

# Application Cover Page

Page 3 contains instructions for completing this form.

**Program:** Wildlife Without Borders - Africa

**Project Title:** Evaluating Risks of Bushmeat in Cameroon to Improve Sustainability

**Project Location (region or protected area/country):** Cameroon

**Project Coordinates (latitude/longitude):** 3.8667 / 11.5167

**Proposed Period of Project Activity:** 06-01-15 to 05-31-17

<b>Amount Requested from USFWS:</b>	\$261,081.63	USD
<b>Applicant's Contribution:</b>	\$0.00	USD
<b>Other Partner Contributions:</b>	\$0.00	USD
<b>Total Project Cost:</b>	<b>\$261,081.63</b>	<b>USD</b>

**Applicant Organization:** EcoHealth Alliance

**DUNS Number:** 0 7 7 0 9 0 0 6 6

**Tax ID Number:** 3 1 1 7 2 6 4 9 4

**Funds should be made payable to:** EcoHealth Alliance - DUNS# 0770900660000

*Provide DUNS if payee is not applicant*

**Project Manager** (provide name, title, organization, phone number, email and mailing address):

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**Partner organizations contributing cash or in-kind support to this project:**

<u>Organization</u>	<u>Contribution Amount (USD)</u>
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The U.S. Fish and Wildlife Service is interested in engaging partners for international wildlife conservation. To achieve this goal we may share your proposal with qualified organizations or individuals that have the potential to enhance the proposed conservation effort. If you prefer that your proposal not be shared, please check this box ☐

  
SIGNATURE OF AUTHORIZED REPRESENTATIVE

15 January 2015  
DATE

NAME OF AUTHORIZED REPRESENTATIVE: Aleksei Chmura

TITLE: Authorized organizational representative

## APPLICATION COVER PAGE INSTRUCTIONS

<b>Program Name:</b>	Select program name from the drop down box or, if completing a printed form, insert the name of the grant program under which you are submitting your application. The programs are: African Elephant Conservation Fund; Asian Elephant Conservation Fund; Great Ape Conservation Fund; Marine Turtles Conservation Fund; Rhinoceros and Tiger Conservation Fund; Wildlife Without Borders-Africa, Latin America & the Caribbean, Mexico, Amphibians in Decline, and Critically Endangered Animals.
<b>Project Title:</b>	Project title should reflect the nature of the work to be performed, and include specifics on the location and country where the work will take place.
<b>Project Location:</b>	List either the protected area or region in which the project will take place.
<b>Project Coordinates:</b>	Enter the latitude and longitude of the project site in decimal degrees. If there are multiple project sites, identify coordinates for the primary site or project headquarters.
<b>Proposed Period of Project Activity:</b>	Enter the month and year of the start and end of the project.
<b>Amount Requested from FWS:</b>	State the amount being requested from the FWS (in U.S. Dollars)
<b>Total Applicant Contribution:</b>	State the amount your organization will contribute to the project (in U.S. Dollars)
<b>Total Partner Contributions:</b>	State the sum total of all contributions from other partners (in U.S. Dollars)
<b>Total Project Cost:</b>	This is the sum of the three amounts listed above (in U.S. Dollars)
<b>Applicant Organization:</b>	This is the organization or individual submitting the application.
<b>DUNS #:</b>	U.S. Governmentwide policy requires all applicant organizations and individuals, both domestic and non-domestic, to apply for, and include a Dun & Bradstreet Data Universal Number System (DUNS) number on their application. Applicants without a DUNS number should go to <a href="http://fedgov.dnb.com/webform/pages/CCRSearch.jsp">http://fedgov.dnb.com/webform/pages/CCRSearch.jsp</a> . You will be prompted to select your country and then search the database for your organization/name. If your organization/name is not found, you will be routed to a web page that allows you to select "Request a New D-U-N-S Number". Follow the instructions for obtaining a new number. Applicants who already have a DUNS number are responsible for updating changes to their address or business name with Dun and Bradstreet directly. The organizational address to be used in the event an award is made must match the information in Dun & Bradstreet's system. An application will not be considered eligible for funding until the applicant provides a valid DUNS number.
<b>TIN #:</b>	Tax Identification Number. Required for all U.S.-based organizations. If you are located outside the United States and do not pay employees within the U.S., you are not required to provide a Taxpayer Identification Number.
<b>Funds should be made payable to:</b>	This is the name of the organization or individual who will receive payment from the U.S. Treasury in the event of an approved grant. The organization or individual listed here should be the same as the Applicant Organization listed above. Other organizations or individuals are not typically permitted to receive funds on behalf of the Applicant Organization without appropriate justification and verifiable written approval from the Applicant Organization.
<b>Project Manager:</b>	The Project Manager is the primary person responsible for overseeing the project activities, and can be contacted for technical, biological, or other questions related to the proposal. Provide: Name; Title; Organization; Mailing Address*; City/Province/State/Country; Zip/Postal Code; Telephone number (include country and city code, if applicable); Fax number; and E-mail address.
<b>Grant Administrator:</b>	In the event an award is granted, the Project Administrator is the person who will receive all grant-related documentation from FWS. If the Grant Administrator will be someone other than the Project Manager provide: Name; Title; Organization; Mailing Address*; City/Province/State/Country; Zip/Postal Code; Telephone number (include country and city code, if applicable); Fax number; and E-mail address.  <i>*The mailing addresses you provide must accept delivery of express/courier mail (DHL/FedEx/Airborne Express). Typically express/courier mail is only deliverable to an actual street address. Do not provide a P.O. Box unless your in-country courier service will deliver express/courier mail to your P.O. Box.</i>
<b>Alternate Contact Person:</b>	The Alternate Contact Person should be available in the absence of the Project Manager and should be familiar with the project activities. For Alternate Contact Person provide their name, organization, telephone, and e-mail address.
<b>Partner organizations:</b>	List each partner organization name and amount of cash and/or in-kind support to be contributed to

	this project. Amounts should be listed in U.S. Dollars. The total of these contributions should equal the amount under Total Partner Contributions above.
<b>Signature:</b>	Cover page <b>must</b> include the signature of your organization's authorized representative. Below the signature and the date, include his/her full name and title.

### NOTICE

In accordance with the Paperwork Reduction Act (44 U.S.C. 3501), please be advised that:

1. The gathering of information from potential grant recipients is authorized under Section 8 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-43, the African Elephant Conservation Act (16 U.S.C. 4201-4203, 4211-4214, 4221-4225, 4241-4246); the Rhinoceros and Tiger Conservation Act (16 U.S.C. 5301-5306); the Asian Elephant Conservation Act (16 U.S.C. 4261-4266); the Great Ape Conservation Act (16 U.S.C. 6301-6305); and the Marine Turtle Conservation Act (P.L. 108-266).
2. The submission of requested information is required for all entities competing for financial assistance awards under the *Wildlife Without Borders* Programs and the Multinational Species Conservation Funds.
3. You are not required to respond to a collection of information unless it displays a currently valid OMB control number.
4. This information collection has been approved by OMB and assigned clearance number 1018-0123.
5. The requested information may be subject to disclosure under provisions of the Freedom of Information Act (5 U.S.C. 552).

The public reporting burden for the information collected on this form is 1 hour. This burden estimate includes time for reviewing instructions, gathering data, and completing and reviewing form. The public reporting burden for completing a full proposal is 21 hours, which amounts to a total estimated time of 22 hours to fully respond to this information collection.

## B. Project Summary

Cameroon has a wide range of landscapes and climates, from grasslands and highlands to dense rain forests. With its varied geography and habitats, Cameroon has remarkable diversity and an abundance of wildlife (Republique du Cameroun, 2014). Cameroon is also an important distribution hub for goods going to the Central African Republic, Equatorial Guinea, Gabon, and Chad. Recently, there has been increased investment in major infrastructure projects, including transportation, water supply, and power generation in areas that were once largely inaccessible. The combination of increasing natural resource extraction and infrastructure development has led to increasing human-wildlife interactions. Furthermore, wildlife populations are being pushed into ever-smaller areas, and hunting pressure has simultaneously increased (Brashares et al., 2011). To reduce threats to key wildlife populations, and enhance institutional conservation capacity in Cameroon under the **Cameroonian Environment Management Framework and Forestry and Environment National Program**, we are submitting this proposal to advance our understanding of wildlife-sourced protein acquisition, bushmeat consumption, and commercial trade to inform efforts to reduce demand and improve sustainability.

Recent economic progress has led to advancing education levels and improved health in Cameroon, yet poverty remains high at 40%, and life expectancies are lower relative to the regional averages (World Bank, 2014). Bushmeat represents one of the main sources of animal protein in extractive industries throughout of Cameroon. Additionally, wildlife hunting is important for rural food security and income. However, it has placed extreme pressure on some wildlife populations, as urban and rural demand for bushmeat has increased. Hunting and **wildlife meat processing** carries a substantial risk for cross-species **exposition and transmission of zoonotic pathogens of wildlife origin**. Despite the increasing demand for bushmeat in Cameroon, the goal for this project is to reduce bushmeat consumption and its commercial trade, to reduce the risk of pathogen exposition, transmission and spread.

Wildlife pathogens, including new retroviruses, have been detected in people that hunt and butcher wild animals in Cameroon (Wolfe et al., 2004, 2005; Zheng et al., 2010). Importantly, this high-risk activity in Western Africa was the likely pathway by which multiple zoonotic diseases emerged in people. Preventing the emergence of zoonotic diseases requires an enhanced understanding in human food preferences, nutrition, cultural practices, and behaviors. Especially in areas with recent anthropogenic disturbance and high-risk human-wildlife contact, which increases the likelihood of emergence and spread of zoonotic pathogens. We will study these complex and interacting preferences, practices, and behaviors in Yaoundé, the capital of Cameroon, due to the high population density and thus increased likelihood of disease spread. Furthermore, education and outreach activities are likely to be more impactful in a densely populated city. Via community outreach, assessment, and education, we hope to identify the social and human factors that contribute to the consumption of bushmeat in hope of reducing consumer preferences for bushmeat and its consumption in Cameroon.

## **C. Project Narrative**

### **1. Statement of Need**

Emerging infectious zoonotic diseases have existed for as long as man and animals have walked the Earth; however, only recently has the global impact of emerging infectious diseases been quantified in terms of cost to economies, biodiversity, and to public health (Jones et al., 2008). Specifically, in Western Africa, the very real threat of zoonotic diseases, like the Ebola Virus, poses danger to local and international communities alike. Evidence suggests that HIV-1, a zoonotic disease, emerged from geographically isolated chimpanzee communities in Cameroon (Keele et al., 2006). This likely occurred because blood and body fluid exchange with non-human primates via hunting, butchering, and pet contact are risk factors for human T-lymphotropic virus emergence (Wolfe et al., 2005). These findings suggest that reducing wildlife contact and bushmeat contact will reduce emerging infectious risk.

Bushmeat has been defined in multiple ways over the years. In this proposal, bushmeat is a term referring to the use of wild animals, ranging from cane rats to gorillas, for food. Bushmeat consumption is tied to health of the global economy, and the state of the economy contributes to the health of the environment (Sayer et al., 2012). Cultural, political, and economic factors have led to an increase in the bushmeat trade over the past 2 decades and thus increased the opportunities for the successful transmission of disease from a wild reservoir to a host, the first step in disease emergence (Karesh & Noble, 2009). This myriad of factors makes curtailing the trade and consumption of bushmeat a very difficult task.

Even the scale at which these factors (e.g., local, regional, national) are analyzed seems to play a role in the harvest and consumption of bushmeat. Even small-scale regional economics are a factor in the spatial location and types of bushmeat sold at markets (Fa et al., 2014). The relationship between wealth and wildlife consumption varies geographically (Brashares, Golden, Weinbaum, Barrett, & Okello, 2011). Wealthier households tend to consume more bushmeat in settlements nearer urban areas, but the opposite pattern is observed in more isolated settlements. Bushmeat hunting is an important source of income in rural areas of Africa, and Cameroon produces 88% of all ungulate bushmeat throughout Africa (Davies & Brown, 2008). The price of bushmeat at local markets is dependent on seasonality and the method of capture used by hunters (Allebone-Webb et al., 2011). An inventory of the four main markets in the Cameroonian capital, Yaoundé, from 1995 to 1996, found that 70–90 tons of bushmeat was sold monthly. Similarly, the overall annual bushmeat trade in Gabon has been valued at about \$25 million (Nasi et al., 2008). Bushmeat is not only a primary source of protein for many families in Cameroon, but also a source of income and wealth.

Unfortunately, animal husbandry is not a viable income source in rural areas, and forest, concession, and conservation lands are increasingly being controlled by local management with the local communities acting as stewards (Russell, Mbile, & Tchamou, 2011). This focus on sustainable forest management, which may require sourcing timber from plantations, means managing natural forests for the provision of non-traditional forest products and forest services

like ecotourism and habitat for wild animals (Ndoye & Tieguhong, 2004). Thus, forest protection is providing habitat for the wild game hunted in Cameroon. Community investment and compensation for conservation should be directly related to the benefits generated by the areas protected, including the community's wages, income, sustainable access to meat, and non-timber forest products; investments should simultaneously improve community-based social services and infrastructure (Schmidt-Soltan, 2004). Despite these observations and findings, compensation for conservation is not offsetting the benefits of bushmeat acquisition and trade.

Finding a consensus solution to the bushmeat crisis is a difficult task because of the many competing interests and social factors involved (Karesh & Noble, 2009). In 2006, Edderai and Dame identified 15 bushmeat markets and 145 restaurants and cafeterias selling roughly 1,000 bushmeat dishes per day in Yaoundé. This trade provided employment for 249 people. A vast network of routes transported Bushmeat, in particular from the savannah and central provinces, which are rich in wildlife and contain National Parks and safari hunting areas. In addition to the underlying economic and infrastructure factors related to the bushmeat trade, individuals are able to discern the type of protein being consumed. Despite individual's ability to identify bushmeat, individual preference seems to play a role in the choice of protein (Schenck et al. 2006). These preferences seem to be influenced by familiarity with the protein, tradition, prestige, and price. Therefore, we need to understand the difference between stated and observed preferences for bushmeat, by each species type, while evaluating the combined quality and preferences for alternative protein sources.

Despite individual differences and preferences of bushmeat, several possible solutions to the bushmeat crisis (e.g., legalization and taxation of the bushmeat and wildlife trade) are unlikely to be effective due to insufficient tax revenue and will not likely reduce demand for wildlife in Cameroon (Wilke et al., 2006). More investment in Africa, in areas that ensure education and political stability and move beyond resource depletion, would go a long way in controlling the bushmeat trade and reducing emerging infectious disease risk (Karesh & Noble, 2009). Furthermore, a better understanding of the specific social factors that influence bushmeat consumption and trade will help inform outreach efforts to reduce bushmeat consumption and associated disease risk. This study seeks to explore the social factors influencing bushmeat consumption and trade, the barriers to alternative sources of protein, and indicators for change in consumption and trade patterns.

## **2. Project Goals & Objectives**

The term bushmeat holds different meanings for different people. For many people bushmeat is a necessary protein source, and for others the bushmeat trades represents an overzealous exploitation of endangered and threatened species that can result in disease spread. Our primary goal in this study is to understand the complex interactions of culture, food security, food safety, and wildlife conservation, and social factors like economics, anthropology, and sociology. These factors drive hunting behaviors, consumption of bushmeat, and wildlife management strategies at local, national, and international levels.

Our goals are to:

- understand what protein sources are available (all types) for consumption;
- understand how and why individuals and families make bushmeat consumption decisions;
- develop and promote best practices for bushmeat consumption;
- use the best practices identified to promote less risky choices to community leaders and to the general public; and,
- develop and implement indicators that will measure changes in bushmeat attitudes, awareness, consumption, and trade.

Our supporting objectives are to:

1. develop, design, and conduct a seasonal longitudinal survey in Yaoundé, Cameroon;
2. design risk management strategies for bushmeat consumption in terms of food safety conservation, and sustainability of natural resources;
3. engage local authorities and community leaders on the reduction and safe - sustainable commercial bushmeat trade where culturally appropriate;
4. engage the general public to understand bushmeat risks and reduce overall bushmeat consumption; and,
5. understand the drivers of the bushmeat value chain from baseline over time by measuring bushmeat attitudes, awareness, consumption, and trade patterns using key indicators from our seasonal survey, while measuring the impact of our activities over time.

### **3. Project Activities, Methods, & Timetable**

#### ***Objective 1: Design and conduct a seasonal, longitudinal survey in Yaoundé, Cameroon.***

*Activity 1 - Focus Groups:* Our Partners in Cameroon will lead and conduct focus groups in Yaoundé. Focus groups will consist of 10 participants, aiming for a mix of rural residents, local government officials, non-governmental organization representatives, and wildlife professionals. There will be 4 focus groups for a total of 40 participants. Sessions will be recorded and detailed notes taken in accordance with obtaining informed consent in accordance with international IRB standards. Results from focus groups will be thematically coded using qualitative software for key patterns and distilled to inform indicators of change in bushmeat consumption and trade patterns as well as best practices.

*Activity 2 - Structured Interview-based Survey:* We will conduct structured interviews with residents in Yaoundé. We will draw our sampling frame from a stratified random sample after dividing Yaoundé into gridded squares. We will also interview organizational leaders, industry, and government officials involved in wildlife preservation, food systems, and bushmeat regulation. These interviews will focus on bushmeat hunting activities and awareness, bushmeat consumption, cultural factors, demographics. We aim to conduct 400 repeated measures interviews. Interviews will be audio-recorded, data will be automatically entered into survey software via iPads taken out into the field, and field notes will be taken.



