ON THE COVER:
EcoHealth Alliance scientists created the first-ever global disease hotspots map that identified at-risk regions to determine where research and fieldwork are needed to help predict and prevent the next pandemic crisis.
OUR MISSION

EcoHealth Alliance leads cutting-edge scientific research into the critical connections between human and wildlife health, and delicate ecosystems. With this science, we develop solutions that prevent pandemics and promote conservation.

ABOUT ECOHEALTH ALLIANCE

Building on over 45 years of groundbreaking science, EcoHealth Alliance is a global nonprofit organization dedicated to protecting wildlife, environmental, and public health from the emergence of disease. Approximately 60 percent of emerging infectious diseases like Ebola, HIV, Zika, SARS, MERS, and West Nile virus originated in animals before spilling over to human populations. Using environmental and health data covering the past 60 years, EcoHealth Alliance scientists created the first-ever global disease hotspots map that identified at-risk regions to determine where research and fieldwork are needed to help predict and prevent the next pandemic crisis. That work is the foundation of EcoHealth Alliance’s rigorous, science-based approach working in nearly 30 countries worldwide. EcoHealth Alliance’s strength is founded on innovations in research, training, global partnerships, capacity building, and policy initiatives.

To learn more, please visit www.EcoHealthAlliance.org
FY17 Board of Directors

EcoHealth Alliance’s Board of Directors sets 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 provides 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.

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Thank you to our donors, supporters, and funders. It is your understanding and belief in our mission that allows us to stand between you and the next pandemic.
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EcoHealth Alliance is made up of a diverse and multidisciplinary team of scientists and staff united by one goal: to put an end to the Pandemic Era.
“We believe in excellent science. We believe that our health is linked to the health of all things around us. We believe that a multidisciplinary approach is necessary to tackle the world’s biggest problems.”
Letter from the Chair

Dear Friends,

As our fiscal year comes to a close, let me begin by thanking all those who’ve helped to elevate and advance EcoHealth Alliance.

First, I must thank our scientists who’ve worked tirelessly in nearly 30 countries to ensure the health of the environment, animals, and people alike. I would also like to say thank you to our in-country partners, without whom we could never do our vital work, and to our administrative and office staff who ensure the day-to-day success of EcoHealth Alliance.

However, we would truly be rudderless without our donors, whose support keeps us going. You are the ones who understand the role One Health plays in maintaining a healthy planet. On behalf of everyone at EcoHealth Alliance, I cannot overstate what your support of our work means. You are a part of all of the research we published, all the discoveries we made, and all of the lives we’ve touched in the past year. As a show of our gratitude, our promise to you is to work even harder to make our world a better, healthier place.

We believe that we can seek out and discover all of the world’s unknown viruses. That we can study them and learn how to fight them before they spill into people and begin to spread globally. That is how we can stand between you and the next pandemic.

I know it sounds like looking for a needle in a haystack, but we’ve already begun to make progress. In the last year, we published research which includes a comprehensive analysis of all known mammalian viruses. The study allows us to prioritize both regions on the planet and specific species in which we’re most likely to discover Disease X: the unknown pandemic. Looking ahead, we can use this work as a roadmap to ensure our success.

We believe in excellent science. We believe that our health is linked to the health of all things around us. We believe that a multidisciplinary approach is necessary to tackle the world’s biggest problems. We’re not slowing down now and I speak for the entire team at EcoHealth Alliance when I offer a sincere thank you for your support and your faith in our vision of a healthy planet.

Sincerely,

Ellen Shedlarz
Chair, EcoHealth Alliance
Dear Friends,

As we close the books on fiscal year 2017, I find myself meditating once more on both our achievements, and the challenges ahead. At EcoHealth Alliance, I’m honored to work with some of the most talented scientists I know, each working tirelessly to advance health—of humans, of animals, and the environment around us—worldwide. But the most exciting part of my job is to see how our diverse group of scientists, development, and admin staff work together as a team, bringing perspectives from veterinary sciences, economics, anthropology, and ecology together to make the world healthier and preserve our precious biodiversity: This is our “One Health” mindset.

During our FY 2017, we published research about the breadth and scope of coronaviruses globally: from MERS which emerged in Saudi Arabia; to SARS which spilled over into humans in China. We published the results of years of study that led us to determine which animals are the most likely hosts of yet-to-be-discovered viruses, and where on the planet these missing viruses are. And because One Health is the ideology that the health of humans, animals, and the environment are connected inexorably, I’m especially excited to tell you about our latest area of research: behavioral surveillance.

