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# RESPOND YEAR TWO WORKPLAN

**EMERGING PANDEMIC THREATS PROGRAM**

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# RESPOND YEAR TWO WORKPLAN

## EMERGING PANDEMIC THREATS PROGRAM

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# ACRONYMS71

ADPC	Asian Disaster Preparedness Center
AED	Academy for Educational Development
AFENET	Africa Field Epidemiology Network
AFRISA	Africa Institute for Strategic Animal Resource Service and Development
AFRO	WHO – Regional Office for Africa
ANIC	L'Association Nationale des Infirmiers au Congo (National Association of Nurses of Congo)
ASEAN	Association of Southeast Asian Nations
ATVCO	L'Association des Techniciens Veterinaires au Congo (Association of Veterinary Technicians of Congo)
AU	African Union
AU-IBAR	African Union Interagency Bureau for Animal Resources
AVET	Applied Veterinary Epidemiology Training Program
BMP	Best Management Practices
CARPE	Central African Regional Program for the Environment
CDC	Center for Diseases Control and Prevention
CE	Continuing Education
CODESA	Comité de Développement Sanitaire (Health Development Committee)
DNP	Department of National Parks, Wildlife and Plant Conservation (Thailand)
DRC	Democratic Republic of Congo
DRIT	Direct, Rapid Immunohistochemistry Test
E&E	Ecology & Environment, Inc.
EACIDS	Eastern African Centre for Infectious Disease Surveillance
ECTAD	Emergency Center for Transboundary Animal Diseases
EMPRES	Emergency Prevention Systems
EPT	Emerging Pandemic Threats Program
FAO	Food and Agriculture Organization of the United Nations

FE(L)TP	Field Epidemiology (Laboratory) Training Program
FETP-V	Field Epidemiology Training Program – Veterinary Component
FOREST	Forest Ecology and Stewardship Training
GHI	Global Health Institute
GIGOM	Gabon International Gas, Oil, and Mining
GIS	Geographic Information System
GMS RID	Greater Mekong Subregion Responses to Infectious Disease
HIPS	Health Initiative for the Private Sector Program
HPAI	Highly Pathogenic Avian Influenza
IBAR	Inter-African Bureau for Animal Resources
ICT	Information Communication and Technology
IEM	Institut d’Enseignement Médicale
ISP	Institut Supérieur Pédagogique
ISTM	Institut Supérieur des Techniques Médicales
ITM	Institut Techniques Médicale
KMS	Knowledge Management System
LOW	Line of Work
M&E	Monitoring and Evaluation
M&IE	Meals & Incidental Expenses
MENTOR	Mentoring for Environmental Training in Outreach and Resource Conservation
MS	Master of Science
MPH	Master of Public Health
OHT	One Health Triangle
OIE	World Organization for Animal Health
PDA	Personal Digital Assistant
PPE	Personal Protective Equipment
PPF	Pandemic Preparedness Forum
Pro-MED	Program for Monitoring Emerging Diseases
RDMA	Regional Development Mission – Asia

RENES	Roseau National d'Epidemiosurveillance (National Network for Epidemiology Surveillance)
ROC	Republic of Congo
RUFORUM	Regional University Forum
SACIDS	Southern African Centre for Infectious Disease Surveillance
SAFETYNET	South Asia Field Epidemiology and Technology Network
SANRU	Santé Rurale (Rural Health)
SEA	Southeast Asia
STOP AI	Stamp out Pandemic and Avian Influenza
TAMIS	Technical and Management Information Systems
TEPHINET	Training Programs in Epidemiology and Public Health Interventions Network
TOT	Training of Trainers
TRG	Training Resources Group, Inc.
TUSK	Tufts University Science Knowledgebase
UMN	University of Minnesota
UNSIIC	UN System Influenza Coordination
UPN	Université Pédagogique Nationale
USFWS	US Fish and Wildlife Service
WCB	West Congo Basin
WCS	Wildlife Conservation Society
WHO	World Health Organization
WILD	Wildlife Investigation and Livestock Disease
ZSL	Zoological Society of London



# EXECUTIVE SUMMARY

## INTRODUCTION

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. During the first year of operations the RESPOND team established a headquarters office in Bethesda and regional offices (hubs) in East and West Congo (in Kampala and Kinshasa, respectively) and in Southeast Asia (Bangkok) to build a foundation for supporting key outbreak-related activities and initiatives in collaboration with countries participating in the Emerging Pandemic Threats (EPT) project. Following an intensive fact-finding phase in each of these regions, RESPOND is already working cooperatively with appropriate government and university officials to support and encourage a One Health Approach in responding to emerging diseases based on needs and gaps identified. This Year Two plan outlines over one hundred new global, regional and national activities that will support a comprehensive, country-specific approach designed to more efficiently and effectively respond to outbreaks, including those caused by novel infectious agents, and thereby help to protect the public's health.

## YEAR TWO WORKPLAN PROCESS

The development of the Year Two workplan has been a highly interactive process, involving all RESPOND staff and based on findings from hundreds of discussions and stakeholder meetings in the field. In all three regional hubs the 'Discovery Phase' has been critically important to inform our workplan, and detailed follow up of initial meetings to develop coordinated implementation plans. Regional offices are still hiring staff, completing registration and collecting information from dozens of organizations and potential partners to further build out the platform for enhanced outbreak response training and capacity building. For example, in SE Asia, the RESPOND office is just completing registration and the Discovery Phase began in mid-July.

In all three regional offices the process to develop the Year Two Plan included the following steps:

1. Concepts for possible RESPOND activities were generated based on interviews and captured critical information including implementing partners, beneficiaries, objectives, Expected results, and timing and estimated budgets;
2. Potential priority activities were presented at stakeholder forums, and discussed carefully with government ministries, universities, international health agencies, EPT partners and key NGOs;
3. Activities were ranked by RESPOND based upon national priorities and identified gaps;
4. RESPOND Senior Management Team short-listed priority activities based on available funding, and finalized budgets;
5. RESPOND Senior Management Team and senior technical staff worked carefully with regional offices to identify important additional activities for possible rapid approval by USAID as well as key activities which currently cannot fit within the existing budget but that remain excellent contributions to national and regional programs, should additional funding become available.

## **MAXIMIZING PROJECT FUNDING AVAILABILITY**

The RESPOND award began on September 30, 2009. The project was designed to open six offices – one central office and five field-based offices in key “hot spot” zones at higher risk for emerging infectious diseases around the globe. Year One allowed RESPOND to set up its headquarters office in the U.S. and a regional presence in the Congo Basin with hubs in Kinshasa, the Democratic Republic of the Congo and in Kampala, Uganda, along with a regional hub to cover Southeast Asia in Bangkok, Thailand.

RESPOND partners have been able to build an important field-based infrastructure which allows for efficient and effective implementation of activities, while remaining ready to program additional funding if this were to become available.

## **GLOBAL PRIORITIES**

Global activities are those that will be implemented across all three hubs established in Year One of the project and in related spoke countries. These include the following:

- Working with faculty from identified universities to develop twinning programs and One Health Alliances that build faculty capacity to train a new cadre of animal, human, and environmental health professionals
- Developing program-wide understanding of One Health core competencies;
- Strengthening the capacity of One Health epidemiological teams in provinces and districts to respond to actual outbreaks, including through enhanced mentoring, leadership, improved training materials and methods, and monitoring and evaluation;
- Establishing health and environmental monitoring recommendations for extractive industries utilizing PREDICT-identified vectors in hot spot regions;
- Engaging telecommunications companies in outbreak response activities and training;
- Strengthening national capacity to support evaluation studies;
- Building capacity to strengthen systems for wildlife disease surveillance and control;
- Supporting public education campaigns on zoonotic disease in collaboration with PREVENT;
- Supporting international health organizations’ priority initiatives for emerging infectious disease outbreaks in animals, humans and wildlife, including those for WHO (e.g. IHR reporting, WHO-GOARN), FAO (Crisis Management Center), and OIE;

## **WEST CONGO BASIN**

There are multiple challenges to working successfully in the West Congo Basin region including few regional platforms, different organizational structures from the central to the local level, poor infrastructure, inadequate communication and transportation systems, and a challenging security environment.

In response to these challenges, RESPOND is leveraging a number of key USAID-supported projects such as CARPE and SANRU to reach into relatively inaccessible regions to provide both training, outreach to rural communities, and support to build credible outbreak response capacity, reporting, and communications networks. Tufts and UMN are establishing twinning relationships with the School of Public Health (University of Kinshasa) and the Faculty of Veterinary Medicine (University of Lubumbashi) to improve curricula, strengthen academic staff capacity, and increase their access to other universities in the region and the development of One Health Alliances. RESPOND also supports

adaptation and use of the Wildlife Investigations and Livestock Diseases (WILD) module, a USAID-supported training program developed by FAO and Zoological Society of London in Southeast Asia, for use by AU-IBAR for building wildlife health capacity in Central Africa. In the absence of One Health networks in this region, a ‘One Health Triangle’ of human, animal and ecological programs and agencies are supported with academic and professional institutions to promote inter-sectoral collaboration and improve disease investigation and outbreak response capacity. RESPOND also conducts training (including at provincial and district levels) in cooperation with governments and international health agencies (WHO-GOARN and FAO-CMC) and to encourage One Health teamwork by animal and human health officials, focused on priority outbreak-related activities (e.g. early identification and reporting of suspected outbreaks and epidemics, proper use of International Health Regulations [IHR] and Integrated Disease Surveillance and Reporting [IDSR]). Basic training on biohazards and infection control, and promotion of the availability and proper use of personal protective equipment (PPE) to prevent spread of disease in health workers and to populations, is carried out in collaboration with PREDICT and DELIVER, with agreed-upon joint training standards. To help strengthen outbreak response, control, and prevention measures, RESPOND provides training to improve the timeliness and quality of emerging infectious diseases outbreak information reported to managers. Health education conducted in remote high-risk areas uses local language (in collaboration with PREVENT and NGOs) and appropriate existing and new technologies.

## **EAST CONGO BASIN**

One of the great strengths of the East Congo Basin is the number of regional networks and institutions focusing on health. In Year Two these are strengthened to provide improved training in outbreak response, initiate the extension of RESPOND into spoke countries and strengthen linkages to West Congo institutions in partnership with the West Congo RESPOND office (Democratic Republic of Congo). Expansion into Rwanda and Tanzania involves a three-pronged approach to build a One Health Alliance across the region by twinning key training programs in partnership with Makerere University to anchor universities in spoke countries. Through regional networks, RESPOND builds and strengthens regional training and capacity building programs and convening regional and national stakeholder working groups to identify needs in each country, and develop programs that meet those needs.

Makerere University, a flagship institution in Africa, forms an anchor for pre-service, in-service and graduate training programs. RESPOND university partners work with Makerere University to strengthen select regional universities through intensive twinning of select programs and concepts. Existing regional networks and alliances are leveraged to strengthen schools of public health (HEALTH Alliance), Ministries of Health (AFENET) and veterinary schools (RUFORUM). RESPOND will also link human and animal health institutions to improve disease monitoring and surveillance (SACIDS and EACIDS). RESPOND assists these networks to further develop strong regional institutions to expand training capacity and provide a core One Health skill set for pre-service and in-service professionals across many universities and countries throughout the region.

## **SOUTHEAST ASIA**

The Southeast Asia regional office in Bangkok began the Discovery Phase only four weeks before the Year Two workplan was due. This time constraint and the lack of travel authorization for Cambodia and Laos during the initial discovery period resulted in the development of more general activities that will be further detailed or refined in the coming months. Funds are earmarked to indicate that a scoping mission will be undertaken to discuss priorities with the relevant national authorities. Success in the long-term will be heightened by engaging key national partners from the outset. Based on de-briefs with FAO and

CDC colleagues and initial discussions in-country with the missions in Vietnam and Thailand, three key strategies are emerging to support the building of regional capacity:

1. Collaborating with existing regional networks to leverage their reach and scope, RESPOND will organize specific One Health fora to facilitate policy-level dialogue across disciplines, co-host the regional Pandemic Preparedness Forum to share current information, and adapt existing curricula to incorporate One Health training;
2. Responding to the critical lack of domestic and wild animal health professionals in Cambodia and Laos, RESPOND will strengthen degree programs (Bachelors in Veterinary Sciences) to provide a foundation for future higher degree programs in these under-served areas, and will develop regional wildlife management and health certificate programs to expand the number of qualified personnel throughout the Lower Mekong River Basin;
3. Using a One Health approach, RESPOND will collaborate with FAO and CDC to strengthen applied epidemiology training in Cambodia and Vietnam, focusing on improved training methods and materials; strengthening capacity of provincial and district-level One Health outbreak response teams; strengthening the training of trainers, mentors and supervisors; and enhancing health education in the community related to early identification and reporting of suspected infectious disease outbreaks;

## **2011 HIGHLIGHTS**

RESPOND is aggressively launching project activities with 12 local institutions in the coming year and numerous regional networks. Training will be conducted at the graduate degree, in-service training and community level with the following results expected:

- Twinning relationships supported with 12 host-country institutions, including 1 workshop on twinning with 180 participants; 10 curricula and 20 case studies developed; mentoring programs established at 5 institutions; 10 national trainers trained; 2 modules developed on One Health;
- 30 candidates begin graduate degree programs; One Health track MPH curriculum developed and track implemented;
- 450 in-service training graduates; One Health MENTOR program developed and 8 fellows begin; FOREST MENTOR fellows supported; collaborations with national parks' authorities and relevant ministries to train veterinarians and first responders to identify and better control illegal wildlife and wildlife product trafficking, including testing and evaluating methods to limit wildlife product trafficking;
- 13,000 community-level first responders trained, 5 TOT candidates trained; 10 modules created; implementation plans developed for identifying sites, trainers and capacity building needs, and provide equipment and supplies to those in critical need;

# INTRODUCTION

Infectious diseases of grave concern to human health are emerging from wildlife and livestock populations in regions of the world where boundaries between human, wildlife and livestock populations are undergoing rapid change. This occurs with greater frequency in tropical regions (“hot spots”), and these areas often have limited resources for disease prevention and control. Among recent examples, avian influenza may have posed the greatest threat to public health, but increases in monkeypox in the Democratic Republic of Congo, and the Hendra and Nipah virus outbreaks in SE Asia are also of potentially global importance.

Most efforts to identify, investigate and respond to emerging infectious diseases have focused on supporting human public health agencies. However, responding effectively to pathogens that play such complex roles in ecosystems depends on a true engagement of and coordination with a diversity of professions and stakeholders in both human and animal health, as well as social and environmental sciences. The frequent lack of coordination among individuals and institutions engaged in human, animal and environmental health, a consequence of inequities in funding and support for entities – such as nurses, veterinarians and wildlife specialists, among others – whose roles have tended to be viewed as unrelated to public health. Outbreak response is likely to be enhanced by a One Health approach where sectors and professions work together to build a stronger and more efficient public health system.

Strengthening One Health at educational institutions in USAID EPT hot-spot regions is a cornerstone of the RESPOND approach to transforming how public health is defined and how public health systems operate. This transformation is not simple, and will require engagement at many levels. The definition of ‘public health professional’ should be broadened to include those professionals and para-professionals who work at the front lines of disease emergence. ‘In service’ training of personnel whose job it is to protect human, animal and environmental health should be transitioned from a single-ministry, single-discipline approach and broadened to include cross-sectoral and multi-disciplinary approaches as the routine and preferred way of protecting the public’s health. Finally, a mechanism to routinely build One Health competencies and understanding in the future workforce is essential, so that professionals embrace and practice a framework that is One Health-consistent at all levels of government service, as well as in university training, and in industry best practices. RESPOND will achieve this vision by:

1. Transforming the future workforce by using a One Health approach to strengthen universities, their degree programs, and university connections to governments, international health agencies, the private sector, and communities.
2. Transitioning the current workforce to better understand and implement a One Health approach through improved cross-sectoral engagement, continuing education, and refresher courses.
3. Broadening the community of public health to improve outbreak response.

## **Strategy 1: Transforming the future workforce through universities**

### Why Universities?

Four core characteristics of Universities make them ideally suited to achieve RESPOND's vision.

#### *Universities are transformative*

Universities are a major source of innovation for social and institutional change, and have the capacity to foster truly transformative movements. Universities have the ability to be neutral conveners of thought leaders across sectors and disciplines, and then to transfer the new ideas to many constituents, including industry, local communities and the next generation of thought leaders. Graduates of universities interact at all levels of cultural and professional life across all disciplines, from ministries to private industry, from communities to research institutes, from nurses to ecologists. This forms a foundation, then, for transformative social and professional change.

#### *Universities are committed to scientific principles of objectivity and inquiry*

Scientific principles underpin evidenced-based approaches to problem solving. Universities provide students and faculty alike with opportunities to question, test and evaluate new approaches without being bound to tradition.

#### *The University's main function is sustainable, long-term capacity building*

Universities are the primary long-term, stable source of pre-service and in-service training for health and environmental professions involved in outbreak response throughout the world. All accredited and degree programs flow through university systems. Unlike many capacity building programs that target particular sectors or professions for short term gains, university time frames are long – involving decades rather than years – so that change seeded in universities is sustained over generations.

#### *Universities work in a global community*

Universities are ideal partners for regional and global cooperation, as they do not strictly adhere to national agendas or boundaries, and can cooperate freely in a truly trans-boundary approach. This coupled with their long term horizon means that partnerships among universities also tend to be stable and, ultimately, efficient because the nature of academia is to build on each project a network of partnerships and collaborations that foster further collaborative initiatives among faculty, colleges and the universities themselves.

For universities to fully capitalize on these inherent strengths they should promote truly innovative approaches to health that also tackle issues of gender and cultural equity. A One Health approach involves not only multiple academic disciplines but also links academic training to actions and activities involved in the day-to-day control and prevention of both common and emerging diseases. It should also be accompanied by methods and tools developed specifically to support interdisciplinary teaching and learning. Central to this approach is the creation of academic programs that cross traditional boundaries to integrate the needs and values of different stakeholders. This link to the practical day-to-day challenges of communities and professions provides the transformative impetus in participatory approaches

### RESPOND: Universities as game changers

A major goal of RESPOND will be to expand existing academic models of innovation in field-based training and One Health approaches to bring together global communities of universities to work together across sectors, regions and professions and train the first generation of truly One Health professionals. The goal will be to create networks of universities that work together to identify best practices, develop new curricula and programs and strengthen One Health professions and collaborations globally. The

world is a smaller and smaller place, and we are increasingly facing global challenges that affect all of our institutions and communities. Emerging infectious disease is only one such challenge that will benefit from this approach. RESPOND will work with universities within and between hotspot regions to strengthen outbreak response at three levels:

*1. University to university*

The core activity for RESPOND to achieve this vision in Y2 will be university twinning. This will occur both as a university to university activity but also as a regional activity through development and expansion of networks of universities (See One Health Alliances section below). Universities will collaborate and share resources to strengthen and expand their own pre-service and in-service training programs on zoonotic disease outbreak investigation and response. RESPOND will also build linkages across the professional schools by promoting, strengthening and expanding joint training opportunities, joint degree programs and interdisciplinary masters programs.

*2. University to ministry*

RESPOND personnel have found strong interest in nearly all countries visited in both strengthening existing ministry capacity for enhanced outbreak response, as well as cooperation with neighboring countries and in work with international health agencies. Discovery also demonstrated high-level interest in and historical efforts to enhance inter-sectoral collaboration and inter-disciplinary work on actual outbreaks; as well as receptivity to assistance and support from RESPOND to expand One Health-style cooperation. Embracing a One Health strategy in government work and in-service training can help transform and strengthen ministry capacity in both human and animal health. Therefore, RESPOND will work collaboratively to broaden and strengthen existing continuing education, refresher courses and applied training at all levels, and will promote and fund cross-sectoral linkages across intergovernmental agencies, ministries, academic institutions, private industry and communities to address gaps in fundamental public health priorities and ability to respond to disease outbreaks. RESPOND partner universities and internal partners (including TRG, E&E, DAI) will collaborate with ministries and professional associations to strengthen in service training to build skills and knowledge in cross-sectoral and cross-disciplinary work, outbreak planning, management and response, communication, and mentorship, while also respecting and building upon existing priorities of international health agencies. In service training will focus on masters and certificate level training of public and private sector employees at the ‘front lines’ of outbreak response as well as developing university driven continuing education programs that fit into the licensing and accreditation requirements for targeted professions.

*3. University to community*

RESPOND will work with Universities and government agencies to strengthen community outbreak response at several levels. First, RESPOND will strengthen and expand training programs that are already focused on professions that work at the community level, including: nurses, community health workers, community animal health workers and wildlife park staff. Second, RESPOND will tie faculty and student work to communities using an extension model that fosters long-term partnership and collaboration between faculty, government workers and the private sector to solve problems at the community level. Programs will link cross disciplinary student and faculty teams to communities and government agencies to identify and meet needs including in the case of infectious disease outbreaks.

