

# EXHIBIT 31





EcoHealth  
Alliance

FISCAL YEAR  
**2013**  
ANNUAL  
REPORT





# ABOUT ECOHEALTH ALLIANCE

## BUILDING ON OVER 40 YEARS

of groundbreaking science, EcoHealth Alliance is a global, nonprofit organization dedicated to protecting wildlife and safeguarding human health from the emergence of disease. The organization develops ways to combat the effects of damaged ecosystems on human and wildlife health. Using environmental and public health data covering the past 60 years, EcoHealth Alliance scientists created the first-ever, global disease hotspots map that identified at-risk regions, to help predict and prevent the next pandemic crisis. That work is the foundation of EcoHealth Alliance's rigorous, science-based approach, focused at the intersection of the **environment, health, and capacity building**. Working in the U.S. and more than 20 countries worldwide, EcoHealth Alliance's strength is founded on innovations in research, training, global partnerships, and policy initiatives.



On the cover and above: With less than 1,500 wild animals living in the lowland forests near the Kinabatangan River in the Malaysian province of Sabah, Borneo, Pygmy elephants are smaller than other Asian elephants featuring longer tails, rounder faces and squarer ears.

These gentle creatures are threatened by habitat loss and fragmentation from conversion of natural forests to commercial plantations. Increased contact with people through hunting and logging creates human-elephant conflict and further disrupts natural habitats.

EcoHealth Alliance's Project Deep Forest in Borneo focuses on the conservation threats of deforestation and agricultural expansion in this region as well as the public health threat from the emergence of new diseases.

Photo: © Rudi Delvaux

### Two statements guide all aspects of our work.

EcoHealth Alliance's **VISION** is to be the organization leading the change in perspectives, policy, and practices that increase global capacity to respond to emerging threats at the intersection of health and the environment. Our **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*.

Our research, programs, and scientists continue to be featured in prestigious **peer-reviewed journals** such as *Nature*, *Science*, *PLoS One*, *The Lancet*, and Institute of Medicine reports. EcoHealth Alliance regularly garners **top media placements** in such outlets as *The Wall Street Journal*, *The New York Times*, *The Huffington Post*, and *TIME*.



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EcoHealth Alliance's Board of Directors set the strategic direction, ensures the financial health and sustainability of the organization, and hires and evaluates the performance of the president. EcoHealth Alliance's Board of Directors provide specific expertise relevant to their personal and professional backgrounds to help the organization enhance its ability to conduct research, advance science, and protect human, animal and ecosystem health.



# LETTER FROM THE CHAIRWOMAN

June 30, 2013

Dear friends,

During the past year EcoHealth Alliance continued to be internationally recognized NGO known for outstanding work and major contributions within the world of conservation and conservation medicine. This includes our work in unraveling the mystery surrounding Middle East Respiratory Syndrome (MERS), to our conservation programs in Sabah, Borneo where our scientists are working to protect native wildlife such as the pygmy elephants and orangutans through our Deep Forest project. In addition, our staff, doctors and scientists have created new integrated public health and wildlife conservation programs worldwide. I am excited to share these program updates in this 2013 Annual Report.

Although we are currently working in more than 15 countries there are so many more places where our help is needed. As we move into our next fiscal year we are facing even more environmental and public health challenges. Our teams continue to forge lasting partnerships with governmental agencies, non-governmental organizations, universities, foreign ministries and independent scientists at the grassroots level. But without your continued support many of these issues will not be addressed.

EcoHealth Alliance also released new research on Ebola virus in fruit bats in the peer reviewed journal, *Emerging Infectious Diseases*, a monthly publication by the Centers for Disease Control and Prevention. The study found Ebola virus antibodies in bats that our scientists screened in Bangladesh. These results suggest that fruit bats are a reservoir for Ebola, or a new Ebola-like virus in South Asia. The study extends the range of this lethal disease further than previously suspected to now include mainland Asia. This type of research, on potential deadly viruses in Asia, is a new frontier of critical importance to human health. Studies such as these are critical to a better understanding of the wildlife reservoirs and potential transmission of a virus in a particular region.

Other exciting recent news includes the collaboration between EcoHealth Alliance and Columbia University and our joint research providing evidence of Middle East Respiratory Syndrome coronavirus (MERS CoV) being found in a bat species in Saudi Arabia. By request of the Saudi Arabian Ministry of Health, EcoHealth Alliance scientists, in collaboration with Columbia University's Center for Infection and Immunity were on the ground in Saudi Arabia, to investigate a then unknown virus

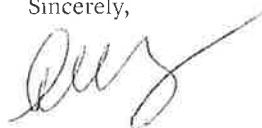
outbreak. This virus, now known as Middle East Respiratory Syndrome (MERS), is a virus that causes severe acute respiratory illness. This early response to a new outbreak is critical to understanding the dynamics of disease, its wildlife reservoir and the routes of transmission. EcoHealth Alliance continues to work with health ministries and public health officials to learn about the dynamics of MERS.

Rapid deforestation all over the world is a major cause for concern from a conservation and public health perspective. Several hundred species are a part of the delicate ecosystems created by the richly bio-diverse forest environments. Deforestation and human encroachment displaces these species and forces heightened interaction between people and animals indicating a high potential for disease transmission as we have seen from the evidence of Nipah virus, Avian Influenza and SARS during the past two decades.

