finance Corporation's (IFC) existing guidelines on Health Impact Assessment.

Throughout the quarter, Louise Flynn continued to collaborate with Renuka Berry from PREDICT to attend various extractive industry meetings and conferences to raise awareness about emerging infectious diseases, and to share drafts of the Audit and Planning Tools.



Sample figure illustrating the effects of timber development in the increase of interaction between wildlife and humans, presented at one of the extractive industry meetings during this quarter. Source: E&E, 2012.

Workshop on Conservation and Mining in the TRIDOM, 23-24 May 2012 (Brazzaville, Republic of Congo)

The purpose of the RESPOND/PREVENT participation was two-fold: to introduce the concept of emerging infectious disease transmission risks and to discuss the tools the extractive industry working group has been developing that can be used to mitigate the vulnerabilities. Objectives were as follows:

- Educate mining companies about the linkages between mining activities and potential exposure/transmission of zoonotic diseases;
- Present the draft Planning and Audit Tools;
- Discuss appropriateness of the tools, the proposed mitigation measures and identify any other measures that have not been captured;

The First International Union of Forest Research Organizations (IUFRO)-Forestry Research Network of Sub- Saharan Africa (FORNESSA) Regional Congress, 25–29 June 2012 (Nairobi, Kenya)

Louise Flynn attended the congress to introduce the concept of emerging pandemic threats to the forestry community and to identify entry points for engaging forestry and timber organizations in mitigating emerging infectious disease transmission. She gave a presentation focused on emerging disease threats as extractive industries move into forests. Focusing on the timber industry, she provided examples of a number of cascading effects, including forest fragmentation that can lead to increased contact between wildlife and humans and between wildlife and domesticated animals; road construction bringing human populations deeper into forests; poor waste management around work camps; and over-stressed healthcare services. She described the Planning and Audit tools created to help timber companies identify risks and develop mitigation measures.

Planned Activities:

- Louise Flynn and Renuka Berry have submitted an abstract to the Society of Petroleum Engineers International Conference on Health, Safety and Environment in Oil and Gas Exploration and Production, 11-13 September 2012 (Perth, Australia). They will present on the linkages between oil and gas exploration and production and emerging infectious diseases. The presentation will include reference to the Planning and Audit Tools that EPT has developed.
- Planning for Year 4 activities, including engagement in Gabon, Uganda (Albertine Rift) and possibly Lao PDR.

SUBACTIVITY 3.1.2 – GOVERNMENT INNOVATIONS SUPPORTING INTEGRATED DISEASE SURVEILLANCE AND RESPONSE IN HUMAN AND ANIMAL HEALTH

The RESPOND project epidemiologist (J. Tegelvik) continues working at her assignment at WHO-AFRO headquarters in Brazzaville, Republic of Congo. Work under the supervision of Dr. Benido Impouma (WHO-AFRO), with technical input from RESPOND Senior Field Epidemiology Officer (D. Hatch) continues on those priority issues agreed to by leadership at WHO-AFRO (Dr. Roungou) and USAID EPT, linked mainly to emerging infectious disease surveillance and outbreak response.

The focus of activities currently is to collaboratively develop a framework to be used by countries in the region to support development of national emergency preparedness and response guidelines. These guidelines are not currently planned to be disease-specific, and will be appropriate for early stages of outbreaks or epidemics, including those where the causal agent has not yet been determined.

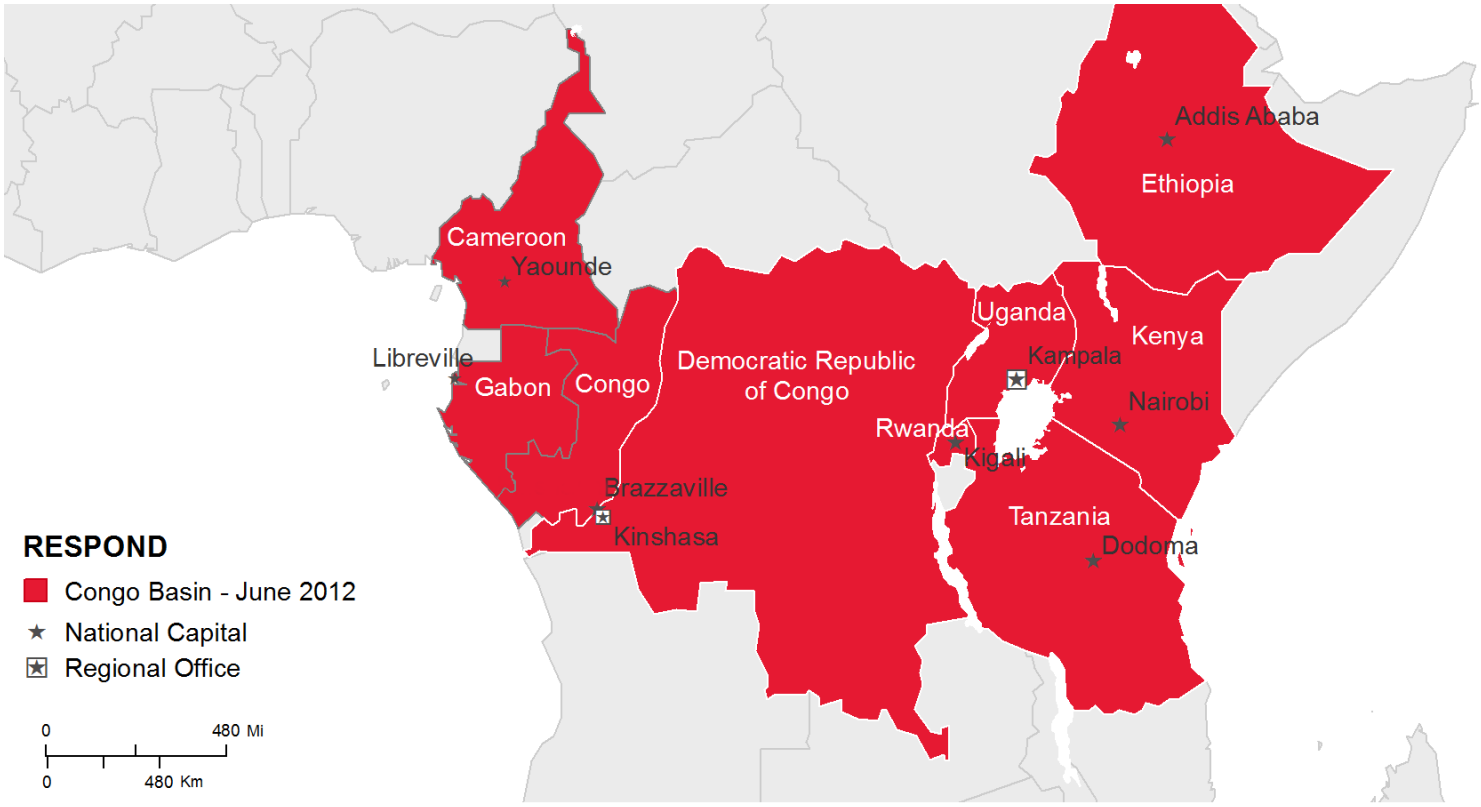
During June 2012, J. Tegelvik (RESPOND) received USAID approval to travel with Dr. Benido Impouma (WHO-AFRO) to Switzerland for several days of technical meetings at WHO headquarters in Geneva. This included technical meetings with colleagues within the Alert and Response Operations (ARO) group, and the Control of Epidemic Diseases (CED) group on June 18-19, 2012, and the Global Outbreak and Alert Response Network (GOARN) Steering Committee Meeting (SCOM) on June 20-21, 2012.

SUBACTIVITY 3.3.1 – PROMED MAIL: EXPANDING SURVEILLANCE AND VERIFICATION FOR WILDLIFE DISEASES

The purpose of this activity was to provide training on the use of non-traditional information sources to enhance routine disease infectious disease surveillance activities. Participants included field epidemiologists and trainees working within the field of disease surveillance in the human, animal and wildlife sectors.

The original contract with the implementing partner, ProMED Mail (PMM), expired without all of the deliverables met or all of the funding used. PROMED Mail, determined that given the limited resources available within its organization, and from RESPOND, it would not undertake further work. Training material development and training workshops under consideration will not be implemented and the activity is now closed.

II. AFRICAN ACTIVITIES

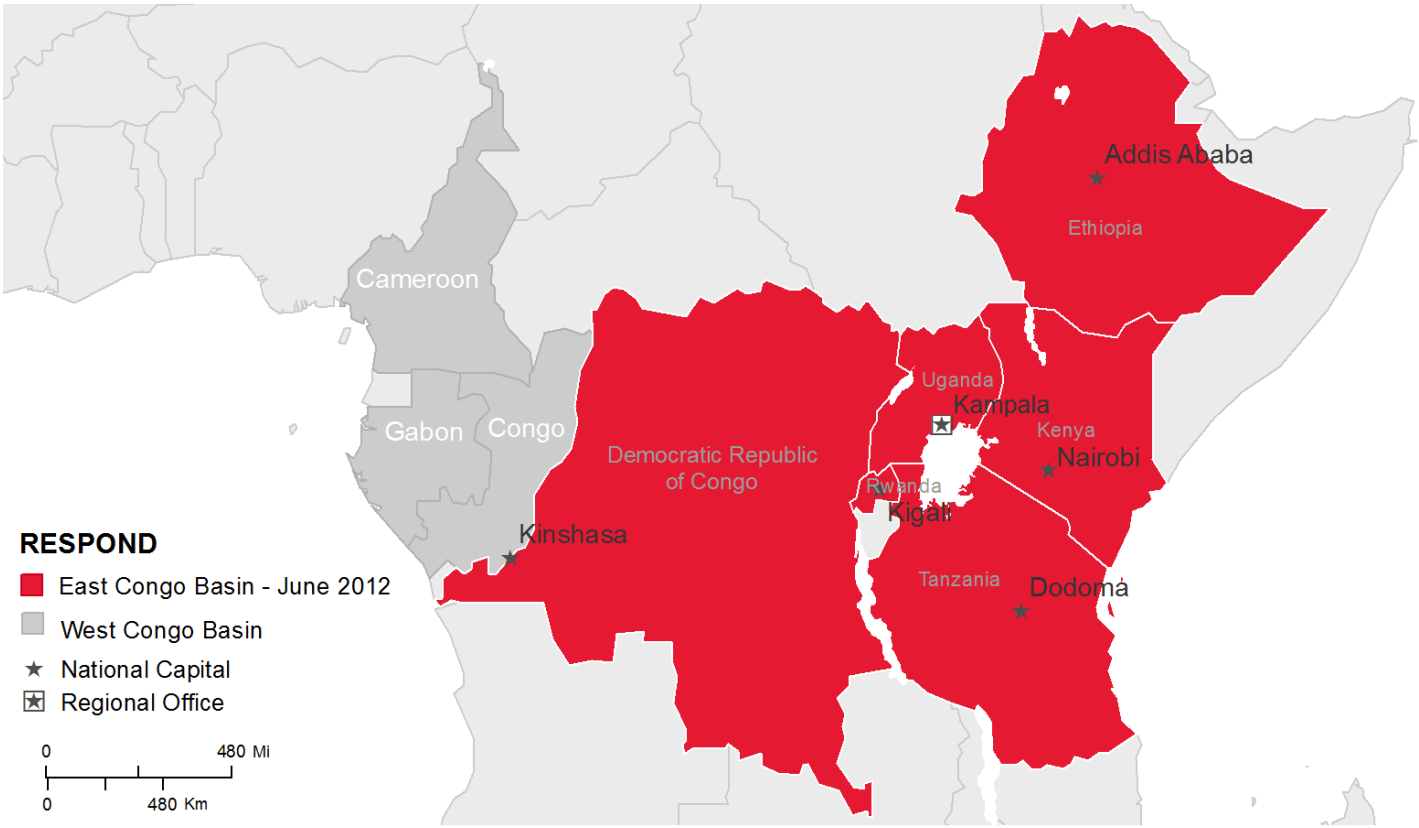


The RESPOND project operates in Eastern, Central and West Africa through support to a network of universities that integrate schools of Public Health and Veterinary Medicine, using the One Health approach to diseases outbreaks in several countries.

OHCEA (One Health Central and Eastern Africa) currently has 14 schools of Public Health and Veterinary Medicine as members, in six countries – Uganda, Tanzania, Rwanda, Ethiopia, Kenya and Democratic Republic of Congo. Its Secretariat is located in Kampala, Uganda, and implementation activities are supported by regional offices in Uganda and the Democratic Republic of Congo.

During Quarter 3 (April-June, 2012), both regional offices held events in support of OHCEA, as well as activities that were originally in the Year 3 Workplan (2011-2012).

UGANDA REGIONAL OFFICE ACTIVITIES



The map above shows the East Congo Basin countries where RESPOND currently works (in red). The Democratic Republic of Congo represents the reach of the Uganda regional office through OHCEA (One Health Central and Eastern Africa university network). The Congo River is represented by the white line that runs to the border of the Republic of Congo and the Democratic Republic of Congo from the eastern side of the Democratic Republic of Congo. The stars represent capital cities.

SUBACTIVITIES SUMMARY

SUBACTIVITY 1.2.2 EC – HEALTH ALLIANCE - ESTABLISHMENT OF ONE HEALTH CENTRAL AND EASTERN AFRICA (OHCEA)

This quarter, HEALTH Alliance deliverables included the completion of the Operations Manual for OHCEA, the creation of OHCEA's Communication Strategy and Policy, and an audit report, as the HEALTH Alliance has received funding from RESPOND. The OHCEA Communications Strategy 2012-2014 that sets the overall directions that OHCEA should follow for communications to support the network's program implementation, was drafted during this quarter. It includes six key strategic objectives which were identified as the major thrusts for OHCEA's communications efforts in the period 2012-2014.

These communication objectives set the overall direction for what OHCEA wants to achieve in order to be effective during the period of implementation. Due to unforeseen implementation delays the Operations Manual and Communication Strategy were not submitted to RESPOND this quarter, however they have been received as of the writing of this report. The audit report, due to RESPOND on June 15, was delayed because of the audit firm's completion of the report, but has also been submitted to RESPOND as of the writing of this report.

Planned Activities:

This grant closes on July 17, 2012, with the Final Report due to RESPOND on July 31, 2012.

SUBACTIVITY 1.2.3 EC - OHCEA AUGUST 2011 - SEPTEMBER 2012 (Y2 & 3) WORKPLAN

During this quarter, the regional office received news that USAID approved the OHCEA sub-award. Following this approval, the office held the sub-award kick-off meeting with OHCEA from June 28 – 29, 2012 at the RESPOND office in Kampala. The meeting was attended by OHCEA's Program Manager, Administrator, Uganda Focal Persons, and the Chair and Principal Investigator. The approved sub-award will run from June 21, 2012 to June 30, 2014.

During this engagement, the roles and responsibilities of the different members of the implementation team were reviewed. In addition, the different components of the sub-award agreement were discussed, including financial and program reporting requirements, substantial involvement clauses, procurement guidelines, USAID compliance rules and M&E obligations. Main regional activities to be implemented under the OHCEA sub-award during the next quarter were discussed and agreed upon, and include 1)Focal Persons meeting in Kampala to develop the Year 2 OHCEA work plan; 2) OHCEA Board of Directors meeting in Uganda; 3) OHCEA Deans' Summit in Ethiopia to approve OHCEA's Yr 2 work plan; 4) workshop for the development of in-service training programs and materials workshop (TOT workshops to be held in Ethiopia and Kenya) and; 5) a workshop for the development of training materials for a vet-nursing-medical field practicum.

Also during this quarter, the Uganda regional office continued to work closely with OHCEA to promote engagements with faculty, students, and U.S. partners to support One Health sensitizations, faculty exchanges, and Country Coordinating Committee meetings. In May 2012, eleven RESPOND-funded Public Health Institute (PHI) participants departed their respective countries for the University of Minnesota. These 11 participants come from OHCEA-member institutions in Democratic Republic of Congo (2), Ethiopia (3), Tanzania (2), Kenya (3) and Rwanda (1).

PHI participants at University of Minnesota (UMN).

The faculty had opportunities to interact with their counterparts from UMN and discuss several areas of collaboration. The potential areas of collaboration discussed included disease modeling, ecosystem health, the One Health approach, wildlife disease surveillance, outbreak response, risk assessment and risk communication, linkages between environment and human health, inter-professional collaboration, zoonoses, wildlife medicine, food safety, drug resistance, epidemiology of infectious diseases, food security, and global One Health leadership.

Unfortunately, the American consulate in Kampala denied B-1 visas for the four Ugandans also planning to travel to the U.S. As a result, the team of Ugandans could not travel to UMN this year. Based upon experience with the

various USAID country missions, there are different documents that the respective U.S. visitors will likely need and different timelines to obtain to qualify for a J-1 visa in the future. This experience will be invaluable during the next round of visits to the U.S.

One Health sensitizations continued to happen at two universities: the University of Nairobi School of Public Health and the Faculties of Medicine and Agriculture at the National University of Rwanda. Dr. Carolyn Garcia from UMN and Uganda Regional Office Director, Lendell Foan, engaged 9 faculty members from the School of Medicine and 9 faculty members (including the Dean and Vice Dean) of the School of Agriculture on learning about One Health, RESPOND, and how academic institutions provide an important link to the development of One Health. This was followed by lectures on One Health attended by over 100 students from the two schools.

OHCEA held two country coordination committee meetings during the quarter. The Uganda One Health Country Coordinating Committee meeting took place on April 3rd, with the discussions centered on the January – March One Health sensitization meetings for staff and students at Makerere University's COVAB and the College of Health Sciences and the strategies for the dissemination of One Health information to various ministries and institutions. It was agreed that CCC members would carry out boardroom meetings with institutional heads. Different ways of involving other One Health initiatives contained within the OHCEA strategy were considered.

RESPOND's Marguerite Pappaioanou presenting during the Ethiopia CCC meeting.

The Ethiopia One Health Country Coordinating Committee "CCC+" meeting took place on May 7 and 8 to sensitize government officials about the One Health approach. The meeting was attended by representatives from the Ethiopian Public Health Association, the Ethiopian Veterinary Association, the Ministry of Agriculture, the Ministry of Health, Addis Ababa University's Faculty of Veterinary Medicine, the National Veterinary Institute, the National Animal Health Diagnostic and Investigation Center and the Ethiopian Health Nutrition Research Institute. Marguerite Pappaioanou, RESPOND's Senior One Health Technical Advisor, presented on the One Health approach and Lendell Foan, Uganda Regional Office Director, gave an overview on RESPOND, and also fielded inquiries regarding the status of the OHCEA grant.