**Strategy 2: Transitioning the current workforce to One Health as business as usual.**

RESPOND teams are undertaking an intensive discovery to identify gaps in knowledge and barriers to One Health approaches in EPT hot-spot regions . In the Democratic Republic of Congo, for example, communication between the Ministries of Health, Agriculture and the Environment is poor to non-existent and they also have highly distinct reporting and management structures that discourage collaboration.

These embedded barriers between government and universities and between the ministries responsible for outbreak response in humans and animals make collaboration and coordination very challenging.

RESPOND will work with ministries, universities and the private sector to build One Health skills for in-service doctors, nurses, veterinarians, wildlife managers and environmental scientists from the village level to the central government level. Specifically RESPOND will focus on:

- Building cross-sectoral skills and knowledge
- Creating One Health connections and networking opportunities across sectors and professions.
- Developing career paths
- Supporting and facilitating the development of One Health-consistent systems at all levels of government.

This work will be accomplished, in part, by the linkages to universities, but will also be driven by engagement of cross-sectoral groups of stakeholders in each region to identify and fill needs of the in service workforce.

### **Strategy 3: Broadening the community of public health to improve outbreak response**

The first responders to infectious disease are generally assumed to be human health professionals- doctors and public health officers at the district or clinic level. However, in the case of emerging infectious disease arising out of wildlife and livestock populations in remote regions, the first responders represent a much broader community of workers: nurses, community health workers, community animal health workers, National Park and protected area rangers, community leaders and councils, traditional healers, hunters, volunteers, and NGO staff. Improving outbreak response, therefore, requires including a broader cadre of professionals and para-professionals and changing how they coordinate and collaborate at the front lines. Specifically, RESPOND will:

- Catalyze government linkages to communities at high risk for emergence.
- Expand the community of front-line responders to include One Health cadres of professionals and health workers.
- Link university expertise and students to community needs.
- Strengthen community front-line responder training.
- Build trainee understanding through community engagement.

### **Core Approaches to Achieve RESPOND goals**

In order to achieve these three key strategies RESPOND will implement activities in all regions that work toward transforming the future Public Health system, transitioning the current Public Health system and broadening how public health is defined and how public health systems operate at the front line level. Where possible, activities will be chosen that intersect and achieve all three of these goals. Three core approaches are illustrative of this RESPOND strategem globally.

#### **Core Approach 1: One Health Alliances – Universities as regional One Health Leaders**

In both SE Asia and the Congo Basin, the RESPOND vision for operationalizing One Health at Universities will be realized at three levels. First, RESPOND will catalyze the creation of ‘One Health Alliances’ that draw upon successful strategies and leaders of profession-specific regional networks and schools (e.g. HEALTH Alliance and ASEAN University Network) to establish meta-alliances that brings professions together to identify, collaborate on, and meet shared goals and needs in health globally. In Y2, a key outcome for RESPOND will be an action plan for developing these One Health Alliances (Congo Basin and Southeast Asia) that is agreed upon by all key professional groups in the regions and that represents a new model for strengthening leadership and capacity for One Health across a global community using universities as platforms. Second, RESPOND will work with emerging One Health Alliance networks to strengthen curricula and establish regional training and mentorship programs

(Masters, Certificate and Continuing Education) that build leadership and applied skills in One Health for pre-service and in-service training. Finally RESPOND will work through the One Health Alliances to build robust university-community connections that will strengthen community health professional training and will engage university professionals and students in community outbreaks and in close cooperation with the governmental system and staff actually responsible for managing response to infectious disease outbreaks and epidemics. Students and faculty will be supported to work with communities to problem-solve disease control challenges and improve community participation in outbreak response systems as part of applied degree programs. In addition, universities will work with ministries and non-profit organizations to identify and train cross-disciplinary outbreak response teams.

One Health Alliance universities will work together to strengthen training programs and communication across community health workers, community animal health workers and wildlife managers, the ‘front line workers’ for outbreak response in the field. These field based programs will in turn enrich university training programs and improve community health and outbreak response while establishing career paths and critical skills for university graduates.

### **Core Approach 2: Cross-sectoral Task Forces – Transitioning to One Health**

One of the most fundamental strategies for transitioning the current workforce will be to catalyze cross-sectoral and cross-professional working groups to operationalize One Health in the regions. RESPOND will work with regional stakeholders to catalyze the formation of these groups around specific tasks and challenges including:

- Risk mitigation and disease prevention
- Outbreak response
- Planning and implementation
- Education and training

As an example to highlight this approach, one of the first activities that RESPOND has undertaken in Uganda has been the formation of a National Anthrax Task Force in response to the ongoing anthrax outbreak in hippos and buffalo in Queen Elisabeth National Park. This task force is composed of representatives from the Ministry of Health, the Ministry of Agriculture, the Ugandan Wildlife Authority, Makerere University (public health and veterinary medicine), AFENET, Conservation for Public Health, RESPOND and CDC. This collaborative approach has been instrumental in advising the outbreak team on approaches and protocols, delivering outbreak management and sample collection supplies, and providing training to the National Park rangers responsible for management of anthrax-infected carcasses, PPE use by workers, and proper sample collection. Already, there is discussion of using this task force as a model for developing a cross-sectoral zoonotic disease task force at the Ministerial level to help guide and manage future responses to other infectious agents, building on cross-sectoral working groups and task force collaborations.

The establishment of both temporary and permanent One Health cross-sectoral task forces accomplishes RESPOND goals at multiple levels. They will play a central role in the transition of the current workforce, by establishing cross-sectoral work as ‘business as usual’ and also by serving as a model for operationalizing One Health in hot spot regions. Such task forces also will play a role in transforming the future work force, because they can engage universities in the day to day business of zoonotic disease control and management. This will in turn provide practical real-time opportunities for faculty and students to participate in and contribute to One Health activities in the region, from the front lines to the central management. The approach will also enrich pre-service training and curriculum as faculty become more engaged in ‘real world’ health challenges. Finally, the task force approach is an opportunity to broaden public health collaboration on the front lines, both through enhancement outbreak response capacity, and development and implementation of cross-sectoral training and education.

### **Core Approach 3: Partnering with Extractive Industries – Public-Private-Academic Partnerships for One Health.**

The final example of a Core Approach that RESPOND is launching in the near term to achieve its goals is to develop win-win-win public-private-academic partnerships with extractive industries in hotspot regions.

#### Why extractive industries?

##### *Extractive industries are motivated to comply with International standards*

Any company that accepts funding from the International Finance Corporation is required to comply with the Equator Principles and International Finance Corporation's Performance Standards. These standards require the development of thorough environmental and social impact plans that could provide an avenue for working with the IFC to mitigate disease risk in industry settlements (?worker populations).

##### *Extractive industries often fund and run Corporate Social Responsibility (CSR) programs*

Industry is motivated to improve their image locally and globally by funding social and environmental programs in the communities where they work. These Corporate Social Responsibility projects are often the most stable source of health care and training in regions where the companies operate commercially.

##### *Extractive industries are motivated to maintain a stable and healthy local community*

Disease outbreaks have the potential to limit or stop worker productivity in remote sites. Many companies maintain active health clinics on their work sites and also in local villages to help mitigate health risks for their employees. In addition, many companies are interested in developing biosecurity measures for the local communities to minimize risks of catastrophic losses due to infectious diseases.

##### *Extractive industries work in remote regions at high risk for disease emergence*

The rapid ecological change and development associated with the timber, oil and mining industries put workers and surrounding communities at higher risk for infectious disease emergence. Very often, these companies are the first to build roads and establish human developments in remote forest locations in hotspot regions. These ragged edges of highly biodiverse tropical forests intersecting with newly established human settlements are likely places for pathogen emergence and transmission, and, therefore, are also high priority locations for the EPT program to work.

RESPOND will work with extractive industries at a number of levels including:

- Establishing and strengthening continuing education in company funded clinics
- Developing biosecurity strategies for remote, vulnerable communities
- Developing best practices in industry for disease prevention

These activities, in turn, will fulfill RESPOND objectives on a number of levels. Clearly, a major outcome will be the broadening of public health at the front-lines through the engagement and strengthening of health systems in remote areas. This can be accomplished both through training and education of clinic and front line health workers in villages, as well as engagement of the company leadership to develop and implement appropriate biosecurity plans. In addition these public-private academic partnerships will also link universities, faculty and students to inform and strengthen field opportunities for pre-service and in-service university based programming. There will also be an opportunity to link these industry based programs to ministry needs, and facilitate ministry-industry communication and collaborations thereby transitioning the current ministry personnel toward a more cross-sectoral engagement and approach.

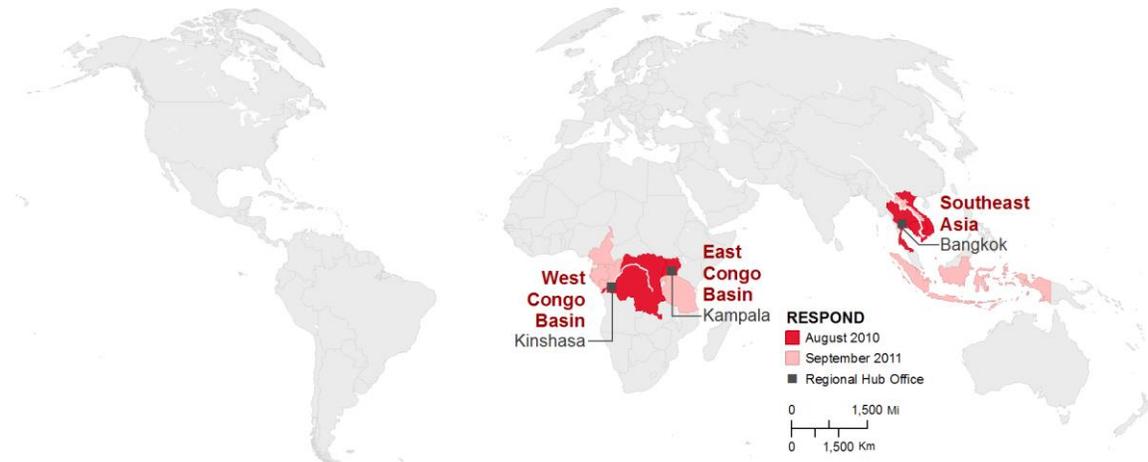
## One Health in Action: The Strategic Outcome

The vision for RESPOND is that by 2014:

- One Health Alliances of universities are **transforming** the workforce by graduating One Health leaders at all levels and professions of health workers.
- The current workforce is **transitioning** to One Health approaches as business as usual.
- Cross-sectoral teams of front line workers and district officials are working together to **broaden** how public health is done.

To date, One Health has been more of a concept than a reality. It has been discussed in international meetings, statements drafted and competing definitions advanced. In many cases, ‘One Health’ has often meant adding representatives of one profession into programs that are otherwise dominated by another profession’s goals and values. By optimizing the real contributions that universities can make to the new field of One Health and outbreak response capacity building, RESPOND has the opportunity to truly operationalize One Health by embedding it in the structure of what public health is – from the ground up and for the long term.

# GLOBAL VISION AND PROJECT OBJECTIVES



The global map above displays where RESPOND works currently (in dark red) and plans to work by September 2011 (in light red). The Congo River is represented by the white line that runs in the West Congo Basin and the Mekong River is represented by the white line that runs through Southeast Asia. The cities indicated in black reflect the locations of the RESPOND Regional Hub Offices

By 2014, RESPOND will have contributed to a more sustainable human, animal and environmental health infrastructure and outbreak communication network in as many as 25 countries. The people and institutions that comprise these systems will be better prepared to promptly identify and report suspected outbreaks of infectious diseases, and to respond logically, collaboratively, and effectively to outbreaks of emerging or re-emerging infectious diseases, at community, district, national and regional levels.

Conceptually, a One Health approach is often considered intuitive – multiple disciplines, professions, and sectors working together to protect public health – but moving from ideas to action is substantially more complicated. The RESPOND team recognizes the opportunity we have to build an evidence base to demonstrate the benefits of a One Health approach to zoonotic disease outbreak response. For RESPOND to meet its goals and objectives, we invest in activities that enable collaboration and cooperation across disciplines and sectors, and empower each to be as competent and resourced as possible to increase the overall strength of the system.

In Year One, RESPOND established its project-wide office (Bethesda, MD, USA) and three regional hub offices (Kinshasa, DRC; Kampala, Uganda; Bangkok, Thailand), and hired highly qualified and experienced administrative, technical and training personnel. Senior technical team members and accomplished university subject-matter experts supported the discovery phase in all regions, during which scores of experts, government officials, and a wide range of potential partners and stakeholders were interviewed. We used the findings of those interviews to carefully plan collaborative activities designed to strengthen outbreak response capacity and meet our project objectives.

This work requires engagement with many organizations – locally, nationally, regionally, and internationally – in both remote and urban environments. It also requires working with target audience groups that range from senior government and public health staff to community health workers and outbreak first responders. While the work of RESPOND influences such a broad range of stakeholders, the intent remains consistent: to collaborate across sectors and disciplines. Our critical engagements include the following:

- National and local governments: National and local governments have the primary responsibility and legal authority for outbreak response. The capacity of national governments to investigate and respond to emerging diseases requires close collaboration among central, provincial, and district levels, as well as with communities. RESPOND supports and strengthens inter-ministerial working groups and coordinating bodies, and provides technical assistance to systemically improve communication, planning, and outbreak response. Additional skills and knowledge-building programs are provided to improve the abilities of in-service personnel, with an emphasis on working with the animal and ecosystem health professionals that are often excluded from established programs. Competency-building programs emphasize applied, experiential approaches to provide practical, field-appropriate expertise, building on lessons learned during HPAI control programs.
- Universities and vocational schools: Strengthening One Health at educational institutions in EPT hot-spot regions is the cornerstone of the RESPOND approach. Tufts University and University of Minnesota schools of public health, medicine, veterinary medicine, nursing, and wildlife management are paired with counterpart institutions in hot-spot countries. This pairing, referred to as “twinning,” allows faculty of both US and hot-spot region institutions to co-develop curricula tailored to the emerging infectious disease, epidemiology, and outbreak response needs of each country and program. Faculty teaching abilities and methodologies are strengthened through targeted professional development programs. In this way, universities are positioned to be key long-term sources of pre-service and in-service training for outbreak response in hot-spot regions. This approach addresses both individual and institutional needs, develops academic and adult learning approaches that cross traditional boundaries, and builds the foundation to transition training to hot-spot country institutions through the development of One Health Alliances. RESPOND also works with and through educational networks such as HEALTH Alliance, RUFORUM, and SACIDS to leverage the reach and impact of such organizations. In Year Two we will evaluate opportunities to work with umbrella higher education organizations such as the Association of African Universities and the ASEAN University Network. RESPOND’s university-based approach is the key to creating a new generation of One Health leaders from many professions, that work together to transform public health systems in the coming century.
- Private sector: Extractive industries such as logging and mining are often at the leading edge of novel interfaces between humans, wildlife, domestic animals, and disturbed environments. In remote areas, private industries may have the only medical facilities. The animal agriculture industry is a crucial actor in zoonotic disease emergence and control, but national and international responses to real and perceived threats and their economic impacts have limited the trust and thus willingness of the industry to monitor and report pathogens. RESPOND works to develop country and regionally-appropriate best management practice recommendations, and serves as a neutral convener to facilitate hot-spot country authorities’ engagement with extractive

and animal industries as crucial stakeholders in infectious disease surveillance, outbreak planning, preparation, and response.

- Community-level first responders: When infectious disease outbreaks occur, district and community health workers, paraprofessionals, protected area and wildlife conservation personnel, and even community leaders are on the front lines. The prevention and control of emerging infectious diseases is enhanced when communities better understand the importance of routinely reporting suspected outbreaks or epidemics promptly to the appropriate authorities. RESPOND provides targeted short-term training programs to build community response capacity and improve first responders' ability to communicate and integrate with more specialized response teams. Because different health professions and communities respond to outbreaks of disease in different ways, RESPOND is developing a "One Health Participatory Toolbox for Outbreak Response," which is an illustrative set of tools and methods that can be applied by a cadre of trained individuals at the local level to investigate and respond to disease outbreaks. The process of developing the toolbox brings together RESPOND-associated professionals to develop a shared terminology and methodology for One Health in action in the field. Social and medical anthropologists – integral RESPOND team members – ensure that culture- and gender-appropriate training approaches and materials are used. Training content is tailored to complement new approaches to One Health outbreak response systems. This front-line training approach responds to emerging and disease outbreaks and dynamic risks, creating a flexible response to ever-changing disease dynamics.
- Regional and global governing bodies: Regional authorities such as the African Union (AU) and the Association of Southeast Asian Nations (ASEAN) can drive the development and revision of policies that promote effective and efficient outbreak investigation and response to transboundary animal and human diseases. Global bodies such as the World Bank are integral to institutional reform that can impact on career path development. USAID's leadership role is critically important for RESPOND to appropriately leverage these regional and global organizations to facilitate changes in the policy environments that can positively impact the adoption of a One Health approach to outbreak response.

Each country in which we work is different, and we design country-specific approaches to outbreak response capacity building in close collaboration with international health agencies, government ministries and EPT partners to build a One Health approach which addresses local gaps and needs. In Year Two of the EPT Program, RESPOND will work through three Regional Hub Offices in two hot-spot regions: the Congo Basin hot-spot region via the West Congo Basin Regional Hub Office (Kinshasa, Democratic Republic of Congo) and East Congo Basin Regional Hub Office (Kampala, Uganda), and the Southeast Asia hot-spot region via the Southeast Asia Regional Hub Office (Bangkok, Thailand). RESPOND's global vision will be adapted to address country and region-specific issues, challenges, and situations.

## RESPOND OBJECTIVES

RESPOND's work is described in the four following objectives and associated activities (the numbers correspond to the RESPOND Year One Workplan):

### **Objective 1: Improve training capacity for skills necessary to respond to suspected outbreaks**

RESPOND strengthens the educational institutions, curricula, and instructors that deliver graduate degree and professional certificate programs, and improves the career path opportunities for people working in the fields related to emerging pandemic threats.

- 1.1 Implement skills and knowledge building strategy. This work builds on the RESPOND Skills and Knowledge Building Strategy developed in Year One, and includes the development of One Health core competencies. Existing curricula are inventoried and reviewed, to serve as a basis from which to develop additional materials.
- 1.2 Implement twining and mentoring program. Faculty and staff from the schools of public health, veterinary and human medicine, wildlife ecology and management, nursing, education, social anthropology, adult learning specialists, and others collaborate to strengthen the administrative systems and the content and delivery of their curricula.
- 1.3 Strengthen and enhance ongoing career path development. Existing career paths are reviewed, challenges and gaps identified, and action plans developed to strengthen career path opportunities in hot-spot countries and regions.
- 1.4 Implement graduate-level degree training. Based on national and regional needs and priorities, existing graduate degree programs are strengthened through the development of new and improved courses and content. Existing infrastructure of schools and universities may be enhanced to support improved instruction and learning. Where critical gaps are identified, RESPOND may support the development of new graduate degree programs.
- 1.5 Implement professional development certificate programs. RESPOND works with the ministries of health, agriculture, wildlife, environment and other ministries to strengthen the professional development of their staff in zoonotic disease outbreak investigation and response. This includes the identification of country-specific needs, curricula development, the selection and training of master trainers, and the design, development and delivery of certificate programs to upgrade the skills of the current generation of professionals involved in outbreak response.

### **Objective 2: Improve cross-sectoral linkages to support coordinated outbreak response**

RESPOND supports the development of productive working relationships among inter-governmental agencies, government ministries, universities, private sector, and non-governmental institutions required for long-term sustainability of a One Health approach.

- 2.1 Strengthen and expand relationships between animal and human health organizations. Working with existing regional bodies and networks, RESPOND convenes multi-sectoral meetings to better understand existing outbreak response systems and barriers to collaboration, and to facilitate opportunities for improvement.
- 2.2 Implement public-private partnerships to enhance One Health principles and practices. RESPOND encourages, facilitates, and supports the inclusion of private sector organizations (NGOs, extractive and animal agriculture industries, telecommunication companies, etc.) in outbreak response planning and implementation.

- 2.3 Implement a Knowledge Management System (KMS) to facilitate cross-sectoral exchange. RESPOND evaluates existing KMS and their usage, and identifies methods to improve functionality, user access, and usage.
- 2.4 Encourage professional linkages among One Health collaborators. RESPOND supports exchanges of personnel among institutions and organizations, both within hot-spot regions and between US-based institutions and those in hot-spot regions.

**Objective 3: Improve the capacity to conduct investigations of suspected outbreaks**

RESPOND develops relationships, procedures, and systems to strengthen in-country and transboundary outbreak response systems, provides direct support for outbreak response, and trains community-level first responders, in collaboration with international health agencies (WHO-GOARN and FAO-CMC).