**Objective 2: Design culturally appropriate risk management strategies for bushmeat consumption.**

*Activity 3 - Risk management strategy development.* During interviews and focus groups with leaders, industry, and government officials, we will co-develop risk management strategies appropriate for the governance context of the country. Interviews will be audio-recorded with permission from participants and transcripts will be thematically coded for relevant patterns and consensus on strategy development. Stakeholders will approve copies of strategies.

**Objective 3: Engage local authorities and community leaders on reduction of commercial bushmeat trade.**

*Activity 4 - Community forums.* Local partners in Cameroon will host community workshops and forums to train community leaders and authorities on bushmeat risks and the benefits of using bushmeat management strategies in their communities, and will provide training on how to provide their newly acquired knowledge and skills to others.

**Objective 4: Engage the general public to reduce bushmeat consumptions**

*Activity 5 - Disseminate materials on effects of bushmeat consumption.* Brochures, posters, websites, text messages, and radio announcements will be assembled that highlight current statistics and potential negative consequences of bushmeat consumption and trade.

**Objective 5: Take a baseline measurement of bushmeat attitudes, awareness, consumption, and trade patterns using key indicators from our seasonal survey.**

*Activity 6 - Survey key stakeholders and general public using indicators.* A sub-sample of the participants from *Activity 2* will be re-surveyed using the indicators developed from survey results on what factors are most related to bushmeat consumption and trade.

		Year 1				Year 2			
		Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring
Planning	Project kick-off meeting in Cameroon	x							
	Identify target audiences and sample survey participants	x	x	x					
	Build survey instrument		x	x					
	Test survey instrument on focus groups		x	x					
Implement	Implement survey		x	x	x	x	x	x	
	Analyze survey data			x	x	x	x	x	x
	Develop campaign message	x	x	x	x	x	x	x	x
	Project follow-up meetings in Cameroon			x				x	
	Develop indicators to measure changes in bushmeat consumption and trade					x	x		
	Year 2 kick-off meeting					x			
	Identify barriers to changing bushmeat consumption patterns						x	x	
	Community forums and workshops				x	x	x	x	x
	Train the trainer events						x	x	x
	Baseline measurement using indicators of change								x
	Interview community leaders, industry and government stakeholders		x				x		
Evaluation and Deliverables	Mid-term and final reports			x				x	x
	Present proposed work and results at conferences		x		x				x
	Prepare and submit publications							x	x
	Disseminate bushmeat and protein consumption information			x	x	x	x	x	x
	Final meeting in Cameroon								x

#### 4. Stakeholder Coordination/Involvement

The program is designed to be highly collaborative and multidisciplinary in nature, and aims to work closely with the following list of individuals, organizations, and agencies in establishing, developing, and implementing the program:

- University of Minnesota, USA (Veterinary Population Medicine and School of Public Health; Dr. Dominic Travis and Dr. Mac Farnham)
- Association Epidémiologie Santé Publique Vétérinaire, Cameroon (Dr. Serge Tchuenteu Nzietchueng)
- Ministry of Forestry and Wildlife (MINFOF) Cameroon (Yaoundé Education Unit; Dr. Kuete Fidèle)
- Ministry of Livestock, Fisheries and Animal Industries, Cameroon (MINEPIA; Dr. Loul Séverin)
- Linnaeus University (Sweden), Cameroon (Department of Pedagogy and Psychology; Dr. Dapi Nzefa)
- **The local community and community leaders in Yaoundé, Cameroon**
- **The Ministry of Forestry and Wildlife**

#### 5. Project Monitoring and Evaluation

Project activities will be monitored and administered by EHA. We will measure project success continuously, and in a comprehensive yearly project update and report to USFWS. Success is defined by meeting our target units for measurable results. We will seek feedback from local community leaders and stakeholders at our kick-off and follow-up meetings, and at community forums and workshops to continually improve our research and education materials. At the conclusion of outreach events, we will request feedback and record the number of participants.

The measurable results used to evaluate the project's effectiveness will include:

- Execution of at 1 longitudinal survey in Yaoundé, Cameroon to identify and quantify the contributing factors to bushmeat consumption (e.g., economic, consumer preferences, availability, cultural).
- The number of participants not lost to follow-up.
- The number and percentage of individuals reached through the 'train the trainers' event to promote peer-to-peer learning.
- Peer-reviewed publications and conference submissions.
- Write and disseminate a bushmeat consumption guide with input from key community leaders. The intended audience is Yaoundé residents. It will not contain, but rather will compare alternate sources of protein in terms of nutritional value, average costs, flavor and taste, and individual health risks.
- The number of attendees at five community bushmeat workshops. We will create interactive sessions for participants to discuss the costs, benefits and preferences

associated with bushmeat and alternate sources of protein. The forum will follow in the evening with information sharing.

Conservation outcomes will be achieved using bushmeat consumption indicators developed through our survey instrument, engaging with key partners in Cameroon. We will develop a best practices guide for reducing bushmeat consumption. The guide will be based on the indicators identified in our longitudinal survey that will capture seasonal variation in bushmeat trade and consumption patterns. This best practices guide and associated indicators will form the basis of continued monitoring of bushmeat consumption and the factors that lead to decreased bushmeat consumption in urbanized Cameroon.

Our partners in Cameroon will continue the longitudinal survey to monitor the effectiveness of trainers, to understand how many people are reached through this peer-to-peer network, how effective trainers are in reducing bushmeat consumption, and how cultural factors change as a result of the outreach performed in this study. Our goal is to roll this pilot study into a more regional platform using the USAID Emerging pandemic Threats program of which we are all participants (PREDICT, RESPOND, Building One Health Work Force). This will provide expansion and sustainability platform in culturally appropriate manner.

## **6. Description of Organizations Undertaking the Project**

EcoHealth Alliance's work spans the U.S. and more than 20 countries in Central and South America, the Caribbean, Africa and Asia to research ways for people and wildlife to share bioscapes for their mutual survival. Our strength is built on our innovations in research, education and training and our accessibility to international conservation partners. Internationally, our programs support conservationists in over a dozen countries at the local level to save endangered species and their habitats and to protect delicate ecosystems for the benefit of wildlife and humans via the PREDICT program. Our staff serve as advisors to USG, IUCN, WHO and FAO and have recently been developing bushmeat consumption guidelines for WHO and FAO.

The University of Minnesota has led technical programs for the U.S. Agency for International Development's (USAID) Emerging Pandemic Threats RESPOND project, with a particular focus on applying One Health methodologies and collaborative approaches towards capacity building in disease outbreak response for countries in Eastern and Central Africa. The College of Veterinary Medicine and School of Public Health includes faculty with expertise in epidemiology, virology, infectious disease ecology, wildlife-human interactions, conservation, food security, biodiversity, disease surveillance, risk analysis, animal product exports, marine biology, wildlife control, and agricultural extension (e.g., One Health Work Force & RESPOND) .

The Association Epidémiologie Santé Publique Vétérinaire (ESPV) in Cameroon aims to promote epidemiology, veterinary medicine, and public health. ESPV assists with training public health practitioners and veterinarians in public health. ESPV publishes a periodical in epidemiology and public health and promotes and strengthens collaboration between

community stakeholders in One Health. ESPV performs epidemiological research of animal diseases and then provides community outreach, veterinary extension services, and population health education of human and animal diseases to local communities in Cameroon.

## **7. Sustainability**

EHA staff and partners have been working in Western Africa for over 25 years and the strength and success of our programs is centered on our long-term presence in building local capacity in country. Protocols, collaborative agreements, informational and communication networks will remain in place for the reporting longitudinal survey data for future analysis after the life of this grant. Additionally, computer equipment and software will allow future survey collection and analysis for the next stages of behavioral studies to continue. Education outreach directed at communities to minimize their consumption and trade of bushmeat will persist and expand through EHA and our partnerships. Ongoing training and professional development (capacity building) of Cameroon personnel will facilitate continuity in all aspects of our program.

## **8. Literature Cited**

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Schmidt-Soltau, K. (2004). The costs of rainforest conservation: local responses towards integrated conservation and development projects in Cameroon. *Journal of Contemporary African Studies*, 22(1), 93-117.

Wilkie, D. S., Starkey, M., Bennett, E. L., Abernethy, K., Fotso, R., Maisels, F., & Elkan, P. (2006). Can taxation contribute to sustainable management of the bushmeat trade? Evidence from Gabon and Cameroon. *Journal of International Wildlife Law and Policy*, 9(4), 335-349.

Wolfe, N. D., W. Heneine, J.K. Carr, A.D. Garcia, V. Shanmugam, U. Tamoufe, J.N. Torimiro, A.T. Prosser, M. LeBreton, E. Mpoudi-Ngole, F.E. McCutchan, D.L. Birx, T.M. Folks, D.S. Burke, and W.M. Switzer. 2005. Emergence of unique primate T-lymphotropic viruses among central African bushmeat hunters. *Proceedings of the National Academy of Sciences*, 102(22): 7994-7999.

Wolfe, N.D., W.M. Switzer, J.K. Carr, V.B. Bhullar, V. Shanmugam, U. Tamoufe, A.T. Prosser, J.N. Torimiro, A. Wright, E. Mpoudi-Ngole, F.E. McCutchan, D.L. Birx, T.M. Folks, D.S. Burke, and W. Heneine. 2004. Naturally acquired simian retrovirus infections in central African hunters. *The Lancet*, 363(9413): 932-937.

World Bank. 2014. Cameroon. Available at: <http://data.worldbank.org/country/cameroon>. Accessed May 2014.

Zheng, H., N.D. Wolfe, D.M. Sintasath, U. Tamoufe, M. LeBreton, C.F. Djoko, D. JleDiffo, B.L. Pike, W. Heneine, and W.M. Switzer. 2010. Emergence of a novel and highly divergent HTLV-3 in a primate hunter in Cameroon. *Virology* 401(2): 137-145.

## 9. Map



**Figure 1.** Two-panel map of the location of the study area. The latitude and longitude of Yaoundé, Cameroon, is 3.8667° N, 11.5167° E using the simple cylindrical projection and WGS84 datum.

## 10. Governmental Endorsement

EcoHealth Alliance worked under an MOU with the government of Cameroon for the PREDICT project (USAID Cooperative Agreement # GHN-A-00-09-00010-00). A letter of support for this particular project is currently being obtained.

## 11. Detailed Notification of Security Forces

We will not be working with any security forces or law enforcement officials in Yaoundé, Cameroon.

# Andrew G. Huff

## Curriculum Vitae

Cell Phone: 212-380-4497 Email: [huff@ecohealthalliance.org](mailto:huff@ecohealthalliance.org)

### EDUCATION

- 2011-2014 University of Minnesota, Minneapolis, MN  
Doctor of Philosophy in Public Health – Environmental Infectious Disease
- 2010-2011 University of Minnesota, Minneapolis, MN  
Master of Science in Security Technologies, Geographic Information Science Minor
- 2006-2010 University of Minnesota, Minneapolis, MN  
Bachelor of Arts in Psychology

### RESEARCH MANAGEMENT

#### *EcoHealth Alliance*

- United States Department of Defense, Defense Threats Reduction Agency (DTRA) (\$2,800,000 annually)  
United States Department of Agriculture (USDA) (\$45,000)  
USAID – PREDICT-2 (\$40,000)

#### *Sandia National Laboratories – Federally Funded Research and Development Center*

- United States Department of Veterans Affairs Office of Public Health (\$450,000 annually)  
United States Department of Homeland Security - Food and Agriculture Sector (\$450,000 annually)  
United States Department of Defense, Defense Threats Reduction Agency (DTRA) (classified - unable to disclose award amount)

#### *University of Minnesota*

- U.S. Department of Homeland Security grant (No. 2010-ST-061-FD0001) awarded to the National Center for Food Protection and Defense at the University of Minnesota – P.I. Amy Kircher - (\$1,200,000)

### ACADEMIC APPOINTMENTS

- 2014-Present EcoHealth Alliance  
Spatial Data Analysis, Infectious Disease Ecology, Technical Research & Development  
*Senior Research Scientist*
- 2014-Present Columbia University  
Ecology, Evolution, and Environmental Biology  
*Adjunct Faculty*
- 2013-2014 Sandia National Laboratories  
Epidemiology, Environmental Health, Food and Agriculture, & Public Health Systems  
*Senior Member of the Technical Staff*
- 2011-2013 University of Minnesota  
National Center for Food Protection and Defense  
*Research Fellow*
- 2008-2010 University of Minnesota  
Center for Interest Measurement Research  
*Psychological Research Assistant*

## RELEVANT PEER REVIEWED PUBLICATIONS & PATENTS

- Huff, A. G., Beyeler, W. E., Kelley, N. S., & McNitt, J. A. (Pending review). How resilient is the United States food system to pandemics and what can society do to increase food system resiliency?. *Journal of Environmental Studies and Sciences*.
- Huff, A. G., Hodges, J., Kennedy, S. P., & Kircher, A. (Pending review). Analysis of the Food and Agriculture Systems Criticality Assessment Tool (FASCAT) and collected data. *Risk Analysis*.
- Huff, A. G. (2014). Enhancing Food Defense: *Risk managers' perceptions, criticality assessments, and novel method for objectively determining food systems' criticality* (dissertation). University of Minnesota, Minneapolis, MN.
- Huff, A. G., Hodges, J. Kircher, A., & Kennedy, S. (2014). State officials' perceptions of Food and Agriculture Sector Criticality Assessment Tool (FASCAT), food-system risk, and food defense funding. *Journal of Homeland Security and Emergency Management*, 0, 1-16.
- Huff, A. G., Kircher, A., Hoffman, J., & Kennedy, S. P. (2013). The development and use of the Food and Agriculture Systems Criticality Assessment Tool (FASCAT), *Food Protection Trends*, 33, 218-223.
- Huff, A. G., Lambert, G. L., Finley, P. D., Evans, L. Mecher, C. E., & Davey, V. J. (2014). Ranking of pandemic influenza mitigation strategies: Why local population demographics matter. Unpublished manuscript.
- Huff, A. G., Ramsey, W., & Kennedy, S. P. (2013). Chapter 4 Assessing Vulnerabilities. Barach, J. T. (Edition 1)., *A systems approach using preventive controls for safe food production; Part 2 Food defense planning: Prevention of intentional adulteration of food*; GMA, 1350 I Street, N. W. Washington, D.C., 20005.
- Huff, A. G., Kircher, A., Hoffman, J., & Kennedy, S. P. (2014). Criticality Spatial Analysis (CRISTAL). Filed by the University of Minnesota. Patent number 61784675.

## TEACHING

- |      |   |
|------|---|
| 2015 | Columbia University, E3B, New York, NY<br>Adjunct Faculty<br>How does food preference affect systems-level food production, environmental health, and pathogen emergence? |
| 2014 | Georgetown University, School of Medicine, Washington, D.C.<br><i>Guest Lecturer</i><br>Agroterrorism   |
| 2012 | University of Minnesota, School of Public Health, Minneapolis, MN<br><i>Teaching Assistant</i><br>Spatial Epidemiology  |
| 2012 | University of Minnesota, College of Science and Engineering, Minneapolis, MN<br><i>Teaching Assistant</i><br>Biosecurity: Security Science & Technologies Foundations     |



## Maureen Miller, PhD

250 West 99<sup>th</sup> Street #3C, New York, NY 10025 | 646.303.1372 | [miller@ecohealthalliance.org](mailto:miller@ecohealthalliance.org) | [@mmepinyc](https://twitter.com/mmepinyc)

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Social epidemiologist with experience targeting systems level change in circumstances of limited resources. Skill set includes institutional research and evaluation infrastructure development; data-driven, learning oriented problem solving; managing projects from concept through final deliverable; and building and developing teams of interdisciplinary professionals to move projects forward on time and on budget.