Planned Activities:

The main regional activities to be implemented under the OHCEA sub-award in July to September 2012 period will include:

- Focal Persons meeting to develop OHCEA work plan for 2013;
- OHCEA Board of Directors Meeting;

- Deans Summit to approve OHCEA's work plan for 2013 and ratify OHCEA Operations Manual and Communications Strategy;
- A workshop for development of in-service training programs and materials workshop (TOT workshops to be held in Ethiopia and Kenya);
- A workshop for development of training materials for vet-nursing-medical field practicum;
- The workshop to identify innovative practical and applied training programs and training of the OHCEA Administrators was originally scheduled to be held during the week of April 30th, 2012 but was postponed by the OHCEA Chair until the sub-award was approved. These training activities will restart during the next quarter.

Other OHCEA activities

- Uganda's Regional Office Technical Lead, Dr. Innocent Rwego, and Dr. Mbaabu Mathiu from the University of Nairobi attended the South East Asia One Health University Network (SEAOHUN) Regional Core Competency (April 2-3) and Curriculum Mapping (April 4-5) Workshops in Bangkok, Thailand. The purpose of their attendance was to understand approaches to assessing and implementing One Health Core Competencies that are being developed globally. After the meeting, Drs. Rwego and Mathiu suggested that OHCEA continues implementation of its strategic plan, and that One Health core competency training in form of a seminar should be included in the planned OHCEA Regional Curriculum/Program Review Workshop. Also, OHCEA members should include the One Health competencies in future curricula being reviewed, both in new curricula and in short courses.
- During the quarter, Serge Nzietchueng, DRC's Regional Office Technical Advisor and Innocent Rwego, Uganda's Regional Office Technical Lead co-facilitated a course at the UMN Public Health Institute titled *"Topics in Infectious Disease: Emerging and Re-Emerging Global Infectious Disease".* The class was well attended and was one of the few classes in which students were fully enrolled.
- RESPOND supported 12 students from OHCEA institutions within the region to participate in the annual summer course in International Animal Production, Disease Surveillance and Public Health, conducted jointly by Makerere University College of Veterinary Medicine, Animal Resources and Biosecurity (COVAB). The summer school was held from June 18 - July 14, 2012.
- Tufts Technical Liaison, Dr. Hellen Amuguni, and one of OHCEA's Kenya Focal Persons, Dr. Andrew Thaiya (University of Nairobi Vet School), presented at the Kenya Veterinarian Association's 50th Anniversary Conference in Nairobi. Dr. Amuguni presented on One Health and Dr. Thaiya presented on OHCEA and a Situational Analysis of One Health in Kenya.
- On May 2-3 Professor Sandra Godden (UMN) visited the University of Nairobi Veterinary College and School of Public Health to build on partnership discussions that were initiated between the two universities earlier in the year. Partnership opportunities discussed included:
    a) Faculty exchanges for continuing education or teaching. E.g. Summer Global Health Institute; other short courses; offer of lectures on tropical diseases;
    b) Faculty exchanges to collaborate on research projects (to be developed);

c) Graduate student exchanges for short courses, or, perhaps, entire semesters;

d) Shared curriculums;

e) Supplementing facilities/resources/equipment at University of Nairobi.

SUBACTIVITY 1.2.4 EC - OHCEA NETWORK DEVELOPMENT

The OHCEA Secretariat held a communication strategy formation workshop on May 8, 2012. The workshop was hosted by the RESPOND Uganda regional office and brought together participants from the Ugandan media, Makerere University's School of Public Health, College of Veterinary Medicine, Animal Resources and Biosecurity, and the Department of Mass Communications, RESPOND, and the OHCEA Secretariat. Formulation of the communication strategy will facilitate the development of the OHCEA network by achieving the following objectives: 1) promote effective and efficient communication between the OHCEA stakeholders through existing and new technologies; 2) empower stakeholders with effective communication and documentation skills; and 3) promote OHCEA as a leader in the One Health approach in East and Central Africa.

In addition to the outputs from the workshop, a communication consultant undertook informant interviews with key stakeholders in RESPOND and OHCEA, and also conducted a communications survey with deans and focal persons from the OHCEA schools. The information from the workshop, the survey and key informants was put together in the form of a three-year communications strategy that will be presented to the deans for ratification during their next summit.

Planned Activities:

Finalize the OHCEA operations and communications strategies and operationalize both to establish clear internal policies for OHCEA.

SUBACTIVITY 1.5.4 EC - RESIDENCY BASED KNOWLEDGE PARTNERSHIP MODEL FOR BUILDING VETERINARY PUBLIC HEALTH COMPETENCE IN UGANDA

During this quarter, the Uganda Regional Office received communication from Project Headquarters (PHQ) that the grant for this sub activity will be withdrawn from USAID and the activities will be implemented and managed with direct support from RESPOND's budget.

Dr. Sylvia Wanzala, a VPH resident at UMN since January 2012, was involved in the curriculum writing workshop at the PHI with the OHCEA focal persons. Specifically, with participants from Kenya, U.S., DRC and Uganda, they began the development of the curriculum towards 'One Health Leadership Field experience course. In addition, she participated in the Public Health Institute where she finished 6.5 credits, as well as worked as a Teaching Assistant for the One Heath class. During the quarter she enrolled for 6 credits to be completed online during the summer, and also began a new project where she will help document One Health case studies from around the world. In June Sylvia was selected to receive an 11-month Fogarty training fellowship. Normally this fellowship is awarded for advanced graduate level training for human physicians and public health professionals; Sylvia is the first veterinarian to receive this prestigious award.

Related to this sub-activity, RESPOND facilitated Dr. Andrew Tamale, a faculty member of COVAB to participate in an existing VPH residency program at the University of Minnesota. The objective of this trip is to conclude the pilot

program for the One Health Central and Eastern Africa (OHCEA) network based on a unique and successful program in veterinary public health at UMN. The program intends to address a critical need in providing applied practical training to veterinarians.

Planned Activities:

- Individual stakeholders meetings;
- Development of the residency program framework for Makerere
- Program sensitization in Ethiopia and Rwanda

SUBACTIVITY 3.2.0.4 EC - STRENGTHEN SURVEILLANCE, REPORTING AND DIAGNOSTIC CAPACITY TO IMPROVE EARLY DETECTION, DIAGNOSIS AND RESPONSE TO DISEASE OUTBREAKS IN HUMANS, LIVESTOCK AND WILDLIFE

This quarter two important RESPOND-funded training events were organized by AFENET: [1] One Health approaches to outbreak response training for District Rapid Response Teams, and [2] One Health Laboratory training for District Laboratory focal persons. Forty-four participants were trained on One Health approaches to outbreak response for District Rapid Response Teams. The objectives of the training were to: 1) provide an overview on the core functions of Integrated Disease Surveillance and Response within the context of the International Health Regulations;, 2) introduce participants to the One Health strategy in disease outbreak investigation and response, 3) share experiences in the One Health approach to investigation and response to recent epidemics, 4) impart skills for outbreak investigation and response to core members of the District Rapid Response teams in the newly created districts, and 5) discuss ways of strengthening community-based disease surveillance using the new districts as pilots.

RESPOND's senior technical advisor, Douglas Hatch, in discussion with the MVPM students. The RESPOND sponsored Master candidates started their field practicum during this quarter.

The One Health laboratory training for both human and animal district Laboratory Focal Persons was organized through funding from RESPOND to AFENET. The workshop was held from June 25 to 29, and was attended by 28 participants from 13 districts. Facilitators were drawn from AFENET, the Uganda Central Public Health Lab, the Uganda Virus Research Institute-National Influenza Lab, the Ministry of Agriculture, Animal Industry and Fisheries and the Ministry of Health-Epidemiology and Surveillance Department.

In addition, during this quarter the five RESPOND-sponsored Masters in Veterinary Preventive Medicine students started their three-month field attachment. The first field supervision visits to the five trainees' district assignments reviewed their first month of field activities. Meetings were held to exchange experiences, understand any concerns of District Veterinary Officers), identify possible logistical and technical gaps for

RESPOND partners to address, and provide technical support related to disease surveillance and outbreak response capacity.

Seven laptops were donated to AFENET this quarter. These laptops are intended for positions related to the MVPM program and three are to be used specifically during outbreak investigations.

Uganda Regional Office Director, Lendell Foan handing certificates for the Peer Educator Disease Outbreak Control training in Kampala.

Other outbreak response activities

RESPOND attended a two-day review workshop on Community Based Disease Surveillance systems and guidelines on April 11 and 12, 2012. The workshop was organized by AFENET in collaboration with the Ministry of Health, Uganda. The specific objectives of the workshop were to review the existing community based disease surveillance guidelines and system, to share experiences of the CBDS pilot system in Northern Uganda (Kitgum District), and adapt the reviewed and agreed WHO guidelines for the implementation of CBDS. Twenty-three veterinary, public health and environment experts drawn from the Ministry of Health, Ministry of Agriculture Animal Industry and Fisheries, AFENET and RESPOND participated in the meeting.

Planned Activities:

The grant for this sub activity ended on June 30, 2012. The report for the May/June period is due on July 15, 2012, and the final report is due on July 31, 2012. The Uganda regional office will schedule and hold a grant close out meeting with AFENET in July, 2012.

SUBACTIVITY 3.2.0.5 EC - PRIVATE SECTOR OUTBREAK RESPONSE TRAINING

Dr. Issa Makumbi from the Uganda Ministry of Health endorses the peer educator curriculum for the private sector.

In line with its objective to build capacity for outbreak response, RESPOND is supporting The Uganda Manufacturers Association (UMA) and Federation of Uganda Employers (FUE) to promote health of private sector workforce and communities by improving response to disease outbreak. Through training of work place-based peer educators, RESPOND seeks to give basic but necessary education on emerging diseases which, if not controlled, will affect the communities and also the work places and hence productivity and the economy at large.

This quarter RESPOND supported the Uganda Manufacturers Association (UMA) and Federation of

Uganda Employers (FUE) to hold a joint one-day Chief Executive Officer breakfast meeting in Kampala. The objectives of the meeting were to launch the private sector Disease Outbreak Training Curriculum and training in the work place, and engage the private sector companies to support the subsequent training. The event attracted 40 private sector company CEOs, membership from UMA and FUE, government officials from the Ministry of Health and National Disease Control Institutions, and RESPOND. The launch was chaired by Dr. Issa Makumbi, Assistant Commissioner, Epidemiology and Surveillance Division of the Ministry of Health.

In addition, between May 28 to 31, UMA and FUE conducted the training of 19 master trainers for the Peer Educator Disease Outbreak Response Training in Kampala. The TOT was facilitated by RESPOND partners, TRG and E&E, the Uganda Red Cross Society, and AFENET. Through group discussions, breakout sessions, and role-playing, the facilitators took participants through the different parts of the modules highlighting the technical aspects of the training modules, exposing them to facilitation skills and understanding the training manuals as reference tools.

During the month of June, UMA and FUE held partnership meetings with several private sector companies to secure commitment to receive outbreak response support training.

Planned Activities:

The UMA and FUE master trainers will conduct the training of peer educators from targeted private sector companies in disease outbreak response from July to September, 2012.

SUBACTIVITY 3.2.2 EC - STRENGTHENING EXISTING PLATFORMS FOR OUTBREAK RESPONSE IN UGANDA

On May 2, 2012, AFENET and RESPOND kicked off the grant to support capacity building for strengthening existing platforms for outbreak investigations and response in Uganda and DRC. Implementation of this initiative will be done through long and short-term training programs anchored on the One Health approach. The training programs will target public health professionals working in three government sectors of human, animal, (livestock and wild life) and environmental health.

The AFENET and RESPOND teams, with stakeholders from COVAB and the Ministry of Agriculture, Animal Industry, and Fisheries (MAAIF), held meetings to review the activity implementation plan, and also to initiate the process for the expansion of the Master of Preventive Veterinary Medicine (MPVM) program. During a five-day residential workshop in May 7 – 11, 2012, the MPVM curriculum was reviewed and the draft of the curriculum was submitted to Makerere University Senate for final review and approval.

Planned Activities:

- On-going support to the MVPM students in the second and final year of their course;
- Support the MVPM students placement to appropriate field sites and support their participation in human and animal disease outbreak investigation and response;
- Develop a proposal for expansion of the MVPM program to include enrollment of cohorts from Uganda, Rwanda, Kenya, and/or Tanzania.

SUBACTIVITY 3.4.7 EC – AMVET TRAINING OF COMMUNITY ANIMAL HEALTH WORKERS

Trainees practice drawing blood during the VETCAP training.

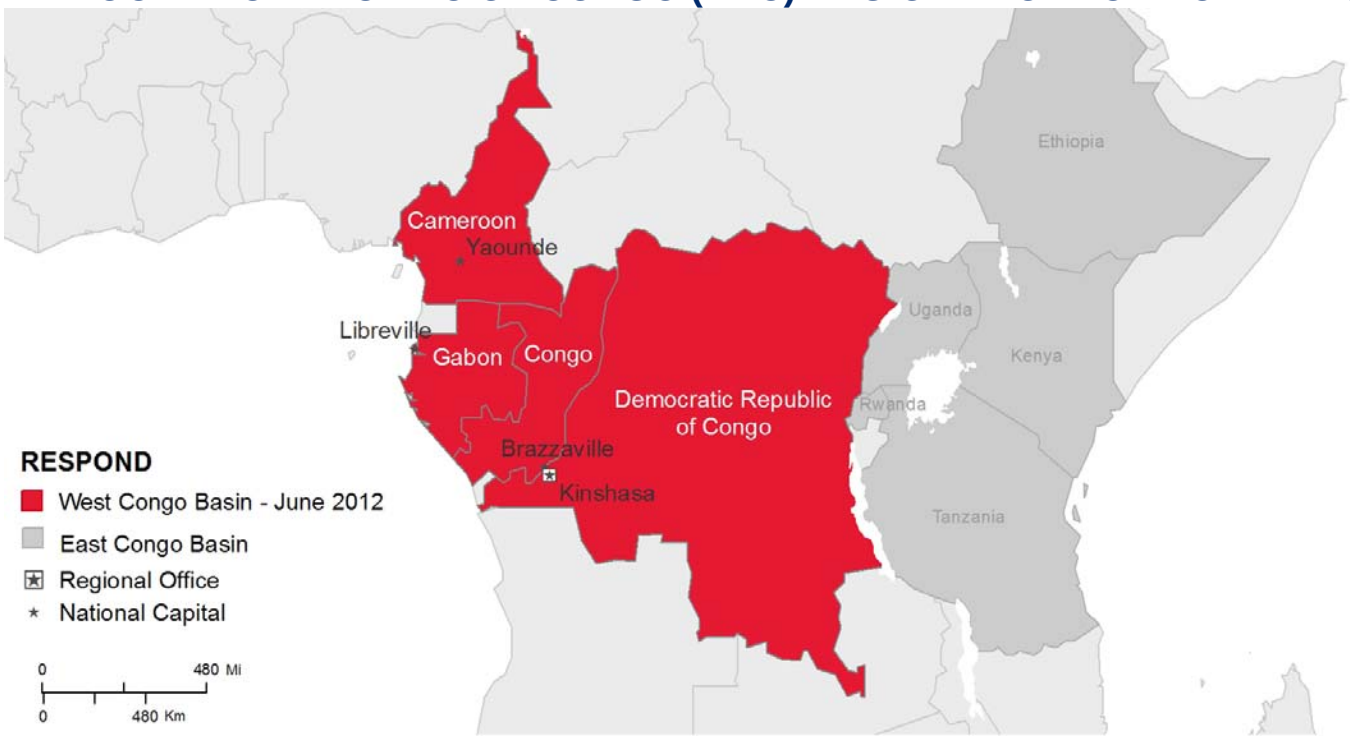
RESPOND supported the U.S. Army Veterinary Civil Action Project (VETCAP) training of 40 Community Animal Health Workers (CAHWs) in Uganda from April 22 to May 5. The goal of the training was to impact knowledge and skills to the participants so that they can better monitor animal and human health and be able to treat and refer animal health cases in their respective communities. During week one, didactic lessons were based on disease identification, diagnosis, management and prevention; drug administration; the importance of carrying out laboratory diagnosis; and disease surveillance. The opening sessions were attended by the US Embassy's Deputy Chief of Mission, USAID/Uganda's Deputy Director, and senior ranking officials from the US and Ugandan militaries.

During the week of field practicum, the trainees participated in several activities that exposed them to practical skills critical to monitoring animal and human health. Samples were tested for brucellosis in a lab, to which about 15 livestock tested positive. At the end of the training participants were equipped with medical kits that would enable them to carry on the activities in their own communities.

Planned Activities:

The next training is planned to take place in September 2012.

DEMOCRATIC REPUBLIC OF CONGO (DRC) REGIONAL OFFICE ACTIVITIES



The map above of the West Congo Basin shows where RESPOND currently works (in red). The Congo River is represented by the white line bordering the Republic of Congo and the Democratic Republic of Congo from the eastern side. The stars represent capital cities, and the capital city of Kinshasa, DRC, is where the RESPOND DRC Regional Office is located. Surrounding countries shaded in gray represent the reach of the RESPOND regional partners, such as HEALTH Alliance and AFENET.

SUBACTIVITIES SUMMARY

SUBACTIVITY 1.2.1 WC - CONDUCT TWINNING AND MENTORING WITH UNIVERSITIES AND VOCATIONAL SCHOOLS

UNIKIN and UNILU Veterinary Schools, and ISTM Lubumbashi successfully concluded activities planned in their RESPOND funded grant. Workshops and institutional exchanges were organized involving local schools, experts and faculty from RESPOND university partners. Besides technical advantages, this grant has given an opportunity to these schools to understand grant management processes necessary for the implementation of project to be funded under OHCEA sub-award.

Under the twinning initiative, seven faculty members from Tufts University and University of Minnesota travelled to DRC to interact with faculty and students from DRC's Schools of Public Health and Veterinary Medicine during the last quarter. Faculty from other disciplines from UNIKIN, ISTM-Kinshasa, ISTM-Lubumbashi and UNILU also were engaged. This unique experience has been an opportunity for joint multidisciplinary training and has enabled faculty better understand their colleagues from other disciplines.

Faculty from public health and nursing schools had a chance to visit slaughterhouses and veterinary laboratories along with colleagues from the veterinary school. Discussions on curricula helped DRC faculty to

understand the depth, focus and nature of courses taught at U.S. universities. Didactic resources were exchanged between counterparts, and joint research opportunities have been initiated (e.g. exploration on cryptosporidium and schistosomiasis with the involvement of junior faculty). Multidisciplinary scientific groups were initiated in three areas: infectious diseases, epidemiology and research methods.

On another note, UNILU and ISTM/Lubumbashi Quality Assurance Commissions created at each academic school per a mandate from the Ministry of Higher Education met in June to discuss practical ways to implement observations formulated during discussions and interactions with counterparts from Tufts University and the University of Minnesota.