- 3.1 Strengthen procedures and systems to improve disease investigation and outbreak response capacity. In collaboration with international health agencies and regional governing bodies, RESPOND supports local and national government authorities, to review existing legal authority for outbreak investigation and response systems, identify logistical and human resource constraints, identify needs for reporting and responding to outbreaks, and develop plans to improve cross-disciplinary and multi-sectoral coordination and collaboration.
- 3.2 Support coordination and provision of outbreak response logistics. RESPOND maintains a flexible funding reserve to provide technical, material and logistical support in response to direct requests from national governments and international health agencies, for new outbreak of potentially zoonotic infectious diseases.
- 3.3 Strengthen communication systems in surveillance, outbreak investigation and response. RESPOND supports reviews of existing outbreak communication systems at local, national and regional levels, develop recommendations to strengthen systems, and provide technical assistance to improve communication systems.
- 3.4 Implement community-level first responder training. Based on the identification of sub-national hot-spot areas by PREDICT, and verification by national government authorities, RESPOND develops and implements targeted curricula for master trainers, training-of-trainers, and for community first-responders (community health-care workers, rural medical personnel, wildlife rangers, community leaders, et cetera).

**Objective 4: Introduce technologies to improve training, surveillance and outbreak investigations**

RESPOND matches appropriate technology to the field-level needs responding to disease outbreaks.

- 4.1 Utilize existing technologies to improve training, surveillance, and outbreak investigations. Review and analyze the technologies currently used in hot-spot countries, identify gaps, develop recommendations for use of existing appropriate technologies.
- 4.2 Introduce appropriate new technologies. Based on the results of technology review and analysis, define priority needs for new technology, and provide seed grants to support new technology development.
- 4.3 Continuous improvement of technologies. RESPOND will strengthen the ability of countries to assess the appropriateness of existing and new technologies for rapid field-level pathogen detection, diagnosis, reporting and control.

## **Lines of Work**

To facilitate coordination among the PREDICT, IDENTIFY, RESPOND, and PREVENT projects, USAID organizes the EPT program under four Lines of Work, namely 1) Wildlife Pathogen Detection, 2) Risk Determination, 3) Outbreak Response Capacity Building, and 4) Risk Reduction. Of these, RESPOND's objectives (as indicated below) fall within Line of Work 3, which consists of the following two activities:

**3.1 Strengthen human and organizational capacity to improve outbreak response** via institutional twinning and mentoring, long-term degree training, short term in-service training, community-level first-responder training and organizational development (RESPOND Objective 1, activities 1.1-1.5; Objective 3, activity 3.4), and;

**3.2 Support outbreak response activities** by improving planning and preparedness capacity within countries and regions, and supporting the logistical and material needs for outbreak response, including strengthening existing technologies and introducing new technologies for outbreak response (RESPOND Objective 2, activities 2.1-2.4; Objective 3, activities 3.1-3.3; Objective 4, activities 4.1-4.3).

The section that follows highlights specific activities aligned to the Outbreak Response Capacity Building line of work that RESPOND will undertake globally in Year Two.

*(Please note that for the following sections presenting narrative descriptions of sub-activities, the term "partners" refers only to organizations that could be considered sub-awardees of the RESPOND project, and does not include collaborating organizations, institutions, or agencies.)*

## GLOBAL ACTIVITIES

### LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING

#### LOW 3.1 Strengthen human and organizational capacity to improve outbreak response

RESPOND Activity 1.1 (linked to RESPOND Objective 1)

**Sub-activity 1.1.4 GL: Develop EPT program-wide definition of One Health core competencies** – RESPOND will collaborate with USAID, EPT partners, international health organizations, local stakeholders, and others to create international recognition for and commitment to collaboratively defining One Health core competencies. To date, One Health core competencies have not been developed and accepted either internationally or for the EPT Program. This activity involves collecting and reviewing existing competencies from various disciplines that combined, form a starting point for One Health capabilities. In addition, we will host meetings to discuss and agree upon core competencies to inform RESPOND and EPT partner programming.

- Partners: Sub-awardees TBD
- Expected results: Published, internationally accepted core competencies; international health agencies and EPT partners incorporating One Health into their planning and implementation

RESPOND Activity 3.4 (linked to RESPOND Objective 3)

**Sub-activity 3.4.8 GL: Support for development of materials and media messages to build public awareness about zoonotic disease – World Rabies Day, 28 September 2010, as a pilot activity** – Using World Rabies Day as a pilot activity, outreach will be conducted in Kinshasa, Democratic Republic of Congo, and Kampala, Uganda by associates of the Global Alliance for Rabies Control. This activity will consist of training educators to conduct presentations in schools and communities prior to World Rabies Day on 28 September 2010, completion of presentations, and dissemination of educational posters and pamphlets in schools and to the general public in designated parts of both cities, as well as outlying areas.

- Partners: Global Alliance for Rabies Control
- Expected results: Increased awareness of issues related to zoonotic disease transmission, particularly of rabies as a threat to public and animal health, simple methods to avoid/minimize risks, and prophylaxis/treatment

#### LOW 3.2 Support outbreak response activities

RESPOND Activity 2.2 (linked to RESPOND Objective 2)

**Sub-activity 2.2.1 GL: Develop best management practice recommendations for extractive industries based on PREDICT-identified vectors in hot spot regions** – Working with PREDICT and RESPOND wildlife specialists, this activity will identify measures that could decrease the potential for disease transmission between zoonotic vectors and humans in areas around extractive sites. Once recommendations are identified, best management practices will be discussed in a variety of regional and global fora, including presentations at regional and international extractive industry conferences.

- Partners: Sub-awardees TBD
- Expected results: Best management practices (BMPs) developed for and communicated to regional extractive industry companies and organizations

**Sub-activity 2.2.2 GL: Involve telecommunications companies in outbreak response activities and training** – Mobile phones are the most common form of communication technology in developing countries. RESPOND will work with Pro-MED Mail and PREDICT – Health Map and locally based telecommunications firms to establish a mechanism to transmit disease outbreak information. In many cases, telcom companies might engage via their corporate social responsibility programs to provide expedited support during outbreaks.

- Partners: TBD
- Expected results: Improved collection and distribution of disease outbreak information to health care professionals to improve response to outbreaks

RESPOND Activity 2.4 (linked to RESPOND Objective 2)

**Sub-activity 2.4.2 GL: Support for TEPHINET to host global conference and add One Health sessions** – Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) is a professional network of field epidemiology training programs and graduates from 43 countries. The Sixth Global Scientific Conference (13-17 December, Cape Town, South Africa) is a forum for exchange and discussion of best practices, regional and global collaborations, important public health findings, and an opportunity for networking amongst public health professionals from hot-spot regions. RESPOND will provide funding and support to include a One Health session and break-out groups focused on incorporating One Health into FETP programs.

- Partners: TEPHINET, others TBD
- Expected results: Total of 500-600 persons expected to attend (Source: TEPHINET); One Health workshop hosted for 30 persons attending the conference, incorporation of One Health into FETP programs discussed; plenary session organized for One Health issues; support provided for individuals to attend meeting

RESPOND Activity 3.1 (linked to RESPOND Objective 3)

**Sub-activity 3.1.1 GL: Strengthen local capacity to support evaluation studies** – RESPOND will conduct a workshop on program evaluation in each region that would introduce participants to a) the goal and purpose of program evaluation, b) steps in conducting a program evaluation, c) practical methods for conducting evaluation, and d) interpreting and using evaluation findings in program improvement.

- Partners: TBD
- Expected results: Increased evaluation capacity to improve programs; 15 trainees per region

RESPOND Activity 3.2 (linked to RESPOND Objective 3)

**Sub-activity 3.2.0 GL: Support to facilitate and improve the response to outbreaks of potentially zoonotic disease in hot spot regions** – At the request of host-country governments and international health agencies with legal authority for outbreak response, RESPOND will provide technical, logistical, and material support to facilitate and improve outbreak response. This can include support for subject-matter experts to consult or participate, provision of logistics (supplies, PPE, vehicles or fuel to transport outbreak response teams), rapid refresher training (use of PPEs, safe collection, shipment and processing of samples from humans and animals with suspected illness). This support will be provided on a case-by-case basis, and available to countries within the EPT hot-spot regions.

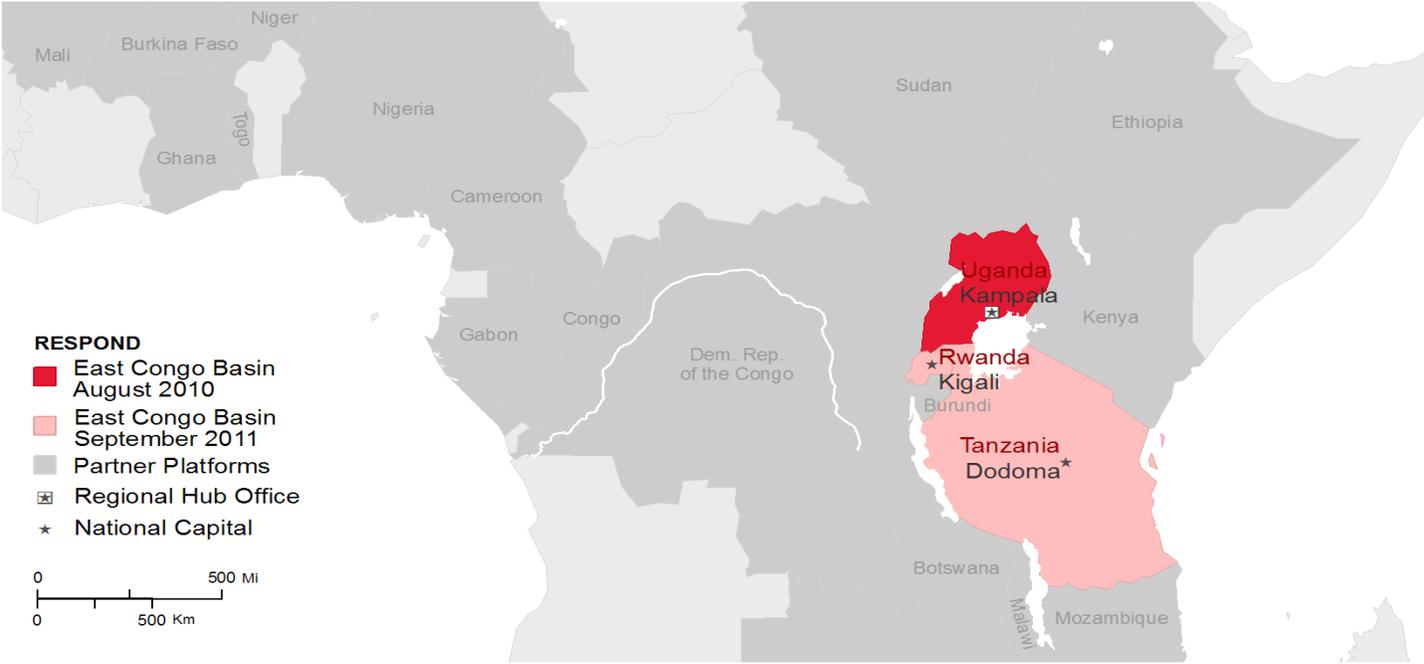
- Partners: In collaboration with host-country governments, work with international health agencies (in-country and regional offices), WHO-GOARN, FAO-CMC, DELIVER, EPT partners, donor-sponsored programs, AFENET, SAFETYNET, TEPHINET, others TBD.
- Expected results: Training, technical, logistical, material and communications support provided to address identified gaps; improved efficiency and efficacy of outbreak response.

RESPOND Activity 3.3 (linked to RESPOND Objective 3)

**Sub-activity 3.3.1 GL: ProMed Mail: Expanding surveillance and verification for wildlife diseases** – Engage with wildlife rangers, veterinarians, and other global health professionals to provide presentations on ProMED Mail to increase the understanding and use of informal disease reporting sources. This will raise awareness in public health communities about informal reporting, improve reporting of wildlife diseases and improve use of and access to information on wildlife diseases. This activity will be coordinated with PREDICT and their engagement with ProMed and HealthMap.

- Partners: ProMED Mail, other sub-awardees TBD
- Expected results: Increased awareness of available informal reporting sources; increased number of ‘reporters’; increased use of wildlife health information to protect and improve public health.

# REGIONAL VISION – EAST CONGO BASIN



The map above of the East Congo Basin shows where RESPOND works currently (in dark red) and plans to work by September 2011 (in light red). 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. The star in the white square located within Uganda represents the capital city of Kampala, location of the RESPOND East Congo Basin Regional Hub Office. Surrounding countries shaded in gray represent the reach of the RESPOND regional partners including HEALTH Alliance, RUFORUM, AFENET, and AFRISA.

Compared to the West Congo Basin, and due in part to substantial investments by USAID, CDC and other international health agencies, there is a strong foundation in academia and existing regional networks for One Health approaches to building capacity for response to emerging pandemic threats in Uganda and throughout the East Congo Basin. RESPOND plans to capitalize on this opportunity by further strengthening that foundation and increasing the effectiveness of regional academic and public health networks. RESPOND will achieve this through strategic efforts to deepen and broaden existing collaborations beyond public health and veterinary medicine to include other sectors and disciplines including wildlife management, ecology, nursing and the private sector.

**Objective 1: Improve training capacity for skills necessary to respond to suspected outbreaks.**

Makerere University, a flagship institution and one of the largest, most comprehensive in Africa, will serve as an anchor for pre-service, in-service and graduate training programs. RESPOND leverages this tremendous regional capacity to improve outbreak response capacity through two mechanisms. First, RESPOND university partners work with Makerere University to strengthen select regional universities through intensive twinning programs. At the same time, regional networks and alliances that already exist are leveraged to strengthen schools of public health (HEALTH Alliance), Ministries of Health (AFENET) and veterinary schools (Regional University Forum for Capacity Building in Agriculture [RUFORUM] and AFRISA) and linked with human and animal health institutions for improving disease monitoring and surveillance (Southern and East African Centres for Infectious Disease Surveillance, [SACIDS and EACIDS]). RESPOND works with these networks to build on strong institutions to expand training capacity and One Health competencies for pre-service and in-service professionals across many universities and countries throughout the region.

RESPOND's approach to improving outbreak response strengthens multiple professions to meet their own needs and goals. The approach builds One Health leaders and institutions that can transform professions and sectors to build a stronger and more efficient public health system. A major goal of RESPOND is to create a One Health Alliance in the Congo Basin that builds One Health capacity within professions and creates collaborations and programs that cut across professions and sectors to address health problems in the region. RESPOND works with the HEALTH Alliance and other strong network partners in the region (AFRISA, RUFORUM, SACIDS) to develop a One Health Alliance with universities as core capacity building institutions, to develop a new generation of One Health leaders from many professions (public health, nursing, veterinary medicine, human medicine, environmental sciences) that work together to transform public health systems in the coming century.

**Objective 2: Improve cross-sectoral linkages to support coordinated outbreak response.**

RESPOND promotes and funds cross-sectoral linkages among intergovernmental agencies, ministries, academic institutions, private industry and communities. Already, the RESPOND East Congo Basin team has been instrumental in the formation of several multi-disciplinary and cross-sectoral groups including a self-identified One Health consortium for Uganda, piloting a One Health university partnership through the Global Health Institute, and catalyzing a national working group for World Rabies Day. Additionally, the East Congo Basin team has been recognized as a key partner in the national task force responding to the ongoing anthrax outbreak in hippos and buffalo in Queen Elizabeth National Park. RESPOND builds on these emerging relationships with ministries, universities, private industry, non-governmental agencies and intergovernmental agencies in Year Two to develop joint plans for strengthening zoonotic disease outbreak capacity by linking identified needs to targeted and jointly developed capacity-building programs.

**Objective 3: Improve the capacity to conduct investigations of suspected outbreaks.**

RESPOND contributes material, logistical and managerial support for strengthening the lines of command and communication and facilitating and reinforcing the organizational capacity of outbreak response teams. Known needs include transportation, communication and information systems, and laboratory equipment.

By using appropriate, proven technologies and methodologies such as Participatory Disease Surveillance and Response and NGO expertise in curriculum content and development, RESPOND will identify the training needs and provide community-based human and animal health providers

with additional capacity to improve outbreak identification, reporting, and response. These efforts will involve collaboration with PREDICT, conservation and wildlife NGOs, and other partners in the field such as AFENET, HEALTH Alliance, RUFORUM, AFRISA, HIPS, CDC, WHO, OIE, and FAO.

**Objective 4: Introduce technologies to improve training, surveillance and outbreak investigations.**

The communication infrastructure in the East Congo Basin is robust and provides a good operating environment for integrating an appropriate and responsive information and communications technology platform. At Makerere University, the Tufts University Science Knowledgebase (TUSK) knowledge management system is already in development from an existing partnership with Tufts University and serves as an appropriate potential ICT platform for further development and refinement. Before this system is introduced in additional parts of the region or supported further where it already exists, RESPOND will conduct an independent and thorough assessment on the technology infrastructure, needs and challenges.

The section that follows highlights specific activities aligned to the Outbreak Response Capacity Building line of work that RESPOND will undertake throughout the East Congo Basin at a regional and country level.

*(Please note that for the following sections presenting narrative descriptions of sub-activities, the term "partners" refers only to organizations that could be considered sub-awardees of the RESPOND project, and does not include collaborating organizations, institutions, or agencies.)*

## REGIONAL ACTIVITIES – EAST CONGO BASIN

### LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING

*Sub-activities described in this section are not repeated again in the section for their respective countries, since they are considered regional sub-activities, not country-specific sub-activities,) for purposes of this workplan. For some of these regional sub-activities, countries for implementation are specified below and the sub-activity titles are listed in the country sections for ease of reference. For others, greater detail about countries for implementation will be developed in the coming months.*

#### LOW 3.1 Strengthen human and organizational capacity to improve outbreak response

RESPOND Activity 1.2 (linked to RESPOND Objective 1)

**Sub-activity 1.2.2 EC: Plan and implement regional twinning and networking activities** – RESPOND will work with the HEALTH Alliance and other strong regional network partners to build and strengthen university networks, by supporting institutional twinning throughout the Congo Basin. The major focus will be to develop a plan and begin to create a university-based One Health Alliance that works across professional schools (public health, veterinary medicine, nursing, medicine, natural resources, wildlife) to create a new generation of leaders that work together to strengthen public health systems throughout the Congo Basin. The focus of planning activities will be to review critical data, systems and results to better understand the unique needs of each profession and agree upon the twinning activities of the following years. The focus of the year's implementation activities will be to build a new One Health program of study focused on strengthening pre-service professional training across the region.

- Partners: HEALTH Alliance, other sub-awardees TBD
- Expected results: One Health Alliance planning workshop held (with regional human, animal and environmental health and social science deans [approximately 30] and faculty [150]); twinning relationships established to support the exchange/sharing of knowledge and resources; faculty exchanges completed – at least 10 faculty from East Congo Basin travel to the US, 10 faculty travel regionally to work on One Health planning and implementation, and 10 faculty from the US travel to East Congo Basin to co-develop programs and curricula, co-mentor students and plan future One Health programs

RESPOND Activity 1.3 (linked to RESPOND Objective 1)

**Sub-activity 1.3.1 EC: Determine job opportunities for staff trained in animal, human and environmental health** – RESPOND will help establish the emerging One Health Alliance as a leader in One Health career track development and promotion. In coordination with government and private sector employers working in public health services, RESPOND will analyze the supply and demand of jobs in zoonotic disease outbreak response and the barriers to career track development and promotion. Based upon this analysis, RESPOND will work with the emerging One Health Alliance to strengthen professional school curricula and training, and with host universities to establish continuing education programs that focus on applied, field based training and preparedness for in-service and private sector professionals in zoonotic disease outbreak response.

- Partners: HEALTH Alliance, other sub-awardees TBD
- Expected results: Career path opportunities in zoonotic disease and outbreak response analyzed and strengthened; plan developed for expanding One Health and outbreak response curricula and continuing education throughout the region; new outbreak and response

curricula developed for professional and wildlife schools; 2 continuing education modules developed for professionals

RESPOND Activity 1.4 (linked to RESPOND Objective 1)

**Sub-activity 1.4.1 EC: Strengthen One Health field component of existing masters programs in public health** – RESPOND partner faculty from the US-based universities will collaborate with faculty from the One Health Alliance schools (including at least human, animal and environmental health) to strengthen the practical, field-based, and in-service training in zoonotic disease outbreak response and field diagnostics. The selected faculty will show a willingness and desire to strengthen their courses by providing their students with One Health related learning opportunities outside of the classroom or academic environment. Masters students will be required to show real-time contributions using a One Health approach while involved in an outbreak response in order to receive academic credit for a One Health track.