### PROFESSIONAL EXPERIENCE

#### **EcoHealth Alliance, New York, NY**

- Senior Scientist, Anthropology and Epidemiology 09/14-present

#### **Columbia University, Mailman School of Public Health, New York, NY**

(<http://www.mailman.columbia.edu/our-faculty/profile?uni=mm35>)

- Adjunct Associate Professor, Department of Epidemiology 03/11-present
- Assistant Professor, Department of Epidemiology 07/00-02/11
- Assistant Research Scientist, HIV Center for Clinical and Behavioral Studies, New York State Psychiatric Institute 05/94-12/94

#### **MMEpidemiology Inc, New York, NY**

- President/Owner, Public Health/Evaluation Consultant Services ([www.mmepi.com](http://www.mmepi.com)) 07/00-12/14

#### **New York Medical College, School of Public Health, Valhalla, NY**

- Associate Professor, Department of Epidemiology and Biostatistics 10/06-10/09

#### **New York City Department of Health and Mental Hygiene, New York, NY**

- Director of HIV Prevention, Bureau of HIV Prevention and Control 08/05-06/06
- Epidemiologist, Injury Prevention Program 03/95-11/95

#### **National Development and Research Institutes, Inc, New York, NY**

- Principal Investigator, Center for Drug Use and HIV Research 12/99-05/01
- Project Director, Institute for AIDS Research 11/96-01/98

### SELECTED ACCOMPLISHMENTS

#### **Governmental, Non- and Inter-Governmental Organization Public Health Experience**

- Global Fund to Fight AIDS, Tuberculosis and Malaria, Geneva, Switzerland
  - Developed applied guidance for health equity/human rights assessment with implementation tools
  - Harmonized gender equity monitoring and evaluation framework
- World Health Organization, Geneva, Switzerland
  - Drafted HIV mortality surveillance guidance for the evaluation of national AIDS programming
- Medecins Sans Frontieres/Doctors Without Borders, Malawi, India
  - Developed tools and implemented trainings for outbreak investigations for District Health Officers
- New York City Department of Health and Mental Hygiene, New York, NY
  - Instituted HIV prevention priorities that established a clear, measurable agenda for 2007-2011
  - Rebid the NYC HIV prevention portfolio (\$12 million annually) in support of developed priorities
  - Developed and field tested a weapon related injury surveillance system
- INSERM (National Institute of Health and Medical Research), Paris, France
  - Evaluated sexual behavior changes resulting from the introduction of successful HIV antiretroviral therapies (Seminal publication: *AIDS* 2000;14(4):F33-F39)

- *Folkehelsa (National Institute of Public Health), Oslo, Norway*
  - Evaluated the Oslo city syringe exchange program (2 publications)
  - Research findings resulted in national expansion of program
- *Accion Contra el Hambre (Action Against Hunger), Madrid, Spain*
  - Designed national level studies to prevent pediatric HIV deaths in Malawi
- *United States Centers for Disease Control and Prevention, Atlanta, GA*
  - Conducted a Georgia statewide outbreak investigation of congenital syphilis
  - Investigation results established active reporting requirements of all positive newborns

### **Management and Community Building Skills**

- Funded, established and staffed a successful community-academic partnership (*Bed Stuy West Community Studies*) between Columbia University and the largest African American community in North America
  - The research center served as a primary source of health screenings for participants
- Managed a staff of 60 civil servants at the New York City Department of Health and Mental Hygiene
  - Restructured department into 4 teams in support of developed priorities

### **Scientific and Research Activities**

- Principal Investigator or other leadership roles on Federal Grants totaling more than \$20 million.
- Peer reviewed author of 40 scientific articles and over 60 conference presentations
- Peer reviewer for National Institutes of Health Center for Scientific Review and many scientific journals
- Research and policy content areas: Infectious disease; structural determinants of health; research and evaluation methods; gender health and human rights; risk mitigation; collective impact approaches

## **EDUCATION**

### **Degrees**

PhD, Epidemiology, Columbia University, New York, NY	1997
MS, Epidemiology, Columbia University, New York, NY	1994
BA, Anthropology, Columbia University, New York, NY	
Graduated magna cum laude; Phi Beta Kappa	1992

### **Additional Training**

Institut National de la Sante et de la Recherche Medicale, Post-Doctoral Fellow, Paris, France	09/98-08/99
National Institute on Drug Abuse (NIDA) Pre-Doctoral Research Fellow, New York, NY	05/94-11/96
National Center for Prevention Services, Division of STD/HIV Prevention, CDC, Atlanta, GA	06/93-08/93

## **SELECTED PEER REVIEWED PUBLICATIONS**

1. Gwizdala RA, Miller M, Bhat M, Vavagiakis P, Henry C, Neaigus A, Shi Q and Lowy FD. Staphylococcus aureus Among Drug Users: Identification of Hidden Networks. *American Journal of Public Health*. 2011;101:1268-76.
2. Miller M, Korves CT, Fernandez T. The social epidemiology of HIV transmission among African American women who use drugs and their social network members. *AIDS Care*. 2007;19(7):858-65.
3. Miller M, Neaigus A. An economy of risk: resource acquisition strategies of inner city women who use drugs. *International Journal of Drug Policy* 2002;13(5):399-408.
4. Miller M, Neaigus A. Networks, resources and risk among women who use drugs. *Social Science & Medicine* 2001;52(6):967-978.
5. Lowy FD, Miller M. Staphylococcus aureus disease among drug users: understanding transmission dynamics and pathogenesis. *Lancet Infectious Diseases* 2002;2:605-612.

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.  
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME William B. Karesh		POSITION TITLE Executive Vice President for Health and Policy, EcoHealth Alliance	
eRA COMMONS USER NAME (credential, e.g., agency login) Karesh			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
Clemson University, SC	BS	05/77	Biology
University of Georgia, GA	DVM	05/82	Veterinary Medicine
Zoological Society of San Diego	Residency	05/84	Wildlife Health

**A. Personal Statement**

As a wildlife veterinarian and infectious disease specialist, I have worked on wildlife disease investigations over the past twenty-five years in over 50 countries, and I have strong technical background in targeted surveillance, wildlife sampling design, specimen collection and international collaborative research. I have worked with government agencies and Inter-governmental organizations to design sound, evidence-based policy and regulations. In relationship to disease risk and the international movement and trade of wildlife products, I serve as the President of the OIE (World Organisation for Animal Health) Working Group on Wildlife Diseases. In addition, I have extensive experience directing projects requiring high levels of coordination among multiple institutions. I served as Technical Director of the \$75M USAID Emerging Pandemics Threats PREDICT program, in which I provide general program leadership as well as oversee disease surveillance in wildlife for emerging human pathogens in over 20 countries. The program has collected over 350,000 specimens from a wide range of wild species, yielding detection of over 900 novel viruses to date. In my role as Chief of Party for the USAID-funded \$8M Global Avian Influenza Network for Surveillance of Wild Birds (2004-2009), I designed, organized and managed the implementation of a wildlife disease surveillance network operating in 34 countries and involving dozens of government agencies, NGOs, universities and private businesses around the world. Additionally, I have been highly involved with MERS-CoV and Ebola response efforts, both directly with local governments as well as through my appointments to the World Health Organization and FAO.

**B. Positions and Honors****Positions and Employment**

1989-2007	Director, International Field Programs, Wildlife Conservation Society
2004- P	Co-Chair, Wildlife Health Specialist Group, IUCN, Switzerland
2005-2006	Advisor/Consultant, Food and Agriculture Organization of the U.N.
2006-2009	Chief of Party, USAID Global Avian Influenza Network for Surveillance
2006- P	Consultant/Advisor, Bio Economics Research Associates (Bio-ERA)
2008-2010	Vice President & Director, Global Health Programs, Wildlife Conservation Society
2008- P	Adjunct Professor, Mount Sinai School of Medicine
2008- P	President, Working Group on Wildlife Diseases, World Organisation for Animal Health (OIE)

2009- P Technical Director, USAID EPT PREDICT  
 2010- P Executive Vice President for Health & Policy, EcoHealth Alliance  
 2011- P Adjunct Faculty, Columbia University, Department of Ecology, Evolution and Biology  
 2013- P Appointment to the WHO International Health Regulation Roster of Experts  
 2013- P Appointment to the WHO MERS Informal Research Network  
 2013- P Appointment as a WHO Advisor to the Expert Panel on MERS

### **C. Selected Peer-reviewed Publications** (selected from over 150 peer-reviewed publications)

1. Leroy, E.M., Rouquet, P., Formenty, P., Souquiere, S., Kilbourn, A., Froment, J.M., Bermejo, M., Smit, S., **Karesh, W.B.**, Swanepoel, R., Zaki, S.R., and Rollin, P.E. (2004) Multiple Ebola Virus Transmission Events and Rapid Decline of Central African Wildlife. *Science*, 303, 387-390. 14726594
2. **Karesh, W.B.**, Dobson, A., Lloyd-Smith J.O., Lubroth, J., Dixon, M.A., Bennett, M., Aldrich, S., Harrington, T., Formenty, P., Loh, E.H., Machalaba, C.C., Thomas, M.J., Heymann, D.L. (2012) Ecology of zoonoses: natural and unnatural histories. *Lancet*, 380(9857),1936-45. 23200502
3. **Karesh, W.B.**, Cook, R.A., Bennett, E.L., Newcomb, J. (2005) Wildlife trade and global disease emergence. *Emerging Infectious Diseases*, 11(7), 1000-2. PMC3371803
4. Smith, K.M., Anthony, S.J., Switzer, W.M., Epstein, J.H., Seimon, T., Jia, H., Sanchez, M.D., Huynh, T.T., Galland, G.G., Shapiro, S.E., Sleeman, J.M., McAloose, D., Stuchin, M., Amato, G., Kolokotronis, S.O., Lipkin, W.I., **Karesh, W.B.**, Daszak, P., Marano, N. (2012). Zoonotic viruses associated with illegally imported wildlife products. *PLoS One*, 7(1), e29505. PMC3254615

### **D. Research Support**

#### **Ongoing Research Support**

USAID EPT PREDICT Mazet (PI) 10/01/09 - 09/30/2014  
 Oversee and coordinate zoonotic disease surveillance and pathogen discovery activities in twenty developing countries, provide leadership across the \$75M PREDICT program, and liaise with management teams of other EPT programs. The program has built a coalition of organizations, university scientists, foreign government agencies and laboratories to enhance capacity for surveillance of emerging human pathogens of wildlife origin, predictive modeling and information sharing for developing countries.  
 Role: Technical Director

USAID RDMA Daszak (PI) 10/1/2013 – 9/30/2016  
 Infectious Disease Emergence and Economics of Altered Landscapes (IDEEAL)  
 Economic assessment of emerging zoonoses as a consequence of development and land use change in Sabah, Malaysia.  
 Role: Policy Lead

New York Community Trust Karesh (PI) 06/11/13 – 06/10/2014  
 One Health in Action  
 Development and implementation of scientific investigations of zoonotic diseases related to wildlife trade and food safety in New York City.  
 Role: PI

US FWS Wildlife Without Borders Epstein (PI) 09/13/2012 – 09/13/2014  
 Development of a Great Ape Health Unit in Sabah, Malaysia  
 Role: Advisor

## **Bibliographical Data**

**Name/Role:** Dominic A Travis DVM, MS, Principle Investigator

### **Current Position:**

<sup>1</sup>Associate Professor, Ecosystem Health, Department of Veterinary Population Medicine, College of Veterinary Medicine, University of Minnesota, 495F ANSC/VM, 1988 Fitch Ave, St. Paul MN, 55108; <sup>2</sup>Adjunct Associate Professor, Department of Environmental Health, School of Public Health, UMN; <sup>3</sup>Resident Fellow, Institute on the Environment, UMN.

### **Education/Training:**

<b>School</b>	<b>Field</b>	<b>Degree</b>	<b>Year</b>
VA-MD Regional CVM	Epidemiology	Residency	2000
University of Maryland	Epidemiology	MS	2000
Michigan State University	Veterinary Medicine	DVM	1997
North Carolina State University	Zoology	BS	1992

### **Previous Positions and Honors:**

#### **Positions:**

2010-2008	Vice President of Conservation and Science, Lincoln Park Zoo
2008-2007	Senior Director, Conservation and Science, Lincoln Park Zoo
2007-2005	Director, Davee Center for Epidemiology and Endocrinology, LPZ
2005-2000	Veterinary Epidemiologist, Lincoln Park Zoo

#### **Advisory Committees:**

2009 – present	<b>Gorilla Doctors, University of California, Davis:</b> Member - Science Advisory Committee
2003 – present	<b>International Union for the Conservation of Nature, Conservation Breeding Specialist Group:</b> Strategic Associate
2010 - 2014	<b>Morris Animal Foundation:</b> Trustee - Board of Trustees
2004 – 2008	<b>Morris Animal Foundation:</b> WSAB
2006	<b>Office of Science and Technology Policy (White House):</b> Member - Blue Ribbon Panel investigating the potential use of domestic animals as sentinels for infectious disease surveillance
2002 – 2003	<b>Pan American Health Organization:</b> Member – Zoonotic/Arboviral Working Group - West Nile virus surveillance coordination team.
2003	<b>Centers for Disease Control and Prevention:</b> Member - Microbial Threats Strategic Planning Committee - CDC five year plan for addressing emerging infectious diseases at the human-animal interface.
2001 – 2008	<b>USDA Animal Care:</b> Member - Wildlife TB Working Group – provided consultation on TB in wildlife with special emphasis on ungulates and elephants. Review of several cases of TB in zoos and circus elephant outbreaks as well as surveillance, biosecurity, diagnostic testing and treatment protocols.

### **Selected Peer-Reviewed Publications:**

1. Wolf TM, Mugisha L, Miyagaki Shoyama F, O'Malley MJ, Flynn JO, Asiimwe B, **Travis DA**, Singer RS, Sreevatsen S. **(submitted)**. Noninvasive test for Tuberculosis detection in primates. Emerging infectious Diseases. **(Wolf MAF graduate fellowship)**

2. Parsons MB, Gillespie TR, Lonsdorf EV, **Travis DA**, Lipende I, Gilagiza B, Kamenya S, Pintea L, Vazquez-Prokopec GM. 2014 Global Positioning System Data-Loggers: A field tool to quantify fine scale movement of domestic animals to evaluate potential for zoonotic transmission to an endangered wildlife population. PLoS ONE 9(11): e110984.doi:10.1371/journal.pone. (**Parsons MAF summer fellow; MAF funded project**)
3. **Travis DA**, Chapman DW, Craft ME, Deen J, Farnham MW, Garcia C, Hueston WD, Kock R, Mahero M, Mugisha L, Nzietchueng S, Nutter FB, Olson D, Pekol A, Pelican KM, Robertson C, and Rwego IB. 2014. One Health: lessons learned from East Africa. Microbiol Spectrum 2(1):OH-0017-2012. doi:10.1128/microbiolspec.OH-0017-2012.
4. Wolf TM, Sreevatsen S, **Travis DA**, Mugisha L, Singer RS. 2013. The risk of tuberculosis transmission to free ranging great apes. American Journal of Primatology 76(1): 2-13. (**MAF graduate fellow**)
5. Terio KA, Kinsel MJ, Raphael J, Mlengeya T, Lipende I, Kirchhoff CA, Gilagiza B, Wilson ML, Kamenya S, Estes JD, Keele BF, Rudicell RS, Liu W, Patton S, Collins A, Hahn BH, **Travis DA**, Lonsdorf EV. 2012. Pathologic lesions in chimpanzees from Gombe National Park, Tanzania, 2004-2010. Journal of Zoo and Wildlife Medicine 42(4): 597-607.
6. **Travis DA**, Watson RW, Tauer A. 2011. The spread of pathogens through the international trade in wildlife. *Rev. sci. tech. Off. int. Epiz.*, 30(1): 219-239.
7. Lonsdorf EV, Murray CM, Lonsdorf EV, **Travis DA**, Gilby IC, Chosy J, Goodall J, Pusey AE. 2011. A retrospective analysis of factors correlated to chimpanzee (*Pan troglodytes schweinfurthii*) respiratory health at Gombe National Park, Tanzania. *EcoHealth* (8) 26-35.
8. Keele BF, Jones JH, Terio KA, Estes JD, Rudicell RS, Wilson ML, Li Y, Laern GH, Beasley TM, Schumacher-Stankey J, Wroblewski E, Mosser A, Raphael J, Kamenya S, Lonsdorf EV, **Travis DA**, Mlengeya T, Kinsel MJ, Else JG, Silvestri G, Goodall J, Sharp PM, Shaw GM, Pusey A, Hahn BH. 2009. Increased mortality and AIDS-like immunopathology in wild chimpanzees infected with SIVcpz. *Nature* 460: 515-519.
9. **Travis DA**, Lonsdorf EV, Mlengeya T, Raphael J. 2008. A science-based approach to managing disease risks for ape conservation. *American Journal of Primatology* 70: 745-750.
10. Weston-Murphy H, Miller M, Ramer J, **Travis DA**, Barbiers R, Wolfe ND and Switzer WM. 2006. Implications of simian retroviruses for captive primate population management and the occupational safety of primate handlers. *Journal of Zoo and Wildlife Medicine* 37(3): 219-233.
11. Decision Tree Writing Group. 2006. Clinical response decision tree for the Mountain Gorilla (*Gorilla beringeii*) as a model for great apes. *American Journal of Primatology* 68: 909-927. (**MAF funding**)
12. **Travis DA**, Hungerford L, Engel GA, Jones-Engel L. 2006. Disease risk analysis, a tool for primate conservation planning and decision making. *American Journal of Primatology* 68: 855-867.
13. Lonsdorf EV, **Travis DA**, Pusey A, Goodall J. 2006. Using retrospective health data from the Gombe chimpanzee study to inform future monitoring efforts. *American Journal of Primatology* 68: 897-908.
14. Engel G, Hungerford LL, Jones-Engel L, **Travis DA**, Eberle R, Fuentes A, Grant R, Kyes R, Schillaci M, and the Macaque Risk Analysis Workshop Group. 2006. Risk Assessment: a model for predicting cross-species transmission of simian foamy virus from macaques (*M. fascicularis*) to humans at a monkey temple in Bali, Indonesia. *American Journal of Primatology* 68: 934-948.

## BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.  
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME <b>MacDonald White Farnham</b>	POSITION TITLE <b>Assistant Professor</b> , College of Veterinary Medicine <b>Adjunct Instructor</b> , School of Public Health University of Minnesota		
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)</i>			
INSTITUTION AND LOCATION	DEGREE	MM/YY	FIELD OF STUDY
University of Saint Thomas, St. Paul, MN, USA	BA	June 1995	Biology & Environmental Studies
Graduate School, University of Minnesota, Minneapolis, MN, USA	MS	May 2002	Veterinary Medicine (Virology)
College of Veterinary Medicine, University of Minnesota, St. Paul, MN, USA	DVM	May 2006	Veterinary Medicine
College of Veterinary Medicine, University of Minnesota, St. Paul, MN, USA	DVM Diploma	May 2006	Swine Medicine
College of Veterinary Medicine, University of Minnesota, St. Paul, MN, USA	Postdoctoral Residency Certificate	June 2010	Veterinary Public Health

### A. Personal Statement

Mac Farnham is an Assistant Professor at the College of Veterinary Medicine and Adjunct Instructor in the School of Public Health at the University of Minnesota. From May 2010 through September 2014, Dr. Farnham provided technical leadership for the USAID Emerging Pandemic Threats Program's RESPOND project in Eastern and Central Africa, focused on applying One Health methodologies and collaborative approaches towards disease outbreak response capacity building. With formal training and work experience as a public health veterinarian, epidemiologist, virologist, animal product export officer, marine biologist, wildlife control technician and agricultural extension volunteer – Dr. Farnham strives to help other health professionals become 'One Health' practitioners. He is an experienced collaborator who has worked across cultural, disciplinary, government, academic and private sectoral boundaries to produce valued partnerships and networks across the world. Mac is committed to developing and strengthening local collaborative methodologies to address complex global issues such as food insecurity, antimicrobial resistance, trans-boundary animal diseases, and emerging disease threats in and between human, domestic animal and wildlife populations.