Humans are the vital third cog in the One Health wheel. We have teams in more than 20 countries around the world conducting surveys to learn what people do, and do not, understand about zoonotic disease threats. We’re learning cultural customs that may put people in some countries or regions at higher risk of disease transmission. We’re also beginning to develop interventions that can help people remain healthy without placing too high a burden of change on either their lifestyles, beliefs, or societal customs.

Our work over two decades shows that people are the key to pandemic threat. Animals are not bioterrorists: they live in their own ecosystems with their own microbes, unbothered until we come along to build roads or farms or cities. These changes trigger spillover of new microbes from wildlife to people, and it’s no coincidence that most of the hotspots of global pandemic risk are places experiencing rapid population growth and major deforestation.

And that’s what makes EcoHealth Alliance so special. I’m biased, of course, but our team of multidisciplinary scientists is able to work together to identify radical solutions to one of the world’s biggest problems: the constant threat of pandemics. I am, myself, a disease ecologist and daily I work with veterinarians, economists, public health professionals, social scientists, data scientists, and epidemiologists. These multiple perspectives give us a variety of viewpoints and plans of attack when it comes to standing between you and the next pandemic.

But none of it would be possible without the support of people like you. You understand our mission and appreciate the importance of our work. I cannot ever state fully what that means to us all here at EcoHealth Alliance. Instead I will say this: our vision is a world without pandemics, where people live in concert with the animals and ecosystems around them. With your support, we can achieve that mission. We can stop pandemics before they start. We can save lives and we can save the environment at the same time.

Cheers,

Dr. Peter Daszak,
President, EcoHealth Alliance
“...our vision is a world without pandemics, where people live in concert with the animals and ecosystems around them. With your support, we can achieve that mission.”
“Human or livestock or wildlife health can’t be discussed in isolation anymore. There is just One Health.”

—Dr. William B. Karesh, Executive Vice President for Health and Policy, EcoHealth Alliance
A One Health approach considers the integral links among human, animal, and environmental health. Our research has shown that the rise in disease emergence originates from the things we do to alter the natural environment.

**Environmental Health:** With deforestation comes great loss of biodiversity and greater risk for disease spillover. Using data and economic research, we’re showing corporations it’s good business to leave forests intact, plain and simple.

**Animal Health:** The market for wild animals and animal products creates a significant risk to wildlife worldwide including extinction, spread of disease, and the introduction of invasive species into delicate ecosystems. We’re working with governments all over the world to spread awareness and mitigate wildlife trade.

**Human Health:** The more people come in contact with wildlife, the higher the risk of an emerging infectious disease. We’re collaborating with other organizations to identify how pandemics emerge and training other professionals in disease prediction and prevention methods.
MORE THAN EVER BEFORE we are facing the threat of new diseases that seemingly erupt out of nowhere. More than 60 percent of all new emerging infectious diseases derive from animal hosts including: Ebola, SARS, HIV/AIDS, Middle East Respiratory Syndrome, and Avian influenza. These epidemic diseases have all emerged as a result of destruction of the rainforests, loss of wildlife habitats, and climate change. Emerging infectious diseases cause mortality rates upwards of 15 million people each year: many victims are children under the age of six.

As a partner organization in USAID’s Emerging Pandemic Threats ‘PREDICT’ program, EcoHealth Alliance is working in global disease hotspot regions to uncover viral threats by testing wildlife known to carry viruses. Through PREDICT, EcoHealth Alliance is:

- Teaching the next generation of conservation scientists in the more than 18 countries where we are conducting fieldwork
- Developing capacity to strengthen and educate teams of scientists to help detect, prevent, and control infectious diseases in animals and people
- Focusing on the early identification of dangerous wildlife pathogens and rapid response to thwart the spread of diseases before they become a significant threat to public health
Who stands between you and the next pandemic?

EcoHealth Alliance—in collaboration with its PREDICT partners—has trained 2,500 scientists, veterinarians, public health professionals, lab technicians, foreign government ministries, and medical personnel in disease prediction and prevention methods. EcoHealth Alliance works with partner labs and in-country field techs to humanely sample non-human primates, rodents, bats, and other wildlife, accumulating more than 56,000 biological samples that have been tested for new viruses. This effort has led to the detection of more than 1,000 unique viruses with the discovery of 815 completely new viruses.

Early detection and discovery of new viruses ultimately helps inform global public health agencies like the World Health Organization and the Centers for Disease Control to advance programs and education to stop diseases in their tracks.
Why saving a forest in Malaysia has a lot to do with saving you.
REDUCING DEFORESTATION

THE LINK BETWEEN DEFORESTATION AND THE SPREAD OF DISEASE is both clear and scientifically proven. Deforestation is most often for agricultural purposes, as a ballooning global population requires more and more food. While thoughtless clearing of the land is much simpler, it often exposes livestock to zoonotic disease which ends up costing local farmers their livelihoods, if not their lives. In the first known outbreak of Nipah virus in Malaysia, the government had to cull more than a million domesticated pigs who were transferring the virus to people, having caught it themselves because they were eating fallen fruit from groves on which bats had also fed.