Planned Activities:

- Faculty from Tufts University and UMN will finalize the year 3 twinning visits to UNILU and UNIKIN to teach and lead workshops designed to build capacity of junior faculty; in July and September 2012;
- A quality assurance workshop will be organized the first week of August at UNIKIN with participation from OHCEA schools;
- An opinion survey on the quality of education offered at UNILU Veterinary and Public Health Schools and ISTM/Lubumbashi will be conducted by Quality Assurance Commissions created at each of these schools; with the primary objective of identifying the gaps that could be addressed as part of the OHCEA 2012-2013 workplan.

SUBACTIVITY 1.2.3 WC - UPGRADE THE SKILLS OF FACULTY AT INSTITUT SUPERIEUR DE TECHNIQUES MEDICALES, INSTITUT TECHNIQUE AGRICOLE ET VETERINAIRE, AND INSTITUT D'ENSEIGNEMENT MEDICALE / INSTITUT TECHNIQUES MEDICALE

The process of finalizing, validating and disseminating the One Health-MISRZ (Multidisciplinary and Integrated Surveillance and Response to Zoonotic disease) pre-service training curriculum is ongoing. After Reform Committee members from the Ministry of Primary, Secondary and Vocational Education, the Ministry of Public Health and the Ministry of Higher Education and University, representing the three types of institutions (ISTM, ITM/IEM and ITAV) validated the training materials, 13 Master Trainers were trained in Lubumbashi from April 6 to 18. The methodology and tools to incorporate the new curriculum into existing programs have been developed during this workshop.

Draft decrees were developed and submitted to respective ministry for signature. This dossier has been presented and handed over to the CCC, which will ensure the follow-up and endorsement at ministerial levels.

Planned Activities:

The next steps consist in training a group of 30 teachers (IEM-ITM-ITAV) and faculty at ISTM to test the training materials and evaluate the process at the end of the academic year. This activity has the potential of being implemented by OHCEA schools under the OHCEA workplan for 2012-2013.

SUBACTIVITY 1.3.1 WC - DEVELOP AN ACTIONABLE PLAN TO STRENGTHEN AND ENHANCE ONGOING CAREER PATH DEVELOPMENT IN DRC AND REPUBLIC OF CONGO (ROC)

FUS (Federation Une Santé), a consortium of five health professional corporations, under the coordination of the Veterinary and Veterinary Technician Associations have been finalizing plans for the implementation of activities that will potentially support the objectives of OHCEA (Objective 1) and the member schools here in the DRC.

1) A census of health professionals led by the Medical Association;
2) A situational analysis of five health professions under the leadership of the National Nursing Association; and
3) A sensitization and educational program through the media, spearheaded by the Pharmacy Council.

FUS organized meetings and workshops to develop the methodology and tools to conduct the situational analysis and the census with the assistance of a consultant. This multidisciplinary collaboration is a unique opportunity for health practitioners and OHCEA schools to work together on issues of common interest: e.g. understanding and mastering the number and geographic distribution of health professionals across the country.

These interests are also shared by academic institutions. Universities are interested to know how many professionals to train based on the country demand for health professionals and structure of the employment market. As a result, the OHCEA Focal Point for the School of Public Health is co-coordinating one the situational analysis of health profession with FUS.

Planned Activities:

For the next quarter, FUS will coordinate with OHCEA schools to implement at least one of the above activities.

SUBACTIVITY 1.5.1 WC - CONDUCT PROFESSIONAL CONTINUING EDUCATION THROUGH DIDACTIC AND FIELD WORKSHOPS USING THE WILDLIFE INVESTIGATION AND LIVESTOCK DISEASE (WILD) MODULE

The third WILD training course took place from May 7 to 18, 2012 at the Mole National Park, Ghana. Thirty-one trainees from ministries responsible for Public Health, Livestock and Wildlife/Environment from 10 African countries and the Inter-governmental Agency for Development (IGAD) participated.

WILD training participants in Ghana.

As a result of the ten-day training, participants have improved their understanding on the interconnectivity of wildlife, livestock and human in health, the impact of human activity on wildlife and the environment and the relationship of local

people with protected areas, and the importance of a multidisciplinary approach in addressing health issues. Each country developed a short, medium and long-term action plan to promote One Health.

A joint RESPOND and AU-IBAR team traveled to Gabon in June 2012 to prepare the next WILD session, scheduled for August 2012. This team met with Gabonese officials, the U.S. Embassy, and the local ad hoc committee to start working with different suppliers for logistical matters.

Planned Activities:

The next steps will be to organize the fourth WILD introductory training course for the francophone countries in La Lope Park, Gabon, from August 14 to 25, 2012. Four EPT countries will participate in this last round of the introductory training course (Republic Democratic of Congo, Republic of Congo, Cameroon, Gabon and the Economic Community of Central African States).

SUBACTIVITY 1.5.5 WC - SUPPORT THE MENTORING FOR ENVIRONMENTAL TRAINING IN OUTREACH AND RESOURCE CONSERVATION- FOREST ECOLOGY AND STEWARDSHIP TRAINING (MENTOR-FOREST) PROGRAM BY ADDING ONE HEALTH CONTENT AND SUPPORTING FELLOWS AND A MENTOR FROM GABON AND THE REPUBLIC OF CONGO

The RESPOND team developed and successfully delivered the module on links between logging and forestry practices and emerging infectious diseases intended for MENTOR-FOREST in June 2012. The module covered the basics of infectious disease transmission, disease emergence, and common reservoir species in tropical forest ecosystems, along with risk analysis and health impact assessment for logging concessions.

This cohort is composed of nine professionals from Gabon and Republic of Congo attending their Master program on Forest Management and Conservation. The module has allowed students to understand the link between emerging infectious diseases and extractive industries, fundamentals of disease transmission, the link among ecosystem, human health and animal health, health impact assessment, and impact assessment and mitigation measures.

RESPOND is sponsoring the participation of one fellow for one year in the MENTOR-FOREST program. RESPOND support to this fellow for year two is dependent on availability of funds.

SUBACTIVITY 3.1.1 WC - STRENGTHEN SYSTEMS FOR DISEASE SURVEILLANCE, OUTBREAK INVESTIGATION AND RESPONSE WITH A ONE HEALTH APPROACH AND RESPONSE

The procurement of IT equipment and office supplies for the Ministry of Agriculture and Rural Development of the DRC was completed during the reporting period. The procurement of goods for the Ministry of Agriculture and Livestock (MINEPIA) in Cameroun has also been completed. The handover ceremony took place on June 1, 2012, combined with the communication and transportation equipment under activity 3.4.1 WC, intended for the Tshuapa District.

According to Ms. Diana Putman, USAID-DRC director, present at the handover ceremony, “the ceremony was a perfect illustration of one of the EPT pillars, the One Health concept, institutionalizing a multisectoral, interdisciplinary and integrated approach for professionals of human, animal and environmental health.”

Planned activities

This subactivity has been completed. The official handover of the supplies procured for MINEPIA in Cameroun will be conducted during the next quarter.

SUBACTIVITY 3.4.1 WC - DELIVER REFRESHER OUTBREAK RESPONSE TRAINING TO RURAL MEDICAL PERSONNEL AND FIRST-RESPONDER TRAINING TO COMMUNITIES IN THE USAID-CARPE SALONGA-LUKENIE-SANKURU LANDSCAPE REGION

Ms. Putman, the USAID-DRC Director, handing over communication and transportation equipment to the DRC Government representative.

The official handover of communication and transportation equipment and materials (radios, bicycles, motorcycles) purchased under this subactivity was completed on June 1, 2012. Representatives from the three recipient ministries and the USAID Director Diana Putman were present at the ceremony.

The delivery to the sites is scheduled for the months of July and August. Delivery, however, will probably be hampered with the resignation of the consultant who was scheduled to oversee the delivery and follow up of the items to each of the delivery sites. Given the remoteness of the locations, RESPOND is now exploring different possibilities for delivery to at least two central locations in Tshuapa District, in collaboration with the recipients.

Planned Activities:

RESPOND will finalize the delivery of goods to Tshuapa district.

SUBACTIVITY 3.4.4 WC - OUTBREAK RESPONSE TRAINING FOR MULTI-DISCIPLINARY TEAMS AT NATIONAL AND SUBNATIONAL LEVELS, INCLUDING TRAINING OF FRONT LINE HEALTH WORKERS IN OUTBREAK RESPONSE

The AFENET grant was signed during the reporting period. RESPOND offices in the DRC and Uganda, with AFENET, reviewed the grant implementation plan, and the grant milestone and deliverables dates during the grant kickoff meeting held in Kampala in May, 2012.

AFENET conducted a stakeholders' workshop in Kinshasa in late June 2012, where they validated the results of the needs assessment undertaken in November, 2011, and the proposed action plan developed to address gaps.

Planned Activities:

AFENET will present a detailed implementation plan by the end of July, 2012, and a short course on disease outbreak investigation and response will be conducted in September as their first intervention.

SUBACTIVITY 4.1.2 - EVALUATE EXISTING KNOWLEDGE MANAGEMENT SYSTEMS FOR THE HEALTH SCIENCES, THEIR APPLICATION AND UTILIZATION IN THE UNIVERSITY CONTEXT, AND SUPPORT THE IMPROVEMENT AND INTEGRATION OF APPROPRIATE SYSTEMS

Tufts University has started the process of installing TUSK at UNIKIN and UNILU. With the process of repairing and extending the university intranet to government entities and laboratories is underway, and an electronic infrastructure will be available to strengthen collaboration, and manage knowledge across sectors and disciplines.

Planned Activities:

For the next three months, capitalizing on the implementation of TUSK and the intranet and in complement to OHCEA plan to strengthen the e-learning capacity of OHCEA schools, Tufts University will:

1) Work closely with UNILU and UNIKIN to train a group of users, also learning from the experience from other OHCEA schools;
2) Facilitate curricula co-development between faculty involved in the twining program and their counterparts from DRC; and
3) Foster collaboration between academia and government entities, particularly veterinary and public health laboratories.

DRC Regional Office Lessons Learned

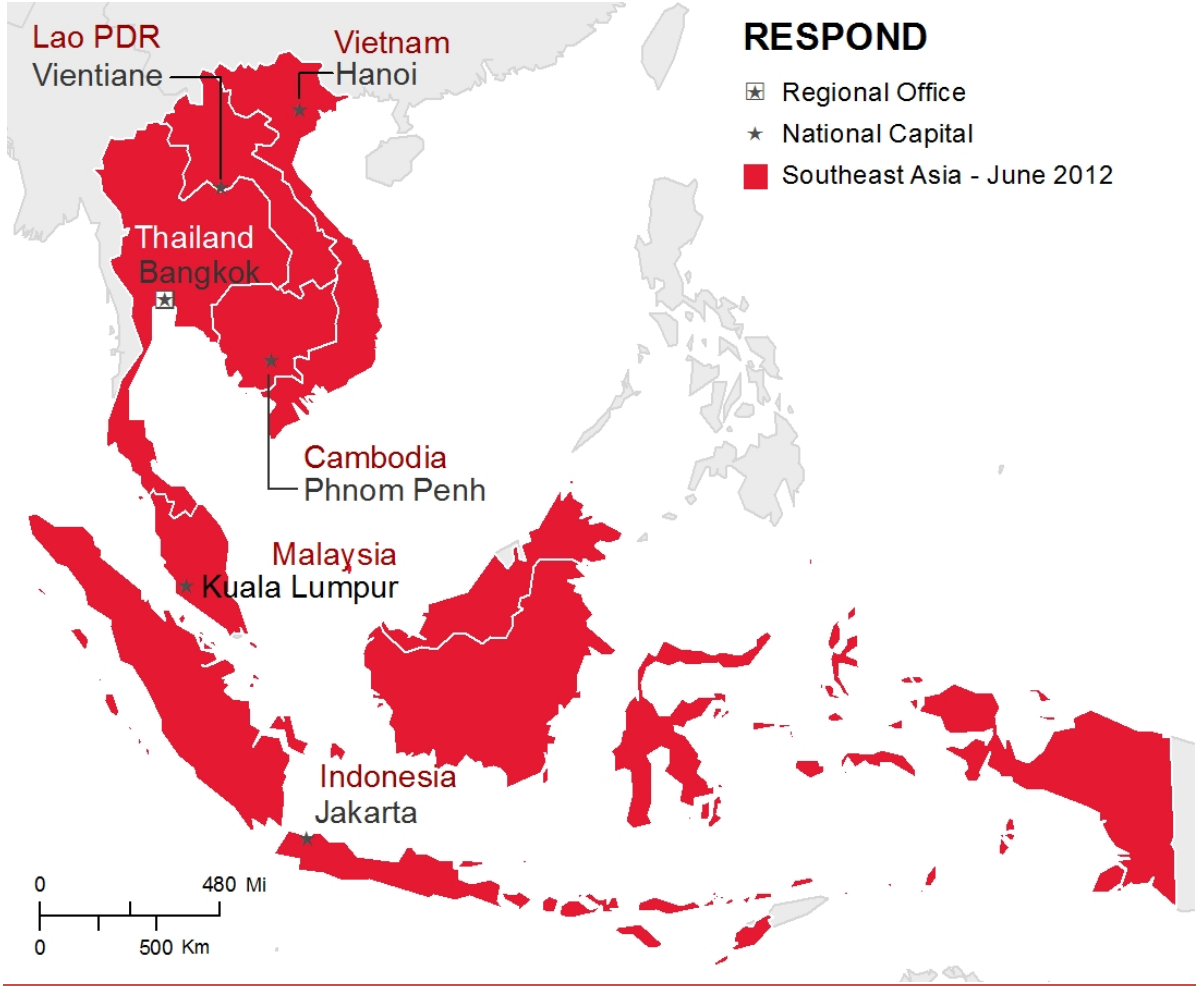
Some valuable lessons were learned by the DRC Regional Office with the completion of four grants during the reporting period:

- Need to ensure that all sub-grantees have a good understanding of the terms and conditions of the grant prior to the grantees signature of official documents. This is particularly important for entities implementing USG grants for the first time and the DRC team can continue to play a critical role in this area in support of OHCEA and the schools.
- Need to continuously provide the OAA and USAID with updates that may affect project implementation. For instance, the security and travel restrictions ensuing from the DRC general elections severely impacted on the completion of the activities by March 31;
- Organizations in the DRC usually have very strong ties to their leaders, and their personalities may help these organizations move their activities effectively, or may be an obstacle to the advancement of the entire project. Managing grants is actually requesting more time and resources in managing and building good relationship with organizations that are RESPOND partners in the region.

The Regional Office requested support from financial system experts for a second round of practical one-on-one training for the office accountant. After one year of implementation, the 2-day session was intended to provide both the region and the FAS team an opportunity to address issues that have surfaced and are not necessarily reflected in the user manual. The session provided an opportunity for the FAS team to identify key areas for user systems improvement and cross training for other Finance Units that do not use the system, but the information extracted from the system.

During the reporting period, the Regional Manager travelled to the U.S. for work planning sessions held in Washington, DC, from June 11 to 16. This was an opportunity to get a better sense of the USAID priorities for the upcoming year and discuss how the DRC Regional Office can align its activities in support of the OHCEA network and its action plan with key stakeholders, including management and partners. The fact that RESPOND in the Uganda and DRC regional offices are now focusing their interventions in strengthening and supporting the OHCEA network, demonstrates the need for clearer management strategy to be developed, which will address not only the day-to-day management in DRC, but also the link and relationship to OHCEA, Uganda Regional Office, University partners, and RESPOND headquarters. During the next quarter both African Region Regional Offices will work closely together to develop a management and transition plan that will reflect the need to focus on support to OHCEA.

III. SOUTHEAST ASIA ACTIVITIES



The map above the Southeast Asia region displays where RESPOND currently works (in red). The stars represent capital cities, and Thailand's capital city, Bangkok, is where the RESPOND Southeast Asia Regional Hub Office is located.

SUBACTIVITIES SUMMARY

SUBACTIVITY 1.2.1 SEA - IMPLEMENT TWINNING AND MENTORING PROGRAM

The Southeast Asia regional office continued dialog and discussion about the establishment of SEAOHUN's Secretariat Office, as well as the National Coordinating Offices in Vietnam, Indonesia, Malaysia and Thailand.

Also within the scope of university twinning and mentoring, SEAOHUN member faculty received support to participate in several One Health-related conferences and trainings. There were 17 travel awardees during this quarter, who participated in conferences and trainings that included the *Scientific Conference on Preventive Medicine and Public Health,* the *15th International Congress on Infectious Diseases, Public Health Institute Course, World Congress on Risk 2012: Risk and Development in a changing World, the 61st International*

Conference of the WDA, Participative Epidemiology, Training in Statistics with R, and Asian Elephant Health, Reproduction & Breeding Management Course, 2012. For more details, see **Appendix VI – Other Materials.**

Two country-specific university networks were established this quarter with RESPOND support: INDOHUN (Indonesia One Health University Network), and MYOHUN (Malaysia One Health University Network). These networks will serve as SEAOHUN partners in coordinating in-country activities and at the same time will engage country-specific university members using the relationships already existing among universities in Indonesia and Malaysia. A report on the INDOHUN establishment and its inaugural symposium is attached with this electronic document**.**

Two Emerging Zoonotic Diseases workshops were held this quarter. The first, in Hanoi, Vietnam, was held from April 23-27, and the second, in Kuala Lumpur, Malaysia was held from June 25-29. Participants gained a basic understanding of the scientific principles, research, teaching methods and materials applicable to four foundational topics and their molecular, microbiological, ecological and social dimensions: (1) the process of disease emergence; (2) disease emergence drivers and underlying mechanisms; (3) integrative research and intervention methods, models, and experimental/intervention design; and (4) disease emergence risk.

A full report on the EZD course held in Vietnam can be found in **Appendix VI – Other Materials.**

Planned Activities:

- Development of a strategic plan for SEAOHUN, with an analysis and a set of recommendations for legal status and establishment of the SEAOHUN Secretariat. This activity will comprise three meetings in September, October and November and will be planned in the last quarter of Year 3;
- Continue establishment of Regional Secretariat and National Network Coordinating Offices in all four SEAOHUN countries (Indonesia, Malaysia, Thailand and Vietnam);
- Continue to support SEAOHUN member faculty to attend One Health-related conferences.
- Hold a series of four country-level Core Competency workshops in Malaysia, Indonesia, Thailand and Vietnam, led by a team of faculty from Tufts University and University of Minnesota;
- Visit to all Network faculties by a senior level team from Tufts University, University of Minnesota and RESPOND in September, to determine the needs of faculties for future planned faculty exchange activities, including building capacity in research methodologies, scientific writing, grant writing, educational methodologies, curriculum and staff development etc.

Dr. Stan Fenwick of the Southeast Asia regional office speaks at the inaugural symposium to launch INDOHUN.

