

From: (b)(6)
Sent: Fri, 7 Jun 2019 01:35:58 +0000
To: (b)(6)
Subject: Fwd: PREDICT 2019 Semi-annual report
Attachments: P2 SAR2019-FINAL-compressed_v2.pdf

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U.S. Agency for International Development (USAID) (b)(6)
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----- Forwarded message -----

From: (b)(6)@ucdavis.edu>
Date: Wed, May 1, 2019 at 5:15 PM
Subject: Re: PREDICT 2019 Semi-annual report
To: (b)(6)@usaid.gov>
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Hi there,

Here is the updated report. We corrected the map in the preface to accurately depict PREDICT's GHSA countries. Coming next week is the M&E Excel file for (b)(6) along with the appendix containing our project's maps and models for this period of performance.

Best,

(b)(6)

On Tue, Apr 30, 2019 at 4:26 PM (b)(6)@usaid.gov wrote:

Hi (b)(6),

Thanks so much for sending, just confirming that this version came through!

Best,

(b)(6)

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
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On Tue, Apr 30, 2019 at 6:45 PM (b)(6)@ucdavis.edu wrote:
Hi there,

Please find attached the final version of PREDICT's 2019 Semi-annual report. It's a pretty great edition, hope you like it.

Enjoy!

(b)(6)



USAID | PREDICT

FROM THE AMERICAN PEOPLE

SEMI-ANNUAL REPORT

2019



**REDUCING PANDEMIC RISK,
PROMOTING GLOBAL HEALTH**

ACKNOWLEDGMENTS

This publication was prepared by the PREDICT Consortium headquartered at the One Health Institute (OHI), School of Veterinary Medicine, University of California, Davis.

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Special thanks to the governments of and partners in Bangladesh, Cambodia, Cameroon, China, Côte d'Ivoire, Democratic Republic of Congo, Egypt, Ethiopia, Ghana, Guinea, India, Indonesia, Jordan, Kenya, Lao PDR, Liberia, Malaysia, Mongolia, Myanmar, Nepal, Republic of Congo, Rwanda, Senegal, Sierra Leone, Tanzania, Thailand, Uganda, and Vietnam. The success realized by the PREDICT project, documented herein, would not have been possible without the valuable contributions of Andrew Clements, Alisa Pereira, Cara Chrisman, and Amalhin Shek.

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ON THE COVER

Photo: Ebola Host Project's Mohamed Turay untangles a bat from a mist net in Sierra Leone. PREDICT's Ebola Host Project, a regional effort across West Africa, is working to identify the animal host species of ebolaviruses. (credit: Simon Townsley)



Photo: (L-R) Jonna Mazet with
PREDICT/Mongolia Country
Coordinator Enkee Shiilegdamba

DIRECTOR'S LETTER

Introduction

The PREDICT Project, led by its in-country teams, has contributed to amazing advancements in local and global health security over the life of the project. Because of the dedication and smart surveillance work of the diligent participants, countries and communities are more aware than ever of zoonotic disease threats and what can be done to reduce risks. Despite these efforts and the giant steps forward, spillovers of viral pathogens do happen, and we must be vigilant in order to recognize them and respond rapidly for the best control outcomes possible. It has been eight months since the Democratic Republic of Congo declared a new outbreak of Ebola virus disease in North Kivu Province. In that time, over 1,200 individuals have been infected, and the disease has claimed over 800 lives. Response teams continue to battle the outbreak in a complex social and political environment, and while the number of cases continues to rise, there have been promising developments in our ability to prevent and contain the spread of this disease. Preliminary assessments in the efficacy of the candidate vaccine and ring vaccination strategy provide needed hope, though other assessments of the social challenges reaching affected communities for response and prevention efforts, including vaccine delivery, are a sober reminder that science and evidence-based interventions can fall short without investments in understanding the human social and behavioral elements critical for their success.

Over the past six months, the PREDICT Ebola Host Project teams in West Africa continued to build an evidence base supporting Ebola and other filovirus prevention efforts by investigating the underlying drivers of viral spillover and spread and the wildlife host species that may pose greatest risk. Building on our earlier discovery of a new ebolavirus in Sierra Leone (*Bombali ebolavirus* in bats), our team, together with the US Centers of Disease Control and Prevention, detected Marburg virus in Egyptian rousette

bats in that country, the first time the virus has been detected west of Gabon. Meanwhile in Liberia, our PREDICT team detected *Zaire ebolavirus* in a greater long-fingered bat, with further genetic investigations showing it was either the same or a close relative of the virus that caused the West Africa outbreak. Recently, in early April, a team of European researchers and partners in Kenya (not affiliated with PREDICT) detected *Bombali ebolavirus*, also in *Mops condylurus* bats, in the Taita Hills near the border with Tanzania, validating our assumptions that this new ebolavirus is geographically widespread and may pose a risk for spillover across the continent, as these bats favor roosting sites near villages and dwellings.

PREDICT has been designed using the One Health approach, recognizing that to prevent spillover of these viruses from wildlife, you must invest in understanding social and behavioral factors that put people and their domestic animals at risk. Since 2014, our teams in over 28 countries have been working with communities using the social science toolkit to build relationships and trust; raise awareness of zoonoses and risks of transmission and spread; and understand the cultural systems, behaviors, and practices that could facilitate viral spillover and spread. In addition, our teams have been working to strengthen the workforce and systems for improved disease surveillance, detection, and health security. In DR Congo, PREDICT led a workshop on Ebola preparedness in Goma, highlighting risks to human communities and the critically endangered mountain gorilla population, which is also susceptible to the disease. In Kenya, PREDICT teams brought the Smithsonian National Museum of Natural History "Outbreak" exhibit to communities in Lakipia, using an innovative educational approach featuring the immersive experience in outbreak and zoonotic disease education combined with a workshop on biosecurity and prevention. In Tanzania, we

launched a monthlong One Health workshop for professionals in the Lake Zone, which borders DR Congo, along with Burundi, Rwanda, and Uganda, and is the designated hot zone for implementation of Tanzania's Ebola Contingency Plan.

We are proud to highlight these successes in our 2019 Semi-annual Report, another round of amazing contributions to global health and security. Our project, which is building to a crescendo at the end of a second 5-year investment phase from USAID, is shifting focus now towards data analysis and characterization of zoonotic disease risk, an exciting phase that promises to yield even more evidence and insights to improve our understanding of pandemic threats, their origins, and, we hope, their eventual demise.

Best regards,



Jonna AK Mazet, DVM, MPVM, PhD
Professor and Global Director
One Health Institute & USAID PREDICT Project
University of California, Davis





PREFACE

The PREDICT Consortium: putting One Health in practice



USAID | PREDICT

FROM THE AMERICAN PEOPLE

PREDICT, a project of USAID's Emerging Pandemic Threats (EPT) program, was initiated in 2009 to strengthen global capacity for detection and discovery of viruses with pandemic potential that can move between animals and people. Those include filoviruses, such as the ebolavirus and Marburg virus; influenza viruses; coronaviruses, the family to which SARS and MERS belong; and paramyxoviruses, like Nipah virus. PREDICT has made significant contributions to strengthening global health security by improving surveillance and laboratory diagnostic capabilities for new and known viruses.

Now working with partners in 30 countries, PREDICT is continuing to build platforms for priority viral surveillance and for identifying and monitoring zoonotic pathogens or those that can be shared between animals and people. Using the One Health approach, the project is investigating the behaviors, practices, and ecological and biological factors driving disease emergence, transmission, and spread. Through these efforts, PREDICT is improving global disease recognition and beginning to develop

strategies and policy recommendations to minimize pandemic risk.

PREDICT is working to strengthen global capacity for detection and discovery of zoonotic viruses with epidemic and pandemic potential, including the Ebola, influenza, and Zika viruses that have been recent causes of devastating disease and necessary impetuses of dramatic and resource-intensive responses. The project is actively and diligently implementing GHSA activities in target countries aimed at developing and operationalizing strategies to improve disease management efficiencies in the short term, and reduce zoonotic pathogen spillover, amplification, and spread in the long term, through improved public health policies and risk-reducing mitigation efforts. In every country of engagement, we work hand-in-hand with governmental and non-governmental stakeholders to develop and implement activities that are tailored to country and regional priorities, and specifically designed to strengthen capabilities and ensure lasting positive effects from our engagements.

PREDICT Consortium & Management

The USAID/PREDICT Consortium is a functionally collaborative working team that implements the project through in-country partners and benefits from the experience of world leaders in zoonotic disease detection and surveillance, epidemiology, disease ecology, and risk characterization. PREDICT's consortium includes partnerships with ministries of health, agriculture, and environment, and implementing university and NGO partners in 30 countries.

PERSONNEL

PREDICT's international consortium of partners consists of

232 in-country staff

99% of whom are citizens of the host countries where they serve

PARTNERSHIPS

PREDICT has executed 22 subaward agreements since the start of the project, of which 90% are with foreign government entities and laboratories in Asia and Africa. These partnerships enable PREDICT to further advance capabilities for zoonotic disease surveillance, detection, and response.

COMMUNICATIONS

Follow PREDICT teams around the world on Twitter

@PREDICTproject



Join ResearchGate to connect with PREDICT Consortium scientists and to access publications and presentations.

Committed to open data, our host country government-approved findings are available online through the PREDICT BioProject on GenBank and through the HealthMap-hosted data portal at www.data.predict.global.

USAID/PREDICT global-level consortium institutions

- **UC Davis' One Health Institute**, based in the highest rated veterinary school in the world, is active all over the globe, working at the interface of animals, people, and the environment to solve complex problems that impact health and conservation.
- **EcoHealth Alliance** is the first group to identify bats as the reservoir of SARS-like coronaviruses, to define hotspots of emerging diseases, and identify drivers of disease emergence.
- **Metabiota, Inc.** has made seminal discoveries regarding the role of hunting of nonhuman primates and food handling in moving animal pathogens to humans.
- **Smithsonian Institution and the National Zoo** are among the founders of the field of conservation biology.
- **Wildlife Conservation Society** is the first conservation organization with a dedicated team of wildlife veterinarians deployed around the world, with programs focused on environmental stewardship and health problem-solving.
- Other global partners include **Columbia University**, **Epidemico (HealthMap)**, and the **International Society for Infectious Disease**.

Photo: PREDICT/Bangladesh team sampling crows



SUCCESS STORIES

Highlights from our teams around the world

SUCCESS STORY

Strengthening National Capacity for Outbreak Response in Bangladesh

Live bird markets are very common in many parts of Southeast Asia, including Bangladesh, where they serve as the economic networks for selling and trading poultry. Beyond buyers and sellers, these markets draw the attention of wild birds like crows, foraging for food. This interface of wild birds, humans, and domestic avian species presents a possible avian influenza biosecurity hazard. PREDICT/Bangladesh has been working with government partners to strengthen outbreak response capabilities since 2016, when the team played a lead role in crow mortality outbreak response, collecting samples from dead and live birds at the live bird markets and testing them at partner laboratories for zoonotic diseases.

More recently, on December 21, 2018, dead crows in Jessore were reported to the Institute of Epidemiology, Disease Control and Research (IEDCR). IEDCR contacted the PREDICT/Bangladesh team, and its members attended meetings in Dhaka to support the Government of Bangladesh's leadership and to help develop a plan for outbreak response. As part of the plan, PREDICT provided training to a multidisciplinary government team that included officials from both IEDCR and the Department of Livestock Services (DLS). PREDICT also provided hands-on training in avian sampling methods, proper personal protective equipment (PPE) and biosafety, and proper disposal of biohazardous waste/carcasses to the DLS team and members of the Field Epidemiology Training Program—Bangladesh (FETPB) Veterinary Fellowship.

The Government of Bangladesh outbreak team led the response and collected samples from crows that were sent to the Bangladesh Livestock Research Institute (BLRI) laboratory for testing. During the outbreak, the rapid mobilization and response demonstrates that the Government has improved national health security capacity for outbreak response, especially for diseases emerging in wildlife—often a gap in national surveillance and detection systems. Over time, PREDICT support helped advance this capability, and Bangladesh is now increasingly self-reliant in zoonotic disease prevention and control.

PREDICT assists government in outbreak response to crow die-off, presenting confirmed results of avian influenza (H5N1)

PREDICT assists government in two crow die-off events, presenting confirmed results of avian influenza (H5N1 & H5), as well as a human encephalitis outbreak (suspected Nipah virus)

Government of Bangladesh independently mobilizes & responds to a crow die-off, suspected to be an outbreak of avian influenza

2016

2017

2018

Recent PREDICT discoveries have identified bats as the host species for multiple zoonotic viruses. But identification does not equal a call for eradication. In fact, PREDICT strives to underscore the ecological importance of bats and the need to conserve their populations and the habitats on which they depend. Community engagement and feedback is essential to PREDICT's strategy for zoonotic disease risk reduction, which includes raising awareness of ecosystem health and conservation in conjunction with public health.

KENYA: Outbreak exhibit, "bat book" leads to action, interventions

In Kenya, PREDICT held several events with communities in Laikipia County (Leikiji, Mpala, Ol Jogi, and Ilmotiok). The team brought a mobile "Outbreak" exhibit (developed in collaboration with the Smithsonian National Museum of Natural History) to catalyze dialogue on the disease risks posed by exposure to wildlife, and help illustrate best practices for disease prevention and control.

Some community leaders expressed concern about the role of bats in disease transmission, as bats are common around their homes and public buildings. In response, *Living Safely with Bats*—a behavior change and risk communication book created by PREDICT—was distributed to community leaders, teachers,

and health liaisons as a resource. The book helps identify practical ways to reduce the risk of disease, such as basic home improvement options that prevent bats from roosting in homes and community spaces.

During visits, our team observed that community members in Ol Jogi were putting these best practices into action through the renovation of a community center. The center's roof had multiple holes, allowing bats to freely enter and roost inside, close to people. Following PREDICT/Kenya's engagement, Ol Jogi residents reinforced the center's roof to fill the holes and gaps, making the building unusable as a roosting site. This basic intervention is now being considered for implementation in homes and other public structures in Ol Jogi.

GUINEA: Bat book & podcast reach at-risk groups at heart of West Africa Ebola outbreak

Over 3,000 miles away in Guinea, PREDICT has been working to reduce the risk of disease transmission in the Forest Region, which has an estimated population of 1,335,274 and is considered to be the origin for the West Africa Ebola outbreak. Over the past six months (October 2018–March 2019) our team used the *Living Safely with Bats* book to target at-risk groups such as hunters and farmers, engaging over 4,000 individuals.



SUCCESS STORY

From East to West Africa: Reducing Risks of Zoonotic Disease Transmission



L-R: Presenting the mobile “Outbreak” exhibit (credit: PREDICT/Kenya), radio interview on “Health for All” (credit: PREDICT/Guinea)

PREDICT also worked with a local radio station to record an interactive episode of the Guinea podcast series “Health for All.” Broadcast throughout the Forest Region in French and four other national dialects (Kissi, Toma, Guerze, and Malinke), the episode focused specifically on the *Living Safely with Bats*

book. As evidence of the podcast’s impact, the Government of Guinea specifically requested that PREDICT intensify risk communication activities upon notice of a confirmed death from Lassa Fever. The Health for All podcast was broadcast daily in the affected region for one month.

Empowering Youth to be One Health Leaders

In Kenya, our team has found that primary school students are highly attuned to the risks of living in close proximity with bats. They were the most receptive group to messaging regarding biosafety measures.



PREDICT visited primary schools in three communities in Kenya (Leikiji, Ol Jogi, and Ilmotiok) to discuss zoonotic diseases of bat origin, such as Ebola and Nipah virus, as well as risk mitigation techniques to protect their health and keep their communities safe. Students first watched a documentary film about zoonotic diseases meant to stimulate conversation.

Following a Question-and-Answer session, students viewed the mobile Outbreak Exhibit and talked about the importance of conserving bat populations while preventing disease transmission from wildlife to people.

In Guinea, PREDICT’s community engagement and risk communication team worked closely with 27 primary schools to bring the *Living Safely with Bats* book and risk reduction messages to over 2,700 children. At the schools, PREDICT distributed 250 of the books to school directors. These books are being used in reading exercises and as a tool for child-to-child communication, along with their intended purpose for increasing awareness of zoonotic diseases, conservation, and the role of wildlife in health ecosystems.

SUCCESS STORY

Strengthening National Capacity to Detect & Prevent Priority Zoonotic Diseases

SIERRA LEONE

Finding viruses before they find us

For the first time in West Africa, scientists detected the deadly Marburg virus in five Egyptian rousette fruit bats in Sierra Leone. Marburg virus was identified by scientists at the same time from two separate projects—the USAID PREDICT project and the US Centers for Disease Control and Prevention project with Njala University.

The multiple diverse strains of the highly pathogenic Marburg virus were found in its natural fruit eating bat reservoir in several locations across the country, suggesting Marburg virus has been present in these bat colonies in Sierra Leone for many years. The Marburg virus was found in Egyptian rousette fruit bats who primarily feed on fruit. If infected, they can shed the virus in their saliva, urine, and feces. In light of the potential threat from this virus, PREDICT/Sierra Leone continues to emphasize how to reduce the risk of exposure and live safely with bats throughout communities in Sierra Leone, also stressing the importance of bats as a keystone species for healthy ecosystems.

LIBERIA

Liberia reaches a healthy security milestone

In Liberia, the PREDICT team reached a major milestone this year with the successful identification of *Zaire ebolavirus* in an insectivorous bat. This discovery is momentous because it is the first detection of *Zaire ebolavirus* in a bat in West Africa, providing important evidence that these bats may be a natural host for Ebola. Our findings and insights are helping target national surveillance and risk communication strategies and empowering local communities with the knowledge to help to prevent zoonotic disease spillover and spread.

In follow-up to the *Zaire ebolavirus* finding and in order to reinforce national laboratory capacity for detection of ebolaviruses, a Liberian scientist received training in advanced viral detection techniques at PREDICT's partner laboratory (Columbia University Mailman School of Public Health). As a result of PREDICT's engagement, Liberia has a trained and equipped wildlife surveillance team and a national laboratory with the capability to detect ebolaviruses and emerging viral threats, yielding tremendous value for strengthening national health security.



Ebola Host Project

PREDICT's Ebola Host Project, a regional effort across West Africa, is working to identify the animal host species of ebolaviruses. Recent discoveries in bats, which include a new ebolavirus (*Bombali ebolavirus*), *Zaire ebolavirus*, and Marburg virus, exemplify the mission of USAID's PREDICT Project, which aims to find viruses before they spillover into humans and cause economic catastrophes and devastating loss of life.



SUCCESS STORY

Strengthening Disease Surveillance & Detection Networks in North Africa & the Middle East

Building the evidence base through new viral discoveries

Global disease surveillance initiatives for novel, emerging viruses are an essential component of pandemic prevention efforts. PREDICT's surveillance strategy is focused on high-risk transmission interfaces, where people and wildlife come into contact and where viruses have the potential to spillover from wild animals into people or their domestic animals. In Egypt, PREDICT collected samples from *Rousettus aegyptiacus* bats from an abandoned mudbrick house in a village in the Nile Delta region, then tested the samples for multiple viral families, including that of influenza viruses. As a result, the team not only discovered a new influenza virus, but the first and only characterization of this wild type bat influenza isolate. Interestingly, the virus was distinct from any previously discovered influenza A virus, suggesting that it is a novel H19N12 subtype.

This exciting finding was recently published in the January 2019 issue of the *Journal of Virology*: "Isolation and Characterization of a Distinct Influenza A Virus from Egyptian Bats."



Improving regional health security

PREDICT works to optimize surveillance and detection protocols and strengthen capacities in national laboratory systems, and to enhance multi-sectoral and regional collaboration between labs for improved global health security. PREDICT continued to encourage collaboration between Egypt's National Research Centre's Center of Scientific Excellence for Influenza Viruses (our project lab in Egypt) and the Jordan University of Science and Technology (JUST – our lab in Jordan) through trainings, sample sharing, and testing of human samples. In 2017, the PREDICT/Egypt team traveled to Jordan for hands-on trainings in safe bat capture and sampling. In turn, the PREDICT/Jordan team assisted with safe and effective implementation of One Health surveillance in at-risk Jordanian communities. In addition, PREDICT lab teams worked together to better understand

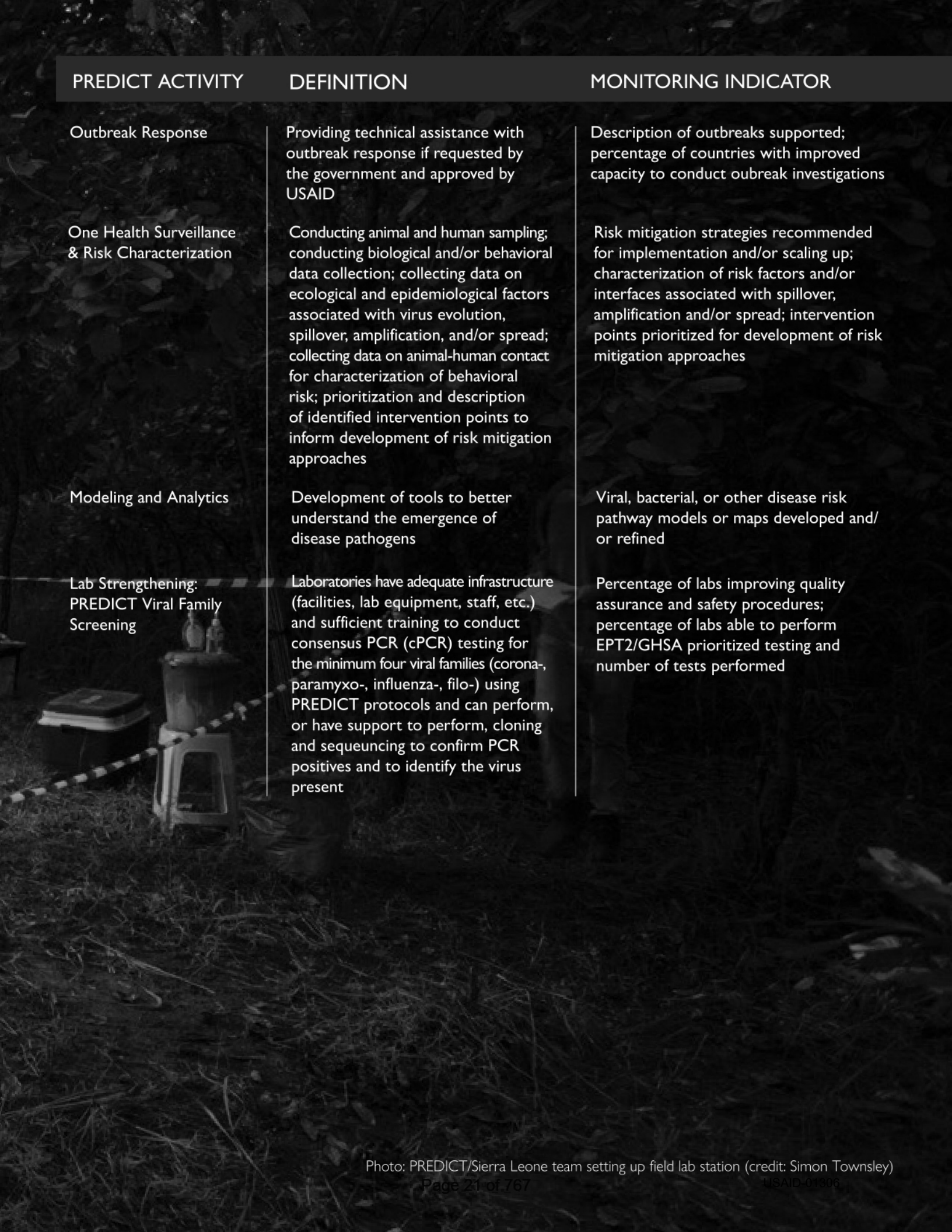
exposure to Middle East Respiratory Syndrome Coronavirus (MERS-CoV). In Egypt, 1,084 human samples were screened using serological assays for MERS-CoV-neutralizing antibodies via a serum microneutralization test. This allowed all of the serology tests from PREDICT/Egypt and Jordan teams to be directly compared, yielding regional insights on MERS exposure in the North Africa and Middle East regions.





MONITORING & EVALUATION

Measuring PREDICT outcomes and impact



PREDICT ACTIVITY	DEFINITION	MONITORING INDICATOR
Outbreak Response	Providing technical assistance with outbreak response if requested by the government and approved by USAID	Description of outbreaks supported; percentage of countries with improved capacity to conduct outbreak investigations
One Health Surveillance & Risk Characterization	Conducting animal and human sampling; conducting biological and/or behavioral data collection; collecting data on ecological and epidemiological factors associated with virus evolution, spillover, amplification, and/or spread; collecting data on animal-human contact for characterization of behavioral risk; prioritization and description of identified intervention points to inform development of risk mitigation approaches	Risk mitigation strategies recommended for implementation and/or scaling up; characterization of risk factors and/or interfaces associated with spillover, amplification and/or spread; intervention points prioritized for development of risk mitigation approaches
Modeling and Analytics	Development of tools to better understand the emergence of disease pathogens	Viral, bacterial, or other disease risk pathway models or maps developed and/or refined
Lab Strengthening: PREDICT Viral Family Screening	Laboratories have adequate infrastructure (facilities, lab equipment, staff, etc.) and sufficient training to conduct consensus PCR (cPCR) testing for the minimum four viral families (corona-, paramyxo-, influenza-, filo-) using PREDICT protocols and can perform, or have support to perform, cloning and sequencing to confirm PCR positives and to identify the virus present	Percentage of labs improving quality assurance and safety procedures; percentage of labs able to perform EPT2/GHSA prioritized testing and number of tests performed

PREDICT ACTIVITY

DEFINITION

MONITORING INDICATOR

Workforce Development
Training and Materials
Developed

Personnel and/or students participating in the following types of trainings; Field Sampling, Information Management, Laboratory Techniques and Assay Development, and Risk Characterization

Number of faculty members that received One Health training or professional development; number of future professionals trained; number of One Health fellows placed; number of current professionals trained

Workforce Development:
Local Capacity

PREDICT training and employment of local or regional staff members in host countries

Total number of in-country staff who are from the host country or region

Advancement &
Improvement of One
Health practices & policy

Development of One Health resources (including guidelines, technical protocols, standard operating procedures, standardized data collection instruments and protocols, and instructional tools and manuals for implementing risk mitigation recommendations) to provide evidence-based guidance on the operationalization and/or implementation of One Health principles and approaches; and inform policy change through evidence based solutions

Description of application of One Health approaches in the workforce; description of national/regional coordination mechanisms showing improved capacity; description of global, regional or country strategies under implementation; list of educational materials developed; tools developed for implementation and operationalization; evidence-based informational resources developed, including policy briefs, research papers, situational analysis/risk assessment; and zoonotic prioritization resources



Photo: Children in Kenya learning about Living Safely with Bats (credit: PREDICT/Kenya)

2018-2019

ONE HEALTH TOOLS & RESOURCES

78

Educational & evidence-based materials developed

ONE HEALTH STRENGTHENING

15

Countries coordinating community One Health events

LAB STRENGTHENING

790K

Tests performed

47

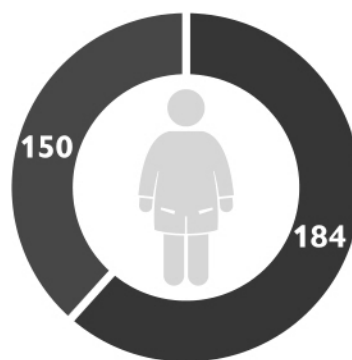
Labs able to perform PREDICT viral family testing

RISK MODELS & MAPS

34

Models or maps developed, re-fined, analyzed & described

ONE HEALTH WORKFORCE CAPACITY



#s trained

Female

Male

RISK FACTORS & RISK INTERFACES

49

Risk factors & risk interfaces characterized since the beginning of PREDICT-2 in 2014

INTERVENTIONS

24

Intervention points prioritized to inform the development of risk mitigation approaches





GLOBAL REPORT

One Health approach to creating a world safe & secure
from infectious disease

CAPACITY STRENGTHENING

Since 2009, PREDICT has trained over 5,000 One Health Professionals in Africa, Asia and Latin America

PREDICT-2 uses an integrated approach to train personnel in One Health skills necessary for field surveillance activities, laboratory testing, outbreak preparedness, and development of risk reduction strategies and interventions. Emerging viruses have the potential to spillover and cross borders; therefore, it is also essential to build a network of international health professionals who can detect, respond to, and prevent health threats.

Since October 2014, PREDICT-2 has engaged in over 28 countries in Asia and Africa to foster leadership and transdisciplinary thinking in the next generation of One Health professionals, strengthening skills and capacities of more than 3,500 people through 20,000 individual training events in topics such as biosafety, cold chain management, emergency preparedness, field sampling, behavioral risk investigations, and disease detection. To enhance global health security, PREDICT-2 continued to train future and current One Health professionals through 'on the job' trainings and workshops. Among these professionals, PREDICT has trained over 300 university students and 1,000 project staff in zoonotic disease surveillance and disease detection skills, a major contribution to the long-term capabilities of national health systems.

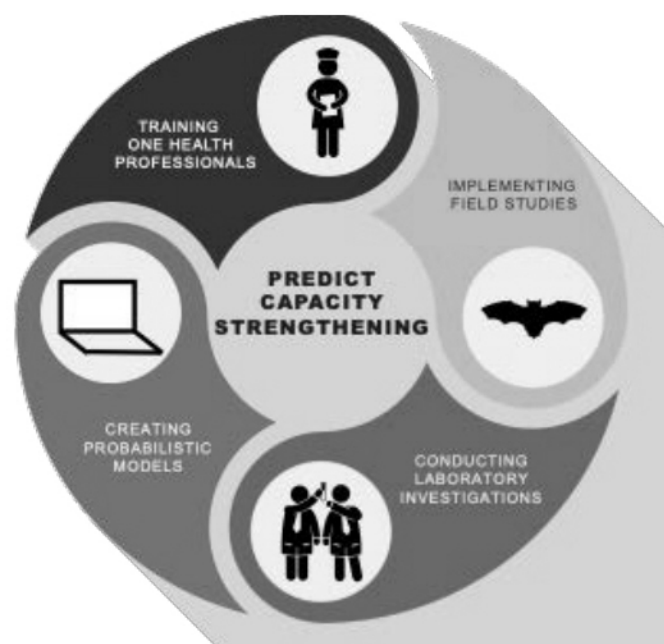


FIGURE 2. PREDICT-2 uses an integrated approach to train personnel in One Health competencies that enable field surveillance activities, laboratory testing for priority zoonotic diseases and other emerging threats, outbreak assistance, and informed behavior change that improves our understanding of zoonotic disease risks at key wildlife-livestock-human interfaces where spillover events may occur.

Building national capacity for zoonotic disease surveillance

Since the inception of PREDICT, the project has focused on enhancing One Health surveillance and laboratory diagnostic capacity in hot spot regions in Asia and Africa, training over 1,200 government officials in the core skills required to detect, respond to, and prevent zoonotic disease threats. In Bangladesh, PREDICT has been providing support and training for the multidisciplinary government outbreak response team, which independently led a wildlife outbreak response in December 2018 (see Success Stories section for details).

We continued to build key partnerships within and across active countries, as exemplified through collaborations with universities, ministries, and international organizations in Asia and Africa. This year, PREDICT/Senegal organized an innovative two-day outbreak simulation exercise on detection and response to an Ebola Virus outbreak for government officials, which resulted in discussions among human, animal, and environmental health sectors emphasizing the importance of collaboration among ministries to prevent and respond to emerging pandemic threats.

WORKFORCE DEVELOPMENT

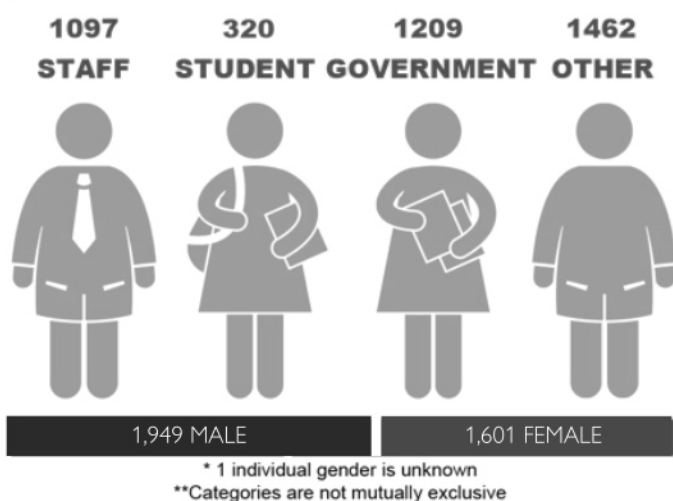


FIGURE 1. Since 2014, PREDICT-2 has trained over 3,500 individuals in One Health surveillance and disease detection in over 28 countries. Trained individuals include PREDICT staff, university students, government officials and others.



FIGURE 3. PREDICT/Senegal hosted a two-day simulation exercise on detection and response to an Ebola Virus outbreak. The simulation hosted over 40 participants from seven different ministries.

In Jordan, our PREDICT team played a critical role in the development of the molecular and virology laboratory at Jordan University of Science and Technology helping enhance JUST capabilities in molecular diagnostics. For example, in November 2018, there was a die-off and millions of dead fish were found along nearby rivers. Samples were sent to the JUST laboratory, and the team detected an emerging herpes virus called koi herpes.



FIGURE 4. PREDICT/Jordan strengthens capacity in laboratory techniques by training graduate students who work as part-time research assistants. Master's student Ola Abeneh demonstrates laboratory techniques at the JUST Molecular and Virology Lab.

Developing innovative training & outreach strategies

Capacity building activities often take place in a traditional classroom, but technical skills for health professionals are best learned in the field or lab through instruction and hands-on training. Through PREDICT-2, a variety of training approaches have been utilized, from online trainings to face-to-face workshops.

In Cambodia and beyond, PREDICT performs aligned surveillance with the participation of government partners, university students, and local authorities, including district and village veterinarians and nurses. Our team in Cambodia also provides experiential training to university students, who serve as interns in the field and project lab to practice and perfect their skills.



FIGURE 5. PREDICT/Cambodia is strengthening wildlife surveillance by working with university students and interns in the classroom and in the field. These hands-on experiences with professional mentors are valuable opportunities for students to apply knowledge and help strengthen the workforce for zoonotic disease surveillance.

Similarly, in Kenya, PREDICT launched an innovative strategy for raising community awareness of the One Health approach and risks of zoonotic diseases through the use of the Smithsonian Institute National Museum of Natural History's "Outbreak" panels. The panels were showcased in the communities and provided a platform for community members to engage in dialogue and role-play to learn and explore ways to prevent, detect, and control diseases at high-risk human-animal-environment interfaces.



FIGURE 6. PREDICT/Kenya showcases "Outbreak" panels at a One Health training, an innovative approach to increasing community awareness of zoonotic diseases and for learning about zoonotic disease prevention, detection, and control.

A One Health learning library for students & professionals

To encourage sharing of the knowledge and skills essential for safe and effective One Health surveillance, detection, and characterization of zoonotic disease threats, PREDICT's training materials, protocols, and e-book resources are freely available to the public (in English and French) at:

www.publications.predict.global

Publicly available guides & protocols

Biosafety, Cold Chain and Emergency Preparedness Resources

- Basic Laboratory Safety
- Biosafety & PPE Use
- Emergency Preparedness
- Implementing Cold Chain for Safe Sample Transport & Storage
- Packing & Shipping Biological Samples

One Health Surveillance & Field Sampling Guides

- Avian Sampling Methods
- Bat Sampling Methods
- Bushmeat Sampling Methods
- Livestock Sampling Methods
- Non-Human Primate Sampling Methods
- Rodent Sampling Methods
- Safe Animal Capture & Sampling
- Small Carnivore Sampling Methods

Behavioral Risk & Qualitative Research Guides

- Qualitative Research: Introduction & Observational Research Methods
- Qualitative Research: Focus Groups, Ethnographic Interviews & Data Analysis



Photo: *Macaca mulatta* in Nepal (credit: Pranav Pandit)

ONE HEALTH SURVEILLANCE:

Characterizing Biological & Ecological Risk

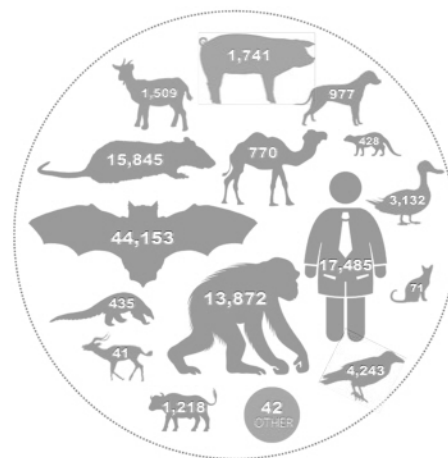
Overview

We completed implementation of our overall One Health surveillance strategy for animals and humans, in coordination with USAID and Emerging Pandemic Threats-2 (EPT-2) partners, to detect viruses in animals and humans and to characterize biological and ecological risk. Surveillance activities focused on a concurrent surveillance strategy for detection of viral sharing and spillover as a result of close proximity interactions, or effective contact, between wildlife shedding viruses and susceptible people (and domestic species where relevant). For human surveillance, sampling targeted people with high-risk occupations at concurrent sampling sites for animals, as well as acutely ill patients year-round at clinic and hospitals within the catchment area of concurrent sites.

At the PREDICT Semi-annual Meeting in November 2018, we reviewed surveillance progress and accomplishments to date and strategized successful completion of sampling and field activities with USAID and global and regional leads. We outlined the transition to post-sampling activities, including supporting data cleaning at the country and cross-partner level, preparation of data for analyses, and discussion of risk characterization. Additionally, we finalized how serology testing will be utilized to complement PCR testing already underway to provide a more complete surveillance assessment.

Targeted monitoring for zoonotic viruses with pandemic potential at specific high-risk interfaces

PREDICT-2 has sampled over 88,000 animals and 17,000 people since the start of project activities in October 2014. Years 1-2 involved coordination of a multitude of required activities before sampling began in each country, including engagement of local partners and stakeholders, obtaining local and institutional permits for animal and human sampling, and staff training. Over the past year, field activities substantially ramped up with respect to sampling efficiency across wildlife, domestic animals, and humans (Figure 1). Sampling activities were completed in the majority of participating countries by the end of Year 4 (September 30, 2018), and remaining sample collection events were completed by the end of January 2019. As sample collection wrapped up, efforts were transitioned to reviewing data, standardizing key data fields that accepted write-in responses, and preparing data for analyses.



Wildlife

PREDICT made a substantial effort towards sampling targeted wildlife species, primarily bats, rodents, and non-human primates, at high-risk interfaces for zoonotic spillover and spread. Wildlife sampling activities at high-risk interfaces were completed in all 28 PREDICT-engagement countries, which include Bangladesh, Cambodia, Cameroon, China, Côte d'Ivoire, Democratic Republic of Congo, Egypt, Ethiopia, Ghana, Guinea, India, Indonesia, Jordan, Kenya, Lao PDR, Liberia, Malaysia, Mongolia, Myanmar, Nepal, Republic of Congo, Rwanda, Senegal, Sierra Leone, Tanzania, Thailand, Uganda, and Viet Nam.

Livestock

PREDICT coordinated with FAO on planning and sampling livestock at sites designated for concurrent and triangulated surveillance wherever possible.

Concurrent livestock sampling activities have been directly supported by FAO in Bangladesh, Cambodia, Indonesia, Lao PDR, Myanmar, Thailand, and Viet Nam. Together with PREDICT teams, FAO sampled livestock in the same locations as wildlife (and humans where possible) in Egypt, Jordan, Nepal, and Tanzania. To date, PREDICT has completed additional livestock sampling in the Democratic Republic of Congo, Guinea, Kenya, Malaysia, Sierra Leone, and Uganda. Due to FAO priorities, livestock sampling was not conducted in Cameroon, China, Côte d'Ivoire, Ethiopia, Ghana, India, Liberia, Mongolia, Republic of Congo, Rwanda, and Senegal.

Humans

Human biological sampling and risk characterization surveys using PREDICT's human questionnaire were completed in high-risk communities in 23 targeted countries: Bangladesh, Cambodia, Cameroon, China, Côte d'Ivoire, Democratic Republic of Congo, Egypt, Ethiopia, Ghana, India, Indonesia, Jordan, Kenya, Lao PDR, Malaysia, Myanmar, Nepal, Rwanda, Senegal, Tanzania, Thailand, Uganda, and Viet Nam.