### B. Positions and Honors

June 2010 – Current	<b>Assistant Professor</b> , Ecosystem Health Initiative, College of Veterinary Medicine and <b>Adjunct Instructor</b> , School of Public Health, University of Minnesota
June 2010 – Sept 2014	<b>Senior Technical Advisor / Regional Technical Lead / Assistant Professor</b> , USAID Emerging Pandemic Threats: RESPOND Project, One Health Central and Eastern Africa (OHCEA) University Network, College of Veterinary Medicine, University of Minnesota, Saint Paul, Minnesota, USA

Mar 2008 - June 2010 **Postdoctoral Fellow / Veterinary Public Health Resident**, Center for Animal Health & Food Safety, College of Veterinary Medicine, University of Minnesota

Sept 2006 - Jan 2009 **Veterinary Technical Supervisor**, New Zealand Food Safety Authority, Verification Agency, Dannevirke, New Zealand

July 2006 - Sept 2006 **Veterinary Research Assistant**, Institute of Food, Nutrition and Human Health, Massey University, Palmerston North, New Zealand

May 2004 – Sept 2004 **Research Assistant**, West Nile Virus Surveillance Project, College of Veterinary Medicine, University of Minnesota

Oct 2002 – Dec 2004 **Animal Health Technician**, Chronic Wasting Disease Surveillance Project, Minnesota Department of Natural Resources, Madelia, Minnesota

### C. Selected Peer-Reviewed Publications

Travis DA, Chapman DW, Craft ME, Deen J, **Farnham MW**, Garcia C, Hueston WD, Kock R, Mahero M, Mugisha L, Nzietchueng S, Nutter FB, Olson D, Pekol A, Pelican KM, Robertson C, Rwego IB. (2014). One Health: Lessons Learned from East Africa, p 285-302. In Atlas R, Maloy S (ed), One Health. ASM Press, Washington, DC. doi: 10.1128/microbiolspec.OH-0017-2012

Travis DA, Chapman DW, Craft ME, Deen J, **Farnham MW**, Garcia C, Hueston WD, Kock R, Mahero M, Mugisha L, Nzietchueng S, Nutter FB, Olson D, Pekol A, Pelican KM, Robertson C, Rwego IB. (2014). One Health: Lessons Learned from East Africa. Microbiol Spectrum 2(1):OH-0017-2012. doi:10.1128/microbiolspec.OH-0017-2012.

**M.W. Farnham**, B. Norby, T.J. Goldsmith, S.J. Wells. (2012). Meta-analysis of field studies on bovine tuberculosis skin tests in United States cattle herds. Preventive Veterinary Medicine. 103(2-3):234-243.

S. Otake, S.A. Dee, R.D. Moon, K.D. Rossow, C. Trincado, **M.W. Farnham**, C. Pijoan. (2003). Survival of porcine reproductive and respiratory syndrome virus in houseflies. Canadian Journal of Veterinary Research. 67(3):198-203.

**M.W. Farnham**, Y.K. Choi, S.M. Goyal, H.S. Joo. (2003). Isolation and characterization of porcine circovirus type-2 from sera of stillborn fetuses. Canadian Journal of Veterinary Research. 67(2): 108-113.

Y.K. Choi, S.M. Goyal, S.W. Kang, **M.W. Farnham**, H.S. Joo. (2002). Detection and subtyping of swine influenza H1N1, H1N2 and H3N2 viruses in clinical samples using two multiplex RT-PCR assays. Journal of Virological Methods. 102: 53-59.

Y.K. Choi, S.M. Goyal, **M.W. Farnham**, H.S. Joo. (2002). Genetic characterization of H1N2 isolates of swine influenza viruses throughout the United States. Virus Research. 87: 173-179.

### D. Research Support

Co-Ag # 14-9794-2252-CA Farnham (PI) 09/30/14 – 09/29/15  
 USDA APHIS High-Priority Transboundary Animal Disease Sampling Partnership in Uganda.  
 Role: PI

Grant # 1000-11676-MNF01-2909030 Hueston and Kircher (co-PIs) 07/01/14 – 06/30/15  
 Creating a flexible professional masters in Food Systems with concentrations focused on Food Industry and Regulatory Science.  
 Role: Co-Investigator

Co-Ag # GHN-A-00-09-00015-00 Deen (PI) 10/01/09 – 09/29/14  
 USAID Emerging Pandemic Threats RESPOND Project, USAID / DAI  
 Role: Co-Investigator (Technical Advisor)



# **CURRICULUM VITAE**

## **I. GENERAL INFORMATION**

**LOUL Séverin**

Cel: (+237) 679 10 89 15

E-mail: [severinloul@yahoo.fr](mailto:severinloul@yahoo.fr)  
[severinloul@gmail.com](mailto:severinloul@gmail.com)

Years of professional experiences: **17**

## **II. DIPLOMANTE FORMATIONS OF UNIVERSITY**

**Master of Science in Animal Tropical Health (Orientation: Collect and analyzes of the epidemiologic data ) obtained at the Institute of Tropical Medicine of Antwerp-Belgium (Academic year 2008 -2009)**

**Certificate of Higher Study in Animal epidemiology obtained than the National Veterinary School of Alfort-French (Academic year 2005-2006)**

**Doctorate of Veterinary medicine obtained at the Inter-state School of Sciences and Veterinary medicine (EISMV) of the University Cheik Anta Diop of Dakar in Senegal (1998)**

**Diploma of Study Higher Specialized - Certificate of Administration of the Companies (D.E.S.S-CAE) obtained at the Institute of Training in Administration and Creation of Companies (I.F.A.C.E.) - Faculty of Science Economic and Management (F.A.S.E.G) - University Cheik Anta Diop (U.C.A.D) of Dakar (Senegal); Academic year 1996-1997 ;**

## **III. PROFESSIONAL EXPERIENCE**

<b>2013 - 2015</b>	<b>Chief of the Prevention and the Fight against Zoonoses Services in Ministry of Livestock, Fisheries and Animal Industries (MINEPIA)éa</b> <ul style="list-style-type: none"><li>• <b>Principal task:</b>Collect, analyzes and treatment of the zoonotic diseases for the reportage near the Animal World Health Organization (OIE), FAO and AU-IBAR</li></ul>
<b>2010 – 2013</b>	<b>Chief of epidemiosurveillance Service in Ministry of Livestock, Fisheries and Animal Industries (MINEPIA):</b> <ul style="list-style-type: none"><li>• <b>Principal task:</b> Collect, analyzes and zoo-medical data processing for the reportage near the Animal World Health Organization (OIE), FAO and AU-IBAR</li></ul>
<b>2007-2008</b>	<b>Focal Point of Cameroun for the Wildlife health of near the Animal World Health Organization (OIE)</b>

2000 -2006	<p><b>Supervisor in Cameroun of research on the bushmeat and wildlife at the "Prevention of the AIDS in Cameroun Project (PRESICA)) - Military Hospital of Yaounde"</b></p> <ul style="list-style-type: none"> <li>• <b><u>Objective:</u></b> seek emergent zoonotic diseases in Cameroun</li> <li>• <b><u>Activities:</u></b> <ul style="list-style-type: none"> <li>- Planning management and execution of the missions of collections of the samples on the bushmeat at the hunters;</li> <li>- Planning management and execution of the missions of collections of the samples at the noncaptive animals;</li> <li>- Formation of the data sinks on wildlife</li> <li>- Analysis quantitative and qualitative of the data and development of the epidemiologic Charts;</li> </ul> </li> </ul>
1998-2000	<p><b>Assistant of research in the Community the Forests Project (PFC)</b></p> <ul style="list-style-type: none"> <li>• <b><u>Principal task:</u></b> supervision of the investigations for the bushmeat carried out near the households with the Site of a forestry development (Company PALLISCO) and four villages of the Messamena Sub-division (East-Cameroon Region): <ul style="list-style-type: none"> <li>- <b><u>Inquire into the bushmeat:</u></b> Numbers game, taken species, instrument used for the capture of game, etc.</li> <li>- <b><u>Inquire into the food of the menages:</u></b> Food in households,</li> <li>- <b><u>Inquire into the daily activities in households:</u></b> activities carried out by the members of each concession</li> <li>- <b><u>Inquire into the census:</u></b> population and flows of their displacement</li> </ul> </li> </ul>

#### IV. ASSETS

##### 1. DATA PROCESSING: SOFTWARE USED WELL

- **Basic software:** Word ; Excel ; PowerPoint ; Publisher
- **Statistical and GIS software:** Stata, R ; Arcviews ; Quantum GIS

##### 2. LANGUAGES

- **French:** Well ; **English:** Passable

##### 3. OTHERS

- Good analysis and processing capacity of the quantitative and qualitative data
- Several continues formation in the animal health, animal epidemiology and wildlife health
- Joint authors of 12 publications on the emergent diseases of wildlife

I certify that this information's provided above is exact.

## CURRICULUM VITAE

Léonie Prudence **Dapi Nzefa**

Born on: 14 Nov 1971 in Cameroon

Södra-Järnväsgatan 21A, 35234 Växjö, Sweden.

Phone: 0046733358842

[dapileo@hotmail.com](mailto:dapileo@hotmail.com)

PoBox 16355 Yaoundé, Cameroon .

Phone: 00237670713640



## EDUCATION and DEGREES

**Feb 2010:** PhD in Public Health, Umeå University, Sweden, Thesis title: *Socioeconomic and sex differences in adolescents dietary intake, anthropometry and physical activity in Cameroon, Africa*

**2005-2010:** PhD education in Public Health and Epidemiology, Umeå University, Sweden.

Certificates in Women and Children Health in Low Income Settings: Uppsala University. Advance Biostatistics, Ethic in research; Umeå University, Sweden.

**2003-2005:** Master's Degree in Public Health and Epidemiology, Umeå University, Sweden.

**1998-1999:** Certification in Hygiene Procedures within Food Sciences, Haute Ecole Lucia de Brouckère, Brussels, Belgium. Certification in Allergies and Foods Intolerances in Children, Namur, Belgium.

**1995-1998:** Degree in Dietetic and Nutrition, Institut Arthur Haulot Brussels, Belgium and Erasmus exchange students at Umeå University, Sweden

## WORK EXPERIENCE and EMPLOYMENTS

**Oct 2013-Jan 2014:** Supervisor of six Swedish students in Cameroon from Department of Pedagogy and Psychology, Linnaeus University, Sweden

**Since March 2010:** Senior Lecturer and researcher in Global Public Health, Gender Inequality, Global Nutrition, Immigration, the impact of colonization in Africa at Universities in Sweden, Holland and Cameroon. Distance and Campus courses.

**Since 2012:** Main supervisor of Masters Students from Catholic University of Yaoundé, Cameroon

**Since Feb 2012:** Main supervisor of Master students and nurses, Kristianstad University, Sweden

**Since 2011:** Research Work; Study about infant feeding practices in urban and rural Cameroon (manuscript).

**Sept 2011-Feb 2012:** Research Work; Study about Somali infant feeding living in the Kronoberg region of Sweden.

**Since Sept 2010:** Senior lecturer about Integrative Health, distance courses at Kristianstad University.

**Sept- Nov 2011:** Work as writing a curriculum, study plan for the International Public Health for Kristianstad University.

**2005-2010:** Work as doctoral student at Umeå University, Sweden. Assistant-Lecturer at the department of Nutrition and at the department of Infectious Diseases. Co-supervisor of more than 50 Swedish students in Cameroon.

**2004-2005:** Evaluation of the Umeå MPH program. Evaluation of the Swedish doctoral booklet. Co-supervisor of Swedish medical students, nurses, dieticians, social workers student doing their projects and essays in Cameroon. Co-supervisor of one MPH student in Umeå University, Sweden.

**2000-2003:** Dietician, public Hospitals, private clinics in Cameroon,

## **ORIGINAL PUBLICATIONS**

1. Dapi NL, Janlert U, Stenlund H, Håglin L (2009). Socioeconomic and gender differences in adolescent nutritional status in urban Cameroon, Africa. *Nutr Res* 9, 313-319.
2. Dapi NL, Janlert U, Stenlund H, Hörnell A, Larsson C (2010). Energy and nutrient intakes in relation to sex and socio-economic status among school adolescents in urban Cameroon, Africa. *Publ Health Nutr*. DOI: 10.1017/S1368980010003150.
3. Dapi NL, Nouedoui C, Janlert U, Håglin L (2005). Adolescents' Food Habits and Nutritional Status among in urban and Rural Areas in Cameroon, Africa. *Scand J Nutr* 49, 151-158.
4. Dapi NL, Omoloko C, Janlert U, Dahlgren L, Håglin L (2007). "I eat to be happy, to be strong and to live". Perceptions of rural and urban adolescents in Cameroon, Africa *J Nutr Educ Behav* 39, 320-326.
5. Léonie N. Dapi, Joacim Rocklöv, Georges Nguetack, Tord Kjellstrom (2010). Heat impact on schoolchildren in Cameroon, Africa. Potential health threat from climate change. *Global health action*. DOI: 10.3402/gha.v3i0.5610
6. Georges Nguetack-Tsague and Léonie N. Dapi (2011). Multidimensional nature of undernutrition: a statistical approach. *J Med & Med Sciences* 2, 690-695.
7. L Nzefa Dapi (Dec 2011). The impact of climate change on students in Yaoundé, Cameroon. *African Newsletter* 21; Finnish Institute of Occupational Health.
9. L Nzefa Dapi, Ericsson E. Breastfeeding among Somalia women in Sweden (on going)

## **ABSTRACT**

Title: Nutritional status and food habits of adolescences according to socioeconomic status in Cameroon, Africa. Oral presentation to the Swedish Medical annual meeting in Oct 2008 in Goteborg, Sweden.

Several Oral presentations about Cameroon health, people and nutrition in Sweden to NGOs, Universities, municipalities and hospitals.

## **Other**

President and founder of the *Swedish Cameroon organization*, a non-profit and apolitical organization  
President and founder of the *Center for Youths in Bandja Village*, a non-profit and apolitical organization  
Director and founder of the Center for Health Promotion-Dapi Welfare; Yaoundé Cameroon since 2012.

# CURRICULUM VITAE

## 1 - GENERAL INFORMATIONS

**Name and Surname:** KUETE Fidèle  
**Sex :** Male  
**Born:** 1963  
**Nationality:** Cameroonian  
**Matrimonial Status:** Married, father of 4 kids  
**Address :** Ministry of Forestry and Wildlife (Cameroon)  
**Phone:** (237) 696 86 37 71/ 673 33 73 83/ 633 77 92 40  
**Email:** kuete\_al@yahoo.fr & fidelekuete@gmail.com  
**Title:** *Engineer of Agricultural Works & General Engineer of Water and Forestry*



## 2 - COMPETENCIES

- Gazettment of protected areas and hunting zones;
- Development and implementation of management plans of protected areas and hunting zones;
- Valuation of wildlife and protected areas;
- Community management of wildlife and forest resources;
- Management of Human/Wildlife conflicts;
- Health of wildlife and ecosystems;
- Environmental education, information and communication;
- Environmental impacts and audits studies;

## 3- PROFESSIONAL EXPERIENCE: Close to 27 years

**2012 till date:** In Charge of Studies Education Unit /Ministry of Forestry and Wildlife-MINFOF (Yaoundé)  
**2008-2012:** Chief of Service Participatory and Communitary Management of Wildlife-MINFOF (Yaoundé)  
**2006-2008:** Conservator of Campo-Ma'an National Park (Campo)  
**2001-2006:** Conservator of Douala-Edéa Wildlife Reserve (Mouanko)  
**1998-2001:** Chief of Littoral Regional Service of Wildlife and Protected Areas (Douala)  
**1996-1998:** Chief of Bureau of Protected Areas in Littoral Region (Douala)  
**1990 :** Chief of Babong Agricultural Post (Lom Subdivision, Moungo Division)

## 4 – STUDIES

Involvement in many studies and consultancies:

- Environmental Impact Assessment of many Forest Monitoring Units in Cameroon (08 00, 08002, 09015, ...)
- Environmental Impact Assessment for the Memve'élé and Bini à Warak dams projects
- Study of the environment of Campo-Ma'an landscape
- Field investigation on the Monkey pox outbreak
- Study on the enrichment of protected areas
- FAO/EC LNV/GTZ/UICN/ICRAF/CIFOR study on the management of secondary forests for