- Hold a two-day planning workshop in August for Thailand SEAOHUN members to develop strategies and mission for THOHUN, the Thailand One Health University Network

SUBACTIVITY 1.2.2 SEA - SUPPORT EXISTING TWINNING RELATIONSHIP BETWEEN KHON KAEN VETERINARY MEDICAL SCHOOL AND NABONG AGRICULTURAL COLLEGE

Twinning between VMKKU, in Thailand, and NAC, in Lao PDR aims to build qualified veterinary workforce and institutional training capacity of Lao PDR. RESPOND support to this activity focuses on NAC faculty training outside the country with the goal of closing the academic gap in Lao PDR. Lecturer support from VMKKU for the second semester of this calendar year reached 43 third-year and 26 fourth-year students in the Bachelor of Veterinary Science (BVS).

From March 4 to May 18, 2012, twenty-five Thai instructors delivered lectures on nine subjects: virology, veterinary helminthology, zoonoses, small animal surgery, epidemiology and preventive medicine and biostatistics, large animal surgery, swine medicine, avian medicine, and fish and exotic animal medicine.

In April, 2012, RESPOND staff visited NAC and the Dean of the Faculty of Agriculture requested continuation of academic support from VMKKU for one more year, so that the first cohort of BVS students can finish their 5-year degree program.

With support from RESPOND, two lecturers from Vietnam's VOHUN (Vietnam One Health University Network) have enrolled in a two-year Masters program in Interdisciplinary Veterinary Science. Also, one lecturer from Hanoi Agricultural University and a lecturer from NAC have enrolled in the one-year Graduate Diploma in Livestock Diseases and Health Management. All courses are to be delivered at VMKKU.

Finally, the planned visit to Tufts University in June by Dr. Sarthorn Porntrakulpipat and Dr.Somboon Sangmaneedet of VMKKU has been postponed to August 2012, due to the U.S. visa approval process.

Planned activities:

- Dr. Sarthorn and Dr. Somboon visit to Tufts for a one-month technical exchange focusing on disease diagnostics and prevention skills;
- Continued training of NAC students and staff at VMKKU and NAC;
- Training on outbreak response investigation for NAC staff and relevant Lao PDR officials has been postponed until December, 2012. A no-cost extension will be arranged.

SUBACTIVITY 1.5.2 SEA - APPLIED FIELD TRAINING FOR WILDLIFE VETERINARY MEDICAL OFFICERS AND FIELD PATHOLOGISTS

RESPOND SEA Regional office has been working with the Faculty of Veterinary Science of Mahidol University in Thailand to conduct a series of four training modules for veterinarians of the Department of National Parks, Thailand, to equip them with basic knowledge and skills necessary to act as a wildlife veterinarian. Veterinary curricula in Thailand normally focus on producing production animal, companion animal and Zoological

veterinarians, , leaving a gap in wildlife training, which some veterinarians need when they are assigned roles in wildlife health monitoring and surveillance.

After the three earlier modules in 2011: (1) roles of wildlife veterinarians; (2) immobilization and anesthesia of wild animals; (3) wildlife epidemiology, the fourth (4) module (postponed due to the flooding in Thailand) focused on field investigations and practices, and was held from June 25 to July 1, 2012 at Huay Kha Kaeng Wildlife Sanctuary World Heritage site in Uthai Thanee Province. Twelve people participated in the hands-on training, which involved patrolling, observing and recording wild animal traces and carcasses in the forest, forensic investigation exercises, learning about current research on wildlife at the Sanctuary, and learning about surveillance of infectious diseases among wildlife, using problem-based techniques.

The trainees found knowledge and skills gained from the four workshops very beneficial to their roles and their future as veterinarians. This training series is complete.

SUBACTIVITY 1.5.5 SEA - SUPPORT TO FETP-FETPV FOR MASTERS DEGREE IN EPIDEMIOLOGY

Thailand's FETP/FETP-V programs (field epidemiology training programs for human health workers and for veterinarians) seek to build the outbreak response and disease surveillance capacity of a core group of epidemiologists, both in the country and the region, equipping them with comprehensive knowledge of the principles of epidemiology, public health biostatistics, data collection, analysis and interpretation, disease surveillance systems, and the importance of accurate and timely health information provided to relevant government authorities to guide the necessary response. The ultimate goal is to support the retention of highly qualified government workers promoting the One Health approach in outbreak response in the region.

With funding support from RESPOND and in collaboration with four universities in Thailand (Prince of Songkla University, Chiang Mai University, Kasetsart University, and Mahidol University), seven students (one from China, one from Lao PDR and five from Thailand) were enrolled in Master's programs in Epidemiology for 2011-2012.

In this quarter, three of the students finished their first academic year of the Masters, and four students completed their Masters Degree. Their research was on the following topics:

- Strengthening surveillance of the vector borne diseases, dengue and chikungunya in Vientiane Capital City, Lao PDR;
- Syphilis prevalence study in Thailand: October 1, 2008 – September 30, 2009;
- Network Analysis to Characterize Trade Patterns of Smallholder Dairy Farms, Nongpho Dairy Cooperative LTD, Thailand;
- Study of complications in pregnant teenagers and their children: January – December 2009.

Planned Activities:

- Continued support for the remaining three Master students;

- Support three additional students to enroll in the relevant university based Masters programs.

SUBACTIVITY 1.5.6 SEA - MONITORING AND DISEASE SURVEILLANCE TRAINING FOR DEPARTMENT OF FORESTRY PROTECTED AREA (PA) STAFF AND FORESTRY VOLUNTEERS IN LAO PDR

During this quarter, both the grant and its activities were finalized for application. The grant was submitted to USAID, and the office is now awaiting final approval. Some of the planned activities include:

- Development of wildlife disease and surveillance training modules for Forestry staff and volunteers in selected Protected Areas of Lao PDR;
- Implementation of training for Forestry staff and volunteers in disease investigation, wildlife diseases of importance, the role of Forestry officers in Government of Lao PDR surveillance activities, personal protection from wildlife diseases, sample preservation, and working with veterinarians and doctors;
- Working with Government of Lao PDR to integrate Forestry officers into country-level surveillance activities.

Planned Activities:

Once the grant is approved, a kick-off meeting will be held and the implementation of planned activities will start.

SUBACTIVITY 3.4.1 SEA - DISTRICT AND PROVINCIAL ZOONOTIC DISEASE OUTBREAK RESPONSE TRAINING, INDONESIA

A few events marked this activity for the reporting period. Among them, the most notable was a meeting with stakeholders (including government) to discuss and develop an implementation plan. Some of the decisions taken during this meeting included:

- Hiring two local consultants to assist with planning of the training activity and to serve as liaisons to seek government support and commitment;
- Preparing a SOW and TOR to identify potential consultants, with support from the USAID mission and government partners;

Planned Activities:

- Consultants to develop and implement an inception workshop in Year 3 Quarter 4 and to discuss and finalize plans for implementation of the in-service training activity with all stakeholders;
- Develop and complete the competitive bid process for implementation of the activity.

SUBACTIVITY 3.4.2 SEA - SUPPORT TRAINING TO STRENGTHEN ONE HEALTH EPIDEMIOLOGICAL TEAMS WITH FOCUS ON APPLIED VETERNINARY EPIDEMIOLOGY TRAINING (AVET) PROGRAM TRAINING AT SELECTED PROVINCIAL, DISTRICT AND COMMUNITY LEVELS (VIETNAM)

The grant for this activity was approved in February, 2012. Since then, the implementation plan for the joint training activity between Government Ministry staff and WHO was reviewed and a workshop was held in May, 2012 in Da Nang to train Ministry employees as trainers for the forthcoming district and provincial level workshop and field activities.

A no cost extension for this activity was approved until March 31, 2013.

Planned Activities:

- Review and strengthen existing training materials in collaboration with FETP-Vietnam, WHO, and CDC, to develop appropriate materials for joint training activity;
- Support the delivery of FESC in-service training courses in multiple provinces, including meeting venues and related travel of district and provincial level officials (animal and human health) responsible for disease surveillance and outbreak response activities;
- Strengthen skills of mentors and supervisors overseeing trainees responsible for 2 to 3-month long field projects focused on outbreaks and disease surveillance systems;
- Support for subject matter experts to provide technical assistance during FESC and field projects;

SUBACTIVITY 3.4.4 SEA - SUPPORT TRAINING TO STRENGTHEN ONE HEALTH EPIDEMIOLOGICAL TEAMS AT PROVINCIAL AND DISTRICT LEVELS

With support from RESPOND, the Field Epidemiology Association of Thailand (FEAT) has been working with stakeholders from the public health, livestock and wildlife sectors at national, provincial, and district levels to introduce a multi-sector approach to outbreak investigation and response under the One Health concept. Following two trainings in Bangkok for mentors and field workers from five provinces during February and March 2012, provincial meetings were held to inform and gain support from relevant provincial authorities.

As a result of those meetings, protocols for joint field investigation were developed and during the reporting period, fieldwork took place in five major provinces where the likelihood of zoonoses is high.

Survey protocols were also developed and specimen collections were carried out in four provinces:

- Chiangmai – tuberculosis and Q fever;
- Chonburi – Brucellosis;
- Kanchanaburi - West Nile virus infection; and
- Songkla - Melioidosis and Brucellosis.

Samples collected from animals are being tested for TB, Brucellosis, and Q fever. Interviews with livestock farmers were focused on contact with animals and other risky behaviors. In Kanchanaburi Province where the

effort is focused on West Nile virus, cases of encephalitis in patient records at provincial hospital were reviewed and blood samples from horses and poultry have been sent to laboratory for testing.

Planned activities:

- Testing of specimens collected and data entry and analysis to find association or linkages between exposure to animals and human health;
- FEAT will hold a workshop for presentation of study results from the four provinces and progress from Nakornrachasima in August, 2012.

SUBACTIVITY 3.4.5 SEA - SUPPORT TRAINING TO STRENGTHEN ONE HEALTH EPIDEMIOLOGICAL TEAMS AT SELECTED PROVINCIAL, DISTRICT, AND VILLAGE LEVEL (LAO PDR)

The finalized grant document has been submitted to USAID Washington for approval in June. Some of the activities planned for this grant include:

- Development of training modules for district and provincial level staff from the MOH and Ministry of Agriculture and Forestry(MoAF);
- Meetings with officials in Luang Prabang, Vientiane Capital City and Savannakhet to discuss and plan the training activities;
- Training of trainer workshops to strengthen the knowledge of National and Provincial level trainers in educational methodologies, disease investigation, epidemiology, outbreak response, disease surveillance, zoonotic diseases etc.;
- Training of district and provincial level MOH and MOA staff in a joint One Health approach to disease investigation and outbreak response, focusing on the above topics;
- Simulation exercises to assess and evaluate the response to outbreaks of zoonotic diseases.

Planned activities:

- Provide technical assistance to implement the activity;
- Obtain support from in-country staff of US-CDC, WHO and FAO to review existing training materials and design additional materials appropriate for the provincial and district training, according to the operational context of Lao PDR.

SUBACTIVITY 3.4.7 SEA - SUPPORT TRAINING TO STRENGTHEN ONE HEALTH EPIDEMIOLOGICAL TEAMS, INCLUDING MOH AND MOA STAFF, AT SELECTED PROVINCIAL AND DISTRICT LEVELS

In Cambodia, the capacity of both human and animal health sectors is limited and supporting each sector to build their own outbreak response capacity is still necessary. To support the human health sector, RESPOND

has been working closely with WHO in supporting the Applied Epidemiology Training (AET), conducted by the Cambodia Communicable Disease Control Department.

Participants were from provincial rapid response teams (RRT), and the second didactic part of the training took place from May 21 to June 8, 2012. Due to a limited number of qualified trainees and supervisors, there were only 5 participants, and RESPOND supported 4 participants from 4 different provinces (Battambang, Rattanakiri, Pursat, and Siem Reap). The content of the second didactic training focused on outbreak investigation using case examples in Cambodia, including zoonotic diseases. After this didactic training, participants developed plans to investigate specific zoonotic diseases and other diseases of concern in their respective provinces.

Still in the scope of this activity, RESPOND staff provided logistical and facilitation support to the USAID Cambodia mission for the annual workshop reviewing the progress of the zoonotic disease response sector and the EPT partners in supporting the Cambodian government's National Zoonotic Disease Action Plan. The workshop was held on June 5 and 6 in Siem Reap, with twenty participants. At the end of the workshop, each EPT partner presented their draft plan for the 2013 Fiscal Year. EPT partners' activities will be incorporated into the national zoonotic disease sector plan of the Cambodian government in Fiscal Year 2013.

Planned activities:

- For the animal health sector, RESPOND has been working with FAO to support the first Mini-FETPV for animal health workers in Cambodia. The planned training will take place in Takeo Province in from July 30th-17thAugust, 2012, with around 20 participants from three provinces near the Cambodia-Vietnam border.
- Support the final 3rd didactic part of the Applied Epidemiology Training (August 20-31), which will conclude with the National Epidemiological Conference during where the participants will present results of their research findings.

Southeast Asia Regional Office Lessons Learned

A review of sub-grantees financial reports indicates that more training is needed for sub-grantees on how to manage USAID grants. Some grantees had no prior organizational experience in managing a large federal grant and found that it was more complicated than anticipated to administer the grant to meet USAID/RESPOND requirements.

As a result, some sub-grants started implementation despite insufficient knowledge on how to manage the grant. A number of these early implementers noted that regular and continuous guidance and support during the implementation period is necessary. The SEA Regional office has developed cost guidelines and necessary guidance for its own staff and sub-grantees. Additional guidelines, policies and documents for implementing and planning processes were collected and compiled from various sources. Results from synthesis of these documents including lessons learned will be incorporated and used in the development of implementation guidelines for existing and new sub-grantees.

Hiring a competent grants manager took more time than anticipated. Continuity of staff is a critical ingredient in the overall success of the project. Difficulty hiring a qualified candidate, as well as staff turnover can be a particular problem when it affects key positions, such as grants manager. It took the regional office several months to recruit replacement staff and train them to be effective in their new positions. Though hiring key project staff with knowledge of the industry and of federal grants could make implementation easier, the common challenge is the difficulty in finding appropriately skilled staff in the local market in Thailand to work for the short/limited time of the project lifecycle. Recognizing the important function and numerous roles of grants management, project management defined and diversified grants management tasks among two administrative staff; manager and officer/assistant level.

IV. APPENDICES:

APPENDIX I: CONCEPT PAPERS AND GRANTS

The following concept papers and grants were approved in the reporting period:

AFENET Combined Uganda and DRC Grant

Sub-activities 3.2.2 EC and 3.4.4 WC were combined in one grant (both concept papers are listed below), and approved on April, 25, 2012. Information on the combined grant is below:

Program Description

The RESPOND project began in October 2009 with a mandate to strengthen training, educational programs, and support to governments, universities and civil society with the objective of improving the capacity to respond to zoonotic and emerging infectious disease outbreaks. This project is one of five in the United States Agency for International Development's (USAID) Emerging Pandemic Threats (EPT) program portfolio.

This grant will strengthen existing platforms for outbreak investigation and response that merges animal, human and environmental health dynamics into a comprehensive capacity for disease detection and control in Uganda and the Democratic Republic of Congo (DRC). To achieve the aforementioned objectives, AFENET will undertake the following activities:

Uganda

1. Continue to develop the hands-on/practical/field focused curriculum as a model for "One Health" applied epidemiology training for veterinarians. Under this activity, AFENET will:
Provide ongoing support for five graduate veterinary students at the Makerere University College of Veterinary Medicine, Animal Resources and Bio-Security (COVAB), with a hands-on/practical/field focused curriculum including links to One Health approaches to disease surveillance, field investigations, applied epidemiology, data analysis and interpretation, outbreak response, communication, risk assessment, basic socio-economics, participatory methodologies, and M&E. Specifically, AFENET will:

a. Develop a special track under the existing Masters in Science (MSc) on Preventive Veterinary Medicine at COVAB in partnership with faculty at COVAB, Tufts, and UMN. The track will include modules on One Health approaches to disease surveillance, field investigations, applied epidemiology, data analysis and interpretation, outbreak response, communication, risk assessment, basic socio-economics, participatory methodologies, and monitoring and evaluation (M&E);

b. Attach fellows to appropriate field sites and support their participation in human and animal disease outbreak investigation and response;

c. Assist in initiating discussions with Ministry of Health (MoH), Ministry of Agriculture, Animal Industries and Fisheries (MAAIF), AU-IBAR, WHO-AFRO, OIE, and FAO to ensure the new curriculum and corresponding program are in line with and responsive to their overarching strategies;

d. Work with COVAB, Tufts, and UMN to develop a framework (proposal) for professional development of fellows, to include: i) Mentorship by staff from AFENET and faculty from COVAB, Tufts, and UMN to ensure completion of the program; ii) Opportunities for fellows to participate in international experiences – including attendance at international conferences and exchange visits to the US, other African countries, and possibly Asia to observe and evaluate different approaches to disease surveillance and response.

e. Assist in developing a framework (proposal) for program expansion in FY13 to include enrollment of cohorts from Uganda, Rwanda, Kenya, and/or Tanzania;

f. Support trainees to attend the 7th Training Program in Epidemiology and Public Health Interventions Network (TEPHINET) conference, to be held in 2012 in the Middle East. AFENET is a member of TEPHINET, and biennially supports trainees from training programs within the network to attend scientific meetings such as these. The conferences serve as a platform for trainees to share findings/experiences from their fieldwork projects with the wider public health community and also contribute to the body of knowledge in public health.

2. Complete the participatory epidemiology manual and conduct associated refresher training.
In 2010, AFENET collaborated with the International Livestock Research Institute (ILRI) to develop a Participatory Epidemiology (PE) training program that incorporates One Health approaches to outbreak investigation, surveillance, and assessment of programs and enhancing communication to communities for public health personnel.
The program is intended for use in training both field staff and in the FE(L)TPs. This program, the first of its kind, was piloted in the Uganda FETP, and a manual was drafted. In this activity, AFENET will:

a. Work with ILRI/PENAPH, Tufts, and UMN to complete both participant and trainer manuals in participatory epidemiology (PE) methods, so as to incorporate One Health approaches and complement the IDSR technical guidelines to enhance the ability of the IDSR system to link with community level activities, including, for example, evaluation of unusual animal health events;

b. Pre-test the PE manual to ensure completeness, accuracy, and relevance;

c. Conduct short courses and mentoring using the PE manual to build participatory epidemiology capacity among AFENET professionals.