- Partners: HEALTH Alliance, other sub-awardees TBD
- Expected results: One Health track MPH curriculum developed and implemented; strengthened laboratory and field diagnostic training in MPH track; 8 students (Year Two) from different sectors enrolled by 2011; 8 in-service trainees supported to engage in outbreak response field experiences (Year Two)

**Sub-activity 1.4.2 EC: Enhance the capacity of practitioners, policy makers and students to manage emerging infectious diseases in Sub-Saharan Africa** – RESPOND will collaborate with existing training programs designed to augment the pool of domestic animal production, agricultural researchers, and policy professionals in sub-Saharan Africa. RESPOND will support: a) regional masters programs; b) regional doctoral programs that link students to field-oriented research and; c) short targeted courses for professional and skill development.

- Partners: RUFORUM, other sub-awardees TBD
- Expected results: At least 100 practitioners/policy makers and 16 candidates at M.Sc. level (8 grants) trained within 2 years, in the areas of disease, surveillance and outbreak response to zoonotic and other emerging infectious diseases

**Sub-activity 1.4.4 EC: Support fellows to attend existing Field Epidemiology Training Programs with veterinary-specific components** – RESPOND will support selected fellows from Uganda, Rwanda, and Tanzania to attend the FETP-V in Nigeria. This sub-activity focuses on increasing the attendance of fellows in FETPs that include a veterinarian component, whether or not it is available in their own country of residence.

- Partners: AFENET, Ministries of Agriculture, Livestock, Wildlife of Uganda, Rwanda and Tanzania
- Expected results: 9 FELTP-Vs start (Year Two), 9 finish by year end (Y3). In Year Two, 3 residents from Uganda, Rwanda and Tanzania (each); increased pool of high-level public health managers with One Health training in the Congo Basin

RESPOND Activity 1.5 (linked to RESPOND Objective 1)

**Sub-activity 1.5.1 EC: Develop One Health MENTOR fellowships in hot spot regions** – RESPOND will build on the innovative and successful MENTOR (Mentoring for Environmental Training in Outreach and Resource Conservation) fellowship model developed by US Fish and Wildlife Service and its collaborators, to develop a One Health MENTOR fellowship for hot-spot

regions. The fellowship will bring together emerging leaders from diverse professional backgrounds, within a hot-spot region, to learn about One Health and to empower them to apply their skills and knowledge to develop approaches and solutions to address emerging and zoonotic infectious disease issues in a collaborative manner, and facilitate the creation of an active network of emerging leaders.

- Partners: Sub-awardees TBD
- Expected results: One Health MENTOR program developed (curriculum, teaching modules, etc.), instructors identified, and 8 fellows identified and start by end Year Two

**Sub-activity 1.5.2 EC: Strengthen and expand the Global Health Institute to serve as a platform for in-service programs and graduate level training in One Health – RESPOND** will develop the Global Health Institute as a platform for One Health in-service and graduate level training in the East Congo Basin. The Global Health Institute (GHI) is a two-week intensive training program that uses a One Health approach by: 1) incorporating co-teaching by US-based and African professionals from multiple disciplines and sectors; 2) ensuring cross-sectoral and cross-professional involvement of trainees; and 3) choosing course topics and curricula that promote a One Health approach to public health. In addition, RESPOND will begin assessing the host universities' interest in and ability to model Congo Basin GHI's after the University of Minnesota's Public Health Institute. The UMN Public Health Institute is used as a platform for in-service and One Health training including a Public Health Certificate in Preparedness, Response and Recovery, Applied Veterinary Public Health residency, and joint DVM/MPH and RN/MPH degrees.

- Partners: HEALTH Alliance universities (specific sub-awardees TBD), other sub-awardees TBD
- Expected results: Two-week Global Health Institute implemented in collaboration with a partner university in the East Congo region; 4-6 credits of coursework delivered; 70 students representing multiple professions and sectors trained in One Health topics; assessment and regional plan developed for regional universities' to partner with University of Minnesota in a Public Health Certificate in Preparedness, Response and Recovery

**Sub-activity 1.5.3 EC: Deliver Global Health Institute in Uganda** – In collaboration with Makerere University, RESPOND developed and delivered a Global Health Institute (August 2010) as a platform for in-service and graduate level training in the East Congo Basin. The Global Health Institute (GHI) is a two-week intensive training program that used a One Health approach in the following ways: 1) US-based and African professionals from multiple disciplines and sectors co-taught courses; 2) trainees were involved from across sectors and professions; and 3) course topics and curricula were chosen to promote a One Health approach to public health. In addition, RESPOND has started assessing the host universities' interest in and ability to model Congo Basin GHI's after the University of Minnesota's Public Health Institute and Executive MPH program which includes a Public Health Certificate in Preparedness, Response and Recovery.

- Partners: Makerere University, ministries and HEALTH Alliance universities
- Expected results: 2-week Global Health Institute implemented in collaboration with Makerere University; 4-6 credits of coursework, including didactic and field components, delivered; 70 students representing multiple professions and sectors trained in One Health topics

RESPOND Activity 3.4 (linked to RESPOND Objective 3)

Sub-activity 3.4.6 EC: Provide training in One Health disease outbreak response to community health care workers – Utilizing existing networks of private industry companies, RESPOND will support the strengthening of training activities of health professionals working in the private sector. The objective is to increase both the quality of the training on rapid response to disease outbreaks and the reach of the training, to the rural community level. This training will include instruction in the appropriate use of Participatory Disease Surveillance and Response methodologies.

- Partners: USAID regional programs such as Health Initiatives for the Private Sector (HIPS), sub-awardees TBD
- Expected results: Working relationship established with HIPS; community training implemented through the HIPS network; 20 trainees expected

### **LOW 3.2 Support outbreak response activities**

RESPOND Activity 2.1 (linked to RESPOND Objective 2)

Sub-activity 2.1.1 EC: Identify and support the development of One Health leaders for outbreak response – RESPOND will support the participation of personnel from ministries of human, animal and environmental health, university officials, NGOs, and private industry in One Health Leadership workshops. These workshops will focus on cross-sectoral engagement, risk communication and policy development. The goal of the workshops is to build the collaboration, networking and mentorship skills, knowledge and attitude required for the participants to collaborate with each other effectively in their professional capacities during responses to outbreaks. An anticipated benefit of the workshops is to identify from among all the participants, the leaders with talent, interest and the necessary attitude to receive additional support and training to help train others. These leaders will then be engaged to work with ministries and the public sector to develop a proactive risk communication and policy development strategy for the region.

- Partners: HEALTH Alliance universities (specific sub-awardees TBD), other sub-awardees TBD
- Expected results: Workshops held with 20 leadership trainers trained with in-depth understanding of One Health and requisite skills for fostering broad collaboration; broader networks established for communication and planning across health professions, and among government, academia and private sector

RESPOND Activity 2.2 (linked to RESPOND Objective 2)

Sub-activity 2.2.1 EC: Convene and plan public/private/academic teams at the national and sub-national level – RESPOND will coordinate the invitation and participation of the private, public and academic sectors in meetings to identify needs and provide joint problem solving for zoonotic disease outbreak responses. These meetings aim to bring private sector personnel into conversations that sometimes happen without them, clarify their role in outbreak response among the public and academic sectors and ensure that all participants have the appropriate and necessary information to improve their coordination with one another.

- Partners: AFENET, other sub-awardees TBD

- Expected results: Communication about and reporting of disease outbreaks improved; private sector involved, their health professional personnel informed, and their role in outbreak response identified; 6 meetings with a total of 100 participants

RESPOND Activity 3.1 (linked to RESPOND Objective 3)

**Sub-activity 3.1.2 EC: Adapt and use existing STOP AI training and planning modules to meet RESPOND-specific needs** – Many high-quality training and planning modules that were successfully utilized by STOP AI in the region will be adapted to fit the current needs of the stakeholders involved in RESPOND. These training and planning modules will be utilized in training-of-trainers initiatives and incorporated into university curriculum, professional development certificate programs, and community-level trainings as appropriate.

- Partners: Sub-awardees TBD
- Expected results: Modified existing STOP AI planning and training modules; RESPOND planning and training materials developed rapidly

RESPOND Activity 3.2 (linked to RESPOND Objective 3)

**Sub-activity 3.2.2 EC: Provide logistical coordination and support during disease outbreaks using a One Health approach** – RESPOND will collaborate with regional networks, WHO-GOARN, FAO-CMC, and others to handle the provision of logistical support to the necessary recipients that emerge during outbreaks of zoonotic diseases. The objective of this sub-activity is to use real-life outbreaks as training grounds to increase the practice of a One Health approach while simultaneously increasing the efficiency of the outbreak response itself.

- Partners: AFENET, ministries of the region.
- Expected results: Improved coordination of outbreak response in the region through increased linkages. Increased efficiency in monitoring and outbreak response for emerging diseases in wildlife and livestock sources. Financial, training facilitation, resources in collaboration with other EPT partners and USG entities support provided.

## **COUNTRY ACTIVITIES – UGANDA**

### **LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING**

#### **LOW 3.1 Strengthen human and organizational capacity to improve outbreak response**

RESPOND Activity 1.2 (linked to RESPOND Objective 1)

**Sub-activity 1.2.1 EC: Curriculum co-development with Makerere University faculty for One Health courses and case studies**

– Faculty from US-based and host universities will represent multiple disciplines including at least human, animal and environmental health. Selected faculty will show willingness and desire to strengthen and expand their courses to reflect a One Health approach, incorporate regional and international perspectives and best practices of curriculum development. Strengthening the content of these courses will focus on complimenting the existing expected competencies by bolstering One Health competencies of both the faculty and the students involved. Strengthening curriculum development will focus on learning needs assessments, course design, course material development and course evaluation that incorporate adult learning and experiential learning methodologies.

- Partners: Makerere University
- Expected results: One Health curricula developed and existing curricula strengthened for outbreak response and One Health approaches (total 10 new or improved curricular); 20 case studies developed to be used in One Health related courses and training

RESPOND Activity 3.4 (linked to RESPOND Objective 3)

**Sub-activity 3.4.1 EC: Develop an implementation plan for identifying sites, trainers and needs to conduct community level first-responder training**

– RESPOND will work with PREDICT, district health and veterinary offices, as well as ministries to develop a plan to identify targeted hot spots to conduct community level training. Once these are identified, RESPOND will analyze the learning and infrastructure needs as well as the needs for improvement of any existing curricula. Based on these needs, RESPOND will develop an implementation plan for co-developing new curricula or updating existing curricula to meet those needs and work with subject matter experts and existing local trainers to develop and conduct training of trainers to implement the newly developed training. A variety of appropriate participatory methodologies, including Participatory Disease Surveillance and Reporting will be used. This plan will serve as a model for regional expansion of activities.

- Partners: AFENET, HEALTH Alliance, other sub-awardees TBD
- Expected results: Training implementation plan completed; knowledge base developed of socio-cultural, environmental, and health-related aspects of participating communities; plan of action approved for community-level training implementation

**Sub-activity 3.4.2 EC: Design, develop and deliver community-level first responder training**

– RESPOND will use newly developed or revised first-responder curricula to train trainers of identified communities (veterinarians, health workers, nurses, teachers). Each trainer in turn will deliver community level training first responders using varied community and participatory techniques and media. RESPOND will evaluate the training implemented and report on best practices for regional expansion in subsequent years.

- Partners: Makerere University, AFENET, HEALTH Alliance, RUFORUM, other sub-awardees TBD
- Expected results: 5 first responder trainers trained, and 100 first responders trained on One Health outbreak response community level curricula

**LOW 3.2 Support outbreak response activities**

RESPOND Activity 3.1 (linked to RESPOND Objective 3)

**Sub-activity 3.1.1 EC: Support regular meetings of One Health Zoonotic Disease Working Groups** – Building on existing inter-ministerial coordinating groups for avian influenza, rabies, and anthrax, RESPOND will support on-going meetings that include ministries from multiple sectors, schools of multiple disciplines from local universities, local NGOs, international health agencies and EPT partners. These meetings facilitate the discussion and coordination of roles and responsibilities of the members, in addition to the technical discussion and identification of priority activities and are expected to expand in response to identification of new disease outbreaks.

- Partners: Sub-awardees TBD
- Expected results: 4 meetings conducted with participants from multiple sectors and disciplines

RESPOND Activity 3.2 (linked to RESPOND Objective 3)

**Sub-activity 3.2.0 GL: Support to facilitate and improve the response to outbreaks of potentially zoonotic disease in hot spot regions** – At the request of host-country governments and international health agencies with the legal authority for outbreak response, RESPOND will provide technical, logistical, and material support to facilitate and improve outbreak response. This can include support for subject-matter experts to consult or participate, provision of logistics (supplies, PPE, vehicles or fuel to transport outbreak response teams), rapid refresher training (use of PPEs, safe collection, shipment and processing of samples from humans and animals with suspected illness). This support will be provided on a case-by-case basis, and available to countries within the EPT hot-spot regions.

- Partners: In collaboration with host-country governments, work with international health agencies (in-country and regional offices), DELIVER, EPT partners, donor-sponsored programs, AFENET, TEPHINET, others TBD.
- Expected results: Training, technical, logistical, material and communications support provided to address gaps identified; improved efficiency and efficacy of outbreak response

**Sub-activity 3.2.0.1EC: Outbreak response – control of anthrax in Queen Elizabeth National Park** – An outbreak of anthrax was identified in hippos in June 2010. In response to requests from Ugandan authorities, RESPOND is serving as the secretariat for the Anthrax Task Force, and is providing technical and financial support for outbreak response teams; laboratory capacity assessment and training; carcass identification, testing, and disposal, community sensitization; and for evaluation of the outbreak response, lessons learned, and opportunities for improvement.

- Partners: Sub-awardees TBD
- Expected results: Formation and management of a cross-sectoral anthrax task force; strengthened outbreak response capacity through logistical support, supply delivery, and training; best practices developed and an adaptable outbreak response template created

**Sub-activity 3.2.1 EC: Hold district, national and regional meetings and workshops to identify needs and initiate the development of a prioritized plan for outbreak response** – RESPOND will coordinate with STOP AI to understand best practices for increasing linkages and building the required mutual trust and respect among multiple disciplines carrying out a One Health approach. RESPOND will support meetings and workshops to establish effective collaboration while planning and improving outbreak responses using a One Health approach, and evaluate results and outcomes both to build the evidence base for a One Health approach, and to capture lessons-learned for use in subsequent meeting, workshop and training activities.

- Partners: AFENET, other sub-awardees TBD
- Expected results: Improved coordination of outbreak response in the region through increased linkages; 10 meetings/workshops, with total 500 participants

RESPOND Activity 4.2 (linked to RESPOND Objective 4)

**Sub-activity 4.1.2 EC: Evaluate existing Knowledge Management Systems needs for the health sciences, their application and utilization in the university context, and support the improvement and integration of appropriate systems** – RESPOND will collaborate with Makerere University to recruit and hire an independent information systems training specialist to assess the desired outcomes of their health sciences programs that could be strengthened by the use of appropriate Knowledge Management Systems. Once the desired outcomes are agreed upon and documented, the independent party will review the existing gaps in infrastructure (hardware and software), as well as procedures, policies and human capacity and compare and contrast them with the desired outcomes. If applicable to the university's needs, RESPOND can support the integration and implementation of a Knowledge Management System through a user support position to allow faculty and students in urban and remote areas to share curricula and access resources via a searchable knowledge base.

- Partners: Makerere University, other sub-awardees TBD
- Expected results: Implementation plan developed for RESPOND support of appropriate technology to increase knowledge sharing, speed and efficiency of outbreak identification and response to outbreaks.

Additional sub-activities in Uganda are reflected in the section entitled "**Regional activities – East Congo Basin**" since they are considered regional activities (not country-specific activities) for purposes of this workplan. These include the following sub-activities:

**Sub-activity 1.4.4 EC: Support fellows to attend existing Field Epidemiology Training Programs with veterinary-specific components**

**Sub-activity 1.5.3 EC: Deliver Global Health Institute in Uganda**

As the year progresses, additional activities might be proposed that are specific to Uganda or regional in scope. In addition, as RESPOND collaborates with networks such as the HEALTH Alliance, AFENET, RUFORUM and AFRISA, it is possible that one or more of them may implement activities in Uganda or in other countries in the East Congo Basin in which people and organizations from Rwanda could participate.

## **COUNTRY ACTIVITIES – RWANDA**

### **LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING**

Sub-activities in Rwanda are reflected in the section entitled "**Regional activities – East Congo Basin**" since they are considered regional activities (not country-specific activities) for purposes of this workplan. This includes the following sub-activity:

#### **Sub-activity 1.4.4 EC: Support fellows to attend existing Field Epidemiology Training Programs with veterinary-specific components**

As the year progresses and RESPOND conducts introductory meetings in Rwanda, additional activities might be proposed that are specific to Rwanda or regional in scope. In addition, as RESPOND collaborates with networks such as the HEALTH Alliance, AFENET, RUFORUM and AFRISA, it is possible that one or more of them may implement activities in Rwanda or in other countries in the East Congo Basin in which people and organizations from Rwanda could participate.

## **COUNTRY ACTIVITIES – TANZANIA**

### **LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING**

Sub-activities in Tanzania are reflected in the section entitled "**Regional activities – East Congo Basin**" since they are considered regional activities (not country-specific activities) for purposes of this workplan. This includes the following sub-activity:

#### **Sub-activity 1.4.4 EC: Support fellows to attend existing Field Epidemiology Training Programs with veterinary-specific components**

As the year progresses and RESPOND conducts introductory meetings in Tanzania, additional activities might be proposed that are specific to Tanzania or regional in scope. In addition, as RESPOND collaborates with networks such as the HEALTH Alliance, AFENET, RUFORUM and AFRISA, it is possible that one or more of them may implement activities in Tanzania or in other countries in the East Congo Basin in which people and organizations from Tanzania could participate.

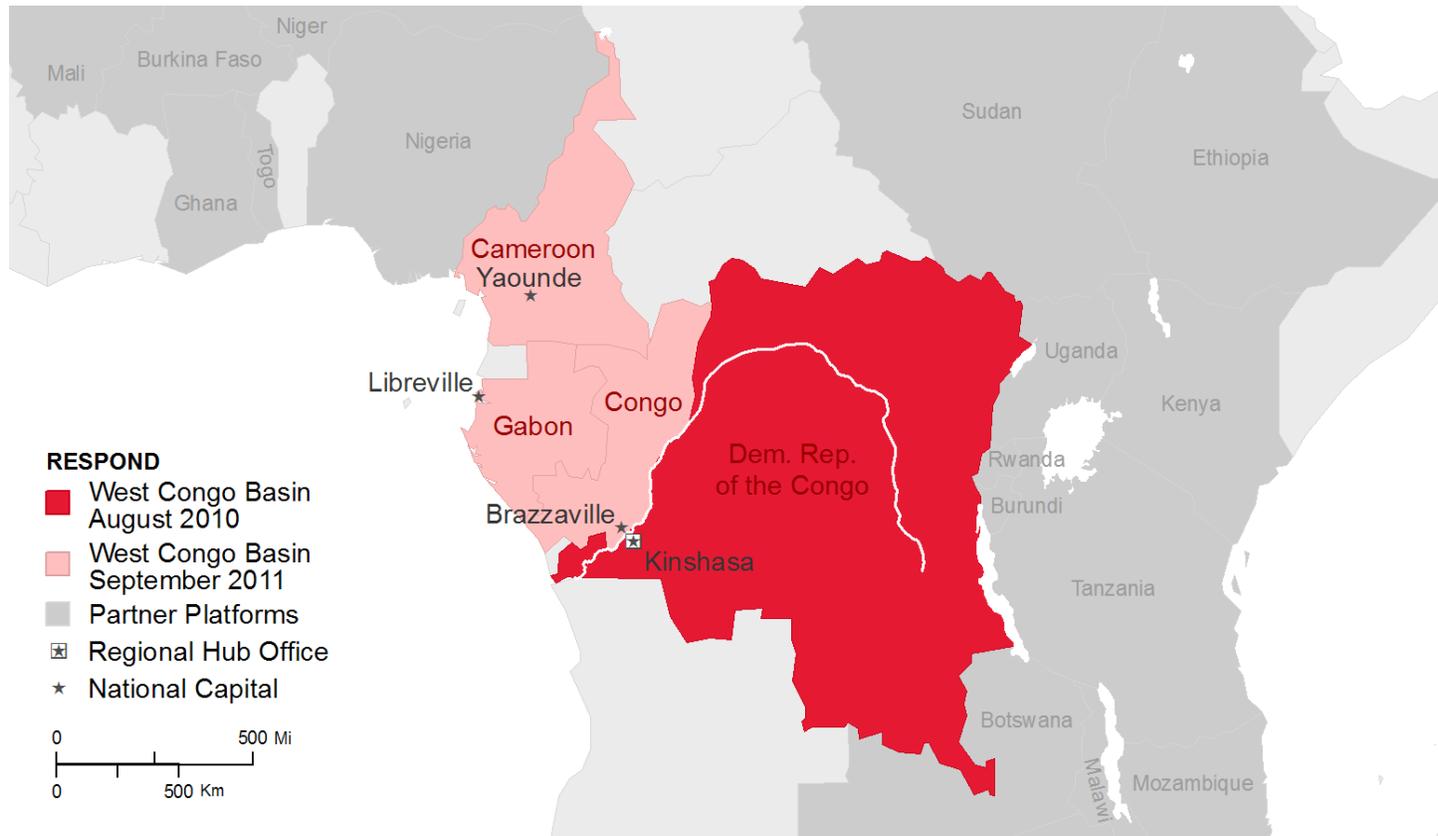
## **COUNTRY ACTIVITIES – BURUNDI, MOZAMBIQUE, SUDAN (SOUTHERN ONLY)**

### **LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING**

Sub-activities in Burundi, Mozambique and Southern Sudan are reflected in the section entitled "**Regional activities – East Congo Basin**" since they are considered regional activities (not country-specific activities) for purposes of this workplan. As the year progresses, RESPOND may conduct introductory meetings in Burundi, Mozambique and Southern Sudan, and additional activities might be proposed that are specific to Burundi, Mozambique or Southern Sudan, or regional in scope. In addition, as RESPOND collaborates with networks such as the HEALTH Alliance, AFENET, RUFORUM and AFRISA, it is possible that one or more of them may implement activities in Burundi, Mozambique and Southern Sudan or in other countries in the East Congo Basin in which people and organizations from Burundi, Mozambique and Southern Sudan could participate.