EcoHealth Alliance's Project Deep Forest was developed on the assumption that the greater the biodiversity in a given area, the greater the diversity of pathogens. As long as these areas of high biodiversity remain preserved in their natural state and free of human encroachment, then people are less at risk of emerging infectious disease. EcoHealth Alliance scientists are testing this theory in the forests of Manaus, Brazil, and Borneo, Malaysia. In the past year, our scientists have begun sampling species for pathogens in each country along a deforestation gradient. For example, we are looking at areas where no deforestation has taken place, areas where some deforestation happened, and areas where once pristine forests have been completely removed. We are very excited to see where this research will lead in hopes that it will support our efforts to halt global deforestation.

I hope you read our current Annual Report and that you become more engaged with an organization that is doing some incredible work to help save wildlife and protect human health. Your support has helped advance the organization in so many ways and allows for the creation for new groundbreaking conservation science programs to become a reality.

Sincerely,



Ellen Shedlarz  
Chairwoman, EcoHealth Alliance





# LETTER FROM THE PRESIDENT

June 30, 2013

Dear friends,

Just two weeks into FY13, EcoHealth Alliance was prominently featured on a front page article in *The New York Times Sunday Review* section. The article "*The Ecology of Disease, Man-Made Epidemics*" explored how disease outbreaks emerge from animals and are transmitted to people. The writer explained that these diseases are the results of how we disrupt nature, meaning that they're essentially an environmental issue linked to people's footprint on the planet.

In fact, most epidemics including HIV/AIDS, Ebola, West Nile, SARS and Nipah virus have their start with the hand of humans. Deforestation, agricultural intensification, wildlife trade, and the global movement of trade and people all drive disease outbreaks. When we disrupt the natural world, ecosystems breakdown and we have the perfect storm for a new infectious diseases to emerge.

This is a key message for EcoHealth Alliance. It's the basis of our innovative programs, policy advances, and communications strategies. It means that the conservation of wildlife and their habitats is inextricably linked to the well-being of people and directly related to public health. Our science team is working each and every day to thwart new diseases from making the jump from wildlife to livestock and people. Our partners and lead scientists work synergistically to unravel the causes of disease by tracking the environmental changes threatening the most biodiverse regions around the world. From Brazil to Borneo, from Africa to Asia, EcoHealth Alliance scientists have 'boots on the ground' working with local professionals to build capacity and strengthen vital wildlife and public health programs.

In this 2013 Annual Report, you can read about the growth of Project Deep Forest that measures our footprint in tropical rain-forests, and how this causes extinctions and disease emergence. We are now into our fourth year of the five year USAID-PREDICT project. The PREDICT project has propelled EcoHealth Alliance into new field sites and has given the us the opportunity to build strategic partnerships within emerging disease 'hotspot' countries. This cross-boundary and cultural bridge continues to fuel innovative science to help solve some of the most pressing environmental issues today.

In the spring of 2013, news coming out of the Middle East caught the world's attention as a new SARS-like virus began making people sick and ultimately causing death. This new disease baffled

authorities in the Kingdom of Saudi Arabia and as cases began to rise over the next few months, the Ministry of Health called upon our partner here in New York City, Columbia University's Mailman School of Public Health. EcoHealth Alliance was invited to send a team to Saudi Arabia to uncover the source of the virus. Not surprisingly, our team identified a new coronavirus that was somehow spilling over to people. Our infectious disease experts identified a bat species as the likely reservoir for the virus. However, as more tests and samples were collected, it was noted that camels also had been exposed to virus. The mystery deepened when our lab results showed that the virus has been circulating in camels for 20 years. The virus, now referred to as Middle East Respiratory Syndrome Coronavirus (MERS - CoV), causes severe upper respiratory illness and results in fatalities in about 30 percent of the confirmed cases.

There's more work to be done to understand the transmission patterns of the MERS virus. The most urgent needs include detailed outbreak investigations to connect how humans become infected from animal or environmental sources. Once these factors are clear then health care facilities, global communities and public health agencies and governmental bodies can provide strategic action to block the transmission cycle as what was done during the 2003 SARS outbreak in Southern China.

EcoHealth Alliance works to understand the risk of transmission between animals and humans through multi-disciplinary teams of veterinarians, biologists, public health professionals, and ecologists. We believe our mission is critical to help predict and prevent the next possible pandemic and your support helps our scientists travel on a moment's notice to be on the frontlines of an outbreak.

I hope you enjoy learning more about our programs and methodology. As conservation has evolved, so have we as an organization. I am so proud of the work we do and of the research we conduct on a daily basis around the globe. I hope that the following pages will galvanize your future support.

