From: Dennis Carroll <dcarroll@usaid.gov>
Sent: Wed, 7 Jun 2017 09:31:52 -0400
Subject: Re: Time to talk today?
To: "Ana S. Ayala" <Ana.Ayala@law.georgetown.edu>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>

I am around Ana. I think, but I think Jonna is traveling in Tanzania. I am free this morning

d

On Wed, Jun 7, 2017 at 9:14 AM, Ana S. Ayala <Ana.Ayala@law.georgetown.edu> wrote:

Dear Dennis and Jonna,

Hope you are both well!

I wanted to touch base with you over the phone regarding some news on my end. I have just been offered a position at ASPR, and I'm scheduled to start on July 10.

Do either or both of you have time to chat today?

All the best,

Ana

Ana S. Ayala, J.D., LL.M.
Director, Global Health Law LL.M. Program
O'Neill Institute for National and Global Health Law
Georgetown University Law Center
(202) 662-9462 | (202) 662-4045 fax
Ana.Ayala@law.georgetown.edu
www.oneillinstitute.org

--
Sent from Gmail Mobile

--
Dr. Dennis Carroll
Director, Emerging Threats Program
Bureau for Global Health
U.S. Agency for International Development

Office: 202-712-5009
Mobile: REDACTED

From: Andrew Clements <aclements@usaid.gov>
Sent: Mon, 12 Mar 2018 12:09:22 -0700
To: Brian Bird <bhbird@ucdavis.edu>
Cc: PREDICTMGT <predictmgt@usaid.gov>, PREDICT-outbreak <predict-outbreak@ucdavis.edu>
Subject: [predict] [predict-outbreak] Re: PREDICT Ghana Lassa fever event update 09Mar2018

Thanks, Brian.
You have my approval to move forward with responding to the verbal GOG request.

Andrew

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Mar 12, 2018, at 7:42 PM, Brian Bird <bhbird@ucdavis.edu> wrote:

> Hi Andrew,
>
> I just got off the phone with the Ghana team to clarify these questions.
>
> It appears that between the Veterinary Services Directorate supplies for avian influenza (Min of Food and Ag), and PREDICT there is sufficient PPE to start the proposed field activities. We will place an order to backfill these donated VSD supplies and use of our stocks. This should allow for rapid deployment of the team, without having to wait for the FAO shipment of supplies in the interim. These FAO supplies will form a needed backstop and stockpile for further work.
>
> I was hoping to get a written request over the weekend, but for now we only have the verbal request. Can we have your approval to proceed based on the verbal requests with the written to follow?
>
> The field team would cover two arms: 1) would be Ghana Health service and a few folks from the University of Ghana (human contact tracing ~95 contacts) and 2) a PREDICT field team comprised of personnel from the Veterinary Services Directorate and Wildlife division for rodent sampling to three sites in Tema.
>
> Can the team proceed?
>
> Thanks!
>
> -Brian
>
> ---
>
> **From:** Andrew Clements <aclements@usaid.gov>
> **Date:** Monday, March 12, 2018 at 10:51 AM
> **To:** Brian Bird <bhbird@ucdavis.edu>
> **Cc:** PREDICTMGT <predictmgt@usaid.gov>, PREDICT-outbreak <predict-outbreak@ucdavis.edu>
> **Subject:** Re: PREDICT Ghana Lassa fever event update 09Mar2018
>
> Brian,
>
> Am I correct in thinking that you are waiting for the GoG to submit a written proposal that you will then forward to me for approval?

Andrew

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov
On Mar 10, 2018, at 7:27 AM, Brian Bird <bhbird@ucdavis.edu> wrote:

Hi all,

As expected, the team has received an official request to support rodent field sampling activities near the home of the recent Lassa fever case in Tema district in Ghana.

A written copy of the request is pending, but verbally the GoG has requested that the PREDICT team conduct field sampling at three-sites in Tema district. The team estimates that the time required would be approximately 12 days at a cost of approximately $11k (transportation, personnel time/per diems, and supplies/PPE). The team is working with the government and other partners involved (CDC and NAMRU) to coordinate any potential field activities. It is expected that a coordination meeting will occur with the various partners on Monday (Mar 12) to discuss and make plans.