3. Develop training modules, tools, and approaches for M&E. Under this activity, AFENET will work with the RESPOND M&E team to:

a. Develop and conduct an introductory workshop on program evaluation, targeting the AFENET Secretariat;
b. Develop evaluation processes for AFENET training modules;
c. Develop performance indicators for AFENET program inputs, processes, and outputs, with an emphasis on implementing Participatory Impact Assessment (PIA) [additional expertise in participatory methods will be provided by Tufts];
d. Translate and adapt, as appropriate, the PIA manual prepared in DRC under RESPOND sub-activity WC 3.4.4 into English for use in training on PIA in Anglophone countries.

4. Assist with developing a framework (proposal) and implementing activities to strengthen management practices within AFENET.
Under this activity, AFENET will:

a. Work with Tufts and UMN, and coordinate with a local management institute, to develop a framework (proposal) for training and technical assistance in areas such as project management, leadership, communication, and mentoring;
b. Assist in implementing the agreed strategy for strengthening management practices within AFENET.

Democratic Republic of Congo

1. Rapid skills assessment of existing outbreak teams and response structures in at least 3 of DRC's 11 provinces:
   In order to develop an appropriate capacity building plan, including appropriate short course content, scope, and duration of training, AFENET needs to conduct a rapid skills assessment in the target areas. In this activity, AFENET will:
   a. Conduct a qualitative assessment of outbreak teams and response structure through field visits and interviews.

b. Write a summary report that details findings, identifies gaps, and makes recommendations.

2. Conduct short courses – outbreak investigation and zoonoses short course:
In order to build critical field epidemiology and outbreak investigation capacity among field staff operating at the Ministry of Agriculture, Ministry of Public Health, and Ministry of Environment, Conservation of Nature and Tourism, AFENET will conduct a two-week course in outbreak investigation and response and a one-week course in field epidemiology and zoonoses.
In this activity, AFENET will:

a. Adapt its existing short course materials for DRC based on the findings from the assessment.
b. Conduct short courses for approximately 40 field staff personnel from multiple ministries.

3. Translate AFENET Participatory Epidemiology (PE) manual into French for use in training in PE in DRC:
In 2010, AFENET collaborated with the International Livestock Research Institute (ILRI) to develop a Participatory Epidemiology (PE) training manual that incorporates One Health approaches to outbreak investigation, surveillance, and assessment of programs. The program is intended for use in training both field staff and in the FE(L)TPs. This document, which is to be finalized as part of the Uganda activities is primarily produced in English.
In this activity, AFENET will:

a. Translate the completed manual into French and pre-test its suitability for use in DRC.

4. Develop a framework (proposal) for continued professional training in One Health for the field staff:
As part of the effort to build sustainability of the project initiatives, this activity will seek to develop a framework (proposal) to institutionalize a comprehensive One Health continuing education program in order to maintain and upgrade professionals' skills in areas such as field epidemiology, risk-based disease surveillance, outbreak investigation and response, participatory epidemiology, and participatory impact assessment. In this activity, AFENET will:

a. Develop a framework (proposal) with partners to institute continuing education in One Health for professionals.

5. Develop a framework (proposal) for a public health association in DRC.
DRC epidemiologists are trained by different institutions in different locations (e.g., field epidemiologists are currently training in Cameroon). There is a need for a forum that can coordinate, streamline and consolidate these efforts in order to provide a platform for the development of the public health sector, especially the areas of surveillance and outbreak investigation. The association's membership will include trained personnel, as well as training participants. In this activity, AFENET will:

a. Identify the key stakeholders, prepare the bylaws, and, in collaboration with the key stakeholders, develop a strategic plan to establish the association.

6. Assist with the process that will lead to proposed protocols to guide outbreak investigation in the One Health framework.

DRC needs a common reference for outbreak investigation, especially for diseases at the animal (livestock, wildlife) and human interface. This activity in the long run aims at developing protocols, roles, and responsibilities of different service ministries for multi-sectoral disease surveillance, outbreak investigation, and response. In this activity, AFENET will:

a. Review existing protocols, identify and/or develop protocols, and agree upon protocols in three districts within selected hotspots.
b. Define the objectives of the One Health framework and provide assistance to the Ministries in developing One Health training materials.

Expected Activity Results:

By 30 May 2013 AFENET will achieve the following objectives under Purpose #1:

a. Successful completion of the MSc in Preventive Veterinary Medicine resulting in five qualified, competent veterinarians trained in public health who will support national and district-level surveillance activities coordinated by MoH and MAAIF;
b. A plan for expansion of the training program in FY13 to include enrollment of cohorts from Uganda, Rwanda, Kenya, and/or Tanzania will be developed;
c. The PE manual–including both participant and trainer manuals–will be finalized, translated, pre-tested and available for use in both Anglophone and Francophone countries;
d. At least 17 AFENET professionals will be trained and mentored in PE methods and are able to serve as potential trainers for expansion of PE methodologies to public health and One Health professionals in member countries;
e. Trained AFENET Secretariat personnel in M&E methods (including PIA) and able to support M&E capacity building among AFENET professionals in member countries;
f. Standardized tools to monitor the impact of AFENET's inputs into public health capacity building will be developed, tested and available for use; and
g. Trained AFENET Secretariat personnel in project management, leadership, communication and mentoring, and able to support capacity building in these areas among AFENET professionals in member countries.

By May 30, 2013 AFENET will achieve the following objectives under Purpose #2:
a. Trained at least 40 personnel from the Ministry of Agriculture, Ministry of Public Health and Ministry of Environment, Conservation of Nature and Tourism at national, provincial and District levels, including selected hotspots (Bas Congo, Bandundu and Katanga), in field epidemiology and outbreak investigation and response that include participatory methods. Trainees will be ready to be mobilized to respond to an outbreak;
b. Reviewed and/or developed proposed mechanisms, including protocols, roles and responsibilities of different services, for multisectoral disease surveillance, outbreak investigation and response. Additionally, these will have been agreed upon for 3 districts within selected hotspots;
c. Developed a proposal for a continuing education program in outbreak investigation and response and participatory epidemiology in collaboration with Fédération Une Santé (FUS), OHCEA and AFENET.
d. Developed a timeline to establish the national association of epidemiologists.

OHCEA One Year Implementation – Part of the OHCEA Grant Signed on June, 2012

The OHCEA Grant was signed this quarter. The concept paper listed below is for one year of the multi-year grant, corresponding to the 2012-2013 period.

One Health Central and Eastern Africa (OHCEA): Year One Implementation

Sub-activity: Multiple sub-activities combined

Partner Lead: University of Minnesota

OHCEA Creation:

One Health Central and Eastern Africa (OHCEA) was created in an effort to strengthen One Health at educational institutions in EPT hot-spot regions. The founding member institutions of OHCEA represent 14 schools of public health and veterinary medicine, from six countries in central and eastern Africa. Additionally, multiple schools within the University of Minnesota and Tufts University are partner institutions within OHCEA. The collaborative approach of OHCEA was intentionally developed in association with regional universities because they are a primary long-term, stable source of pre-service and in service training for outbreak resource training and response. Universities are also a major source of innovation for social and institutional change, and have the capacity to foster truly transformative movements, in part through their ability to be a neutral convener of thought leaders across sectors and disciplines, and then to transfer the new ideas to the next generation of thought leaders. Finally, Universities are ideal partners for regional cooperation, as they do not adhere to national agendas or boundaries, and are able to participate more openly to create a truly trans-boundary approach. Already, universities in East Africa are leaders in discipline-specific regional capacity building through admirable organizations like Health Alliance (Schools of Public Health) and RUFORUM (Agricultural Schools). OHCEA plans to build on these existing models to create a new model of cooperation that strengthens regional capacity not only of one discipline, but also across disciplines and sectors to improve whole health systems throughout the region. The vision for this new alliance will be actualized by convening One Health thought leaders from across professions (public health, veterinary medicine, nursing, medicine, wildlife sciences, natural resource sciences) and organizational sectors (intergovernmental, governmental, academic, private, NGO) to work together to identify common interests and build truly collaborative programs to advance One Health capacity in the region.

Below are the outlined objectives for the OHCEA Year One work plan. This is an implementation plan that includes both approved and pending OHCEA activities, in three phases throughout RESPOND Y2.

PHASE ONE

Timeline: January 1 to February 15, 2011

Deliverable for Phase 1:

1. Establish the OHCEA Secretariat;

2. Establish Country Coordinating Committees (CCC) in each country;
3. Complete an itemized budget for OHCEA grants for 2011;
4. Complete the OH surveillance and response country baseline assessment;
5. Identify OH leadership core competencies, training needs and plan for continued leadership training;
6. Hold the First Annual OHCEA Deans meeting in Rwanda;
7. Begin the development of a ten-year strategic plan for OHCEA;
8. Launch the sensitization of One Health Rwanda

This phase will finalize the structure of the OHCEA secretariat, including organization registration, the hiring of administrative staff and the establishment of the OHCEA office. It also includes building CCC teams for each member country consisting of stakeholders from member universities, ministries and non-governmental organizations. All of these stakeholders will participate in the OHCEA meeting being held in Rwanda in February 2011. During this meeting OHCEA will define and finalize its overall vision/mission statement, begin developing a strategic plan for short, medium and long term goals, review the OH leadership competencies for future training, complete and discuss the OH surveillance and response country baseline assessment tool and participate in the launch of One Health Rwanda.

PHASE TWO

Timeline: February 15 to April 30, 2011

Deliverables for Phase 2:

1. Complete and deliver a report of the full Gap Analysis for each country;
2. Complete a short, medium and long term Strategic Plan for OHCEA that will inform the next three RESPOND work plans;
3. Identify country stakeholders and identify training needs;
4. Begin to evaluate and implement OH training through RESPOND training mechanisms;
5. Draft OHCEA Network Manual

In this phase OHCEA stakeholders will begin the Gap Analysis process which includes curriculum review, identification of core competencies and assessment of knowledge/skill levels by CCC. This will identify both strengths and gaps of existing OH curricula at the pre-service, in-service and community level, and will include the revision and/or development of One Health curricula. OHCEA deans and stakeholders will complete the strategic plan which includes short, medium and long-term goal setting, and OHCEA deans/secretariat will begin to draft the OHCEA Network Manual by defining the table of contents and development of content materials for review/feedback.

PHASE THREE

Timeline: May 1-September 30, 2011

Deliverables for Phase 3:

1. Launch OH sensitization in Tanzania;
2. Launch OH sensitization in Ethiopia;
3. Develop and/or modify OH curriculum;
4. Develop strategic plan for inclusion of Nursing, Human Medicine and Wildlife professions;
5. Complete OHCEA Network Manual

The final phase of OHCEA year one implementation includes a One Health launch in both Tanzania and Ethiopia. At these meetings OHCEA deans and stakeholders will continue to develop and modify the One Health curriculum as defined by the OHCEA vision/mission. Additionally, OHCEA will begin to develop a strategic plan for opening membership to other health disciplines, which includes nursing, medicine and wildlife professions; this will foster the development of an inclusive 'One Health' model for OHCEA. Finally, the OHCEA deans/secretariat will complete the OHCEA Network Manual for organizational reference and development.

Full OHCEA implementation is occurring through collaborative efforts of the RESPOND Uganda and DRC teams, the founding member institutions of OHCEA, the recently developed OHCEA secretariat and the Country Coordinating Committees for each member country. These key stakeholders are working to facilitate activities, workshops and planning sessions which will allow for the deliverables outlined above to be met, and sets a strong foundation for the long term management and continued development of OHCEA in the Central and Eastern African region. It is expected that the resources and outcomes developed within OHCEA will continue beyond RESPOND, and the continued development of OHCEA's vision and mission will build outbreak response capacity within the region, as well as, provide a global model for building One Health Networks globally.

RESPOND Concept Paper (No-cost Extension Approved)

Cooperative Agreement Number GHN-A-00-09-00015

Sub-activity number: 3.4.4 SE

Sub-activity name: Support training to strengthen One Health epidemiological teams at the provincial and district levels

Partner lead: Tufts

Grantee: FEAT

Introduction:

Based on initial discussions held in Thailand during the discovery phase of the RESPOND project (July-August 2010), leadership of the Field Epidemiology Training Program (FETP/FETP-V) and senior advisors to the Ministry of Public Health (MoPH) and Ministry of Agriculture (MoA)/DLD stated that an activity to strengthen training in the areas of applied epidemiology, disease surveillance and early identification and response to outbreaks for One Health teams responsible for infectious disease outbreaks at the provincial and district levels was a high priority.

Therefore, this RESPOND proposal supports an activity in Thailand to enhance existing in-service MoPH and MoA/DLD in-service district- and provincial-level training activities coordinated at the FETP/FETP-V in collaboration with WHO, FAO, and CDC. This activity will be designed to enhance the capacity for:

- early outbreak identification,
- notifiable disease reporting,
- proper sample collection and transport,
- proper use of personal protective equipment (PPE)
- evaluation of, or joint study of, disease surveillance systems,
- presentation of findings from evaluation/study to a professional audience

In addition, training for One Health "SRRT" (Surveillance and Rapid Response Teams) will include an emphasis on the importance of providing accurate and timely disease information to managers responsible for disease prevention and control activities. RESPOND will respect governmental priorities, and work in close partnership with the technical expertise and experience available at WHO, FAO and the Thailand-U.S. Centers for Disease Control and Prevention Collaboration (TUC, Bangkok) to maximize the quality of training, and minimize unnecessary duplication.

This activity will be accomplished mainly by supporting and strengthening in-service training of the staff responsible for outbreak confirmation and response at the provincial and district levels. This will include strengthening existing training materials and methods in collaboration with the FETP/FETP-V, supporting

short-courses and workshops focused on public health biostatistics and epidemiology; outbreak management; data analysis, interpretation and presentation to professional audiences; and outbreak response and evaluation activities. Training will include staff working in human health (physicians and nurses), and animal health (including veterinarians, both livestock and wildlife experts [e.g. in collaboration with newly established DNP Wildlife Training Center]) responsible for outbreak response and investigation at the district and provincial levels.

There is general agreement among Ministries and international health agencies, including WHO, FAO, OIE, and CDC about the usefulness of the One Health concept in public health. Thailand already has extensive experience and success with the teamwork among animal and human health professionals during the country's successful response to HPAI/H5N1. RESPOND and partners will work collaboratively to build upon this experience, supporting the FETP/FETP-V plan to expand training to include topics in a wider range of emerging infectious diseases in both animal (livestock and wildlife) and human populations, and in the One Health approach to outbreak response, thereby improving the quality of training, the effectiveness of provincial and district level teams, and thereby better protecting the health of human and animal populations.

Background of existing In-service Training of SRRTs:

In Thailand, short course training designed specifically for provincial and district SRRT teams currently exists. Training normally includes both team leaders (most frequently physicians and technical health officers) and team members (provincial and district health officials). Only a few DVMs have joined this training in recent years, which trains about 20 teams annually.

Summary of RESPOND training support:

This RESPOND proposal will follow the FETP/FETP-V and MoPH/MoA leadership's recommendation for strengthening training by collaboratively supporting existing Thai Government training activities, beginning in FY2011 to conduct the following activities:

1. *Training of Trainers (TOT) Course (Week #1):*
   Details:
   Approximately 15 MoPH, 10 MoA/DLD and 5 DNP/ZPO staff will attend a one week Training-of-Trainer (ToT) course supported by RESPOND in collaboration with appropriate Ministries. Orientation about Thai Government priorities as well as those of WHO (e.g., IHR), FAO/OIE, CDC will be discussed, along with effective strategies and methods for training (see Figure 1). Trainers will be selected according to criteria established and agreed upon by MoPH, MoA/DLD and DNP/ZPO staff.

2. *One Week Applied Epidemiology Training Course (Week #2):*
   Details:
   A total of approximately 50 staff from up to 5 provinces who are responsible for outbreak investigation and response will attend a One Week Course in Applied Epidemiology; Trainers who completed the ToT course (#1, above) will participate as trainers and facilitators, along with FETP/FETP-V/iFETP staff and selected Thai university faculty. The group of 50 trainees will include approximately 30 from the MoPH (including physicians and nurses), 10 from the MoA/DLD and 10 wildlife veterinarians from DNP/ZPO (see Figure 1).

3. *Two Month Field Assignments (Week #3-#11):*
   Details:
   At the end of the 1-week workshop (#2, above), each trainee will be assigned a field project, and will conduct an activity related to:

   a. Evaluation of, or joint study of, an existing disease surveillance system

   b. Outbreak investigation

Notes:

- Objective of this field activity is to apply lessons learned in the classroom.
- Where possible, trainees will work collaboratively in the field, with approval of local supervisors.
- Goal for FY2011 would be to support and implement the ToT workshop, and 1-Week applied epidemiology training course), and initiate the 10-week field projects (not all may be completed by Sept. 30, 2011), along with planning a follow-up seminar [see #4, below]).
- Trainers from ToT course, and subject matter experts (e.g. FETP/FETP-V/iFETP, MoPH, DLD, DNP, ZPO, selected universities, WHO, CDC, FAO, RESPOND, etc.) will assist with mentoring and supervision. RESPOND will assist in strengthening training and developing important supervisory skills of mentors, such managing and providing guidance to field-level staff and trainees in outbreak investigations, surveillance system evaluations, reporting of suspected outbreaks; data analysis and interpretation; presentation of results to a professional audience, and providing timely information to managers responsible for disease prevention and control.

4. *Seminar (Week #11):*
   Details:
   Trainees (n=50), ToT trainers and selected field supervisors and mentors will be invited to attend a seminar, where findings of field work with be presented for peer review and discussion.

This RESPOND proposal will support collaboration with MoPH, MoA/DLD, and DNP along with WHO/FAO/OIE/CDC to accomplish the following activities:

1. Short courses in applied epidemiology for provincial and district staff, coordinated by FETP/FETP-V in collaboration with Ministries and local and regional officials;
2. Practical field projects focused on evaluations of, or joint study of, disease surveillance systems; outbreak investigations, linking classroom training during workshops to practical skills and knowledge useful in current work responsibilities;
3. Review and strengthen, in close collaboration with FETP/FETP-V/iFETP leadership, the existing materials (and methods) for training of staff, with RESPOND working collaboratively to enhance course materials, methods of delivery, quality, and monitoring and evaluating training effectiveness;

4. Training of trainers course will recruit and orient instructors, including staff from faculties of public health and nursing, MoPH, MoA/DLD, DNP/ZPO and other university faculty; and will include an orientation on One Health, advanced training methods and strategies;
5. Convene an annual conference on ONE HEALTH for course participants from human health, livestock and wildlife health sector at national or sub-national (regional) level;
6. Produce a reference textbook on applied epidemiology suitable for distribution to course participants.

Note: The above activities will include RESPOND assisting with the design and implementation of continuing education (CE) strategies and materials, support for refresher courses, and monitoring and evaluation (M&E) activities to help guide course review and inform improvement(s) to strengthen future courses and workshops. The target for training will include staff, trainers, mentors and supervisors that support outbreak response teams and activities.