Thank you,



Dr. Peter Daszak  
President, EcoHealth Alliance

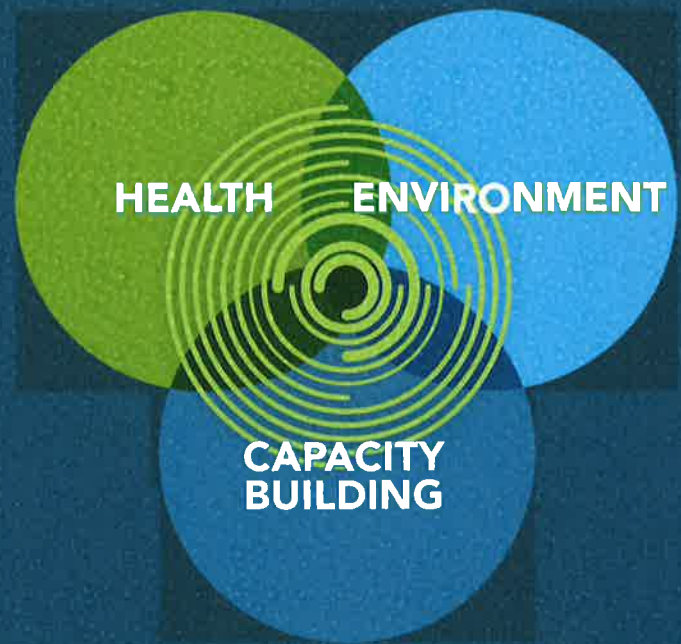


# ORGANIZATION UPDATES

In fiscal year 2013, EcoHealth Alliance continued on an upward trajectory set out by the organization's established three-year strategic plan. Building upon the tenets of that plan, the organization expanded the scope of existing programs and laid the framework for innovative new programs to address urgent conservation and public health concerns. The organization's mission is focused on the complex and changing threats to the environment and the resulting impact on human, animal, and ecosystem health.

A defining moment in this past fiscal year was the publication of a comprehensive article on the front page of *The New York Times Sunday Review* entitled, **The Ecology of Disease: Man-Made Epidemics**. In this article the writer eloquently penned a narrative that highlighted the causes of emerging infectious diseases from the direct alterations of the landscape and natural environment. Deforestation, intensive agricultural expansion, climate change, wildlife trade and other factors are contributing to the upsurge of new disease outbreaks. The article further explored how EcoHealth Alliance is working to predict and prevent disease spill over events through its programs and alliance partners. The biggest challenge we face as a global community is the realization that our health and well-being is dictated by the actions of our own hand.

EcoHealth Alliance scientists and its global partnerships continue to make critical scientific breakthroughs to demonstrate how the largest threats to global health are caused by environmental changes that alter and disrupt wildlife habitats. Our mission is critical and our research is vital to move forward and develop innovative, culturally sensitive solutions to the most pressing environmental and public health issues we face today and in the future.



EcoHealth Alliance works at the intersection of ecosystem, animal and human health through local conservation programs and develops global health solutions to emerging diseases.



# PROGRAM UPDATES

EcoHealth Alliance's programs continue to change the face of ecohealth practices by integrating multi-disciplinary teams as well as both domestic and foreign government agencies. This collaborative approach is cost-effective, culturally sensitive and gains buy-in from all participants.

## PREDICT

Avian Influenza, HIV/AIDS, SARS, and Influenza H1N1: these diseases are not just infamous for their human and economic impact, they also share one common trait. All four of these diseases are animal-related, and they are not the only ones of their kind.

Zoonotic diseases — or those that can be transmitted between animals and humans — represent approximately 75 percent of the newly emerging diseases currently affecting people. In the context of globalization and expansive trade and travel, these diseases can travel very quickly, posing serious public health, development and economic concerns.

In an effort to identify and respond to new zoonotic diseases before they spread to humans, the U.S. Agency for International Development (USAID) established its Emerging Pandemic Threats (EPT) program. The EPT program consists of four projects: PREDICT, RESPOND, IDENTIFY, and PREVENT. The PREDICT project seeks to identify new emerging infectious diseases that could become a threat to human health. PREDICT partners locate their research in geographic “hotspots” and focus on wildlife that are most likely to carry zoonotic diseases — animals such as bats, rodents, and nonhuman primates.

EcoHealth Alliance works at the leading edge of this field by building local capabilities and testing high-risk wildlife in Bangladesh, Brazil, China, Colombia, Indonesia, Malaysia, and Mexico. After scientists collect swabs or small amounts of blood, they analyze the samples in the lab to look for evidence of disease. The findings are catalogued in a database, that mathematical experts use to create

predictive maps of potential disease outbreaks. This approach not only allows researchers to find new diseases, but also helps communities prepare for and respond to the threat of an outbreak.

The strongest foundation of EcoHealth Alliance research is the connection between *local conservation* and *global health*. EcoHealth Alliance goes beyond scientific fieldwork to support local researchers and actively build local capacity. As a PREDICT partner, EcoHealth Alliance works with scientists and policymakers in each country to create a network of research, communication, and response partners — on a local, regional, and global level.



Disease is largely an environmental issue. Sixty percent of emerging infectious diseases that affect humans are zoonotic — they originate in animals. And more than two-thirds of those originate in wildlife.  
Artwork by Olaf Hajek.



## PROGRAM UPDATES

# ADVANCING A ONE HEALTH APPROACH

Many of the planet's current and evolving human health challenges have ecological links. Despite these connections, human health is largely viewed in isolation from the health of animals and the environment. Approaching health problems through a comprehensive perspective that considers environmental determinants and drivers of disease will enable informed and proactive understanding and action to address major challenges facing our health and the health of our planet.