## 5 -ATTENDANCE OF WORKSHOPS, CONFERENCES, FIELD TRIPS AND SPECIAL MISSIONS

**Nov 4-6, 2014 (Douala):** Ebola Preparation and Response Scenario. Regional West Africa Preparedness & Response Planning Workshop  
**Dec 8-12, 2014 (Yaoundé) :** Strategic Preparedness and Response for Biological Incidents. Emergency Operations Center Staff Engagement for the Republic of Cameroon's Workshop. Organized by DTRA/CBRN Preparedness Program  
**Sept 19-20, 2014 (Yaoundé) :** Concertation workshop between the Ministry in charge of Fisheries and animal husbandry and partner laboratories in light of the development of an active Ebola surveillance system on wildlife  
**July 04, 2014 (Yaoundé) :** One Health Concept workshop : The role of wildlife health managers on Ebola  
**07-12 July, 2014 (Mbargué, Minta):** Joint investigation mission on the outbreak of Monkey pox disease in the Mbargue Chimpanzee Rescue Centre  
**Feb 12-22, 2014 (Nyabisan) :** 2<sup>nd</sup> Field training on One Health Concept with Global Viral Cameroon  
**Dec 02-05, 2013 (Garoua) :** Workshop on the finalization of the Protected Areas Management Master Degree Curricula for the Garoua Wildlife School  
**May 13-28, 2013 (Garoua) :** Training on wildlife inventory in savanna ecosystems  
**Augt 13-24, 2012 (Lopé, Gabon) :** International USAID/RESPOND/AU-IBAR initial training workshop on One Health Concept: Incidence of wildlife on the outbreak of domestic animal diseases

	and public health
<b>May 2-4, 2012 (Libreville, Gabon) :</b>	ECCAS regional Workshop on Integrated Regional Coordination Mechanism (IRCM) for the Prevention and Control of Transboundary Animal Diseases and Zoonosis in Central Africa
<b>March 02, 2012 (Yaoundé) :</b>	National Validation Workshop of the Cameroon's National Program for the Prevention and Fight against Emergent and Re-emergent Zoonosis
<b>October, 10-15, 2011 (Gbayanga, CAR) :</b>	UNESCO/ WWF/WCS/RCA/Congo/Cameroun Experts workshop on the gazettment process of the TNS (Tri-National de la Sangha) as a world Heritage Site
<b>Sept 22-23, 2011 (Yaoundé) :</b>	National workshop on the promotion of One Health Concept and Ad hoc Committee workshop in charge of the development of Zoonosis Program)
<b>Feb 28, 2011 (Yaoundé) :</b>	Contributor on the workshop on the redynamization of the Cameroon's national and transboundary anti-poaching strategy organized by the Wildlife and Protected Development
<b>Nov 6-10, 2010 (Kinshasa, DRC) :</b>	Contribution on the TNS working group on the 6 <sup>th</sup> COMIFAC ministerial Conference session
<b>Jan 19-22, 2010 (Kampala, Uganda) :</b>	CITES International Workshop for anglophone and lusophone countries on the non detrimental trade of wild species of fauna and flora: Identification of priorities for capacity building and development of technical assistance
<b>July 21-22, 2009 (Yokadouma) :</b>	GTZ/WWF workshop for the capacity building of Wildlife Resources Valorization Commitees (COVAREF ) and Councils on the management of wildlife royalties
<b>June 3-5, 2008 (Kribi):</b>	TRAFFIC Central Africa Program workshop on the capacity building and on the use of ETIS tools by forestry, Customs and border Police staffs.
<b>June 9-11, 2008 (Kribi):</b>	RAPAC international workshop on the exchange of experience for the development of responsible tourism in Central Africa protected areas
<b>October 4-6, 2007 (Douala):</b>	RAPAC international workshop on the development of protected areas efficiency assessment using PAMAETT tool
<b>March 26-31, 2007 (Libreville, Gabon):</b>	RAPAC international workshop on the development of protected Areas business plans
<b>Nov 28-29, 2006 (Campo) :</b>	MINFOF/WWF Workshop on the development of strategic surveillance plan for Campo Ma'an National Park
<b>2005 (Douala) :</b>	MINFOF staff Capacity building workshop on the forestry and wildlife control strategy
<b>May 2003 (Edea) :</b>	Central/West Africa Regional "In the Hands of Fishers (IHO) workshop on mangrove management and sustainable fisheries". In collaboration with Cameroon Wildlife Conservation Society ( Mouanko Project)
<b>March 2003 (Mfou) :</b>	MINEF/GRASP workshop on Great Apes National Management Plan
<b>July &amp; sept, 2002 (Yaoundé &amp; Mfou):</b>	MINEF/WWF national workshops on the Cameroon protected areas network assessment
<b>2001 (Douala):</b>	United States Fish & Wildlife Service Bush Meat international workshop held at Sawa Hotel
<b>2000 (Yaoundé):</b>	National workshop on Cameroon's national anti-poaching strategy development
<b>May 2000 (Yokadouma):</b>	MINEF/WWF international workshop on the Cameroon's national management plan for elephant
<b>1998 (Douala) :</b>	MINEF/DFID training workshop on the Community forestry Development Manual of Procedures
<b>1996 (Douala) :</b>	MINEF sensitization workshop on the launching of forestry law N°94/01 of 20/01/94 and its implementation texts
<b>1993 (Bafoussam) :</b>	MINEF workshop on the National Environment Management Program

#### 6 - OTHERS:

- ◆ Member of Wildlife Health Specialist Group of IUCN Species Survival Commission.
- ◆ Focal point of the Ministry of Forestry and Wildlife for One Health and Zoonosis, and this light, member of national experts in charge of the training and sensitization on the One Health concept
- ◆ Monthly participation with other ministries and partners on the EPT/One Health group meetings since December 2012
- ◆ Member of the Ad hoc Committee in charge of the elaboration of the Cameroon Zoonosis Program
- ◆ Close relationships with national forestry and wildlife training institutions and great interface with MINFOF staffs be it in central and de-concentrated services, some key ministries , development partners and institutions, NGOs
- ◆ Congratulations in 2008 from Hon. Janet GARVEY, US Ambassador in Cameroon, for the quality of the management of Campo-Ma'an national Park (upon completion of her visit on the field)
- ◆ Congratulations in 2000 from the Ministry of Environment and Forestry for anti-poaching operations Douala and its neighborhoods

**Certify true all above informations.**

Serge Tchuenteu Nzietchueng  
Phone: (+237) 651913936  
Email: nitch\_cm@yahoo.fr

### **Career statement**

Professional veterinarian with more than seven (7) years of experience engaging and working with academic institutions, research institutions, government, regional and international organizations in developing and developed countries. I led and coordinated the multi-sectoral, multi-disciplinary and institutional process that culminated in the integration of the One Health approach into national the One Health strategic documents in Cameroon and Rwanda - the first countries on the continent to achieve this critical milestone. I was part of the team that for the first time in Africa used the network analysis methodology to describe the spread of Marburg virus in Uganda in 2012. My areas of interest include livestock production, food security and safety, One Health, infectious diseases, teaching and policy.

### **Key skill and competencies**

Livestock production at the environment-animal and human interface, Value chain analysis, One Health, Epidemiology and participatory epidemiology, Disease surveillance, outbreak investigation and disease management, Risk analysis, network analysis. Confidently assume management roles. I have developed, planned and managed activities for a total amount of US\$ 1,585,943 during the last 4 years.

### **Education**

**2006: *Veterinary Degree in animal health and production in tropical countries.***

National Veterinary School of Toulouse (ENVT, France)

**Dissertation title: Introduction and dissemination of Newcastle disease virus in North Cameroon: Models and qualitative risk analysis (Cameroon)**

**2005: *Master of Science in livestock productions in tropical countries.***

University of Montpellier 2 (UM II, France)

**Thesis title: Participatory epidemiology investigation on priority diseases of sheep in Lake Alaotra Region (Madagascar)**

**2004: *CEAV: Certificate for specialization in livestock infectious diseases and disease surveillance in Tropical countries*, National Veterinary School of Toulouse (ENVT, France)**

**Dissertation title: Elaboration of performance indicators for the animal disease surveillance network, (Mali)**

**2003: *Doctor of Veterinary Medicine*, National Veterinary School of Algiers (ENVA, Algeria)**

**Thesis: Contribution to improve method of heats synchronization in cattle in Algeria.**

### **Professional experience**

Period	<b>May 2010-June 2014</b>
Location	Kinshasa, Democratic Republic of Congo, Kigali, Rwanda
Organization	Tuft University, College of Veterinary Medicine (May-June 2010 ) University of Minnesota, College of veterinary medicine, University of Minnesota (June 2010-June 2014)
Position	<ul style="list-style-type: none"> <li>• Technical Advisor, USAID Grantee project, Tufts University</li> <li>• Adjunct Professor, Ecosystem Health Initiative</li> <li>Adjunct Instructor, School of Public Health</li> <li>University Technical Advisor, USAID Grantee RESPOND Project</li> <li>University of Minnesota</li> <li>Department of Veterinary Population Medicine</li> </ul>
<p><b>Cameroon</b> Lead the national process to design the One Health National Strategy and the National Program for Prevention and control of emerging and re-emerging zoonotic diseases Coordination of the One Health sensitization and the operationalization of One Health</p> <p><b>Rwanda, Ghana, Gabon, Burundi</b> Coordination of the Wildlife investigation, livestock and public health project (WILD project)</p> <ul style="list-style-type: none"> <li>• Adapt the WILD training material for each African agro-ecology system</li> <li>• Implement One Health training on wildlife investigation, livestock and public health</li> <li>• Establish an African network of wildlife health practitioners</li> </ul> <p><b>Rwanda</b></p> <ul style="list-style-type: none"> <li>• Coordination of the national process to design the One Health National Strategy plan and the One Health action plan</li> </ul> <p><u>Teaching</u></p> <p><b>1. Learning Mentor for Emerging Infectious Diseases and Extractive Industries</b> Master of Forest Management and Conservation, National School of forestry and Water, University of Libreville, Gabon</p> <p><b>2. Public Health Institute, University of Minnesota (UMN)</b></p> <ul style="list-style-type: none"> <li>• Co-teacher “Topics in infectious diseases: Emerging and re-emerging infectious diseases” (2012, 2013) to graduate students at UMN.</li> <li>• Co-teacher ”</li> </ul>	

Period	<b>March 2007 to December 2008</b>
Location	Nairobi, Kenya, Addis Ababa, Ethiopia
Organization	International Livestock Research Institute (ILRI), Market opportunities theme
Position	Assessment of Rift Valley Fever outbreak response lead Epidemiological coordinator (Kenya and Ethiopia) Pro-poor HPAI H5N1 Risk Reduction Strategies Project ILRI/IFPRI/FAO/RVC
<ul style="list-style-type: none"> <li>• Risk assessment introduction of H5N1 virus into Ethiopia</li> <li>• Participatory outbreak assessment of Rift Valley fever outbreak in Kenya and Tanzania 2006-2007</li> <li>• Guidelines for the Prevention and Control of RVF in Kenya and Tanzania Participatory assessment of Rift Valley fever surveillance and response activities in Arusha region of Tanzania</li> </ul>	



## **1. ECOHEALTH ALLIANCE BUDGET JUSTIFICATION**

### **A. Key personnel:**

The PD/PI, Dr. Andrew Huff, will commit 2.5 weeks per year in each year of this budget. Dr. Huff will be primarily responsible for overseeing the project, general management, communication and collaboration with sub awardees, and contributing to data analysis and manuscript writing. He with the design and implementation field surveys; assist with focus group training materials, survey and focus group data analyses and outreach and education materials.

Senior/Key Personnel, Dr. Maureen Miller, will commit 2.5 weeks per year. Dr. Miller will assist with the design and implementation field surveys; assist with focus group training materials, survey and focus group data analyses and outreach and education materials. She will participate in regular conference calls, help with data analysis, and draft manuscripts.

Senior/Key Personnel, Dr. William Karesh, will commit 2.5 weeks per year. Dr. Karesh will assist with the design and implementation field surveys; assist with focus group training materials, survey and focus group data analyses and outreach and education materials. He will participate in regular conference calls, help with data analysis, and draft manuscripts. He will also assist with developing culturally sensitive bushmeat policy recommendations. He will be working on the project at no cost to the government.

### **B. Other Personnel**

Dr. Dominic Travis, will commit 2.5 weeks per year. Dr. Travis will assist with determining bushmeat consumption patterns and associated infectious disease risk, assist with data analyses, and manuscript writing. He will also advise on and provide training for field teams.

Dr. Mac Farnham, will commit 5 weeks per year. Dr. Farnham will provide expertise in the cultural context of bushmeat consumption. He will also assist with determining bushmeat consumption patterns and associated infectious disease risk, assist with data analyses, and manuscript writing. He will also advise on and provide training for field teams.

Dr. Loul Séverin will commit 8 weeks per year and is affiliated with the Association Epidémiologie Santé Publique Vétérinaire in Cameroon. Dr. Séverin will assist with the design and implementation of the field survey, finding study sites, participants, and will oversee all data collection efforts. Dr. Séverin will coordinate outreach and extension activities and will assist with data analysis. Finally, Dr. Séverin will provide expertise on zoonoses and bushmeat.

Dr. Dapi Nzefa will commit 8 weeks per year and is affiliated with the Association Epidémiologie Santé Publique Vétérinaire in Cameroon. Dr. Nzefa will provide expertise on nutrition and vulnerable populations in Cameroon (e.g., women, children, and impoverished communities).

Kuete Fidèle will commit 8 weeks per year and is affiliated with the Association Epidémiologie Santé Publique Vétérinaire in Cameroon. Kuete will recruit participants and administer outreach and extension activities. Kuete will provide expertise on protected areas and human-wildlife interactions in Cameroon.

Dr. Serge Tchuenteu Nzietchueng will commit 8 weeks per year and is affiliated with the Association Epidémiologie Santé Publique Vétérinaire in Cameroon. Dr. Nzietchueng is the primary liaison between EcoHealth Alliance and Cameroon. Serge will coordinate logistics and research efforts between personnel. He will assist with data analysis and manuscript writing.

Fringe benefits for Year 1 are calculated for EcoHealth Alliance's federally approved rate of 32.4% of base salary with annual increase of 3.0% in all subsequent years.

### **C. Equipment**

Laptop computers, tablet devices, and applicable software will be purchased for partners in Cameroon (\$7,100) -- see Section F. Other Direct Costs, *Materials and Supplies*.

### **D. Travel**

#### *International Travel*

\$36,260 is requested annually in Years 1 and 2. This will support round-trip flights from New York to Douala, Cameroon for the kick-off, follow-up, and wrap-up meetings for 2 Senior/Key Personnel and 1 PD/PI at kick-off, 1 Senior/Key personnel for follow-up, and 2 Senior/Key Personnel for wrap-up.

The kick-off meetings in Years 1 and 2 include Six nights and seven days of hotels, meals, and incidentals for 2 Senior/Key Personnel and 1 PD/PI are calculated at \$10,878 per year: hotels at \$189 per night (x 6 nights and 1 personnel = \$3,402) and meals and incidentals at \$106 per day (x 7 days and 3 personnel = \$2,226). Airfare is calculated at \$1500 (x 3 people = \$4500) per person and other local travel including transportation to and from airports and local travel in Cameroon is calculated at \$250 per person (x 3 people = \$750).

The follow-up meetings in Years 1 and 2 include six nights and seven days of hotels, meals, and incidentals for 1 Senior/Key Personnel. This includes a hotel at \$189 per night ( x 6 nights and 1 personnel = \$1134) and meals and incidentals at \$106 per day ( x 7 days and 1 personnel = \$742). Airfare is calculated at \$1500 and other local travel including transportation to and from airports and local travel in Cameroon is calculated at \$250.

The final wrap-up meeting in Year 2 will include six nights and seven days of hotels, meals and incidentals for 2 Senior/Key Personnel. This includes a hotel at \$189 per night ( x 6 nights and 2 personnel = \$2268) and meals and incidentals at \$106 per day (x7 days and 2 personnel = \$1484). Airfare is calculated at \$1500 (x 2 people = \$3000) and other local travel including transportation to and from airports and local travel in Cameroon is calculated at \$250 (x 2 people = \$500).

## **E. Participant/Trainee Support Costs**

There are no participant/trainee support costs.

## **F. Other Direct Costs**

### *Materials & Supplies*

We request \$7,100 in Years 1 and 2 for survey software and technology to implement the survey. In year 1, we will purchase the 13-inch MacBook Air at \$1300 ( x 4 = \$5200) and iPad Air 2 at \$550 ( x 2 = \$1100) to support data collection and analysis. We will purchase survey software in year 1 with a licensing fee of \$200 which we will renew in year 2 for a total of \$400.

### *Data Collection and Outreach*

We request \$7585 in Years 1 and 2 to support data collection, communication materials, and community outreach.

We request \$4335 for data collection in year 1. Data collection will consist of transportation to the survey and focus groups sites calculated at \$45 ( x 3 people x 3 days = \$405), transportation with the town for survey implementation calculated at \$50 ( x 3 people x 3 days = \$450), lodging calculated at \$50 ( x 3 people x 8 days = \$1200), meals at \$25 ( x 3 people x 8 days = \$600), per diem calculated at \$50 ( x 3 people x 8 days = \$1,200), airtime communication between researchers calculated at \$30, and space and refreshments for focus groups calculated at \$150.

We request \$1050 for communication materials in Year 1. Communication materials will include poster printing fees at \$100, community radio air time at \$250, refreshments and space to host group discussions with local leaders and stakeholder institutions calculated at \$150 ( x 4 meetings = \$600) and miscellaneous office supplies at \$100.

We request \$1900 for community outreach in Year 2. Community outreach will include transportation to outreach sites calculated at \$45 ( x 2 people x 3 days = \$270), transportation within outreach sites calculated at \$50 ( x 2 people x 3 days = \$300), lodging calculated at \$50 ( x 2 people x 3 days = \$300), meals calculated at \$25 ( x 2 people x 3 days = \$150), per diem at \$50 ( x 2 people x 4 days = \$400), communication between researchers at \$30, and group discussion refreshments at \$150.

### *Host Country Meeting Costs*

We request \$16230 in Years 1 and 2 to support host country meeting costs for the kick-off, follow-up, and wrap-up meetings between Senior/Key Personnel and other personnel. Project management will be covered from subcontractor costs.