Details on the single human case and travel history in the attached report, as well as a proposed budget for your consideration and discussion.

Have a good evening/weekend,

-Brian

Brian H. Bird DVM, MSPH, PhD
Global Lead Sierra Leone and
Multi-Country Ebola operations
PREDICT-USAID

One Health Institute
1089 Veterinary Medicine Dr.
School of Veterinary Medicine
University of California, Davis
Email: bhbird@ucdavis.edu
Skype: brianhbird1
http://www.vetmed.ucdavis.edu/ohi/predict/index.cfm

--

<PREDICT Ghana_Lassa fever event report_09Mar2018_final.pdf>
<Budget_Lassa Fever Event_Ghana[1].xlsx>

From: Andrew Clements <aclements@usaid.gov>
Sent: Thu, 25 Jul 2019 18:19:22 -0700
Subject: Re: Bomabli Virus in Mops condylurus Bats, Guinea
To: Tracey Goldstein <tgoldstein@ucdavis.edu>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, David Wolking <djwolking@ucdavis.edu>, Brian Bird <bhbird@ucdavis.edu>, PREDICTMGT <predictmgt@usaid.gov>

Thanks

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Jul 25, 2019, at 9:47 AM, Tracey Goldstein <tgoldstein@ucdavis.edu> wrote:

> Yes, we saw it - the paper is attached in case you don't have a copy.
>
> Corina and our country coordinator are hoping to meet with Dr. Sakoba today to figure out the plan forward. We will keep you informed.
>
> Best Tracey

On Thu, Jul 25, 2019 at 8:27 AM Andrew Clements <aclements@usaid.gov> wrote:

> Looks like a Russian group just published on Bombali virus in bats in Guinea.

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

Begin forwarded message:

> **From:** Tamar Bah <tbah@usaid.gov>
> **Date:** July 25, 2019 at 8:37:27 AM MDT
> **To:** Andrew Clements <aclements@usaid.gov>
> **Cc:** Corina Grigorescu Monagin <cgmonagin@ucdavis.edu>, Jaber Amine Belkhiria <jabelkhiria@ucdavis.edu>, Alpha Oumar Camara [REDACTED], Izetta Simmons <isimmons@usaid.gov>, Andrew Williams <andwilliams@usaid.gov>
> **Subject: Fwd: Bomabli Virus in Mops condylurus Bats, Guinea**
>
> Hello Andrew and Corina,
> I am sure you already saw this article on Russian Central Research Institute of Epidemiology publication regarding their findings in bats here in Guinea.
> I would like to know whether you have any news on the plan on the way forward.
> Please note that Dr. Sakoba mentioned in the past and recently that **Guinea does not want to have a press release**, but they are not opposed to publication internationally.
> I understand Predict was not comfortable to publish ahead of the country press release. This release from government has become a sensitive issue due political weight and also Ebola fatigue.
> We would like to know your thoughts on the way forward.

Thanks!

Tamar T. Bah, MPH
Acting Health Office Director
Global Health Security Agenda Advisor
USAID Guinea
Office: REDACTED
Cell: REDACTED

---------- Forwarded message ---------
From: **Alpha Oumar Camara** <REDACTED
Date: Wed, Jul 24, 2019 at 10:39 AM
Subject: Bomabli Virus in Mops condylurus Bats, Guinea
To: Tamar Bah <tbah@usaid.gov>

Bonjour
Je vous envois le lien à l'article en objet pour information. Je suis très désolé par l'action de l'autorité en Guinée face au résultat de PREDICT dont les discussions se poursuivent pour la communication.
https://wwwnc.cdc.gov/eid/article/25/9/19-0581_article

Cordialement,
Alpha

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Tracey Goldstein, PhD
One Health Institute
School of Veterinary Medicine
University of California
Davis, CA 95616
Phone: (530) 752-0412
Fax: (530) 752-3318
E-mail: tgoldstein@ucdavis.edu