One Health is about bridging the gaps between the work of individual disciplines. Protecting plants and animals is about protecting human health. And protecting human health requires the protection of those species with which we share our planet.

THE ISSUE

- Each year, around 18 million acres of forest (an area roughly the size of Panama) disappear from the planet forever
- Southeast Asia has the highest rates of deforestation in the world
- 31 percent of new and emerging infectious disease outbreaks are linked to land-use change like deforestation
- In Sabah, Malaysia alone, malaria costs $8.9 million per year in the form of mosquito control, patient treatment, and various other expenditures

THE IMPACT

- By conducting analysis to understand how intact forest can regulate disease emergence, we can work with governments and industry leaders to create good-sense, forward-thinking policies
- Our work demonstrates that retaining forests is a sound investment
- Sustained fieldwork in Sabah will lead to evidence-based analysis of expenses avoided by curbing deforestation rates
- For each dollar the government of Sabah invests in reducing malaria rates, it gains back $5 in avoided expenses, so a 10 percent reduction equals $14 million in savings
- We’re now using what we’ve learned to expand our work globally; in West Africa we’re working to understand the link between deforestation and the origins of Ebola

THE SOLUTION

- In-country partnerships have resulted in the training of local communities in Malaysia, Indonesia, and Thailand to understand the link between deforestation and emerging disease, as well as its economic impact
- Our existing regional partnerships have allowed us to expand our work in Southeast Asia to understand other health impacts of deforestation, such as increased respiratory disease due to slash-and-burn practices
- With the government of Sabah, our scientists have authored a position paper which states plainly the advantage of forest preservation both to environmental and human health
THE GLOBAL WILDLIFE TRADE IS BIG BUSINESS and the industry is worth billions annually. The U.S. is the largest importer of wildlife and wildlife products on record. The wildlife trade not only presents extinction risk for unique and endangered species, but could also spread diseases globally. The wildlife trade fuels the pet industry and also provides products ranging from “bushmeat” (meat of wild mammals such as apes and monkeys) to fashion products (fur or skins) as well as products thought to provide medicinal benefits.

EcoHealth Alliance’s health and policy team are conducting ongoing efforts to assess and mitigate the threats from the global trade in wildlife including:

- Informing policymakers and global organizations such as the World Health Organization on disease threats that may arise from wildlife trade
- Working with conservation authorities to advance the protection and welfare of wildlife
- Educating consumers on the health risks related to ‘non-traditional’ pet choices

Using innovative science, EcoHealth Alliance is mapping the spread of pathogens through trade and travel networks to predict possible disease threats. Working with our partners around the globe in highly bio-diverse regions, EcoHealth Alliance is educating wildlife hunters in source areas on the health risks of the trade. We have successfully turned hunters into wildlife field technicians by training them in disease surveillance efforts, providing a new way to make their livelihoods.

The scale and growth of the wildlife trade is enormous but with your help we can prevent the extinction of species, stop the spread of disease, and develop public awareness campaigns to stop demand for these products.
Why a healthy gorilla makes a healthy you.
SPOTLIGHT ON
ECOHEALTH ALLIANCE’S
DR. LEILANI FRANCISCO
SENIOR BEHAVIORAL RISK COORDINATOR
What led you to EcoHealth Alliance?

In college, I started in mechanical engineering but I decided I didn’t want to build things or be in isolation, I wanted to work with people. I took an anthropology course and had a professor who just presented the world in a way I had never thought about it before. At an anthropology research center at the university, I was doing some urban health ethnography work with prison populations, looking at HIV among men in Maryland state prison systems and thought, “Whoa I could really make a difference here.” I liked the applied health aspect and eventually I parlayed my urban domestic experience into a master’s degree in applied medical anthropology, then went on to get a doctorate in international public health.

What’s great about the work at EcoHealth Alliance is they value my experience in fields that are often overlooked like anthropology; adding the behavioral component to the PREDICT project brings in humans in a more comprehensive way.

What’s the behavioral component of pandemic prevention?

It has a lot to do with what we found in the West African Ebola outbreak. It turned out it was spreading largely because of burial practices, that people were touching the dead bodies. One Health links the health of the environment, animals, and humans, and our behavioral research looks closely at sociocultural norms and practices that put people at risk for the spread of zoonotic disease outbreaks.

What are some practices or behaviors you run into repeatedly that are a barrier to keeping people healthy?