The proposed activity will not be strictly academic, but will instead be in-service, practical or "applied "epidemiology training, designed to improve knowledge and practical skills in the areas of: disease surveillance, outbreak identification, disease reporting, communication, teamwork and the effectiveness of response in provinces and districts.

EPT and other Partners:

- FETP/FETP-V/iFETP, MoPH, MoA/DLD and DNP/ZPO
- World Health Organization
- Thailand-US Centers for Disease Control and Prevention (CDC) Collaboration (TUC)
- FAO/OIE

Goals:

To strengthen the quality and usefulness of the existing training methods and materials in order to improve the outbreak response capacity of One Health epidemiological (SRRT) teams at provincial and district levels in Thailand, broaden activities to include additional animal and wildlife health professionals, as well as other human health staff involved in surveillance (e.g. nurses), and to enhance and expand support for activities to include additional provinces where such in-service courses have not yet been conducted.

Objectives:

The overall objective of the proposed activity in Thailand is to strengthen aspects of in-service One Health training at the MOH, MOA and DNP in the following ways:

1. A key element of this training of provincial and district SRRT teams is to apply what was learned in the classroom (short courses) to actual work responsibilities. The existing training activity will include one week didactic training workshops (on disease surveillance and outbreak investigation) followed by a practical field assignment (see Figure 1, page 7);

2. RESPOND will also support the FETP/FETP-V design and assignment of a specific project to each short-course participant (e.g. an evaluation of, or joint study of, a disease surveillance system, and/or conduct of an outbreak investigation); then will assist reconvening of participants after the 2 month field activity to present the principal findings of their projects for peer-review;
3. RESPOND will support meetings, site visits and mentoring to enhance the quality of technical supervision and to assist participants to complete field assignments. This work will be performed in collaboration with the MoPH, MoA/DLD, and DNP/ZPO, in partnership with WHO, FAO, and CDC (TUC), to ensure that the proposed activities do not duplicate or interfere with other ongoing training activities, and reflect current Ministry priorities;
4. The proposed activity will support a review of existing in-service surveillance and outbreak training under the leadership of FETP/FETP-V/iFETP and Ministries, and will propose collaborative solutions to address gaps identified;
5. RESPOND will work with partners to assure that training topics include the following concepts: One Health, notifiable disease reporting, early outbreak identification, sample collection, understanding of laboratory diagnostic procedures for sample analysis, data analysis and interpretation, biohazards, biosafety;
6. Monitoring and evaluation will be carefully designed in collaboration with FETP/FETP-V/iFETP to focus on evaluating the effectiveness of training, and information gathered will be used to improve training strategies and materials and methods.

Activities:

1. Establish selection criteria and apply them to identification of trainers to be trained.
2. Deliver short-term training courses in 5 provinces, which will include support for meeting venues and related travel of district and provincial level officials (animal and human health) responsible for disease surveillance and outbreak response activities.
3. Short-term training workshops to improve skills of mentors and trainers overseeing field projects, with the objective of improving the quality of technical supervision;
4. Support for subject matter experts to provide technical assistance and mentoring to participants conducting field projects;
5. Review and strengthening of existing training materials, as requested, and monitoring and evaluation of selected training courses;
6. Strengthen training and coursework, including training of trainers at faculties of public health and nursing to increase epidemiology capacity. Staff working in disease surveillance will participate in short-courses and practical field projects at their work assignments, with agreement of supervisors.

Expected Outcomes:

1. Increased scope of short-term One Health applied epidemiology in-service training to provincial and district-level staff in multiple provinces;
2. Improved quality of training materials and methods, based on monitoring and evaluation, and collaborative efforts to strengthen course effectiveness;
3. Follow up of initial training, including a review of the findings of field projects, and associated training to improve the capacity of staff in: data analysis and interpretation, early outbreak identification and reporting, outbreak communication (including the need for providing timely and accurate health information to managers responsible for disease prevention) and control activities;
4. Improve training and capacity of SRRTs to safely collect and properly transport samples to enable determination of the causes of disease outbreaks;
5. Improved teamwork among human and animal health professionals during outbreak response at the district and provincial levels, including wildlife professionals and nurses working in disease surveillance and outbreak identification and response.

APPENDIX II: SUCCESS STORIES AND REGION HIGHLIGHTS

RESPOND

SUCCESS STORY: UNIVERSITY NETWORKS

Africa-Southeast Asia-US faculty exchange marks initial success in transforming the student experience towards One Health

Faculty exchange group poses near University of Minnesota's schools of Public Health, Medicine, Pharmacy, Dentistry and Nursing on the Minneapolis campus

In June 2012, faculty members from the two RESPOND supported university networks in Africa and Southeast Asia: OHCEA (One Health Central and Eastern Africa) and SEAOHUN (Southeast Asia One Health University Network) attended a 3-week 'immersion' in One Health, at the University of Minnesota, USA.

Through practice and application of different methodologies including active learning, collaboration, participatory methods, team based learning and 'scholarship of teaching and learning' (applying and documenting experimental processes to teaching), participating faculty members left the workshop with a toolbox holding these and many other tools needed to change the current paradigm into a One Health reality.

In addition to visiting faculty members from OHCEA and SEAOHUN, the RESPOND team was joined throughout the three week exchange by many other University of Minnesota faculty members across a variety of schools and disciplines, Louise Flynn from Ecology and Environment, and Dr. Jenny Steele from Tufts University – all interested in collaborations with their OHCEA and SEAOHUN counterparts.

During the first week of the exchange, network members' faculty toured various campuses, schools and different 'One Health' collaborators around the state (including MN state departments of health, agriculture and natural resources). For the second week, participants attended courses at the School of Public Health's 'Public Health Institute' including:

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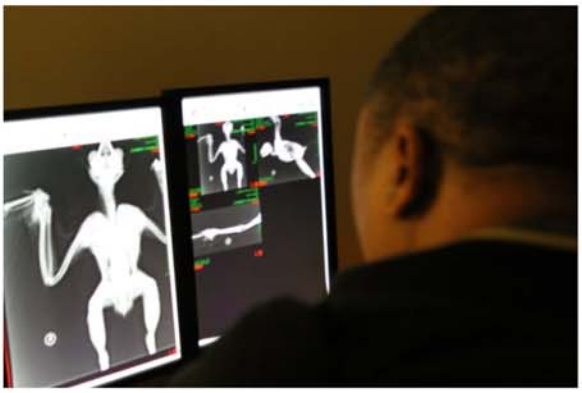
- *Farm to table study program: Minnesota;*
- *Food System Defense*: *Vulnerabilities and How to Close Them*;
- *Making the Case for One Health: Putting Planning, Skills and Experience into Action;*
- *From Facebook to focus group;*
- *Global Food Systems*: *Pork;*
- *Global One Health Leadership Workshop;*
- *Introduction to Environmental and Occupational Health and Safety.*

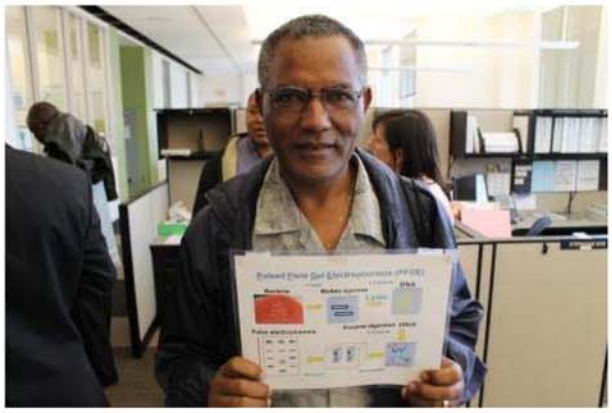


Prof. Mwanthi (Kenya) reviews a bald eagle radiograph at UMN's world renowned Raptor Center

The third week comprised a curriculum development / faculty development workshop led by Deb Wingert, from the Center for Teaching and Learning at the University of Minnesota. The workshop focused on introducing a new teaching and learning paradigm for the 21st century, marked by methodologies to improve multi-disciplinary collaboration consistent with the One Health approach. At the beginning of the workshop participants self-selected into four topic areas (groups) based on personal, institutional and country interests:

1) One Health Leadership Field Experience (One Health Demonstration Sites);
2) Ecosystem Health / One Health (targeting private sector and extractive industries);
3) Risk Analysis (in One Health);
4) Epidemiology for Outbreak Response in Human, Domestic Animal and Wildlife Populations.

The groups started with macro-design methodologies to outline a skeleton for their proposed courses, and then adding on micro-design methods over the next several days to develop content for each course. Active learning and team based learning concepts were introduced and practiced each day of the workshop. This workshop design served two purposes: (1) to transition from the 'old teaching paradigm' (lecture based learning) to the 'new teaching paradigm' (active, team-based, collaborative and scholarly); and (2) to demonstrate and apply collaborative cross-disciplinary course development methods consistent with the university networks' vision of One Health.



Prof. Kifle (Ethiopia) displays the Pulsed Field Gel Electrophoresis (PFGE) technique used for food-borne disease surveillance at UMN Dept. of Health.

Dr. Tom Molitor, chair of UMN's Veterinary Population Medicine department, introduced the concept of SOTL (scholarship of teaching and learning), which garnered much interest and discussion into how it can be applied

in very different institutional cultures, with new knowledge garnered shared across those different cultures and teaching disciplines.

Minnesota Veterinary Diagnostic Lab director, Dr. Jim Collins, gives a tour of the facility and pathology floor.

Overall, the three-week faculty exchange experience was a tremendous success, with faculty participants committed to translating and applying methodologies and lessons learned to their home institutions. As they are applied, these methodologies are representative of a paradigm shift towards applying the One Health concept into the student experience across the globe. USAID RESPOND is very proud to support university networks as a hallmark success for One Health and USAID's Emerging Pandemic Threats Program.

Prof. Le Thi Thanh (Viet Nam) visits 'Team D', a unique One Health approach to food-borne disease surveillance in MN

Group photo at conclusion of curriculum development / faculty development workshop on UMN St Paul campus

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SUCCESS STORY: WEST CONGO

Second in-service One Health Training in Wildlife Investigation, Livestock and Public Health hold in Mole Park, Ghana, is a Success

In May 2012, thirty-one health professionals from eleven countries were brought together in Ghana's Mole Park for the second **One Health Training in Wildlife Investigation, Livestock and Public Health**. Professionals included medical doctors, nurses, microbiologists, food safety specialists, veterinarians, wildlife specialists and environment specialists, and participating countries were Malawi, South Africa, Ghana, Swaziland, Ethiopia, Sierra Leone, Liberia, Nigeria, Angola and Lesotho. One regional economic community, the Inter-governmental Agency for Development (IGAD), was represented by one official. The overall objective of the training was to empower multi-sectoral core country teams to advocate for One Health approaches and to address zoonotic disease surveillance at the wildlife-livestock-human interface.

The training was based on the adult learning approach that provides the participants with opportunities to have direct experience in relevant issues, reflect on their own past experiences, conceptualize and apply knowledge and skills to specific contexts. Lectures were followed by discussion and clarification sessions. Field visits were made to savannah and forest ecosystems to observe the interactions between human activities and wildlife, and their impact on the environment. Problem-based learning exercises were conducted to enable participants to better understand the links between the determinants of health, the epidemiological pattern of the disease and therefore the necessity for a better collaboration among the different sectors to address zoonoses.

> *"The lesson was that professionals are ready to work together to use a holistic approach to disease control in the spirit of One Health".*
>
> ***Dr. Vakuru Columba Teru***
> ***Ministry of Agriculture, Nigeria***

In both field visits and problem-based learning, multi-sectoral teams worked to enhance and capture the essence and spirit of One Health. Trainees used outputs of the fieldwork to develop a multi-sectoral strategy and recommendations to address zoonoses and conflicts at the interface wildlife-livestock-human in West Gonja district.

Lessons learned from One Health initiatives in Ghana, Ethiopia, Sierra Leone, and South Africa were shared with all the participants. Regarded

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as One Health champions, trainees identified actions that they would implement in their respective countries in the short, medium and long term to promote One Health.

All the trainees agreed to join the One Health WILDHEALTH network. Lead by AU-IBAR, the One Health WILDHEALTH network aims to link and empower trainees with a view to achieve four objectives: a) promote One Health, b) Share experiences, c) Share scientific information and d)Provide technical advice for prevention and control infectious diseases. With the new trainees, the network expands from 9 country-nodes to 19 country-nodes[1]. Uganda, Ethiopia, and Kenya are also members of One Health Central and Eastern Africa (OHCEA) network, an academic partnership between institutions in Eastern and Central Africa and universities in the United States (University of Minnesota and Tufts University) with the goal of educating future health professionals using the One Health approach.

This training was supported by AU-IBAR and facilitated by AU-IBAR and USAID RESPOND.

For more photos of this training, visit:
http://www.facebook.com/media/set/?set=a.496254730391787.139428.120761677941096&type=1

WILD training participants in Mole National Park, Ghana

In the red shirt, IGAD representative in discussion with the ranger during field visit to the savanna eco-system.

Special thanks to:

Dr. Richard D Suu-ire (Manager of Accra zoo, Wildlife Division, Forestry commission), Mr. Meyir Ziekah (Accra zoo vet wildlife division, forestry commission), Mr. Umaru Farouk (manager of Mole National park), Ali Mahama (Assistant wildlife officer, law enforcement and ground coverage officer), Mr. Nana Adu Nsiah (Director of Wildlife division, Forestry commission),Dr. Edward Mark Hansen (Director of veterinary services, Ministry of Food and Agriculture).

[1] Rwanda, Kenya, Ethiopia, Ghana, South Africa, Lesotho, Nigeria, Angola, Tanzania, South Sudan, Sudan, Zambia, Zimbabwe, Mozambique, Sierra Leone, Liberia, Malawi, Swaziland, Botswana.

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SUCCESS STORY: SOUTHEAST ASIA

Building skills of wildlife veterinarians in Thailand through field training

Team of trainees immobilizing a leopard

Participants learning how to use PPE for outbreak investigation

The awareness of the role of wild animals in infectious diseases in livestock and humans has been increasing in Thailand, in particular after serious waves of H5N1 that affected domestic poultry, human and wild birds during 2004-2008. The agency responsible for monitoring wildlife health and prevention of spill over of diseases from wildlife is the Department of National Parks, Wildlife and Plant Conservation (DNP), under the Ministry of Natural Resource and Environment (MNRE). However, the capabilities in animal health surveillance, and diagnostic expertise in Thailand rests with the Department of Livestock Development (DLD) under the Ministry of Agriculture and Cooperatives (MoAC), Zoological Park Organization (ZPO), and veterinary faculties in universities. Integrating wildlife health monitoring and disease surveillance as well as preparing DNP's staff to be part of multi-sector team to respond to emerging zoonotic and infectious diseases requires a huge amount of capacity building.

Responding to this capacity building needs, RESPOND has been working with local technical organizations, universities and international institutions to provided in-service trainings to veterinarians and rangers working in national parks and conservation areas in Southeast Asia.

In Thailand, RESPOND has been working with the Faculty of Veterinary Science at Mahidol University to design a set of basic competencies required for wildlife veterinarians in order to fulfill their roles and responsibilities adopting the One Health approach. A series of four trainings took place during 2011-2012 comprised of four modules:

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(1) Orientation, core professional principles and knowledge, wildlife diseases and wildlife studies, and the One health approach;

(2) Wildlife capture and immobilization techniques;

(3) Wildlife epidemiology and surveillance;

(4) Field experience for smart patrol, forensic investigation and outbreak investigation.

The 15 participants attending the trainings are recently recruited veterinarians stationed in 14 DNP regional offices across Thailand and 1 from the Bangkok central office. Most of them have been providing treatment to sick wild animals seized from poachers or wildlife traffickers kept in DNP wildlife reception centers, and few have conducted limited disease surveillance in captive animals.

RESPOND supported trainings were conducted through a combination of presentations, filed visits and hands-on activities that serve to build basic necessarily skills for wildlife veterinarians. Subject matter experts and trainers were from universities in Thailand, Ministry of Public Health, RESPOND SEA Office, Tufts University, University of Minnesota, OIE, FAO Regional Office for Asia and Pacific and many international consultants.

"I found these trainings very useful in our work. Before the training, I could see only individual animals and thought that emerging zoonotic diseases were far away. I also gained much understanding of how wild animals can affect human health and the concept of One Health that we have to work together across disciplines and sectors."

"The course is really good because the trainers have a high level of experience, and they make the exercise and practice on animal anesthesia and immobilization quite exciting. We learned so much."

"Besides the knowledge and skills, we learned to do team work. We have now become a network of DNP vets that can help each other when we need to."

"The DNP region that I am with is planning to start conducting surveillance on Nipah virus among bats. The training on bat trapping with harp trap and the specimen collection process was very useful to me. I will definitely use it during my work."

Participants' feedback about the capacity building activities.

Overall, the participants found this series of trainings beneficial to their immediate work. RESPOND has enhanced the capacity of the first cohort of wildlife veterinarians in Thailand and equipped them with knowledge and skills for their new challenging tasks.

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REGION HIGHLIGHTS: University Partnerships

Strengthening veterinary and public health education in the Democratic Republic of Congo (DRC)

Jean Mukherjee, DVM, Ph.D. Tufts University Assistant Professor, Cummings Veterinary School with UNILU veterinary students Class of 2012 during a farm practice trip in the outskirts of Lubumbashi- DRC, April 2012

Seven Tufts University and University of Minnesota faculty from various health backgrounds have visited the Democratic Republic of Congo to interact with counterparts from DRC academic institutions based in Kinshasa and Lubumbashi. The project is supported through funding from USAID's RESPOND project. One of the expected outcomes of this project is to strength DRC academic institutions in educating health professionals to become competent in their fields of study and capable of working collaboratively with counterparts from other health disciplines. Collaboration between health disciplines particularly involved in disease surveillance and outbreak response is critical to address threats from zoonotic diseases.

The twinning program involves teaching courses, leading workshops, conducting discussions, exchanges of experiences and curricula co-development. The project focuses on key fields of interest, such as epidemiology, infectious diseases, parasitology, histopathology, qualitative and quantitative research methods and health economics. It also involves practice sessions to provide hands on experience.

This project is a multi-level and multi-faceted endeavor involving not only faculty and students but also experts from key government entities such Ministry of Health, Agriculture and Environment. For instance, the project reinforces collaboration between universities and government laboratory experts. It allows interactions between faculty from various disciplines within and outside a university. As a result, faculty and students from various disciplines have had opportunities to learn together, share experiences and better understand the workings of other health fields. This experience is expected to be replicated at the regional level with OHCEA (One Health Central and Eastern Africa) university members.