# REGIONAL VISION – WEST CONGO BASIN



The map above of the West Congo Basin shows where RESPOND works currently (in dark red) and plans to work by September 2011 (in light red). The Congo River is represented by the white line that 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, and the star in the white square located within DRC represents the capital city of Kinshasa, location of the RESPOND West Congo Basin Regional Hub Office. Surrounding countries shaded in gray represent the reach of the RESPOND regional partners such as HEALTH Alliance, RUFORUM, and AFENET.

There are multiple challenges to working successfully in the West Congo Basin region. On the institutional side, most countries in the region have a limited history of scientific or technical collaboration, and cross-disciplinary epidemiological surveillance is almost non-existent. As a result, few regional, transboundary health networks exist, limited initiatives are undertaken in a collaborative manner and human capacity to respond to outbreaks remains localized to a few internationally supported organizations. In the Democratic Republic of Congo (DRC), sectors involved in human, domestic animal and wild animal health have different organizational structures and administrative units from the central to the local level, and at present no direct administrative coordination exists among them. In addition, poor infrastructure, communication systems, and challenging post conflict instability handicap interventions targeting most critical and remote zones. DRC is generally considered a post-conflict country, but several provinces are still suffering from significant armed conflict and subsequent displacements of people, including transboundary movements between DRC and bordering countries

including Uganda and the Republic of Congo. Insecure conditions in these areas may negatively impact RESPOND's ability to reach vulnerable populations and communities.

RESPOND can capitalize on many significant opportunities. DRC is undergoing reform in many public and private sectors. Although this presents a challenging operating environment, there is also an important opportunity to introduce new ideas and development programs. At the national and ministerial level, the curricula for nursing and veterinary technician training programs were recently revised. RESPOND was asked to evaluate the curricula as they are being implemented. This example demonstrates exciting opportunities that RESPOND has to create linkages between disciplines for greater collaboration and long-term sustainability.

The geographically strategic location of Kinshasa, DRC, as a regional hub for RESPOND, will facilitate easy access to the WHO-AFRO office in Brazzaville, as well as access to head offices of other existing platforms such as the USAID Central African Regional Program for the Environment (CARPE) and SANRU (Santé Rural) rural health program. Both CARPE and SANRU have established programs that work in remote landscapes, and collaborating with them will help RESPOND reach communities in sub-national hot-spot areas.

Within five years, the countries of the West Congo Basin will demonstrate measurably improved capacity to respond to outbreaks of emerging and re-emerging diseases. RESPOND will measure the extent to which human, animal and wildlife health systems use a sustainable One Health approach to infectious disease surveillance, investigation and response at the community, national and regional levels:

**Objective 1: Improve training capacity for skills necessary to respond to suspected outbreaks.**

The RESPOND team is developing twinning relationships with multiple regional universities and health professional schools, including anchor institutions such as the University of Kinshasa (public health, veterinary medicine), University of Lubumbashi (veterinary medicine, nursing), Institut Supérieur des Techniques Médicales (ISTM) – Kinshasa and Lubumbashi (nursing), and Ecole de Faune de Garoua, Cameroon (wildlife and natural resource management). Strengthened academic programming helps address human capacity gaps in field epidemiology and veterinary public health services, and will facilitate the development of a regional One Health Alliance. RESPOND is also facilitating the development of a cadre of professionals by supporting for One Health Triangles – communities of interest made up of educators, researchers and scientists committed to an interdisciplinary and intersectoral approach to emerging pandemic threats. Other institutions in the region will be identified and strengthened to build and expand regional collaborations.

**Objective 2: Improve cross-sectoral linkages to support coordinated outbreak response.**

RESPOND engages appropriate sectors, including government health systems, the private sector, donor organizations, NGOs and international health agencies to mobilize and harmonize our investment in this region. For example, in the DRC, RESPOND is partnering with the newly-created consensus building platform, CARG (Conseil Agricole Rural de Gestion, supported by Belgian Technical Cooperation), the CODESA (Comité de Développement Sanitaire) platforms for human health, and RENES (Roseau National d'Epidémiosurveillance, an animal disease control and surveillance network). Regionally, support is being provided for existing platforms, such as the South African Center for Infectious Disease Surveillance (SACIDS). Successful pilot models of coordination are being proposed and developed regionally.

**Objective 3: Improve the capacity to conduct investigations of suspected outbreaks.** RESPOND contributes material, logistical and managerial support for strengthening the lines of command and communication among the sectors mentioned above. RESPOND will facilitate and reinforce the organizational capacity of outbreak response teams. Known needs include transportation, communication/information systems, and basic laboratory equipment.

By building capacity of community-level first responders to identify, diagnose, and respond to outbreaks with the use of appropriate technologies, RESPOND targets community-level training and support interventions in collaboration with PREDICT, conservation and wildlife NGOs, and other partners in the field (i.e. AFENET, SANRU, CARPE, CDC, WHO-GOARN, OIE, FAO-CMC). Priority training targets community-based human and animal health care providers, and includes training on the use of Participatory Disease Surveillance and Response methods. NGO experience and expertise will inform curriculum content and development.

**Objective 4: Introduce technologies to improve training, surveillance and outbreak investigations.**

The communication infrastructure in the West Congo Basin presents many challenges for integrating appropriate and responsive information, communications, and infectious disease diagnostic technology. For example, access to most mobile technologies is limited to the major urban centers and internet access is costly and not widely available. Lack of sufficient international bandwidth is still a major problem for many countries. RESPOND analyzes the appropriateness and availability of current technologies, evaluates how they are being used in hot-spot countries, and works closely with host universities and government ministries before introducing technology and bringing new or existing technologies to scale.

The section that follows highlights specific activities aligned to the Outbreak Response Capacity Building line of work that RESPOND will undertake throughout the West Congo Basin at a regional and country level.

*(Please note that for the following sections presenting narrative descriptions of sub-activities, the term "partners" refers only to organizations that could be considered sub-awardees of the RESPOND project, and does not include collaborating organizations, institutions, or agencies.)*

## REGIONAL ACTIVITIES – WEST CONGO BASIN

### LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING

*Sub-activities described in this section are not repeated again in the section for their respective countries, since they are considered regional sub-activities, not country-specific sub-activities,) for purposes of this workplan. For some of these regional sub-activities, countries for implementation are specified below and the sub-activity titles are listed in the country sections for ease of reference. For others, greater detail about countries for implementation will be developed in the coming months.*

#### LOW 3.1 Strengthen human and organizational capacity to improve outbreak response

RESPOND Activity 1.2 (linked to RESPOND Objective 1):

**Sub-activity 1.2.1 WC: Through a One Health Alliance, conduct twinning and mentoring with universities and vocational schools** – In the Democratic Republic of Congo (DRC) and Cameroon, RESPOND will work with faculty from identified universities to develop twinning programs and One Health Alliances that build faculty capacity to train a new cadre of animal, human, and environmental health professionals. Visiting professors will be paired with advanced PhD candidates to provide additional mentorship and support leadership development, while master’s degree courses in veterinary public health and wildlife health will be supported. Funding may be provided to support degree-related research. Activities will commence in DRC in early August 2010.

- Partners: University of Kinshasa (DRC), University of Lubumbashi (DRC), ISTM Kinshasa and Lubumbashi, Ecole de Faune de Garoua (Cameroon)
- Expected results: Model(s) for twinning and mentoring for anchor institutions in DRC in effect; five PhD candidates mentored by six visiting professors, and masters degree programs in veterinary public health and wildlife health supported

**Sub-activity 1.2.2 WC: Support regional and international exchanges of personnel to improve outbreak response and control** – To help develop the concept of One Health Alliances, RESPOND will support the identification of national, regional and international exchange opportunities, qualified candidates, and the development of exchange assignments for ministry personnel (public health, agriculture, wildlife), university faculty, and NGOs and private sector industry employees. Exchanges will help build respect, understanding, cooperation, and collaboration for continued One Health approaches. Exchanges will involve collaborations between partner institutions, with exchanges made in both directions.

- Partners: ministries of health, agriculture, wildlife, environment, partner universities, NGOs, private sector companies
- Expected results: At least 5 ministry personnel and 10 faculty have completed professional exchanges by the end of Year Two

RESPOND Activity 1.3 (linked to RESPOND Objective 1)

**Sub-activity 1.3.1WC: Develop an actionable plan to strengthen and enhance ongoing career path development in the Democratic Republic of Congo and Republic of Congo** –

RESPOND will work to identify barriers to employment and identify corrective programs for developing and retaining a skilled workforce. This requires the coordination and input of various ministries, NGOs and private sector partners.

- Partners: Sub-awardees TBD
- Expected results: Corrective programs to address barriers to employment and gaps to unemployment compiled in an action plan for resource mobilization, with the long-term goal of reducing these barriers to increase job opportunities

RESPOND Activity 1.5 (linked to RESPOND Objective 1)

**Sub-activity 1.5.1 WC: Conduct professional continuing education through didactic and field workshops using the Wildlife Investigation and Livestock Disease (WILD) module** – The African Union Interagency Bureau for Animal Resources (AU-IBAR) is spearheading the development of a series of wildlife health capacity building workshops, with at least 3 participants from each AU member country. RESPOND, in collaboration with FAO, will help support didactic workshops (based on the Thailand FETP-V WILD module), and One Health field experiences as follow-ups to wildlife capture workshops that have been run by AU-IBAR in July-August 2010.

- Partners: Royal Veterinary College (RVC), other sub-awardees TBD
- Expected results: At least 3 participants (veterinarian, wildlife biologist, laboratorian) from each of the 13 EPT Congo Basin countries trained (didactic) on wildlife/livestock/human interface issues, and gain One Health field experience working on a zoonotic disease issue; participants have improved understanding of and ability to address zoonotic disease issues at wildlife/livestock/human interface

**Sub-activity 1.5.2 WC: Support participants from the Democratic Republic of Congo, Republic of Congo, and Cameroon to attend Global Health Institute courses** –RESPOND will partner with the University of Minnesota Global Health Institute to deliver courses on One Health approaches applied to outbreak investigation and response. Trainees will gain practical skills and knowledge in outbreak investigation and response while building relationships with other global health professionals throughout the region. In addition to courses developed by RESPOND partners, the curriculum team will also co-develop modules on outbreak investigation and response for didactic delivery to professionals from animal, human and ecosystem health.

- Partners: host universities, Sub-awardees TBD
- Expected results: Participants (20 from DRC and 10 from the region) attend two-week courses

**Sub-activity 1.5.4 WC: Support the FOREST MENTOR program by adding One Health content and supporting fellows and a mentor from the Democratic Republic of Congo to participate** – US Fish and Wildlife Service, Woods Hole Research Center, and WCS-Gabon are developing an 18-month multi-disciplinary Forest Ecology and Stewardship Training (FOREST) fellowship program on extractive industries in the Congo Basin, based on the innovative Mentoring for Environmental Training in Outreach and Resource Conservation (MENTOR) model developed by USFWS. RESPOND will add content to the FOREST curriculum on emerging infectious and zoonotic diseases, relationships with extractive industries, and a One Health approach to infectious diseases. RESPOND will also support the participation of two fellows and one mentor from DRC.

- Partners: Sub-awardees TBD
- Expected results: Support MENTOR program by providing content and supporting two fellows and one mentor; fellows understand the relationships between emerging zoonotic

diseases and extractive industries, risk mitigation, and a One Health approach to human/animal/ecosystem issues; strengthened ability of fellows to address complex issues via collaborative, multi-disciplinary approach; relationship network established that expands and improves collaboration and cooperation developed among emerging leaders in their respective fields

RESPOND Activity 3.4 (linked to RESPOND Objective 3)

**Sub-activity 3.4.4 WC: Outbreak response training for multi-disciplinary teams at national and sub-national levels, including training of front line health workers in outbreak response**

– Building on the success of AFENET’s expertise in providing practical, applied field epidemiology training, RESPOND will provide support for the development and training of multi-disciplinary outbreak response teams in zoonotic disease investigation and response, using a One Health approach. This includes training on the use of Participatory Disease Surveillance and Response methods. RESPOND will develop a working group with ministries, universities, community organizations, and NGOs to develop a plan, including a sustainability plan, for these teams. The working group will then prioritize team locations, and identify key individuals to include in the teams.

- Partners: AFENET; other sub-awardees TBD.
- Expected results: Multi-disciplinary teams are developed and trained to provide improved response to outbreaks of potentially zoonotic infectious diseases

### **LOW 3.2 Support outbreak response activities**

RESPOND Activity 2.1 (linked to RESPOND Objective 2)

**Sub-activity 2.1.1 WC: Introduce EPT RESPOND project to key collaborators (USAID missions, host governments, international health agencies, private sector partners, NGOs, universities)** – In Cameroon and the Republic of Congo, RESPOND will work closely with USAID/Washington to strategically launch the project/program discovery phase, serving as an opportunity to expand relationships between animal and human health organizations.

- Partners: USAID mission, host governments, international health agencies, private sector partners, NGOs, universities, others TBD
- Expected results: Cameroon and Republic of Congo visited, background information collected, sub-activities identified

RESPOND Activity 2.2 (linked to RESPOND Objective 2)

**Sub-activity 2.2.1 WC: Organize seminars with the private sector to disseminate information on zoonotic diseases** – Regular awareness and advocacy seminars will be organized in DRC, ROC, and Cameroon, to provide private sector industries and NGOs with updated information on outbreaks of diseases, One Health related events occurring in the region and to encourage them to become active in disease surveillance and outbreak response.

- Partners: Sub-awardees TBD
- Expected results: 2 seminars of 15 participants each conducted (2 in each country); Key stakeholders (public and private) trained to use a One Health approach for planning and coordination of outbreak response; a permanent group for discussion of orientation and application on One Health is established in each country. A common understanding of the One Health principles and practices is reached. Collaborative engagement occurs on emerging zoonotic diseases surveillance and outbreak response

RESPOND Activity 2.4 (linked to Objective 2)

**Sub-activity 2.4.1 WC: Create “One Health Triangles” at academic and professional institutions to promote multi-sectoral and multi-disciplinary coordination** – One Health Triangles (OHTs) are communities of interest made of educators, researchers and scientists interested in and committed to the One Health concept and the development of One Health Alliances. Such communities are created and/or spearheaded by champions from animal, human and ecosystem health. Support is provided for a variety of activities to promote and apply a One Health approach, including multi-sectoral and multi-disciplinary seminars, conferences, workshops and applied research. RESPOND will provide grants to One Health Triangles to support activities such as student thesis/dissertations, joint faculty multi-sectoral and multi-disciplinary research, and promotion of linkages among animal, human and ecosystem health. A national and a regional yearly conference to report One Health work accomplished during the year will be organized. To qualify as a OHT, the community of interest must include institutions from three pillars of One Health (animal, human and ecosystem health) and must be institutionalized. OHTs will link academic institutions to communities, ministries and the private sector. In addition to academic discussions, One Health practitioners will be directly linked to activities on the ground in pilot areas. Government and university master trainers and subject-matter experts will work together to support training activities and assess progress in the field. This collaborative approach will enable key decision-makers in government health services and educators in training institutions to be better informed and involved in the process of continuous improvement.

- Partners: University of Kinshasa (DRC), University of Lubumbashi (DRC), Ecole de Faune de Garoua (Cameroon), ISTM Lubumbashi and Kinshasa, other sub-awardees TBD
- Expected results: Three One Health Triangles are operational in DRC, one each in Republic of Congo and Cameroon (i.e., OHTs have supported scientific work in disease surveillance, outbreak investigation and response, have promoted inter-sectoral linkages in each country)

## **COUNTRY ACTIVITIES – DEMOCRATIC REPUBLIC OF CONGO**

### **LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING**

*Additional activities planned for the Democratic Republic of Congo are reflected in the section entitled "Regional activities – WEST CONGO BASIN" since they are considered regional activities (not country-specific activities), for purposes of this workplan.*

#### **LOW 3.1 Strengthen human and organizational capacity to improve outbreak response**

RESPOND Activity 1.2 (linked to RESPOND Objective 1)

**Sub-activity 1.2.3 WC: Upgrade the skills of faculty at Institut Supérieur de Techniques Médicales (ISTM), Institut Technique Agricole et Vétérinaire (ITAV), and Institut d'Enseignement Médicale (IEM) / Institut Techniques Médicale (ITM)** – In DRC, RESPOND will work with anchor institutions and ministries (Ministry of Higher and University Education, the Ministry of Primary, Secondary and Vocational Education, and the Ministry of Health) to prepare vocational and university level modules, and train a national team of trainers. National instructors will improve skills in competency based approaches to outbreak investigation and response. AFENET along with RESPOND experts will work closely with faculty of post graduate, undergraduate and vocational programs to incorporate One Health approaches and outbreak investigation and response skills into existing curricula. This will include instruction on the appropriate use of Participatory Disease Surveillance and Response methodologies.

- Partners: AFENET, other sub-awardees TBD
- Expected results: 10 national trainers trained; 2 modules on One Health using competency based approach developed for vocational and university in DRC, faculty skilled upgraded

RESPOND Activity 1.4 (linked to RESPOND Objective 1)

**Sub-activity 1.4.2 WC: Through a One Health Alliance, strengthen delivery of graduate-level degree programs related to outbreak response with a One Health perspective at the University of Kinshasa** and **Sub-activity 1.4.3 WC: Through a One Health Alliance, strengthen delivery of graduate-level degree programs related to outbreak response with a One Health perspective at the University of Lubumbashi** – Masters' degree programs will be funded to allow professionals from DRC to obtain credentials in the following areas: veterinary public health, public health nursing, wildlife health, and ecosystem management at the University of Kinshasa or the University of Lubumbashi. The goal is to support programs that support both pre-service and in-service trainees. This will focus on building innovative programs that can meet both needs, and involve extensive applied, field-based training. This activity includes: a) scholarship support for students from the DRC to obtain degrees in any of these disciplines at either the University of Kinshasa or the University of Lubumbashi, b) rehabilitation to improve facilities at schools delivering graduate programs, and c) strengthening the curricula of the various disciplines involved by ensuring cross-disciplinary teaching and enrollment, based on a One Health approach. Cross-disciplinary teaching can include, for example, teaching veterinary students about ecosystem management and nursing, teaching ecosystem management and nursing students about veterinary health, teaching human public health students about wildlife health, and teaching wildlife health students about human public health. This list portrays a few examples, but is not exhaustive or meant to exclude the cross-training of any disciplines.

- Partners: University of Kinshasa, University of Lubumbashi, other sub-awardees TBD
- Expected results: Scholarships provided for masters' degree programs; facilities improved at schools delivering graduate programs; cross-disciplinary teaching and enrollment conducted

RESPOND Activity 3.4 (linked to RESPOND Objective 3)

**Sub-activity 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** – RESPOND will train first responders at the provincial and local levels, and will leverage USAID-CARPE networks and platforms to reach communities in remote areas. At the provincial level, teams will be composed of fully cross-sectoral responders, including personnel from the medical, veterinary, ecological, extractive industry and law enforcement sectors. Community level responders will include traditional authorities, health / forestry/agriculture extension agents, and conservation outreach workers. Training modules, including the use of Participatory Disease Surveillance and Response methodologies, will be developed for three levels of first responders – provincial; health zones and “chefferie” (chiefdom sector) – in collaboration with qualified sub grantee NGOs and USAID funded projects. Complementary activities include training of first responders and outbreak awareness outreach in rural communities, with special focus on BaTwa pygmies. Support for university students in applied biological and anthropological studies related to ongoing field research and community outreach activities will be available.