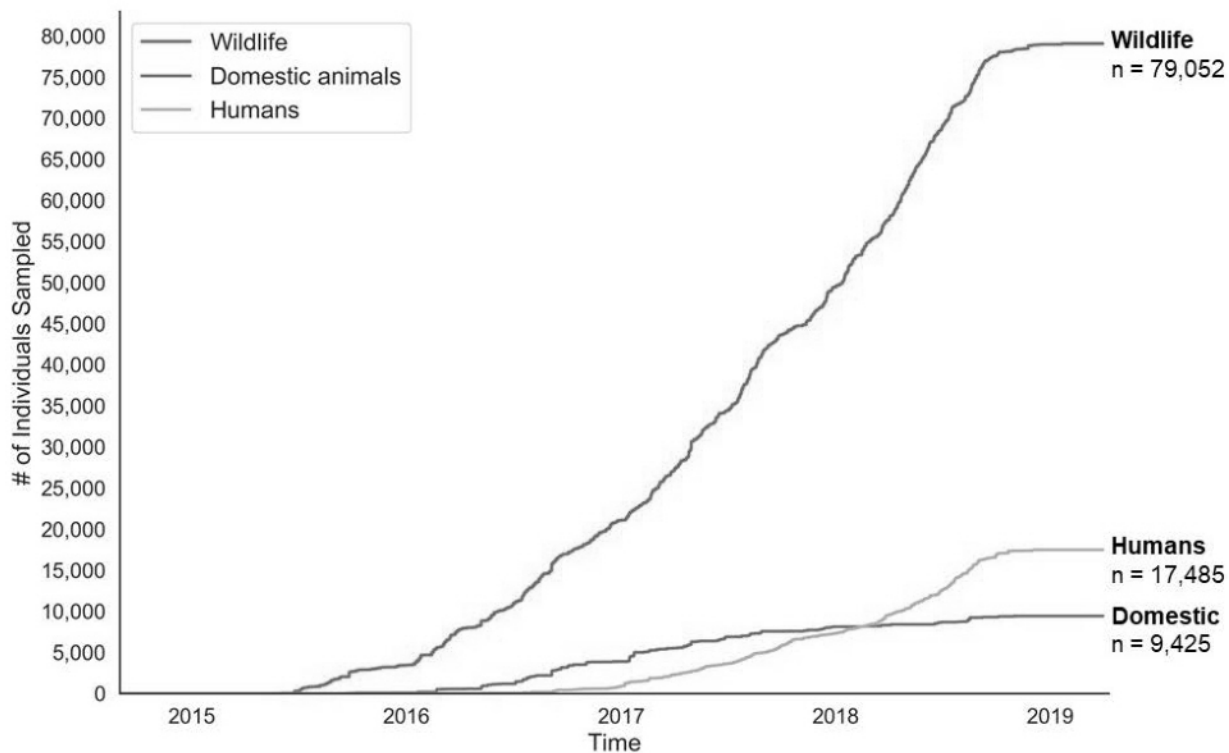


FIGURE 1. Number of individual wildlife, domestic animals and humans sampled.

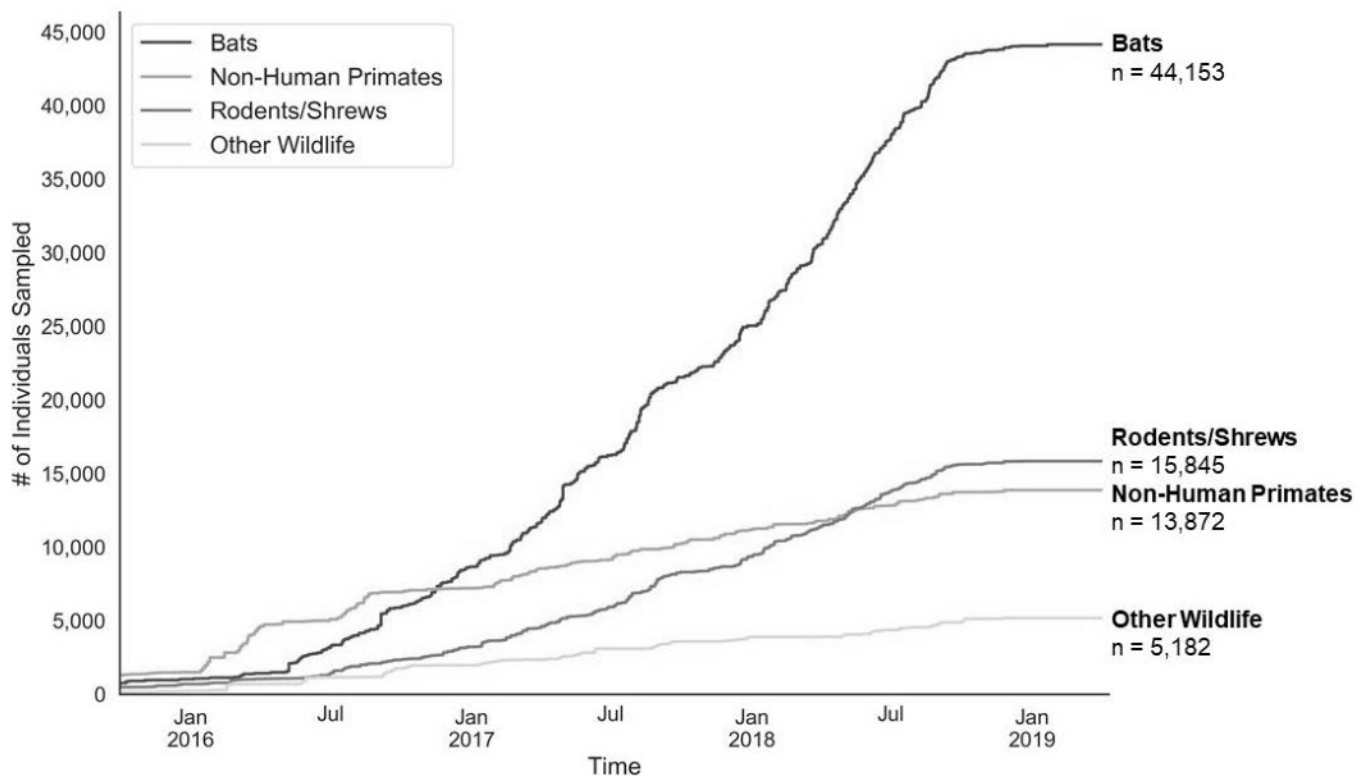
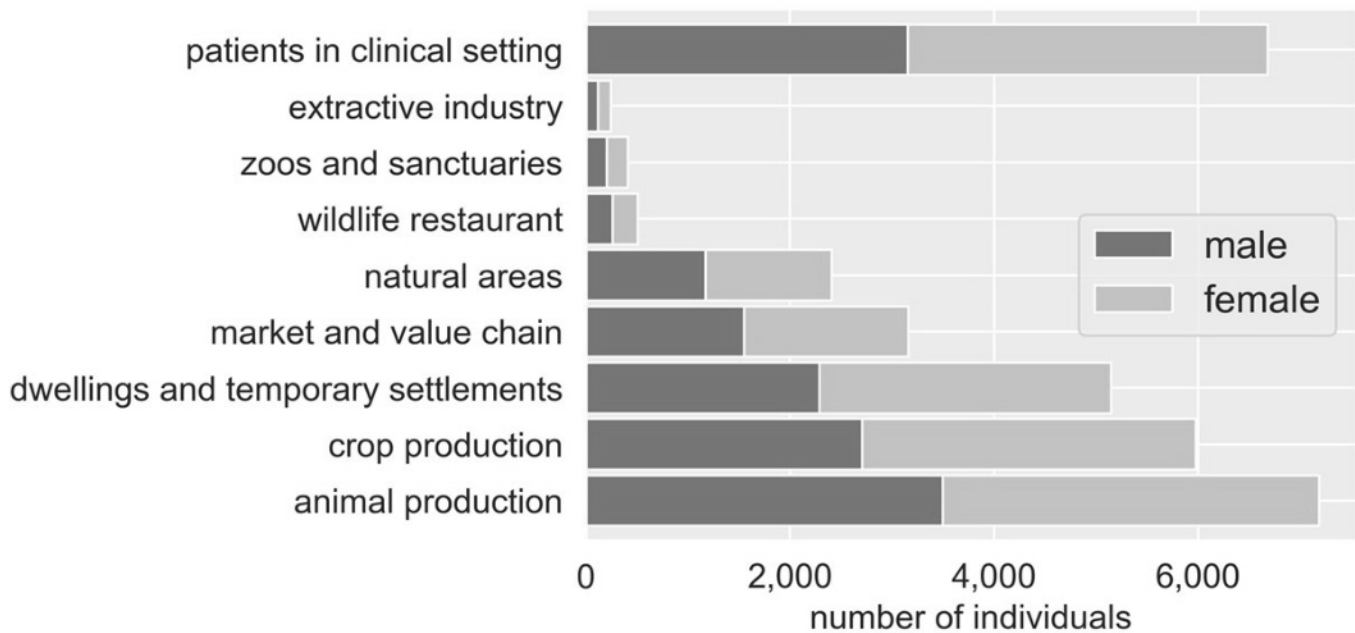
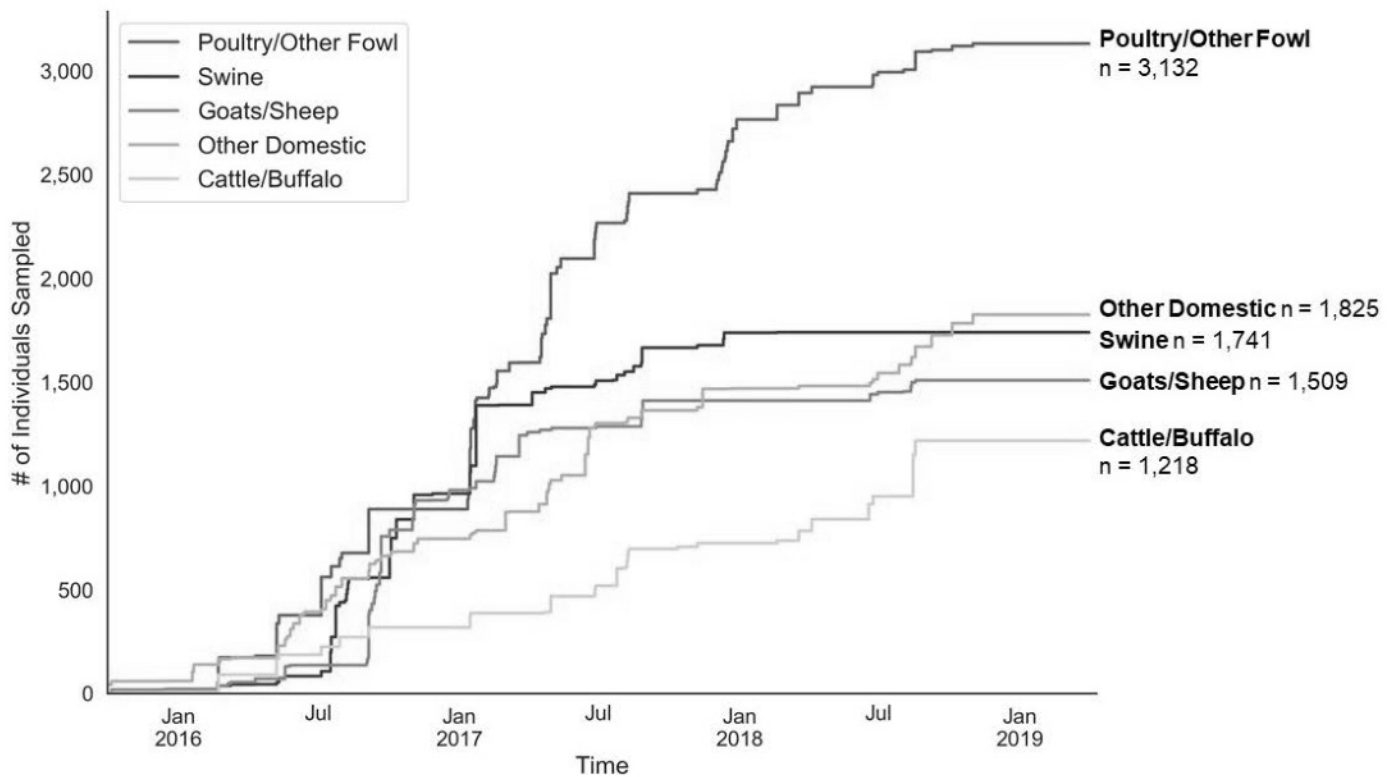


FIGURE 2. Number of individual wild animals* sampled overall, by taxonomic group.

*Depicts animals with data entered into the Emerging Infectious Disease Information Technology Hub (EIDITH), PREDICT's information and data management system.



CHARACTERIZING BEHAVIORAL RISK

PREDICT's behavioral risk activities aim to 1) collect data to better understand the human drivers of viral emergence, transmission, and spread, and 2) use evidence to inform the development of potential population or policy-level intervention strategies to reduce the spillover, amplification, and spread of zoonotic viruses and other emerging threats.

Highlights

- 739 professionals (46% women) in 29 countries trained on a variety of topics relevant to behavioral risk investigations.
- 9 tools established or refined to enhance the rigor of mixed-method behavioral risk characterization and the development of intervention recommendations.
- Over 1,000 ethnographic interviews and 100 focus groups (inclusive of over 900 participants) conducted.
- More than 19,000 quantitative behavioral questionnaires completed with community members and patients.
- More than 100 downloads of the *Living Safely with Bats* behavior change and risk communication picture book by community leaders, members, students, and individuals who work in academia or research, public health, animal health, NGOs, elementary schools, US government agencies, development, communications, museum libraries, and bat conservation. Successful endorsement of the behavior change book during its initial rollout in West Africa along with interest from the broader PREDICT consortium led to a broader adaptation and development for use in Asia partner countries (Figure 1).

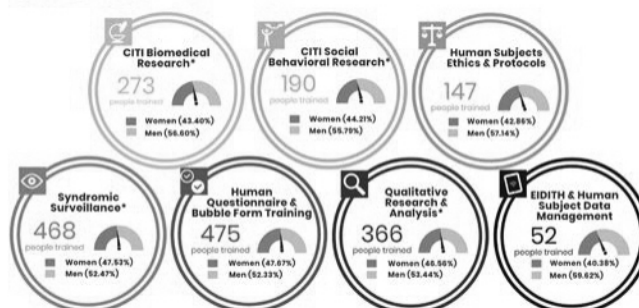


FIGURE 1. PREDICT's *Living Safely with Bats* behavior change and risk communication picture book, adapted for the South and Southeast Asia region.

Successes

Strengthening capacity for behavioral risk investigations in 28 countries

739 people trained



* includes trainings which require certification

SKILLS STRENGTHENED OVER LIFE OF PROJECT

FIGURE 2. Trainings include both remote and in-person events, as well as cross-team trainings to build regional capacity.

Standardizing approaches for investigating human behavioral risks

PREDICT continued to standardize and refine behavioral risk protocols, frameworks, and data investigation tools to improve scientific rigor within data analyses and interpretation.

- A Data Analysis Report was prepared that provides a visually engaging way to digest the information from the ecological, biological, and behavioral risk surveillance questionnaires. This report allows the data to be rapidly compared across each site for each country. With this new tool, country team members and technical team members are able to quickly conceptualize the differences between reported behaviors and contacts in country sites. The Data Analysis Report uses heatmaps to represent varied animal contacts by priority taxa overall and by key demographic characteristics. User-friendly heatmaps, such as the one featured from Indonesia (Figure 3), will assist country teams in exploring the data by visualizing trends as they work to develop evidence-based intervention recommendations.
- Data analysis planning resources were developed—including a framework and prototype to support analysis planning across all country-level behavioral risk teams and across consortium technical teams. In addition, an inventory of analysis themes of interest to country teams was established, helping coordinate data analysis for development of holistic, multidisciplinary One Health intervention recommendations.

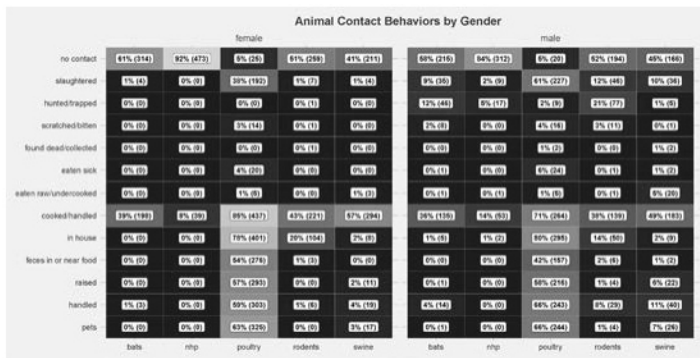


FIGURE 3. Behavioral Risk heatmap from Indonesia of the responses of the ecological, biological and behavioral risk surveillance questionnaires, by gender for various contact types by priority animal taxa.

Identifying Potential Intervention Points

The **Intervention Development Tool**—created to assemble the risk and protective factors relevant to knowledge/beliefs, attitudes, skills, and behaviors—has been implemented. The tool is used to capture both protective and risky factors as they relate to behavior and incorporates relevant summaries with supporting data sourced from ethnographic interviews and focus group discussions. The end-goal logic model for behavior change, which will incorporate these findings, can be seen in Figure 4.

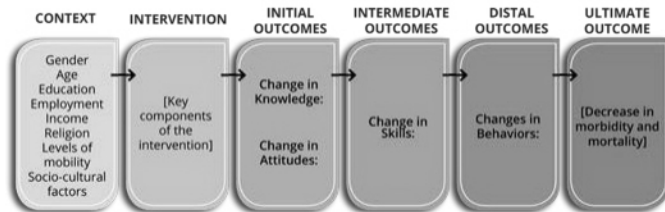


FIGURE 4. PREDICT's logic model for behavior change.

Deep Dive Investigations. Preliminary analyses of project data revealed that bat-related interfaces warrant particular attention, given the connection between bats and epidemics (such as in the case of SARS and Ebola). PREDICT has detected numerous viruses in bats at high-risk interfaces, including filoviruses, coronaviruses, paramyxoviruses, and influenza viruses, further supporting the need to conduct in-depth behavioral investigations at human-animal contact interfaces.

Our work exploring zoonotic disease risk and behaviors at human-animal interfaces, such as animal markets and value chains, also warrants extensive examination. PREDICT continued to explore several priority deep dive topics (Figure 5) that we identified as particularly critical for in-depth investigation. Early insights into intervention recommendations have been drafted across six countries (nine deep dive topics).



FIGURE 5. Behavioral risk deep dive topics under investigation by PREDICT technical teams.

Collaboration across Objective Teams. The PREDICT Modeling and Analytics (M&A) technical team is leading the implementation of modeling efforts referred to as 'IMPACTs' (Intervention Modeling Projects ACross Teams). The IMPACTs, some of which are focused on behavioral questions around human-bat interactions, are designed to output modeling results that can be integrated into the development of intervention recommendations for each of PREDICT's deep dive topics.

Working with the Surveillance and M&A technical teams has allowed for visually engaging analyses of the quantitative behavioral data (Figure 6).

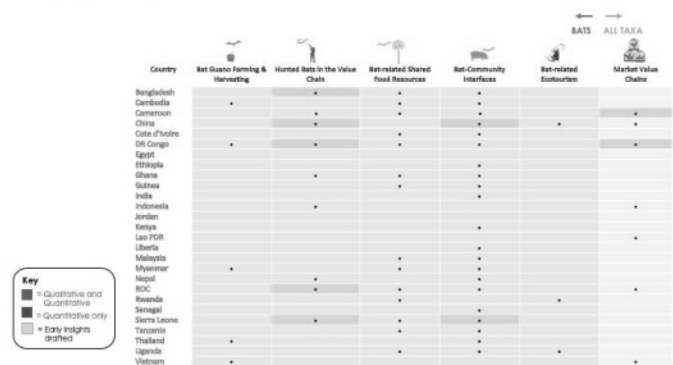


FIGURE 6. The multitude of ways that PREDICT-enrolled participants who completed the questionnaire experience contact with animals.

Select PREDICT Behavioral Risk Products

- 11 training decks to support capacity-building sustainability
- Data analysis planning resources
- Questionnaire analysis report
- Coding clarification log
- Questionnaire analysis matrix
- Real-time Interim Data Review (IDR) report
- Maps of behavioral data
- Intervention development tool
- Behavior change and risk communication resource *Living Safely with Bats* adapted to multiple contexts and translated in several languages

STRENGTHENING ONE HEALTH DATA PLATFORMS

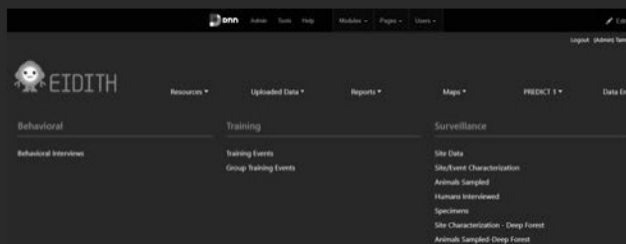


EIDITH

The Emerging Infectious Disease Information and Technology Hub (EIDITH) is the centerpiece of PREDICT's One Health data and knowledge management platform. Through EIDITH, One Health surveillance and lab data are captured from the field by apps and pushed to our secured servers for data cleaning and validation.

Specimen ID	Animal ID	Scientific Species Name	Common Name			
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			
Add Barcoding Result						
Sample Information	Test Date	Assay Used	Host Species ID <small>(100% = species 90-95% = 100% species 90% = unidentified)</small>	Use as Final	% Identity	% Gen Covera
CMAR71128_Oiv 1 CMAR71128 Atherurus africanus field ID certain	2018-Mar-4	CYTB	Atherurus africanus <input type="radio"/> 100% species <input type="radio"/> 90-95% = 100% species <input type="radio"/> 90% = unidentified	Yes	99	
CMAR71147_RT 1 CMAR71147 Cephalophus cephus field ID certain	2018-Mar-4	COI	unidentified <input type="radio"/> 100% species <input type="radio"/> 90-95% = 100% species <input type="radio"/> 90% = unidentified	No	62	
CMAR71134_RT 1 CMAR71134 Cephalophus dorsalis	2018-Mar-3	COI	Cephalophus dorsalis <input type="radio"/> 100% species <input type="radio"/> 90-95% = 100% species <input type="radio"/> 90% = unidentified	No		

An EIDITH application for host species identification and DNA barcode results.



EIDITH's new menu system for improved site navigation.

Multiple Person Training Event

Date *

Location of Training *

Trainer Name *

Was the training conducted by PREDICT staff? ☐ yes ☐ no

Were PREDICT protocols used in the training? ☐ yes ☐ no

Did participants take PREDICT quizzes after the training? ☐ yes ☐ no

Estimated number of trainee participants who attended:

Training Information

Type of Training:

Training Topic:

Trainee Participant Information

General: ☐ ACU 101 ☐ Bio ☐ Emergency Preparedness ☐ Information Manage ☐ Modeling and Analy ☐ Response and Mitigation

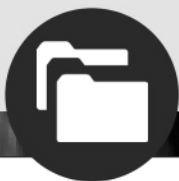
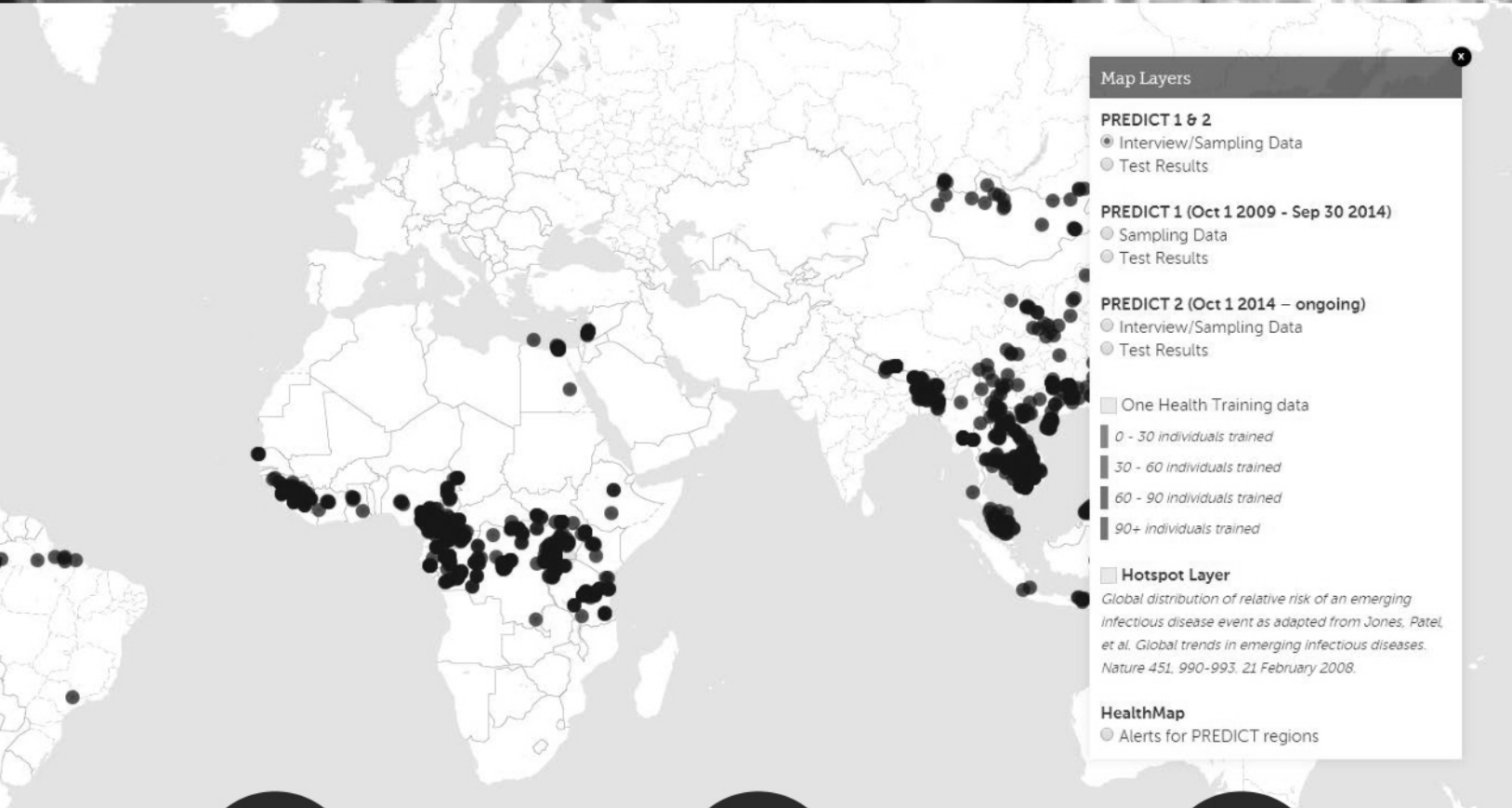
Training Home Country:

What was the gender makeup of the participants? (insert estimate):

EIDITH training application form for multiple-person training data.



EIDITH has upgraded the animal identification (barcoding) test results module, improving the accuracy of species data, which is critical for the conservation community.



EIDITH enables reporting to PREDICT partners, USAID, and host country governments, pulling data from our servers into customized data and information summaries that include reports on viral findings for government review and approval for public release.



EIDITH is home to PREDICT's training tracking system, where our teams can monitor trainee status, receive notifications on expired or refresher trainings, and view One Health competencies gained through our capacity strengthening program.



EIDITH also exports data that are approved for public release to HealthMap, PREDICT's home for interactive training, surveillance, and test result data. The site, **www.data.predict.global** is updated every 24 hours and powers visualization and analysis of data for the entire life of the project.

VIRAL DETECTION & LABORATORY IMPLEMENTATION

Laboratory capacity building

PREDICT continued to improve disease detection capabilities in 63 laboratories, targeted for training and testing across five priority viral families (corona, paramyxo, filo, influenza, and flaviviruses) known to cause zoonotic disease in humans and that are considered pandemic threats. There are now 47 labs testing for one or more priority viral families across Asia and Africa.

During this period, 19 labs gained step-wise increases in detection capacity (Figure 1): 10 gained a one-step increase, 8 gained a two-step increase, and one advanced three steps. As a result, one lab began testing for the first time, an additional lab produced preliminary results for the first time, and 17 labs submitted sequence results for interpretation.

Results reporting also improved, and viral findings have been approved for public release by host country governments in 22 countries. Results reports were prepared for 13 countries and shared with government partners (or will be shared soon). All government-approved results are available on our public site: www.data.predict.global.

CRITICAL CAPACITY

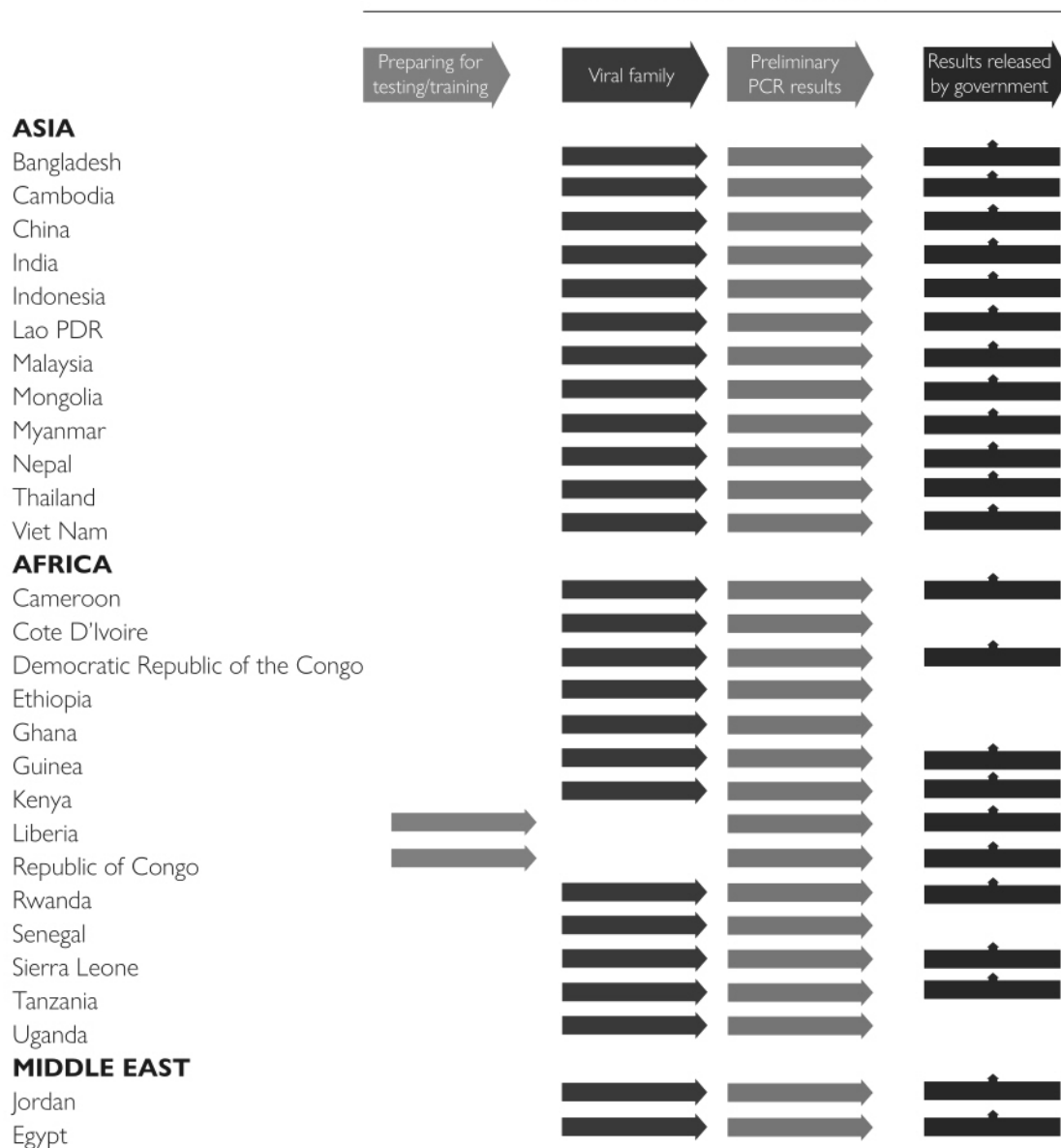


FIGURE 1. Major milestones and laboratory capacity gains toward viral detection



FIGURE 2. Bode Shobayo, deputy director for research at the National Public Health Institute of Liberia, visits the Center for Infection and Immunity (CII) at Columbia University. He was there to help with screening of Ebola Host Project samples collected from bats in Liberia and for training in advanced diagnostic platforms, including VirCapSeq and Serochip. While at the CII, Mr. Shobayo also participated in several capacity strengthening academic programs, including the weekly journal club in which he presented a study on filoviruses in China.

Testing progress

We are in the final stages of testing and data entry for the current five-year period. A side-by-side comparison shows that we tested more individuals in PREDICT-2 than in PREDICT-1, surpassing PREDICT-1 numbers in Year 2 (Figure 3). The majority of samples tested were from bats, humans, and rodents (Figure 4).

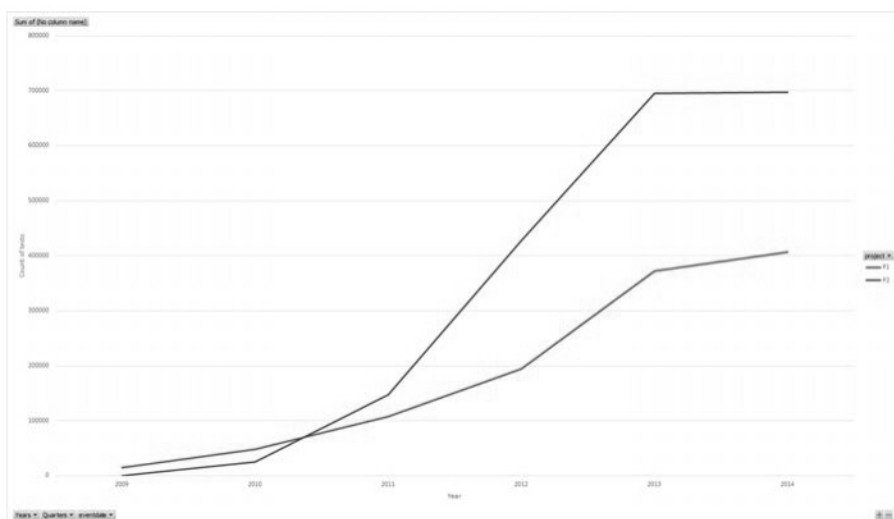


FIGURE 3. Total number of individuals tested in PREDICT-1 (red line) and PREDICT-2 (blue line).

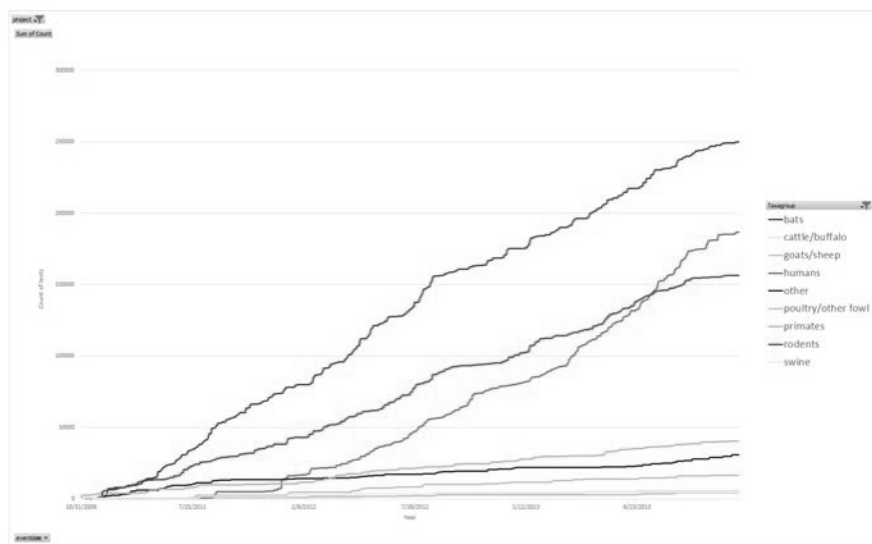


FIGURE 4. Total number of individuals tested to date, broken out by taxa.

PREDICT viral interpretation results

Viral family	# of known viruses found in P1	# of novel* viruses found in P1	# of additional known viruses found in P2	# of additional novel* viruses found in P2	Total
Coronavirus	31	69	18	Coronavirus	149
Paramyxovirus	12	74	8	Paramyxovirus	172
Filovirus	0	0	2	Filovirus	3
Influenza virus	8	0	1	Influenza virus	9
Flavivirus	3	5	3	Flavivirus	12
Hantavirus	4	3	1	Hantavirus	8
Rhabdovirus	0	31	0	Rhabdovirus	36

Some findings not yet approved for release; data for other viral families detected during PREDICT-1 but not targeted in PREDICT-2 are not shown.

*Definition of a novel virus: A virus is considered to be new or novel if it has equal or greater genetic variation than the difference between the two closest known virus species within a family/genus and if it represents a distinct (monophyletic) lineage. Our data are strongly suggestive of a new virus, but such classification can only be conferred by the International Committee on Taxonomy of Viruses (ICTV).



FIGURE 5. Viral map.

A table of comprehensive viral findings approved by host government partners for public release is provided below. All approved viral findings are also available on PREDICT's public site, www.data.predict.global.

Highlight of viral findings

- **Coronaviruses:** Completed 27 full genome sequences collected from Cambodia, ROC, Rwanda, Malaysia, and Bangladesh to facilitate phylogenetic analyses to better classify the viruses and understand their evolutionary history, as well as to evaluate their zoonotic potential.
- **Evaluated the ability of Bombali virus to antagonize human interferon:** Preliminary evidence suggests that Bombali virus is a poor antagonist of human interferon. This finding suggests that the virus may not induce a severe pathogenic response in people. Additional work is ongoing to fully characterize this response.
- **Generated additional NPC1 sequences for ebolavirus host susceptibility project:** An additional 25 NPC1 sequences were generated from bats and rodents. NPC1 is the host receptor used by filoviruses to enter cells. These sequences are now being used to assess species susceptibility to different ebolaviruses.
- **Detection of Marburg virus in West African rousette bats:** Marburg virus was detected in five Egyptian rousette bats (*Rousettus aegyptiacus*) in Sierra Leone. These infected bats were identified in caves near Moyamba, Koinadugu/Falaba, and Kono districts. Multiple strains of Marburg virus were found, including the Angola strain, a lineage of virus that emerged at a Marburg virus outbreak in 2005 in Angola. This is the first time that the Angola strain has been detected in bats (Figure 5). It also has provided further, productive impetus for collaborations with the CDC Special Pathogens Branch.
- **Detection of Ebola virus (species Zaire ebolavirus) in a greater long-fingered bat (*Miniopterus inflatus*) in Liberia:** An oral swab tested positive for Ebola virus (EBOV) by real-time PCR and was confirmed positive by sequencing. Approximately 20% of the genome was recovered. Preliminary analysis suggests the virus is the same or a close relative of the West African outbreak strain. Serum collected from this bat neutralized recombinant Vesicular Stomatitis Virus (VSV)-expressing EBOV glycoprotein (Figure 6).

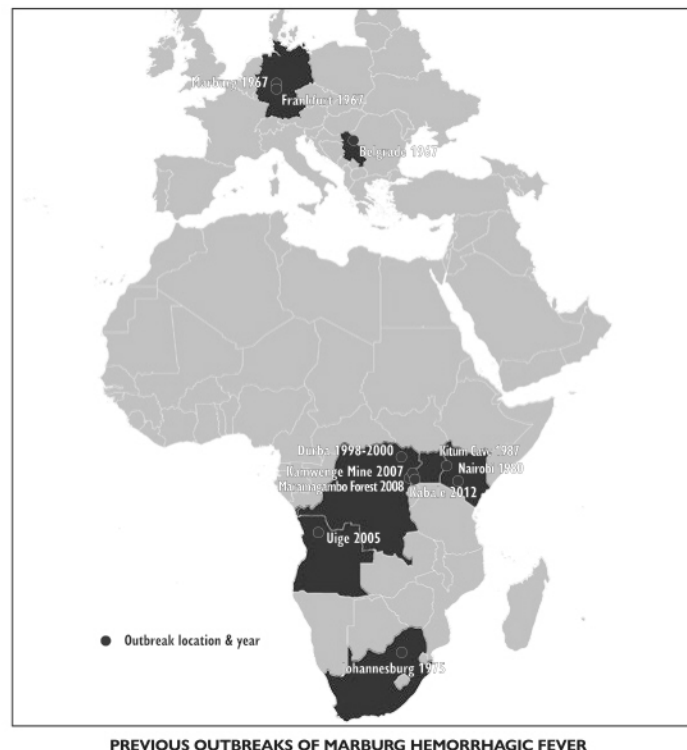


FIGURE 6. Marburg virus was detected in Egyptian rousette bats (*Rousettus aegyptiacus*) in Sierra Leone. This is the first time the virus has been found in West Africa and is more than 2,700 km from the closest previously reported detection.

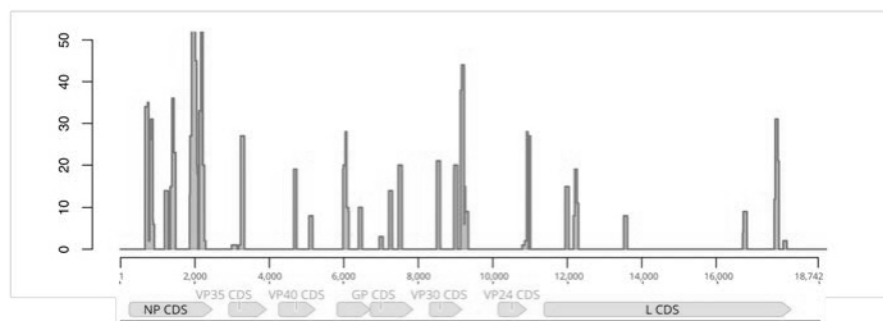


FIGURE 7. Ebola virus (species Zaire ebolavirus) was detected in a greater long-fingered bat (*Miniopterus inflatus*) in Liberia. Plot shows that approximately 20% of the genome has been sequenced.

Tools in development

- **Paramyxoviruses:** Vesicular Stomatitis Virus (VSV) pseudotype particles have been developed that incorporate different genes from paramyxoviruses, including a PREDICT virus found in bats. The goal is to assess the ability of these genes to mediate entry and replication in human and animal cells.
- **Ebola Serologic Assay:** Optimization of the PREDICT ebolavirus ELISA and western blot assays for testing human sera has been completed with samples from eastern DRC, and the assays are now being used to test a second batch of human samples from Uganda. Bat samples for further testing have now been shipped from Sierra Leone, Guinea, and Liberia to the US.
- **Refining our deep-sequencing approach:** We continued data collection and ongoing analyses to compare results of high throughput sequencing using unbiased sequencing with VircapSeq-VERT and to evaluate factors that affect sequencing.
- **Development of ebolavirus reagents:** Antibodies against proteins of the new Bombali virus have been produced (GP, NP, VP24, VP35). Recombinant VSV expressing the Bombali glycoprotein has also been developed. These reagents are now being used to understand Bombali virus infection in human cells and look for evidence of exposure in human populations.