**A One Health approach considers the integral links among human, animal and environmental health.** This approach promotes sharing of information and perspectives across disciplines to provide more comprehensive and upstream understanding of health concerns at the human-animal-environment interface. This, in turn, can yield innovative, cost-effective solutions.

### One Health can provide high value for a range of critical health topics, including:

- Improving data and information sharing systems to more fully utilize information from food safety, animal and human health to improve healthcare outcomes.
- Emerging diseases in humans, given their high rate of emergence from wildlife.
- Rabies, given susceptibility of >120 species, near-global presence, and its role in more than 50,000 human deaths annually.
- Antimicrobial resistance, given widespread medical and food industry antimicrobial use, paired with complex environmental, ecological and evolutionary factors.
- Climate change, given potential impacts on disease host range and pathogen persistence.
- Food security, given dependence on food systems and rapidly changing practices.
- Wildlife trade, given global movement, often unregulated, of animals and the pathogens they may harbor.



EcoHealth Alliance's wildlife sampling and pathogen discovery in Bangladesh is supported by local conservation partnerships and has saved countless lives from the emergence of disease.

Support for a One Health approach has been expressed by the World Health Organization, The Food and Agriculture Organization of the U.N, the World Organization for Animal Health, the US Institute of Medicine, the American Medical and American Veterinary Medical Associations, and the U.S. Centers for Disease Control and Prevention. **EcoHealth Alliance seeks to move the support from theoretical One Health discussions to actionable, on-the-ground One Health activities that yield tangible human health benefits and promote the health of our ecosystems.**

**To advance a One Health approach, EcoHealth Alliance seeks to undertake a systematic approach to create a roadmap forward that will provide a clear route to implementable, sustainable, and effective One Health infrastructure. Overall outputs sought are:**

- Establishing best practices that optimize the development and implementation of One Health infrastructure at different scales and scopes.
- Determining urgent health priorities ripe for a One Health approach where benefits of efforts can be maximized.
- Creating sustainable mechanisms for formal and informal professional networking across disciplines to boost creative and upstream problem-solving for health issues.
- Driving a culture of change in professions to increase interest and recognition of local and global benefits from collaboration and a broader view of health and environmental links.

## PROGRAM UPDATES

# ECONOMICS OF EMERGING INFECTIOUS DISEASES

Outbreaks of emerging diseases and pandemics inflict damages and costs to society that include the direct costs of treating illness, the effects of a reduction in labor supply caused by an unhealthy and/or dying work force, as well as losses in sectors unrelated to health such as travel and trade.

The rate at which emerging disease events occur is increasing, and in order to minimize the damages, it is important to examine the benefits, costs, and effectiveness of underlying policy approaches in addition to determining the magnitude of the damage and on whom the economic burdens fall.

**This program comprises a wide range of projects that take into account the uncertainty surrounding the timing, location, and virulence of an outbreak.**

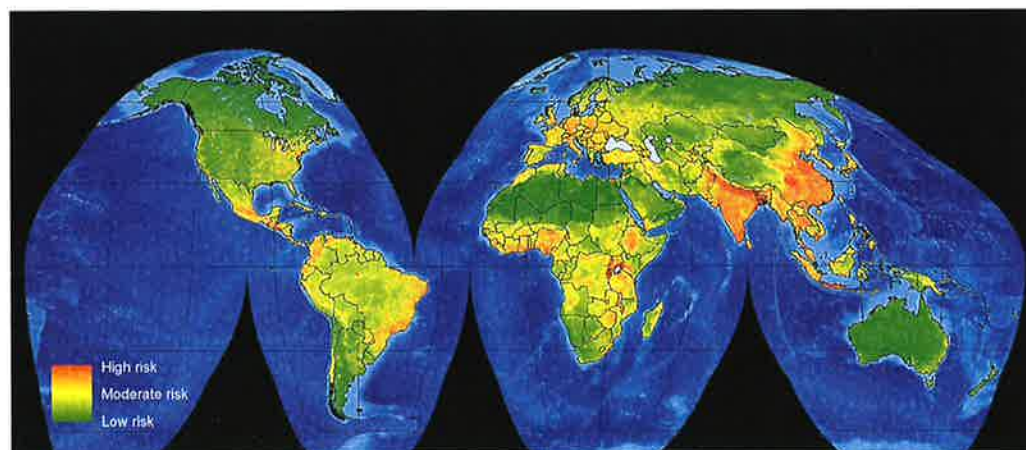
- **Economic impacts of emerging infectious disease events.** What are the total damages associated with past events?
- **Optimal pandemic policies responses.** Should we invest more in preventing the outbreak or alleviating the damages of an outbreak and when should we invest and implement these policies?
- **Financing options for global disease surveillance and response.** Multi-lateral organizations have investigated the

costs necessary to bolster infectious disease surveillance and response capacities in all countries around the world. Global donations required to fund these upgrades are not sufficient. What other options does the global community have?

- **Valuing ecosystem services.** With specific consideration of the role of intact ecosystems in mitigating infectious diseases, what is the optimal use of land and resources considering benefits and costs of converting land and the benefits of preserving intact landscapes?
- **Extractive industries.** What are the damages that industries and surrounding communities can sustain if precautions are not taken to lessen the risk of infectious disease outbreaks?
- **Impact of disease on commodity prices.** How do different media announcements regarding disease outbreaks impact the behaviors of hedgers and speculators?