- Partners: Sub-awardees TBD
- Expected results: Updated, motivated and better equipped medical personnel in isolated rural areas; inclusion of more than 300 remote rural communities and several logging concessions in outbreak alert and national health systems; modules developed and delivered for the training of first responders ;reinforced and extended intra and inter-provincial outbreak communications network straddling four provinces; support provided for university students for applied health-related research

**Sub-activity 3.4.2 WC: Support for community-level training and outreach for populations in high risk areas** – RESPOND will leverage SANRU and other existing programs and their networks, and NGOs already working in rural and very remote "hot spot" areas, by providing support for appropriate training. This will include the delivery of refresher outbreak response training and first-responder training to traditional authorities, health/ forestry/ agriculture extension agents and conservation outreach workers, including women and other traditionally under-represented populations. Training will include the use of Participatory Disease Surveillance and Response and adult learning methodologies, while also incorporating gender and culturally sensitive considerations tailored to the specific locations.

- Partners: SANRU, other sub-awardees TBD.
- Expected results: Population in up to 260 health zones will receive refresher outbreak response and first-responder training. 50 participants in up to 260 health zones in DRC (approximately 13,000 total participants)

**Sub-activity 3.4.3 WC: Make available and accessible a minimum equipment package to newly-trained first-responder teams** – Eleven first responder teams at the provincial level, 50 teams from health zones and 30 teams in targeted health areas will be equipped with the necessary minimum standard of equipment required to launch a successful outbreak investigation, using avian and/or

monkey pox as examples of a zoonotic disease based approach. Minimum standard equipment includes personal protective equipment (PPE); material for samples conservation, transport (i.e. triple packaging of sample) and shipment. The RESPOND team will work with the ministries to develop a plan to maintain equipment supplies to these teams as they mature and develop.

- Partners: Sub-awardees TBD
- Expected results: 91 teams provided minimum equipment available to operate effectively; items and prices of minimum equipment assessed with national laboratories and DELIVER

### **LOW 3.2 Support outbreak response activities**

RESPOND Activity 2.1 (linked to RESPOND Objective 2)

**Sub-activity 2.1.2 WC: Support for veterinarians to attend the annual meeting of the Congolese Veterinary Medical Association** – RESPOND provided support for the national meeting of the Congolese Veterinary Medical Association in June 2010. This support enabled veterinary technicians to attend, provided an opportunity to professors from the third veterinary school in the country (University of Graben, School of Veterinary Medicine) to attend and contribute to the meeting, facilitated the participation of teachers/principals of schools training veterinary technicians, and allowed RESPOND to gain more insight regarding the veterinary profession and services in DRC.

- Partners: Congolese Veterinary Medical Association
- Expected results: Broader inclusion and representation of veterinary professionals in DRC at the national professional meeting

RESPOND Activity 3.1 (linked to RESPOND Objective 3)

**Sub-activity 3.1.1 WC: Strengthen systems for disease surveillance, outbreak investigation and response with a One Health approach** – Stakeholder meetings will be organized to reach consensus on mechanisms to be established or strengthened to enhance multi-disciplinary and multi-sectoral collaboration for effective and efficient national disease surveillance and outbreak response. Gaps in communication systems and logistical capacity will be assessed and ways and means to address them will be discussed. This will result in improved procedures and systems for disease surveillance and outbreak investigation and response.

- Partners: Sub-awardees TBD
- Expected results: Stakeholder meetings conducted; analysis of systems and procedures completed; multi-disciplinary and multi-sectoral coordination mechanisms established; and improved procedures and systems developed for disease surveillance and outbreak investigation and response

RESPOND Activity 4.1 (linked to RESPOND Objective 4)

- **Sub-activity 4.1.2 WC: Evaluate existing Knowledge Management Systems needs for the health sciences, their application and utilization in the university context, and support the improvement and integration of appropriate systems**– RESPOND will collaborate with universities in the region to recruit and hire an independent information systems training specialist to assess the desired outcomes of their health sciences programs that could be strengthened by the use of appropriate Knowledge Management Systems. Once the desired outcomes are agreed upon and documented, the independent party will review the existing gaps in infrastructure (hardware and software), as well as procedures, policies and human capacity and compare and contrast them with the desired outcomes. If applicable to the university's needs, RESPOND can support the integration and implementation of a Knowledge Management System through a user support position to allow faculty and

- students in urban and remote areas to share curricula and access resources via a searchable knowledge base.
- Partners: Sub-awardees TBD
- Expected results: Implementation plan developed for RESPOND support of appropriate technology to increase knowledge sharing, speed and efficiency of identification of and response to outbreaks.

RESPOND Activity 4.2 (linked to RESPOND Objective 4)

**Sub-activity 4.2.2 WC: Pilot test the rabies DRIT test and evaluate the implementation of**

**appropriate new technology for rapid zoonotic disease detection** – Building upon the One Health collaboration co-sponsored by RESPOND (4.2.2 WC) this technology transfer will involve collaborative work with MoH, MoA and Wildlife Authority, university and other partners. In DRC, laboratorians and epidemiologists at Ministries of Health and Agriculture and universities will be trained in the use of a new, rapid, diagnostic test for rabies (DRIT - Direct, Rapid Immunohistochemistry Test). Additional training will cover the use of personal protective equipment to limit biohazard exposure, and work in a One Health survey using data to guide management and prevention. The DRIT test is appropriate for use in rural health centers as well as reference laboratories, and follow-up evaluations will assess the uptake and use of this novel test. The DRIT test will be an important first step both to increase local diagnostic capacity in provinces and districts in DRC, and to transfer technology to assist local governments and human and animal health agencies to understand incidence and prevalence of disease, and to encourage collaboration to determine the epidemiology of this disease in each locale. This provides a model for collaboration on other diseases, including how to better utilize accurate health information to guide management of prevention and control measures by local health officials and clinicians.

- Partners: Sub-awardees TBD
- Expected results: 16 laboratorians (8 working in human labs, 8 in veterinary labs) from 4 areas (Kinshasa and 3 other provinces) trained in the use of DRIT, biosafety, effective PPE use to prevent disease transmission; 12 epidemiologists (human and animal) trained in applied epidemiology, biosafety, sample collection, surveys, use of GIS software and PDAs related to outbreaks

Additional sub-activities in the Democratic Republic of Congo are reflected in the section entitled "**Regional activities – West Congo Basin**" since they are considered regional activities (not country-specific activities) for purposes of this workplan. These include the following sub-activities:

**Sub-activity 1.2.1WC: Through a One Health Alliance, conduct twinning and mentoring with universities and vocational schools**

**Sub-activity 1.3.1WC: Develop an actionable plan to strengthen and enhance ongoing career path development in the Democratic Republic of Congo and Republic of Congo**

**Sub-activity 1.5.1 WC: Conduct professional continuing education through didactic and field workshops using the Wildlife Investigation and Livestock Disease (WILD) module**

**Sub-activity 1.5.2 WC: Support participants from the Democratic Republic of Congo, Republic of Congo, and Cameroon to attend Global Health Institute courses**

**Sub-activity 1.5.4 WC: Support the FOREST MENTOR program by adding One Health content and supporting fellows and a mentor from the Democratic Republic of Congo to participate**

**Sub-activity 2.2.1 WC: Organize seminars with the private sector to disseminate information on zoonotic diseases**

**Sub-activity 2.4.1 WC: Create “One Health Triangles” at academic and professional institutions to promote multi-sectoral and multi-disciplinary coordination**

As the year progresses, additional activities might be proposed that are specific to the Democratic Republic of Congo or regional in scope. In addition, as RESPOND collaborates with networks such as the HEALTH Alliance and AFENET, it is possible that one or more of them may implement activities in the Democratic Republic of Congo or in other countries in the East Congo Basin in which people and organizations from the Democratic Republic of Congo could participate.

## **COUNTRY ACTIVITIES – GABON**

### **LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING**

#### **LOW 3.2 Support outbreak response activities**

RESPOND Activity 2.2 (linked to RESPOND Objective 2)

**Sub-activity 2.2.2 WC: Introduce EPT RESPOND project to key collaborators (USAID missions, host governments, international health agencies, private sector partners, NGOs, universities), and attend the Gabon International Gas, Oil, and Mining Conference –** RESPOND will work closely with USAID/Washington to strategically launch the project/program discovery phase, serving as an opportunity to expand relationships between animal and human health organizations. Presentation and networking at the Gabon International Gas, Oil and Mining (GIGOM) Conference on 8-10 December provides a key opportunity for introduction of RESPOND and EPT.

- Partners: Sub-awardees TBD
- Expected results: Gabon visited, background information collected, activities and potential partners identified

Additional sub-activities planned for Gabon are reflected in the section entitled "**Regional activities – West Congo Basin**" since they are considered regional sub-activities (not country-specific sub-activities) for purposes of this workplan. This includes the following sub-activities:

**Sub-activity 1.5.1 WC: Conduct professional continuing education through didactic and field workshops using the Wildlife Investigation and Livestock Disease (WILD) module**

**Sub-activity 1.5.4 WC: Support the FOREST MENTOR program by adding One Health content and supporting fellows and a mentor from the Democratic Republic of Congo to participate**

As the year progresses and RESPOND collaborates with networks such as the HEALTH Alliance and AFENET, it is possible that one or more of them may implement sub-activities in Gabon, or in other countries in the West Congo Basin in which people and organizations from Gabon could participate.

## **COUNTRY ACTIVITIES – REPUBLIC OF CONGO**

### **LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING**

Sub-activities in the Republic of Congo are reflected in the section entitled "**Regional activities – West Congo Basin**" since they are considered regional sub-activities (not country-specific sub-activities) for purposes of this workplan. This includes the following sub-activities:

**Sub-activity 1.3.1WC: Develop an actionable plan to strengthen and enhance ongoing career path development in the Democratic Republic of Congo and Republic of Congo**

**Sub-activity 1.5.1 WC: Conduct professional continuing education through didactic and field workshops using the Wildlife Investigation and Livestock Disease (WILD) module**

**Sub-activity 1.5.2 WC: Support participants from the Democratic Republic of Congo, Republic of Congo, and Cameroon to attend Global Health Institute courses**

**Sub-activity 2.1.1WC: Introduce EPT RESPOND program to key collaborators (USAID missions, host governments, international health agencies, private sector partners, NGOs, universities)**

**Sub-activity 2.2.1WC: Organize seminars with the private sector to disseminate information on zoonotic diseases**

**Sub-activity 2.4.1 WC: Create “One Health Triangles” at academic and professional institutions to promote multi-sectoral and multi-disciplinary coordination**

As the year progresses and RESPOND conducts introductory meetings in the Republic of Congo, additional sub-activities might be proposed that are specific to the Republic of Congo or regional in scope. In addition, as RESPOND collaborates with networks such as the HEALTH Alliance and AFENET, it is possible that one or more of them may implement sub-activities in the Republic of Congo or in other countries in the West Congo Basin in which people and organizations from the Republic of Congo could participate.

## **COUNTRY ACTIVITIES – CAMEROON**

### **LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING**

Sub-activities in Cameroon are reflected in the section entitled "**Regional activities – West Congo Basin**" since they are considered regional sub-activities (not country-specific sub-activities) for purposes of this workplan. This includes the following sub-activities:

**Sub-activity 1.2.1WC: Through a One Health Alliance, conduct twinning and mentoring with universities and vocational schools**

**Sub-activity 1.5.1 WC: Conduct professional continuing education through didactic and field workshops using the Wildlife Investigation and Livestock Disease (WILD) module**

**Sub-activity 1.5.2 WC: Support participants from the Democratic Republic of Congo, Republic of Congo, and Cameroon to attend Global Health Institute courses**

**Sub-activity 2.1.1WC: Introduce EPT RESPOND program to key collaborators (USAID missions, host governments, international health agencies, private sector partners, NGOs, universities)**

**Sub-activity 2.2.1WC: Organize seminars with the private sector to disseminate information on zoonotic diseases**

**Sub-activity 2.4.1 WC: Create “One Health Triangles” at academic and professional institutions to promote multi-sectoral and multi-disciplinary coordination**

As the year progresses and RESPOND conducts introductory meetings in Cameroon, additional sub-activities might be proposed that are specific to Cameroon or regional in scope. In addition, as RESPOND collaborates with networks such as the HEALTH Alliance and AFENET, it is possible that one or more of them may implement sub-activities in Cameroon or in other countries in the West Congo Basin in which people and organizations from Cameroon could participate.

## **COUNTRY ACTIVITIES – CENTRAL AFRICAN REPUBLIC, NORTHERN ANGOLA, EQUATORIAL GUINEA**

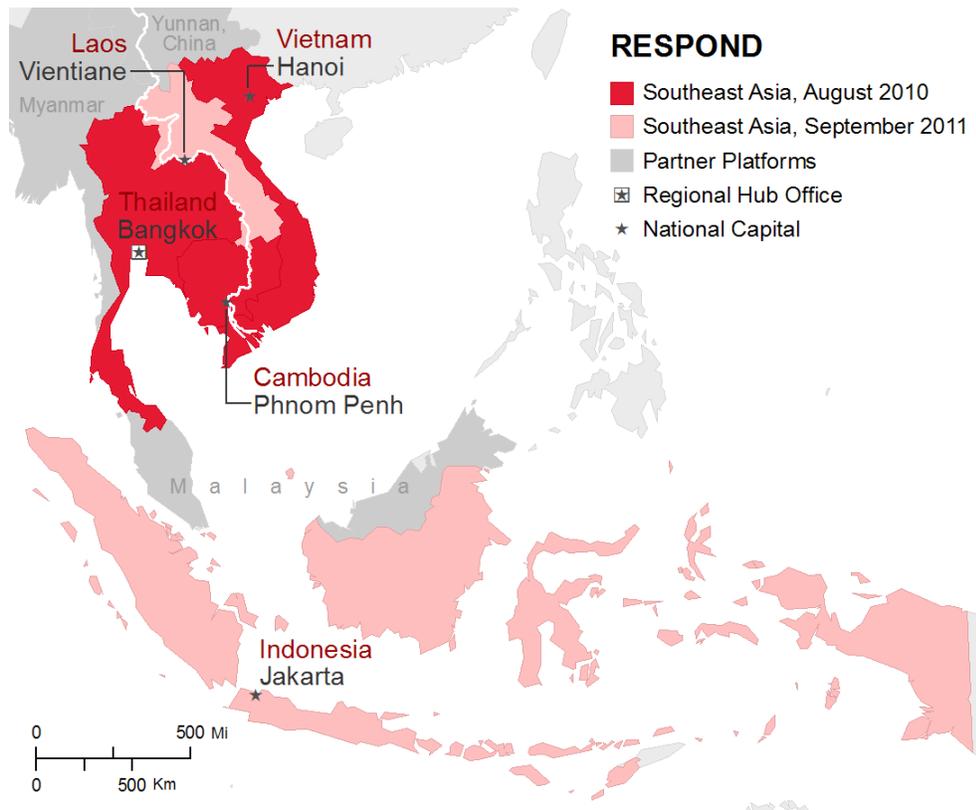
### **LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING**

Sub-activities in these countries are reflected in the section entitled "**Regional activities – West Congo Basin**" since they are considered regional sub-activities (not country-specific sub-activities) for purposes of this workplan. This includes the following sub-activity only, for which participants will be supported from EPT Congo Basin hot-spot countries:

#### **Sub-activity 1.5.1 WC: Conduct professional continuing education through didactic and field workshops using the Wildlife Investigation and Livestock Disease (WILD) module**

As the year progresses and RESPOND conducts introductory meetings, additional sub-activities might be proposed that are specific to these countries or regional in scope. In addition, as RESPOND collaborates with networks such as the HEALTH Alliance and AFENET, it is possible that one or more of them may implement sub-activities in these countries in the West Congo Basin in which people and organizations from these countries could participate.

# REGIONAL VISION – SOUTHEAST ASIA



The map above of the Southeast Asia region displays where RESPOND works currently (in dark red) and plans to work by September 2011 (in light red). The Mekong River is represented by the white line that runs from Vietnam south to Cambodia. The stars represent capital cities, and the star in the white square located within Thailand represents the capital city of Bangkok, location of the RESPOND Southeast Asia Regional Hub Office. Surrounding countries shaded in gray represent the reach of the RESPOND regional partners including ASEAN, the Asian Disaster Preparedness Center, Mekong Basin Disease Surveillance Network, and the Kenan Institute.

In Southeast Asia, there is a high level of awareness and receptivity to the One Health concept and approach, in addition to well-developed existing regional networks, platforms, and capacities to respond to emerging pandemic threats. As a result of the region-wide response to highly pathogenic avian influenza (HPAI) in recent years, links between human and animal health sectors exist but require strengthening, including improving current levels of awareness about One Health, additional capacity building efforts, and resource allocations to ensure sustainability. Linkages among the human and animal health sectors and the ecology and environment sectors also need to be developed and supported. Infectious disease surveillance and detection systems in wildlife, a prerequisite to effective holistic outbreak investigation and response, remain a critically important unmet need in the region. Gaps exist in the supply of highly qualified bachelor and graduate-level training in animal health/disease, environmental and ecology, as well as One Health in some countries. In addition, applied epidemiology training and outbreak-related data analysis and reporting skills and competencies are often incomplete.

To date, adequate resources have not been dedicated to the development of sustainable One Health skills and field experience among trainers, mentors, and managers and this capacity varies by region. Therefore, RESPOND must address these gaps as an important component of the overall surveillance and outbreak response system for infectious diseases.

Significant advocacy efforts are needed that encourage policy and systems changes to better support a One Health approach to emerging pandemic threats. Furthermore, RESPOND must balance its efforts at national, provincial, district and community levels so that there are training and capacity-building activities at each level. Building sustainable, long term capacity must be balanced with meeting infectious disease threats that may occur in the near future. One Health is the key to strengthening the still weak link between human and animal health agencies. Throughout the region there is both support and resistance to more integration. RESPOND strategy and programming focuses on continuing to build the evidence base for One Health, and encouraging collaboration at all levels among professions responsible for outbreak investigation and response.

Within the five-year timeframe of the project, the RESPOND consortium and collaborating partners will leverage existing outbreak response capacity—developed as an outcome of influenza pandemic preparedness—to catalyze and demonstrate a significantly improved and sustainable public health infrastructure and enhance the outbreak response capacity for identifying and controlling emerging pandemic threats in the region.

RESPOND directly addresses critical training and capacity building needs, gaps, and opportunities in the following ways:

**Objective 1: Improve training capacity for skills necessary to respond to suspected outbreaks.**

By creating and enhancing academic degree programs in human, animal, and environmental health, promoting regional collaboration among training institutions, and supporting academic twinning, RESPOND improves the capacity of health professionals to respond to suspected outbreaks. This activity provides a pipeline of future health professional leaders for whom One Health is the preferred method of engagement. RESPOND is developing twinning relationships with anchor academic institutions in Thailand, Cambodia, Vietnam and Laos, and exploring development of twinning relationships with Gadjah Mada University in Indonesia. We are supporting and strengthening the existing twinning relationship, including veterinary and animal science faculty and student exchanges, between Khon Kaen University in Thailand and Nabong Agricultural College in Laos, and also exploring with universities in Cambodia and Laos opportunities to improve faculty skills for course delivery in Bachelor of Veterinary Science programs. These twinning activities will facilitate the development of regional One Health Alliances.

Given the critical unmet need for training and capacity-building in wildlife disease surveillance and outbreak response in the region, RESPOND is partnering with the National Park, Wildlife and Plant Conservation Department (DNP) in Thailand to establish a regional training center for wildlife professionals Huai Kha Khaeng Wildlife Sanctuary<sup>1</sup>. This activity will increase the field skills of

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<sup>1</sup> Huai Kha Khaeng Wildlife Sanctuary is part of the Western Forest Complex in Thailand, which is made up of 19 national parks and wildlife sanctuaries –and is one of the largest protected areas in Southeast Asia.

rangers and mid-level protected area staff, and support development of wildlife disease surveillance systems. RESPOND also supports applied field training and mentorship for newly-hired wildlife veterinarians working for the DNP, as well as MS programs for wildlife veterinarians from Mahidol and Kasetsart universities in Thailand. In addition, RESPOND supports training of wildlife rangers to detect illegal killing and transport of wildlife in Nam Ha Reserve in Laos and Xishuangbanna Reserve in China's Yunnan Province (contiguous protected areas adjacent to the Bangkok–Kunming highway), a major risk factor for potential human exposure to zoonotic pathogens. RESPOND will continue to explore and identify additional training and capacity-building needs and opportunities in the region.