TABLE 1. Viral findings approved for release by country, taxa, year and season indicating the number of positive individuals for each virus detected

COUNTRY	VIRUS	TAXA	2015		2016		2017		2018	
			Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet
Bangladesh	Influenza A	Birds			1		3			
		Poultry/other fowl			10		45			
	Strains of Newcastle Disease Virus	Poultry/other fowl					22			
	Peste des petits ruminants (PPR)	Goats/sheep		2			2			
	Strain of Alphacoronavirus 1	Dogs					2			
	Strain of Avian Paramyxovirus 6	Poultry/other fowl					7			
	Strain of Duck Coronavirus	Poultry/other fowl					37			
	Strain of Infectious bronchitis virus (IBV)	Birds					3			
		Poultry/other fowl					29			
	Strain of Murine coronavirus	Rodents/shrews		1						
	Strain of Pigeon-Dominant Coronavirus	Poultry/other fowl					9			
	PREDICT_CoV-17	Bats							4	
	PREDICT_CoV-52	Bats				1		2		
	PREDICT_CoV-56	Bats				5				
	PREDICT_CoV-86	Bats				1				
	PREDICT_CoV-88	Bats				4				
	PREDICT_CoV-89	Bats				1				
	PREDICT_CoV-90	Bats				3				
	PREDICT_PMV-103	Bats				1				
	PREDICT_PMV-104	Bats				1				
	PREDICT_PMV-109	Bats				1				
	PREDICT_PMV-20	Rodents/shrews				5				
Cambodia	Strain of Bat coronavirus 512/2005	Bats	2		26					
	Strain of Infectious bronchitis virus (IBV)	Poultry/other fowl						6		
	Strain of Lonquan Aa mouse coronavirus	Rodents/shrews	37	22	4	7				
	Strain of Murine coronavirus	Rodents/shrews	70	62	29	12				
	Strain of Tembusu virus	Poultry/other fowl						2		
	Thottapalayam virus	Rodents/shrews	2							
	PREDICT_CoV-100	Poultry/other fowl					1	1		
	PREDICT_CoV-102	Poultry/other fowl						3		
	PREDICT_CoV-24	Bats								
	PREDICT_CoV-25	Bats	1							
	PREDICT_CoV-35	Bats				2				
	PREDICT_CoV-56	Bats				1				
	PREDICT_PMV-13	Bats	6		18					
	PREDICT_PMV-63	Bats	1							
	PREDICT_PMV-66	Bats	3		6					
	PREDICT_PMV-67	Bats	9		1					
	PREDICT_RbdV-21	Bats	1							
	PREDICT_RbdV-28	Bats	1							
	PREDICT_RbdV-31	Bats	2							
	PREDICT_RbdV-32	Bats	1							
	PREDICT_RbdV-33	Bats	1							
Cameroon	Human Parainfluenzavirus 2	Humans					1			
	Influenza A	Humans					4	3		
	Monkey pox	Environment sample				7				
		Non-human primates				5				
	Strain of Bat coronavirus Hipposideros	Bats							1	
	Strain of Bat-related Human Coronavirus 229E	Bats				16	4	15	3	
	Strain of Zaria Bat Coronavirus	Bats					2	8		
	PREDICT_CoV-30	Bats	1							
	PREDICT_CoV-35	Bats	2							
	PREDICT_CoV-44	Bats				1	2	1	3	

	PREDICT_CoV-54	Bats		10	3	
	PREDICT_CoV-66	Bats	2			
	PREDICT_CoV-75	carnivores		1		
	PREDICT_CoV-81	Bats		11	3	3
	PREDICT_PMV-101	Rodents/shrews			3	1
	PREDICT_PMV-127	Bats		2	1	
	PREDICT_PMV-131	Rodents/shrews		1		1
	PREDICT_PMV-133	Bats		1		1
	PREDICT_PMV-79	Bats		1		
	PREDICT_PMV-80	Bats		1	1	
	PREDICT_PMV-82	Bats				
		Rodents/shrews				
China	Influenza A	Humans	3			
	Strain of Bat Coronavirus 1	Bats		32		
	Strain of Bat Coronavirus HKU10	Bats		6		
	Strain of Bat coronavirus HKU2	Bats		3		28
	Strain of Bat coronavirus HKU6	Bats				44
	Strain of Bat coronavirus HKU8	Bats		3		
	Strain of Bat coronavirus HKU9	Bats				6
	Strain of Bat paramyxovirus isolate BtHp-ParaV/GD2012	Bats				2
	Strain of Hipposideros_Bat_Alphacoronavirus MJ/67C	Bats				2
	Strain of Rhinolophus/Hipposideros Alpha-coronavirus	Bats		1		
	Strain of SARS-related betacoronavirus Rp3/2004	Bats				14
	Strain of SARS-related betacoronavirus RsSHC014	Bats		1		
	PREDICT_CoV-22	Bats		11		32
	PREDICT_CoV-23	Bats				1
	PREDICT_CoV-79	Bats		8		29
	PREDICT_CoV-95	Bats				2
	PREDICT_PMV-123	Bats				1
	PREDICT_PMV-129	Bats				1
	PREDICT_PMV-130	Bats				1
	PREDICT_PMV-134	Bats				1
	PREDICT_PMV-135	Bats				1
	PREDICT_PMV-136	Bats				1
	PREDICT_PMV-47	Bats				3
	PREDICT_PMV-49	Bats		1		1
	PREDICT_PMV-88	Bats		1		
	PREDICT_PMV-89	Bats		1		
	PREDICT_PMV-90	Bats		1		
Democratic Republic of the Congo	Zaire Ebolavirus (EBOV) - Équateur province outbreak	Humans				1
	Strain of Bat coronavirus Hipposideros	Bats		1		
	Strain of Eidolon bat corona-virus/Kenya/ KY24/2006	Bats			8	
	Strain of Kenya bat corona-virus/BtKY56/ BtKY55	Bats	1		2	1
	Strain of Pan paniscus lymphocryptovirus 1	Non-human primates		2	2	
Egypt	Strain of Bat coronavirus HKU9	Bats				6
	Strain of Rousettus Bat Coronavirus/NRC-1	Bats				4
	Strain of Rousettus Bat Coronavirus/NRC-2	Bats				8
	PREDICT_PMV-113	Bats		1		
	PREDICT_PMV-114	Bats				1
	PREDICT_PMV-115	Bats				1

Egypt	PREDICT_PMV-116	Bats							1
	PREDICT_PMV-118	Bats				12			
	PREDICT_PMV-119	Bats				1			
Jordan	Strain of Bat Alphacoronavirus/GS2013/HuB2013	Bats							5
	Strain of Bat Coronavirus BM48-31/BGR/2008	Bats							28
	Strain of Bat coronavirus HKU9	Bats							2
	Strain of Betacoronavirus 1 (OC43)	Bats							1
	Strain of Bat-related Human Coronavirus 229E	Bats							17
	PREDICT_CoV-65	Bats							5
	PREDICT_CoV-91	Bats							1
Kenya	PREDICT_CoV-90	Bats							5
	Strain of Chaerephon bat corona-virus/Kenya/KY22/2006	Bats							1
Lao PDR	Strain of Lonquan Aa mouse coronavirus	Rodents/shrews				2			
Liberia	Zaire Ebolavirus (EBOV)	Bats						1	
Malaysia	Strain of Infectious bronchitis virus (IBV)	Poultry/other fowl						1	
	Strain of Murine coronavirus	Rodents/shrews	1			1			1
	Strain of Philippines/Diliman1525G2/2008	Bats						1	
	PREDICT_CoV-52	Bats	1			5			
	PREDICT_CoV-76	Bats	3						
		Rodents/shrews	1						
	PREDICT_CoV-78	Bats	2	7	1	1			4 1
		Rodents/shrews	1			1			1 9
	PREDICT_CoV-80	Bats	3						
	PREDICT_CoV-84	Bats	1			1			1
	PREDICT_CoV-87	Bats							4
	PREDICT_Flavi-6	Bats				2			
	PREDICT_PMV-105	Bats	1						
	PREDICT_PMV-106	Bats				2			
	PREDICT_PMV-107	Bats				2			
	PREDICT_PMV-108	Bats				1			
	PREDICT_PMV-110	Bats				1			
	PREDICT_PMV-120	other				1			
	PREDICT_PMV-137	Bats							1
	PREDICT_PMV-72	Bats	2						
	PREDICT_PMV-74	Bats				1	1		
	PREDICT_PMV-81	Bats	4						
	PREDICT_PMV-98	Bats				1			
	PREDICT_PMV-99	Bats				1			
Mongolia	Influenza A	Birds				31	15		
Myanmar	PREDICT_CoV-35	Bats						1	3
	PREDICT_CoV-47	Bats				2			
	PREDICT_CoV-82	Bats				3			
	PREDICT_CoV-90	Bats							1
	PREDICT_CoV-92	Bats						36	
	PREDICT_CoV-93	Bats						3	
	PREDICT_CoV-96	Bats						5	
	PREDICT_PMV-132	Rodents/shrews						2	
	PREDICT_PMV-48	Bats						4	

Nepal	Influenza A	Birds	12		
		Humans		10	
	Strain of Duck Coronavirus	Birds	25		
	Strain of Infectious bronchitis virus (IBV)	Birds	3		
	Strain of Murine coronavirus	Rodents/shrews	4		
	Strain of Newcastle Disease Virus	Birds	8		
	PREDICT_PMV-83	Rodents/shrews	1		
Republic of Congo	Strain of Kenya bat coronavirus/BtKY56/BtKY55	Bats	11		
	PREDICT_CoV-30	Bats		2	
Rwanda	Strain of Chaerephon bat coronavirus/Kenya/KY22/2006	Bats	1		
	Strain of Eidolon bat coronavirus/Kenya/KY24/2006	Bats		19	1
	Strain of bat-related Human Coronavirus 229E	Bats	2		
	Strain of Kenya bat coronavirus BtKY33/2006	Bats	1		
	PREDICT_CoV-44	Bats	7		
	PREDICT_CoV-77	Bats	1		
	PREDICT_CoV-94	Rodents/shrews			2
	PREDICT_PMV-56	Bats		1	
Sierra Leone	Bombali Ebolavirus (BOMV)	Bats		3	
	Marburg virus (MARV)	Bats			2
Tanzania	Strain of Bat coronavirus HKU9	Bats		3	7
	Strains of Betacoronavirus 1 (OC43)	Humans			3
	Strain of Chaerephon bat coronavirus/Kenya/KY22/2006	Bats			1
	Strain of Eidolon bat coronavirus/Kenya/KY24/2006	Bats		1	4
	PREDICT_CoV-97	Bats		1	
	PREDICT_PMV-141	Bats		1	
	PREDICT_PMV-143	Rodents/shrews			1
	PREDICT_PMV-144	Rodents/shrews		1	1
	PREDICT_PMV-146	Rodents/shrews		1	
	PREDICT_PMV-150	Rodents/shrews		1	
Thailand	Nipah Virus	Bats			2
	Strain of Bat Coronavirus 1	Bats	1		
	Strain of Murine coronavirus	Rodents/shrews		9	2
	PREDICT_CoV-17	Bats		13	
	PREDICT_CoV-22	Bats	7		
	PREDICT_CoV-27	Bats	3		
	PREDICT_CoV-47	Bats	5		6
	PREDICT_CoV-68	Bats		9	
	PREDICT_PMV-2	Bats		4	
	PREDICT_PMV-20	Rodents/shrews			2
	PREDICT_PMV-85	Bats		1	
	PREDICT_PMV-86	Rodents/shrews		2	
Viet Nam	Influenza A	Swine			26
	Strain of Porcine Parainfluenzavirus 1	Swine	1		2

MODELING & ANALYTICS (M&A)

Major highlights & successes

This period, PREDICT's M&A team focused on four major themes:

- 1) Demonstrating how we can analyze PREDICT data to increase the efficiency of surveillance programs and predictive power of our models.
- 2) Intervention Modeling Projects ACross Teams (IMPACT) that help test proposed broad-based intervention strategies that derive from PREDICT results.
- 3) Working with EPT partners to produce maps, models, and other products that help them design their programs, test hypotheses, and hone their One Health strategic plans.
- 4) Designing new analytical strategies and open-source tools to analyze risk of disease emergence.

1) Analyzing PREDICT data to increase efficiency of surveillance programs

Analyses were conducted to examine whether surveillance can be targeted seasonally to a period when the risk of disease emergence is greatest. We used longitudinal serological data from Bangladesh to identify co-circulation dynamics of Nipah, filovirus, and Rubulavirus in a bat population of the species *Pteropus medius*. We show that each virus has different periods/months when seroprevalence is significantly increasing or decreasing, and the calculated risk of viral shedding is greatest. We also analyzed these data to show that individual bats can be co-infected with multiple viruses (see Figure 1).

Therefore, interventions to mitigate the spillover of viruses from this one fruit bat species will need to consider different periods of viral shedding, and a single intervention to mitigate human exposure may have the benefit of reducing spillover risk for multiple viruses.

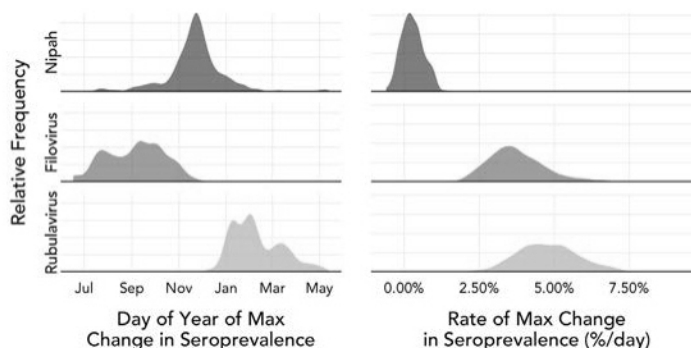


FIGURE 1. Analysis of serological data for three viruses to determine the timing and strength of viral circulation in juvenile bats from a longitudinal dataset from Bangladesh. Plots show periods of the year when the increase in seroprevalence is greatest (left), and the rate of change for each virus (right). Plots display the relative frequency from 1,000 generalized additive model runs.

PREDICT is analyzing the specific risk of viral emergence across the wildlife market value chain. Using data from bushmeat market surveys in North Sulawesi, Indonesia (see Figure 2), models are being developed to quantify the areas of greatest risk for bat- and rodent-borne zoonotic virus emergence. We identified markets that sell fresh and frozen bats, rats, wild pigs, and snakes. Daily observational data are being used to calculate the volume of wildlife sold monthly/annually and will feed in to IMPACT projects (Intervention Modeling Projects ACross Teams) to assess the specific risk that these markets play in disease spillover and spread.

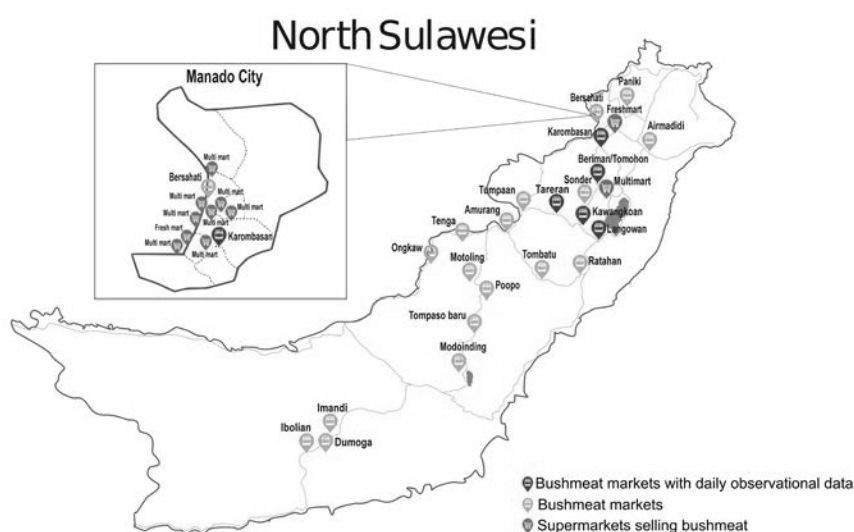


FIGURE 2. Map of the wildlife trade/value chain in North Sulawesi, Indonesia. Green markers indicate bushmeat markets surveyed by PREDICT, and red denotes markets where daily observational data were recently collected. Supermarkets where bushmeat is also available are marked in orange.

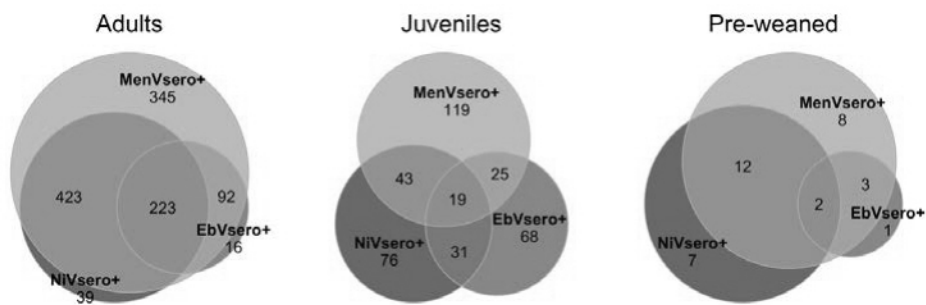


FIGURE 3. Patterns of seropositivity to multiple viruses in fruit bats from Bangladesh. Venn diagrams for adult, juvenile, and pre-weaned (dependent) *Pteropus medius* bats testing positive for antibodies against Nipah virus, filovirus, and rubulavirus. Numbers under labels are counts of bats with only seroreactivity to those viruses. Numbers in overlapping areas represent number of bats detected with multiple viruses or evidence of co-immunity.

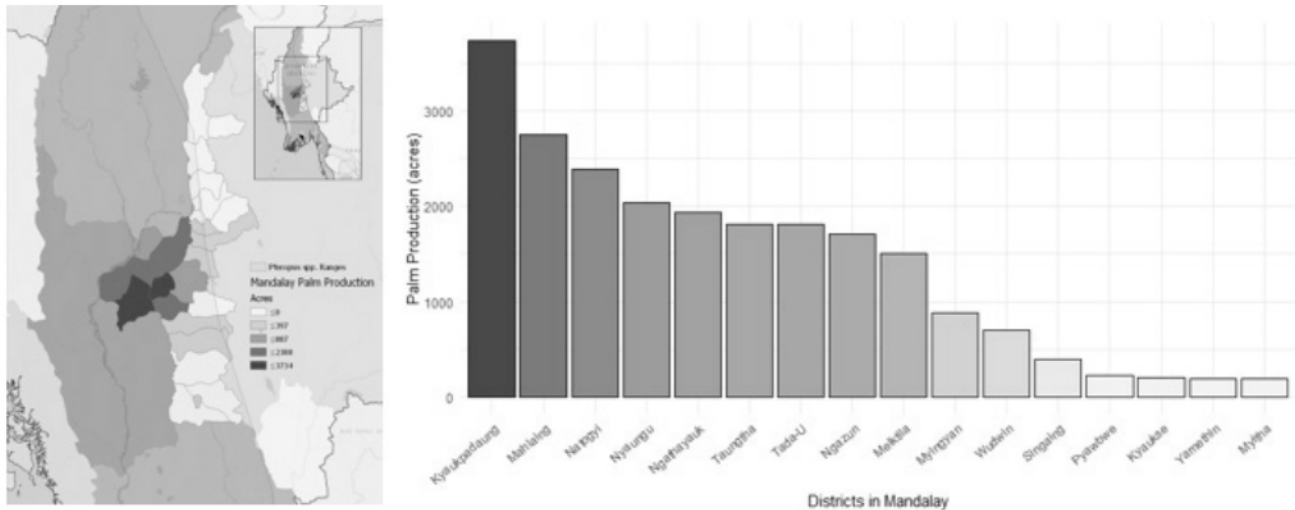


FIGURE 4. Date palm sap harvesting data from Myanmar by district in Mandalay being used to map the risk of bat-borne virus spillover risk.

2) Analyses to test proposed broad-based intervention strategies

The PREDICT M&A, Surveillance, and Behavioral Risk teams continue to develop analyses to assess potential evidence-based risk interventions and define the boundaries within which interventions might prove successful. Over the last six months, significant progress has been made on 15 IMPACT projects focused on different risk factors or specific interfaces of disease emergence. Over the remaining six months of the project, the M&A team will continue to coordinate across PREDICT, USAID EPT, and our in-country teams in modeling, capacity-building, and scientific communication efforts. Outputs from all analyses will be developed as short, policy-relevant Emerging Disease Insight documents for distribution to key stakeholders and the public.

3) Working with EPT partners to produce maps, models and other products of value for their programs

PREDICT continued to collaborate with FAO on the Africa Sustainable Livestock 2050 (ASL2050) project to model the risk of disease in the face of expanding livestock production in Africa (see Figure 5). We produced geospatial maps of cattle density under three future scenarios of agricultural development: 1) Stratified societies, 2) Business as usual, and 3) Toward sustainability. Countries included in these forecasts: Burkina Faso, Uganda, Kenya, Nigeria, Egypt, and Ethiopia.

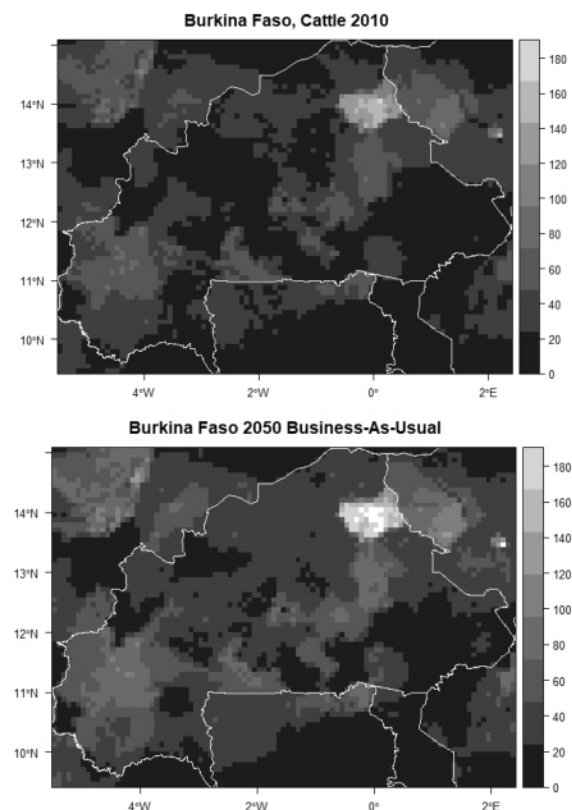


FIGURE 5. Forecasted changes in cattle density for Burkina Faso from 2010 to 2050 under a business-as-usual scenario. Maps produced by PREDICT as part of the Africa Sustainable Livestock 2050 (ASL2050) project in collaboration with FAO.

PREDICT's M&A team supported the development and strategic design of the Global Virome Project (GVP). We designed a spatial modeling approach to identify priority sites for targeted wildlife sampling at a 10 × 10 km resolution in countries of relevance to the GVP. PREDICT developed specific maps for the Thai National Virome Project (TNVP) and the China Virome Project and presented these at the TNVP launch, as well as in high-level meetings with Chinese Government and US Embassy leaders in Beijing. These analyses will form the basis for the design of specific workplans in both countries during the rollout of their virome projects in 2019-20.



Legend

% of Model Iterations Selecting Site

0%

25%

50%

75%

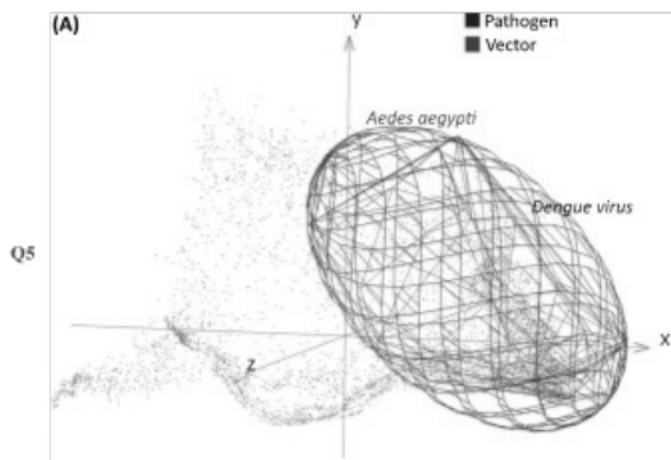
100%

Protected Areas

Optimizing sites for the China Virome Project, part of the GVP. Darker shaded areas on the map (red and dark red) are sites that were consistently identified by the model as the optimal areas to discover the greatest number of viruses using the fewest resources. Protected areas in China shown in green.

4) New analytical strategies and open-source tools to analyze risk of disease emergence

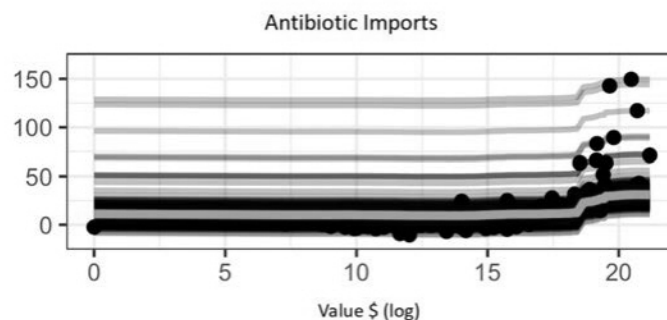
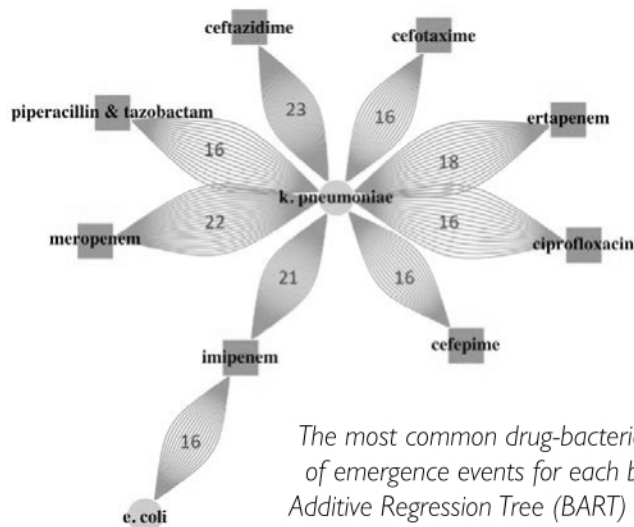
We continued developing new tools within the EIDITH R package to facilitate the cleaning and analysis of project data. These open-source tools allow country and global teams to download their country-level PREDICT-2 data, clean datasets by automatically identifying outliers and fields with missing or incorrect data, and analyze patterns in the data using the statistical analysis program, R. Site characteristics, behavioral risk, animal, or testing data can then be manipulated in R to explore and visualize data from the project in near real-time, as it's entered into the database.



PREDICT developed a new theoretical model of disease distribution using ecological niche models. Example bottom-left shows how dengue virus (blue polyhedron) distribution coincides with that of its vector, the mosquito *Aedes aegypti* (red ellipsoid).

PREDICT developed a new theoretical framework for modeling the geography of disease transmission using biological properties of both hosts and parasites to produce reliable outputs of disease distributions. These analyses can be used to better map and help guide the surveillance and discovery of pathogens across the landscape.

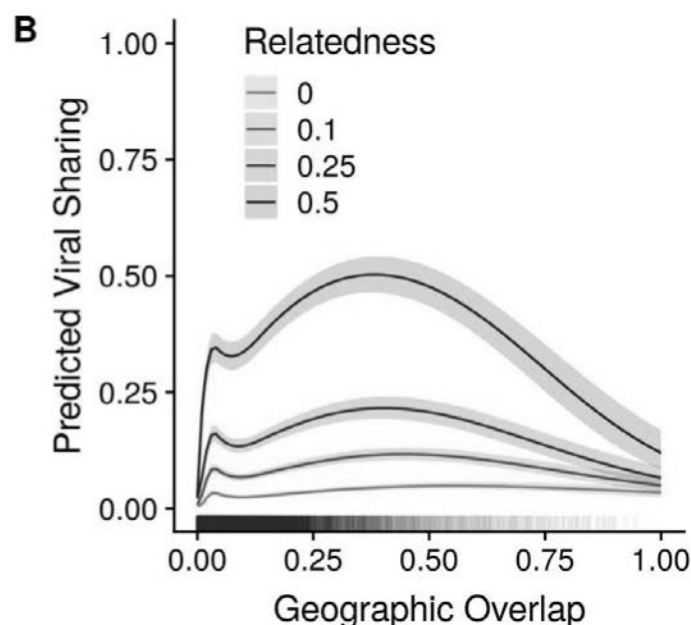
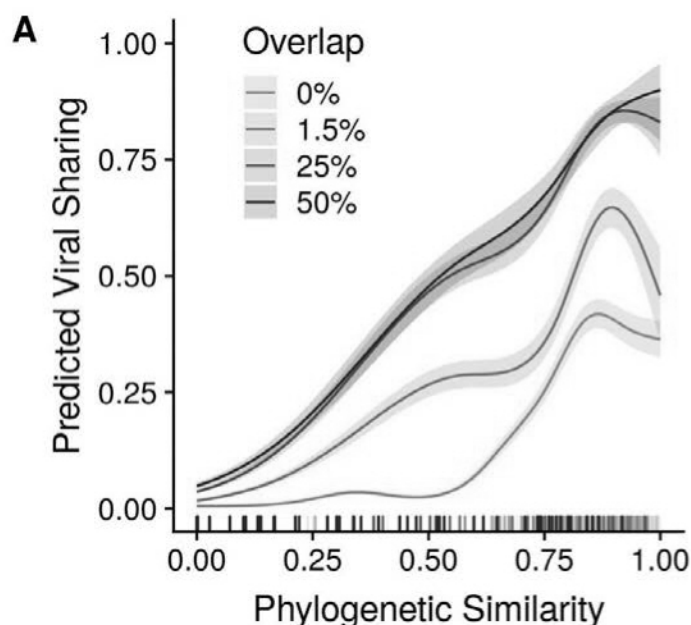
PREDICT completed the most comprehensive database to date to analyze the drivers of antimicrobial resistance (AMR) disease emergence in people. This effort involved data extraction and data cleaning from over 24,000 scientific papers published from 2006-2017. PREDICT is currently using this database to develop an AMR "hotspots" map to show areas around the world where future AMR emergence is most likely. Preliminary analysis using Bayesian Additive Regression Tree (BART) models are underway to identify potential risk factors that explain the number of AMR events within a country. Variables include: research bias, percentage of agricultural land cover, livestock index, GDP, and % of GDP spent on healthcare, population, antibiotic imports, and antibiotic exports.



The most common drug-bacteria combinations in PREDICT's AMR database are displayed. The number of emergence events for each bacteria-drug combination are shown in red (left). Example of Bayesian Additive Regression Tree (BART) model output showing an increase in the per-country risk of a new AMR emergence event with increasing levels of antimicrobial drug imports for a given country (right).

Building off previously published PREDICT analyses to identify host and viral traits that predict zoonotic potential, we developed new models to explain viral sharing between all mammal species. Specifically, phylogenetic similarity and geographic overlap were used to predict a viral sharing network across all known mammals (~5000 species). These analyses found that more

closely related species and those that overlap the most in space, are much more likely to share viruses. The relationship of these factors was non-linear, and the two variables interact so that phylogenetic similarity has a stronger effect on species that overlap more, and conversely overlap matters more when species are more closely related.



New PREDICT model to examine factors that determine viral sharing among all known mammal species. These plots show the interacting, non-linear effect of host species relatedness (left) and geographic overlap (right).

For more information

Emerging Disease Insights are available online: livescience.ecohealthalliance.org

ONE HEALTH PARTNERSHIPS

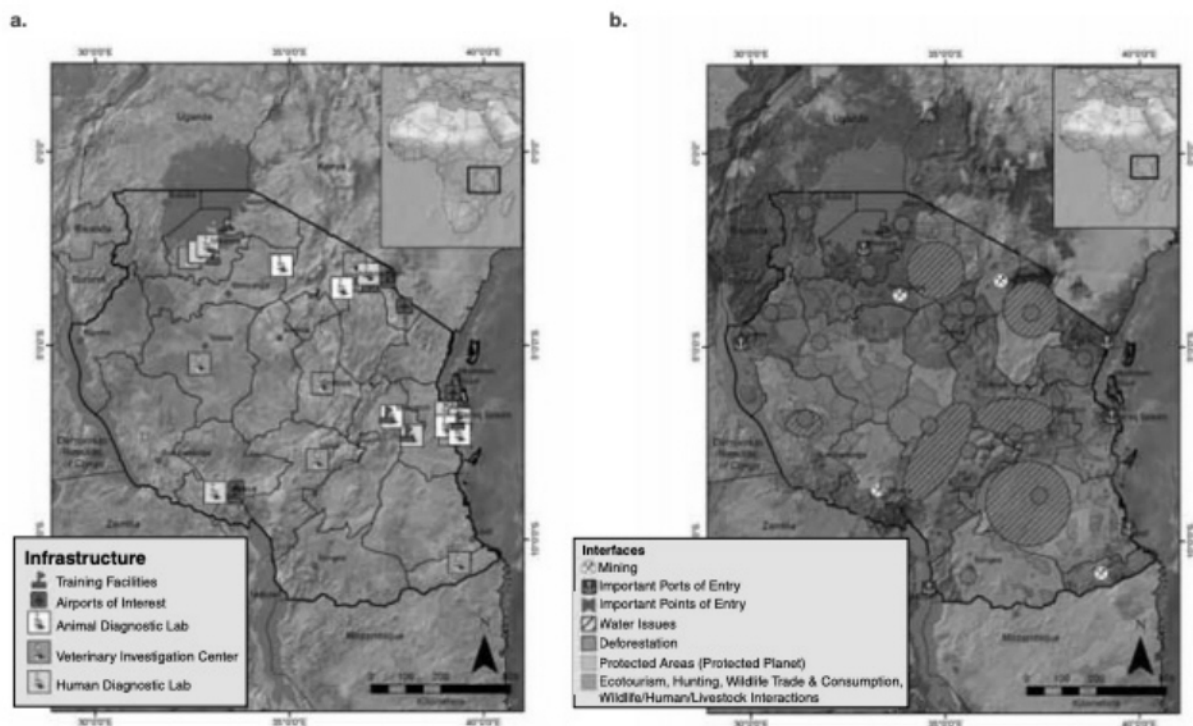
One Health policy advocacy

To set the path for success under the second phase of the Global Health Security Agenda (GHSA), PREDICT-2 had a direct role in shaping the GHSA Roadmap 2024, which sets out annual implementation and outcome objectives, enhancing attention to multisectoral coordination and inclusion of the environment sector. As part of our engagement, PREDICT led the delegation representing non-governmental stakeholders (the Global Health Security Agenda Consortium) at the GHSA Steering Group meeting at the Hague in February 2019. PREDICT has also been appointed as a focal point for the PREVENT 2 – Zoonotic Disease Action Package working group under the Steering Committee. PREDICT helped to develop the work plan for the GHSA Advocacy and Communications Task Force that will oversee compilation of information toward awareness of the GHSA 2024 outcomes, action plan, and implementation, and will show the value of continued prioritization of health security.

Following publication of the World Bank's Operational Framework for Strengthening Human, Animal and Environmental Public

Health Systems at their Interface ("One Health Operational Framework") in 2018, to which PREDICT contributed significant technical expertise, we had a key role in circulation of the Framework's key messages and practical guidance to donors, intergovernmental agencies, and countries through a wide variety of fora, providing opportunities to reach additional stakeholders.

Examples include the United Nations Rio Conventions Pavilion event, "Harnessing biodiversity for a healthy and resilient future," convened by the UN Convention on Biological Diversity (CBD) and World Health Organization (WHO) at the CBD 14th Conference of the Parties (COP), the 2nd Wildlife Forum on "Sustainable Use for Conservation and Livelihoods" hosted by the Collaborative Partnership on Wildlife Management, "One Health in the 21st Century" hosted at the Woodrow Wilson Center, a high-level roundtable on "Leveraging global polio eradication assets to support global health security and sustainable universal health coverage" convened by Chatham House with Rotary International, InterAction Council, other partners (non-PREDICT), and the Gates Global Grand Challenges meeting.



Inter-sectoral drivers and capabilities mapping approach (illustrative example; produced by USAID Emerging Pandemic Threats PREDICT in 2012-14). (a) Distribution of human and animal diagnostic resources. (b) Relative risk of an emerging infectious disease from wildlife, based on mammalian diversity and human population density, from bright green (lowest risk) to red (highest risk). Risk interfaces are marked. Airports or border crossings in both indicate possible pathways for international spread of diseases. Source: World Bank One Health Operational Framework for Strengthening Human, Animal, and Environmental Public Health Systems at their Interface 2018.

PREDICT continued collaboration with a range of entities to improve animal and environmental dimensions of health security. Through the International Panel of Experts for the Global Health Security Index under development by the Nuclear Threat Initiative, the Economist Intelligence Unit, and the Johns Hopkins School of Public Health we helped to integrate One Health-relevant indicators on prevention and detection of epidemic and pandemic threats, including zoonoses and antimicrobial resistance. We also participated in the OIE ad hoc group on MERS-CoV, presenting PREDICT findings in the review of criteria for OIE disease listing.

At country level, PREDICT conducted training in Liberia on One Health policy and evaluation, leading to a draft intervention ultimately presented at the plenary at the UN CBD COP14. This intervention helped inform the decision on Health and Biodiversity accepted by Parties, which includes a recommendation for governments and other stakeholders to “review, adjust and improve biodiversity-health linkages in the environmental assessment of relevant projects.”

Other highlights & success stories

PREDICT collaborated on the forthcoming WHO Guide for Multisectoral Partnership Coordination for Preparedness, IHR (2005), and Health Security, providing examples from PREDICT and moderating a panel on “Public Health Institutions and Non-State Actors’ Engagement for IHR (2005) and health security” at an expert roundtable convened by WHO to collect examples of country-level coordination. This document complements the FAO/OIE/WHO Tripartite Zoonoses Guide on “Taking One Health Approaches to Address Zoonotic Diseases in Countries” published in March 2019, which features approaches shared by PREDICT and refers to several policy and evaluation guidance resources produced by PREDICT.

PREDICT continued to engage technical institutions to promote simplified procedures to promote timely movement of emergency diagnostic specimens, including to address regulations that inadvertently delay investigation of wildlife disease emergencies. Recommendations from the working group convened by countries under the Convention on the International Trade of Endangered Species of Wild Fauna and Flora (CITES), which PREDICT served on, will advance for final vote at the Conference of the Parties in May 2019. Our team also participated in the development of OIE Guidance on Transport of Biological Specimens.

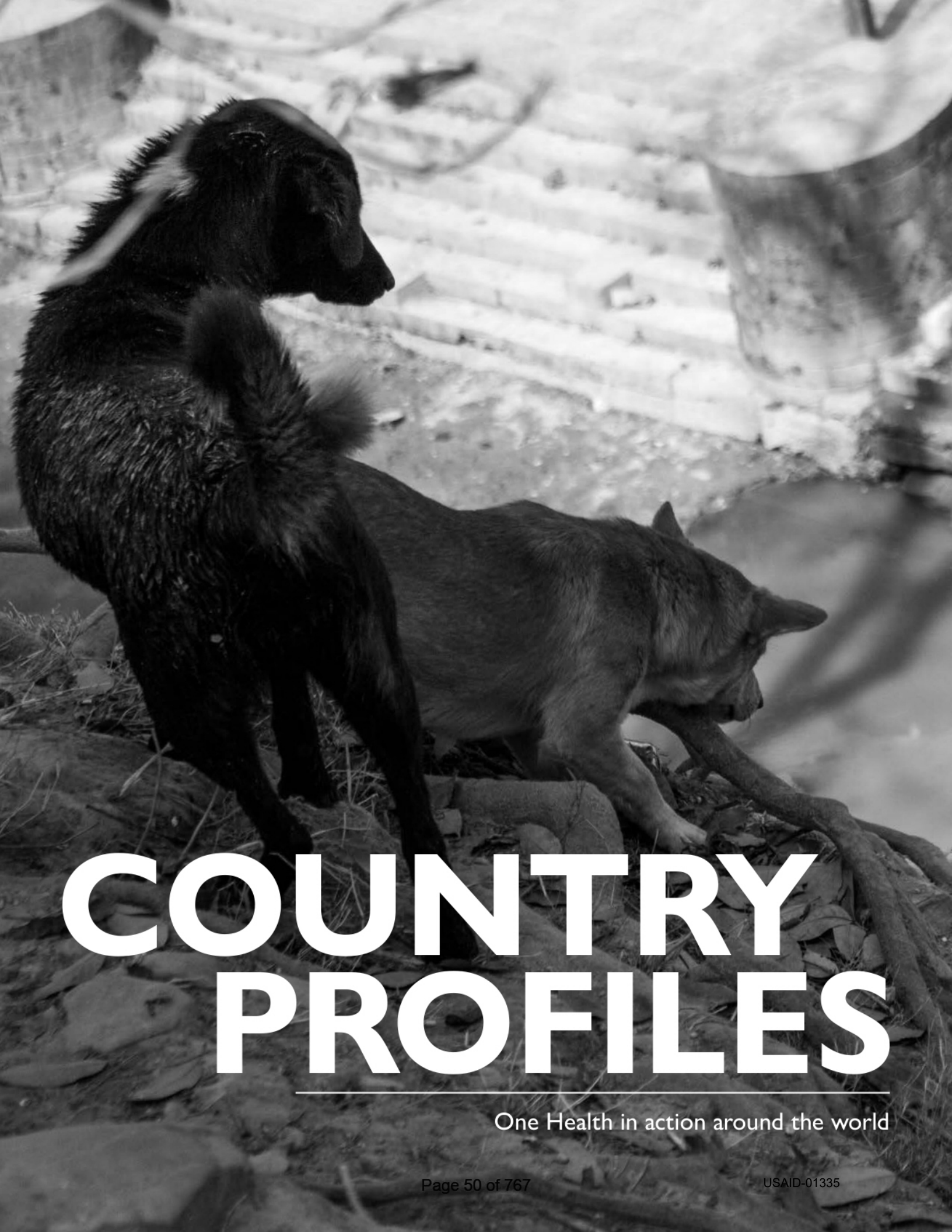
New publications, products and policy briefs

Key outputs highlighted practical pathways and benefits of multisectoral approaches to global health security and included:

- “Institutionalizing One Health: from Assessment to Action” in Health Security, which PREDICT led in collaboration with partners from the World Bank, WHO, CDC, FAO, OIE, Toward a Safer World Network, and the EPT OHW and P&R projects to show opportunities for alignment of assessment and planning tools.
- “Infectious disease and economics: The case for considering multisectoral impacts” in One Health, on the economic imperative for a wide range of private sector stakeholders to mitigate risks and impacts of emerging infectious diseases.