A big one is traditional medicine. Historically this has been an issue because we, as a field, don’t know quite how to talk with people about their traditional beliefs. It’s possible that some of these things work because there are so few clinical trials on alternative medicine, especially not in developing countries. So we feel hesitant to say “You’re wrong,” but at the same time we want to say “Here’s a different way that could be better.”

The goal of PREDICT on the whole is to detect and discover viruses with pandemic potential, but personally what is your goal in your work with PREDICT?

My goal is to be able to communicate and collaborate with the other technical teams so that we can, together, develop comprehensive interventions that address all facets of zoonotic disease emergence. On the behavioral side, one of those interventions is a book we developed to help people live safely around bats.

Explain Living Safely with Bats.

The idea behind the book is to reach out to low literacy populations to give them information to help them mitigate any risk associated with interacting with bats. Through preliminary analysis of PREDICT data, we learned that there was an explicit need to help communities learn how to prevent zoonotic disease through bats in particular. It contains six sections: one on the importance of bats within our ecosystem, then basics of bat safety, how to dispose of dead bats, what to do if contact with a bat is unavoidable, how to manage bats in your home, and managing bats around the home, like in a garden or farm.

The book was fully built in-house under my direction. We’re super psyched about it and with its launch we really think we can make a difference by helping people find ways to protect their own health.

continued...
“One Health links the health of the environment, animals, and humans, and our behavioral research looks closely at sociocultural norms and practices that put people at risk for the spread of zoonotic disease outbreaks.”

What’s something you’ve learned working at EcoHealth Alliance?

I feel like I’m constantly learning but a good example comes from a bat cave tourist study we’re doing and one of the sites has a wildlife restaurant that has wildlife walking in and out. And they have bats in the kitchen. So the fact that there’s so much opportunity to make a difference was a really eye-opening moment for me. In science we’re kind of distanced from being able to make a change but when I heard that I realized we’re not that far off from being able to make a difference.

In terms of behavioral surveillance, how do you measure success?

One is capacity building, for sure. So if we look at the numbers, we’ve trained so many people across the globe and we’re really giving them skills that they’ll need for a lifetime. We’re helping all of our in-country partners to get certifications for human subjects research. They can put that on a résumé and when PREDICT is over, they’ll be able to say, “I got this training and I can do research; I’m ready to start today.” Additionally, I actually think we’re probably preventing some outbreaks. There’s no way for us to know, because prevention is hard to measure. But we address the latest outbreaks on every team management call and recently we didn’t have any to discuss. And I thought, “Well, maybe it’s working.”
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. Policy often ends 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 on translating its strong ecosystem health science into actionable information for health policymakers. 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.

Toward shared conservation goals, EcoHealth Alliance also continued its fruitful collaboration with the Secretariat of the Convention on Biological Diversity, providing the ecosystem health perspective at a regional workshop in Brazil hosted by the CBD and the World Health Organization. EcoHealth Alliance has 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 policy expertise to intergovernmental organizations including the World Organisation for Animal Health (OIE), the International Union for the Conservation of Nature, the United Nation’s Food and Agriculture Organization and the World Health Organization, including expert advice on Avian influenza and Middle East Respiratory Syndrome.

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 industries to develop sustainable and healthy practices. Across the world and on local levels, EcoHealth Alliance staff and partners engage policymakers 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.
EcoHealth Alliance

FINANCIAL STATEMENTS

FY2017 Income:

- **Government Grants:** 91%
  - $12,872,573
- **Foundations and Corporations:** 2%
  - $272,984
- **Individuals:** 3%
  - $315,964
- **Investment Income**: 1%
  - $183,315
- **Other Income:** 1%
  - $205,815
- **Special Events Income:** 2%
  - $354,342

**TOTAL INCOME:** $14,204,993

*Includes investment gains of $119,446

FY2017 Expenses:

- **Program:** 88%
  - $12,237,739
- **External Relations:** 5%
  - $588,119
- **Administration:** 6%
  - $816,748
- **Special Events:** 1%
  - $92,636

**TOTAL EXPENSES:** $13,735,242

**CHANGE IN NET ASSETS:** $469,751

The firm of Loeb & Troper audited the Consolidated Statements of EcoHealth Alliance as of June 30, 2017 including the Consolidated Balance sheet, Consolidated Statement of Activities, Consolidated Statement of Functional Expense, and Consolidated Statement of Cash Flows. 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 Armine Arustamyan, Chief Financial Officer at EcoHealth Alliance, 460 West 34th Street, - 17th floor, New York, NY 10001.
HOW YOU CAN HELP

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Please visit:
www.ecohealthalliance.org/donate

EcoHealth Alliance stands among only five percent of charities evaluated by Charity Navigator to receive at least seven consecutive 4-star evaluations.