**Objective 2: Improve cross-sectoral linkages to support coordinated outbreak response.**

RESPOND works closely with USAID Washington and the Regional Development Mission – Asia (RDMA) to engage with ASEAN<sup>2</sup> and other key regional platforms to initiate and strengthen the dialogue through regional One Health fora in to identify significant issues and policy challenges for improving outbreak response capacity at both regional and national levels. Along with the Asian Disaster Preparedness Center (ADPC), RESPOND will co-host the Bangkok based regional Pandemic Preparedness Forum (PPF), which aims to improve coordination among organizations working to mitigate the threat of pandemics in Southeast Asia. In Vietnam, RESPOND is collaborating with PREDICT and the USAID Mission in Hanoi to hold a national level meeting on One Health, in addition to exploring support for Applied Veterinary Epidemiology Training Program (AVET) veterinary officers to participate in the Field Epidemiology Training Program (FETP) at the Ministry of Health. In Thailand, RESPOND is sponsoring planning and implementation of One Health seminars among health science schools. Across the region, RESPOND is supporting students and fellows to give presentations at global One Health meetings, and for the design of updated training materials (e.g. case studies) based on outbreak investigations in the Southeast Asia region, useful to improve the quality and method of district and provincial One Health training in multiple countries.

**Objective 3: Improve the capacity to conduct investigations of suspected outbreaks.**

RESPOND will assess, reinforce and support One Health teams at all levels of government, particularly the provincial, district, and community levels, including in the areas of domestic animal, wildlife, environmental and ecology, and infectious diseases in the human population. Examples of this include work with government officials, selected university faculty and international health agencies to review the core competencies of One Health epidemiological teams at the provincial and district levels in Thailand, Cambodia, Laos and Indonesia, and support for the design and delivery of improved applied epidemiology training materials and methods to enhance outbreak response capacity. Collaboration with the Department of National Parks, Wildlife and Plant Conservation in Thailand increases capacity to stop illegal transport of wildlife and wildlife products, and thereby reduce the potential for the occurrence and impact of zoonotic disease outbreaks. In Vietnam, RESPOND is working with the FAO Applied Veterinary Epidemiology Training Program (Department of Animal Health, Ministry of Agriculture and Rural Development) the Ministry of Health, the Partnership for Avian and Human Pandemic Influenza, the National Institute of Hygiene

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<sup>2</sup> ASEAN recently set up the Animal Health Trust Fund to facilitate the implementation of unified and harmonized animal health projects in the region, and has established the Wildlife Enforcement Network (ASEAN-WEN), which coordinates a regional response to illegal trade in protected species.

and Epidemiology, WHO-GOARN, FAO-CMC, and other groups to enhance the outbreak response capacity and training of One Health epidemiological teams at select provincial, district, and community levels. In partnership with the Asian Disaster Preparedness Center and Kenan Institute Asia's Greater Mekong Subregion Responses to Infectious Diseases (GMS RID) program, RESPOND will adapt and develop One Health curricula and provide support for conduct of training at province and district levels, with a focus on cross border outbreak response systems.

**Objective 4: Introduce technologies to improve training, surveillance and outbreak investigations.** RESPOND strengthens sustainable system development to improve public health by building the capacity of community-level first responders to promptly report suspected disease outbreaks, and enhancing district and provincial level capacity to identify, confirm, and respond to outbreaks with the use of appropriate technologies. RESPOND will also assess and integrate existing and new appropriate technology solutions and tools into outbreak response capacity building and training activities (described in Objectives 1-3) at provincial and district levels.

The section that follows highlights specific activities aligned to the Outbreak Response Capacity Building line of work that RESPOND will undertake throughout Southeast Asia at a regional and country level.

*(Please note that for the following sections presenting narrative descriptions of sub-activities, the term "partners" refers only to organizations that could be considered sub-awardees of the RESPOND project, and does not include collaborating organizations, institutions, or agencies.)*

## REGIONAL ACTIVITIES – SOUTHEAST ASIA

### LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING

*Sub-activities described in this section are not repeated again in the section for their respective countries, since they are considered regional sub-activities, not country-specific sub-activities,) for purposes of this workplan. For some of these regional sub-activities, countries for implementation are specified below and the sub-activity titles are listed in the country sections for ease of reference. For others, greater detail about countries for implementation will be developed in the coming months.*

#### LOW 3.1 Strengthen human and organizational capacity to improve outbreak response

RESPOND Activity 1.2 (linked to RESPOND Objective 1)

**Sub-activity 1.2.1 SE: Through a One Health Alliance, plan and implement university twinning** – This process will involve exchanges of faculty, administrators, and graduate students; co-development of curriculum; joint training; and subsequent support of other regional educational institutions, all to facilitate the development of One Health integration of faculties within and among schools and universities of public health, animal health, wildlife and environment and the training of future health professions leaders prepared to implement a One Health approach to emerging pandemic threats.

- Partners: Khon Kaen Veterinary Medical School (Thailand), Nabong Agricultural College (Laos), others TBD
- Expected results: MOUs signed between twinning universities; exchanges of professors and graduate students completed; curricula shared and co-developed; newer, more effective methods of teaching and learning adopted; graduate students and government staff jointly trained; twinning institutions support other regional educational institutions

RESPOND Activity 1.5 (linked to RESPOND Objective 1)

**Sub-activity 1.5.1 SE: Establish a regional training center for wildlife professionals** – RESPOND will leverage relationships at Huai Kha Khaeng Wildlife Sanctuary (Thailand) to increase field skills of rangers and mid-level protected area personnel while also working to support implementation of a system of ranger-based wildlife health monitoring. RESPOND is discussing collaborations and coordination with PREDICT, WCS-Thailand, WWF-Thailand, Kasetsart University, and King Mongkut Technical University.

- Partners: Sub-awardees TBD
- Expected results: Wildlife rangers' field skills increase; rangers capable of monitoring wildlife health and safely conducting necropsies to provide samples for analysis. 15 workshops, 90 trainees

**Sub-activity 1.5.3 SE: Training to interdict illegal wildlife and wildlife products trafficking** – Transport of wildlife and wildlife products can facilitate the spread of zoonotic diseases across borders and through communities. RESPOND will work with national parks, ministries and wildlife markets to train veterinarians and first responders (wildlife officials and park rangers) in outbreak response and to control movement and trade in illegal wildlife and wildlife products. RESPOND will coordinate with PREDICT for training on basic non-invasive disease sampling (e.g. blood, tissue sampling, fecal swabs) and necropsy, and to develop a sustainable training program for responding to outbreaks in wildlife. The Prime Minister of Thailand and the Minister of Natural Resources and Environment support this Center as part of a policy to offer regional

leadership on environmental and health issues. RESPOND is also discussing collaboration with The Smithsonian Institution and the US Fish and Wildlife Service to provide sustainable support for the Center.

- Partners: Sub-awardees TBD
- Expected results: National Park and government wildlife veterinarians trained in wildlife health monitoring and reporting, handling, field pathology, sample collection and transport, biohazard avoidance, and proper use of PPE; park rangers and wildlife officials trained in management poaching and wildlife trade, sample collection and processing, disease outbreak response and control; assessment of the use of trained detection dogs to control illegal wildlife and wildlife product trafficking

RESPOND Activity 3.4 (linked to RESPOND Objective 3)

**Sub-activity 3.4.6 SE: Collaborate with the Asian Disaster Preparedness Center and Kenan Institute to adapt One Health curricula for multiple audiences and levels** – Work with ADPC and the Kenan Institute to revise the draft-version of the One Health Training package written by Murdoch University, Chiang Mai University, and ICF Macro. The package will be tailored to specific audiences, including government officials, health officers, doctors, veterinarians and environmental stewards, and community members using participatory methodologies to ensure transference of knowledge and skills. Kenan Institute and ADPC will work with RESPOND to deliver the trainings to key audiences at the government, university, and community levels.

- Partners: Sub-awardees TBD
- Expected results: Eight modules on One Health, Disaster Risk Management, Zoonotic Diseases, Epidemiology, Socioeconomic Issues, Ecology & Health, One Medicine, and Management Tools. Additional modules will be developed for in-country and cross-border communications

### **LOW 3.2 Support outbreak response activities**

RESPOND Activity 2.2 (linked to RESPOND Objective 2)

**Sub-activity 2.2.1 SE: Initiate extractive industry outreach in Southeast Asia** – RESPOND will conduct initial introductory meetings with extractive industries and other relevant private sector companies that have corporate social responsibility programs in Thailand and Vietnam

- Partners: Sub-awardees TBD
- Expected results: Plan developed for engagement with industries operating in Southeast Asia; identified points of contact within companies interested in participating in RESPOND activities

RESPOND Activity 2.4 (linked to RESPOND Objective 2)

**Sub-activity 2.4.1 SE: Host the regional Pandemic Preparedness Forum for 2011** – A monthly regional meeting to collaborate on planning and create a forum for dialogue and discussion across disciplines and technical sectors. Activities include bringing in keynote speakers from the region to share news, research, and updates on field activities.

- Partners: Sub-awardees TBD
- Expected results: Relationships strengthened among partners and participants; advocacy established at all levels for One Health. Monthly forum with 20 participants each month

Sub-activity 2.4.3 SE: ASEAN USAID/RESPOND regional forums on One Health – RESPOND will work closely with USAID Washington, the Regional Development Mission – Asia (RDMA), and bilateral missions in the region to engage with ASEAN to initiate and strengthen dialog in collaboration with other key regional platforms, such as the Mekong Basin Disease Surveillance Network (MBDS), the Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS), and the Asian Disaster Preparedness Center (ADPC). Regional fora on One Health will be supported to identify significant issues and policy challenges for improving outbreak response capacity among health professionals at regional and national levels.

- Partners: Sub-awardees TBD
- Expected results: 2 regional fora conducted with 100 participants each; consensus developed on One Health; best practices shared, evidence base for One Health approach built; needs, gaps, and opportunities for strengthening One Health across the region identified

## COUNTRY ACTIVITIES - THAILAND

### LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING

#### LOW 3.1 Strengthen human and organizational capacity to improve outbreak response

RESPOND Activity 1.2 (linked to RESPOND Objective 1)

Sub-activity 1.2.2 SE: Support existing twinning relationship between Khon Kaen Veterinary Medical School and Nabong Agricultural College – These two institutions currently have an MoU that provides for bilateral faculty and student exchange and this twinning relationship is a model for other regional twinning relationships because the institutions involved share language and cultures. RESPOND will support and reinforce this relationship through engagement with Khon Kaen University for faculty and curriculum development, which will in turn support the Khon Kaen- Nabong agreement.

- Partners: Khon Kaen Veterinary Medical School, Nabong Agricultural College
- Expected results: Improved capacity of faculty from both institutions to teach outbreak investigation and response consistent with One Health; greater numbers of student graduates from both institutions prepared to enter government service or to be enlisted in future emerging pandemic threats outbreak investigation and response efforts; strengthened faculty and student exchange between Khon Kaen Veterinary Medical School and Nabong Agricultural University

RESPOND Activity 1.5 (linked to RESPOND Objective 1)

Sub-activity 1.5.2 SE: Applied field training for wildlife veterinary medical officers and field pathologists – RESPOND will collaborate with the Thai Department of National Parks, Wildlife and Plant Conservation; Mahidol and Kasetsart universities; the Open Zoo in Bangkok, and PREDICT to provide training to wildlife veterinarians, para-veterinarians, and other wildlife first responders (rangers, conservation NGO personnel) to strengthen their field sampling, reporting, and diagnostic skills. The proposed training will build capacity for rapid assessment and sustained response to detected or suspected outbreaks, as an institutionalized government function.

- Partners: Sub-awardees TBD
- Expected results: Wildlife first responders uniformly trained (20) in methods for safely handling and sampling potentially diseased wildlife, and safely transporting biomaterials; knowledge of wildlife diseases increased; improved data collection and communication from wildlife first responders; strengthened relationships between district and provincial wildlife first responders (government and NGO) and national and regional government and NGO groups

RESPOND Activity 3.4 (linked to RESPOND Objective 3)

Sub-activity 3.4.4 SE: Support training to strengthen One Health epidemiological teams at provincial and district levels – Based on the success of a One Health approach in limiting transmission of HPAI in animals and infection in humans, the Thai Ministry of Public Health (MoPH) and Department of Livestock Development (DLD) strongly support expanding this collaborative One Health approach to a wider range of emerging and re-emerging infectious diseases, particularly to teams of professionals at the provincial and district levels. This will be done in collaboration with national authorities, including the FETP-Thailand, and FETP-V, WHO

and FAO, and RESPOND will assist with improving the quality of the training materials and methods, and to monitoring and evaluating the impact of this training.

- Partners: Sub-awardees TBD
- Expected results: Core competencies reviewed for the early identification and reporting of suspected outbreaks of disease and epidemics by One Health epidemiological teams at the provincial and district levels; applied epidemiology training and continuing education materials and methods improved, and include the development of case studies of disease outbreaks relevant to the region

Additional sub-activities in Thailand are reflected in the section entitled "**Regional activities – Southeast Asia**" since they are considered regional activities (not country-specific activities) for purposes of this workplan. These include the following sub-activities:

**Sub-activity 1.2.1 SE: Through a One Health Alliance, plan and implement university twinning**

**Sub-activity 1.5.1 SE: Establish a regional training center for wildlife professionals**

As the year progresses, additional activities might be proposed that are specific to Thailand or regional in scope. In addition, as RESPOND collaborates with networks such as the Asian Disaster Preparedness Center, the Mekong Basin Disease Surveillance Network, and the Kenan Institute, it is possible that one or more of them may implement activities in Thailand or in other countries in the East Congo Basin in which people and organizations from Thailand could participate.

## COUNTRY ACTIVITIES - VIETNAM

### LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING

#### LOW 3.1 Strengthen human and organizational capacity to improve outbreak response

RESPOND Activity 1.5 (linked to RESPOND Objective 1)

**Sub-activity 1.5.4 SE: Support three veterinary medical officers to enroll as FETP(V) Vietnam fellows** – Vietnam currently has an FETP program that is supported by WHO and CDC; FAO supports AVET, a training program designed for veterinarians that has similar objectives but is far shorter in duration. There is presently no mechanism for human and animal health professionals at the highest levels of the government to participate together in outbreak investigation and response. This activity will Support three veterinarians enrolled in the AVET program to attend the FETP program.

- Partners: Sub-awardees TBD
- Expected results: Three veterinarians enrolled in the Vietnam FETP and graduate on-time.

RESPOND Activity 3.4 (linked to RESPOND Objective 3)

**Sub-activity 3.4.2 SE: Strengthen One Health epidemiological teams with focus on Applied Veterinary Epidemiology Training (AVET) Program training at selected provincial, district, and community levels** – The AVET program, developed and administered by FAO, provides short-term (3 month) training for veterinarians in outbreak investigation and response. RESPOND will strengthen AVET by providing additional program, curriculum development, and monitoring and evaluation support in collaboration with university faculty. Ministries and agencies in Vietnam responsible for human health (Department of Preventive Medicine, NIHE, FETP-Vietnam, WHO) acknowledged during discovery meetings with RESPOND that a One Health approach proved successful in limiting transmission of HPAI in animals and limited spread to humans. There is general agreement, including support from USAID Vietnam, that this collaborative One Health approach should be expanded to a wider range of emerging and re-emerging infectious diseases, particularly to teams of professionals at the provincial and district levels. This will be done in collaboration with national authorities and other partners, including the Ministry of Agriculture, Ministry of Health, Department of Preventive Medicine, NIHE, FETP-Vietnam, AVET program, FAO, WHO, CDC-Thailand, SAFETYNET, and selected universities. RESPOND will assist with improving the quality of the training materials and methods, and monitoring and evaluation of the impact of this training.

- Partners: Sub-awardees TBD
- Expected results: Core competencies reviewed for the early identification and reporting of suspected outbreaks of disease and epidemics by One Health epidemiological teams at the provincial and district levels; applied epidemiology training and continuing education materials and methods improved, including the development of case studies relevant to the region; for each AVET class supported, 10 veterinarians trained in outbreak investigation and response; improved and expanded professional networks for veterinarians in Vietnam additional support and training provided to FETP-Vietnam graduates and other human health leaders of outbreak investigation and response

### LOW 3.2 Support outbreak response activities

RESPOND Activity 2.4 (linked to RESPOND Objective 2)

Sub-activity 2.4.2 SE: Collaborate with USAID/Vietnam to hold PREDICT and RESPOND One Health Meeting – To extend the focus of pandemic threat beyond H5N1 to all emerging pathogens that could trigger pandemics, RESPOND will help familiarize government, ministry, university, district, provincial, and community level organizations and individuals with the concepts of One Health. This meeting aims to educate participants in the rationale and importance of considering animal health – domestic, livestock and wildlife, and environmental health in ensuring public human health. Vietnam’s focus and success on H5N1 can be extended by explaining the threat of other pathogens and how to best prepare for and respond to identified threats.

- Partners: Sub-awardees TBD
- Expected results: One Health initiative introduced and pandemic threats beyond avian influenza effectively explained at meeting with 100 participants from various sectors and disciplines

Additional sub-activities in Vietnam are reflected in the section entitled "**Regional activities – Southeast Asia**" since they are considered regional sub-activities (not country-specific sub-activities) for purposes of this workplan. As the year progresses and RESPOND conducts introductory meetings in Vietnam, additional activities might be proposed that are specific to Vietnam or regional in scope. In addition, as RESPOND collaborates with networks such as the Asian Disaster Preparedness Center, the Mekong Basin Disease Surveillance Network, and the Kenan Institute, it is possible that one or more of them may implement activities in Vietnam or in other countries in Southeast Asia in which people and organizations from Vietnam could participate.

## COUNTRY ACTIVITIES - CAMBODIA

### LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING

#### LOW 3.1 Strengthen human and organizational capacity to improve outbreak response

RESPOND Activity 3.4 (linked to RESPOND Objective 3)

Sub-activity 3.4.3 SE: Support training to strengthen One Health epidemiological teams at provincial and district levels –Similar to Thailand, a One Health approach in Cambodia to strengthen outbreak-related training which builds on the collaborative approach used for controlling HPAI would be useful. Because there are insufficient numbers of qualified mentors in both the human and animal health fields, initial training to strengthen activities at the provincial and district levels would also focus on supporting the training of supervisory staff in these locations in the areas of applied epidemiology, appropriate and timely use of disease surveillance and suspected outbreak-related data by managers. This proposed sub-activity will be discussed with appropriate authorities during discovery meetings in Cambodia tentatively planned for October 2010.

- Partners: Sub-awardees TBD
- Expected results: Core competencies reviewed for the early identification and reporting of suspected outbreaks of disease and epidemics by One Health epidemiological teams at the provincial and district levels; applied epidemiology and outbreak-related training and continuing education materials and methods improved, and include the addition of case studies relevant to the region.

Additional sub-activities in Cambodia are reflected in the section entitled "**Regional activities – Southeast Asia**" since they are considered regional sub-activities (not country-specific sub-activities) for purposes of this workplan. As the year progresses and RESPOND conducts introductory meetings in Cambodia, additional activities might be proposed that are specific to Cambodia or regional in scope. In addition, as RESPOND collaborates with networks such as the Asian Disaster Preparedness Center, the Mekong Basin Disease Surveillance Network, and the Kenan Institute, it is possible that one or more of them may implement activities in Cambodia or in other countries in Southeast Asia in which people and organizations from Cambodia could participate.

## **COUNTRY ACTIVITIES - LAOS**

### **LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING**

#### **LOW 3.1 Strengthen human and organizational capacity to improve outbreak response**

RESPOND Activity 3.4 (linked to RESPOND Objective 3)

**Sub-activity 3.4.5 SE: Support training to strengthen One Health epidemiological teams at provincial and district levels** –Similar to Thailand, a One Health approach in Laos to strengthen outbreak-related training which builds on the collaborative approach used for controlling HPAI would be useful. Because there are insufficient numbers of qualified mentors in both the human and animal health fields, initial training to strengthen activities at the provincial and district levels would also focus on supporting the training of supervisory staff in these locations in the areas of applied epidemiology, appropriate and timely use of disease surveillance and suspected outbreak-related data by managers. This proposed sub-activity will be discussed with appropriate authorities during discovery meetings in Laos tentatively planned for October 2010.

- Partners: Sub-awardees TBD
- Expected results: Core competencies reviewed for the early identification and reporting of suspected outbreaks of disease and epidemics by One Health epidemiological teams at the provincial and district levels; applied epidemiology and outbreak-related training and continuing education materials and methods improved, and include the addition of case studies relevant to the region

Additional sub-activities in Laos are reflected in the section entitled "**Regional activities – Southeast Asia**" since they are considered regional sub-activities (not country-specific sub-activities) for purposes of this workplan. They include the following:

**Sub-activity 1.2.1 SE: Through a One Health Alliance, plan and implement university twinning**

As the year progresses and RESPOND conducts introductory meetings in Laos, additional activities might be proposed that are specific to Laos or regional in scope. In addition, as RESPOND collaborates with networks such as the Asian Disaster Preparedness Center, the Mekong Basin Disease Surveillance Network, and the Kenan Institute, it is possible that one or more of them may implement activities in Laos or in other countries in Southeast Asia in which people and organizations from Laos could participate.