Ultimately, the Economics of Emerging Infectious Diseases program seeks to determine how to optimally allocate resources to address the pandemic threat, whether devising strategies to mitigate the underlying causes or providing the necessary knowledge for individuals, businesses, and society as a whole, to minimize economic damages in the event of an imminent pandemic. EcoHealth Alliance's experience determining the distribution of the damages as well as the underlying causes will be invaluable to policy makers.

Our scientists are investigating emerging disease threats to support multiple projects at EcoHealth Alliance, including outbreak investigation, hotspots mapping, and disease surveillance.





## PROGRAM UPDATES

# ASSESSING AND MITIGATING THE IMPACTS OF WILDLIFE TRADE

In support of our mission to protect the health of wildlife and people across the planet, EcoHealth Alliance is working to reduce the negative impacts of illegal wildlife trade. Estimated to be worth 10 billion dollars per year, illicit wildlife trafficking represents one of the leading illegal activities globally. The potential threats to humans and animals are extensive, including the spread of disease, the introduction of invasive species, and the extinction of wildlife populations.

The scale of the legal global wildlife trade is enormous and increasing. Over half a million shipments containing more than 1.68 billion live animals were imported by the U.S. alone between 2000 and 2006. Ninety-two percent of these were designated for commercial purposes (largely for the pet trade). While the illegal wildlife trade is of high concern, it is imperative that legal trade is conducted responsibly. The introduction of non-native species around the world, both accidental and intentional,

is a significant source of pathogen pollution (defined as the human mediated introduction of a pathogen to a new host or region). The wildlife trade has facilitated the introduction of alien species, where they compete with native species for resources, alter ecosystems, damage infrastructure and destroy crops. It has also led to the introduction of pathogens that threaten public health, agricultural production and biodiversity.

The illegal wildlife trade represents an unregulated market of live wild animals and wild animal products. Products range from expensive artifacts (such as those made from elephant ivory), to food items (such as “bushmeat” or meat of wild mammals such as non-human primate) to fashion products (made from fur or skins of rare animals). Illegal products skirt regulations in place to protect conservation of vulnerable species as well as prevention of disease transmission from non-native wildlife to humans, domestic animals (such as pets and livestock) and wildlife native to the United States. Diseases of public health concern that have emerged from the wildlife trade in the past include SARS and monkeypox.



The illegal wildlife trade represents an unregulated market of live wild animals and wild animal products.

## PROGRAM UPDATES

# ASSESSING AND MITIGATING THE IMPACTS OF WILDLIFE TRADE *continued*

Experts at EcoHealth Alliance are conducting on the ground science, in collaboration with government and industry, to reduce the risks of wildlife trade.

### Ongoing projects include:

- Conducting disease surveillance of traded wildlife and U.S.-confiscated wildlife imports to inform decision makers about wildlife-associated pathogen risk.
- Studying disease risk at the human-wildlife interface in Asia — a hotspot for emerging zoonoses.
- Assessing non-traditional pet choices to provide scientifically-based recommendations for healthy and environmentally-friendly pets via our EcoHealthyPets program.
- Developing outreach materials for travelers, airport staff, and law enforcement officials to increase public awareness of the illegal wildlife trade.
- Providing science-based guidance to regulators to reduce the risks to health and ecosystem from the wildlife trade.
- Developing socio-economic models to identify the most cost-effective means of preventing disease emergence from wildlife importation to the U.S.
- Modeling the spread of pathogens through trade and travel networks to predict emergence, and identifying the socio-economic drivers of pathogen spread through live animal trade networks.
- Informing international trade and animal health groups of necessary measures to strengthen policies on wildlife harvest and movement.

### Our program goals are:

- Characterizing the scope and scale of global wildlife trade and identifying the disease risks wildlife trade species pose to humans, livestock and native biota.
- Drawing upon the best available scientific findings to make policy recommendations to reduce the risks of disease emergence and the decline of wildlife populations resulting from the wildlife trade.
- Working directly with industry professionals to better understand host-pathogen dynamics in trade.
- Developing proactive steps to mitigate the transmission and spread of diseases of wildlife origin to other wildlife, domestic animals, and humans.

### What you can do

The United States is one of the top importing countries involved in the illegal wildlife trade. There are steps the public can take to support the elimination of the illegal wildlife trade both abroad and domestically:

- International travelers should avoid purchasing and/or carrying wild animal products, including meat, skins, and traditional medicines. Intentionally smuggled wildlife imports are often concealed in boxes or coolers; if you see a passenger carrying a suspicious container report it to Customs and Border Protection officials.
- When traveling domestically, be aware of national and state laws regarding the transport of wild animals. Some laws differ among states.
- We encourage you to make conscientious choices about your pet selection. Always make sure pets are captive-bred and choose pets that present minimal health and environmental risks, and can be adequately cared for in a captive situation.



EcoHealth Alliance works toward curbing the threats posed by the wildlife trade in conservation as well as animal and human health, beginning in our own backyard in New York at JFK Airport. We partner with many government agencies to confiscate shipments, identify species, and assess disease introduction from wildlife illegally smuggled through U.S. borders.