Selected presentations on PREDICT, One Health, zoonotic diseases and global health security

- Chaired the OIE Working Group on Wildlife Meeting, highlighting new and emerging wildlife disease events and reinforcing the importance of country reporting for wildlife diseases to OIE delegates.
- Presented to a subcommittee of the National Science and Technology Council on the outcomes of a Pandemic Prediction and Forecasting Science and Technology working group workshop on behavioral risk modeling for pandemics.
- Presented on “Digital Disease Detection for Health Security” at the 2018 American Public Health Association meeting, showing tools from PREDICT and its partners that can be used by public health agencies to help monitor and detect disease threats.
- Presented on risk reduction strategies for emerging infectious disease risks linked to ecosystem degradation on a webinar on migration hosted by the World Federation of Public Health Associations working group on health in emergencies and disasters.
- Highlighted PREDICT’s work at an expert Symposium on Biosecurity and Transnational Environmental Crime hosted by the Canadian Institute for Advanced Research. Attendees were representatives of law enforcement and intergovernmental agencies.



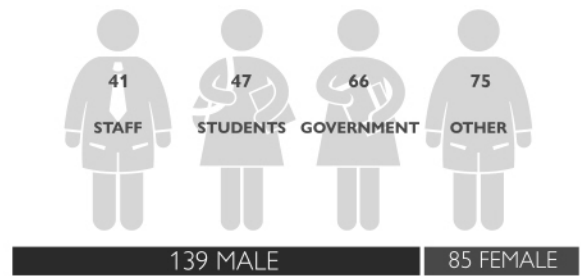
COUNTRY PROFILES

One Health in action around the world

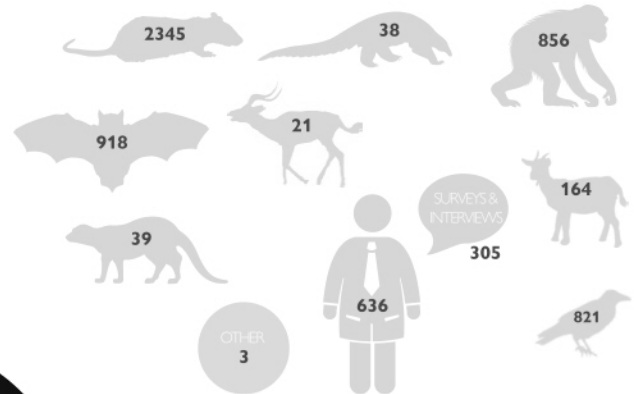




WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

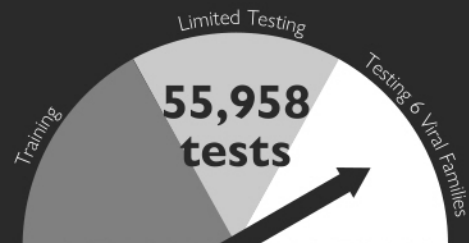


IMPACT

224 trained in One Health skills
4,856 individuals sampled (animals & humans)
941 individuals interviewed
35 unique viruses detected

LAB STRENGTHENING

· Military Health Research Center



VIRAL FINDINGS

P1

217 new viruses
20 known viruses

P2

11 new viruses
8 PREDICT-1 viruses
18 known viruses



Global Health Security Agenda

CAMEROON

..... **MOHAMED MOCTAR MOUICHE
MOULIOM, DVM, MPH**

Country Coordinator, PREDICT/Cameroon

PARTNERS

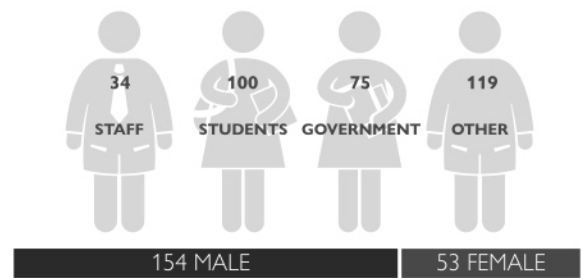
- Metabiota, Inc.
- Global Viral
- Mosaic
- Military Health Research Center (CRESAR)



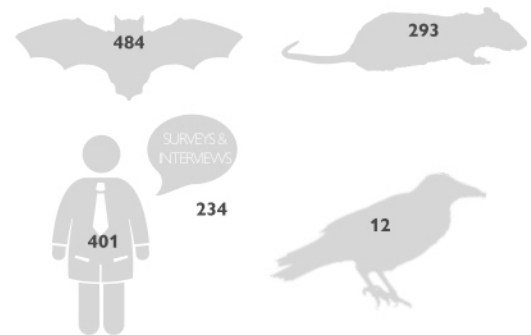
“PREDICT has effectively contributed to Cameroon’s increased capacities for zoonotic disease surveillance and the detection of priority zoonotic diseases and unknown threats. The opportunity to work with specialists from various professional backgrounds and to share their experience has helped me to build my own capacity more efficiently than ever before in the One Health approach and project management.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE



IMPACT

207 trained in One Health skills
1,190 individuals sampled (animals & humans)
635 individuals interviewed

LAB STRENGTHENING

- Institut Pasteur du Côte d'Ivoire
- Laboratoire National d'Appui au Développement Agricole



Global Health Security Agenda

CÔTE D'IVOIRE

..... **EUGENE KOFFI KOUASSI, DVM, MSc**

PREDICT/Côte d'Ivoire, Research Associate

Institut Pasteur Côte d'Ivoire

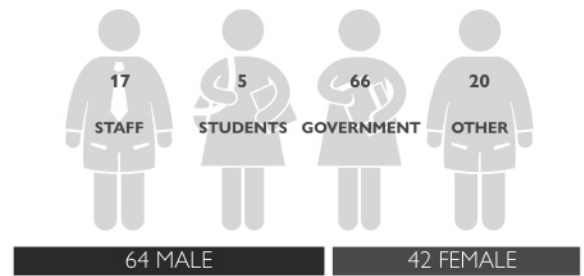
PARTNERS

- EcoHealth Alliance
- Institut Pasteur de Côte d'Ivoire
- Laboratoire National d'Appui au Développement Agricole

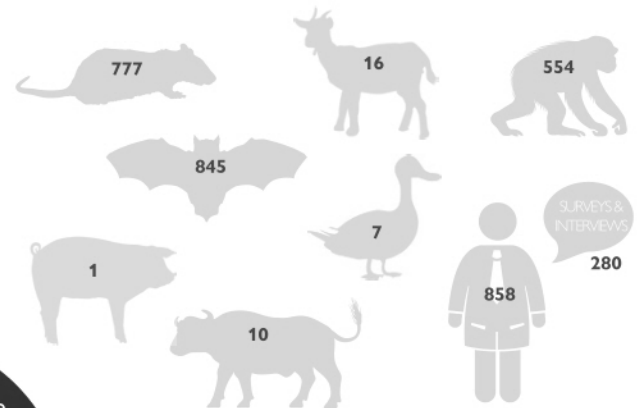


“I have acquired the capacity to develop collaborations with several ministerial sectors: water and forest, animal and human health, administrative authorities, and village authorities in the surveillance of emerging diseases.”

WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

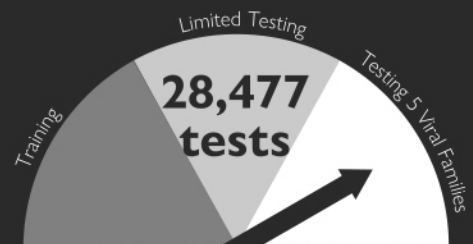


IMPACT

106 trained in One Health skills
3,068 individuals sampled (animals & humans)
1,138 individuals interviewed
8 unique viruses detected

LAB STRENGTHENING

· Institut National de Recherche Biomédicale



VIRAL FINDINGS

P1
49 new viruses
22 known viruses

P2
1 PREDICT-1 viruses
7 known viruses

DEMOCRATIC REPUBLIC OF THE CONGO



Global Health Security Agenda

..... **PLACIDE MBALA, MPH, PhD**

PREDICT/DRC, Former Laboratory Manager, INRB
Current Director of Viral Hemorrhagic Fevers
Diagnostics Units, INRB

Institut National de Recherche Biomedicale

PARTNERS

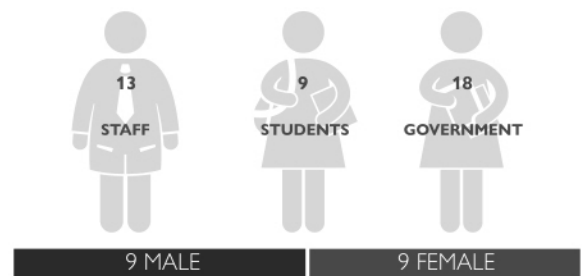
- Metabiota, Inc.
- Institut National de Recherche Biomédicale
- Kinshasha School of Public Health
- Mountain Gorilla Veterinary Project
- University of California, Davis



Dr. Mbala now directs the Viral Hemorrhagic Fevers Diagnosis Unit at INRB, and is a key player in the training of physicians, biologists, and laboratory technicians, as well as in the establishment of field laboratories integral to Ebola outbreak response in his country. PREDICT provided Dr. Mbala the opportunity to gain and refine his skills in laboratory management, molecular biology techniques, and field investigations, and through his tireless work and ongoing contributions, Dr. Mbala and those he mentors, improve the capacity of DRC to respond to outbreaks with a One Health approach, and bring a greater understanding of zoonotic diseases in this high-risk area of the world.



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

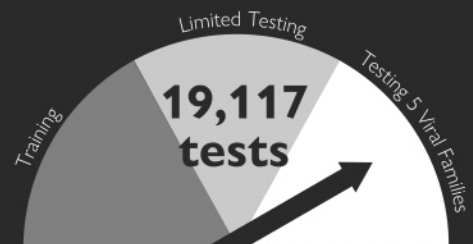


IMPACT

18 trained in One Health skills
2,100 individuals sampled (animals & humans)
1,097 individuals interviewed
9 unique viruses detected

LAB STRENGTHENING

Center of Scientific Excellence for Influenza Viruses



VIRAL FINDINGS

P2

6 PREDICT-1 viruses
3 known viruses

EGYPT

PREDICT/EGYPT TEAM

PREDICT-2 Interdisciplinary Teamwork

*Egypt National Research Centre's Center of Scientific
Excellence for Influenza Viruses*

PARTNERS

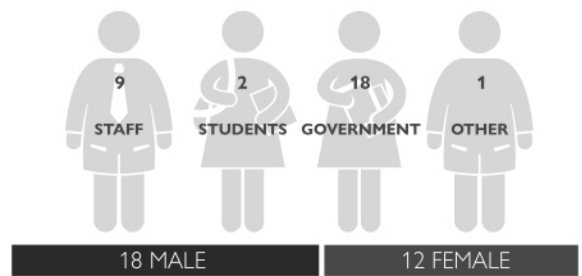
- EcoHealth Alliance
- Egypt National Research Centre



The Egypt team demonstrated how interdisciplinary backgrounds can work together toward a common goal: promoting One Health activities to better understand and respond to viral zoonotic threats in Egypt.



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

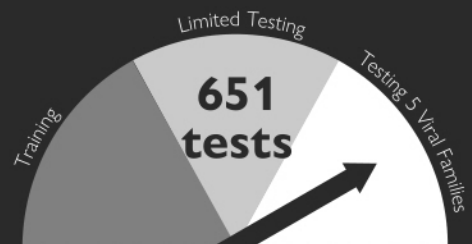


IMPACT

30 trained in One Health skills
1,355 individuals sampled (animals & humans)
313 individuals interviewed

LAB STRENGTHENING

· Addis Ababa University Aklilu Lemma Institute of Pathobiology



ETHIOPIA



Global Health Security Agenda

..... **DESALEGN BELAY TAKELE**

PREDICT/Ethiopia, Associate Researcher

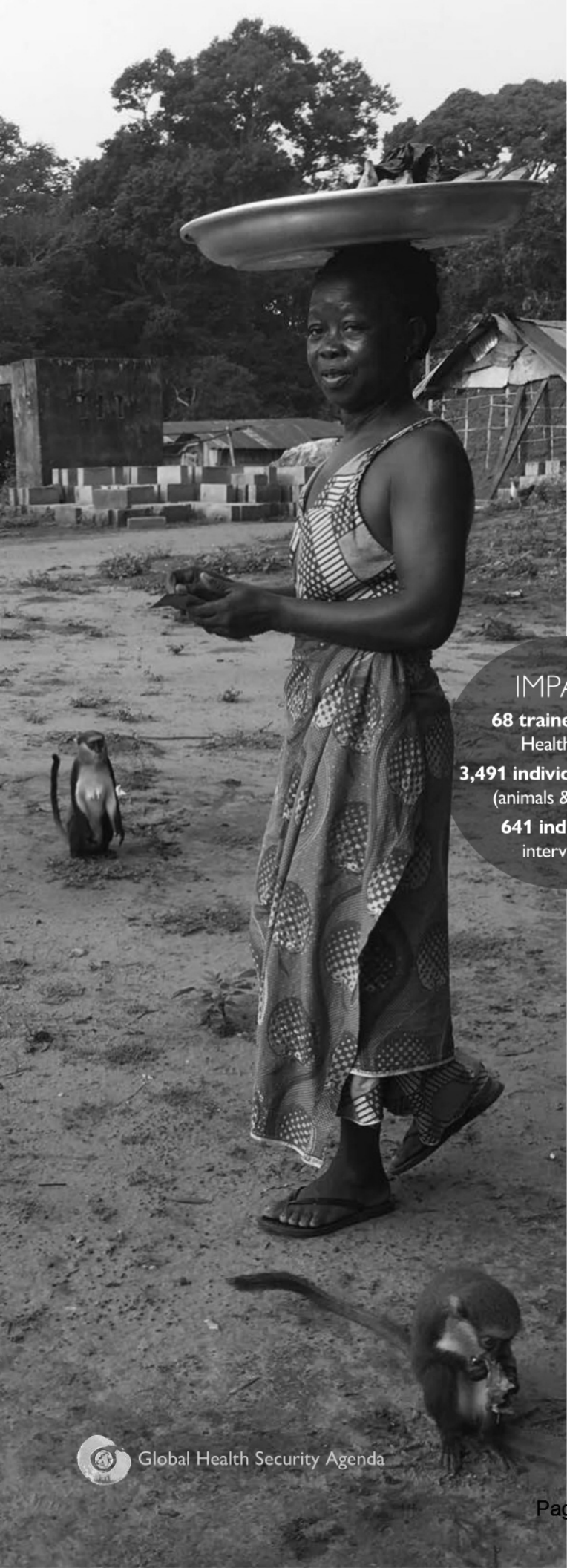
*National Influenza Laboratory, Ethiopian Public
Health Institute*

PARTNERS

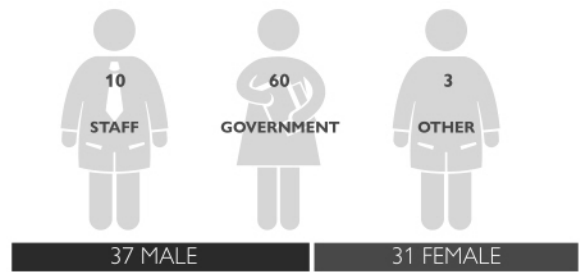
- University of California, Davis
- Addis Ababa University
- Aklilu Lemma Institute of Pathobiology
- Ethiopian Public Health Institute



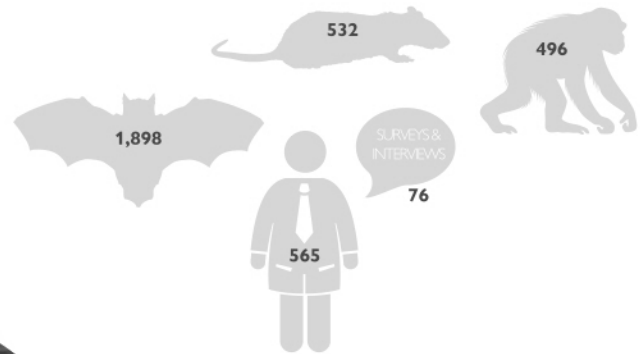
“It is a special experience to work on different viral families, with other colleagues from different disciplines, and international collaboration—UC Davis is a practical powerhouse of One Health.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

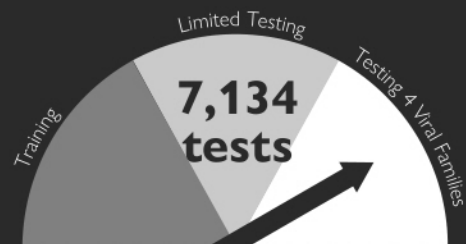


IMPACT

68 trained in One Health skills
3,491 individuals sampled (animals & humans)
641 individuals interviewed

LAB STRENGTHENING

- Accra Veterinary Laboratory
- Noguchi Memorial Institute for Medical Research



Global Health Security Agenda

GHANA

..... **RICHARD SUU-IRE, DVM, PhD**

PREDICT/Ghana, Wildlife Disease Surveillance Lead

*Wildlife Division of the Forestry Commission,
Ministry of Land and Natural Resources*

PARTNERS

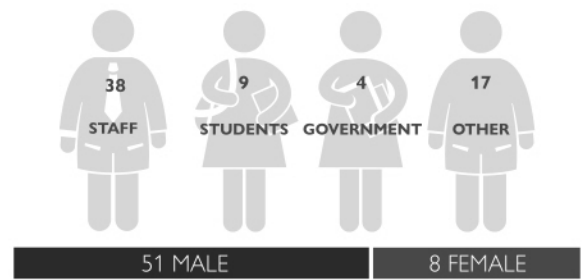
- University of California, Davis
- Wildlife Division of the Forestry Commission, Ministry of Land & Natural Resources
- Veterinary Services Directorate, Ministry of Food & Agriculture
- Noguchi Memorial Institute for Medical Research, University of Ghana
- Ghana Health Services
- Military Hospital of the Ghana Armed Forces



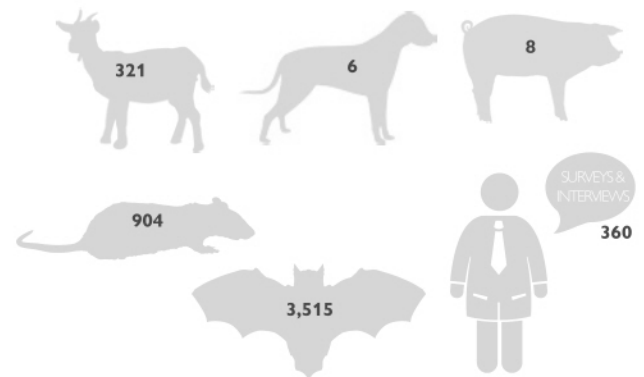
“I look back at my life back to the village where I had to herd cattle and make time for schooling in the face of serious want and feel that I must share the little I have with those who do not have at all.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

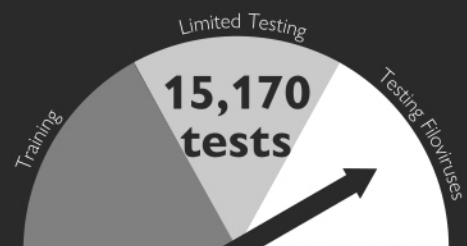


IMPACT

59 trained in One Health skills
4,754 individuals sampled (animals & humans)
360 individuals interviewed

LAB STRENGTHENING

- Laboratoire de Fievres Hemorrhagiques
- UC Davis One Health Institute*



*As part of the Ebola Host Project, samples are being tested at UC Davis to accelerate release of viral findings for use for decision-making and risk-mitigation efforts.



Global Health Security Agenda

GUINEA

POKPA SAKOUVOGUI

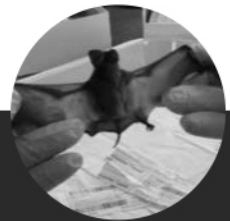
PREDICT/Guinea, Student & Community Liaison

PARTNERS

- University of California, Davis
- Laboratoire de Fievres Hemorrhagiques

SAYON YOMBOUNO

PREDICT/Guinea, Veterinarian



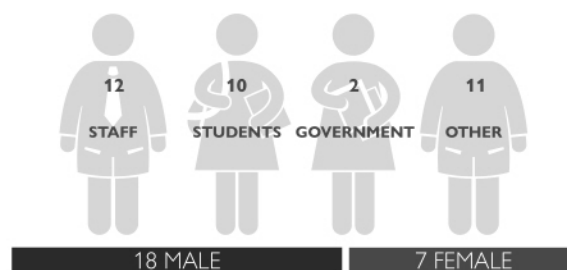
“Experiences that I acquired with PREDICT helped me become more professional in my work in general. Also, taking part of research projects that aims to improve the health situation in my country made me proud. This is why I plan to go back to university once the project ends. PREDICT inspired me to become an epidemiologist!”



“This year, when you came to visit my class, you had a book full of pictures with bats and you gave us advice on how to interact with them. I realized that it was not good to play or even touch bats. Since then, I tried to explain to my parents that bats are important for the environment but they could carry dangerous diseases.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

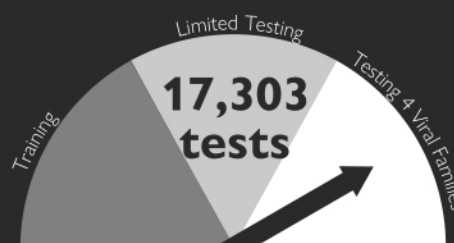


IMPACT

- 25 trained** in One Health skills
- 2,164 individuals** sampled (animals & humans)
- 1,085 individuals** interviewed
- 7 unique viruses** detected

LAB STRENGTHENING

Jordan University of Science and Technology



VIRAL FINDINGS

P2

- 1 new virus**
- 1 PREDICT-1 viruses**
- 5 known viruses**

JORDAN



Global Health Security Agenda

..... **MUSTAFA ABABNEH**

PREDICT/Jordan, Technical Laboratory Lead

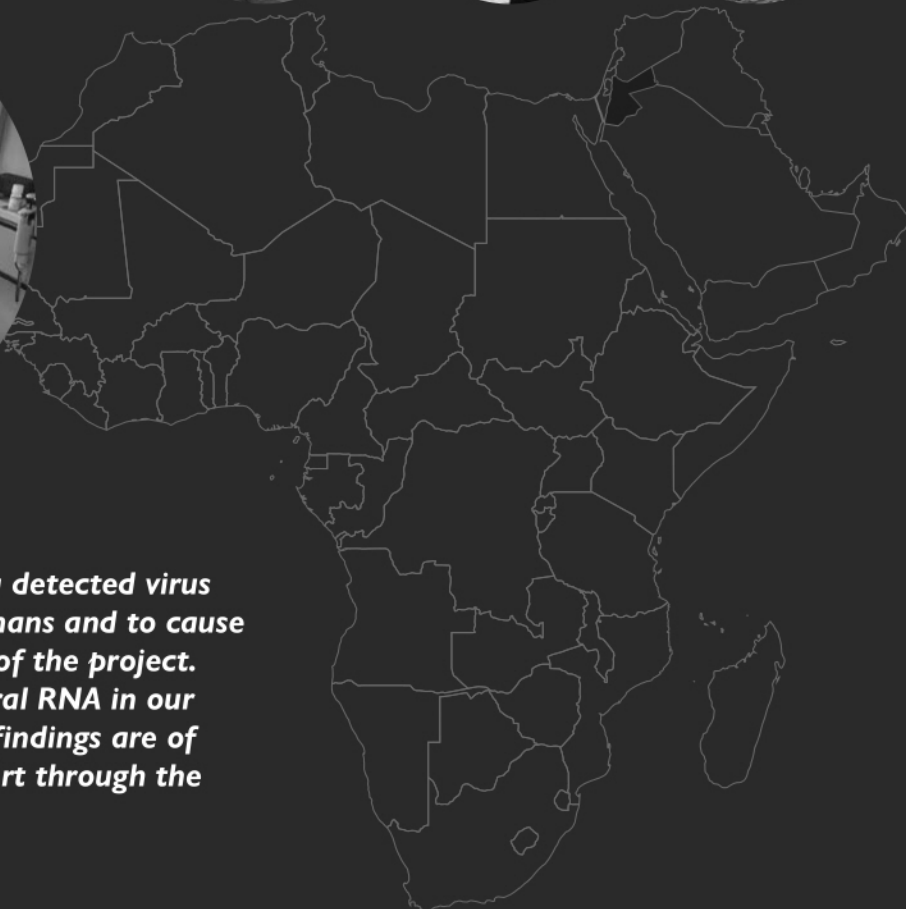
Jordan University of Science and Technology

PARTNERS

- EcoHealth Alliance
- Jordan University of Science and Technology

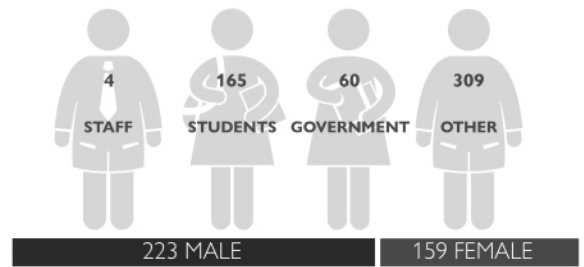


“We are discovering whether a detected virus has the potential to infect humans and to cause illness, which is a central part of the project. We may find a multitude of viral RNA in our samples, so prioritizing which findings are of greater importance helps us sort through the data.”





WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

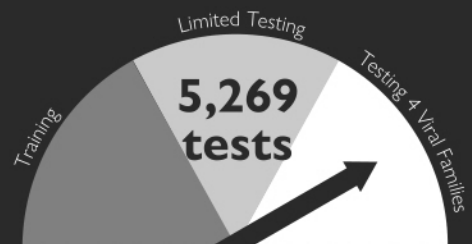


IMPACT

382 trained in One Health skills
1,861 individuals sampled (animals & humans)
327 individuals interviewed
2 unique viruses detected

LAB STRENGTHENING

- Kenya Medical Research Institute
- Institute of Primate Research



VIRAL FINDINGS

P2

- 1 new virus**
- 1 known viruses**



Global Health Security Agenda

KENYA

AMOS RIMFA

PREDICT/Kenya, MS Candidate

Institute of Primate Research

University of Nairobi

PARTNERS

- Smithsonian Institution
- Institute of Primate Research
- Kenya Medical Research Institute

PERIS AUMA AMBALA

PREDICT/Kenya, PhD Candidate

Institute of Primate Research

Kenyatta University



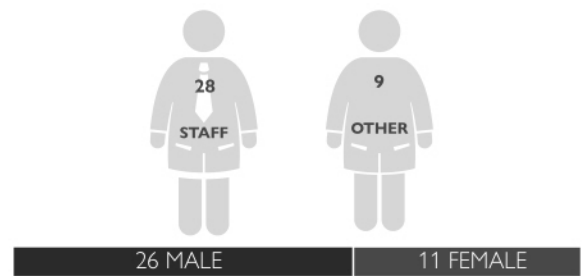
“[Female scientists] are not put on the map [in Kenya], so there are very few of us...Female scientists should be encouraged, motivated, and mentored.”



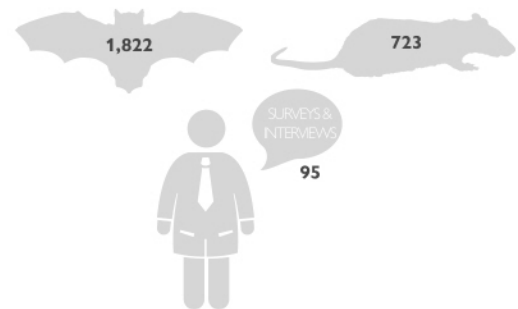
“The work [that PREDICT does] is very proactive in terms of disease management, not only on control but also on prevention. PREDICT actually is trying to prevent before an occurrence happens...We may not understand now, until a recent outbreak, then we will know the value of what PREDICT has done.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

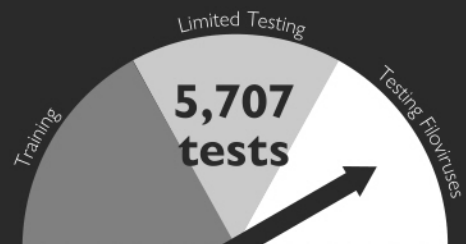


IMPACT

37 trained in One Health skills
5,386 individuals sampled (animals & humans)
95 individuals interviewed
1 unique virus detected

LAB STRENGTHENING

- National Public Health Institute of Liberia
- Columbia University Center for Infection & Immunity



VIRAL FINDINGS

P2
Zaire ebolavirus

*As part of the Ebola Host Project, samples are being tested at Columbia University to accelerate release of viral findings for use for decision-making and risk-mitigation efforts.



Global Health Security Agenda

JACKSON PULTOLNOR

PREDICT/Liberia, Team Lead

Society for the Conservation of Nature, Liberia

PARTNERS

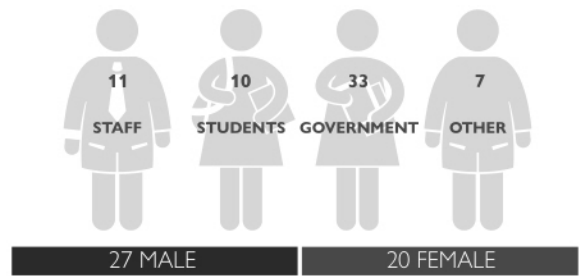
- EcoHealth Alliance
- National Public Health Institute of Liberia
- Columbia University Center for Infection & Immunity



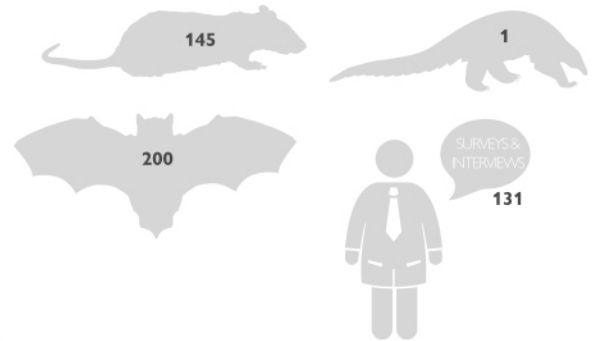
With Jackson's experience on the PREDICT project, he hopes to continue working in the conservation and One Health fields and combine that with his previous interest in sustainable farming and forestry. Jackson is poised to become one of the future Liberian leaders in these fields.



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE



IMPACT

- 47 trained** in One Health skills
- 346 individuals** sampled (animals & humans)
- 131 individuals** interviewed
- 2 unique viruses** detected



VIRAL FINDINGS

P1

55 new viruses
13 known viruses

P2

1 PREDICT-1 viruses
1 known viruses

REPUBLIC OF CONGO

..... **CYNTHIA GOMA-NKOUA**

PREDICT/RoC, Country Coordinator

National Public Health Laboratory

PARTNERS

- EcoHealth Alliance
- Laboratoire National de Sante Publique (LNSP)



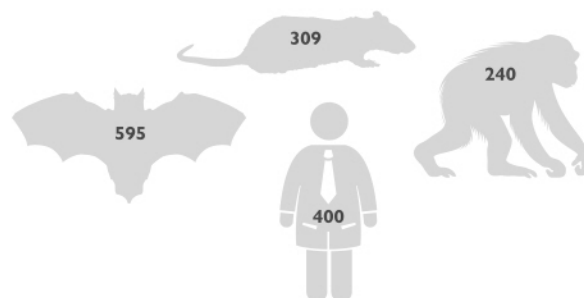
“I am currently the head of the Molecular Epidemiology Service laboratory of the National Public Health Laboratory (LNSP) in Brazzaville. My passion for infectious diseases began in 1995 when I saw the movie “Outbreak” about the spread of Ebola.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE



IMPACT

20 trained in One Health skills

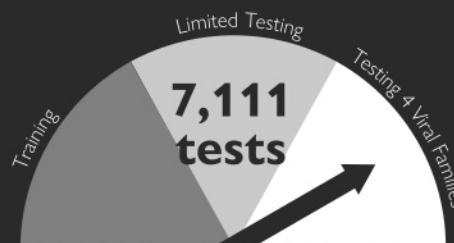
1,544 individuals sampled (animals & humans)

400 individuals interviewed

11 unique viruses detected

LAB STRENGTHENING

- Rwanda Agricultural Board Wildlife Virology Laboratory
- National Reference Lab/Rwanda Biomedical Center



VIRAL FINDINGS

P1

16 new viruses
11 known viruses

P2

2 new viruses
2 PREDICT-1 viruses
7 known viruses



Global Health Security Agenda

RWANDA

..... **ADRIEN EMILE NTWALI**

PREDICT/Rwanda, Field Veterinarian

Gorilla Doctors

PARTNERS

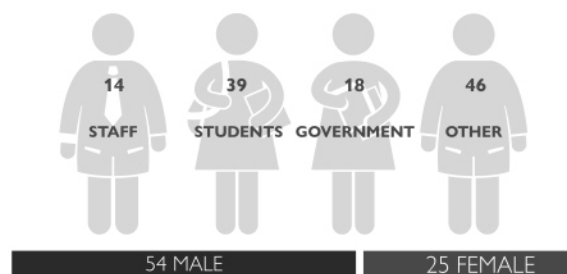
- Mountain Gorilla Veterinary Project/Gorilla Doctors
- University of California, Davis
- Rwanda Agriculture Board
- National Reference Laboratory/
Rwanda Biomedical Center



“Gorilla Doctors (PREDICT implementing partner) are always ready to save the lives of gorillas anytime, no matter how the weather is looking, no matter what time of the day or week, no matter how far the gorillas are in the forest, no matter what circumstances.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

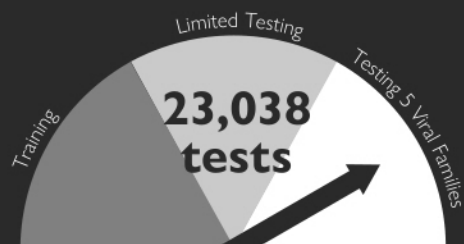


IMPACT

79 trained in One Health skills
1,671 individuals sampled (animals & humans)
795 individuals interviewed

LAB STRENGTHENING

- L'Institut Senegalais de Recherches Agricoles
- Cheikh Anta Diop University



SENEGAL



Global Health Security Agenda

..... **AMINATA BA**

PREDICT/Senegal, Laboratory Technician

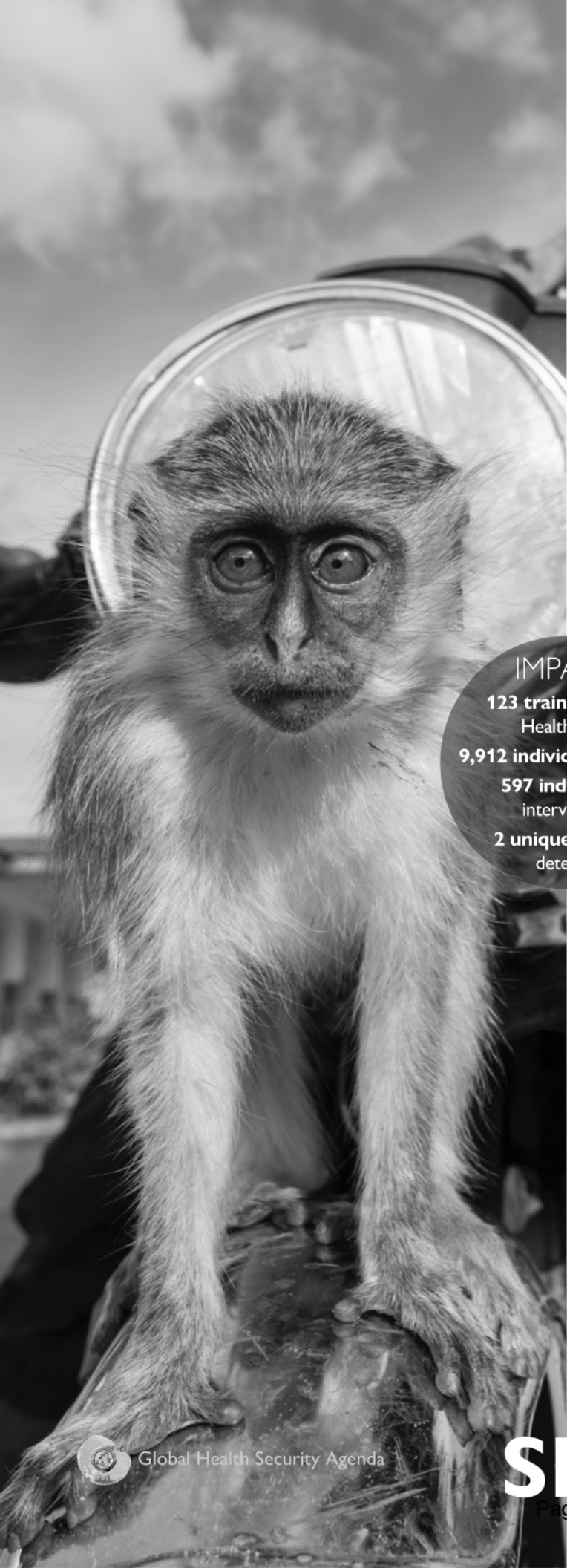
National Veterinary Laboratory

PARTNERS

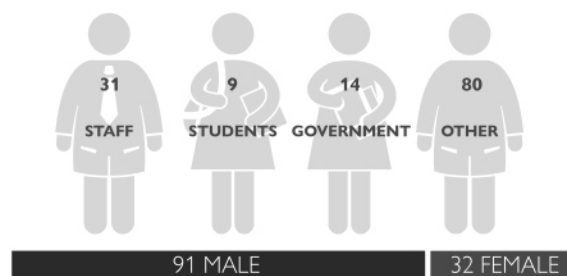
- University of California, Davis
- Inter State School of Veterinary Science & Medicine of Dakar
- Cheikh Anta Diop University/ Dantec University Hospital
- L'Institut Senegalais de Recherches Agricoles



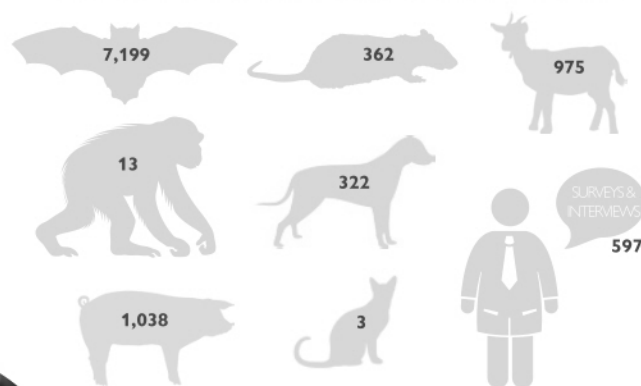
“For me, the USAID/PREDICT project is a great experience, fitting perfectly into the One Health concept. This project has allowed me to broaden my skills in molecular diagnostics of highly pathogenic and critically important viral families.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

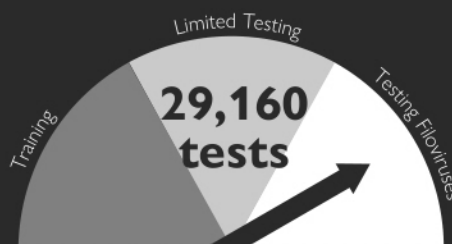


IMPACT

123 trained in One Health skills
9,912 individuals sampled
597 individuals interviewed
2 unique viruses detected

LAB STRENGTHENING

- University of Makeni
- UC Davis One Health Institute



VIRAL FINDINGS

P2

- 1 new virus** (*Bombali ebolavirus*)
- 1 known virus** (*Marburg virus*)

*As part of the Ebola Host Project, samples are being tested at UC Davis to accelerate release of viral findings for use for decision-making and risk-mitigation efforts.



Global Health Security Agenda

SIERRA LEONE

EDWIN LAVALIE

PREDICT/Sierra Leone, Field Ecologist

University of Makeni

PARTNERS

- University of California, Davis
- University of Makeni

ABDULAI BANGURA

PREDICT/Sierra Leone, Field Ecologist

University of Makeni

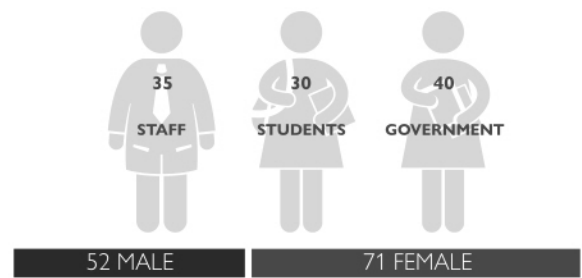


"I am most proud of being able work in a community that do not have knowledge of my job, using my skills for community to trust our ideas and allow us to capture animals, safely process them. Most importantly, I am most proud of working as a Sierra Leonean scientist that discovered the BOMBALI Ebola virus and the Marburg virus."