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REGION HIGHLIGHTS: EAST CONGO

Strengthening field epidemiology through the Masters in Veterinary Preventive Medicine curriculum

Makerere University Deputy Academic Registrar (right in the black suit) presents the Quality Assurance requirements from NCHE to participants in the MVPM curriculum review retreat in Jinja.

Stakeholders that participated in the curriculum review exercise:

- *Makerere University College of Veterinary Medicine, Animal Resources and Biosecurity (COVAB)*
- *Makerere University Academic Registrar's Office*
- *Ministry of Agriculture, Animal industries and Fisheries (MAAIF)*
- *African Field Epidemiology Network (AFENET)*
- *USAID EPT-RESPOND Project*
- *The Jinja District Local Government*
- *The Conservation and Ecosystem Health Alliance*

RESPOND, in collaboration with AFENET and Makerere University's College of Veterinary Medicine, Animal Resources and Biosecurity (COVAB), organized a one-week workshop to review the Masters in Veterinary Preventive Medicine (MVPM) curriculum.

The workshop, held from May 7-12, focused on reviewing and updating the MVPM program justification, objectives, outcomes and course content; developing budgets for the program and the related student field attachments; and aligning the MVPM curriculum to the requirements of the Uganda National Council for Higher Education (NCHE).

In line with RESPOND's objective to build capacity in outbreak response, the review was also aimed at incorporating One Health concepts into the curriculum. A team of 19 reviewers drawn from academia, government and NGOs, and under the leadership of Prof. David Owiny, Dean School of Biosecurity, Biotechnical and Laboratory Sciences, participated in the review. The workshop was the climax of several stakeholder meetings covering two months in which the draft curriculum was deliberated by academic and field epidemiology experts.

At the end of the workshop, in addition to the Field Epidemiology track, another track on Animal Health and Economics was introduced into the program. The name of the program was changed to **Master of Science in Veterinary Preventive Medicine** and it was decided that the program be hosted by the Department of Biosecurity, Ecosystems and Veterinary Public Health (BEP). The program will be research-based, characterized by practical teaching methods and problem-based learning implemented through fieldwork.

The reviewed curriculum was forwarded to the Makerere University Senate, which will forward it to NCHE for accreditation. Once passed by NCHE, the next student cohort is expected to start in August 2012, and will follow the new curriculum.

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REGION HIGHLIGHT: EAST CONGO

One Health residency program: USAID RESPOND contributing to enhance students experience and strengthen university partnerships

For the past year and a half USAID RESPOND has been partnering with the College of Veterinary Medicine, Animal Resources and Biosecurity (COVAB) at Makerere University in Uganda, to establish a residency program for graduate health professionals focused on One Health collaborations and approaches. RESPOND, a USAID cooperative agreement grant award, has provided a unique opportunity to develop this program through its network of universities called One Health Central and Eastern Africa (OHCEA).

Based on a one-of-a-kind residency program in veterinary public health at the University of Minnesota, the Makerere One Health residency is an innovative approach to shift a paradigm in the way health professions and university students approach challenges to human, animal, and environmental health. The One Health residency is designed to provide graduate health professionals (veterinarians, nurses, medical doctors and public health) with a unique hands-on, applied and experiential learning model, while at the same time connecting universities to government service and the private sector. Each two-year, One Health residency program, offers residents exposure to a variety of projects to develop their skills and competency in core capacities (e.g. Epidemiology, Health Systems, Food Safety and Infectious Disease). The first cohort of one nurse and two veterinarians are expected to start their residencies in February of 2013.

In 2012, Dr. Sylvia Wanzala travelled from Makerere University in Uganda to the University of Minnesota to begin her one-year, hands-on residency program at the Global Initiative for Food Systems Leadership and Center for Animal Health and Food Safety, at University of Minnesota. This was designed to give her one year of training in One Health competencies in the areas of food safety, epidemiolgy and statistics, One Health leadership, infectious diseases, ecosystem and environmental health, animal and public heath administration and health systems. Dr. Wanzala is, then, going to translate these newly learned skills into projects during the second year of her program, and use them to mentor new residents.

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Sylvia's residency work also includes the participation in local, national and international policy courses. These courses have greatly contributed to her ability to network effectively with stakeholders back in Uganda. She has also been working on her Executive Masters of Public Health degree, a prerequisite for all One Health residents, and a model that will be replicated with future recruits for the program

Finally, Sylvia and the One Health residency program advisor, Prof. Francis Ejobi, had the opportunity to meet the RESPOND project director and deputy director in Bethesda, Maryland. These meetings focused on providing receiving feedback and suggesting different approaches for the residency program being developed at Makerere.

The biggest success of this residency program came just a few days after Prof. Ejobi returned to Uganda. Makerere COVAB submitted a formal grant proposal to RESPOND to establish a One Health residency program at the university. The grant is intended to expand the residency program through the OHCEA network in just a few short years, to train One Health professionals from not only Uganda, but also Rwanda, Democratic Republic of Congo, Kenya, and Tanzania.

Photo captions:

Top: **Dr. Sylvia Wanzala,** current resident at UMN, and future assistant One Health residency coordinator; **Professor Francis Ejobi** (department head Department of Biosecurity, Ecosystems and Veterinary Public Health – COVAB; and One Health residency program advisor)

Bottom right: **Dr. Katey Pelican** (RESPOND UMN co-Lead and UMN associate professor), **Dr. Sylvia Wanzala**, **Dr. Dominic Travis** (RESPOND technical advisor and UMN associate professor), and **Dr. Jeff Bender** (former director Center for Animal Health and Food Safety, and UMN associate professor) at 5th annual One Health Partnerships meeting.

Upper left, page 2: Intergovernmental Policy course participants in Washington D.C., with Dr. **Sylvia Wanzala** in the middle, second row. The course was aimed at early-career professionals who were also graduate students from University of Minnesota, North Dakota State University, Washington State University, and University of California, Davis.

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REGION HIGHLIGHT: SOUTHEAST ASIA

Emerging Zoonotic Diseases Short Courses in Vietnam and Malaysia

Participants, instructors, and facilitators at the EZD course in Kuala Lumpur, Malaysia

Participants engaged in a group activity on modeling the spread of disease within a population.

Tufts University, the American University lead for the Emerging Zoonotic Disease Short Course (EZD) in Southeast Asia, held two courses in April and May, 2012, in Vietnam and Malaysia, with support from RESPOND in the Southeast Asia Regional Office.

The course in both countries introduced the One Health approach to participants and focused on the emergence of zoonotic diseases in the context of their importance to global health, the ecology and evolution of diseases, and the process of disease emergence, concluding with integrative approaches to prevent disease emergence.

A combination of lectures and group activities and discussions were employed to demonstrate a variety of teaching methods. In addition to learning the course content, participants also learned novel teaching methods they can use in their own courses with students. Approximately 25 participants from Vietnam and Malaysia attended the courses and it was very well received in both countries.

Dr. Mohd Sham Othman delivering a lecture on ecology.

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RESPOND

REGION HIGHLIGHT: WEST CONGO

Success in the first pre-service Training of Trainers on integrated disease surveillance and response against zoonoses in the Democratic Republic of Congo

In April 2012, the Faculty of Veterinary Medicine of the University of Lubumbashi, an OHCEA member, and the ISTM of Lubumbashi organized the first pre-service Training of Trainers (TOT) on Multisectoral Integrated Surveillance and Response against Zoonoses (MISRZ) in the Democratic Republic of the Congo.

This training brought together inspectors from central and provincial levels (Katanga) from the Ministry of Primary and Secondary Education, the Ministry of Public Health and from Ministry of Higher Education. The two-week TOT aimed at strengthening the skills of a cohort of 13 people to become trainers of teachers and junior faculty, and actively contribute to the integration of the One Health MISRZ curricula into existing program at nursing schools, vocational schools (IEM/ITM) and university (ISTM), and veterinary technician schools (ITAV).

Participants were sensitized and trained on the One Health concept, the referential of competencies, training manuals, evaluation manuals and epidemiology of zoonoses such as Ebola, Monkeypox and Chikungunya. They were also trained on competency-based training methods, experimental learning and applied problem solving, using examples of integrative situations for each competency and evaluation tool.

The implementation plan for the remaining steps of the integration process was developed during the workshop, and the official endorsement by all ministry commissions is expected to happen by the end of 2012. The next step will be to train a number of teachers and junior faculty to test the new curriculum in pilot schools and ISTM.

The master trainers who participated expressed the utmost appreciation and great interest in utilizing their newly acquired skills. This initiative has certainly contributed to build the basis of a new generation of professionals led by academia. It is a good example of how RESPOND is building disease surveillance, outbreak investigation and response capacity in the Democratic Republic of Congo.

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RESPOND

REGION HIGHLIGHT: EAST CONGO

Building Capacity to Monitor Animal and Human Health at the Community Level

Trainees attending classes and taking blood samples from livestock during field practicum.

From April 22 to May 5, 2012, RESPOND supported the U.S. Army VETCAP training of 40 Community Animal Health Workers (CAHWs) in Uganda. The goal of the training was to build knowledge and skills in the participants so that they can better monitor animal and human health and be able to treat and refer animal health cases in their respective communities.

Graduates receiving certificates after the course.

The two-week training was structured with one week of didactic work and the second week for field practicum. During week one, lectures were based on disease identification, diagnosis, management and prevention, drug administration, the importance of carrying out laboratory diagnosis, and disease surveillance.

The sessions were taught by AFENET officials (Africa Field Epidemiology Network), district veterinary officers, and Makerere University's College of Veterinary Medicine, Animal Science and Biosecurity (COVAB) Masters Students. The opening sessions were attended by the U.S. Embassy's Deputy Chief of Mission, USAID/Uganda's Deputy Director, and senior ranking staff from the U.S. and Ugandan military.

During the week of field practicum, the trainees participated in several activities that exposed them to skills critical to monitoring animal and human health. The activities undertaken in the field ranged from taking of blood samples from livestock, spraying livestock for ticks, de-worming, castration and treatment of wounded animals (including those with infections, and foot and mouth disease). The samples were tested for brucellosis in a lab, and about 15 livestock tested positive.

The closing ceremony for the training was graced by the Local Council Five (LCV) chairman of the Napak District. Participants received certificates of appreciation and Medical kits that would enable them continue the activities in their own communities.

For more photos of the VETCAP training, visit:
http://www.facebook.com/media/set/?set=a.475744655776128.134922.120761677941096&type=1

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www.usaid.gov

REGION HIGHLIGHTS: EAST CONGO

RESPOND leverages private sector involvement in outbreak response

Dr. Issa Makumbi from Uganda's Ministry of Health launching the private sector disease surveillance and outbreak response training curriculum.

Criteria for companies targeted for outbreak response training:

- companies with functional and established peer educator programs;
- extractive industries;
- companies that operate where outbreaks historically have occurred; and
- companies that operate in close proximity with forests or national parks.

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In line with its objective to build capacity for outbreak response, USAID RESPOND is supporting The Uganda Manufacturers Association (UMA) and the Federation of Uganda Employers (FUE) to promote health in the private sector workforce and communities. Through training of work place-based peer educators, RESPOND seeks to give basic but necessary education on emerging diseases which, if not controlled, will affect the workplace and the surrounding communities, affecting productivity and the local economy.

On Thursday, May 24, 2012 the Uganda Manufacturers Association (UMA) and the Federation of Uganda Employers (FUE) held a joint one-day Chief Executive Officer (CEO's) Breakfast Meeting at the Kampala Serena Hotel. The objectives of the meeting were to launch the private sector Disease Outbreak Training Curriculum and Training at the Workplace, engaging other private sector companies to support the same type of training. The CEO's breakfast meeting attracted close to 40 private sector CEO's, mostly from members of the Private Sector Foundation Uganda, UMA, FUE, as well as Government Officials from the Ministry of Health and National Disease Control Institutions.

Dr. Issa Makumbi, Assistant Commissioner, Epidemiology and Surveillance Division Ministry of Health, launched the curriculum. "Given that Uganda has suffered several outbreaks which affected Uganda's socio-economic landscape in the recent past, the private sector in Uganda represents an important and untapped resource to support the Ministry to effectively respond to the outbreaks", he noted.

He thanked USAID RESPOND for supporting the government in fulfilling its mandate and also applauded RESPOND's commitment to strengthen the private sector capacity to promote awareness and surveillance of disease outbreaks in workplaces in Uganda. He pledged the Ministry's continued support to the private sector in this initiative to have a healthy and productive workforce and a disease free population.

APPENDIX III: PUBLICATIONS AND ABSTRACTS

A number of abstracts were submitted to the Prince Mahidol Award Conference and the Ecohealth conference. However, oral presentations and posters approved will only be presented in Quarter 4 of Year 3, and during Year 4.

One paper was published in the International Journal of Infectious Diseases (IJID), but the article is not open access and RESPOND is mentioned in the acknowledgment section: http://www.ijidonline.com/article/S1201-9712(12)00116-6/abstract.

APPENDIX IV: ONLINE COMMUNICATIONS AND PRESS COVERAGE

RESPOND Website: http://www.respond-ept.com

The RESPOND website has been redesigned and is waiting final USAID approval to be re-launched.

Facebook - http://www.facebook.com/EPTRESPOND

https://www.facebook.com/media/set/?set=a.496254730391787.139428.120761677941096&type=1

https://www.facebook.com/media/set/?set=a.475744655776128.134922.120761677941096&type=1

https://www.facebook.com/photo.php?fbid=441458889204705&set=a.441458792538048.129716.120761677941096&type=1

https://www.facebook.com/photo.php?fbid=10150953289349505&set=o.120761677941096&type=1&theater

Twitter - @RESPOND_EPT - https://twitter.com/#!/RESPOND_EPT

- USAID RESPOND provides computers to AFENET in support of outbreak response activities in Uganda. twitpic.com/9tf2e0
- RESPOND's Year 4 planning has started at the West Congo Regional Office with a two-day internal workshop on April 23 and 24. Focus on OHCEA.

Press Releases

Emerging Pandemic Threats Program

PREDICT • RESPOND • PREVENT • IDENTIFY

USAID FROM THE AMERICAN PEOPLE

For Immediate Release

Contacts:

Dr Loul Séverin
Tél 237 96 15 01 61, severinloul@yahoo.fr
Ministère de l'Elevage, de la Pêche et des Industries Animales

Aisatou Ngong
Program Management Specialist
Tél +237 22 20 15 00, NgongA@state.gov
Embassade des Etats-Unis d'Amérique au Cameroun

Jean-Solo Ratsisompatrarivo
Directeur Régional, Projet RESPOND, USAID
Tél +243 99 74 252 99, jean-solo_ratsisompatrarivo@dai.com

Official handover ceremony of information technology equipment to the Ministry of Livestock, Fisheries and Animal Industries of Cameroun

Yaoundé, July 16, 2012 – On Thursday, July 16, the United States Government will officially donate a large amount of information technology equipment to the veterinary department of Cameroon's Ministry of Livestock, Fisheries and Animal Industries. Ambassador Robert P. Jackson will offer remarks at the official handover ceremony, which will be presided over by the Minister of Livestock, Fisheries, and Animal Industries.

The equipment donation is worth approximately$35,000, and is part of USAID's RESPOND project effort to support the Government of Cameroon in the combat of diseases of animal origin before they pose significant human threats. The equipment donation will be used to support the Ministry in the implementation of the newly created national program for the prevention and fight against emerging and re-emerging zoonotic diseases, using a One Health approach.

You are kindly invited to cover this important event and ensure a wide distribution to the public.

Notes to editors

The One Health approach recognizes that human health, animal health, and ecosystem health are inextricably linked, and that collaboration across sectors is needed to achieve more rapid and effective responses with benefits to public, animal, and environmental health.

Collaboration among sectors is needed for effective and timely disease surveillance, monitoring environmental impacts, leadership and management needed for this new approach to surveillance and response, evaluation, and capacity building in each of these areas.

Bureau Régional Bassin du Congo Ouest
111, Avenue Bas Congo, Gombe Kinshasa – RDC
Tél. : 243 990 810 337 – 243 990 810 338

The RESPOND project is one component of USAID's Emerging Pandemic Threats (EPT) program and coordinates activities with three other EPT projects: PREDICT, PREVENT and IDENTIFY. RESPOND is also in close coordination with other international agencies, such as the U.S. Centers for Disease Control and Prevention (CDC), the Food and Agriculture Organization (FAO), the Organization for Animal Health (OIE), and the World Health Organization (WHO).

Implemented by DAI, the RESPOND project team builds on the expertise of the University of Minnesota (UMN), Tufts University, Training Resources Group, Inc.(TRG), and Ecology and Environment (E&E) to accomplish its goal of transforming public health education to ensure a more integrated approach to outbreak response.

For more information, visit http://respond-ept.com

Emerging Pandemic Threats Program
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USAID FROM THE AMERICAN PEOPLE

For Immediate Release

Contacts: Dr. Le Vu Anh
Dean, Hanoi School of Public Health
lva@hsph.edu.vn

Brian McLaughlin
Regional Director, RESPOND project, USAID
Brian_McLaughlin@dai.com

Claudia Costabile
Communications Officer, RESPOND project, USAID
claudia_costabile@dai.com

VOHUN Promotes One Health Short Course
Emerging Infectious Diseases: Integrative Research, Training and Practice

Hanoi, April 23, 2012 – Diseases of serious concern to human health, such as the H1N1 Influenza, Anthrax, and Ebola are emerging from animal populations in regions of the world where humans, wildlife and livestock are increasingly in contact. Conditions for new disease development are favored as human and domestic animal populations increase and interact with wildlife in new and unexpected ways. To protect human populations from infectious disease outbreaks, public health systems must radically alter their approaches to disease surveillance, detection, response, control, and prevention. The One Health concept is a new way of thinking about disease transmission. It challenges traditional public health tenets by linking human, animal and wildlife health with the environment to address the risks of global pandemics of emerging and re-emerging diseases.

VOHUN (Vietnam One Health University Network) and the Hanoi School of Public Health are taking an important step towards training future professionals to be One Health leaders in the Southeast Asia region. They are hosting a 5-day intense training course focusing on the theory and practice of responding to emerging infectious diseases and pandemic threats. The course, called EID (Emerging Infectious Diseases), is sponsored by RESPOND – part of USAID's Emerging Pandemic Threats Program (EPT) – and will discuss risk factors, control and mitigation measures, as well as development of curricula that integrates varied disciplines, professions and government sectors involved in the prevention and response to emerging infectious diseases and pandemic threats in Southeast Asia.

"This course is aimed at medical, veterinary, environment, and public health faculty interested in the One Health approach to infectious diseases emergence'" said Professor Le Vu Anh, Dean of the Hanoi School of Public Health, where the course will take place from April 23-27. "Its purpose is to train educators, researchers and practitioners with the knowledge and skills necessary to respond to new pandemic threats and re-emerging infectious and zoonotic diseases in the Asia Region.", he explains.