## PROGRAM UPDATES

THE DATA SCIENCE  
AND RESEARCH TECHNOLOGY  
(DART)  
LAB AT ECOHEALTH ALLIANCE

The Data Science And Research Technology (DART) Lab at EcoHealth Alliance harnesses the promise of emerging technology to assess infectious disease threats to human, animal, and ecosystem health.

The expansion of the web has fostered a vibrant digital ecosystem. The growth of data in disease ecology, driven by instrumentation and internet usage, presents both an opportunity and a challenge for scientists. On one hand, the increase in the volume of data provides the opportunity to explore the drivers of disease emergence in a data-rich setting. On the other, the growth and diversity of the digital ecosystem can bury these signals in a sea of ‘big data’ and noise.

The DART lab’s dynamic team of data scientists and software developers draws upon interdisciplinary backgrounds in ecology, computer science, and health. The team leverages EcoHealth Alliance’s expertise in life sciences and global network of field investigators to connect digital patterns with natural processes that present threats to health and ecosystems.

The DART research philosophy is a blend of data science and software development: collective intelligence, expert solicitation, and automation drive our data mining, while web technology, agile methods, and social coding fuel our research applications.

The DART lab is currently exploring global media and field data to identify new diseases, pathogens, or environmental risks. Through flagship projects, such as the Global Repository of Infectious Disease (GRID), the team is pinpointing the origins of infectious diseases by curating and analyzing historic media related to infectious diseases through dynamic web applications. GRID builds upon EcoHealth Alliance’s expertise in developing ‘hotspot’ maps of infectious diseases (e.g., “Global trends in emerging infectious diseases” by Jones et al. in Nature 2008). The historic perspective from GRID informs EcoHealth Alliance’s field programs and virtual biosurveillance laboratories.

Virtual laboratories provide a space for researchers and citizen scientists to explore and interpret information online. DART technology helps filter and prioritize data

to quickly connect researchers to relevant information through recommendation engines and search tools trained on news, social, and scientific media. The team facilitates complex data exploration with dynamic web visualizations, including open source contributions to mapping data in the web browser.

DART’s research technology reflects the next frontier of interactive web tools for visualizing spatio-temporal scientific data and providing decision support for assessing disease threats to humans and animals. The DART lab’s analytical capacity ranges from statistical modeling, natural language processing, and machine learning, to ‘big data’ methods for transforming scientific data. The technology developed is designed to further the health and conservation goals of EcoHealth Alliance, as well as global capacity building by developing cyberinfrastructure for the global research community. Examples include, field technology for data collection and sampling, as well as real-time surveillance to identify ‘hotspots’ for investigation by our field teams.

Sharing and collaboration is a strong argument for blending web development and data science. Indeed, DART web platforms are designed to attract more minds to wrangling and interpreting the flow of information. The team designs ‘intelligent’ tools such as models that improve with usage, data sets that are refined by contributors, and online communities that foster informed dialogue and outreach through citizen and participatory science.

The next frontier for DART is to project understanding of the past and present into the future. The team is actively prototyping methods to couple geographic and information networks with crowd, expert, and programmatically-sourced data to anticipate where and when new diseases might emerge and spread. Through data science and research technology we hope to help predict and prevent the next pandemic, or extinction event.

## PROGRAM UPDATES

# HEALTH AND POLICY INITIATIVES

Despite the strong inter-dependencies of people, animals and the environment, wildlife and ecosystem health are typically not adequately considered in the development of human health, agriculture, or conservation policies. As a result, these initiatives are missing the critical piece of the health and biodiversity puzzle. Policies often end up lacking in science-driven guidance, and responses are reactive rather than proactive in predicting and preventing health and conservation threats.

EcoHealth Alliance has a core focus of translating its strong ecosystem health science into actionable information for policy makers. For example, on a local level, EcoHealth Alliance presented on the scale and impacts of the illegal wildlife trade in New York to the state's District Attorney Association to raise awareness among prosecutors. On a national level, EcoHealth Alliance provided scientific guidance through invited briefings to Congressional and White House officials on pandemic prevention and control and natural resource management. This was especially relevant given the U.S. government's growing focus on global health security and concerns over the illegal wildlife trade.

Towards shared conservation goals, EcoHealth Alliance also continued its fruitful collaboration with the Secretariat of the Convention on Biological Diversity (CBD), providing the ecosystem health perspective at a regional workshop in Brazil hosted by the CBD and the World Health Organization. EcoHealth Alliance also provided input on the CBD's publication "Healthy Planet, Healthy People — A Guide to Human Health and Biodiversity". EcoHealth Alliance has also continued to provide ecosystem and public health expertise to intergovernmental organizations including the World Organisation for Animal Health (OIE), the International Union for the Conservation of Nature (IUCN), and the UN's Food and Agriculture Organization and World Health Organization, including expert advice on avian influenza and Middle East Respiratory Syndrome (MERS-COV).



The official opening of Sabah's first Bio-security 2 laboratory was a joint initiative between the Sabah Wildlife Department (SWD), EcoHealth Alliance (EHA) and Danau Girang Field Centre (DGFC). The opening was officiated by US Ambassador to Malaysia HE Ambassador Joseph Yun. His Excellency also witnessed the signing of an MOU between EcoHealth Alliance and Sabah Wildlife Department for the USAID-PREDICT Project.