Operational costs will include meeting supplies for the three meeting types (1 - Kick-off, 2 - Follow-up, and 3 - Wrap-up) calculated at \$150 ( x 3 types = \$450), and communication fees \$150 ( x 3 meeting types = \$450). Transportation costs will include transport to Yaounde for project staff and meeting materials calculated at \$15 ( x 6 people x 6 meetings = \$540) and around Yaounde calculated at \$50 ( x 6 people x 6 meetings = \$1800). Meeting expenses will

include venue rental calculated at \$350 ( x 6 days = \$2100), lodging and breakfast for project staff calculated at \$60 ( x 6 people x 9 days = \$3240), coffee breaks calculated at \$10 ( x 25 people x 12 breaks = \$3,000), and other refreshments/lunch calculated at \$30 ( x 25 people x 6 days = \$4500). Per diem for project staff is calculated at \$50 ( x 10 people x 9 days = \$4500) and miscellaneous activities fees at \$150.

#### **H. Indirect Costs**

We are requesting the EcoHealth Alliance federally approved indirect cost rate of 44.1% on all applicable direct costs. Indirect is taken only on the first \$25,000 for each consortium/contractual agreement in each year. As there are 2 (one to the University of Minnesota and one to the Association Epidémiologie Santé Publique Vétérinaire in Cameroon), a total of \$22,050 (\$11,025 x 2) is requested as indirect costs on consortium/contractual/subaward agreements. This is not included as part of direct cost calculations.

## EcoHealth Alliance COST SUMMARY

Cost Element	Year 1			Year 2		
	Rate	Quantity	Total Amount	Rate	Quantity	Total Amount
	Hrly	# Hrs		Hrly	# Hrs	
PI - Dr. Andrew G. Huff	\$ 62.50	104	\$6,500.00	64.375	104	\$6,695.00
Dr. Maureen Miller	\$ 62.50	104	\$6,500.00	64.375	104	\$6,695.00
Dr. William Karesh	\$ -	104	\$0.00	0	104	\$0.00
<b>TOTAL DIRECT LABOR</b>		XX	\$13,000.00		XX	\$13,390.00
LABOR BURDEN	Rate	Lbr Burden Applied to	Total Amount	Rate	Lbr Burden Applied to	Total Amount
FRINGE BENEFITS	35.1%	\$13,000.00	\$4,563.00	35.15%	\$13,390.00	\$4,706.59
OVERHEAD			\$ -	%	\$	\$
<b>TOTAL LABOR BURDEN</b>			\$17,563.00			\$18,096.59
TOTAL MATL/EQUIPMENT			\$7,100.00			\$0.00
TOTAL TRAVEL COSTS			\$18,130.00			\$26,143.46
TOTAL ALL OTHER DIRECT COSTS			\$11,907.50			\$11,907.50
TOTAL SUBCONTRACTOR COSTS			\$41,433.15			\$43,117.66
<b>TOTAL DIRECT COSTS</b>			\$96,133.65			\$99,265.21
G&A, F&A, FCCM	Rate	Rate Applied to	Total Amount	Rate	Rate Applied to	Total Amount
G&A OR F&A	44.1%	\$96,134	\$42,394.94	44.1%	\$ 52,807	\$23,287.84
FACILITIES CAPITAL COST OF MONEY (FCCM) (Attach Completed DD Form 1861)			\$0.00			\$
<b>TOTAL COSTS</b>			\$138,528.58			\$122,553.05
FEE/PROFIT	Fee Rate	Fee Rate Applied to: (total cost, excluding travel & FCCM)	Total Amount	Fee Rate	Fee Rate Applied to: (total cost, excluding travel & FCCM)	Total Amount
FEE OR PROFIT	%	\$	\$0.00	%	\$	\$
<b>TOTAL COST PLUS FEE</b>			\$138,528.58			\$122,553.05
<b>TOTAL REQUESTED</b>			<b>\$261,081.63</b>			

## EcoHealth Alliance MATERIALS/EQUIPMENT

Item	Manufacturer	Part Number	Unit Price	Quantity	Total Price	Contract Period	Additional Information
Computers	Apple	13 inch MacBook Air	\$1,300	4	\$5,200	Year 1	Cameroon partners
Tablet	Apple	iPad Air 2	\$550	2	\$1,100	Year 1	Survey data collection tool
Survey Software License - annual	n/a	n/a	\$200	4	\$800	Years 1 and 2	Annual software fee per tablet

**ESTIMATED TOTAL**     \$7,100

## EcoHealth Alliance TRAVEL

<b>Trip #:</b>	1	<b>Location:</b>	Douala, Cameroon			<b>Contract Period</b>	
<b>Purpose:</b>	Kickoff Meeting					Base Period	
<b>Days</b>	<b># of People</b>	<b>Airfare</b>	<b>Per Diem</b>	<b>Lodging</b>	<b>Other</b>	<b>Total</b>	
7	3	\$1,500.00	\$742.00	\$1,134.00	\$250.00	\$10,878.00	
Itemized Expenses for "Other"							
<b>Description</b>		<b>Amount</b>					
Transportation to/from airport		\$100.00					
Local transport in Cameroon		\$150.00					
		<b>Total:</b> \$250.00					
<b>Trip #:</b>	2	<b>Location:</b>	Douala, Cameroon			<b>Contract Period</b>	
<b>Purpose:</b>	Biannual Follow-up Meeting					Base Period	
<b>Days</b>	<b># of People</b>	<b>Airfare</b>	<b>Per Diem</b>	<b>Lodging</b>	<b>Other</b>	<b>Total</b>	
7	2	\$1,500.00	\$742.00	\$1,134.00	\$250.00	\$7,252.00	
Itemized Expenses for "Other"							
<b>Description</b>		<b>Amount</b>					
Transportation to/from airport		\$100.00					
Local transport in Cameroon		\$150.00					
		<b>Total:</b> \$250.00					
<b>Trip #:</b>	3	<b>Location:</b>	Douala, Cameroon			<b>Contract Period</b>	
<b>Purpose:</b>	Year 2 meeting					Option I	
<b>Days</b>	<b># of People</b>	<b>Airfare</b>	<b>Per Diem</b>	<b>Lodging</b>	<b>Other</b>	<b>Total</b>	
7	3	\$1,500.00	\$742.00	\$1,134.00	\$250.00	\$10,878.00	
Itemized Expenses for "Other"							
<b>Description</b>		<b>Amount</b>					
Transportation to/from airport		\$100.00					
Local transport in Cameroon		\$150.00					
		<b>Total:</b> \$250.00					
<b>Trip #:</b>	4	<b>Location:</b>	Douala, Cameroon Biannual			<b>Contract Period</b>	
<b>Purpose:</b>	Follow-up Meeting (Year 2)					Option I	
<b>Days</b>	<b># of People</b>	<b>Airfare</b>	<b>Per Diem</b>	<b>Lodging</b>	<b>Other</b>	<b>Total</b>	
7	2	\$1,500.00	\$742.00	\$1,134.00	\$250.00	\$7,252.00	
Itemized Expenses for "Other"							
<b>Description</b>		<b>Amount</b>					
Transportation to/from airport		\$100.00					
Local transport in Cameroon		\$150.00					
		<b>Total:</b> \$250.00					
<b>Trip #:</b>	5	<b>Location:</b>	Douala, Cameroon			<b>Contract Period</b>	
<b>Purpose:</b>	Project Wrap-up Meeting					Option I	
<b>Days</b>	<b># of People</b>	<b>Airfare</b>	<b>Per Diem</b>	<b>Lodging</b>	<b>Other</b>	<b>Total</b>	
7	2	\$1,500.00	\$742.00	\$1,134.00	\$250.00	\$7,252.00	
Itemized Expenses for "Other"							
<b>Description</b>		<b>Amount</b>					
Transportation to/from airport		\$100.00					
Local transport in Cameroon		\$150.00					
		<b>Total:</b> \$250.00					

<b>TRAVEL ESTIMATED COST</b>	<b>\$43,512.00</b>
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## EcoHealth Alliance SUBCONTRACTORS

Company or Institution Name	Total Price	Contract Period	Additional Information
University of Minnesota	\$21,433.15	Year 1	Dr. Dominic Travis & Dr. Mac Farnham
Cameroon Partners	\$20,000.00	Year 1	Serge Tchuenteu Nzietchueng, Dr. Kuete Fidèle, Dr. Dapi Nzefa,& Dr. Loul Séverin
University of Minnesota	\$21,861.81	Year 2	Dr. Dominic Travis & Dr. Mac Farnham
Cameroon Partners	\$20,000.00	Year 2	Serge Tchuenteu Nzietchueng, Dr. Kuete Fidèle, Dr. Dapi Nzefa,& Dr. Loul Séverin

ESTIMATED TOTAL    \$83,294.96



## CAMEROON: Data Collection & Outreach Part 1

NO.	CATEGORY	VOLUME		FREQUENCY		COST/ UNIT	(\$ ) TOTAL LOCAL CURRENCY	REMARKS
		VOL	UNIT	FREQ	UNIT			
I	<b>Data collection (earl-mid Year 1)</b>							
	1 Transport from Yaoundé to	3	person	3	days	45.00	405.00	
	2 Transport within the town	3	person	3	days	50.00	450.00	
	3 Accommodation	3	person	8	days	50.00	1,200.00	
	4 Breakfast, lunch and dinner	3	person	8	days	25.00	600.00	
	5 Per diem	3	person	8	days	50.00	1,200.00	
	6 Airtime communication	1	Card	1	lump sum	30.00	30.00	
	7 Groups discussion	1	person	3	lump sum	150.00	450.00	
	Value Added Tax (VAT)					0%		
	<b>Subtotal</b>						<b>4,335.00</b>	
II	<b>Communication materials (End of Year 1 )</b>							
	1 Poster	200	unit	1	lump sum	0.50	100.00	
	2 Community Radio	1	Radio	5	lump sum	50.00	250.00	
	3 Group discussion with local leader, local institutions	1	person	4	lump sum	150.00	600.00	
	4 communication misc.	1	unit	1	lump sum	100.00	100.00	
	Value Added Tax (VAT)					0%		
	<b>Subtotal</b>						<b>1,050.00</b>	
III	<b>Community outreach (Year 2)</b>							
	1 Transport from Yaoundé to	2	person	3	days	45.00	270.00	
	2 Transport within the town	2	person	3	days	50.00	300.00	
	3 Accommodation	2	person	3	days	50.00	300.00	
	4 Breakfast, lunch and dinner	2	person	3	days	25.00	150.00	
IV	5 Per diem	2	person	4	days	50.00	400.00	
	6 Airtime communication	1	Card	1	lump sum	30.00	30.00	Including coffee break and lunch (45 persons)
	7 Groups discussion	1	person	3	lump sum	150.00	450.00	
	<b>Subtotal</b>						<b>1,900.00</b>	
V								Members of the committee, professional associations, universities, .....
	Value Added Tax (VAT)					0%	0.00	
	<b>Subtotal</b>						<b>0.00</b>	
VI								
	Value Added Tax (VAT)					0%	0.00	
	<b>Subtotal</b>						<b>0.00</b>	
VII						-	0.00	WC basin
	Value Added Tax (VAT)					-	0.00	
	<b>Subtotal</b>						<b>0.00</b>	
	<b>Subtotal VAT:</b>							
	<b>GRAND TOTAL without VAT</b>						<b>7,585.00</b>	

## CAMEROON: Data Collection & Outreach Part 2

NO.	CATEGORY	VOLUME		FREQUENCY		COST/ UNIT US \$	TOTAL LOCAL CURRENCY	Comments
		VOL	UNIT	FREQ	UNIT			
I	PROJECT MANAGEMENT(Salaries, Consultancy Fees & etc.)							
	1 Workshop facilitators		person		days	0.00	0.00	Epidemiology and Public Health association
	Value Added Tax (VAT)					0%	0.00	
	Subtotal						0.00	
II	OPERATIONS (Supplies, Communication, Rental, Photocopies & Other Operational expenses)							
	1 Meeting supplies	1	unit	3	ump sum	150.00	450.00	1)initial inception meeting
	2 communication misc.	1	unit	3	ump sum	150.00	450.00	2) year 1-2 half way meeting
	Value Added Tax (VAT)					18%		3) final wrap up meeting
	Subtotal						900.00	2 days meeting x 3 meetings
III	TRANSPORTATION (Local, Material & Staff Transport)							
	Transport participants in Yaoundé	6	pple	6	trip	15.00	540.00	1)initial inception meeting
	1 Road transport participants to Yaoundé	6	pple	6	trips	50.00	1,800.00	2) year 1-2 half way meeting
	Value Added Tax (VAT)					18%		
	Subtotal						2,340.00	
IV	MEETING EXPENSES (Accommodation, Consumption and other facilities)							
	1 Venue rental	1	unit	6	days	350.00	2,100.00	1)initial inception meeting
	2 lodging including breakfast	6	pple	9	days	60.00	3,240.00	2) year 1-2 half way meeting
	3 Coffee break	25	unit	12	breaks	10.00	3,000.00	3) final wrap up meeting
	4 Refreshment/lunch	25	unit	6	days	30.00	4,500.00	2 days meeting x 3 meetings
	Value Added Tax (VAT)					18%		
	Subtotal						12,840.00	
V	ACTIVITIES:							
	Per diem	10	pple	9	days	50	4,500.00	3) final wrap up meeting
	2 Misc.	1	ump sum	1	ump sum	150.00	150.00	
	Value Added Tax (VAT)					18%		
	Subtotal						150.00	
VI	MEDIA & INFO (If Applicable)							
	1		ump sum		ump sum		0.00	
			unit		unit		0.00	
						18%	0.00	
	Subtotal						0.00	
	GRAND TOTAL with VAT						16,230.00	
	Subtotal VAT:						0.00	
	GRAND TOTAL without VAT						16,230.00	

## UMN SUBAWARD BREAKDOWN

PERSONNEL	YEAR 1 06/01/15 - 05/31/16				YEAR 2 06/01/16 - 05/31/17				TOTAL 06/01/15 - 05/31/17
	Effort	Cal months	Base Salary	Amount	Effort	Cal months	Base Salary	Amount	
Dominic Travis, PI	3%	0.36	\$163,308	4,860	3%	0.36	\$166,574	4,957	9,817
Mac Farnham, Co-I	10%	1.20	\$78,534	7,853	10%	1.20	\$80,105	8,010	15,864
<b>Total Salary</b>				<b>12,713</b>				<b>12,968</b>	<b>25,681</b>
<b>FRINGE</b>			<b>Rate</b>				<b>Rate</b>		
Dominic Travis, PI			33.80%	1,643			33.80%	1,676	3,318
Mac Farnham, Co-I			33.80%	2,654			33.80%	2,708	5,362
<b>Total Fringe</b>				<b>4,297</b>				<b>4,383</b>	<b>8,680</b>
<b>TOTAL PERSONNEL</b>				<b>17,011</b>				<b>17,351</b>	<b>34,361</b>
<b>TOTAL DIRECT COSTS</b>				<b>17,011</b>				<b>17,351</b>	<b>34,361</b>
<b>INDIRECT COSTS (26% MTDC)</b>			<b>26%</b>	<b>4,423</b>			<b>26%</b>	<b>4,511</b>	<b>8,934</b>
<b>TOTAL</b>				<b>21,433</b>				<b>21,862</b>	<b>43,295</b>

# NONPROFIT RATE AGREEMENT

EIN: 311726494

DATE: 04/25/2014

ORGANIZATION:

EcoHealth Alliance

460 West 34th St., 17th Fl.

New York, NY 10001-2320

FILING REF.: The preceding  
agreement was dated  
04/03/2013

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

## SECTION I: INDIRECT COST RATES

RATE TYPES:      FIXED              FINAL              PROV. (PROVISIONAL)      PRED. (PREDETERMINED)

### EFFECTIVE PERIOD

<u>TYPE</u>	<u>FROM</u>	<u>TO</u>	<u>RATE(%)</u>	<u>LOCATION</u>	<u>APPLICABLE TO</u>
FINAL	07/01/2012	06/30/2013	40.10	On-Site	All Programs
PROV.	07/01/2013	Until Amended	43.70		Use same rates and conditions as those cited for fiscal year ending June 30, 2013.

### \*BASE

Total direct costs excluding capital expenditures (buildings, individual items of equipment; alterations and renovations), that portion of each subaward in excess of \$25,000 and flow-through funds.

ORGANIZATION: EcoHealth Alliance

AGREEMENT DATE: 4/25/2014

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**SECTION I: FRINGE BENEFIT RATES\*\***

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<u>TYPE</u>	<u>FROM</u>	<u>TO</u>	<u>RATE(%)</u>	<u>LOCATION</u>	<u>APPLICABLE TO</u>
FINAL	7/1/2012	6/30/2013	32.60	All	Full-Time Employees
PROV.	7/1/2013	Until amended	33.40		Use same rates and conditions as those cited for fiscal year ending June 30, 2013.

\*\* DESCRIPTION OF FRINGE BENEFITS RATE BASE:

Salaries and wages.

ORGANIZATION: EcoHealth Alliance

AGREEMENT DATE: 4/25/2014

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**SECTION II: SPECIAL REMARKS**

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TREATMENT OF FRINGE BENEFITS:

The fringe benefits are charged using the rate(s) listed in the Fringe Benefits Section of this Agreement. The fringe benefits included in the rate(s) are listed below.

TREATMENT OF PAID ABSENCES

Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences.

Fringe benefits include FICA/Medicare, health insurance, life insurance, dental insurance, short/long term disability insurance, retirement, workers' compensation and unemployment and other.

Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost of \$5,000 or more per unit.

ORGANIZATION: EcoHealth Alliance

AGREEMENT DATE: 4/25/2014

### SECTION III: GENERAL

**A. LIMITATIONS:**

The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its indirect cost pool as finally accepted; such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as indirect costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

**B. ACCOUNTING CHANGES:**

This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from indirect to direct. Failure to obtain approval may result in cost disallowances.