"I personally enjoy making trips to remote villages, forests and caves to trap and sample animals. It gives me the opportunity to interact with nature and see the rich biodiversity of our land, which is always hard to resist even when taken into consideration how risky our work is. It gives that pride, confidence and respect about the work we do for each sampling trip as a team. In addition, I am really proud of the work we do sensitizing people on how to safely live with animals, stimulating huge behavioral change in the lives of locals."

WORKFORCE DEVELOPMENT



**One individual gender unknown*

ONE HEALTH SURVEILLANCE



IMPACT

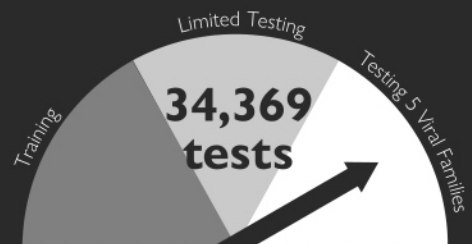
124 trained in One Health skills*

4,039 individuals sampled (animals & humans)

1,574 individuals interviewed

LAB STRENGTHENING

- Ifakara Health Institute
- Sokoine University of Agriculture



VIRAL FINDINGS

P1	P2
15 new viruses	6 new viruses
12 known viruses	4 known viruses



Global Health Security Agenda

TANZANIA

..... **HAPPY RAPHAEL MKALI**

PREDICT/Tanzania, Laboratory Lead

Ifakara Health Institute

PARTNERS

- University of California, Davis
- Sokoine University of Agriculture
- Ifakara Health Institute

..... **WALTER SIMON MAGESA**

PREDICT/Tanzania, Laboratory Scientist

Sokoine University of Agriculture



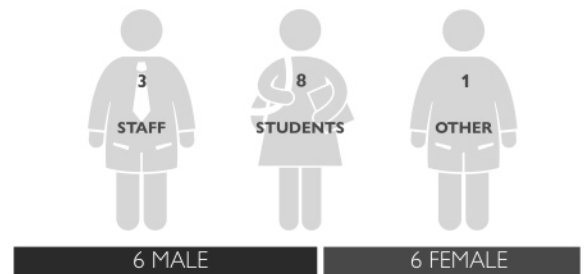
“The capacity building of local experts on surveillance and detection of known and unknown pathogens of pandemic potential and the One Health approach makes me really enjoy working with PREDICT, interacting with people from different disciplines (including veterinary, public health and social science professionals), who all work together and share experiences on solving community health issues.”



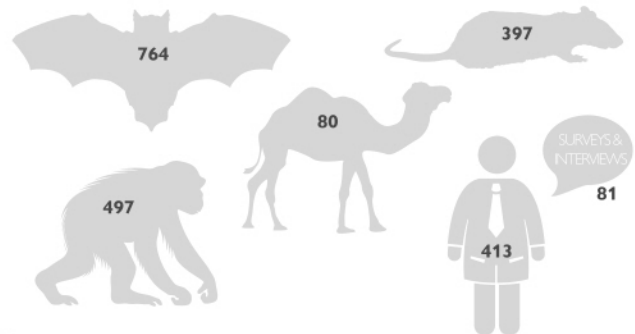
“What I really enjoy about working with PREDICT is the beauty of interacting with teams of different disciplines—from veterinarians to social scientists to the public health professionals, who all together have brought different experiences on how to approach zoonoses and other One Health issues around our communities.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE



IMPACT

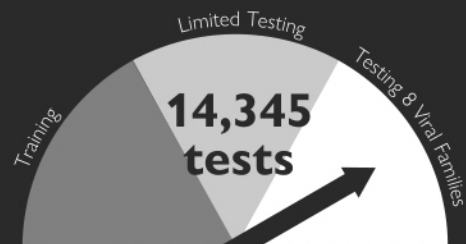
12 trained in One Health skills

2,151 individuals sampled (animals & humans)

494 individuals interviewed

LAB STRENGTHENING

- Uganda Viral Research Institute
- Makerere University Walter Reed Project



VIRAL FINDINGS

P1

39 new viruses

17 known viruses

P2

UGANDA



Global Health Security Agenda

..... **RICKY OKELLO OKWIR**

PREDICT/Uganda, Field Veterinarian

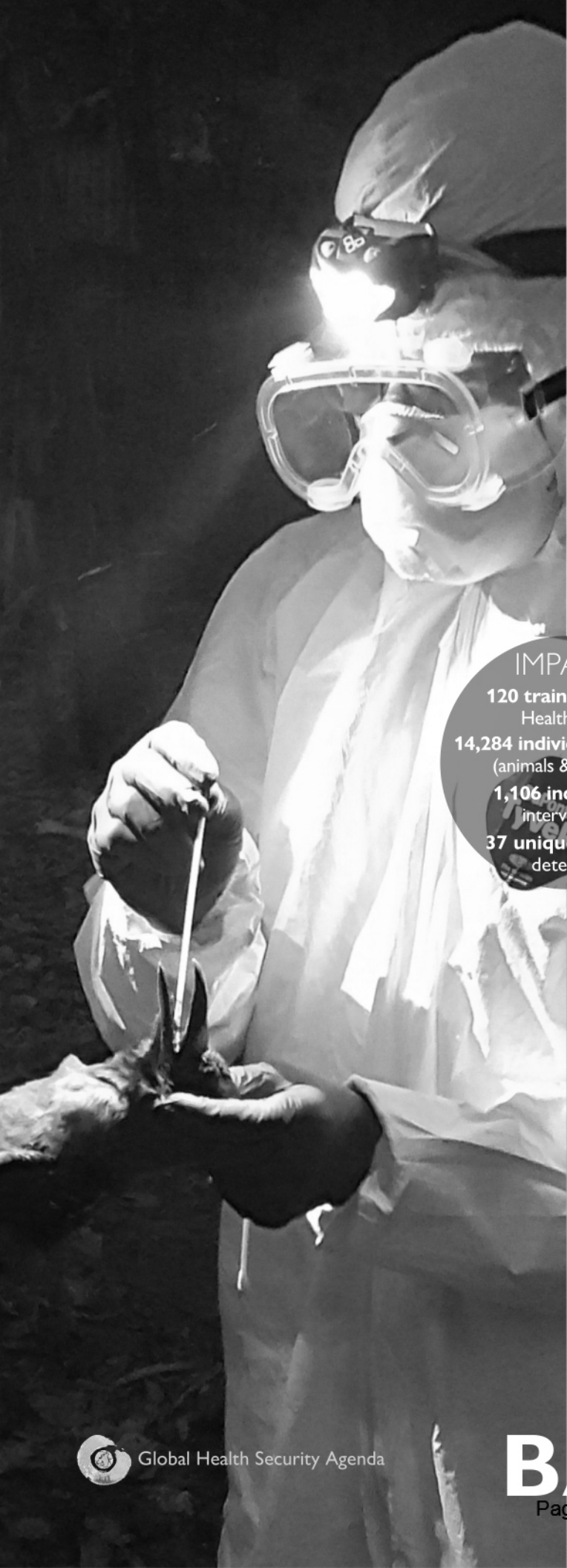
Gorilla Doctors

PARTNERS

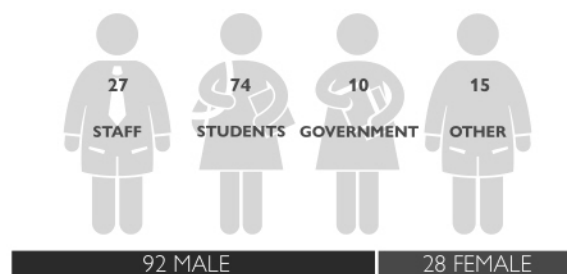
- Mountain Gorilla Veterinary Project/Gorilla Doctors
- University of California, Davis
- Uganda Viral Research Institute
- Makerere University Walter Reed Project



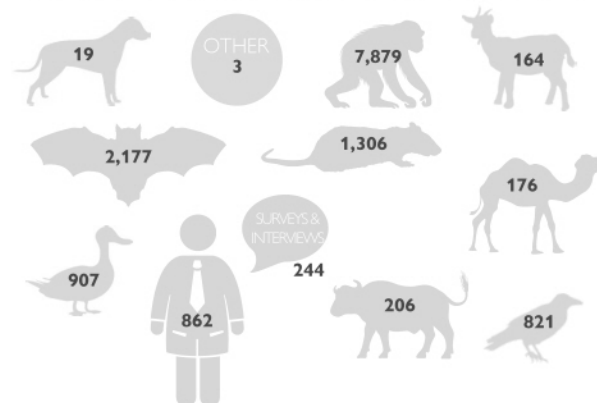
“I was compelled to enter the veterinary profession at an early age of just 10 years after suffering a traumatic incident in our remote village. I watched a mother squirrel and her baby speared by a group of hunters. I rescued the squirrels, and as a young school-going child, took care of the two squirrels from just my basic knowledge of simple wound treatment that I had learned in school.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

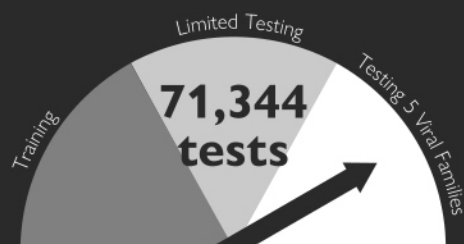


IMPACT

120 trained in One Health skills
14,284 individuals sampled (animals & humans)
1,106 individuals interviewed
37 unique viruses detected

LAB STRENGTHENING

· Institute of Epidemiology, Disease Control & Research
· icddr,b



VIRAL FINDINGS

P1	P2
217 new viruses	11 new viruses
20 known viruses	8 PREDICT-1 viruses
	18 known viruses



Global Health Security Agenda

BANGLADESH

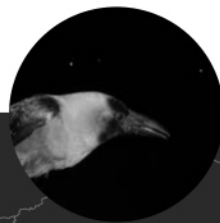
SHARIFUL ISLAM

PREDICT/Bangladesh, Field Coordinator-Epidemiology

Institute of Epidemiology Disease Control & Research

PARTNERS

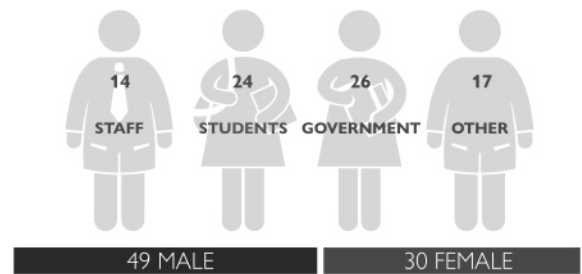
- EcoHealth Alliance
- icddr,b
- Institute of Epidemiology,
Disease Control & Research
- Bangladesh Forest Department



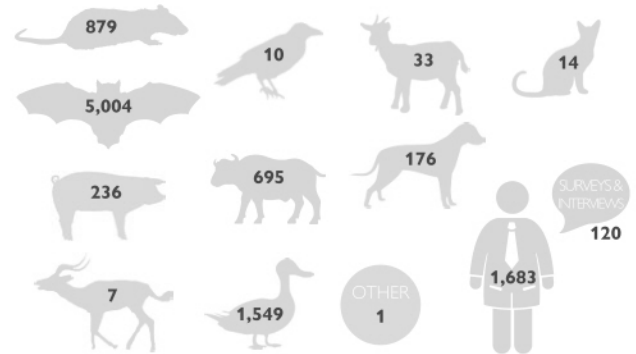
Dr. Islam has been leading field teams with multisectoral representation to conduct ecological and epidemiological studies of zoonotic viruses in wildlife. While in the field, Dr. Islam collects biological samples from various wildlife species, including bats, macaques, rodents, shrews and wild birds.



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

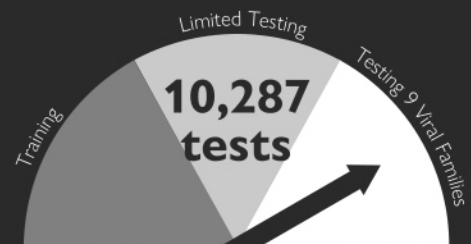


IMPACT

79 trained in One Health skills
10,177 individuals sampled (animals & humans)
1,803 individuals interviewed
31 unique viruses detected

LAB STRENGTHENING

· Institut Pasteur du Cambodge



VIRAL FINDINGS

P1	P2
29 new viruses	7 new viruses
18 known viruses	11 PREDICT-1 viruses
	13 known viruses



Global Health Security Agenda

CAMBODIA

VEASNA DUONG

PREDICT/Cambodia, Country Coordinator

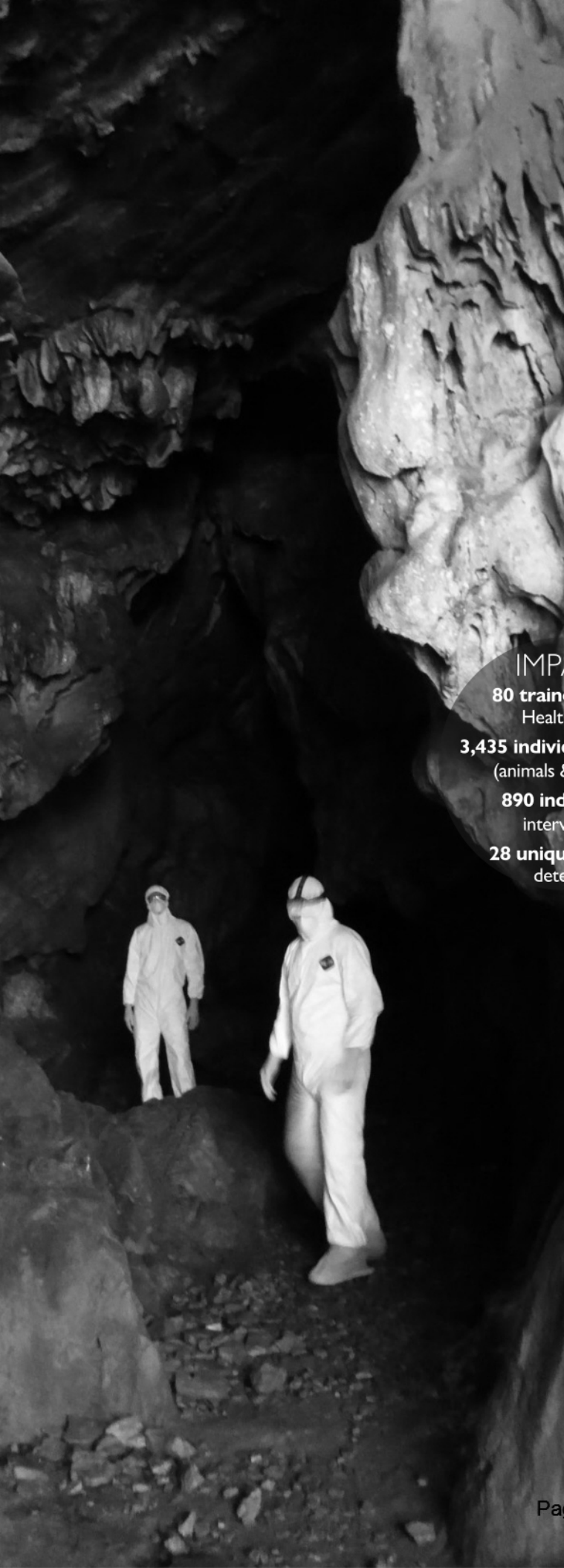
Institut Pasteur du Cambodge

PARTNERS

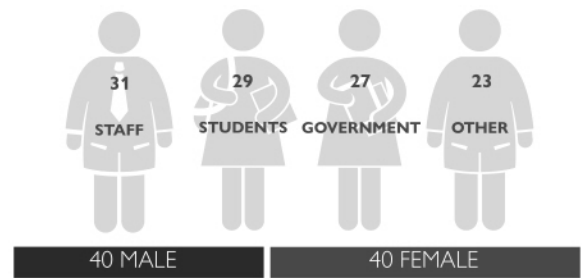
- University of California, Davis
- Institut Pasteur du Cambodge



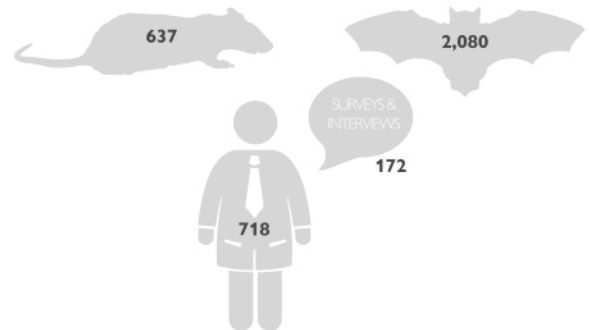
“PREDICT has introduced and built capacity here for effective One Health approach to tackle emerging zoonotic viruses with potential threat to Cambodia and the world.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

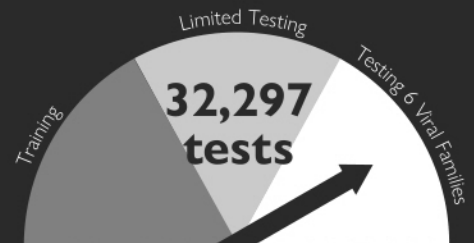


IMPACT

- 80 trained** in One Health skills
- 3,435 individuals** sampled (animals & humans)
- 890 individuals** interviewed
- 28 unique viruses** detected

LAB STRENGTHENING

- Wuhan Institute of Virology of Chinese Academy of Sciences
- Institute of Microbiology of Chinese Academy of Sciences



VIRAL FINDINGS

P1	P2
46 new viruses	11 new viruses
22 known viruses	5 PREDICT-1 viruses
	12 known viruses

CHINA

.....**GUANGJIAN ZHU, PhD**

PREDICT/China, Field Coordinator

EcoHealth Alliance

PARTNERS

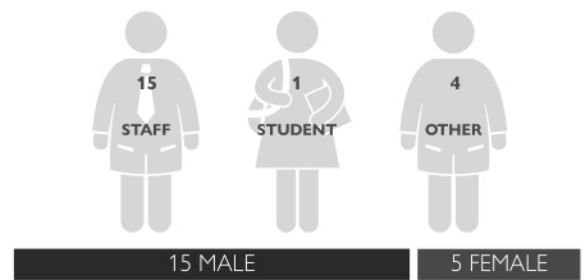
- EcoHealth Alliance
- Wuhan Institute of Virology of Chinese Academy of Sciences
- Institute of Microbiology of Chinese Academy of Sciences
- Chinese Center for Disease Control & Prevention



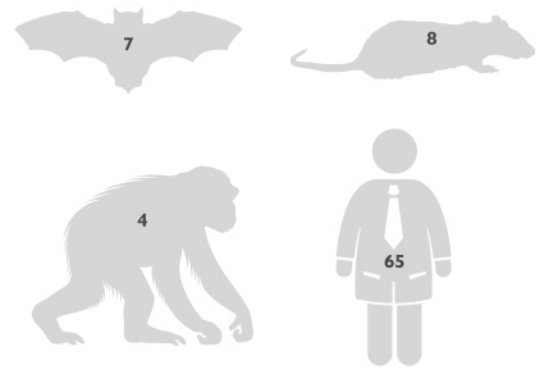
“I believe every individual who works with PREDICT is the key of its success. The greater success of PREDICT in China lies in the sharing and collaborating with the world.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

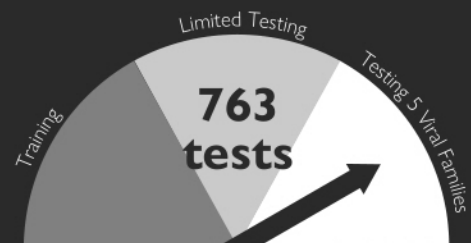


IMPACT

20 trained in One Health skills
84 individuals sampled (animals & humans)

LAB STRENGTHENING

Sanjay Gandhi Postgraduate Institute of Medical Sciences



INDIA



Global Health Security Agenda

HARJEET SINGH MAAN

PREDICT/India, Laboratory Lead

Sanjay Gandhi Postgraduate Institute of Medical Sciences

PARTNERS

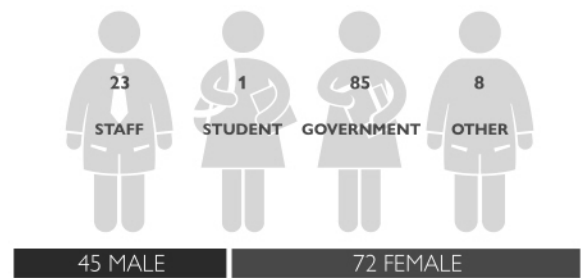
- EcoHealth Alliance
- Sanjay Gandhi Postgraduate Institute of Medical Sciences



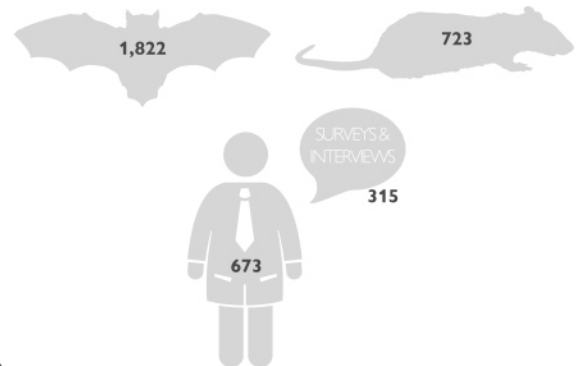
“I have since taken my expertise in microbiology to work as a Senior Scientist at the State Virology laboratory, at Gandhi Medical College in Bhopal Madhya Pradesh, India, where I am now in charge of a virology lab.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE



IMPACT

117 trained in One Health skills

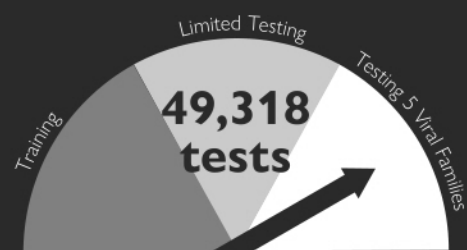
3,218 individuals sampled (animals & humans)

988 individuals interviewed

27 unique viruses detected

LAB STRENGTHENING

- Eijkman Institute for Molecular Biology (EIMB)
- Primate Research Center of the Institut Pertanian Bogor (Bogor Agricultural University)



VIRAL FINDINGS

P1

14 new viruses
6 known viruses

P2

14 new viruses
5 PREDICT-1 viruses
8 known viruses



Global Health Security Agenda

INDONESIA

..... **UUS SAEPULOH, SSi, M.Biomed**

PREDICT/Indonesia, Laboratory Technologist

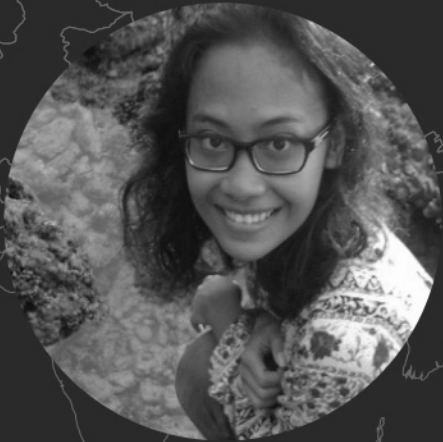
Primate Research Center IPB University

..... **TINA KUSUMANINGRUM, MSc**

PREDICT/Indonesia, Field Coordinator

PARTNERS

- EcoHealth Alliance
- Primate Research Center of the Institut Pertanian Bogor (Bogor Agricultural University)
- Eijkman Institute for Molecular Biology

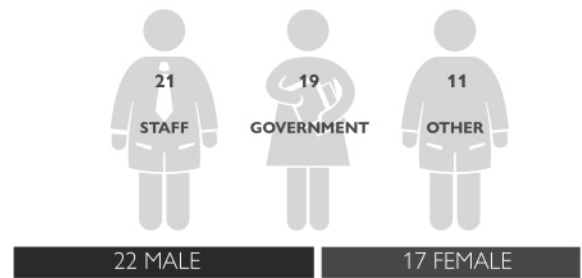


“PREDICT has given me an opportunity to be a part of global research communities in fighting zoonotic diseases through multisectoral collaboration.”

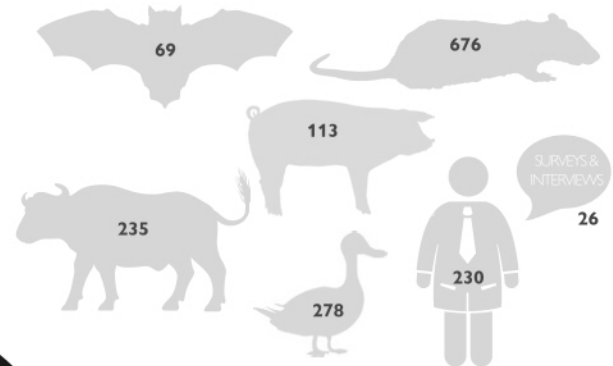


“Since I joined PREDICT/Indonesia, I’ve had many opportunities to improve my knowledge and skills in molecular biology and virology, especially in best practices for viral detection, surveillance, and biosecurity. I hope this knowledge and my ability to share it will increase and strengthen the capacity of laboratory technologies in our institution and across Indonesia for detecting wildlife zoonotic agents.”

WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

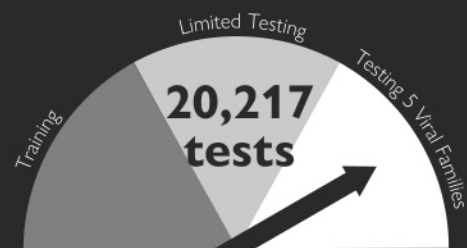


IMPACT

39 trained in One Health skills
1,601 individuals sampled (animals & humans)
256 individuals interviewed
12 unique viruses detected

LAB STRENGTHENING

- National Center for Laboratory & Epidemiology
- National Animal Health Laboratory



VIRAL FINDINGS

P1

16 new viruses
5 known viruses

P2

5 known viruses
2 new viruses



Global Health Security Agenda

LAO PDR

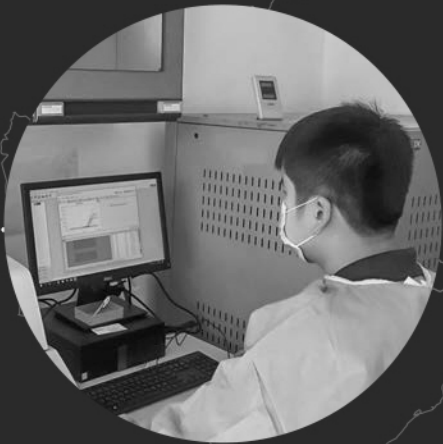
SINAKHONE XAYADETH

PREDICT/Lao PDR, Laboratory Technician

National Center for Laboratory & Epidemiology

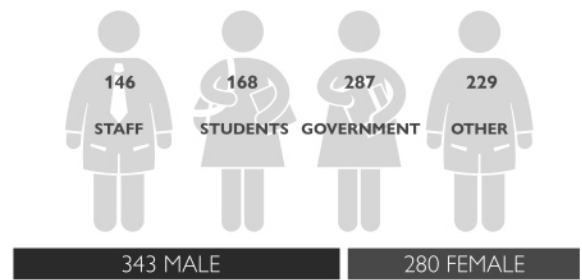
PARTNERS

- Metabiota, Inc.
- National Animal Health Laboratory
- National Center for Laboratory & Epidemiology

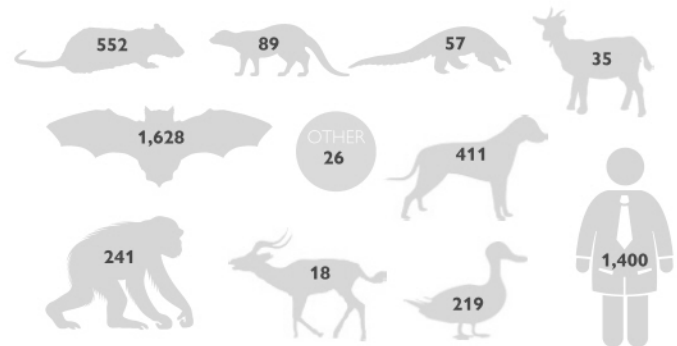


His experience working on the PREDICT project has motivated Sinakhone to further improve the laboratory capacity of his country, with his sights set on continuing his education in advanced molecular laboratory techniques. While the benefits of equipment and supplies, shared protocols, and in-service trainings provided to an organization are clear, the transfer of knowledge, mentorship, and inspiration ignited through involvement in a global project like PREDICT are also of great value and can have long-lasting and far-reaching effects.

WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

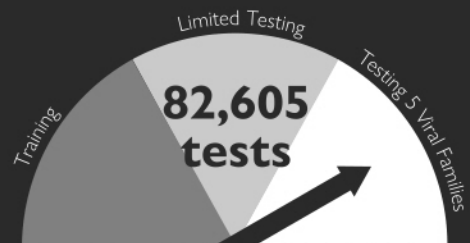


IMPACT

597 trained in One Health skills
4,676 individuals sampled (animals & humans)
1,400 individuals interviewed
28 unique viruses detected

LAB STRENGTHENING

- Wildlife Health, Genetic & Forensic Laboratory, Sabah Wildlife Department
- Virology Lab, Faculty of Veterinary Medicine, University Putra, Malaysia
- PERHILITAN National Wildlife Forensic Laboratory
- National Public Health Laboratory Peninsular Malaysia
- Kota Kinablu Public Health Laboratory



VIRAL FINDINGS

P1

57 new viruses
19 known viruses

P2

17 new viruses
3 PREDICT-1 viruses
8 known viruses

MALAYSIA

ZAHIDAH IZZATI ZEID

PREDICT/Malaysia Veterinarian

EcoHealth Alliance

PARTNERS

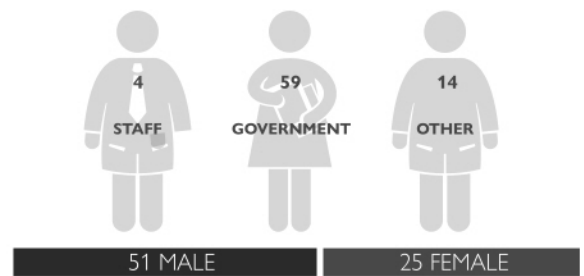
- EcoHealth Alliance
- Conservation Medicine, Ltd.
- PERHILITAN & National Wildlife Forensic Laboratory
- Sabah Wildlife Department, Wildlife Health, Genetic & Forensic Laboratory
- Danau Girang Field Centre
- University Malaysia Sabah
- Sabah State Health Department
- Queen Elizabeth Hospital



Dr. Zahidah has quickly become an important member of the PREDICT team in Malaysia working closely with government partners to build capacity to reduce the likelihood of spillover events.



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

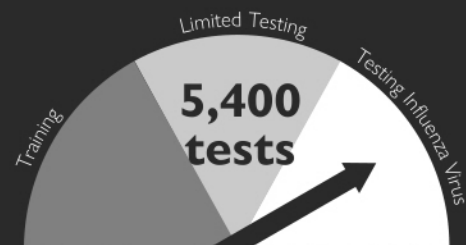


IMPACT

76 trained in One Health skills
3,243 animals sampled
1 unique virus detected

LAB STRENGTHENING

· State Central Veterinary Laboratory



VIRAL FINDINGS

P2
Influenza virus

MONGOLIA

..... **ULAANKHUU ANKHANBAATAR**

PREDICT/Mongolia, Virologist

State Central Veterinary Laboratory

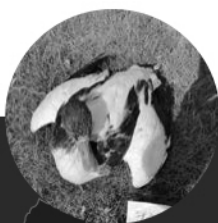
PARTNERS

- Wildlife Conservation Society
- State Central Veterinary Laboratory

..... **ARIUNBAATAR BARKHASBAATAR**

PREDICT/Mongolia, Avian Specialist

Wildlife Conservation Society

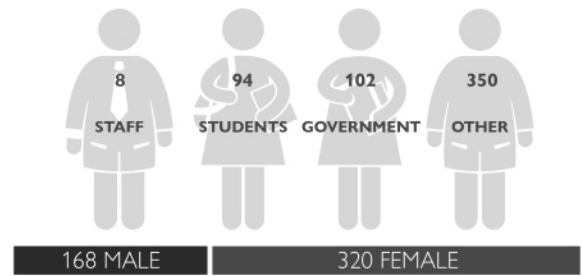


“Through the PREDICT project, I have got a lot of field experience and wildlife disease knowledge, including bird survey organizations, sample collection, bird necropsy and teamwork. I hope to expand my knowledge by continuing to learn new skills that will enhance my capabilities to use the One Health approach.”

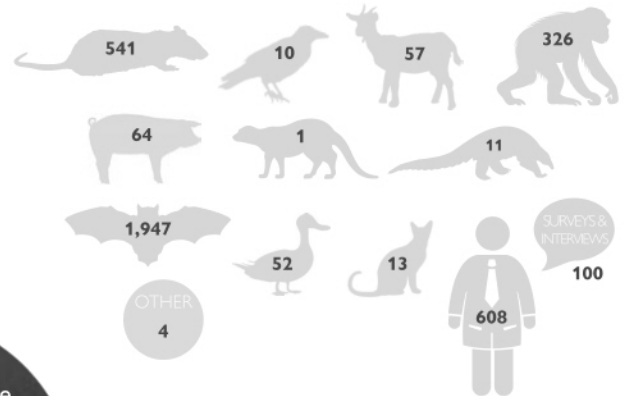


“Working with the international project team has been a great opportunity for my further research. Also my bird identification has improved.”

WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE



IMPACT

488 trained in One Health skills

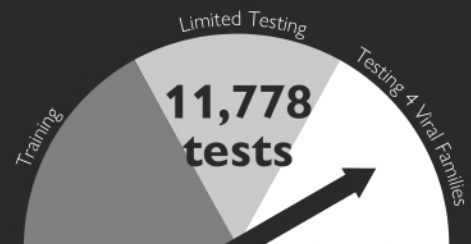
3,611 individuals sampled (animals & humans)

708 individuals interviewed

9 unique viruses detected

LAB STRENGTHENING

- Livestock Breeding & Veterinary Department
- Department of Medical Research



VIRAL FINDINGS

P2

6 new viruses

3 PREDICT-1 viruses

MYANMAR

..... OHNMAR AUNG, MD

PREDICT/Myanmar, Country Coordinator

Smithsonian Institution

PARTNERS

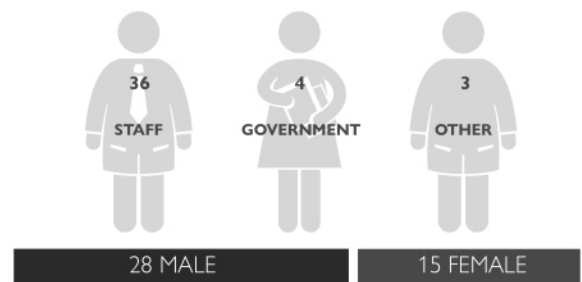
- Smithsonian Institution
- Department of Medical Research of the Ministry of Health & Sports
- Livestock Breeding & Veterinary Department
- Laboratory of the Ministry of Livestock, Agriculture & Irrigation
- Ministry of Natural Resources & Environmental Conservation



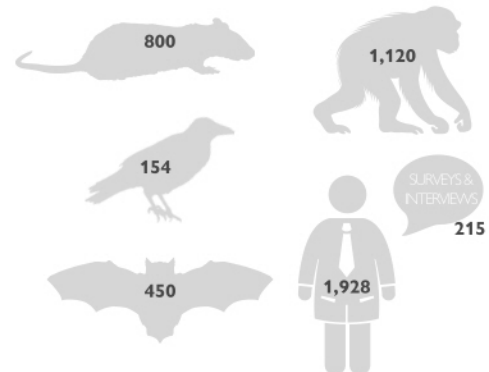
Dr. Ohnmar Aung is a medical doctor and social scientist. As the country coordinator for PREDICT in Myanmar, she is responsible for guiding and coordinating the project within the country, alongside Myanmar's three ministry partners. Dr. Aung has been a practicing physician for more than 15 years and has extensive experience bringing health infrastructure to communities throughout the country.



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

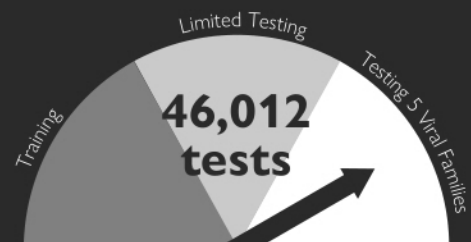


IMPACT

43 trained in One Health skills
4,452 individuals sampled (animals & humans)
2,143 individuals interviewed
8 unique viruses detected

LAB STRENGTHENING

Center for Molecular Dynamics Nepal/
Intrepid Nepal



VIRAL FINDINGS

P1

6 new viruses
5 known viruses

P2

1 new viruses
7 known viruses

NEPAL

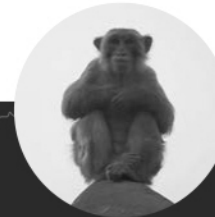
..... **DIBESH KARMACHARYA, PhD**

PREDICT/Nepal, Country Coordinator

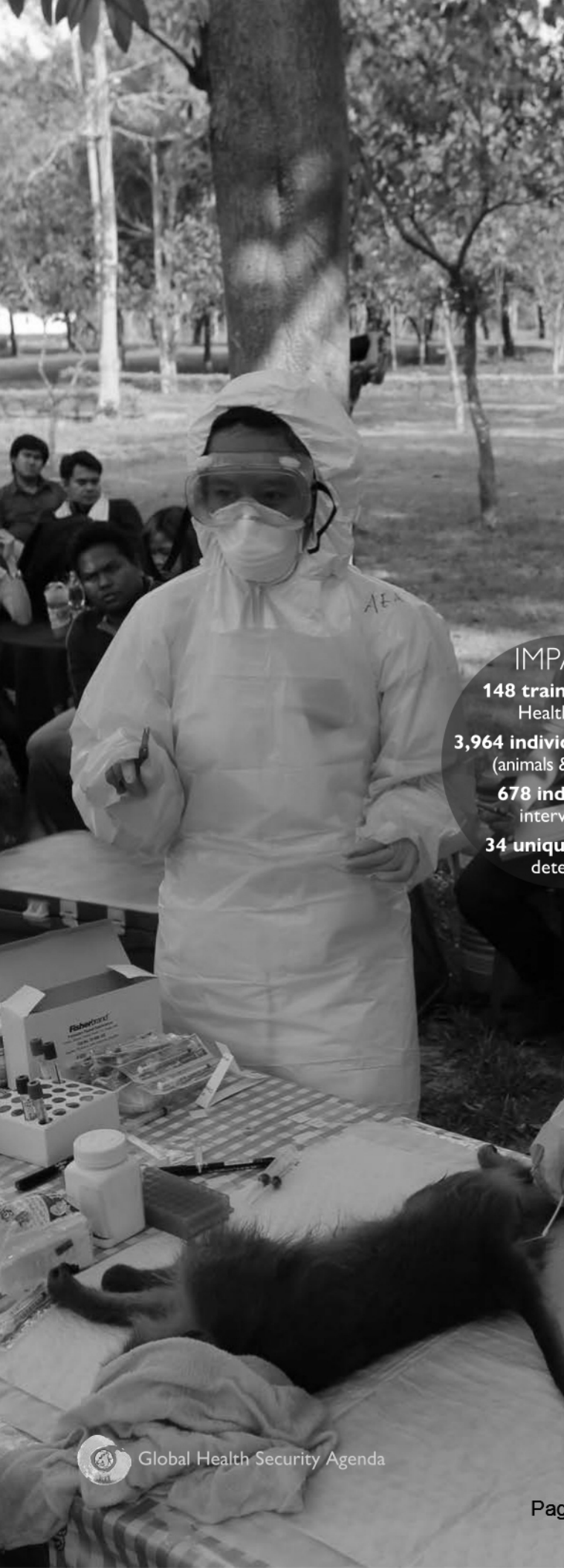
Center for Molecular Dynamics Nepal

PARTNERS

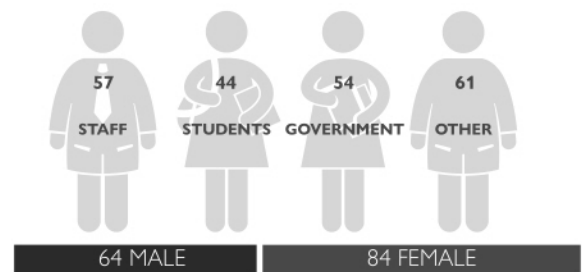
- University of California, Davis
- Center for Molecular Dynamics
Nepal/Intrepid Nepal



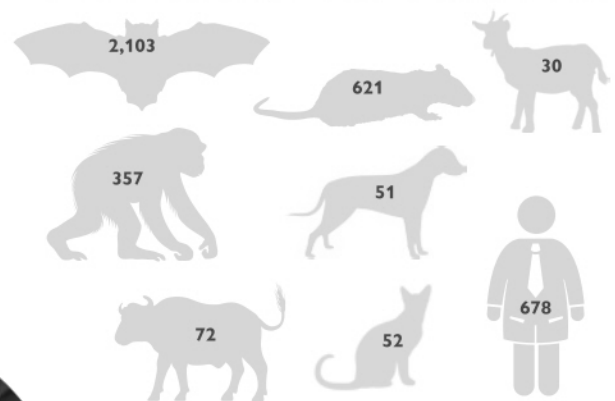
“PREDICT has helped in building capacity for emerging disease detection and characterization in Nepal, greatly enhancing country’s surveillance capabilities.”



WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

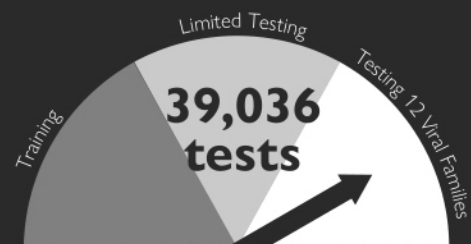


IMPACT

- 148 trained** in One Health skills
- 3,964 individuals** sampled (animals & humans)
- 678 individuals** interviewed
- 34 unique viruses** detected

LAB STRENGTHENING

WHO-CC Viral Zoonoses Chulalongkorn University



VIRAL FINDINGS

P1	P2
83 new viruses	6 new viruses
34 known viruses	14 known viruses
	14 PREDICT-1



Global Health Security Agenda

THAILAND

PRATEEP DUENGKAE, PhD

PREDICT/Thailand, Co-Country Coordinator

Faculty of Forestry at Kasetsart University

AINGORN CHAIYES

PREDICT/Thailand, Modeling & Analytics Fellow

PARTNERS

- EcoHealth Alliance
- Chulalongkorn University Hospital
- Kasetsart University
- Department of National Parks, Wildlife & Plant Conservation
- Department of Livestock & Development
- Ministry of Public Health

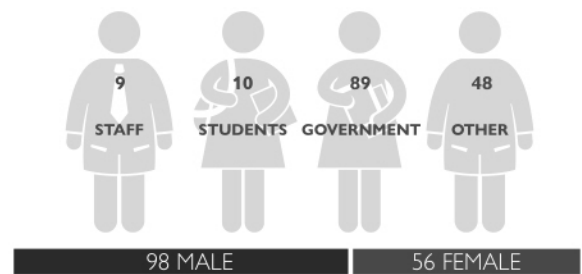


“I was awarded a PREDICT Modeling & Analytics Fellowship to work with the team at EcoHealth Alliance in New York City. The fellowship helped me to expand my work to evaluate habitat suitability and Nipah Virus Risk of Lyle’s Flying Fox in Thailand. The methods and techniques I learned as part of PREDICT will help me promote the conservation and management of wildlife and wildlife diseases in Thailand and transfer this knowledge to others.”

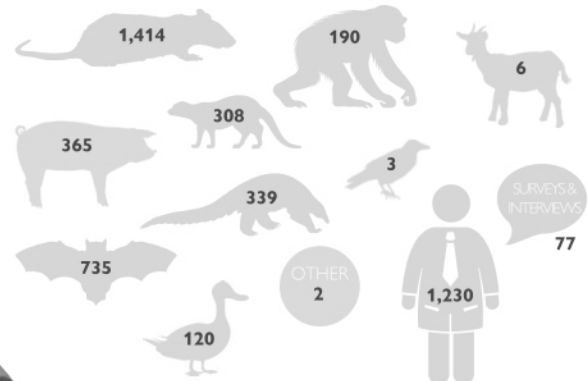


“I spent my whole career studying the wildlife and natural ecosystems of Thailand. Joining the PREDICT project opened up a whole new area of research for me, and has allowed me to link my knowledge of ecology and animal biology with infectious disease research. It’s been exciting to see how PREDICT has helped to shape the national agenda for One Health in Thailand”.

WORKFORCE DEVELOPMENT



ONE HEALTH SURVEILLANCE

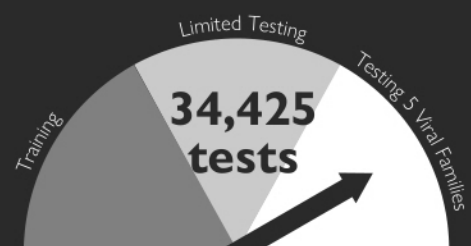


IMPACT

154 trained in One Health skills
4,712 individuals sampled (animals & humans)
1,307 individuals interviewed
9 unique viruses detected

LAB STRENGTHENING

- Viet Nam National University of Agriculture
- Regional Animal Health Office No. 6
- National Institute of Hygiene & Epidemiology



VIRAL FINDINGS

P1

23 new viruses
7 known viruses

P2

2 new viruses
1 PREDICT-1 virus
6 known viruses



Global Health Security Agenda

VIET NAM

NGUYEN THI THANH NGA

PREDICT/Viet Nam, Country Coordinator

Wildlife Conservation Society

NGUYEN DUC THINH

PREDICT/Viet Nam, Laboratory Technician

Viet Nam National University of Agriculture

PARTNERS

- Wildlife Conservation Society
- Viet Nam National University of Agriculture
- Regional Animal Health Office Laboratories (RAHO6 & RAHO7), Department of Animal Health
- National Institute of Hygiene & Epidemiology



“PREDICT is so meaningful not only to me but also globally because of its One Health approach. This is also my first time to work together with wildlife and animal health staffs and I feel very happy to be able to be a part of it.”



“I started my career as a member of the PREDICT project program. Being a part of the team has helped me to deepen my expertise, improved my skills, and has given me a golden chance to explore the areas that I’m interested in, that is wildlife, wildlife health and zoonotic diseases. I believe and hope that PREDICT project will not only help me to enhance my personal veterinary skills but its findings will also bring value to animal and human health, and especially the wildlife health in Viet Nam.”

A black and white photograph of a donkey standing in a dusty yard. The donkey is light-colored with a dark collar and is looking towards the left. In the background, two children are standing near a low wall and some trees. The scene is set in a rural area with a simple building in the background.

Photo: Male and children in Guinea (credit: Jaber Belkhiria)

PUBLICATIONS

Learn more at www.publications.predict.global.

- Ahmed Kandeil, Mokhtar R. Gomaa, Mahmoud M. Shehata, Ahmed N. El Taweel, Sara H. Mahmoud, Ola Bagato, Yassmin Moatasim, Omnia Kutkat, Ahmed S. Kayed, Patrick Dawson, Xueting Qiu, Justin Bahl, Richard J. Webby, William B. Karesh, Ghazi Kayali, Mohamed A. Ali. 2019. **Isolation and Characterization of a Distinct Influenza A Virus from Egyptian Bats.** *Journal of Virology* 93(2). doi: 10.1128/JVI.01059-18
- Anderson, D. E., Islam, A., Cramer, G., Todd, S., Islam, A., Khan, S. U., Foord, A., Rahman, M.Z., Mendenhall, I.H., Luby, S.P., Gurley, E.S., Daszak, P., Epstein, J.H., Wang, L. F. 2019. **Isolation and full-genome characterization of Nipah viruses from bats, Bangladesh.** *Emerging Infectious Diseases* 25(1). doi: 10.3201/eid2501.180267
- Hassan, M.M., Begum, S., Faruq, A., Alam, M., Mahmud, T., Islam, A. 2019. **Multidrug resistant Salmonella isolated from street foods in Chittagong, Bangladesh.** *Microbiology Research Journal International* 26(6). doi: 10.9734/mrji/2018/v26i630083
- Islam, A., Islam, S., Ferdous, J., Rahman, M.K., Uddin, M.H., Akter, S., Rahman, M.H., Hassan, M.M. 2019. **Diversity and prevalence of parasitic infestation with zoonotic potential in dromedary camel (*Camelus dromedarius*) and fat-tailed sheep (dhumba) in Bangladesh.** *Journal of Advanced Veterinary and Animal Research* 6(1). doi: 10.5455/javar.2019.f324
- Islam, S., Rahman, M.K., Ferdous, J., Hossain, M.B., Hassan, M.M., Islam, A. 2018. **Hematological reference values for healthy fat-tailed sheep (dhumba) in Bangladesh.** *Journal of Advanced Veterinary and Animal Research* 5(4). doi: 10.5455/javar.2018.e302
- Islam, S., Ferdous, J., Rahman, M.K., Akter, S., Hassan, M.M., Islam, A. 2019. **Reference values for hematological and serum biochemical parameters of dromedary camel (*Camelus dromedarius*) in sub-tropical climate of Bangladesh.** *Advances in Veterinary and Animal Sciences* 7(4). doi: 10.17582/journal.aavs/2019/7.4.232.237
- Joyjinda Y, Rodpan A, Chartpituck P, Suthum K, Yaemsakul S, Cheun-Arom T, Bunprakob S, Olival KJ, Stokes MM, Hemachudha T, Wacharapluesadee S. 2019. **First Complete Genome Sequence of Human Coronavirus HKU1 from a Nonill Bat Guano Miner in Thailand.** *Microbiol Resour Announc* 8(6). doi: 10.1128/MRA.01457-18
- Kowarsky M, De Vlaminc I, Okamoto J, Neff NF, LeBreton M, Nwobegabay J, Tamoufe U, Diffo Ledoux J, Tafon B, Kiyang J, Saylor K, Wolfe ND, Quake SR. 2018. **Cell-free DNA Reveals Potential Zoonotic Reservoirs in Non-Human Primates.** *Biorxiv*. doi: 10.1101/481093
- Machalaba C. et al., 2018. **Institutionalizing One Health: from Assessment to Action.** *Health Security* 16(S1). doi: 10.1089/hs.2018.0064
- NF Ntumvi, P Mbala, U Tamufe, C Kumakamba, V Ndze, IN Lukusa, M LeBreton, JA Losoma, J Diffo, F Nkawa, JM Takuo, P Mulembakani, J Nwobegahay, M Makuwa, JJM Tamtum, A Gillis, S Harris, AW Rimoin, NA Hoff, JM Fair, C Monagin, J Ayukebong, EM Rubin, ND Wolfe, CE Lange. 2018. **High herpesvirus diversity in wild rodent and shrew species in central Africa.** *Intervirology* 61(4). doi: 10.1159/000493796
- Nziza, J., Tumushime, J.C., Cranfield, M., Ntwari, A.E., Modrý, D., Mudakikwa, A., Gilardi, K. and Šlapeta, J. 2019. **Fleas from domestic dogs and rodents in Rwanda carry *Rickettsia asembonensis* and *Bartonella tribocorum*.** *Medical and Veterinary Entomology* 33(1). doi: 10.1111/mve.12340
- Smith K., Machalaba C., Seifman R., Feferholtz Y., Karesh W. 2019. **Infectious disease and economics: The case for considering multi-sectoral impacts.** *One Health*. doi: 10.1016/j.onehlt.2018.100080
- Young C., Kharmacharya D., Bista M., Sharma A., Goldstein T., Anthony S.J., Smith W., Mazet J., Johnson C. 2019. **Sharing of antimicrobial resistance genes among animals, humans, and the environment in Nepal: A one health case study.** *International Journal of Infectious Diseases* 79(20). doi: 10.1016/j.ijid.2018.11.064



USAID
FROM THE AMERICAN PEOPLE



UC DAVIS
VETERINARY MEDICINE
One Health Institute



WCS
Page 110 of 767



EcoHealth
Alliance



METABIOTA™



Smithsonian
Institution

USAID-01395

From: (b)(6)
Sent: Fri, 10 Mar 2017 17:48:13 -0500
To: (b)(6)
Cc:
Subject: GVP Update - Exec Summary, Resource Deck, etc.
Attachments: BeijingGVPExecutiveSummary.docx, GVP Resource Deck 3.10.2017.pptx

Dear GVP Colleagues,

Happy Friday & weekend! We hope that you are all doing well and that things are great in your part of the world.

We wanted to provide a few quick updates as we reflect on the Beijing meeting and pursue next steps:

- 1) Newsletter: We hope you all received the "As the Virome Turns" newsletter (below). This will continue to be our method for providing updates on outreach, publications, etc. If you haven't signed up, please do so at the bottom of this email. If you have anything for inclusion, please send to (b)(6)@usaid.gov).
- 2) Executive Summary: Our amazing participant and (b)(6), has compiled an Executive Summary from the Beijing meeting (attached). Please let us know if you have any comments or thoughts about the summary.
- 3) Resource Deck: In order to facilitate your GVP-related presentations, we've been working on compiling a large set of slides from which you can all pick and choose to create your own, audience-specific presentations. We will continue to update this, but please find attached the first version for your use. We would love any feedback or additional slides to add!
- 4) May 1st Deadline: As the various working groups pull together their deliverables for the May 1st deadline, please note that your Thematic Area co-leads are a great resource for any questions. The co-leads will be meeting regularly to share information and identify opportunities for collaboration between the Thematic Areas.
- 5) Webinar: Following the May 1st deadline, we will be organizing an interactive webinar to share more details on the modeling strategy. We plan to record the webinar for those who are unable to attend. We'll distribute more details as they become available.

As always, please reach out if you have any questions or concerns!

Best,

(b)(6)

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

----- Forwarded message -----

From: **GVP** <Globalviromeproject@gmail.com>
Date: Fri, Mar 10, 2017 at 2:13 PM
Subject: As the Virome Turns--Happy 2017!
To: (b)(6)@usaid.gov

[View this email in your browser](#)



Happy 2017! Since the last edition, quite a bit has taken place in Washington, but much more has taken place everywhere GVP Steering Committee members have traveled. With Spring almost here, and

the beginning of Daylight savings time soon upon us, make sure to enjoy the extra sleep until Sunday, when you should remember to spring forward! Keep scrolling to see how GVP continues to beat on, both in person and in publications featuring our own (b)(6) and (b)(6)



Last month the teams were busy, showcasing GVP globally and launching activities in key locations. Read the breakdown below:

Miami Beach: 2017 Advances in Genome Biology and Technology Meeting, February 12

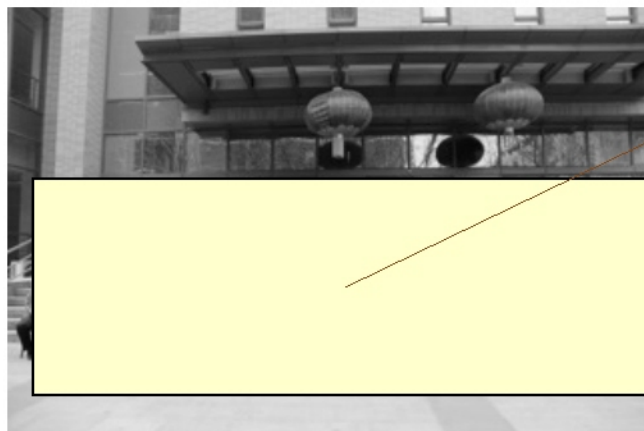
(b)(6) (Metabiota) gave a keynote talk on the “Global Virome Project”. This meeting represents the largest yearly gathering of genome scientists and technologists (~800).

Beijing: Feb. 5th – Feb. 8th

During their time in Beijing, (b)(6) and others met for the GVP steering committee meeting and “Launched” the China National Virome project! Audiences included USAID China colleagues, the GVP core group, steering committee, and working group co-leads, senior representatives from the Chinese Academy of Sciences, China CDC, the leadership from the Chinese Academy of Sciences International Affairs Division, and the health/science representatives from Embassy Beijing (State, USAID, NSF, HHS,

CDC, NIH, etc.). We look forward to the Embassy's continued support of this opportunity moving forward.

- GVP Steering Committee: The GVP meeting was the second meeting of the steering committee and the first meeting of the extended group (working group co-leads). In addition to be a productive session helping to map out the way forward, the opportunity to bring together the individuals working in different technical areas allowed for extensive cross-talk and coordination.



(b)(6)

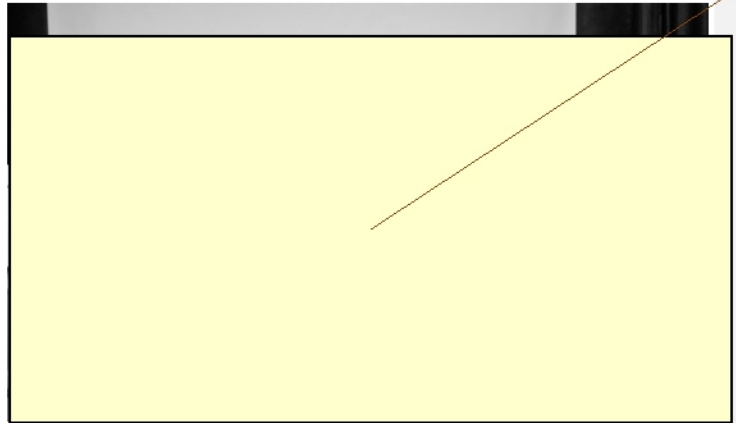
- “Launch” of the China National Virome Project: The Chinese Academy of Sciences and the China CDC co-hosted a scientific forum to: 1. Present GVP, and 2. Highlight ongoing Chinese scientific work that aligns with GVP. Our Chinese colleagues are very enthusiastic about being a “first wave country” for the GVP – meaning that they would begin a National Virome Project. The next step is for them to set up an internal meeting to map out the way forward on their end.

Bangkok: Jan. 28th – Feb. 3rd

Several ETD members and other partners met in Bangkok, primarily to attend the PMAC 2018 planning meeting, PMAC 2017 side meetings on AMR & OneHealth Workforce, and to present on the GVP to Thai colleagues:

- AMR meeting: 125 participants from ministries of Ag and Health from 7 Asian countries and an equal number of major private sector firms (livestock producers, retailers and suppliers). Strong endorsement of expanded engagement across region for characterizing anti-biotic use among producers and promotion of good stewardship. Concrete next steps identified. Private sector has initiated steps to co-sponsor a similar meeting in Cairo to cover Middle East producers.

- One Health Workforce: a regional meeting bringing together representatives from across the OHW network in SE Asia and Africa and equivalent representation for similar networks funded by WB and Australia in South Asia. Highly interactive and laid the foundation for a broader “web” of engagement across multiple networks.
- GVP: a very well received presentation and discussion on GVP to a broad cross-section of Thai government leaders, scientists and educators. Strong endorsement of role of the RTG in GVP.
- PMAC 2018: first meeting of the International Organizing Committee for PMAC 18 – with the theme of “Making the World Safe from the Threats of Emerging Infectious Diseases”. USAID has a strong leadership role in planning for this meeting. PMAC 18 will cover both emerging viral threats as well as antimicrobial resistance. Abstracts should be submitted by following [this link](#).



(b)(6)

San Francisco: Jan. 24th – Jan. 27th

During their time in San Francisco, folks held a series of GVP outreach meetings, notable with The Chan–Zuckerberg BioHub, Illumina, and the Science Philanthropy Alliance. All outreach meetings were successful in that colleagues expressed strong support and enthusiasm for the GVP:

- Illumina: (b)(6) (Metabiota), (b)(6) (USAID), (b)(6) (Metabiota) gave a presentation to senior Illumina management on the Global Virome Project. Illumina representatives included: (b)(6)
(b)(6). Discussions included potential involvement of Illumina in the GVP, during which key representatives expressed a very strong interest in serving as a partner, focusing on the development of the “next generation” of technology related to diagnostics. Their involvement

has potential to speed up the process through introduction of new technologies (similar to what occurred during the Human Genome Project).

- Science Philanthropy Alliance: SPA is a “clearing house” for a dozen major foundations interested in supporting “transformative science”. They expressed a strong sense that GVP was very much aligned with a number of their member foundations and are taking steps to facilitate future discussions with participating foundations
- Chan-Zuckerberg BioHub: The BioHub (Stanford/UC Berkeley/UCSF) is interested in working with the GVP around the samples which will be collected and new technologies which may be used as part of the big data generated.

(b)(6)



Each working group continues to pursue deliverables planned for completion this May. Of note will be updates from the Science & Technology Team, which we will share in the next edition of As the Virome Turns.



- [GVP is Featured in Techonomy](#)
- (b)(6) writes for the O'Neill Institute for Global Health and Law

Are you a new reader?

- [Subscribe Here](#)
- [Read past editions here](#)
- Contact (b)(6) at (b)(6)@usaid.gov if you would like to submit content for future editions of "As the Virome Turns"

Upcoming Events

- [The Beginning of the End of the Pandemic Era: March 17](#)
- [SEAOHUN Fellowship Program](#)
Application Deadline: March 31
An excellent opportunity for qualified individuals to gain practical, trans-disciplinary experience and contribute productively to One Health related projects at several host organizations. Follow [this link](#) to learn more and apply!
- [PMAC 2018: Call for Abstracts, March 31, 2017](#)



Photo Credits: Gorilla Doctors Project, (b)(6)/USAID, NIAID



Forward



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This email was sent to (b)(6) [@usaid.gov](#)

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From: (b)(6)
Sent: Thu, 8 Nov 2018 21:30:20 +0000
To: (b)(6)@state.gov
Cc: (b)(6)
Subject: Fwd: TVPP
Attachments: Thailand GVP_China Project_October 2018_Final.pdf, ATT00002.bin

Hi (b)(6),

Please see attached for (b)(6) slides from the Bangkok GVP meeting.

Best,

(b)(6)

Sent from my iPhone

Begin forwarded message:

From: (b)(6)@ecohealthalliance.org>
Date: October 31, 2018 at 9:34:59 PM EDT
To: (b)(6)@metabiota.com>
Cc: (b)(6)@usaid.gov>, (b)(6)
<(b)(6)@ecohealthalliance.org>, (b)(6)@usaid.gov>, (b)(6)
<(b)(6)@ucdavis.edu>, (b)(6)@georgetown.edu>, (b)(6)
<(b)(6)@ucdavis.edu>, (b)(6)@usaid.gov>, "(b)(6)@usaid.gov"
<(b)(6)@usaid.gov>, (b)(6)@usaid.gov>, (b)(6)
<(b)(6)@usaid.gov>, (b)(6)@ecohealthalliance.org>, Peter Daszak
<daszak@ecohealthalliance.org>, (b)(6)
<(b)(6)@ecohealthalliance.org>
Subject: Re: TVPP

Dear (b)(6)

Attached are my slides, not sure if it will help or not, but there are some nice pictures at least...

Thanks again for having me at the meeting in Bangkok, look forward to seeing many major progresses of the TVPP.

Best Regards,

(b)(6)

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From: (b)(6)
Sent: Thu, 27 Sep 2018 13:41:01 +0000
To: (b)(6)
Cc: (b)(6)
(USAID/Dhaka/PHNE); (b)(6)
Subject: Re: [GVP] Action Requested - Update Thailand Agenda
Attachments: 05 Thailand National Virome Project_Draft Agenda_9.27.18.docx

Hi (b)(6),

Thanks so much, we just realized that it was an easy change - we replaced (b)(6) name with (b)(6)! I've attached the updated document with that edit.

Best,

(b)(6)

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

On Thu, Sep 27, 2018 at 7:49 AM (b)(6)
<(b)(6)@usaid.gov> wrote:
Dear (b)(6),

The most updated version that I received and worked on it today. As mentioned earlier, we still wait for the call from DMSC for the 3rd prep meeting.

Best regards,

(b)(6)

USAID Regional Development Mission Asia
Bangkok, 10330

E-mail: (b)(6)@usaid.gov

Tel: +(b)(6), Fax: +(b)(6)

On Thu, Sep 27, 2018 at 1:56 PM, (b)(6)

<(b)(6)@usaid.gov> wrote:

Dear (b)(6),

This is the most updated version that I have in hand. Please use word document version for your edits.

Best regards,

(b)(6)

USAID Regional Development Mission Asia

Bangkok, 10330

E-mail: (b)(6)@usaid.gov

Tel: +(b)(6), Fax:+(b)(6)

----- Forwarded message -----

From: (b)(6)@hotmail.com>

Date: Thu, Aug 23, 2018 at 1:42 PM

Subject: Re: [GVP] Action Requested - Update Thailand Agenda

To: (b)(6)@usaid.gov>

ส่งตารางที่แก้ไขมาให้พี่ก๊วก่อนค่ะ

ขอบคุณค่ะ

(b)(6)

(b)(6)

ศูนย์วิทยาศาสตร์สุขภาพโรคอุบัติใหม่ โรงพยาบาลจุฬาลงกรณ์

Thai Red Cross Emerging Infectious Diseases - Health Science Centre

WHO Collaborating Centre for Research and Training on Viral Zoonoses

King Chulalongkorn Memorial Hospital

Faculty of Medicine, Chulalongkorn University

Rama4 road, Patumwan

Bangkok, Thailand 10330

Tel (b)(6)

Fax

From: (b)(6)@usaid.gov>

Sent: Monday, August 20, 2018 10:24 AM

To: (b)(6)

(b)(6)

Cc: (b)(6)

(b)(6)

Subject: Fwd: [GVP] Action Requested - Update Thailand Agenda

Dear colleagues,

Please see attachment the draft meeting agenda with GVP's inputs. We have to further work out more details from our end. In addition, I have asked (b)(6) (15-20 min talk) to provide his perspective on the establishment Thailand National Virome Project.

Best regards,

(b)(6)

USAID Regional Development Mission Asia
Bangkok, 10330

E-mail: (b)(6)@usaid.gov

Tel: +(b)(6) Fax: +(b)(6)

----- Forwarded message -----

From: (b)(6)@ucdavis.edu>

Date: Fri, Aug 17, 2018 at 1:19 AM

Subject: Re: [GVP] Action Requested - Update Thailand Agenda

To: (b)(6)@usaid.gov>

Cc: Peter Daszak <daszak@ecohealthalliance.org>, (b)(6)@ucdavis.edu>, (b)(6)

(b)(6)@metabiota.com>, (b)(6)@metabiota.com>, (b)(6)

<(b)(6)@usaid.gov>, (b)(6)@usaid.gov>

Here you go -- thanks for the opportunity to input.

Ours looks like a lot of changes, but it is mostly restructuring.

We also think we need to ask speakers to include Q&A for each section or to shorten sections further to allow for questions.

Have a nice day,

(b)(6)

On Thu, Aug 16, 2018 at 7:13 AM, (b)(6)@usaid.gov> wrote:

Hi Team,

A huge thank you to those who have provided input to the agenda. If you have not yet provided input, particularly for speaker name and session title, please take a moment to do so today.

Thanks again,

(b)(6)

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

On Mon, Aug 13, 2018 at 1:59 PM (b)(6)@usaid.gov wrote:

Hi GVP Colleagues,

As per our conversation on Thursday, we would like to request your assistance in updating the agenda for the Thailand National Meeting, to be held Oct. 24-25 in Bangkok. In particular, we would like to ensure that speaker name and session titles have been added.

Please input your edits to [this google doc](#). If you're unable to access it, I have also attached a recent draft of the agenda in which you can make your edits. In case helpful for framing, I've pasted below some feedback from the GoT that (b)(6) shared.

We would appreciate your feedback by **COB Wednesday, 8/15**.

Thanks!

(b)(6)

Feedback

(b)(5) - Deliberative Process Privilege

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)

Cell: (b)(6)

E-mail: (b)(6)@usaid.gov

(b)(6)

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From: (b)(6)
Sent: Tue, 21 Mar 2017 15:28:46 +0000
To: (b)(6)
Subject: Re: Returned mail: see transcript for details
Attachments: BeijingGVPExecutiveSummary (2).docx

Attached again, let me know if it came through!

(b)(6)
Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

On Mon, Mar 20, 2017 at 5:44 PM, (b)(6)
(b)(6)@pasteur.fr> wrote:
Hi again. Actually I don't see the exec summary. Can you send that again?

On 20 Mar 2017, at 19:27, (b)(6)@usaid.gov> wrote:

That's frustrating, but glad you got the email!

(b)(6)
Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)
Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

On Mon, Mar 20, 2017 at 12:30 PM, (b)(6)
(b)(6)@pasteur.fr> wrote:
Thanks- having problems with my WHO email today. Thanks for resending.

On 20 Mar 2017, at 17:07, (b)(6)@usaid.gov> wrote:

Hi (b)(6),

It seems to be bouncing back from the WHO email, but I've attached the Exec Summary here again.

Best,

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk:

(b)(6)

Cell:

E-mail: (b)(6)@usaid.gov

----- Forwarded message -----

From: **Mail Delivery Subsystem** <MAILER-DAEMON@who.int>

Date: Mon, Mar 20, 2017 at 12:04 PM

Subject: Returned mail: see transcript for details

To: (b)(6)@usaid.gov

The original message was received at Mon, 20 Mar 2017 17:01:32 +0100
from (b)(6)

----- The following addresses had permanent fatal errors -----

<(b)(6)@who.int>

(reason: (b)(6) Too many hops)

(expanded from: <(b)(6)@who.int>)

----- Transcript of session follows -----

(b)(6) Too many hops 30 (25 max): from <(b)(6)@usaid.gov> via localhost, to
<(b)(6)@who.int>

Original-Recipient: (b)(6)@who.int

Final-Recipient: (b)(6)@who.int

X-Actual-Recipient: (b)(6)@sakurain.who.int

Action: failed

Status: (b)(6)

Diagnostic-Code: SMTP: (b)(6) Too many hops

Last-Attempt-Date: Mon, 20 Mar 2017 17:04:46 +0100

----- Forwarded message -----

From: (b)(6)@usaid.gov

To: <(b)(6)@who.int>

Cc:

Bcc:

Date: Mon, 20 Mar 2017 11:59:19 -0400

Subject: Re: GVP Update - Exec Summary, Resource Deck, etc.

Hi (b)(6)

I've attached the executive summary, which will hopefully go through. It appears that the slide deck is too large for the WHO email addresses. If you have an alternative email for me to use, let me know. Otherwise, I'll see if I can shrink it.

Best,

(b)(6)

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)

Cell: (b)(6)

E-mail: (b)(6)@usaid.gov

On Sat, Mar 11, 2017 at 5:04 AM, (b)(6)@pasteur.fr> wrote:

Hi (b)(6), you can use my WHO email now: (b)(6)@who.int

On 11 Mar 2017, at 00:06, (b)(6)@usaid.gov> wrote:

Dear Colleagues,

If you're receiving this email, I received a notice that your email couldn't receive the attachments in the original email. If you have an alternate email you would like me to forward the slide deck to (as it's quite large), please let me know. I have reattached the executive summary in the hopes that it goes through.

Best,

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)

Cell: (b)(6)

E-mail: (b)(6)@usaid.gov

----- Forwarded message -----

From: (b)(6)@usaid.gov>

Date: Fri, Mar 10, 2017 at 5:48 PM
Subject: GVP Update - Exec Summary, Resource Deck, etc.
To: (b)(6)@usaid.gov>
Cc: (b)(6)@usaid.gov>

Dear GVP Colleagues,

Happy Friday & weekend! We hope that you are all doing well and that things are great in your part of the world.

We wanted to provide a few quick updates as we reflect on the Beijing meeting and pursue next steps:

- 1) Newsletter: We hope you all received the "As the Virome Turns" newsletter (below). This will continue to be our method for providing updates on outreach, publications, etc. If you haven't signed up, please do so at the bottom of this email. If you have anything for inclusion, please send to (b)(6)@usaid.gov).
 - 2) Executive Summary: Our amazing participant and (b)(6) has compiled an Executive Summary from the Beijing meeting (attached). Please let us know if you have any comments or thoughts about the summary.
 - 3) Resource Deck: In order to facilitate your GVP-related presentations, we've been working on compiling a large set of slides from which you can all pick and choose to create your own, audience-specific presentations. We will continue to update this, but please find attached the first version for your use. We would love any feedback or additional slides to add!
 - 4) May 1st Deadline: As the various working groups pull together their deliverables for the May 1st deadline, please note that your Thematic Area co-leads are a great resource for any questions. The co-leads will be meeting regularly to share information and identify opportunities for collaboration between the Thematic Areas.
 - 5) Webinar: Following the May 1st deadline, we will be organizing an interactive webinar to share more details on the modeling strategy. We plan to record the webinar for those who are unable to attend. We'll distribute more details as they become available.
- As always, please reach out if you have any questions or concerns!

Best,

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)
Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

----- Forwarded message -----

From: **GVP** <Globalviromeproject@gmail.com>
Date: Fri, Mar 10, 2017 at 2:13 PM
Subject: As the Virome Turns--Happy 2017!

To: (b)(6)@usaid.gov

[View this email in your browser](#)



Happy 2017! Since the last edition, quite a bit has taken place in Washington, but much more has taken place everywhere GVP Steering Committee members have traveled. With Spring almost here, and the beginning of Daylight savings time soon upon us, make sure to enjoy the extra sleep until Sunday, when you should remember to spring forward! Keep scrolling to see how GVP continues to beat on, both in person and in publications featuring our own (b)(6) and (b)(6).



Last month the teams were busy, showcasing GVP globally and launching activities in key locations.

Read the breakdown below:

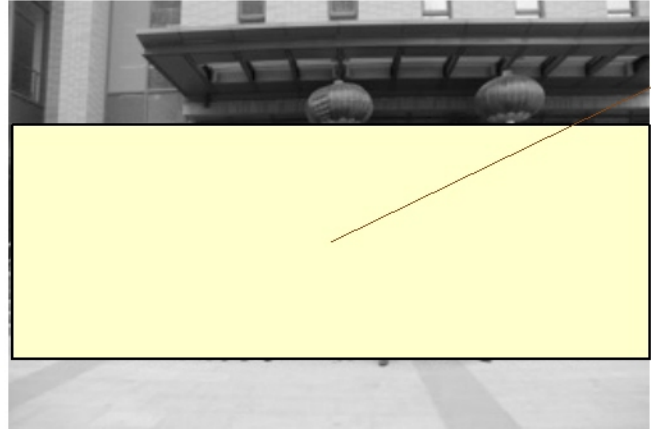
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(b)(6) (Metabiota) gave a keynote talk on the "Global Virome Project". This meeting represents the largest yearly gathering of genome scientists and technologists (~800).

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- GVP Steering Committee: The GVP meeting was the second meeting of the steering committee and the first meeting of the extended group (working group co-leads). In addition to be a productive session helping to map out the way forward, the opportunity to bring together the individuals working in different technical areas allowed for extensive cross-talk and coordination.



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(b)(6)

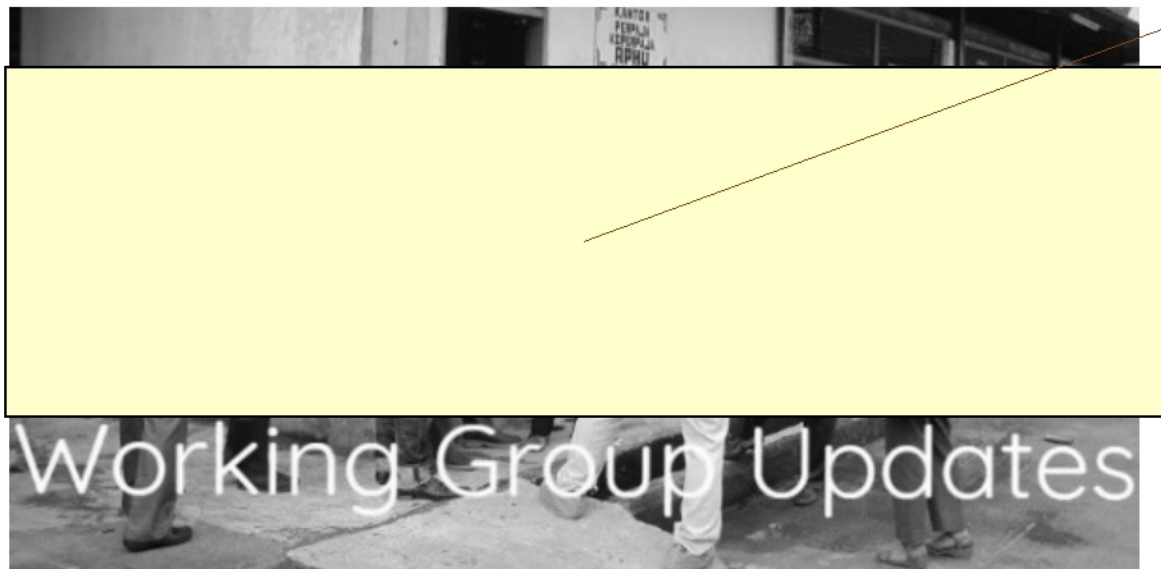
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Each working group continues to pursue deliverables planned for completion this May. Of note will be updates from the Science & Technology Team, which we will share in the next edition of As the Virome Turns.



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An excellent opportunity for qualified individuals to gain practical, trans-disciplinary experience and contribute productively to One Health related projects at several host organizations. Follow [this link](#) to learn more and apply!
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Photo Credits: Gorilla Doctors Project, (b)(6)/USAID, NIAID



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mailchimp

<BeijingGVPExecutiveSummary.docx>

<BeijingGVPExecutiveSummary (2).docx>

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of the Freedom of Information and Privacy Act

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of the Freedom of Information and Privacy Act

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From: (b)(6)
Sent: Thu, 27 Sep 2018 16:33:52 +0000
To: (b)(6)
Cc: (b)(6)
(USAID/Dhaka/PHNE); (b)(6)
Subject: Re: [GVP] Action Requested - Update Thailand Agenda
Attachments: 05 Thailand National Virome Project_Draft Agenda_9.27.18 cc.docx

Hi (b)(6),

Apologies for the second email, but one of our colleagues noted another needed change - since (b)(6) will be replacing (b)(6) on the agenda, we needed to change that for the IM session. Please see an updated document with that edit.

Best,

(b)(6)

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

On Thu, Sep 27, 2018 at 9:41 AM (b)(6)@usaid.gov> wrote:
Hi (b)(6)

Thanks so much, we just realized that it was an easy change - we replaced (b)(6) name with (b)(6)! I've attached the updated document with that edit.

Best,

(b)(6)

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

On Thu, Sep 27, 2018 at 7:49 AM (b)(6)
<(b)(6)@usaid.gov> wrote:

Dear (b)(6)

The most updated version that I received and worked on it today. As mentioned earlier, we still wait for the call from DMSC for the 3rd prep meeting.

Best regards,

(b)(6)

USAID Regional Development Mission Asia
Bangkok, 10330

E-mail: (b)(6)@usaid.gov

Tel: +(b)(6), Fax:+(b)(6)

On Thu, Sep 27, 2018 at 1:56 PM, (b)(6)
<(b)(6)@usaid.gov> wrote:

Dear (b)(6)

This is the most updated version that I have in hand. Please use word document version for your edits.

Best regards,

(b)(6)

USAID Regional Development Mission Asia
Bangkok, 10330

E-mail: (b)(6)@usaid.gov

Tel: +(b)(6), Fax:+(b)(6)

----- Forwarded message -----

From: (b)(6)@hotmail.com>

Date: Thu, Aug 23, 2018 at 1:42 PM
Subject: Re: [GVP] Action Requested - Update Thailand Agenda
To: (b)(6)@usaid.gov>

ส่งตารางที่แก้ไขมาให้พี่ก๊วก่อนค่ะ
ขอบคุณค่ะ

(b)(6)

(b)(6)

ศูนย์วิทยาศาสตร์สุขภาพโรคอุบัติใหม่ โรงพยาบาลจุฬาลงกรณ์
Thai Red Cross Emerging Infectious Diseases - Health Science Centre
WHO Collaborating Centre for Research and Training on Viral Zoonoses
King Chulalongkorn Memorial Hospital
Faculty of Medicine, Chulalongkorn University
Rama4 road, Patumwan
Bangkok, Thailand 10330
Tel: (b)(6)
Fax: (b)(6)

From: (b)(6)@usaid.gov>
Sent: Monday, August 20, 2018 10:24 AM

(b)(6)

Subject: Fwd: [GVP] Action Requested - Update Thailand Agenda

Dear colleagues,
Please see attachment the draft meeting agenda with GVP's inputs. We have to further work out more details from our end. In addition, I have asked (b)(6) (15-20 min talk) to provide his perspective on the establishment Thailand National Virome Project.

Best regards,

(b)(6)

USAID Regional Development Mission Asia
Bangkok, 10330
E-mail: (b)(6)@usaid.gov
Tel: +(b)(6) Fax: +(b)(6)

----- Forwarded message -----

From: (b)(6)@ucdavis.edu>

Date: Fri, Aug 17, 2018 at 1:19 AM

Subject: Re: [GVP] Action Requested - Update Thailand Agenda

To: (b)(6)@usaid.gov>

Cc: Peter Daszak <daszak@ecohealthalliance.org>, (b)(6)@ucdavis.edu>, (b)(6)
(b)(6)@metabiota.com>, (b)(6)@metabiota.com>, (b)(6)
<(b)(6)@usaid.gov>, (b)(6)@usaid.gov>

Here you go -- thanks for the opportunity to input.

Ours looks like a lot of changes, but it is mostly restructuring.

We also think we need to ask speakers to include Q&A for each section or to shorten sections further to allow for questions.

Have a nice day,

(b)(6)

On Thu, Aug 16, 2018 at 7:13 AM, (b)(6)@usaid.gov> wrote:

Hi Team,

A huge thank you to those who have provided input to the agenda. If you have not yet provided input, particularly for speaker name and session title, please take a moment to do so today.

Thanks again,

(b)(6)

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)

Cell:

E-mail: (b)(6)@usaid.gov

(b)(6)

On Mon, Aug 13, 2018 at 1:59 PM (b)(6)@usaid.gov> wrote:

Hi GVP Colleagues,

As per our conversation on Thursday, we would like to request your assistance in updating the agenda for the Thailand National Meeting, to be held Oct. 24-25 in Bangkok. In particular, we would like to ensure that speaker name and session titles have been added.

Please input your edits to [this google doc](#). If you're unable to access it, I have also attached a recent draft of the agenda in which you can make your edits. In case helpful for framing, I've pasted below some feedback from the GoT that (b)(6) shared.

We would appreciate your feedback by **COB Wednesday, 8/15**.

Thanks!