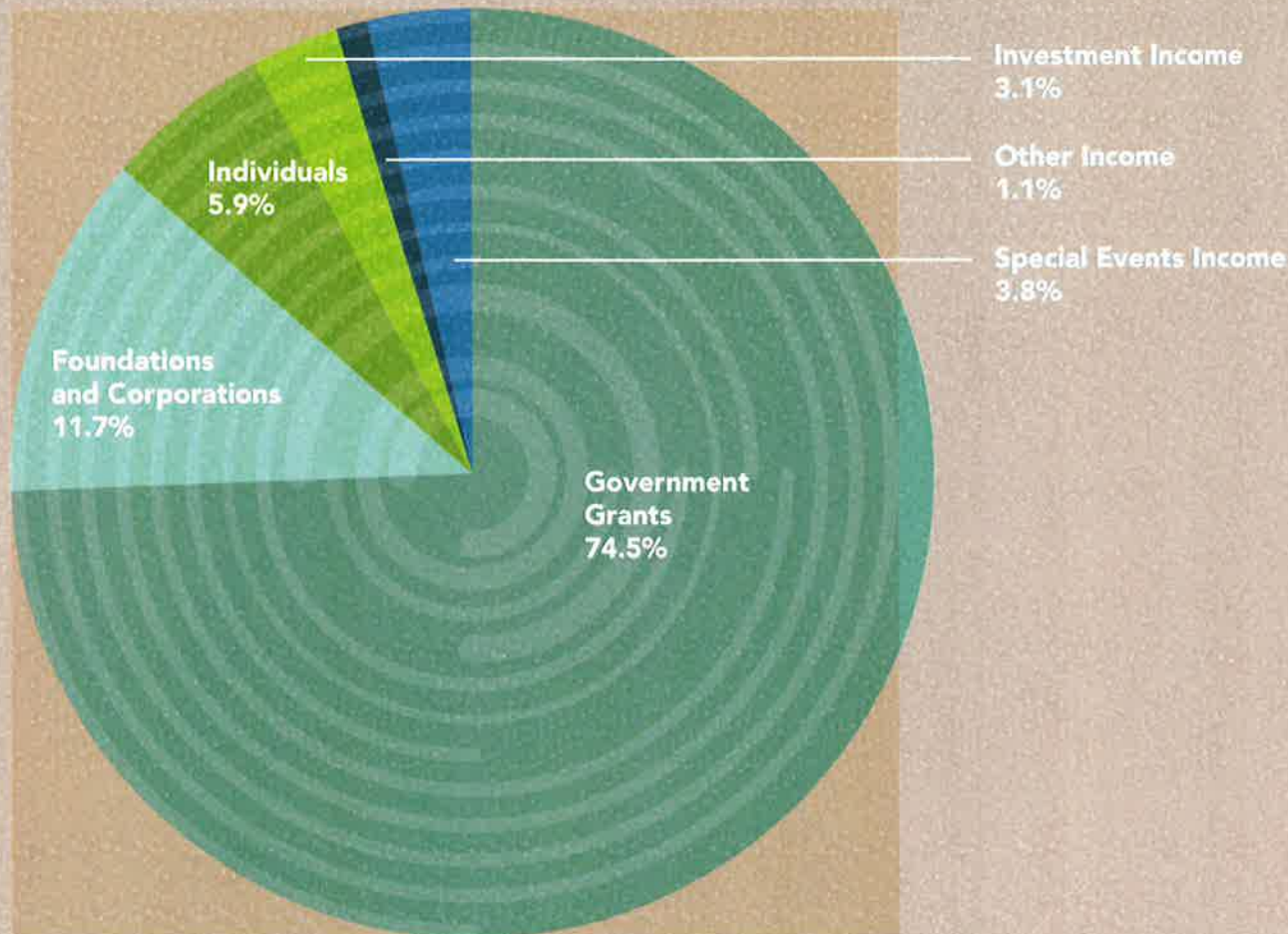
Internationally, EcoHealth Alliance has worked with government partners from health, agriculture, and wildlife agencies to develop surveillance programs and processes that enable early detection of disease risks for both humans and animals. EcoHealth Alliance provided technical and editorial support for the IUCN-OIE Guidelines to Wildlife Disease Risk Analysis, which will serve as a resource for governments, wildlife managers, and land use planners to promote more proactive consideration and mitigation of disease risks.

Recognizing the importance of both regulatory approaches and corporate practices to health and the environment, EcoHealth Alliance strives to also work closely with private industry to develop sustainable and healthy practices. Across the world and on local levels, EcoHealth Alliance staff and partners engage policy makers and industry partners to provide sound guidance based on science and build capacity to more efficiently and effectively promote wildlife and domestic animal health, public health, and natural resource management.