<Ahead of Print - Bombali Virus in Mops condylurus Bats, Guinea - Volume 25, Number 9—September 2019 - Emerging Infectious Diseases journal - CDC.pdf>

Sent: Fri, 3 Mar 2017 06:07:02 -0800
Subject: Fwd: CORRECTION : Draft responses to emails for your review
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Karen Saylors <ksaylors@metabiota.com>, Prime Mulembakani <[redacted], Prime Mulembakani <pmulembakani@metabiota.com>, Ubald Tamoufe <utamoufe@metabiota.com>, Eddy Rubin <erubin@metabiota.com>
Cc: Robert Mann <rmann@metabiota.com>, "predict@ucdavis.edu" <predict@ucdavis.edu>

Dear Karen & Eddy,
Please manage the revision of the emails sent by you, Prime, and Ubald using the text of the revisions to those emails below. This text has been reviewed and approved by USAID. Do not include this whole chain. Please send to the original distribution list of the inappropriate emails with "CORRECTION: " in the subject line itself (e.g., CORRECTION: Cut on PREDICT Budget). These versions should either come from the original sender or Eddy, preferably immediately. That email should include the full distribution of the original email chain plus predict@ucdavis.edu and PREDICTMGT@USAID.gov so the messages are received by all affected parties.

In response to the email "Suspension provisoire de PREDICT_CONGO a compter du 1er Mars 2017"

Dear All,

We would like to correct our earlier communication regarding suspending activities in the Republic of Congo. Our reasoning for cancelling the upcoming training and temporarily suspending activities in RoC was to allow for internal Metabiota review of administrative issues. At no time were we advised of a reduction in budget, and any reference to budget cuts in our messaging to you were the result of an internal communication issue between Metabiota PREDICT leadership and our in-country teams.

We sincerely regret the confusion and inconvenience we have caused to all parties involved.

Thank you,

Eddy Rubin

Chief Scientific Officer, Metabiota

In response to the email "Cut on PREDICT Budget"

Dear All,

We would like to correct an earlier communication from our Country Coordinator in DRC that referenced a cut to the PREDICT budget. This information was incorrect and is a result of an internal communication issue between Metabiota PREDICT leadership and our in-country teams. We decided to temporarily suspend activities in RoC to allow for an internal Metabiota review of administrative issues. At no time were we advised of a budget reduction.

We sincerely regret the confusion and inconvenience we have caused.

Thank you,

Eddy Rubin

Chief Scientific Officer, Metabiota

In response to the email "Visit to Brazzaville"

Dear Beth, Mario and Mary,

We would like to correct an earlier email sent to you regarding the cancellation of our planned trip to Brazzaville. We have temporarily suspended our trip to Brazzaville to allow for an internal Metabiota review of administrative issues, not due to budget cuts or direction from PREDICT hierarchy. The incorrect information provided to you was due to an internal Metabiota communication issue.

We sincerely regret any confusion or inconvenience that we have caused.

Thank you,

Eddy Rubin

Chief Scientific Officer, Metabiota

From: Andrew Clements <aclements@usaid.gov>
Sent: Mon, 20 Mar 2017 19:06:43 +0100
To: predict@ucdavis.edu
Cc: predictmgt@usaid.gov
Subject: [predict] Fwd: ACTION Due March 31: Data Call on New Partnerships with U.S. Higher Education Institutions
Attachment
00. Higher Education Capacity Development and Partnerships Data Call - Memo.docx
02. Higher Education Capacity Development and Partnerships Data Call - Data Entry Template.xlsx
Attachment
01. U.S.-Host Country Higher Education Partnerships for Capacity Development - FY2016 Directive Definitions and Parameters.docx
Attachment

See request below. If you can't make the deadline (COB today, sorry) please let me know. We got this late last week without the attachements which only came through today.

In response to Congressional directives and inquiries, BRM is attempting to capture information regarding the Agency's investments, across all sectors, between U.S. based, and host countries Higher Education Institutions (HEI) that support capacity development.