(b)(6)

Feedback

(b)(5) - Deliberative Process Privilege

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)

Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)

Cell:

E-mail: (b)(6)@usaid.gov

(b)(6)

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From: (b)(6)
Sent: Mon, 20 Mar 2017 12:06:26 -0400
To: (b)(6)@who.int; (b)(6)
Subject: Fwd: Returned mail: see transcript for details
Attachments: BeijingGVPExecutiveSummary (2).docx

Hi (b)(6),

It seems to be bouncing back from the WHO email, but I've attached the Exec Summary here again.

Best,

(b)(6)

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

----- Forwarded message -----

From: Mail Delivery Subsystem <MAILER-DAEMON@who.int>
Date: Mon, Mar 20, 2017 at 12:04 PM
Subject: Returned mail: see transcript for details
To: (b)(6)@usaid.gov

The original message was received at Mon, 20 Mar 2017 17:01:32 +0100
from (b)(6)

----- The following addresses had permanent fatal errors -----

<(b)(6)@who.int>
(reason: (b)(6) Too many hops)
(expanded from: <(b)(6)@who.int>)

----- Transcript of session follows -----

(b)(6) Too many hops 30 (25 max): from <(b)(6)@usaid.gov> via localhost, to
<(b)(6)@who.int>

Original-Recipient: rfc822;(b)(6)@who.int
Final-Recipient: RFC822;(b)(6)@who.int

X-Actual-Recipient: RFC822; (b)(6)@sakurain.who.int
Action: failed
Status: 5.4.6
Diagnostic-Code: SMTP; (b)(6) Too many hops
Last-Attempt-Date: Mon, 20 Mar 2017 17:04:46 +0100

----- Forwarded message -----

From: (b)(6)@usaid.gov>
To: <(b)(6)@who.int>
Cc:
Bcc:
Date: Mon, 20 Mar 2017 11:59:19 -0400
Subject: Re: GVP Update - Exec Summary, Resource Deck, etc.
Hi (b)(6),

I've attached the executive summary, which will hopefully go through. It appears that the slide deck is too large for the WHO email addresses. If you have an alternative email for me to use, let me know. Otherwise, I'll see if I can shrink it.

Best,

(b)(6)

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

On Sat, Mar 11, 2017 at 5:04 AM, (b)(6)@pasteur.fr> wrote:

Hi (b)(6), you can use my WHO email now: (b)(6)@who.int

On 11 Mar 2017, at 00:06, (b)(6)@usaid.gov> wrote:

Dear Colleagues,

If you're receiving this email, I received a notice that your email couldn't receive the attachments in the original email. If you have an alternate email you would like me to forward the slide deck to (as it's quite large), please let me know. I have reattached the executive summary in the hopes that it goes through.

Best,

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)
Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

----- Forwarded message -----

From: (b)(6)@usaid.gov>
Date: Fri, Mar 10, 2017 at 5:48 PM
Subject: GVP Update - Exec Summary, Resource Deck, etc.
To: (b)(6)@usaid.gov>
Cc: (b)(6)@usaid.gov>

Dear GVP Colleagues,

Happy Friday & weekend! We hope that you are all doing well and that things are great in your part of the world.

We wanted to provide a few quick updates as we reflect on the Beijing meeting and pursue next steps:

- 1) Newsletter: We hope you all received the "As the Virome Turns" newsletter (below). This will continue to be our method for providing updates on outreach, publications, etc. If you haven't signed up, please do so at the bottom of this email. If you have anything for inclusion, please send to (b)(6)@usaid.gov).
- 2) Executive Summary: Our amazing participant and (b)(6), has compiled an Executive Summary from the Beijing meeting (attached). Please let us know if you have any comments or thoughts about the summary.
- 3) Resource Deck: In order to facilitate your GVP-related presentations, we've been working on compiling a large set of slides from which you can all pick and choose to create your own, audience-specific presentations. We will continue to update this, but please find attached the first version for your use. We would love any feedback or additional slides to add!
- 4) May 1st Deadline: As the various working groups pull together their deliverables for the May 1st deadline, please note that your Thematic Area co-leads are a great resource for any questions. The co-leads will be meeting regularly to share information and identify opportunities for collaboration between the Thematic Areas.
- 5) Webinar: Following the May 1st deadline, we will be organizing an interactive webinar to share more details on the modeling strategy. We plan to record the webinar for those who are unable to attend. We'll distribute more details as they become available.

As always, please reach out if you have any questions or concerns!

Best,

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)

Cell:

E-mail: (b)(6)@usaid.gov

----- Forwarded message -----

From: **GVP** <Globalviromeproject@gmail.com>

Date: Fri, Mar 10, 2017 at 2:13 PM

Subject: As the Virome Turns--Happy 2017!

To: (b)(6)@usaid.gov

[View this email in your browser](#)



Happy 2017! Since the last edition, quite a bit has taken place in Washington, but much more has taken place everywhere GVP Steering Committee members have traveled. With Spring almost here, and the beginning of Daylight savings time soon upon us, make sure to enjoy the extra sleep until Sunday, when you should remember to spring forward! Keep scrolling to see how GVP continues to beat on, both in person and in publications featuring our own (b)(6) and (b)(6).



Last month the teams were busy, showcasing GVP globally and launching activities in key locations. Read the breakdown below:

Miami Beach: 2017 Advances in Genome Biology and Technology Meeting, February 12

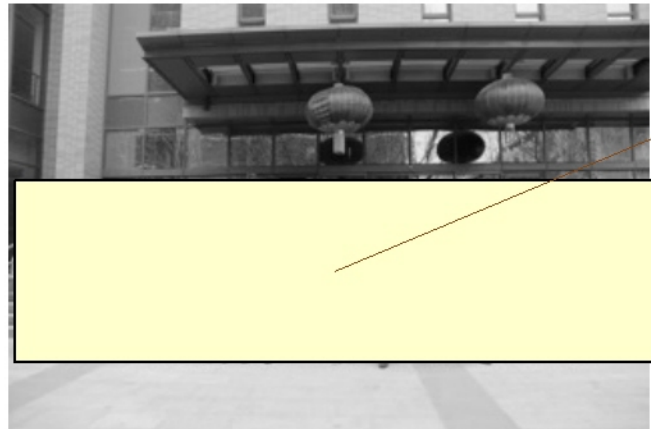
(b)(6) (Metabiota) gave a keynote talk on the "Global Virome Project". This meeting represents the largest yearly gathering of genome scientists and technologists (~800).

Beijing: Feb. 5th – Feb. 8th

During their time in Beijing, (b)(6) and others met for the GVP steering committee meeting and "Launched" the China National Virome project! Audiences included USAID China colleagues, the GVP core group, steering committee, and working group co-leads, senior representatives from the Chinese

Academy of Sciences, China CDC, the leadership from the Chinese Academy of Sciences International Affairs Division, and the health/science representatives from Embassy Beijing (State, USAID, NSF, HHS, CDC, NIH, etc.). We look forward to the Embassy's continued support of this opportunity moving forward.

- GVP Steering Committee: The GVP meeting was the second meeting of the steering committee and the first meeting of the extended group (working group co-leads). In addition to be a productive session helping to map out the way forward, the opportunity to bring together the individuals working in different technical areas allowed for extensive cross-talk and coordination.



- “Launch” of the China National Virome Project: The Chinese Academy of Sciences and the China CDC co-hosted a scientific forum to: 1. Present GVP, and 2. Highlight ongoing Chinese scientific work that aligns with GVP. Our Chinese colleagues are very enthusiastic about being a “first wave country” for the GVP – meaning that they would begin a National Virome Project. The next step is for them to set up an internal meeting to map out the way forward on their end.

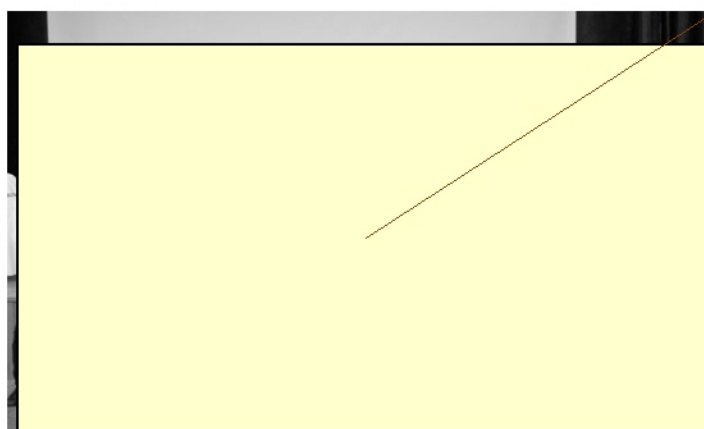
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(b)(6)

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representatives expressed a very strong interest in serving as a partner, focusing on the development of the “next generation” of technology related to diagnostics. Their involvement has potential to speed up the process through introduction of new technologies (similar to what occurred during the Human Genome Project).

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In the News

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From: (b)(6)
Sent: Thu, 16 May 2019 15:59:28 +0000
To: (b)(6) Peter Daszak; (b)(6)
(b)(6)
Subject: (b)(5) - Deliberative Process Privilege
Attachments:
Agenda_V2.docx

Hi All,

Looking forward to speaking soon, here's the agenda:

- (b)(6)
- China
 - 501c3
 - Thailand update
 - updates (below, she's not joining)
 - AOB

Best,

(b)(6)

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

----- Forwarded message -----

From: (b)(6)@ucdavis.edu>
Date: Thu, May 16, 2019 at 10:24 AM
Subject: Call today
To: (b)(6)@usaid.gov>, (b)(6)@metabiota.com
<(b)(6)@metabiota.com>, (b)(6)@usaid.gov>, Peter Daszak
<daszak@ecohealthalliance.org>, (b)(6)@metabiota.com <(b)(6)@metabiota.com>, (b)(6)
<(b)(6)@ecohealthalliance.org>
Cc: (b)(6)@ucdavis.edu>

Hi everyone,

I unfortunately won't be able to join the GVP call today because (b)(6)

(b)(6). Here are updates from my end:

-SciAni: the ending of the latest version is much better (added a long pause and fade-out at the end), and is ready for our final approval. It has all of our suggestions incorporated, so I will approve this version unless I hear otherwise by tomorrow (Friday May 17) at 12pm PT. Here is the link:

(b)(6)

-Newsletter: the newsletter was published earlier this week!

Best,

(b)(6)

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From: (b)(6)
Sent: Wed, 3 Jul 2019 21:08:55 +0000
To: (b)(6)
Cc: (b)(6); Peter Daszak; (b)(6)
Subject: Re: Biosketch and agenda for the China Virome Project Meeting
Attachments: DC bio 7.3.2019.doc

Hi (b)(6),

Please find attached an updated version of (b)(6) bio and photo attached. Will this work? I'll have to defer to him and Peter on the other parts of your request.

Best,

(b)(6)

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

On Tue, Jul 2, 2019 at 8:35 AM (b)(6)@ecohealthalliance.org> wrote:
Hi (b)(6) and Peter,

Attached please find the updated agenda for the CVP meeting in China in July.

Can you please 1) confirm the title of your presentation at the plenary session, and 2) send me your biosketch for the program printing by this Thursday?

Thank you very much.

Best,

(b)(6)

(b)(6)

EcoHealth Alliance

460 West 34th Street, Ste. 1701
New York, NY 10001

(b)(6) (U.S. mobile)

(b)(6) (Skype)

(b)(6) (WeChat)

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

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(b)(6)

of the Freedom of Information and Privacy Act

Page 257 of 767

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(b)(6)

of the Freedom of Information and Privacy Act

From: (b)(6)
Sent: Mon, 20 Mar 2017 11:59:19 -0400
To: (b)(6)@who.int
Subject: Re: GVP Update - Exec Summary, Resource Deck, etc.
Attachments: BeijingGVPExecutiveSummary (2).docx

Hi (b)(6),

I've attached the executive summary, which will hopefully go through. It appears that the slide deck is too large for the WHO email addresses. If you have an alternative email for me to use, let me know. Otherwise, I'll see if I can shrink it.

Best,

(b)(6)

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

On Sat, Mar 11, 2017 at 5:04 AM, (b)(6)@pasteur.fr> wrote:

Hi (b)(6) you can use my WHO email now: (b)(6)@who.int

On 11 Mar 2017, at 00:06, (b)(6)@usaid.gov> wrote:

Dear Colleagues,

If you're receiving this email, I received a notice that your email couldn't receive the attachments in the original email. If you have an alternate email you would like me to forward the slide deck to (as it's quite large), please let me know. I have reattached the executive summary in the hopes that it goes through.

Best,

(b)(6)

Emerging Threats Division

Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)
Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

----- Forwarded message -----

From: (b)(6)@usaid.gov>
Date: Fri, Mar 10, 2017 at 5:48 PM
Subject: GVP Update - Exec Summary, Resource Deck, etc.
To: (b)(6)@usaid.gov>
Cc: (b)(6)@usaid.gov>

Dear GVP Colleagues,

Happy Friday & weekend! We hope that you are all doing well and that things are great in your part of the world.

We wanted to provide a few quick updates as we reflect on the Beijing meeting and pursue next steps:

- 1) Newsletter: We hope you all received the "As the Virome Turns" newsletter (below). This will continue to be our method for providing updates on outreach, publications, etc. If you haven't signed up, please do so at the bottom of this email. If you have anything for inclusion, please send to (b)(6)@usaid.gov).
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Best,

(b)(6)

Emerging Threats Division

Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)
Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

----- Forwarded message -----

From: **GVP** <Globalviromeproject@gmail.com>
Date: Fri, Mar 10, 2017 at 2:13 PM
Subject: As the Virome Turns--Happy 2017!
To: (b)(6)@usaid.gov

[View this email in your browser](#)



Happy 2017! Since the last edition, quite a bit has taken place in Washington, but much more has taken place everywhere GVP Steering Committee members have traveled. With Spring almost here, and the beginning of Daylight savings time soon upon us, make sure to enjoy the extra sleep until Sunday, when you should remember to spring forward! Keep scrolling to see how GVP continues to beat on, both in person and in publications featuring our own (b)(6) and (b)(6).



(b)(6)

Outreach

Last month the teams were busy, showcasing GVP globally and launching activities in key locations.

Read the breakdown below:

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(b)(6) (Metabiota) gave a keynote talk on the "Global Virome Project". This meeting represents the largest yearly gathering of genome scientists and technologists (~800).

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During their time in Beijing, (b)(6) and others met for the GVP steering committee meeting and "Launched" the China National Virome project! Audiences included USAID China colleagues, the GVP core group, steering committee, and working group co-leads, senior representatives from the Chinese Academy of Sciences, China CDC, the leadership from the Chinese Academy of Sciences International Affairs Division, and the health/science representatives from Embassy Beijing (State, USAID, NSF, HHS, CDC, NIH, etc.). We look forward to the Embassy's continued support of this opportunity moving forward.

- GVP Steering Committee: The GVP meeting was the second meeting of the steering committee and the first meeting of the extended group (working group co-leads). In addition to be a productive session helping to map out the way forward, the opportunity to bring together the individuals working in different technical areas allowed for extensive cross-talk and coordination.



(b)(6)

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San Francisco: Jan. 24th – Jan. 27th

During their time in San Francisco, folks held a series of GVP outreach meetings, notable with The Chan-Zuckerberg BioHub, Illumina, and the Science Philanthropy Alliance. All outreach meetings were successful in that colleagues expressed strong support and enthusiasm for the GVP:

- Illumina: (b)(6) (Metabiota), (b)(6) (USAID), (b)(6) (Metabiota) gave a presentation to senior Illumina management on the Global Virome Project. Illumina representatives included: (b)(6)
(b)(6) Discussions included potential involvement of Illumina in the GVP, during which key representatives expressed a very strong interest in serving as a partner, focusing on the development of the “next generation” of technology related to diagnostics. Their involvement has potential to speed up the process through introduction of new technologies (similar to what occurred during the Human Genome Project).
- Science Philanthropy Alliance: SPA is a “clearing house” for a dozen major foundations

interested in supporting “transformative science”. They expressed a strong sense that GVP was very much aligned with a number of their member foundations and are taking steps to facilitate future discussions with participating foundations

- Chan-Zuckerberg BioHub: The BioHub (Stanford/UC Berkeley/UCSF) is interested in working with the GVP around the samples which will be collected and new technologies which may be used as part of the big data generated.



Each working group continues to pursue deliverables planned for completion this May. Of note will be updates from the Science & Technology Team, which we will share in the next edition of As the Virome Turns.



- [GVP is Featured in Techonomy](#)
- (b)(6) writes for the O'Neill Institute for Global Health and Law

Are you a new reader?

- [Subscribe Here](#)
- [Read past editions here](#)
- Contact (b)(6) at (b)(6)@usaid.gov if you would like to submit content for future editions of "As the Virome Turns"

Upcoming Events

- [The Beginning of the End of the Pandemic Era: March 17](#)
- [SEAOHUN Fellowship Program](#)
Application Deadline: March 31
An excellent opportunity for qualified individuals to gain practical, trans-disciplinary experience and contribute productively to One Health related projects at several host organizations. Follow [this link](#) to learn more and apply!
- [PMAC 2018: Call for Abstracts, March 31, 2017](#)



Photo Credits: Gorilla Doctors Project, (b)(6) USAID, NIAID



Forward



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This email was sent to (b)(6) [@usaid.gov](mailto: @usaid.gov)

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GVP Core Team · Ronald Reagan Building · 1300 Pennsylvania Avenue NW · Washington, DC 20004 · USA



mailchimp

<BeijingGVPExecutiveSummary.docx>

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of the Freedom of Information and Privacy Act

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of the Freedom of Information and Privacy Act

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Withheld pursuant to exemption

(b)(5) - Deliberative Process Privilege

of the Freedom of Information and Privacy Act

From: (b)(6)
Sent: Mon, 13 Aug 2018 17:59:13 +0000
To: (b)(6) Peter Daszak; (b)(6)
Cc: (b)(6)
Subject: [GVP] Action Requested - Update Thailand Agenda
Attachments: 04 Thailand National Virome Project_Draft Agenda_June 29_JM_ET.docx

Hi GVP Colleagues,

(b)(5) - Deliberative Process Privilege

Thanks!

(b)(6)

Feedback

(b)(5) - Deliberative Process Privilege

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

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of the Freedom of Information and Privacy Act

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of the Freedom of Information and Privacy Act

Page 287 of 767

Withheld pursuant to exemption

(b)(5) - Deliberative Process Privilege
of the Freedom of Information and Privacy Act

From: (b)(6) (Beijing)
Sent: Wed, 1 Feb 2017 03:37:47 +0000

(b)(6)

Subject: PREDICT International Travel Request (Group ITA request for GVP Beijing meeting)
Attachments: Beijing GVP Mtg Agenda - Final.docx

Looping in more Embassy folks who will join the meetings.

USAID/Beijing will be arranging Embassy MPool to the meeting venues on Feb. 6&7. Will let you know details when MPool is dispatched.

From: (b)(6) [mailto:(b)(6)@usaid.gov]
Sent: Wednesday, February 01, 2017 6:52 AM

(b)(6)

Subject: Re: PREDICT International Travel Request (Group ITA request for GVP Beijing meeting)

Hi (b)(6) & Colleagues,

Thank you again for your interest in the Global Virome Project (GVP) meeting next week. Please find attached the final agenda for the Steering Committee meeting (Monday & Tuesday morning), as well as the China National Virome Project (CNVP) Initiative Meeting on Tuesday afternoon.

Please let me know if you have any questions or if I can provide any additional information.

Best,

(b)(6)

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)

Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

On Sun, Jan 22, 2017 at 8:24 PM, (b)(6)@state.gov wrote:
Hi, (b)(6)

Thank you very much. Please keep Beijing Embassy colleagues on this list in the loop and add (b)(6)@nsf.gov<mailto:(b)(6)@nsf.gov>).

Look forward to the agenda.

Best,

(b)(6)

Official
UNCLASSIFIED

From: (b)(6) [mailto:(b)(6)@usaid.gov]
Sent: Sunday, January 22, 2017 12:43 AM

(b)(6)

Subject: Re: PREDICT International Travel Request (Group ITA request for GVP Beijing meeting)

Hi (b)(6)

Embassy colleagues are more than welcome to attend the rest of the meeting, thank you for clarifying.

If you have a sense in advance of who will attend, let us know and we can include any others on communications going forward, including with the updated agenda. If not, we will plan to keep you looped in with updates.

Best,

(b)(6)

Sent from my iPhone

On Jan 20, 2017, at 9:16 AM, (b)(6)
(b)(6)@ecohealthalliance.org<mailto:(b)(6)@ecohealthalliance.org> wrote:
Dear (b)(6),

Thanks for your message, (b)(6) is in charge of the agenda of the GVP global Working Group Meeting, and I believe she can answer your question.

But there won't be any problems regarding the logistics.

Best Regards,

(b)(6)

On Jan 19, 2017, at 8:23 PM, (b)(6) (Beijing)
<(b)(6)@state.gov<mailto:(b)(6)@state.gov>> wrote:

Dear (b)(6),

Thank you very much. Can I ask if it's ok for Embassy colleagues to attend some of the sessions on the 6th or the morning of 7th besides the workshop on the afternoon of the 7th?

Best,

(b)(6)

Official
UNCLASSIFIED

From: (b)(6)@ecohealthalliance.org]
Sent: Friday, January 20, 2017 1:35 AM

(b)(6)

Subject: Re: PREDICT International Travel Request (Group ITA request for GVP Beijing meeting)

Thanks, (b)(6)!

Dear (b)(6),

The GVP Working Group Meeting will take place at the China National Convention Center Grand Hotel (国家会议中心大酒店: 北京朝阳区北辰西路8号院1号楼).

And the meeting on Feb. 7 in the afternoon will be held at the Institute of Microbiology, Chinese Academy Science (中国科学院微生物所: 北京朝阳区北辰西路1号院3号E301会议室), (b)(6) is hosting the meeting on behalf of the Chinese Academy of Sciences and China CDC, he will definitely extend an invitation to you all soon to provide more information. (b)(6) assistant and I are still working on the agenda and will share it to all participants when it's available.

Hope this helps, let me know if any further information I can provide.

Best Regards,

(b)(6)

On Jan 19, 2017, at 8:39 AM, (b)(6)
<(b)(6)@usaid.gov<mailto:(b)(6)@usaid.gov>> wrote:

Hi (b)(6)

To follow up on the additional questions regarding contact and location, (b)(6) (cc'ed from EcoHealth Alliance) should be able to help answer some of those questions as she has been directly liaising with our Chinese colleagues to plan the event.

(b)(6) - Some of our colleagues from the Embassy in Beijing may attend the meeting and/or the event, could you provide them with the information requested below?

Best,

(b)(6)

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)

Cell:

E-mail: (b)(6)@usaid.gov<mailto:(b)(6)@usaid.gov>

On Thu, Jan 19, 2017 at 8:34 AM, (b)(6)
<(b)(6)@usaid.gov<mailto:(b)(6)@usaid.gov>> wrote:
Hello All,

Attached is the current version of the Agenda, however we have quite a number of edits and changes to make, including to the portion with the Chinese CDC, etc. Over the next several days, we will be working to add in times and other updated details. Then, we will be meeting on the 26th to finalize with the core group in person. After that, we will have a final (or close to it) version for distribution to attendees.

(b)(6)

Emerging Threats Division
U.S. Agency for International Development (USAID)

Telephone: (b)(6) > Cell: (b)(6) >
(b)(6)@usaid.gov <mailto:(b)(6)@usaid.gov>

On Wed, Jan 18, 2017 at 9:14 PM, (b)(6) (Beijing)
<(b)(6)@state.gov<mailto:(b)(6)@state.gov>> wrote:
Hi, (b)(6),

If the agenda is not available yet, do you have information of meeting venue? Or could you let us know the contacts of China CDC (working level people lower than (b)(6)) so that we can reach out to them for detailed information?

Many thanks,

(b)(6)

From: (b)(6) [mailto:(b)(6)@usaid.gov<mailto:(b)(6)@usaid.gov>]

Sent: Saturday, January 14, 2017 5:15 AM

(b)(6)

Subject: Re: Fw: PREDICT International Travel Request (Group ITA request for GVP Beijing meeting)

Hello (b)(6) or (b)(6),

Can you please circulate the agenda for the GVP Beijing meeting. Please see request below.

Best,

(b)(6)

Emerging Threats Division
U.S. Agency for International Development (USAID)

Telephone: (b)(6) > Cell: (b)(6) > |
(b)(6)@usaid.gov<mailto:(b)(6)@usaid.gov><mailto:(b)(6)@usaid.gov<mailto:
(b)(6)@usaid.gov>>>

On Thu, Jan 12, 2017 at 11:47 AM, (b)(6)
<(b)(6)@usaid.gov<mailto:(b)(6)@usaid.gov><mailto:(b)(6)@usaid.gov<mailto:
to:(b)(6)@usaid.gov>>> wrote:

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Best,

(b)(6)

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U.S. Agency for International Development (USAID)

Telephone: (b)(6) > Cell: (b)(6)

(b)(6) > |
(b)(6) @usaid.gov<mailto:(b)(6)@usaid.gov>
<mailto:(b)(6)@usaid.gov<mailto:(b)(6)@usaid.gov>>

On Tue, Jan 10, 2017 at 7:56 PM, (b)(6) (Beijing)
<(b)(6)@state.gov<mailto:(b)(6)@state.gov><mailto:(b)(6)@state.gov<mailto:(b)(6)@state.gov>>> wrote:
Hi, (b)(6)

Embassy colleagues are interested in attending the workshop, and is it possible to attend some of the sessions of the GVP meeting as well? Could you please share with us the agenda of the GVP Beijing meeting including the workshop on the afternoon of 7th, if it's available?

Many thanks,
(b)(6)
USAID Beijing

(b)(6)

EcoHealth Alliance<<http://www.ecohealthalliance.org/>>
460 West 34th Street – 17th floor
New York, NY 10001

(b)(6) (U.S. mobile)
(b)(6) (China mobile)
(b)(6) (Skype)
(b)(6) (WeChat)

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

(b)(6)

EcoHealth Alliance<<http://www.ecohealthalliance.org/>>
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New York, NY 10001

(b)(6) (U.S. mobile)
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(b)(6) (Skype)
(b)(6) (WeChat)

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Official - Transitory
UNCLASSIFIED

From: (b)(6)
Sent: Mon, 20 Mar 2017 16:00:16 +0000
To: (b)(6)
Subject: Fwd: GVP Update - Exec Summary, Resource Deck, etc.
Attachments: BeijingGVPExecutiveSummary (2).docx

Dear Colleagues,

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(b)(6)

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Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

----- Forwarded message -----

From: (b)(6)@usaid.gov>
Date: Fri, Mar 10, 2017 at 6:06 PM
Subject: Fwd: GVP Update - Exec Summary, Resource Deck, etc.
To: (b)(6)@usaid.gov>

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(b)(6)

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk:

(b)(6)

Cell:

E-mail: (b)(6)@usaid.gov

----- Forwarded message -----

From: **GVP** <Globalviromeproject@gmail.com>

Date: Fri, Mar 10, 2017 at 2:13 PM

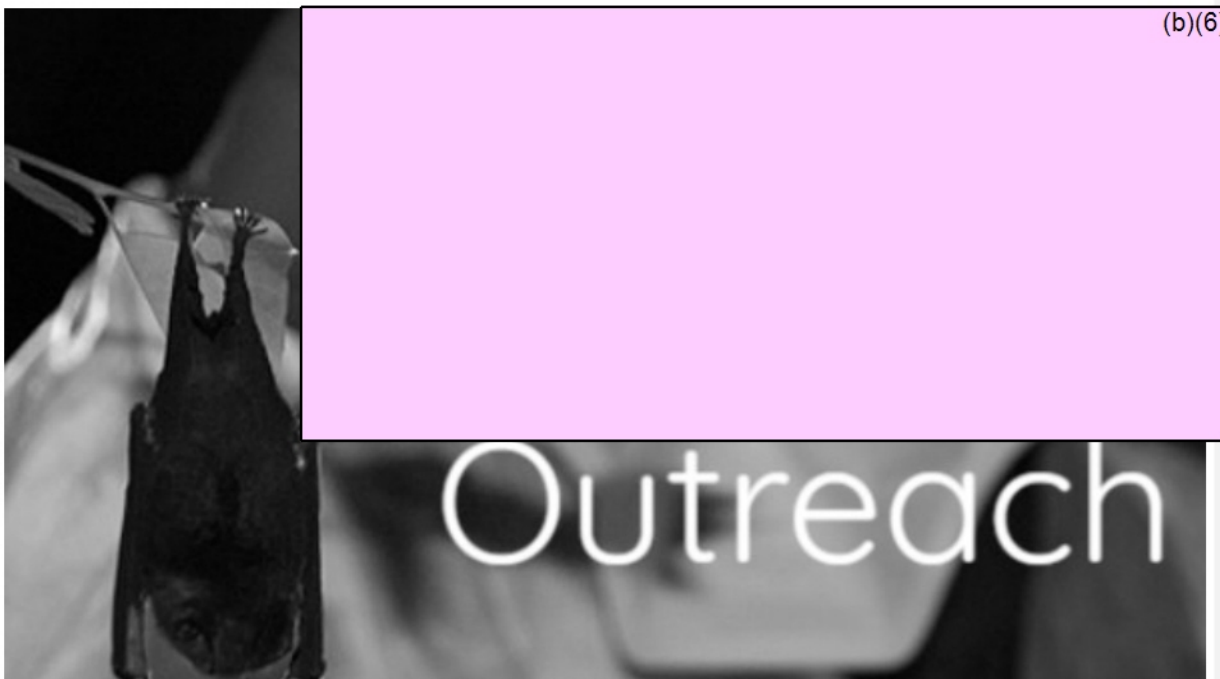
Subject: As the Virome Turns--Happy 2017!

To: (b)(6)@usaid.gov

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(b)(6)

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During their time in San Francisco, folks held a series of GVP outreach meetings, notable with The Chan-Zuckerberg BioHub, Illumina, and the Science Philanthropy Alliance. All outreach meetings were successful in that colleagues expressed strong support and enthusiasm for the GVP:

- Illumina: [REDACTED] (Metabiota), [REDACTED] (USAID), [REDACTED] (Metabiota) gave a presentation to senior Illumina management on the Global Virome Project. Illumina representatives included: [REDACTED] [REDACTED] Discussions included potential involvement of Illumina in the GVP, during which key representatives expressed a very strong interest in serving as a partner, focusing on the development of the “next generation” of technology related to diagnostics. Their involvement has potential to speed up the process through introduction of new technologies (similar to what occurred during the Human Genome Project).
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interested in supporting “transformative science”. They expressed a strong sense that GVP was very much aligned with a number of their member foundations and are taking steps to facilitate future discussions with participating foundations

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Each working group continues to pursue deliverables planned for completion this May. Of note will be updates from the Science & Technology Team, which we will share in the next edition of As the Virome Turns.



- [GVP is Featured in Techonomy](#)
- [\(b\)\(6\) writes for the O'Neill Institute for Global Health and Law](#)

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Photo Credits: Gorilla Doctors Project, [\(b\)\(6\)](#) USAID, NIAID



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GVP Core Team · Ronald Reagan Building · 1300 Pennsylvania Avenue NW · Washington, DC 20004 · USA



From: (b)(6)
Sent: Mon, 20 Mar 2017 15:56:54 +0000
To: (b)(6)
Subject: Re: GVP Update - Exec Summary, Resource Deck, etc.
Attachments: BeijingGVPExecutiveSummary (2).docx

Hi (b)(6),

Sorry about that, I've had some trouble with the documents going through. It should now be attached.

Best,
(b)(6)

(b)(6)
Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

On Mon, Mar 20, 2017 at 9:03 AM, (b)(6) wrote:
Dear (b)(6),

Las Friday I returned from travel abroad and try now to keep up with my email messages.

It seems that the "Executive Summary" was not attached to this message; could you send it again?

Best,

(b)(6)
--

Em 10 de mar de 2017, à(s) 19:48, (b)(6)@usaid.gov> escreveu:

Dear GVP Colleagues,

Happy Friday & weekend! We hope that you are all doing well and that things are great in your part of the world.

We wanted to provide a few quick updates as we reflect on the Beijing meeting and pursue next steps:

1) Newsletter: We hope you all received the "As the Virome Turns" newsletter (below). This will continue to be our method for providing updates on outreach, publications, etc. If you haven't signed up, please do so at the bottom of this email. If you have anything for inclusion, please send to (b)(6)@usaid.gov).

2) Executive Summary: Our amazing participant and (b)(6) has compiled an Executive Summary from the Beijing meeting (attached). Please let us know if you have any comments or thoughts about the summary.

3) Resource Deck: In order to facilitate your GVP-related presentations, we've been working on compiling a large set of slides from which you can all pick and choose to create your own, audience-specific presentations. We will continue to update this, but please find attached the first version for your use. We would love any feedback or additional slides to add!

4) May 1st Deadline: As the various working groups pull together their deliverables for the May 1st deadline, please note that your Thematic Area co-leads are a great resource for any questions. The co-leads will be meeting regularly to share information and identify opportunities for collaboration between the Thematic Areas.

5) Webinar: Following the May 1st deadline, we will be organizing an interactive webinar to share more details on the modeling strategy. We plan to record the webinar for those who are unable to attend. We'll distribute more details as they become available.

As always, please reach out if you have any questions or concerns!

Best,

(b)(6)

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk:

(b)(6)

Cell:

E-mail: (b)(6)@usaid.gov

----- Forwarded message -----

From: **GVP** <Globalviromeproject@gmail.com>

Date: Fri, Mar 10, 2017 at 2:13 PM

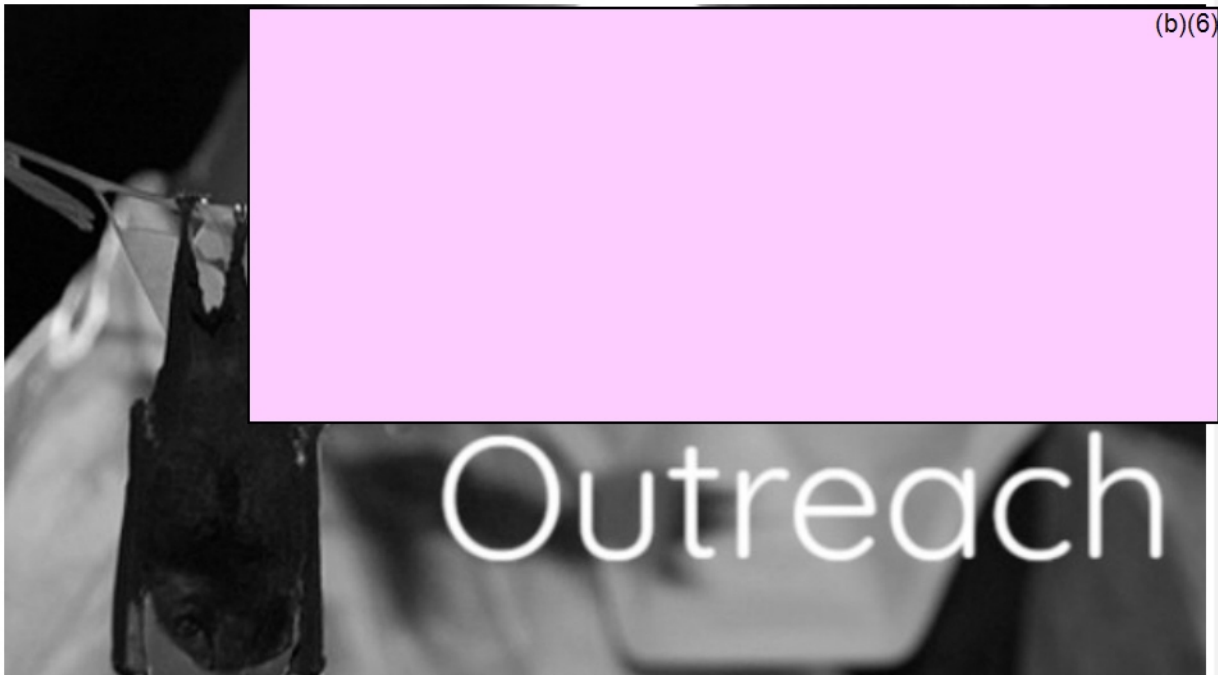
Subject: As the Virome Turns--Happy 2017!

To: (b)(6)@usaid.gov

[View this email in your browser](#)



Happy 2017! Since the last edition, quite a bit has taken place in Washington, but much more has taken place everywhere GVP Steering Committee members have traveled. With Spring almost here, and the beginning of Daylight savings time soon upon us, make sure to enjoy the extra sleep until Sunday, when you should remember to spring forward! Keep scrolling to see how GVP continues to beat on, both in person and in publications featuring our own (b)(6)



Last month the teams were busy, showcasing GVP globally and launching activities in key locations.

Read the breakdown below:

Miami Beach: 2017 Advances in Genome Biology and Technology Meeting, February 12

(b)(6) (Metabiota) gave a keynote talk on the "Global Virome Project". This meeting represents the largest yearly gathering of genome scientists and technologists (~800).

Beijing: Feb. 5th – Feb. 8th

During their time in Beijing, (b)(6) and others met for the GVP steering committee meeting and "Launched" the China National Virome project! Audiences included USAID China colleagues, the GVP core group, steering committee, and working group co-leads, senior representatives from the Chinese Academy of Sciences, China CDC, the leadership from the Chinese Academy of Sciences International Affairs Division, and the health/science representatives from Embassy Beijing (State, USAID, NSF, HHS, CDC, NIH, etc.). We look forward to the Embassy's continued support of this opportunity moving forward.

- GVP Steering Committee: The GVP meeting was the second meeting of the steering committee and the first meeting of the extended group (working group co-leads). In addition to be a productive session helping to map out the way forward, the opportunity to bring together the individuals working in different technical areas allowed for extensive cross-talk and coordination.



- “Launch” of the China National Virome Project: The Chinese Academy of Sciences and the China CDC co-hosted a scientific forum to: 1. Present GVP, and 2. Highlight ongoing Chinese scientific work that aligns with GVP. Our Chinese colleagues are very enthusiastic about being a “first wave country” for the GVP – meaning that they would begin a National Virome Project. The next step is for them to set up an internal meeting to map out the way forward on their end.

Bangkok: Jan. 28th – Feb. 3rd

Several ETD members and other partners met in Bangkok, primarily to attend the PMAC 2018 planning meeting, PMAC 2017 side meetings on AMR & OneHealth Workforce, and to present on the GVP to Thai colleagues:

- AMR meeting: 125 participants from ministries of Ag and Health from 7 Asian countries and an equal number of major private sector firms (livestock producers, retailers and suppliers). Strong endorsement of expanded engagement across region for characterizing anti-biotic use among producers and promotion of good stewardship. Concrete next steps identified. Private sector has initiated steps to co-sponsor a similar meeting in Cairo to cover Middle East producers.
- One Health Workforce: a regional meeting bringing together representatives from across the OHW network in SE Asia and Africa and equivalent representation for similar networks funded by WB and Australia in South Asia. Highly interactive and laid the foundation for a broader

“web” of engagement across multiple networks.

- GVP: a very well received presentation and discussion on GVP to a broad cross-section of Thai government leaders, scientists and educators. Strong endorsement of role of the RTG in GVP.
- PMAC 2018: first meeting of the International Organizing Committee for PMAC 18 – with the theme of “Making the World Safe from the Threats of Emerging Infectious Diseases”. USAID has a strong leadership role in planning for this meeting. PMAC 18 will cover both emerging viral threats as well as antimicrobial resistance. Abstracts should be submitted by following [this link](#).

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- [PMAC 2018: Call for Abstracts, March 31, 2017](#)



Photo Credits: Gorilla Doctors Project, [\(b\)\(6\)](#) / USAID, NIAID



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GVP Core Team · Ronald Reagan Building · 1300 Pennsylvania Avenue NW · Washington, DC 20004 · USA



mailchimp

<BeijingGVPExecutiveSummary.docx><GVP Resource Deck 3.10.2017.pptx>

From: (b)(6)
Sent: Tue, 31 Jan 2017 22:58:25 +0000
To: (b)(6)
Cc:
Subject: Re: Logistics details for Beijing meeting
Attachments: Beijing GVP Mtg Agenda - Final.docx

Hi (b)(6),

Thank you for all of this information! Sorry to hear that remote participation won't be an option, but probably for the best with a group of this size!

For the other items, it all sounds good.

In terms of the documents I can pull together the short bios (seemed easiest to just have them sent to me, also guessing we'll be missing a lot of people) once I have them. Will it be a problem if we need to print them once we're there? Also, are you able to create a simpler attendee list from what you shared earlier today so we have that as a backup?

I have the org chart but will need to update it with the new Operations title and can send that and an updated timeline to you sometime tomorrow. The final agenda is attached to this email (and at the google doc link in case you want to edit before printing!). Any thoughts on the ELSI WG Issue Paper that they shared? They had requested it to be disseminated, so if it's not too much, I suppose having a copy will be helpful.

Let me know if I missed anything!

Best,

(b)(6)

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

On Mon, Jan 30, 2017 at 10:32 PM, (b)(6)@ecohealthalliance.org> wrote:
Sorry! For the conference call, I just checked with the hotel, it can be only done in another small meeting room, so we won't be able to provide remote participation for the GVP meeting, unless

we want to try Skype or FaceTime if the time difference is not a problem. But we can definitely have some small group calls with certain people as needed.

Thanks,

(b)(6)

On Jan 30, 2017, at 10:26 PM, (b)(6)@ecohealthalliance.org> wrote:

Hi (b)(6),

I thought of the large table, but it may not be easier for 40 people to interact or discuss, so hope the smaller round tables will work.

I will try to get 3-4 easels for the A1 flip charts. I don't think there would be any problem, but just in case, I will also prepare some tape or adhesive putty, so that we can put the charts on the wall inside the meeting room as well. There will be enough markers available for A1 charts and seat card.