**C. FIXED RATES:**

If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

**D. USE BY OTHER FEDERAL AGENCIES:**

The rates in this Agreement were approved in accordance with the authority in Office of Management and Budget Circular A-122, and should be applied to grants, contracts and other agreements covered by this Circular, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

**E. OTHER:**

If any Federal contract, grant or other agreement is reimbursing indirect costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected programs, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of indirect costs allocable to these programs.

BY THE INSTITUTION:

EcoHealth Alliance

(INSTITUTION)

(SIGNATURE)

(NAME)

(TITLE)

(DATE)

ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES

(AGENCY)

(SIGNATURE)

Darryl W. Mayes

(NAME)

Deputy Director, Division of Cost Allocation

(TITLE)

4/25/2014

(DATE) 1227

HHS REPRESENTATIVE:

Edwin Miranda

Telephone:

(212) 264-2069

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.  
CONSOLIDATED FINANCIAL STATEMENTS,  
AUDITOR'S REPORTS AND SCHEDULE  
RELATED TO OFFICE OF MANAGEMENT  
AND BUDGET CIRCULAR A-133  
JUNE 30, 2013**



**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

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**Notes to Schedule of Expenditures of Federal Awards**

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
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**Independent Auditor's Report on Financial Statements  
and Supplementary Information**

**Board of Directors  
EcoHealth Alliance, Inc. and  
Wildlife Preservation Trust International, Inc.**

***Report on the Financial Statements***

We have audited the accompanying consolidated financial statements of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc., which comprise the consolidated balance sheet as of June 30, 2013, and the related consolidated statements of activities, functional expenses and cash flows for the year then ended, and the related notes to the consolidated financial statements.

***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

***Auditor's Responsibility***

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### ***Opinion***

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc. as of June 30, 2013, and changes in their net assets and their cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### ***Supplementary Information***

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying schedule of expenditures of federal awards, as required by Office of Management and Budget Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*, is presented for purposes of additional analysis and is not a required part of the financial statements. The accompanying schedule of expenditures of federal awards is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the accompanying schedule of expenditures of federal awards is fairly stated, in all material respects, in relation to the financial statements as a whole.

***Report on Summarized Comparative Information***

We have previously audited EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s June 30, 2012 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated January 31, 2013. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2012 is consistent, in all material respects, with the audited financial statements from which it has been derived.

***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated December 2, 2013 on our consideration of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s internal control over financial reporting and on our tests of their compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s internal control over financial reporting and compliance.

*Loeb & Troper LLP*

December 2, 2013, except for the schedule  
of expenditures of federal awards, as to  
which the date is February 14, 2014

**EXHIBIT A**

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**CONSOLIDATED BALANCE SHEET****JUNE 30, 2013 AND 2012**

	<u>2013</u>	<u>2012</u>
<b>ASSETS</b>		
Cash and cash equivalents	\$ 1,114,233	\$ 1,527,312
Investments (Note 3)	1,845,184	2,607,681
Contributions receivable (Note 4)	247,206	385,524
Government contracts receivable - current	1,644,860	637,600
Other receivable		988
Prepaid expenses	63,305	23,381
Security deposits	33,333	33,333
Fixed assets - net (Note 5)	<u>95,733</u>	<u>146,119</u>
Total assets	<u>\$ 5,043,854</u>	<u>\$ 5,361,938</u>
<b>LIABILITIES AND NET ASSETS</b>		
Liabilities		
Accounts payable and accrued expenses	<u>\$ 2,329,374</u>	<u>\$ 1,900,734</u>
Net assets (Exhibit B)		
Unrestricted	2,396,635	1,987,408
Temporarily restricted (Note 7)	317,845	473,796
Permanently restricted (Notes 7 and 11)	<u>1,000,000</u>	<u>1,000,000</u>
Total net assets	<u>2,714,480</u>	<u>3,461,204</u>
Total liabilities and net assets	<u>\$ 5,043,854</u>	<u>\$ 5,361,938</u>

See independent auditor's report.

The accompanying notes are an integral part of these statements.

**ECOHEALTH ALLIANCE, INC. AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**EXHIBIT B**

**CONSOLIDATED STATEMENT OF ACTIVITIES**

**YEAR ENDED JUNE 30, 2013  
(With Summarized Financial Information  
for the Year Ended June 30, 2012)**

	<b>2013</b>			<b>2012</b>
	<b>Unrestricted</b>	<b>Temporarily Restricted</b>	<b>Permanently Restricted</b>	
Operating revenues and other support				
Government contracts and grants	\$ 7,057,581			\$ 5,834,820
Foundations - contributions	3,000	\$ 187,015		505,468
Corporations - contributions (including in-kind contributions of \$769,551 in 2013) (Note 9)	905,010	10,999		935,210
Bequests	77,681	31,273		409,928
Individuals - contributions	355,064	92,000		499,415
Special events	355,945			185,590
Other revenues	91,821	9,948		65,346
Net assets released from restrictions (Note 7)	487,186	(487,186)		
Total operating revenues and other support	9,333,288	(155,951)	9,177,337	8,435,777

-continued-

**ECOHEALTH ALLIANCE, INC. AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**EXHIBIT B  
-2-**

**CONSOLIDATED STATEMENT OF ACTIVITIES**

**YEAR ENDED JUNE 30, 2013  
(With Summarized Financial Information  
for the Year Ended June 30, 2012)**

	<b>2013</b>			<b>2012</b>
	<b>Unrestricted</b>	<b>Temporarily Restricted</b>	<b>Permanently Restricted</b>	
Expenses (Exhibit C)				
Program service				
Research and education	\$ 7,019,042			\$ 6,894,466
Supporting services				
Management and general	658,174			690,163
Fund raising	1,439,960			871,644
Direct costs of special events	99,388			92,458
Total supporting services	2,197,522			1,654,265
Total expenses	9,216,564			8,548,731
Operating gain (loss)	116,724	\$ (155,951)		(112,954)
Nonoperating activities				
Investment income (Note 3)	292,503			116,869
Disposition of restricted funds (Note 11)			\$ (1,000,000)	(1,872,785)
Change in net assets (Exhibit D)	409,227	(155,951)	(1,000,000)	(1,868,870)
Net assets - beginning of year	1,987,408	473,796	1,000,000	5,330,074
Net assets - end of year (Exhibit A)	\$ 2,396,635	\$ 317,845	\$ -	\$ 3,461,204

See independent auditor's report.

The accompanying notes are an integral part of these statements.



ECOHEALTH ALLIANCE, INC. AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.

EXHIBIT C

CONSOLIDATED STATEMENT OF FUNCTIONAL EXPENSES

YEAR ENDED JUNE 30, 2013  
(With Summarized Financial Information  
for the Year Ended June 30, 2012)

	Research and Education	Management and General	Supporting Services		Total	Total	
			Fund Raising	Direct Costs of Special Events		2013	2012
Salaries	\$ 1,953,635	\$ 311,161	\$ 412,242		\$ 723,403	\$ 2,677,038	\$ 2,338,790
Payroll taxes and employee benefits	638,611	100,009	133,100		233,109	871,720	723,024
Total salaries and related expenses	2,592,246	411,170	545,342		956,512	3,548,758	3,061,814
Professional fees (Note 9)	76,071	61,266	763,659		824,925	900,996	864,292
Subcontracts	3,006,187					3,006,187	2,787,426
Grants to other organizations	128,084					128,084	256,213
Field costs	86,976					86,976	111,002
Meetings and conferences	164,656	8,295	33,050		41,345	206,001	148,047
Travel and entertainment	437,372	2,449	20,190		22,639	460,011	461,001
Occupancy (Note 8)	268,895	132,900	42,778		175,678	444,573	410,281
Printing	37,636	619	7,551		8,170	45,806	52,006
Postage	21,902	1,274	2,513		3,787	25,689	32,187
Supplies	22,872	6,033	3,124		9,157	32,029	28,908
Telephone	43,309	10,177	3,369		13,546	56,855	29,204
Dues and subscriptions	12,452	683	293		976	13,428	19,511
Depreciation and amortization	30,054	15,402	4,930		20,332	50,386	62,917
Catering and facility rental				\$ 99,388	99,388	99,388	92,458
Information technology	90,330	7,613	13,161		20,774	111,104	130,219
Investment expenses		14,948			14,948	14,948	23,257
Miscellaneous		293			293	293	1,245
Total other than salaries and related expenses	4,426,796	261,952	894,618	99,388	1,255,958	5,682,754	5,510,174
Total expenses	7,019,042	673,122	1,439,960	99,388	2,212,470	9,231,512	8,571,988
Less expenses netted against investment income		(14,948)			(14,948)	(14,948)	(23,257)
Total expenses reported by function on the statement of activities (Exhibit B)	\$ 7,019,042	\$ 658,174	\$ 1,439,960	\$ 99,388	\$ 2,197,522	\$ 9,216,564	\$ 8,548,731

See independent auditor's report.

The accompanying notes are an integral part of these statements.

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**CONSOLIDATED STATEMENT OF CASH FLOWS**

**YEARS ENDED JUNE 30, 2013 AND 2012**

	<u>2013</u>	<u>2012</u>
Cash flows from operating activities		
Change in net assets (Exhibit B)	\$ (746,724)	\$ (1,868,870)
Adjustments to reconcile change in net assets to net cash used by operating activities		
Depreciation and amortization	50,386	62,917
Realized and unrealized gains on investments	(240,537)	(27,183)
Disposition of endowment fund	1,000,000	
Decrease (increase) in assets		
Contributions receivable	138,318	(141,387)
Government contracts receivable	(1,007,260)	64,106
Other receivable	988	9,616
Prepaid expenses	(39,924)	32,313
Increase in liabilities		
Accounts payable and accrued expenses	428,640	462,750
Net cash used by operating activities	<u>(416,113)</u>	<u>(1,405,738)</u>
Cash flows from investing activities		
Proceeds from sale of investments	2,224,010	2,395,619
Purchase of investments	(1,220,976)	(599,162)
Disposition of long-term endowment	(1,000,000)	
Net cash provided by investing activities	<u>3,034</u>	<u>1,796,457</u>
Net change in cash and cash equivalents	(413,079)	390,719
Cash and cash equivalents - beginning of year	<u>1,527,312</u>	<u>1,136,593</u>
Cash and cash equivalents - end of year	<u>\$ 1,114,233</u>	<u>\$ 1,527,312</u>

See independent auditor's report.

The accompanying notes are an integral part of these statements.

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**JUNE 30, 2013**

**NOTE 1 - ORGANIZATION AND TAX STATUS**

On June 22, 2010, Wildlife Trust, Inc. changed its name to EcoHealth Alliance, Inc.

EcoHealth Alliance, Inc. was incorporated on July 20, 2000 in the Commonwealth of Massachusetts. EcoHealth Alliance, Inc.'s mission is to integrate innovative science-based solutions and partnerships that increase capacity to achieve two interrelated goals: protecting global health by preventing the outbreak of emerging diseases and safeguarding ecosystems by promoting conservation.

EcoHealth Alliance, Inc. is funded primarily by contributions and government contracts and grants.

Wildlife Preservation Trust International, Inc. (WPTI) was incorporated on January 7, 1976 in the state of Pennsylvania. WPTI is a dormant corporation. In 2000, WPTI transferred the predominance of its assets to Wildlife Trust Inc., now known as EcoHealth Alliance, Inc.

EcoHealth Alliance, Inc. and WPTI are exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code and are related through common control.

EcoHealth Alliance, Inc. and WPTI are collectively referred to as "EHA."

**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

***Basis of accounting*** - The financial statements are prepared on the accrual basis of accounting.

***Principles of consolidation*** - All material intercompany transactions and balances have been eliminated in the consolidation.

***Use of estimates*** - The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

-continued-

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**JUNE 30, 2013**

**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)**

***Cash and cash equivalents*** - EHA considers highly liquid instruments purchased with original maturities of three months or less to be cash equivalents. EHA has periodically throughout the year maintained balances in various operating and money market accounts in excess of federally insured limits.

***Investments*** - Investments are recorded at fair value. EHA invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market and credit risks. Due to the level of risk associated with investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term, based upon the markets' fluctuations, and that such changes could materially affect EHA's financial statements.

***Contributions receivable*** - Unconditional promises to give that are expected to be collected within one year are recorded at net realizable value. Unconditional promises to give that are expected to be collected in future years are recorded at the present value of their estimated future cash flows. The discounts on those amounts are computed using risk-adjusted interest rates applicable to the years in which the promises are received. Amortization of the discounts is included in contribution revenue. Conditional promises to give are not included as support until the conditions are subsequently met.

***Government contracts receivable*** - Government contracts receivable are recorded when qualifying expenditures are incurred and EHA has a signed contract for services.

***Allowance for doubtful accounts*** - EHA determines whether an allowance for uncollectibles should be provided for contributions and government contracts receivable. Such estimates are based on management's assessment of the aged basis of its contributions and other sources, current economic conditions and historical information. Contributions and government contracts receivable are written off against the allowance for doubtful accounts when all reasonable collection efforts have been exhausted.

***Fixed assets*** - Fixed assets are recorded at cost and depreciated over their estimated useful lives using the straight-line method. Leasehold improvements are recorded at cost and are amortized over the shorter of the term of the lease or its estimated useful life using the straight-line method. Items with a cost in excess of \$5,000 and an estimated useful life of greater than one year are capitalized.

-continued-

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**JUNE 30, 2013**

**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)**

*Net assets* - Unrestricted net assets include funds having no restriction as to use or purpose imposed by donors. Temporarily restricted net assets are those whose use has been limited by donors to a specific time period or purpose. Permanently restricted net assets have been restricted by donors to be maintained in perpetuity.

*Revenues from government agencies* - Revenues from government agencies are recognized when earned. Expense-based grants are recognized as allowable expenses are incurred. Performance-based grants are recognized as milestones are achieved.

*Contributed services* - Contributed services are recognized as revenue if the services create or enhance nonfinancial assets or require specialized skills, are provided by individuals possessing those skills, and typically need to be purchased if not provided by donation.

*Contributions* - Unconditional contributions, including promises to give cash and other assets, are reported at fair value at the date the contribution is received. Contributions are reported as either temporarily or permanently restricted support if they are received with donor stipulations that limit the use of the donated assets. When a donor restriction expires, that is, when a stipulated time restriction ends or purpose restriction is accomplished, temporarily restricted net assets are reclassified as unrestricted net assets and reported in the statement of activities as net assets released from restrictions.

*In-kind donations* - In-kind donations are recorded at fair value.

*Functional allocation of expenses* - The costs of providing EHA's programs and other activities have been summarized on a functional basis. Accordingly, certain costs have been allocated among the programs and supporting services benefited.

*Rent expense* - EHA leases space at various locations. All leases are operating leases. Rent expense is recognized on the first day of each month for the current month's rent. All leases are reflected on the straight-line basis.

-continued-

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**JUNE 30, 2013**

**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)**

***Grants to other organizations*** - EHA grants funds to charitable organizations for specific programs. Grants are recorded when approved by the EHA Board of Directors. Funds approved for payment are recorded as grants payable. As of June 30, 2013 and 2012, there were no outstanding grants payable.

***Subcontracted services*** - Subcontracted services are recorded when services are incurred by the subcontractor. Advances to subcontractors are recorded as an asset. As of June 30, 2013 and 2012, there were no advances to subcontractors.

***Measure of operations*** - EHA includes in its measure of operations all revenues and expenses that are an integral part of its program and supporting services and excludes investment income and disposition of restricted funds.

***Prior-year summarized comparative information*** - The financial statements include certain prior-year summarized comparative information in total but not by net asset class. Such information does not include sufficient detail to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the financial statements for the year ended June 30, 2012, from which the summarized information was derived.

***Fair Value Measurements***

***Fair Value Measurements***, ASC Topic 820, establishes a framework for measuring fair value. The framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below. Level 1 inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that EHA has the ability to access. Level 2 inputs to the valuation methodology include:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability;
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

-continued-

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**JUNE 30, 2013**

**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)**

***Fair Value Measurements (continued)***

If the asset or liability has a specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability. Level 3 inputs to the valuation methodology are unobservable and significant to the fair value measurement. The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

The following is a description of the valuation methodology used for assets measured at fair value. There has been no change in the methodology used at June 30, 2013 as compared to 2012.

***Cash equivalents*** - Valued at the closing price reported on the active market on which the individual securities are traded.

***Government and government agency bonds, common stock, corporate bonds, U.S. Treasury bonds and notes, and exchange-traded funds (ETFs)*** - Valued at the closing price reported on the active market on which the individual securities are traded.

The method described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while EHA believes its valuation method is appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

The assets at fair value as of June 30, 2013 and 2012 are set forth by level within the fair value hierarchy in Note 3.

***Uncertainty in income taxes*** - EHA has determined that there are no material uncertain tax positions that require recognition or disclosure in the financial statements. Periods ending June 30, 2010 and subsequent remain subject to examination by applicable taxing authorities.

***Subsequent events*** - Subsequent events have been evaluated through December 2, 2013, which is the date the financial statements were available to be issued.