# FINANCIAL STATEMENTS

## EcoHealth Alliance Income Statement FY2013



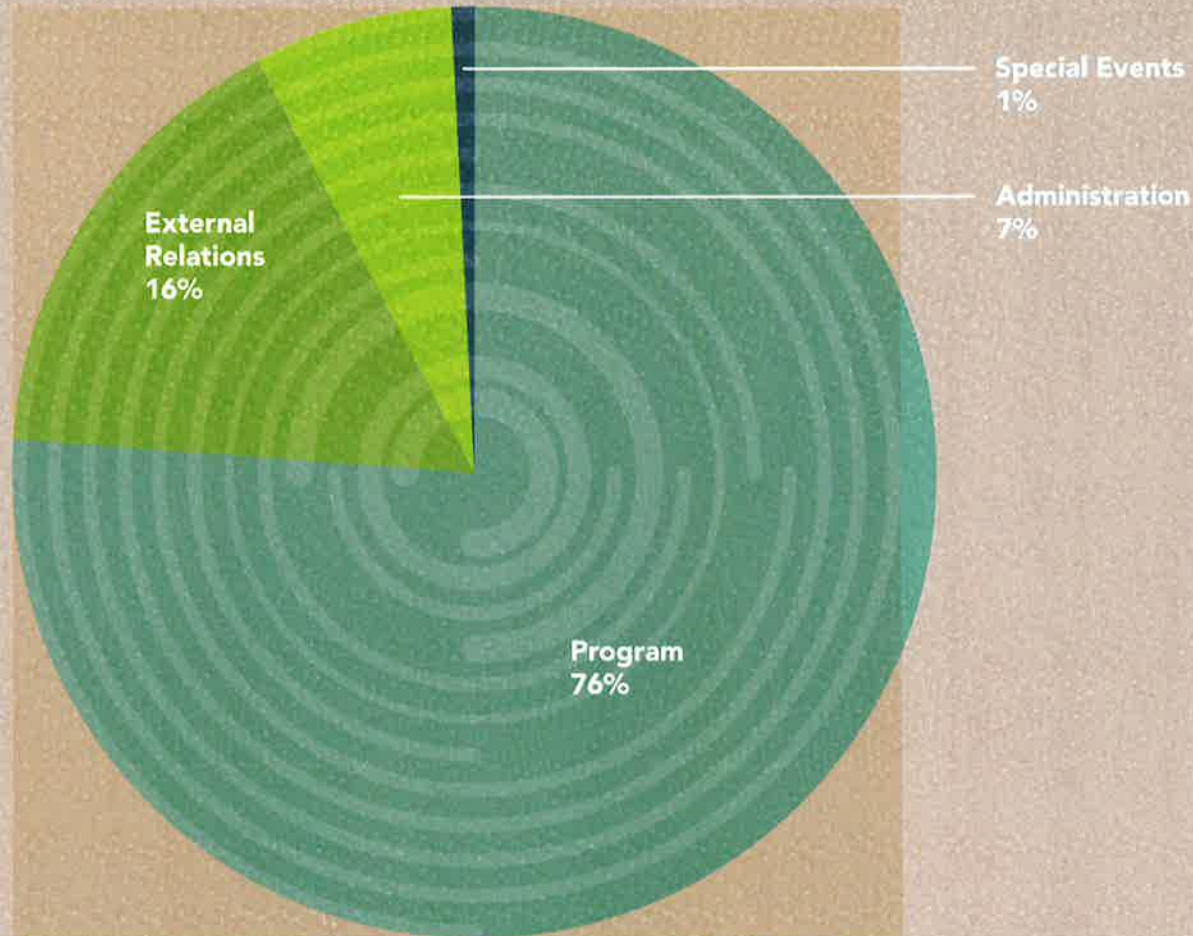
### FY2013 Income

Government Grants	\$ 7,057,581.
Foundations and Corporations*	\$ 1,106,024.
Individuals	\$ 556,018.
Investment Income	\$ 292,503.
Other Income	\$ 101,769.
Special Events Income	\$ 355,945.
<b>Total Income</b>	<b>\$ 9,469,840.</b>

\*Includes \$769,551 of Donated Services

# FINANCIAL STATEMENTS

## EcoHealth Alliance Expense Statement FY2013



### FY2013 Expenses

Program	\$7,019,042 .
External Relations*	\$ 1,439,960.
Administration	\$ 658,174 .
Special Events	\$ 99,388 .
<b>Total Expenses</b>	<b>\$9,216,564 .</b>
Total Revenues Less Total Expenses	\$ 253,276 .
Disposition of Restricted Funds	\$(1,000,000.)
<b>Change in Net Assets</b>	<b>\$ (746,724.)</b>

\*Includes \$769,551 of Donated Services

The Consolidated Statements of EcoHealth Alliance as of June 30, 2013 including the Consolidated Balance sheet, Consolidated Statement of Activities, Consolidated Statement of Functional Expense, and Consolidated Statement of Cash Flows were audited by the firm of Loeb & Troper. The above presentation has been derived from those audited financial statements. Copies of the audit as well as the Internal Revenue Service Form 990 tax return are available upon request to Harvey Kasdan, Chief Financial Officer at EcoHealth Alliance, 460 West 34th Street, 17th floor, New York, NY 10001





# EcoHealth Alliance

## SENIOR MANAGEMENT TEAM

Dr. Peter Daszak  
*President*

Dr. William Karesh  
*Executive Vice President for Health and Policy*

Joanne Mazurki  
*Executive Vice President for Marketing and Development*

Harvey Kasdan  
*Chief Financial Officer*

Dr. Jonathan Epstein  
*Associate Vice President*

**Local conservation.  
Global health.**

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