As for the printing materials, I have got the *From the Big Science to Big Impact* from (b)(6), and downloaded three documents from the GVP website, so I will wait for the final agenda, and attendee list/bios, org chart of steering committee, and timeline handouts. If you have any final version of these, please feel free to send it to me.

Thanks, (b)(6), for taking notes!

Best,

(b)(6)

On Jan 30, 2017, at 4:25 PM, (b)(6)@usaid.gov> wrote:

Hi (b)(6),

The other item, which I keep forgetting to clarify. What is the capability in the room for remote participation? While not ideal, it does sound as though some participants are interested (like (b)(6)). However, I don't want to leave the door open if it's not a option at all.

Thanks,

(b)(6)

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

On Mon, Jan 30, 2017 at 2:42 PM, (b)(6)@usaid.gov> wrote:
Hi (b)(6)

Thank you for compiling and sending this, I very much appreciate it. Also, thanks to both of you for your help on Thursday - the combination of the Mac and the touch pad were not going well for me! :)

The room set up sounds good. It would have been great to have one large table (as in Bellagio), but I think with a group of this size, having a series of tables will be more efficient. For the "speed dating," my understanding is that (b)(6) will work with (b)(6) on the plans. I just sent them a quick email and cc'ed you. The few times I've been in a work setting where they did that, they moved people around one gigantic table, but I think this will work out fine.

Meeting room - This looks good. For the A-1 flip charts below, would it be possible to have them on easels for the room? We found that it was helpful to have 3-4 in Bellagio and to be able to stick up the lists as we created them around the room for future reference. If that is the case, I don't think we'll need extra white boards. Thanks for the offer to help with the VPN as our email is gmail-based.

Table/Participants - I think this is also comprehensive and can't think of anything additional beyond what you've listed (unless we want/need markers to write on the seat card?).

Materials - For Bellagio, we gathered short bios, any thoughts on whether we need that for this meeting? (b)(6) suggested we have printed the entire outreach binder, which I believe was the ones you listed and the other two from the [website](#). We could also include the Bellagio Initiative, but not sure if that is necessary, since they have all received it electronically.

Other - It sounds like press engagement may be happening after all, but it has yet to be settled as to what exactly that will look like. I'll share whatever I receive to keep you in the loop.

Rapporteur - Do you know what the plan is for this and if someone has been designated to take notes for the meeting? We did it for Bellagio and it was incredibly helpful, but hadn't heard if that was the case this time. Have you heard anything?

Best,

(b)(6)

(b)(6)

Emerging Threats Division

Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

On Thu, Jan 26, 2017 at 4:40 PM, (b)(6)@ecohealthalliance.org> wrote:
Hi (b)(6),

It was nice to talk with you in the afternoon. (b)(6) and I just went through some details about GVP Steering Meeting, and hope you can have a quick look it.

First, the meeting venue will be set up with 5 round tables, so about 7-9 people can take one table. For the work group “speed dating”, the meeting room should be have enough space for different group to find a comparatively quite space for discussion, if not, we can use some other space outside the meeting room.

And in the meeting room we have already prepared:

- 1 Screen
- 1 Projector
- 2-3 Microphones
- 1 adaptor for connecting MAC to the projector
- 1 white board (enough?)
- Marker pens
- WIFI (Google is blocked in China, VPN will be needed to access to gmail, Google doc.m etc... We usually use PandaPow, will set it up for you and (b)(6) in Beijing if needed)

For each table and participant, there will be:

- Paper
- Pen
- A1 Flipchart paper (for people discussion and reporting? Do we need this?)
- Name tag
- Seat card (blank, then people can write down their names because we are not assigning seats)
- Anything else will be needed for the discussion?

And meeting materials need to be printed out in Beijing:

- Agenda
- Attendee list
- Org Chart of steering committee

- Timeline handouts
- Big Science to Big Impact
- Other GVP background document?

Can any of you send me all the meeting materials before Feb. 4? so I can get them printed out in Beijing to put them into folders for each participant.

- We can use flash drive to put presentations into the laptop on the day of meeting, no problem!
- Snack will be served during breaks, and there will be photographers taking photos and videos that can be used for press or the GVP website.
- No media is invited unless the US Embassy would like to do some press engagement.
- A small meeting room with projector has been reserved for the core team meeting on Feb. 5

Let me know if anything is missing.

Thanks,

(b)(6)

(b)(6)

EcoHealth Alliance

460 West 34th Street – 17th floor
New York, NY 10001

(b)(6)

U.S. mobile)

(China mobile)

(b)(6)

(Skype)

(WeChat)

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

From: (b)(6)
Sent: Thu, 26 Jan 2017 06:58:21 -0800
To: (b)(6)
Subject: Fwd: PREDICT International Travel Request (Group ITA request for GVP Beijing meeting)
Attachments: ATT00001.bin, Beijing Agenda.docx

Thoughts?

Sent from my iPhone

Begin forwarded message:

From: (b)(6)@ecohealthalliance.org>
Date: January 26, 2017 at 6:53:57 AM PST
To: "(b)(6) (Beijing)" <(b)(6)@state.gov>
Cc: "(b)(6) (Beijing)" <(b)(6)@state.gov>, "(b)(6) (Beijing)" <(b)(6)@state.gov>, "(b)(6) (Beijing)" <(b)(6)@state.gov>, "(b)(6) (Beijing)" <(b)(6)@state.gov>, "(b)(6) (Beijing)" <(b)(6)@usaid.gov>
Subject: Re: PREDICT International Travel Request (Group ITA request for GVP Beijing meeting)

Dear (b)(6)

Nice to meet you online, too!

Thanks for your information. I briefly talked with (b)(6) of China CDC and also the China representative in the GVP effort) about this last night, both us think this would be an opportunity to build more research ties between China and the U.S.

And for your information, there will be two parts of GVP events in Beijing on Feb. 6-7:

- The whole day of Feb. 6 and the morning of Feb. 7 will be the GVP Steering Committee Meeting with scientists and policy-makers from across the world to “To forge a consensus on the next steps for the GVP to achieve the goals of building a world safe from emerging viral threats and to lay out a clear roadmap for the launch of the GVP that will provide the best possible outcomes for protecting global health”. There will be two representatives from China to participate.
- In the afternoon of Feb. 7 after the GVP Steering Committee Meeting, there will be a China National Virome Project (CNVP) Initiative Meeting at the Chinese Academy of Sciences, to discuss about the strategies and plans to launch the project from China side. Many Chinese scientists and relevant agencies will attend the meeting, there will be a lot conversation going on around how China can contribute to the global GVP efforts with local sources and by expanding current international collaborations.

Please find more information from the attached draft Beijing agenda.

So as long as (b)(6) agrees on this, we are happy to work with you from China side to have some press coverage on these activities. We haven't invited any Chinese media, but can try to invite some after the Chinese New Year, or do you have any suggestions in terms of the Chinese media you usually work with? And there will be two photographers taking photos and videos for the GVP Steering Committee Meeting, which can be shared them to you if wanted.

Please feel free to contact me anytime if anything I can help. I will arrive in Beijing on Feb. 3, and look forward to meeting and working with you!

Happy Chinese New Year!!

(b)(6)

From: (b)(6)
Sent: Thu, 26 Jan 2017 07:24:36 -0800
To: (b)(6)@usaid.gov; (b)(6)
Subject: Fwd: PREDICT International Travel Request (Group ITA request for GVP Beijing meeting)
Attachments: ATT00001.bin, Beijing Agenda.docx

Hi (b)(6) & (b)(6),

I'll speak with (b)(6) today about this to verify his support (so please note that the below activities may not happen), but wanted to keep you both looped in regarding the progress around the possibility of media coverage for the GVP mtg in Beijing so that you were aware in advance.

Best,

(b)(6)

Sent from my iPhone

Begin forwarded message:

From: (b)(6)<(b)(6)@ecohealthalliance.org>
Date: January 26, 2017 at 6:53:57 AM PST
To: "(b)(6)<(b)(6)@state.gov>
Cc: "(b)(6)<(b)(6)@state.gov>, (b)(6)<(b)(6)@state.gov>, (b)(6)<(b)(6)@state.gov>, (b)(6)<(b)(6)@state.gov>, (b)(6)<(b)(6)@state.gov>, (b)(6)<(b)(6)@usaid.gov>
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Happy Chinese New Year!!

(b)(6)

From: (b)(6)
Sent: Thu, 16 Feb 2017 21:26:20 +0000
To: (b)(6)
Subject: Fwd: China National Virome Project (CNVP) Initiative Meeting Follow-up

In case this is an easier way to get the photos (not sure why it would be, but just in case ;)).

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

----- Forwarded message -----

From: (b)(6)@ecohealthalliance.org>
Date: Thu, Feb 16, 2017 at 11:52 AM
Subject: China National Virome Project (CNVP) Initiative Meeting Follow-up
To: "(b)(6)@im.ac.cn">

Download full resolution images
Available until Mar 18, 2017

Dear All,

Thank you very much for joining us in Beijing for the China National Virome Project Initiative Meeting. We appreciate your insights and participation in the discussion about this initiative. We were also able to report this meeting and concept to the Chinese Academy of Sciences HQ with the US Embassy on Wednesday, optimistic responses were received and we all look forward to having further activities to move this project forward.

Because of the limited discussion time at the meeting, we would like to invite you to send (b)(6) and me any thoughts you have about this CNVP, in Chinese or English, including any opportunities to reach out, raise funds, and collaborate, and ideas to work together to build this into a national project. We will follow up to arrange more meetings and activities for discussion and communication as we move forward.

Group photos and presentation slides (in PDF) were attached, and more information about the Global Virome Project can be found on its official website: <http://www.globalviromeproject.org/>. Please feel free to let me know if you have any questions as a result of this meeting.

Thanks again, hope to be in touch soon with further discussions and meetings.

Best Regards,

(b)(6) !

(b)(6)

EcoHealth Alliance

460 West 34th Street – 17th floor

New York, NY 10001

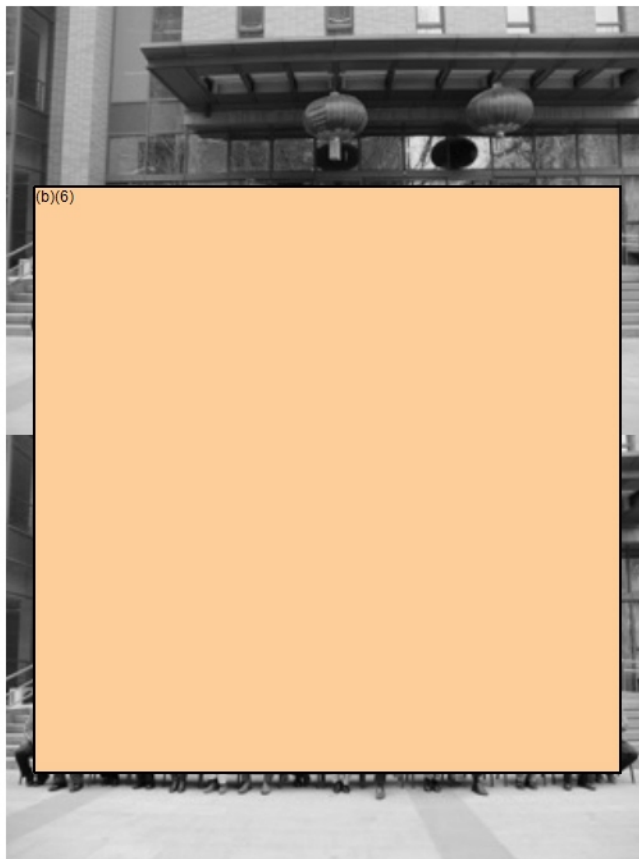
(b)(6) (U.S. mobile)

(b)(6) (China mobile)

(b)(6) (Skype)

(b)(6) (WeChat)

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(b)(5) - Deliberative Process Privilege
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Page 527 of 767

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(b)(5) - Deliberative Process Privilege
of the Freedom of Information and Privacy Act

Page 528 of 767

Withheld pursuant to exemption

(b)(5) - Deliberative Process Privilege
of the Freedom of Information and Privacy Act

From: (b)(6)
Sent: Wed, 24 Jul 2019 17:57:44 +0000
To: (b)(6)
Cc: (b)(6)
Subject: Re: Minute of TVPP Core Group Meeting - 24 June 2019

Sounds great, thanks so much!

Sent from my iPhone

On Jul 24, 2019, at 1:46 PM, (b)(6)@ucdavis.edu> wrote:

Hi (b)(6)

We are supportive of (b)(6) working with (b)(6) on the proposal development (given that Peter is okay with it, of course), and I will also support the work remotely. I will respond to (b)(6) in the group email.

Best,

(b)(6)

From: (b)(6)
Sent: Tuesday, July 23, 2019 2:30 PM
To: (b)(6)@usaid.gov; (b)(6)@ucdavis.edu; (b)(6)
<(b)(6)@usaid.gov>
Subject: RE: Minute of TVPP Core Group Meeting - 24 June 2019

Hi (b)(6)

I will discuss with (b)(6) and get back to you.

Thanks for checking in,

(b)(6)

From: (b)(6) [mailto:(b)(6)@usaid.gov]
Sent: Tuesday, July 23, 2019 2:12 PM
To: (b)(6)@ucdavis.edu; (b)(6)@ucdavis.edu; (b)(6)
<(b)(6)@usaid.gov>
Subject: Fwd: Minute of TVPP Core Group Meeting - 24 June 2019

Any thoughts on having (b)(6) work with them as (b)(6) proposed?

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

----- Forwarded message -----

From: (b)(6)@usaid.gov>
Date: Fri, Jul 19, 2019 at 11:41 PM
Subject: Re: Minute of TVPP Core Group Meeting - 24 June 2019
To: (b)(6)@usaid.gov>
Cc: (b)(6)@usaid.gov>, (b)(6)@ucdavis.edu>,
<(b)(6)@ucdavis.edu>, (b)(6)@usaid.gov>

Thanks (b)(6) The update from our end, Department of National Parks Wildlife, and Plant Conservation (DNP) already submitted the principle investigator (PI) for the pilot project on June 5. DNP proposed (b)(6) (P2 Coordinator) as PI to develop concept note and full proposal according to the discussion with the core group if TVPP. It has been slow process from FAO to follow up and sent out the minutes of the meeting(of which i do not agree with the timeline in the minutes , too slow)). However, I did understand their constraints due to ASF outbreaks in Laos, Cambodia, VN , and China that keeping them super- busy and unfortunately that EPT FY 2018 fund has not arrived either. I will deliberately follow up with the gov counterparts to speed up the process.

Thank you for your note regarding CVP that it will happen later this year which will allow us to work with the core group to get the right the representation from TVPP to join the meeting in Harbin (will be super cold during that period).

(b)(6) (EcoHealth) is coming for DTRA Bat research in Phuket and I will meet with him and (b)(6) on Aug 3 for P2 Community engagement activity in Rachaburi. Is it possible to have (b)(6) work with (b)(6), DNP and Forestry Faculty, Kasetsart University for the site selection, species, and sample size required for the pilot project and proposal development. If not (b)(6), who is the appropriate person from GVP to work with the core group and PI for detailed proposal development.

Thank you very much and look forward to your advice including the effective line of communication with GVP team.

Best regards,
(b)(6)

Sent from my mobile.

On Jul 19, 2019, at 9:58 PM, (b)(6)@usaid.gov wrote:

(b)(6) thanks for the notes. Regarding the Harbin event, it turns out this will be a preliminary organizational meeting; the actual launch will happen later this year. Will keep everyone in the loop and hopefully arrange for Thai participation

(b)(6)

(b)(6)

(b)(6), Emerging Threats
Bureau for Global Health
US Agency for International Development
Mobile: (b)(6)

NOTE: I will be leaving USAID August 30, 2019 and afterwards can be reached at:

Personal email: (b)(6)

Personal mobile: (b)(6)

On Jul 19, 2019, at 6:49 AM, (b)(6)
<(b)(6)@usaid.gov> wrote:

Dear (b)(6) and (b)(6),

Attachment is the minutes of TVPP core group meeting on June 24, 2019. is there any update on the launching of China Virome project in Harbin during July 27-28 (referred in the meeting minutes)?

We have not received any update regarding the event including the invitation letter. Thank you.

Best regards,

(b)(6)

USAID Regional Development Mission Asia
Bangkok, 10330
E-mail: (b)(6)@usaid.gov
Tel: +(b)(6) Fax: +(b)(6)

----- Forwarded message -----

From: (b)(6)@fao.org
Date: Wed, Jul 17, 2019 at 10:55 AM

Subject: Minute of TVPP Core Group Meeting - 24 June 2019

To: (b)(6)@mahidol.ac.th <(b)(6)@mahidol.ac.th>, (b)(6)@dmsc.mail.go.th
<(b)(6)@dmsc.mail.go.th>, (b)(6)@gmail.com <(b)(6)@gmail.com>,
(b)(6)@gmail.com <(b)(6)@gmail.com>, (b)(6)@hotmail.com
<(b)(6)@hotmail.com>, (b)(6)@mahidol.ac.th <(b)(6)@mahidol.ac.th>,
(b)(6)@mail.kmutt.ac.th <(b)(6)@mail.kmutt.ac.th>, (b)(6)@health.moph.go.th
<(b)(6)@health.moph.go.th>, (b)(6)@dmsc.mail.go.th>,
(b)(6)@dmsc.mail.go.th <(b)(6)@dmsc.mail.go.th>, (b)(6)@kmutt.ac.th
<(b)(6)@kmutt.ac.th>, (b)(6)@gmail.com <(b)(6)@gmail.com>
Cc: (b)(6)@fao.org>, (b)(6)
(b)(6)@fao.org>, (b)(6)
<(b)(6)@fao.org>, (b)(6)@usaid.gov>, (b)(6)
<(b)(6)@usaid.gov>, (b)(6)@usaid.gov <(b)(6)@usaid.gov>, (b)(6),
(b)(6)@fao.org>

Dear all participants,

Please see the minute of TVPP Core Group meeting which was held on 24 July, at Grande Centre Point Ploenchit hotel.

Our apologies for the delay in sending the minute to you.

Please also be kindly informed that this is an unofficial minute in English version, and the official report in Thai version will be prepared by DMSc.

Thank you so much,

Sincerely,

(b)(6)

(b)(6)

Emergency Center for Transboundary Animal Diseases (ECTAD)
Food and Agriculture Organization of the United Nations (UN-FAO)
Regional Office for Asia and the Pacific (RAP)
39 Phra Atit Road, Phranakorn
Bangkok 10200 THAILAND

Tel. No.: (b)(6)

Fax No.: (b)(6)

Mobile Phone No.: (b)(6)

E-mail: (b)(6)@fao.org

(b)(6)

<image001.png>

<Minute -TVPP Core Group Meeting .docx>

From: (b)(6)
Sent: Wed, 25 Jul 2018 19:41:43 +0000
To: (b)(6)
Subject: Fwd: Roundtable Dialogue Toward Establishing a Thailand National Virome Project

FYI

(b)(6)
U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division
(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

----- Forwarded message -----

From: (b)(6)@usaid.gov>
Date: Wed, Jul 25, 2018 at 1:17 PM
Subject: Re: Roundtable Dialogue Toward Establishing a Thailand National Virome Project
To: (b)(6)@usaid.gov>, (b)(6)@usaid.gov>, (b)(6)@ucdavis.edu, daszak@ecohealthalliance.org
Cc: (b)(6)@usaid.gov>, (b)(6)@usaid.gov, (b)(6)@usaid.gov, "(b)(6)@usaid.gov>, (b)(6)@usaid.gov

Dear (b)(6), and Peter,

After the telecon, I had discussed in length with (b)(6) regarding the limitation to have the key persons from our end to join the workshop and to cover all aspects in details that Thai colleagues would like to learn from the GVP team. With that said, she consulted with DG and Director of NIH, DMSC to get the green light to postpone the meeting to October. Please identify a few optional dates in October that work for all or most of all from your end and propose those dates back to DMSC and NSTDA so we can finalize the meeting dates. I did call (b)(6) to hold on the venue reservation and bid until we get the agreed upon dates.

Please feel free to adjust the 2nd draft meeting agenda accordingly to fit with the speakers.

Thank you very much and look forward to hearing from you at your earliest convenience.

Best regards,

(b)(6)

Sent from my mobile.

On Jul 24, 2018, at 12:44 AM, (b)(6)@usaid.gov wrote:

Hi (b)(6)

This is incredibly helpful, let me quickly reach out to those individuals and see if they would be available.

Best,

(b)(6)

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)

Cell:

E-mail: (b)(6)@usaid.gov

(b)(6)

On Mon, Jul 23, 2018 at 12:49 PM, (b)(6) <(b)(6)@usaid.gov> wrote:

Please see attachment the 2nd draft agenda from the prep meeting on July 17. They would like to hear more details on GVP including questions and answers, the support of the project, more concerns on virus and sequencing information, modeling, data analysis. Additionally, they would like to hear more from China if China already starts the project and on the process of establishing China national virome project.

I also want to check if Aug 28 and 29 works for you, (b)(6) and Peter. DMSC said that they could move the schedule up on these 2 dates. If this two dates do not fit with your schedule, they will fix the meeting date as originally planned (Sep 6-7).

Best regards,

(b)(6)

Sent from my mobile.

Begin forwarded message:

From: (b)(6)@dmsc.mail.go.th>
Date: July 21, 2018 at 11:23:24 AM GMT+7
To: (b)(6)@usaid.gov>, (b)(6)
<(b)(6)@mahidol.edu>, (b)(6)@mahidol.ac.th>, (b)(6)
(b)(6)@dld.go.th>, (b)(6)@dmsc.mail.go.th>, (b)(6)
(b)(6)@dmsc.mail.go.th>, (b)(6)@dmsc.mail.go.th>, (b)(6)
(b)(6)@dmsc.mail.go.th>, (b)(6)@dmsc.mail.go.th>
Cc: (b)(6)@dmsc.mail.go.th>, (b)(6)@dmsc.mail.go.th>, (b)(6)
<(b)(6)@dmsc.mail.go.th>, (b)(6)@dmsc.mail.go.th>
Subject: Re: ขอเปลี่ยนห้องประชุม **Re: Roundtable Dialogue Toward Establishing a Thailand National Virome Project**
Reply-To: (b)(6)@dmsc.mail.go.th>

เรียนทุกท่าน

ได้ปรับแก้ Agenda ตามที่ได้หารือกันเมื่อวันที่ 17 กรกฎาคม ดังที่แนบมานี้

จึงเรียนมาเพื่อโปรดตรวจสอบ หากมีข้อมูลเพิ่มเติมสามารถเสนอได้ค่ะ

นกวรรณ

(b)(6)

National Institute of Health, Department of Medical Sciences
88/7 Tiwanon Road, Nonthaburi 11000, Thailand

----- ข้อความดั้งเดิม -----

จาก: "(b)(6)@usaid.gov>
ถึง: "(b)(6)@dmsc.mail.go.th>
สำเนา: "(b)(6)@mahidol.edu>, (b)(6)
<(b)(6)@mahidol.ac.th>, (b)(6)@dld.go.th>, (b)(6)
<(b)(6)@dmsc.mail.go.th>, (b)(6)@dmsc.mail.go.th>
ส่งแล้ว: อังคาร, 17 กรกฎาคม, 2018 10:09:24 AM
เรื่อง: Re: ขอเปลี่ยนห้องประชุม Re: Roundtable Dialogue Toward Establishing a Thailand National Virome Project

Noted, thanks.

Best regards,

(b)(6)

USAID Regional Development Mission Asia

Bangkok, 10330

E-mail: (b)(6)@usaid.gov

Tel: +(b)(6) Fax: +(b)(6)

On Tue, Jul 17, 2018 at 9:33 AM, (b)(6) <(b)(6)@dmisc.mail.go.th> wrote:

เรียนทุกท่าน

การประชุม GVP วันนี้ ขอเปลี่ยนห้องประชุมเป็น A203 อาคาร 1 NIH ค่ะ
นภวรรณ

Sent from my iPad

On 11 Jul BE 2561, at 16:54, (b)(6) <(b)(6)@dmisc.mail.go.th> wrote:

เรียน อ ชนรรต

วันที่ 17 จะเป็นการหารือเพื่อเตรียมการจัดประชุม และ identify
stakeholder ที่จะเข้าประชุมค่ะ

เบอร์โทร 0813710960 ค่ะ

นภวรรณ

(b)(6)

National Institute of Health, Department of Medical Sciences
88/7 Tiwanon Road, Nonthaburi 11000, Thailand

----- ข้อความดั้งเดิม -----

จาก: "(b)(6)@mahidol.edu>

ถึง: "(b)(6)@dmisc.mail.go.th>

สำเนา: "(b)(6)@usaid.gov>

ส่งแล้ว: พุธ, 11 กรกฎาคม, 2018 11:59:56 AM

เรื่อง: Re: Roundtable Dialogue Toward Establishing a Thailand National
Virome Project

สวัสดีครับ

ผม ชนรรต จากเขตร้อนครับ ผมยินดีเข้าร่วมครับ

ถ้าเป็นไปได้ผมรบกวนขออนุญาตโทรไปเรียนปรึกษาได้ไหมครับ

เพื่อจะได้ทราบว่าทางเราควรเชิญท่านใดในทีมไปเข้าร่วมบ้างครับ

ขอขอบคุณครับ

ด้วยความเคารพอย่างสูง

ชนรรต

On Mon, Jul 9, 2018 at 5:29 PM, (b)(6) <(b)(6)@dmisc.mail.go.th>

wrote:

Dear all

As you have been informed by (b)(6) earlier, I am writing to confirm that the GVP meeting will be on September 6-7. The preparation meeting for our Thai based colleagues is scheduled to be on July 17, 13.30. at DMSc. Please kindly confirm your availability. The official invitation letter will be issued later.

Best regards,

(b)(6)

National Institute of Health, Department of Medical Sciences
88/7 Tiwanon Road, Nonthaburi 11000, Thailand

----- ข้อความดั้งเดิม -----

จาก: "(b)(6)@usaid.gov"
ถึง: "(b)(6)@dmsc.mail.go.th", "(b)(6)@mahidol.ac.th", "(b)(6)@mahidol.edu", "(b)(6)@gmail.com", "(b)(6)@fao.org", "(b)(6)@fao.org", "(b)(6)@mahidol.ac.th", "(b)(6)@mahidol.ac.th", "(b)(6)@hotmail.com", "(b)(6)@hotmail.com"
สำเนา: "(b)(6)@usaid.gov", "(b)(6)@usaid.gov", "(b)(6)@ucdavis.edu", "Peter Daszak" <daszak@ecohealthalliance.org>, "(b)(6)@usaid.gov", "(b)(6)@usaid.gov, (b)(6)@usaid.gov, (b)(6)@ucdavis.edu

ส่งแล้ว: อาทิตย์, 8 กรกฎาคม, 2018 2:29:17 AM

เรื่อง: Roundtable Dialogue Toward Establishing a Thailand National Virome Project

Scientists Aim to Stop the Devastation of Zika-like Pandemics

Killer viruses can ravage countries, but now a new project hopes to spot diseases likely to jump from animals to humans. Read more...

<<https://usaid.us10.list-manage.com/track/click?u=afb9d459a45eccd639f25d07d&id=257156ea58&e=f91f1625a3>>

The link is about GVP project. The GVP launching workshop in Thailand is

now planned for Sep 2018. DMSC, MOPH and NSTDA, Ministry of Science and Technology kindly accepts to co-host the event. Please review the first draft meeting agenda that crafted by our end, but will require your advice

and inputs especially part of the network in Thailand and whom we should invite to give a talk and/or join the launching workshop.

Thank you very much and look forward to meeting you all at the 1st prep meeting at DMSC.

Best regards,

(b)(6)

USAID Regional Development Mission Asia
Bangkok, 10330

E-mail: (b)(6)@usaid.gov

Tel: +(b)(6) Fax: +(b)(6)

From: (b)(6)
Sent: Thu, 26 Jan 2017 17:55:26 +0000
To: (b)(6)
Cc: (b)(6); press@usaid.gov
Subject: Re: Beijing Tues afternoon event

Thanks (b)(6) for sharing.

(b)(6) did you speak with (b)(6) about this? Are we good when it comes to potential press? Is the DOC/PA officer on the ground in the loop on this and our role there?

Thanks for checking. Right now any potential media interaction is highly sensitive for obvious reasons so we must be extra vigilant.

Many thanks,

(b)(6)

(b)(6)

Bureau for Global Health, Front Office **USAID**
1300 Pennsylvania Avenue NW, (b)(6), Washington, DC 20523
Office: (b)(6) cell (b)(6); Email: (b)(6)@usaid.gov

On Wed, Jan 25, 2017 at 4:10 PM, (b)(6)@usaid.gov> wrote:
Hi All,

Please see below and attached (hopefully).

Let me know what additional information I can provide.

Best,

(b)(6)

Sent from my iPhone

Begin forwarded message:

From: (b)(6)@ecohealthalliance.org>
Date: January 25, 2017 at 4:05:14 PM EST
To: (b)(6)@usaid.gov>
Cc: Peter Daszak <daszak@ecohealthalliance.org>, (b)(6)@usaid.gov>, (b)(6)@ecohealthalliance.org

Subject: Re: Beijing Tues afternoon event

Hi (b)(6)

It's an initiative meeting to discuss about the plans and strategies to launch the China National Virome Project, we (b)(6) haven't got any funds committed, but some potential funders are invited. And because there is no funds available, (b)(6) decided not to announce the project this time, and no media coverage is planned. Please find the attached draft agenda that may provide more information.

Sorry I haven't heard much details from (b)(6), but please let me know if any further information I can provide.

Best,

(b)(6)

From: (b)(6)
Sent: Fri, 28 Sep 2018 02:18:41 +0000
To: (b)(6)
Cc: (b)(6)
Subject: Re: [GVP] Action Requested - Update Thailand Agenda

Dear (b)(6),

Noted with thanks. I will send this version back to our colleagues in Thailand.

Best regards,
(b)(6)
USAID Regional Development Mission Asia
Bangkok, 10330
E-mail: (b)(6)@usaid.gov
Tel: +(b)(6), Fax: +(b)(6)

On Thu, Sep 27, 2018 at 11:33 PM, (b)(6)@usaid.gov> wrote:
Hi (b)(6),

Apologies for the second email, but one of our colleagues noted another needed change - since (b)(6) will be replacing (b)(6) on the agenda, we needed to change that for the IM session. Please see an updated document with that edit.

Best,

(b)(6)
(b)(6)
U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division
(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

On Thu, Sep 27, 2018 at 9:41 AM (b)(6)@usaid.gov> wrote:
Hi (b)(6),

Thanks so much, we just realized that it was an easy change - we replaced (b)(6) name with (b)(6). I've attached the updated document with that edit.

Best,
(b)(6)

(b)(6)
U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division
(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

On Thu, Sep 27, 2018 at 7:49 AM (b)(6)
<(b)(6)@usaid.gov> wrote:
Dear (b)(6),

The most updated version that I received and worked on it today. As mentioned earlier, we still wait for the call from DMSC for the 3rd prep meeting.

Best regards,
(b)(6)
USAID Regional Development Mission Asia
Bangkok, 10330
E-mail: (b)(6)@usaid.gov
Tel: +(b)(6), Fax: +(b)(6)

On Thu, Sep 27, 2018 at 1:56 PM, (b)(6)
<(b)(6)@usaid.gov> wrote:
Dear (b)(6),

This is the most updated version that I have in hand. Please use word document version for your edits.

Best regards,

(b)(6)

USAID Regional Development Mission Asia
Bangkok, 10330

E-mail: (b)(6)@usaid.gov

Tel: +(b)(6) Fax: +(b)(6)

----- Forwarded message -----

From: (b)(6)@hotmail.com>

Date: Thu, Aug 23, 2018 at 1:42 PM

Subject: Re: [GVP] Action Requested - Update Thailand Agenda

To: (b)(6)@usaid.gov>

ส่งตารางที่แก้ไขมาให้พี่ก๊วก่อนค่ะ

ขอบคุณค่ะ

พี่

(b)(6)

ศูนย์วิทยาศาสตร์สุขภาพโรคอุบัติใหม่ โรงพยาบาลจุฬาลงกรณ์

Thai Red Cross Emerging Infectious Diseases - Health Science Centre

WHO Collaborating Centre for Research and Training on Viral Zoonoses

King Chulalongkorn Memorial Hospital

Faculty of Medicine, Chulalongkorn University

Rama4 road, Patumwan

Bangkok, Thailand 10330

Tel (b)(6)

Fax

From: (b)(6)@usaid.gov>

Sent: Monday, August 20, 2018 10:24 AM

To: (b)(6)

(b)(6)

Cc: (b)(6) (FAORAP); (b)(6)

(b)(6)

Subject: Fwd: [GVP] Action Requested - Update Thailand Agenda

Dear colleagues,

Please see attachment the draft meeting agenda with GVP's inputs. We have to further work out more details from our end. In addition, I have asked (b)(6) (15-20 min talk) to provide his perspective on the establishment Thailand National Virome Project.

Best regards,

(b)(6)

USAID Regional Development Mission Asia
Bangkok, 10330

E-mail: (b)(6)@usaid.gov

Tel: +(b)(6) Fax: +(b)(6)

----- Forwarded message -----

From: (b)(6)@ucdavis.edu>

Date: Fri, Aug 17, 2018 at 1:19 AM

Subject: Re: [GVP] Action Requested - Update Thailand Agenda

To: (b)(6)@usaid.gov>

Cc: Peter Daszak <daszak@ecohealthalliance.org>, (b)(6)@ucdavis.edu>, (b)(6)

(b)(6)@metabiota.com>, (b)(6)@metabiota.com>, (b)(6)

<(b)(6)@usaid.gov>, (b)(6)@usaid.gov>

Here you go -- thanks for the opportunity to input.

Ours looks like a lot of changes, but it is mostly restructuring.

We also think we need to ask speakers to include Q&A for each section or to shorten sections further to allow for questions.

Have a nice day,

(b)(6)

On Thu, Aug 16, 2018 at 7:13 AM, (b)(6)@usaid.gov> wrote:

Hi Team,

A huge thank you to those who have provided input to the agenda. If you have not yet provided input, particularly for speaker name and session title, please take a moment to do so today.

Thanks again,

(b)(6)

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

On Mon, Aug 13, 2018 at 1:59 PM (b)(6)@usaid.gov wrote:

Hi GVP Colleagues,

As per our conversation on Thursday, we would like to request your assistance in updating the agenda for the Thailand National Meeting, to be held Oct. 24-25 in Bangkok. In particular, we would like to ensure that speaker name and session titles have been added.

Please input your edits to [this google doc](#). If you're unable to access it, I have also attached a recent draft of the agenda in which you can make your edits. In case helpful for framing, I've pasted below some feedback from the GoT that (b)(6) shared.

We would appreciate your feedback by **COB Wednesday, 8/15**.

Thanks!

(b)(6)

Feedback

Please see attachment the 2nd draft agenda from the prep meeting on July 17. They would like to hear more details on GVP including questions and answers, the support of the project, more concerns on virus and sequencing information, modeling, data analysis. Additionally, they would like to hear more from China if China already starts the project and on the process of establishing China national virome project.

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

From: (b)(6)
Sent: Tue, 18 Jun 2019 13:49:44 +0000
To: Peter Daszak
Subject: Re: Timeline for the GVP 501c3 filing

:)

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

On Mon, Jun 17, 2019 at 2:14 PM Peter Daszak <daszak@ecohealthalliance.org> wrote:

Dear All,

I just wanted to check back in with you all and let you know where we are in the process of launching the GVP 501c3. Right now, the filing documents have been drafted, reviewed and revised by myself, (b)(6) and are back with our *pro bono* lawyers for final versions to be prepared.

(b)(5) - Deliberative Process Privilege

For more information, please keep up to date via our newsletter that (b)(6) updates, our twitter account [@GlobalVirome](#), and the website www.globalviromeproject.org In the meantime... have a great summer, and I look forward to getting back to you all at the end of August.

Cheers,

Peter

Peter Daszak

President

EcoHealth Alliance

460 West 34th Street – 17th Floor

New York, NY 10001

Tel. +1 (b)(6)

Website: www.ecohealthalliance.org

Twitter: [@PeterDaszak](#)

EcoHealth Alliance leads cutting-edge 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.

From: (b)(6)
Sent: Fri, 5 Jul 2019 16:22:10 +0000
To: (b)(6)
Cc: (b)(6) Peter Daszak; (b)(6)
Subject: Re: Biosketch and agenda for the China Virome Project Meeting

Hi (b)(6),

All sounds good, thanks so much!

Best,

(b)(6)

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

(b)(6)

(b)(5); (b)(5) -
Deliberative
Process Privilege

On Wed, Jul 3, 2019 at 6:39 PM (b)(6)@ecohealthalliance.org> wrote:

(b)(6)

Cheers,

(b)(6)

On Wed, Jul 3, 2019 at 5:09 PM (b)(6)@usaid.gov> wrote:

Hi (b)(6),

(b)(6)

Please find attached an updated version of (b)(6) attached. Will this work? I'll have to defer to him and Peter on the other parts of your request.

Best,

(b)(6)

(b)(6)

(b)(6)

U.S. Agency for International Development (USAID) (b)(6)
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division

(b)(6)

Desk: (b)(6)

Cell: (b)(6)

E-mail: (b)(6)@usaid.gov

(b)(6)

On Tue, Jul 2, 2019 at 8:35 AM (b)(6)@ecohealthalliance.org> wrote:
Hi (b)(6) and Peter,

Attached please find the updated agenda for the CVP meeting in China in July.

Can you please 1) confirm the title of your presentation at the plenary session, and 2) send me your biosketch for the program printing by this Thursday?

Thank you very much.

Best,

(b)(6)

EcoHealth Alliance
460 West 34th Street, Ste. 1701
New York, NY 10001

(b)(6) (U.S. mobile)

(b)(6) (Skype)

(b)(6) (WeChat)

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

From: (b)(6)
Sent: Sun, 21 Oct 2018 05:13:52 +0000
To: (b)(6)@usaid.gov
Cc: (b)(6)@dmisc.mail.go.th; (b)(6)
(b)(6)@usaid.gov; (b)(6)@ucdavis.edu
Subject: Fwd: Request for cv

Please ask short CV of all speakers for the organizing committee. These will be included in the handout. I am waiting to hear more from (b)(6) regarding the update factsheet of GVP. If i do not receive the updated version by Tuesday afternoon, will print out the version previously sent to me on Thursday to be included in the handout. Thanks.

(b)(6)

Sent from my mobile.

Begin forwarded message:

From: (b)(6)@dmisc.mail.go.th>
Date: October 21, 2018 at 11:33:20 AM GMT+7
To: (b)(6)@usaid.gov
Subject: Request for cv

Dear (b)(6)

Kindly ask for cv from us speakers ka. I will put in the handout ka.

(b)(6)

เมื่อ 21 ต.ค. 2018 09:14 (b)(6)@usaid.gov> เขียนว่า

This is great. Please let us know if 15 is enough. Our schedule is quite flexible on Day 2.
Thank you very much.

Best regards,

(b)(6)

Sent from my mobile.

On Oct 21, 2018, at 8:40 AM, (b)(6)@ecohealthalliance.org> wrote:

Dear (b)(6),

Yes, we would love to share some experience from China to Thai colleagues, and I'll work with Peter and (b)(6) to prepare the talk.

Thanks,

(b)(6)

On Sun, Oct 21, 2018 at 8:16 AM [b](6)

<[b](6)@usaid.gov> wrote:

Received with thanks.

Not sure if you are able to share your experience in working with GOC and partners in establishing China national virome project, 5-10 min talk to the Thai colleagues on the 2 nd day of the meeting.

Look forward to seeing you on Tuesday.

Best regards,
Sent from my mobile.

On Oct 20, 2018, at 4:56 AM, [b](6)@ecohealthalliance.org> wrote:

conservation.

From: (b)(6)
Sent: Tue, 18 Apr 2017 13:56:41 +0000
To: (b)(6)
Cc: Peter Daszak; (b)(6)
Subject: Re: GVP & China

Hi (b)(6),

Thank you for the update, it's still great to hear that things are moving. I'm headed over now and will give him your regards as well as let you know any outcomes of the meeting.

Best,

(b)(6)

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)
Cell: (b)(6)
E-mail: (b)(6)@usaid.gov

On Tue, Apr 18, 2017 at 9:45 AM, (b)(6)@ecohealthalliance.org> wrote:
Hi (b)(6),

Thank you for your message. I wish we could have more updates, but the only progress I heard from (b)(6) is that the bureaus of international cooperation and frontier sciences & education of CAS are pushing the GVP/CNVP to the upper levels of Chinese government (i.e. the Ministry of Science and Technology), which is still waiting for the official reply of the proposal. They don't know how long it will take, I will keep following up and let you know.

Please give our best regards to (b)(6), hope you have a very productive meeting!

Best,

(b)(6)

P.s. (b)(6) (cc'ed) is looking for other channels to pitch this project, he is keen on people like (b)(6) so if you know any opportunity this could happen, please let him know.

On Apr 17, 2017, at 1:24 PM, (b)(6)@usaid.gov> wrote:

Hi Peter, (b)(6)

We just wanted to let you all know that (b)(6) (who you met in Beijing), will be in DC tomorrow at 10am. We'll be meeting with him and discussing updates about the GVP-related work overall, as well as in China.

We will let you know how it goes and any updates, but also wanted to let you know in advance, in case there were any China-related updates which would be helpful to share or items that we should discuss with him.

Best,

(b)(6)

(b)(6)

Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (b)(6)

Cell:

E-mail: (b)(6)@usaid.gov

(b)(6)

EcoHealth Alliance
460 West 34th Street – 17th floor
New York, NY 10001

(b)(6) (U.S. mobile)

(b)(6) (China mobile)

(b)(6) (Skype)

(b)(6) (WeChat)

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