-continued-

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**JUNE 30, 2013**

**NOTE 3 - INVESTMENTS**

	<b>2013</b> <b>(Level 1)</b>	<b>2012</b> <b>(Level 1)</b>
Cash equivalents	\$ 30,067	\$ 30,911
Bonds		
Corporate bonds	337,912	584,973
Government and government agency bonds	79,993	71,346
U.S. treasury bonds and notes	48,660	37,763
Common stock		
Basic materials	206,565	218,607
Conglomerates		98,165
Consumer goods	190,566	175,266
Financial	166,148	213,248
Healthcare	223,730	226,626
Industrials	63,540	30,713
Information technology	262,820	290,700
Services	229,156	264,284
Exchange-traded funds (ETFs) - equities	<u>6,027</u>	<u>365,079</u>
	<u>\$ 1,845,184</u>	<u>\$ 2,607,681</u>

Investment income consists of the following:

	<b>2013</b>	<b>2012</b>
Interest and dividends	\$ 66,914	\$ 112,943
Realized and unrealized gains on investments	240,537	27,183
Investment fees	<u>(14,948)</u>	<u>(23,257)</u>
	<u>\$ 292,503</u>	<u>\$ 116,869</u>

-continued-



**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**JUNE 30, 2013**

**NOTE 4 - CONTRIBUTIONS RECEIVABLE**

Contributions receivable are recorded at their net realizable value. The contributions receivable are expected to be paid as follows:

2014	\$ 207,206
2015	<u>40,000</u>
	<u>\$ 247,206</u>

**NOTE 5 - FIXED ASSETS**

	<u>2013</u>	<u>2012</u>	<u>Estimated Useful Lives</u>
Office equipment	\$ 47,507	\$ 47,507	3 years
Furniture and fixtures	68,439	68,439	10 years
Leasehold improvements	<u>472,824</u>	<u>472,824</u>	10 years
	588,770	588,770	
Accumulated depreciation and amortization	<u>(493,037)</u>	<u>(442,651)</u>	
Net	<u>\$ 95,733</u>	<u>\$ 146,119</u>	

**NOTE 6 - PENSION**

EHA has a 403(b) defined contribution pension plan covering employees who meet age and length of service requirements. Pension expense was \$119,053 and \$107,477 for the years ended June 30, 2013 and 2012, respectively.

-continued-

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**JUNE 30, 2013**

**NOTE 7 - TEMPORARILY AND PERMANENTLY RESTRICTED NET ASSETS**

Temporarily restricted net assets are available for the following purposes:

	<u><b>2013</b></u>	<u><b>2012</b></u>
Aquatics programs		\$ 5,000
Conservation medicine field activities	\$ 277,480	
Ecohealth Alliance Partners	40,265	305,636
Predict and prevent programs	<u>                    </u>	<u>163,160</u>
	<u>\$ 317,845</u>	<u>\$ 473,796</u>

Temporarily restricted net assets have been released from restrictions by satisfying the following purposes:

	<u><b>2013</b></u>	<u><b>2012</b></u>
Aquatics programs	\$ 5,000	\$
Conservation medicine field activities	53,655	13,337
Ecohealth Alliance Partners	265,371	272,579
Predict and prevent programs	<u>163,160</u>	<u>370,403</u>
	<u>\$ 487,186</u>	<u>\$ 656,319</u>

Permanently restricted net assets are restricted to investments to be held in perpetuity. The investment income is available for the following purpose:

	<u><b>2013</b></u>	<u><b>2012</b></u>
Elephant conservation	\$ <u>-</u>	\$ <u>1,000,000</u>

-continued-

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**JUNE 30, 2013**

**NOTE 8 - OCCUPANCY**

In 2005, EHA entered into a ten-year and five-month lease for office space in New York. On September 24, 2013 the lease was extended until December 31, 2023. Rental expense for the years ended June 30, 2013 and 2012 was \$264,036 and \$243,834, respectively.

Minimum lease payments are as follows:

<b>Year Ending June 30,</b>	
	<u>                    </u>
2014	\$ 299,800
2015	369,600
2016	369,600
2017	397,100
2018	424,600
Thereafter	<u>2,500,300</u>
	<u>\$ 4,361,000</u>

**NOTE 9 - IN-KIND DONATIONS**

EHA received the following in-kind donations:

Legal fees	\$ 38,661
Public relations	690,600
Research	<u>40,290</u>
	<u>\$ 769,551</u>

**NOTE 10 - CONTINGENCIES**

EHA is subject to audits by funding sources. Management believes that the results of such audits, if any, will not have an adverse effect on the financial statements.

-continued-

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**JUNE 30, 2013**

**NOTE 11 - DISPOSITION OF RESTRICTED FUNDS**

In March 2013, EHA reached an agreement with the Wildlife Conservation Network on the disposition of a restricted fund: the Elephant Crisis Fund, (part of EcoHealth Alliance Partners) which had been held by EHA.

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**

**YEAR ENDED JUNE 30, 2013**

<b>Federal Grantor/Pass-through Grantor/Program or Cluster Title</b>	<b>Federal CFDA Number</b>	<b>Pass-through Entity Identification Number</b>	<b>Federal Expenditures</b>
<b><u>Research and Development Cluster</u></b>			
U.S. Department of Interior			
Fish and Wildlife Service			
Endangered Species Conservation - Recovery Implementation Funds	15.657		\$ 74,491
Great Apes Conservation Fund	15.629		<u>36,996</u>
Total U.S. Department of Interior			<u>111,487</u>
National Science Foundation			
Biological Sciences	47.074		
Viral Pathogens			15,975
EcohealthNet			119,930
Kuming Workshop			<u>9,020</u>
Total National Science Foundation			<u>144,925</u>
U.S. Department of Defense			
Defense Threat Reduction Agency			
Biosurveillance Ecosystem Implementation	12.UNKNOWN		<u>501,970</u>
Total U.S. Department of Defense			<u>501,970</u>

- continued -

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**

**YEAR ENDED JUNE 30, 2013**

<b>Federal Grantor/Pass-through Grantor/Program or Cluster Title</b>	<b>Federal CFDA Number</b>	<b>Pass-through Entity Identification Number</b>	<b>Federal Expenditures</b>
<b><u>Research and Development Cluster (continued)</u></b>			
U.S. Department of Health and Human Services			
National Institutes of Health			
Allergy, Immunology and Transplantation Research	93.855		\$ 1,031,507
Biomedical Research and Research Training	93.859		
Pass-through from Arizona State University		12-850	107,264
Bushment Services	93.UNKNOWN		46,318
International Research and Research Training	93.989		496,791
The Ecology, Emergence and Pandemic Potential of Nipah Virus in Bangladesh	93.999		<u>105,394</u>
Total U.S. Department of Health and Human Services			<u>1,787,274</u>
United States Agency for International Development			
Global Viral Forecasting	98.UNKNOWN		
Pass-through from Global Viral Forecasting Incorporated		N/A	130,130
Emerging Pandemic Threat Program	98.UNKNOWN		
Pass-through from University of California-Davis		N/A	<u>4,381,794</u>
Total United States Agency for International Development			<u>4,511,924</u>
Total Research and Development Cluster			<u>7,057,580</u>
Total expenditures of federal awards			<u>\$ 7,057,580</u>

See independent auditor's report.

The accompanying notes are an integral part of this schedule.

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**

**YEAR ENDED JUNE 30, 2013**

**NOTE 1 - BASIS OF PRESENTATION**

The accompanying schedule of expenditures of federal awards (the "Schedule") includes the federal grant activity of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc. under programs of the federal government for the year ended June 30, 2013. The information in this schedule is presented in accordance with the requirements of Office of Management and Budget (OMB) Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*. Because the Schedule presents only a selected portion of the operations of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc., it is not intended to and does not present the financial position, changes in net assets or cash flows of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.

**NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

Expenditures reported on the Schedule are reported on the accrual basis of accounting. Such expenditures are recognized following the cost principles contained in OMB Circular A-122, *Cost Principles for Non-Profit Organizations*, wherein certain types of expenditures are not allowable or are limited as to reimbursement. Negative amounts shown on the Schedule represent adjustments or credits made in the normal course of business to amounts reported as expenditures in prior years. Pass-through entity identifying numbers are presented where available.

**NOTE 3 - SUBRECIPIENTS**

Of the federal expenditures presented in the Schedule, EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc. provided federal awards to subrecipients as follows:

<u>CFDA Number</u>	<u>Program Name</u>	<u>Amount Provided to Subrecipient</u>
47.074	Biological Sciences	\$ 97,109
93.855	Allergy, Immunology and Transplantation Research	616,816

-continued-

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS**

**YEAR ENDED JUNE 30, 2013**

**NOTE 3 - SUBRECIPIENTS (continued)**

<u>CFDA Number</u>	<u>Program Name</u>	<u>Amount Provided to Subrecipient</u>
93.859	Biomedical Research and Research Training	\$ 17,240
93.989	International Research and Research Training	318,767
93.999	The Ecology, Emergence and Pandemic Potential of Nipah Virus in Bangladesh	27,144
93. UNKNOWN	Bushment Services	<u>4,000</u>
	Total	<u>\$ 1,081,076</u>





**Independent Auditor's Report on  
Internal Control Over Financial Reporting  
and on Compliance and Other Matters  
Based on an Audit of Financial Statements Performed  
in Accordance with Government Auditing Standards**

**Board of Directors  
EcoHealth Alliance, Inc. and  
Wildlife Preservation Trust International, Inc.**

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc., which comprise the balance sheet as of June 30, 2013, and the related statements of activities, functional expenses and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated December 2, 2013.

***Internal Control over Financial Reporting***

In planning and performing our audit of the financial statements, we considered EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s internal control. Accordingly, we do not express an opinion on the effectiveness of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

### ***Compliance and Other Matters***

As part of obtaining reasonable assurance about whether EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s financial statements are free from material misstatement, we performed tests of their compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

### ***Purpose of This Report***

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

*Loeb & Troper LLP*

December 2, 2013



**Report on Compliance for Each Major Federal Program;  
Report on Internal Control Over Compliance**

**Board of Directors  
EcoHealth Alliance, Inc. and  
Wildlife Preservation Trust International, Inc.**

***Report on Compliance for Each Major Federal Program***

We have audited EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s compliance with the types of compliance requirements described in the OMB Circular A-133 Compliance Supplement that could have a direct and material effect on each of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s major federal programs for the year ended June 30, 2013. EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

***Management's Responsibility***

Management is responsible for compliance with the requirements of laws, regulations, contracts, and grants applicable to their federal programs.

***Auditor's Responsibility***

Our responsibility is to express an opinion on compliance for each of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*. Those standards and OMB Circular A-133 require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s compliance.

### ***Opinion on Each Major Federal Program***

In our opinion, EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc. complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of their major federal programs for the year ended June 30, 2013.

### ***Report on Internal Control Over Compliance***

Management of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc. is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with OMB Circular A-133, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of EcoHealth Alliance, Inc. and Wildlife Preservation Trust International, Inc.'s internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A material weakness in internal control over compliance is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A significant deficiency in internal control over compliance is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of OMB Circular A-133. Accordingly, this report is not suitable for any other purpose.

*Loeb & Troper LLP*

February 14, 2014

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**SCHEDULE OF FINDINGS AND QUESTIONED COSTS**

**YEAR ENDED JUNE 30, 2013**

**Section I - Summary of Auditor's Results**

**Financial Statements**

Type of auditor's report issued: Unmodified

Internal control over financial reporting:

Material weakness(es) identified?	<u>          </u> yes	<u>    X    </u> no
Significant deficiency(ies) identified?	<u>          </u> yes	<u>    X    </u> none reported
Noncompliance material to financial statements noted?	<u>          </u> yes	<u>    X    </u> no

**Federal Awards**

Internal control over major programs:

Material weakness(es) identified?	<u>          </u> yes	<u>    X    </u> no
Significant deficiency(ies) identified?	<u>          </u> yes	<u>    X    </u> none reported

Type of auditor's report issued on compliance  
for major programs: Unmodified

Any audit findings disclosed that are required to be reported  
in accordance with Section 510(a) of Circular A-133?            yes     X     no

Identification of major program:

<b><u>CFDA Number</u></b>	<b><u>Name of Federal Program or Cluster</u></b>
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Various	Research and Development Cluster
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Dollar threshold used to distinguish between  
Type A and Type B programs:                     \$300,000                    

Auditee qualified as low-risk auditee?     X     yes            no

**ECOHEALTH ALLIANCE, INC.  
AND  
WILDLIFE PRESERVATION TRUST  
INTERNATIONAL, INC.**

**SCHEDULE OF FINDINGS AND QUESTIONED COSTS**

**YEAR ENDED JUNE 30, 2013**

**Section II - Financial Statement Findings**

No matters were reported.

**Section III - Federal Award Findings and Questioned Costs**

No matters were reported.

**Commitment Form (Letter of Intent) to Establish a Subaward Agreement**  
University of Minnesota – Office of Sponsored Projects Administration

DATE:

01/12/2015

PRIME SPONSOR:

US Fish and Wildlife Services

PRIME INSTITUTION:

EcoHealth Alliance

PRINCIPAL INVESTIGATOR:

Dr. Andrew Huff

COLLABORATING INSTITUTION:

Regents of the University of Minnesota

COLLABORATING INSTITUTION PRINCIPAL INVESTIGATOR:

Dr. Dominic Travis

TITLE:

Evaluating Risks of Wildlife Sourced Protein Acquisition in Urban Centers of Cameroon

PROPOSED AMOUNT:

\$54,552

PROPOSED PROJECT PERIOD:

06/01/2015 - 05/31/2017

**CERTIFICATIONS:**

**1. Facilities & Administration Rates** included in this proposal have been calculated based on:

- ☒ Our federally-negotiated F&A Rates for this type of work, or a reduced F&A rate that we hereby agree to accept.
- ☐ Other rates (please specify the basis on which the rate has been calculated in "comments" below).
- ☐ Not applicable (no indirect cost request for the subrecipient).

**2. Fringe Benefit Rates:**

- ☒ Are consistent with or lower than our federally-negotiated rate agreement.
- ☐ Are based on other rates (please specify the basis on which the rate has been calculated in "comments" below).



**CERTIFICATIONS (continued):**

**3. Human Subjects**                      ☒ Yes                      ☐ No                      ☐ Exempt                      FWA# \_\_\_\_\_

If Yes:

☐ Copies of the IRB approval and approved "Informed Consent" form are attached.

☒ Copies of IRB approval and "Informed Consent" will be forwarded to the Office of Sponsored Projects Administration at the University of Minnesota as soon as they become available.

**3a. Human Research Participants Protection Training**                      # of applicable personnel: 2

☐ Certification of education on the protection of human research participants for all individuals identified as Senior/Key Personnel attached.

☒ Certification will be provided at time of award.

**4. Animal Subjects**                      ☐ Yes                      ☒ No                      IACUC Assurance # \_\_\_\_\_

If Yes:

☐ Copy of the IACUC approval is attached.

☐ Copy of IACUC will be forwarded to the Office of Sponsored Projects Administration at the University of Minnesota as soon as they become available, but no later than time of award.

**5. Biosafety Committee**                      ☐ Yes                      ☒ No

If Yes:

☐ Copy of the Biosafety Committee approval form is attached.

☐ Copy of the Biosafety Committee approval will be forwarded to the Office of Sponsored Projects Administration at the University of Minnesota as soon as it becomes available.

**6. Conflict of Interest** (applicable PHS, NIH, NSF, DHHS or any other program requiring federal financial disclosure)

☒ Subrecipient Organization/Institution hereby certifies that it has an active and enforced conflict of interest policy that is consistent with the provision of 42 CFR Part 50, Subpart F "Responsibility of Applicants for Promoting Objectivity in Research." Subrecipient also certifies that, to the best of Institution's knowledge, 1) all financial disclosures have been made related to the activities that may be funded by or through a resulting agreement, and required by its conflict of interest policy; and 2) all identified conflicts of interest have or will have been satisfactorily managed, reduced or eliminated in accordance with subrecipient's conflict of interest policy prior to the expenditures of any funds under resultant agreement.

☐ Not applicable because project is not being funded by PHS, NIH, NSF or DHHS

**CERTIFICATIONS (continued):**

7. Cost Sharing/Matching ☐ Yes ☒ No In-Kind: ☐ Yes ☐ No

Cost sharing, Matching and/or In-Kind amounts and justification should be included in the subrecipient's budget.

8. Certification Regarding Debarment & Suspension ☒ Yes ☐ No

Subrecipient certifies that neither it nor the principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in any Federal department or Agency. Subawards to any entity or individual included in the Federal Excluded Parties are prohibited.

**COMMENTS:**

The appropriate programmatic and administrative personnel involved in this application are prepared to establish and administer the necessary inter-institutional agreement(s) consistent with prime sponsor policies.

By: Andrea Marshall

Name: Andrea Marshall

Title: Principal Grant & Contract Administrator  
(Institutional Official)

Date: 1/14/15

**Please return this form to the University of Minnesota's principal investigator or department administrator with the approved budget and statement of work.**

Office of Sponsored Projects Administration,  
450 McNamara Alumni Center,  
200 Oak Street SE, Minneapolis, MN 55455-2070, 612.624.5599

# UNIVERSITY OF MINNESOTA

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*Twin Cities Campus*

*Sponsored Projects Administration*

*450 McNamara Alumni Center  
200 Oak Street S.E.  
Minneapolis, MN 55455  
Office: 612-624-5599  
Fax: 612-624-4843*

January 14, 2015

Dr. Andrew Huff  
EcoHealth Alliance  
huff@ecohealthalliance.org

*Title: Evaluation Risks of Wildlife Sourced Protein Acquisition in Urban Centers of Cameroon*

Dear Dr. Huff:

The proposal for the above reference program is being submitted on behalf of Dominic Travis at the University of Minnesota. The proposal has been administratively reviewed and approved on behalf of the Regents of the University of Minnesota.

Questions involving programmatic concerns should be directed to the Principal Investigator. If you have fiscal or contractual questions, please contact Brett Carlson at 612/626-7441.

Sincerely,



Andrea Marshall  
Principal Grant & Contract Administrator

Enclosure