## **COUNTRY ACTIVITIES - INDONESIA**

### **LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING**

#### **LOW 3.2 Support outbreak response activities**

RESPOND Activity 3.4 (linked to RESPOND Objective 3)

Sub-activity 3.4.1 SE: Support training to strengthen One Health epidemiological teams at provincial and district levels –Similar to Thailand, a One Health approach in Indonesia to strengthen outbreak-related training which builds on the collaborative approach used for controlling HPAI would be useful. Because there are insufficient numbers of qualified mentors in both the human and animal health fields, initial training to strengthen activities at the provincial and district levels would also focus on supporting the training of supervisory staff in these locations in the areas of applied epidemiology, appropriate and timely use of disease surveillance and suspected outbreak-related data by managers. This proposed sub-activity will be discussed with appropriate authorities during discovery meetings in Indonesia tentatively planned for October 2010.

- Partners: Sub-awardees TBD
- Expected results: Core competencies reviewed for the early identification and reporting of suspected outbreaks of disease and epidemics by One Health epidemiological teams at the provincial and district levels; applied epidemiology and outbreak-related training and continuing education materials and methods improved, and include the addition of case studies relevant to the region

Additional sub-activities in Indonesia are reflected in the section entitled "**Regional activities – Southeast Asia**" since they are considered regional sub-activities (not country-specific sub-activities) for purposes of this workplan. As the year progresses and RESPOND conducts introductory meetings in Indonesia, additional activities might be proposed that are specific to Indonesia or regional in scope. In addition, as RESPOND collaborates with networks such as the Asian Disaster Preparedness Center, the Mekong Basin Disease Surveillance Network, and the Kenan Institute, it is possible that one or more of them may implement activities in Indonesia or in other countries in Southeast Asia in which people and organizations from Indonesia could participate.

## **COUNTRY ACTIVITIES – CHINA, YUNNAN PROVINCE**

### **LOW 3: OUTBREAK RESPONSE CAPACITY BUILDING**

Sub-activities in Yunnan Province, China, are reflected in the section entitled "**Regional activities – Southeast Asia**" since they are considered regional sub-activities (not country-specific sub-activities) for purposes of this workplan. This includes the following sub-activity:

#### Sub-activity 1.5.3 SE: Training to interdict illegal wildlife and wildlife products trafficking

As the year progresses and RESPOND conducts introductory meetings, additional activities might be proposed that are specific to Yunnan Province, China, or regional in scope. In addition, as RESPOND collaborates with networks such as the Asian Disaster Preparedness Center, the Mekong Basin Disease Surveillance Network, and the Kenan Institute, it is possible that one or more of them may implement activities in Yunnan Province, China, or in other countries in Southeast Asia in which people and organizations from Yunnan Province, China, could participate.

# IMPLEMENTATION PLAN – GLOBAL

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
3.1	1.1.4 GL	Develop EPT program-wide definition of One Health core competencies. <b>(Fast Track)</b>	Global	Tufts	Published, internationally accepted core competencies						
3.2	2.2.1 GL	Develop best management practice recommendations for extractive industries based on PREDICT-identified vectors in hot spot regions.	Global	DAI	Best management practices (BMPs) developed						
3.2	2.2.2 GL	Involve telecommunications companies in the outbreak response activities and training.	Global	DAI	Improved collection and distribution of disease outbreak information						
3.2	2.4.2 GL	Support for TEPHINET to host global conference and add One Health sessions. <b>(Fast Track)</b>	Global	UMN	Support conference and conduct One Health workshop for 30 persons; plenary session for One Health issues						
3.2	3.1.1 GL	Strengthen local capacity to support evaluation studies.	Global	UMN	Increase evaluation capacity to improve programs. 15 trainees per region.						
3.2	3.2.0 GL	Support to facilitate and improve the response to outbreaks of potentially zoonotic disease in hot spot regions.	Global	DAI	Training, technical, logistical, material and communications support provided						
3.2	3.3.1 GL	ProMed Mail: Expanding surveillance and verification for wildlife diseases.	Global	Tufts	Increased use of wildlife health information to protect and improve public health.						
3.1	3.4.8 GL	Support for development of materials and media messages to build public awareness about zoonotic disease – World Rabies Day, 28 September 2010, as a pilot activity. <b>(Fast Track)</b>	Global	Tufts	Increased awareness of issues related to zoonotic disease transmission						

# IMPLEMENTATION PLAN – BY REGION

## EAST CONGO BASIN – REGIONAL

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
<b>Outbreak Response Capacity Building</b>											
3.1	1.2.2 EC	Plan and implement regional twinning & networking activities. <b>(Fast Track, HEALTH Alliance)</b>	East Congo Regional	UMN	Twinning workshop for Makerere (10 deans and 50 faculty), Tanzania (10,50) and Rwanda (10, 50).						
3.1	1.3.1 EC	Determine job opportunities for staff trained in animal, human and environmental health. <b>(Fast Track, HEALTH Alliance)</b>	East Congo Regional	UMN	New curricula for professional and wildlife schools; 2 CE modules for professionals.						
3.1	1.4.1 EC	Strengthen OH field component of existing masters programs in public health. <b>(Fast Track, HEALTH Alliance)</b>	East Congo Regional	UMN	MPH curriculum developed & implemented; 8 students (Year Two) included. Also, 8 in-service trainees.						
3.1	1.4.2 EC	Enhance the capacity of practitioners, policy makers and students to manage emerging infectious diseases in Sub-Saharan Africa. <b>(Fast Track, RUFORUM)</b>	East Congo Regional	UMN	Training of 100 practitioners/policy makers and 16 candidates at M.Sc. level (8 grants) within 2 year period						
3.1	1.4.4 EC	Support fellows to attend existing Field Epidemiology Training Programs with veterinary-specific components. <b>(Fast Track)</b>	East Congo Regional	Tufts	18 FELTP-Vs start (Year Two)						
3.1	1.5.1 EC	Develop One Health MENTOR fellowships in hot spot regions.	East Congo Regional	UMN	MENTOR program developed, instructors identified, and 8 fellows identified and start by end Year Two.						
3.1	1.5.2 EC	Strengthen and expand the Global Health Institute to serve as a platform for in-service programs and graduate level training in One Health <b>(Fast Track, HEALTH Alliance)</b>	East Congo Regional	UMN	Implement a 2-week GHI; train 70 students						

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
3.1	1.5.3 EC	Deliver Global Health Institute in Uganda	East Congo Regional	UMN	Implement a 2-week GHI; train 70 students						
3.2	2.1.1 EC	Identify and support the development of One Health leaders for outbreak response. <b>(Fast Track, HEALTH Alliance)</b>	East Congo Regional	UMN	20 trainees in each country; Broader networks across sectors.						
3.2	2.2.1 EC	Convene and plan public/private/academic teams at the national and sub-national level.	East Congo Regional	UMN	Improvement in communication; 6 meetings, with a total of 100 participants.						
3.2	3.1.2 EC	Adapt and use existing STOP AI training and planning modules to meet RESPOND-specific needs.	East Congo Regional	Tufts	Reduce the amount of time needed to create RESPOND materials.						
3.2	3.2.0 EC	Support to facilitate and improve the response to outbreaks of potentially zoonotic disease in hot spot regions.	Global	DAI	Training, technical, logistical, material and communications support provided.						
3.2	3.2.2 EC	Provide logistical coordination and support during disease outbreaks using a One Health approach. <b>(Fast Track)</b>	East Congo Regional	UMN	Improved coordination of outbreak response in the region through increased linkages.						
3.1	3.4.6 EC	Provide training in One Health disease outbreak response to community health care workers.	East Congo Regional	UMN	Establish a relationship with HIPS and roll-out of community training. 20 trainees						

## WEST CONGO BASIN – REGIONAL

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
<b>Outbreak Response Capacity Building</b>											
3.1	1.2.1 WC	Through a One Health Alliance, conduct twinning and mentoring with universities and vocational schools. <i>(Fast Track)</i>	West Congo Regional	Tufts	Twinning/mentoring established with 5 institutions. Five PhD candidates mentored; masters programs supported.						
3.1	1.2.2 WC	Support regional & international exchanges of personnel to improve outbreak response and control.	West Congo Regional	Tufts	5 ministry personnel and 10 faculty will have completed professional exchanges.						
3.1	1.3.1 WC	Develop an actionable plan to strengthen and enhance ongoing career path development in DRC and Republic of Congo (ROC).	West Congo Regional	UMN	Corrective programs are compiled in an action plan for resource mobilization						
3.1	1.5.1 WC	Conduct professional continuing education through didactic and field workshops using the Wildlife Investigation and Livestock Disease (WILD) module.	West Congo Regional	Tufts	3 participants (vet, wildlife biologist, lab) from each of the 13 EPT Congo Basin countries will be trained and gain field experience.						
3.1	1.5.2 WC	Support participants from DRC, Republic of Congo, and Cameroon to attend Global Health Institute courses.	West Congo Regional	Tufts	30 professionals (20 from DRC and 10 from the region) will attend two-week courses.						
3.1	1.5.4 WC	Support the FOREST MENTOR program by adding One Health content and supporting fellows and a mentor from the Democratic Republic of Congo to participate.	West Congo Regional	Tufts	FOREST fellows mentored on relationships, risks and approach						
3.2	2.1.1WC	Introduce EPT RESPOND project to key collaborators (USAID missions, host governments, international health agencies, private sector partners, NGOs, universities).	West Congo Regional	UMN	Cameroon visited, background information collected, sub-activities identified.						

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
3.2	2.2.1 WC	Organize seminars with private sector to disseminate information on zoonotic diseases.	West Congo Regional	DAI	2 seminars of 15 participants each are to be conducted (2 in each country)						
3.2	2.4.1 WC	Create "One Health Triangles" at academic and professional institutions to promote multi-sectoral and multi-disciplinary coordination.	West Congo Regional	UMN	Three One Health Triangles are operational in DRC, one each in Republic of Congo and Cameroon						
3.2	3.2.0 WC	Support to facilitate and improve the response to outbreaks of potentially zoonotic disease in hot spot regions.	Global	DAI	Training, technical, logistical, material and communications support provided.						
3.1	3.4.4	Outbreak response training for multi-disciplinary teams at national and subnational levels, including training of front line health workers in outbreak response.	West Congo Regional	UMN	Multi-disciplinary teams are developed and trained						

## SOUTHEAST ASIA – REGIONAL

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO
<b>Outbreak Response Capacity Building</b>										
3.1	1.2.1 SE	Through a One Health Alliance, plan and implement university twinning. <b>(Fast Track)</b>	Southeast Asia Regional	UMN	Twinning agreements established with 10 institutions.					
3.1	1.5.1 SE	Establish a regional training center for wildlife professionals. <b>(Fast Track)</b>	Southeast Asia Regional	UMN	Number of trainees: 92. 17 workshops, 1024 person days, 64 training days.					
3.1	1.5.3 SE	Training to interdict illegal wildlife and wildlife products trafficking.	Southeast Asia Regional	UMN	National Park and government wildlife veterinarians trained (50 trainees); Assessment of the use of sniffer dogs					
3.2	2.2.1 SE	Initiate extractive industry outreach in SE Asia. <b>(Fast Track)</b>	Southeast Asia Regional	Tufts	Plan for engagement with industries operating in Southeast Asia					
3.2	2.4.1 SE	Host regional Pandemic Preparedness Forum for 2011.	Southeast Asia Regional	Tufts	Monthly forum with 20 participants each month.					
3.2	2.4.3 SE	ASEAN USAID/RESPOND regional forums on One Health.	Southeast Asia Regional	Tufts	2 regional forums conducted with 100 participants each					
3.2	3.2.0 SE	Support to facilitate and improve the response to outbreaks of potentially zoonotic disease in hot spot regions	Global	DAI	Training, technical, logistical, material and communications support provided.					
3.2	3.4.6 SE	Collaborate with Asian Disaster Preparedness Center (ADPC) and Kenan Institute to adapt One Health curricula for multiple audiences & levels. <b>(Fast Track)</b>	Southeast Asia Regional	Tufts	10 modules created for the One Health training package					

# IMPLEMENTATION PLAN – BY COUNTRY

## UGANDA

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
<b>Outbreak Response Capacity Building</b>											
3.1	1.2.1 EC	Curriculum co-development with Makerere University faculty for One Health courses and case studies.	Uganda	Tufts	10 curricula and 50 case studies developed						
3.2	3.1.1 EC	Support regular meetings of One Health Zoonotic Disease Working Groups. <b>(Fast Track)</b>	Uganda	Tufts	4 meetings conducted.						
3.2	3.2.0.1 EC	Outbreak response: Control of Anthrax in Queen Elizabeth National Park.	Uganda	DAI	Support provided for response, best practices developed and an adaptable outbreak response template created.						
3.2	3.2.1 EC	Hold a series of district, national and regional meetings and workshops to identify needs and initiate the development of a prioritized plan for outbreak response.	Uganda	UMN	10 meetings/workshops, with total 500 participants.						
3.1	3.4.1 EC	Develop an implementation plan for identifying sites, trainers and needs to conduct community level first responder training.	Uganda	Tufts	Training implementation plan; Knowledge base created						
3.1	3.4.2 EC	Design, develop and deliver community-level first responder training.	Uganda	Tufts	5 first responder trainers trained, and 100 first responders trained						
3.2	4.1.2 EC	Evaluate existing Knowledge Management Systems needs for the health sciences, their application and utilization in the university context, and support the improvement and integration of appropriate systems.	Uganda	Tufts	Increase capacity of current 'file cabinet' database to include analysis of data						

## DRC

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
3.1	1.2.3 WC	Upgrade the skills of faculty at Institut Supérieur de Techniques Médicales, Institut Technique Agricole et Vétérinaire, and Institut d'Enseignement Médicale / Institut Techniques Médicale. <b>(Fast Track)</b>	DRC	UMN	5 institutions involved; 10 national trainers trained; 2 modules developed						
3.1	1.4.2 WC	Strengthen delivery of graduate-level degree programs related to outbreak response with a One Health approach at the University of Kinshasa. <b>(Fast Track)</b>	DRC	UMN	15 MS students enrolled; degree offered in veterinary of public health.						
3.1	1.4.3 WC	Strengthen delivery of graduate-level degree programs related to outbreak response with a One Health approach at the University of Lubumbashi.	DRC	Tufts	15 MS students enrolled; degrees offered in wildlife health and public health nursing.						
3.2	2.1.2 WC	Support for veterinarians to attend the annual meeting of the Congolese Veterinary Medical Association.	DRC	DAI	Broader inclusion and representation of veterinary professionals in DRC						
3.2	3.1.1 WC	Strengthen systems for disease surveillance, outbreak investigation and response with a One Health approach <b>(Fast Track)</b>	DRC	Tufts	Analysis & improvement of systems and procedures completed in each country.						
3.1	3.4.1 WC	Deliver refresher outbreak response training to rural medical personnel and first-responder training to communities in the USAID-CARPE Salong-Lukenie-Sankuru Landscape region.	DRC	Tufts	Medical personnel in isolated rural areas trained; Training modules developed and delivered.						
3.1	3.4.2 WC	Support for community-level training and outreach for populations in high risk areas	DRC	UMN	50 participants x 260 hot spots health areas in DRC (approx 13,000 total participants).						
3.1	3.4.3 WC	Make available and accessible a minimum equipment package to newly-trained first-responder teams.	DRC	UMN	First responders are trained and have minimum equipment available to operate effectively.						

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
3.2	4.1.2 WC	Evaluate existing Knowledge Management Systems needs for the health sciences, their application and utilization in the university context, and support the improvement and integration of appropriate systems	DRC	Tufts	Implementation plan for RESPOND support of appropriate technology						
3.2	4.2.2 WC	Pilot test the rabies DRIT test and evaluate the implementation of appropriate new technology for rapid zoonotic disease detection.	DRC	UMN	16 laboratorians (8 from human labs, 8 from vet labs) trained; 12 epidemiologists (animal and veterinary) receive training.						

## GABON

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
3.2	2.2.2 WC	Introduce EPT RESPOND project to key collaborators (USAID missions, host governments, international health agencies, private sector partners, NGOs, universities), and attend the Gabon International Gas, Oil, and Mining Conference.	Gabon	DAI	Gabon visited, background information collected, sub-activity identified.						

## THAILAND

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
3.1	1.2.2 SE	Support existing twinning relationship between Khon Kaen Veterinary Medical School and Nabong Agricultural College	Thailand	Tufts	Improve existing twinning relationship between 2 institutions						
3.1	1.5.2 SE	Applied field training for wildlife veterinary medical officers and field pathologists.	Thailand	UMN	20 wildlife vets trained						
3.2	3.4.4 SE	Support training to strengthen One Health epidemiological teams at provincial and district levels.	Thailand	Tufts	Review and improve training materials & delivery methods						

## CAMBODIA

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
3.2	3.4.3 SE	Support training to strengthen One Health epidemiological teams at provincial and district levels.	Cambodia	UMN	Review and improve training materials & delivery methods						

## VIETNAM

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
3.1	1.5.4 SE	Support three veterinary medical officers to be enrolled as FETPV Vietnam fellows.	Vietnam	Tufts	Support three vet graduates of FETP						
3.2	2.4.2 SE	Collaborate with USAID/ Vietnam to hold PREDICT and RESPOND One Health meeting..	Vietnam	UMN	Meeting held with 100 participants from various sectors						
3.2	3.4.2 SE	<u>Sub-activity 3.4.2 SE:</u> Strengthen One Health epidemiological teams with focus on Applied Veterinary Epidemiology Training (AVET) Program training at selected provincial, district, and community levels	Vietnam	UMN	Review and improve training materials & delivery methods						

## LAOS

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
3.2	3.4.5 SE	Support training to strengthen One Health epidemiological teams at provincial and district levels.	Laos	UMN	Review and improve training materials & delivery methods						

## INDONESIA

LOW		Activities by LOW	Location	Who is Responsible? <sup>1</sup>	Expected results 1 July 2010 - 30 September 2011	Q4 Y1	Q1 YEAR TWO	Q2 YEAR TWO	Q3 YEAR TWO	Q4 YEAR TWO	
3.2	3.4.1 SE	Support training to strengthen One Health epidemiological teams at provincial and district levels.	Indonesia	Tufts	Review and improve training materials & delivery methods						

# PROVISIONAL PERFORMANCE MONITORING PLAN

PROJECT OBJECTIVE	INDICATOR	DATA SOURCE/ COLLECTION METHOD	FREQUENCY OF DATA COLLECTION	RESPONSIBLE PARTY
1,4	Number of skills and knowledge building packages integrated into programs	Grantee sends data; M&E/Information Officer enters into TAMIS	Quarterly	Steve Peck
1	Number of exchanges made between twinning institutions	Grantee sends data; M&E/Information Officer enters into TAMIS	Quarterly	Steve Peck
1,2,3	Number of trainees	Grantee sends data; M&E/Information Officer enters into TAMIS	Quarterly	Steve Peck
1,2,3	% change in trainee knowledge	Grantee sends data; M&E/Information Officer enters into TAMIS	Quarterly	Steve Peck
1,2,3	% of trainees actively engaged in EPT related activities	Grantee sends data; M&E/Information Officer enters into TAMIS	Quarterly	Steve Peck
1,2,3	# of trainee co-authors of EPT-related abstracts, publications and papers accepted at national, regional and international conferences	Assessment/survey conducted by M&E team	Annual	Steve Peck
1,2,3	% of trained trainers (including faculty) engaged in training programs (all tiers)	Grantee sends data; M&E/Information Officer enters into TAMIS	Quarterly	Steve Peck
2	Number of stakeholder events sponsored	Grantee sends data; M&E/Information Officer enters into TAMIS	Quarterly	Steve Peck
2	Number of organizations involved in inter-sectoral work on disease outbreak response	Grantee sends data; M&E/Information Officer enters into TAMIS	Quarterly	Steve Peck
2	Number of KM sites established/used	Grantee sends data; M&E/Information Officer enters into TAMIS	Annual	Steve Peck

2	Number of One Health professionals with access to expert network	Assessment/survey conducted by M&E team	Annual	Steve Peck
3	Number of procedural & structural improvements implemented for outbreak response capacity	Grantee sends data; M&E/Information Officer enters into TAMIS	Quarterly	Steve Peck
3	Percent of outbreak responses supported	Project activity records; M&E/Information Officer enters into TAMIS	Annual	Steve Peck
3	Average time from first report of suspected disease to arrival of outbreak response teams	Project activity records; M&E/Information Officer enters into TAMIS	Annual	Steve Peck
4	Number of countries utilizing appropriate technologies for outbreak response	Grantee sends data; M&E/Information Officer enters into TAMIS	Annual	Steve Peck