The EID Short Course curriculum draws on veterinary and medical science, microbiology, epidemiology, medical geography, disease ecology, environmental risk management, ecosystem management, and conservation biology, among other fields. Participants will gain competence in basic concepts, theory and methods for assessing and responding to emerging to zoonotic disease threats.

"The EID Course will be the first step toward the integration of many One Health disciplines, and we are happy to have VOHUN promoting such an event to facilitate the transfer of knowledge and skills essential

to our human, animal and environmental health professionals", said Dr. Anh about the role of VOHUN in the EID course.

Below are details about the course:

When: April 23-27, 2012
Sponsor: USAID Emerging Pandemic Threats Program – RESPOND Project
Hosts: Hanoi School of Public Health and Vietnam One Health University Network
Where: Cong Doan hotel, 14 Tran Binh Trong street, Hanoi, Vietnam

COURSE STRUCTURE, CONTENT, AND LECTURERS

The course consists of lectures and group exercises aimed at providing trainees with a solid grasp of fundamental concepts, principles, and terminology. The afternoon sessions will be structured as group learning, with small group scenario discussions led by facilitators. The course consists of 10 modules:

Day 1 Overview of Emerging Zoonotic Diseases as a Global Health Challenge
Day 2 Evolutionary Ecology of Disease Emergence I
Day 3 Evolutionary Ecology of Disease Emergence II
Day 4 The Disease Emergence Process and Risk
Day 5 Integrative Approaches to Prevention and Control

Instructors and facilitators of the courses come from Global Health Asia Program, Tufts University (USA), University of Minnesota (USA), Royal Veterinary College (UK), DUKE-NUS (Singapore) and from Vietnam One Health University Network.

Contact: Dr. Nguyen Viet Hung
Department of Environmental Health, Hanoi School of Public Health
138 Giang Vo, Ba Dinh, Hanoi, Vietnam
T: (+84) 4.62733162, F: (+84) 4.62733172, @: nvh@hsph.edu.vn

Notes to editors

The **One Health** approach recognizes that human health, animal health, and ecosystem health are inextricably linked, and that collaboration across sectors is needed to achieve more rapid and effective responses with benefits to public, animal, and environmental health.

Collaboration among sectors is needed for effective and timely disease surveillance, monitoring environmental impacts, leadership and management needed for this new approach to surveillance and response, evaluation, and capacity building in each of these areas.

The **RESPOND** project is one component of USAID's Emerging Pandemic Threats (EPT) program and coordinates activities with three other EPT projects: PREDICT, PREVENT and IDENTIFY. RESPOND is also in close coordination with other international agencies, such as the Centers for Disease Control (CDC), the Food and Agriculture Organization (FAO), the Organisation for Animal Health (OIE) and the World Health Organization (WHO).

For more information, visit http://respond-ept.com

The Vietnam One Health University Network (VOHUN) is a network of 14 universities in medicine, public health, nursing and veterinary medicine throughout Vietnam whose goal is to promote the One Health approach in Vietnam through training, research at universities and partnership with other stakeholders in order to train a new generation of graduates with a wider understanding and practice of One Health.

Emerging Pandemic Threats Program

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Hanoi School of Public Health (HSPH) was formally established in 2001 as the sole university in Vietnam aimed at developing modern public health as an agent of change for protecting people's health through training and research. During the past decade, HSPH has made remarkable progress in offering degree programs in public health and hospital management, as well as in translating research findings to inform policy. The School also founded the Vietnam Public Health Association, with 13 branches in different provinces to implement public health intervention programs.

For more information, visit www.hsph.edu.vn.

Press Coverage (including EPT):

Voice of America - DRC

VOA TEXT

For decades, the Congo Basin Countries, in general and the DRC in particular, have faced several emerging or re-emerging zoonotic diseases threats, such as viral hemorrhagic fever, highly pathogenic avian influenza H5N 1, pandemic influenza H1N1, monkey pox, rabies, tuberculosis, etc. These threats have different health, social and economic aspects with a negative impact on the development of countries. It is, then, essential to work together in order to address those threats in a collaborative, integrated manner and by promoting what is called the "One Health" approach.

This approach integrates a broad set of health and environment disciplines and professions to design strategies to prevent, monitor and respond to zoonotic diseases. It is a health perspective that takes into account what affects not only human beings, wild and domestic animals, but also what affects the ecosystems that we all share. “One Heath” is a new way of thinking about the transmission of disease. It challenges the traditional thought of public health by connecting human, animal health and, and environment in order to reduce the global risks of pandemics of emerging and re-emerging diseases. This approach is an important concept, especially when the outbreak of a serious zoonotic disease is identified, but more essentially, it is a concept which must be practiced in the daily activities to help us prevent, detect and treat the diseases which affect people in various aspects of their daily lives".

It is with this perspective in mind that RESPOND has launched a number of integrated, multi-sectoral training initiatives aimed at human, animal health and ecosystems professionals under the Multi-Sectoral Integrated Monitoring and Response to Zoonoses (SRIMZ) program, using "One Health" approaches.

The training program was held in February 2011 in Bondé, Province of Equateur, in collaboration with CDC / Atlanta – Monkey pox Branch, CDC / D. R. Congo, Kinshasa School of Public Health, INRB (National Institute for Biomedical Research), the Department of Biology at UNIKIN, the National Programme on viral hemorrhagic fevers and Monkey pox, and human public health services, veterinary services and environmental services in the District of Tshuapa.

Experts from three sectors - Agriculture, Public Health and Environment - have developed hands-on training materials, including a participant’s manual and a facilitator’s guide, in a participatory manner, using a Competence-Based Approach (CBA) logic. This manual and guide aim at providing the SRIMZ players in the three aforementioned areas with knowledge, procedures, skills and practices in order to better survey, investigate and respond to epidemic / epizootic diseases outbreaks. (**Twinning photographs**)

For the purpose of reinforcing public awareness on these threats, InCEF (International Conservation and Education Fund), in partnership with RESPOND, has developed audio-visual educational awareness tools on

Ebola hemorrhagic fever. This InCEF film explains the causes, mode of transmission, signs and symptoms, as well as the prevention of this zoonotic disease. (**Film about Ebola**)

Additional short-term trainings were organized, including a risk analysis workshop to tackle the need to build zoonotic diseases prevention and control skills for staff from the Ministry of Agriculture (Office of Production and Health of Animals), the Ministry of Public Health / Directorate for Fight against Disease) and the Ministry of the Environment, Conservation of Nature and Tourism (Congolese Institute for the Conservation of Nature). (**Photographs**)

The achievement of sustainable and permanent capacity building also requires the training of professionals who are capable of identifying and responding to the outbreaks of new and emerging diseases at their initial stage and in a sustainable manner. To manage this, RESPOND has established academic twinning programs between universities, faculties of public health and veterinary medicine in Central and Eastern Africa and U.S. institutions, including Tufts University, and University of Minnesota. For the DRC specifically, these partnerships involve the universities of Kinshasa and Lubumbashi, which are members of OHCEA (One Health Central and Eastern Congo), a network of Eastern and Central Africa universities that seeks to promote the One Health approach to zoonotic diseases outbreaks through faculty and student exchanges among network members. (**Photographs of twinning**).

Uganda Regional Office

http://covab.mak.ac.ug/home/37-latest-news/106-mvpm-curriculum-reviewed.html

APPENDIX V – OTHER MATERIALS

Southeast Asia One Health Poster (Used in various meetings and conferences in Southeast Asia)

SEAOHUN General Poster (Used in several meetings and conferences)

South East Asia One Health University Network

SEAOHUN

Vision

A Network fostering sustainable trans-disciplinary capacity building to respond to emerging and re-emerging infectious and zoonotic diseases

Founding Members

Indonesia:
- University of Indonesia (Public Health)
- University of Gadjah Mada (Veterinary Medicine, Medicine)
- Institut Pertanian Bogor (Veterinary Medicine)

Malaysia:
- Universiti Kebangsaan Malaysia (Medicine, Allied Health Sciences)
- Universiti Putra Malaysia (Veterinary Medicine)

Thailand:
- Mahidol University (Veterinary Science, Tropical Medicine)
- Chiang Mai University (Veterinary Medicine, Nursing)

Vietnam:
- Hanoi School of Public Health
- Hanoi Medical University
- Hanoi University of Agriculture (Veterinary Medicine)

Objectives

- To promote and advance the One Health approach for control of emerging and re-emerging infectious and zoonotic diseases (EZDs)
- To improve the competencies of One Health professionals
- To build a One Health evidence base through research activity
- To build cadres of trained professionals to be One Health current and future leaders

Mission

To leverage the training, education, and research capacities of the university network to build the skills, knowledge and attitude base for One Health leaders

Examples of Activities

- Develop Regional One Health Core Competencies
- Map institutional curricula; align One Health Core Competencies and curricula
- Strengthen teaching and learning methodologies
- Conduct Emerging Zoonotic Diseases training workshops
- Build regional wildlife health capacity
- Support university One Health collaborations, grant writing and publishing
- Advocate for One Health with governments
- Strengthen university-based government in-service training programs

National One Health University Networks

VOHUN – Vietnam
INDOHUN – Indonesia
MYOHUN – Malaysia
THOHUN – Thailand

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Evaluation Summary of Emerging Zoonotic Diseases Course, 23-27 April 2012, Hanoi, Vietnam

In order to evaluate the participants' achievement, the evaluations were conducted as a formative assessment by daily evaluation and a summative assessment by final course evaluation. Beside these two types of evaluation, an observation made by instructors was taken into account as well. The daily evaluation is not only help the instructor identify the content that needs to be clarified or to improve/modify the activities during the following modules, but also indicates the participants' achievement of each course's learning objective. The final course evaluation is used to determine whether participants have met the course goals and learning outcomes at the end of the course. All of these forms of feedback will help improve the course in the future. All of the evaluations were given by participants anonymously, except for the final course evaluation where participants' expertise was specified.

Daily evaluation with open questions was collected from 20-30 participants from each day, and the final course evaluation from 25 participants (73.5%) at the end of the course. Ten participants identify as public health, 8 as veterinarians, and 7 as medical doctors.

Daily evaluation is varied according to the contents and activity of the day. For example, in day 1- Overview of emerging zoonotic diseases as global health challenge (Module I and II) one participant stated that most valuable thing that he/she had learned today is knowledge and skills of how to solve a complex problem by study each element of the complex system, and the interaction between these elements. The other participants mentioned that the activity on this day helped them understand how to establish research groups involving people from different institutions and the importance of the One Health approach. According to these comments, the lecture and exercises of this day provide both knowledge of how to frame the problem, as well as skills of how to build the team for doing the research, including group interaction. This also included the observation made by instructors during the group presentation and the last day in 'conducting integrative research's activity', which participants conduct their own working group according to their interest.

Participants also provide comments on how to improve the course, and several of the comments concerned an unacceptable quality of the simultaneous translation and that some would have preferred to have the manual and articles fully in Vietnamese. Some participants are not proficient in English, and their comments indicated that the translator was not able to keep up with the pace and terminology of the complex scientific material and they felt they were not getting the message that the instructor was conveying. Unfortunately we were unable to switch translators during the course, but we tried to improve the situation by talking slower and giving more time for him to keep up with translation. Several comments also indicated that participants would like extended time for group discussion, which was accommodated in the course after the comment was made on daily feedback.

One of the most interesting aspects of the daily feedback is that most of the participants enjoy having in depth group discussions, and they reported that this is the first time for them to have a chance to interact and learn from different colleagues from different disciplines, and especially from different universities. Some said that group interaction not only helps them exchange their knowledge, but also helps develop the relationship between participants. They also pointed out that during the group discussion or group

activity, the facilitator played an important role in helping participants understand the contents or activities. The result was consistency in the final evaluation as shown in figure 1.

Final course evaluation results are divided as of course objectives, curriculum design and contents, and participants' self-assessment as are shown in Figure 1 and 2, respectively. Since the participants enter the course with different background knowledge and skills related to the various module contents, after the training is finished, the participants should be able to gain more knowledge and skills in every module, as shown in figure 2. Participants would be able to construct phylogenetic trees to study the relationship of organisms, use the spatial analysis program NAADSM, and SIR model to allow them to better understand how diseases emerge and spread. Comparing the same module in self-assessment among 3 experts, medical doctors tended to report the least background knowledge and skills in each module before training as compared to public health professionals and veterinarians. But, one medical doctor mentioned in the final course evaluation that this course helped him understand the One Health approach more clearly. This course also provided him knowledge about how the ecosystem is related to emerging zoonotic diseases, and how interdisciplinary work is important in order to prevent emerging zoonotic diseases.

In conclusion, the Vietnam EZD course helped participants improve their knowledge and skills related to Emerging Zoonotic Disease, especially for the team building in order to solve emerging zoonotic disease. The course will also provide them the opportunity to discuss and address the emerging zoonotic disease problem in their country with people from different fields and various universities by conducting the working group by the end of the course. The observation made by instructors during the working group presentation was agreed that participants would be able to use the knowledge and skills from the training to address the emerging zoonotic diseases problem, as well as plan for interdisciplinary research. However, in this training we have also shown that a language barrier can affect the quality of learning and a local facilitator is can be equally important to instructor in terms of helping/facilitating participant better understand the contents.

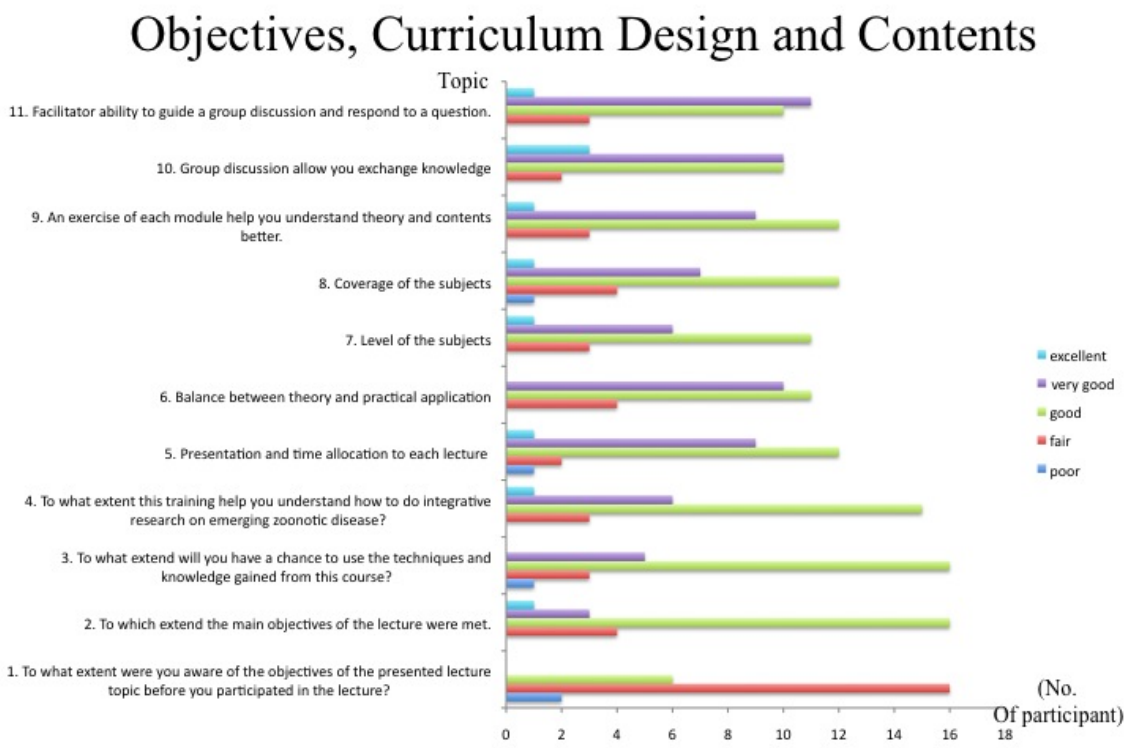

Figure 1. Feedback of the EZD course objective, curriculum design and contents from the final course evaluation.

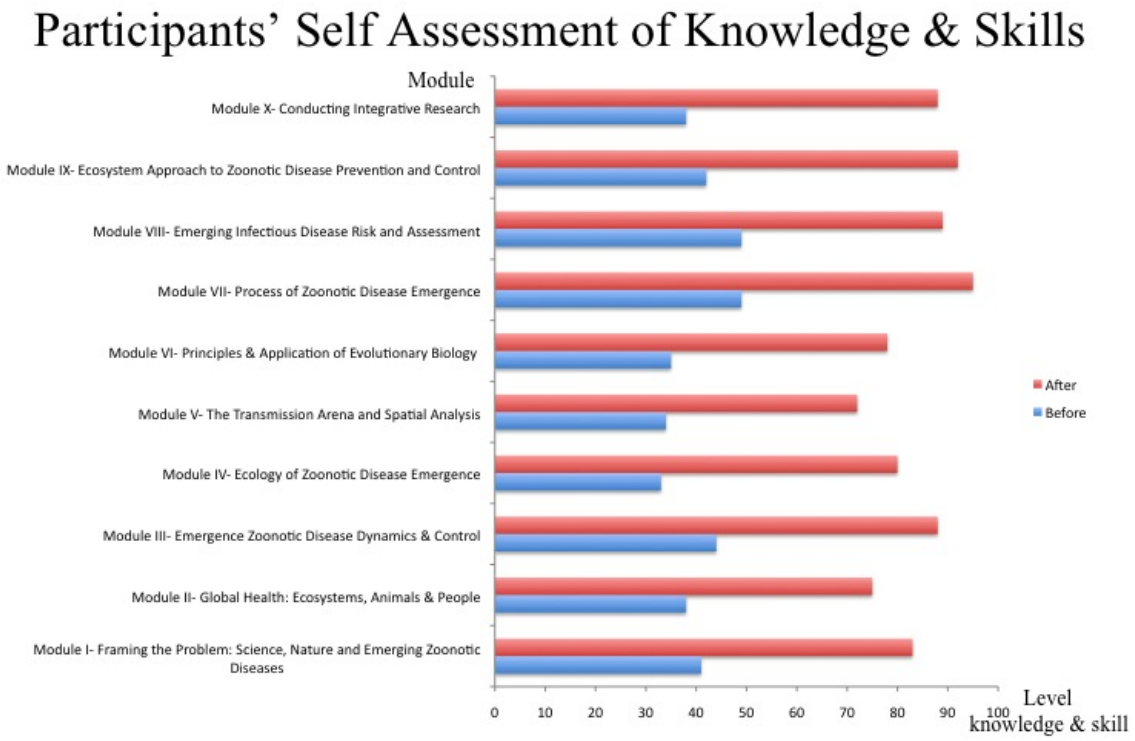

Figure 2. The participants' self-assessment of knowledge and skills before and after the training.