Andrew P. Clements, Ph.D.
Senior Scientific Adviser
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

Begin forwarded message:

From: Marilyn Crane <mcrane@usaid.gov>
Date: March 20, 2017 at 5:43:35 PM GMT+1
To: Shana Gillette <sgillette@usaid.gov>, Andrew Clements <aclements@usaid.gov>, Alisa Pereira <apereira@usaid.gov>
Subject: Fwd: ACTION Due March 31: Data Call on New Partnerships with U.S. Higher Education Institutions

Attachments finally came through!
Marilyn

---------- Forwarded message ----------
From: **Miruna Mosincat** <mmosincat@usaid.gov>
Date: Mon, Mar 20, 2017 at 11:37 AM
Subject: Re: ACTION Due March 31: Data Call on New Partnerships with U.S. Higher Education Institutions
To: Marilyn Crane <mcrane@usaid.gov>
Cc: Megan Fotheringham <mfotheringham@usaid.gov>, Dennis Carroll <dcarroll@usaid.gov>, "Alisa (GH/HIDN) Pereira" <apereira@usaid.gov>, "Vincent, Cheri (GH/HIDN/ID)" <CVincent@usaid.gov>, "Fox, Elizabeth(GH/HIDN)" <EFox@usaid.gov>, Brittany Carlsen <bcarlsen@usaid.gov>

Hi Marilyn,

Sorry about that! Here are the attachments!

Miruna

On Mon, Mar 20, 2017 at 11:22 AM, Marilyn Crane <mcrane@usaid.gov> wrote:

> Hi Miruna,
> The attachments have been lost somewhere in all of the forwards. Would you kindly resend the attachments so that I can complete them for One Health Workforce?

Thanks,
Marilyn

On Mon, Mar 20, 2017 at 11:16 AM, Miruna Mosincat <mmosincat@usaid.gov> wrote:

> Hello all,

Please not that this is due back to me by **COB today**! Please let me know if I can help with this request in anyway.

Thank you,

Miruna

On Thu, Mar 16, 2017 at 4:47 PM, Megan Fotheringham <mfotheringham@usaid.gov> wrote:

> All,
> Please see below for a tasker that P3 is collecting information on.

If any of the projects that you manage support efforts between US based Higher Edication Institutions and host country Higher Education Institutions to increase capacity development (as defined below and in the attachments), please complete the attached forms and send them to **Miruna Mosincat by COB March 20th**. We will compile the answers for the ID Office and submit on behalf of everyone by teh requested deadline of noon on March 21st.

Thank you
Megan

Megan Fotheringham, MPP, MPH
Acting Deputy Office Director
Office of Infectious Diseases
Bureau for Global Health
US Agency for International Development
+1-571-551-7429
mfotheringham@usaid.gov

---------- Forwarded message ----------
From: **Clairmont Austin** <caustin@usaid.gov>
Date: Thu, Mar 16, 2017 at 1:36 PM
Subject: Fwd: ACTION Due March 31: Data Call on New Partnerships with U.S. Higher Education Institutions
To: "Saldana, Kelly (GH/HIDN)" <KSaldana@usaid.gov>, Doug Arbuckle <darbuckle@usaid.gov>, "Fox, Elizabeth(GH/HIDN)" <EFox@usaid.gov>, Barbara Hughes <bhughes@usaid.gov>, Sharon Carney <SCarney@usaid.gov>, Elise Jensen <ejensen@usaid.gov>, "Lloyd, Wallace (GH/SPBO/OPS)" <wlloyd@usaid.gov>, David Milestone <dmilestone@usaid.gov>, "Starbird, Ellen" <EStarbird@usaid.gov>
Cc: Shyami DeSilva <sdesilva@usaid.gov>, Tara Lewing <tlewing@usaid.gov>, Kendra Phillips <kphillips@usaid.gov>, Lin Liu <liliu@usaid.gov>, Michele Russell <mrussell@usaid.gov>, Megan Fotheringham <mfotheringham@usaid.gov>, "JBorrazzo@usaid.gov" <JBorrazzo@usaid.gov>, "Melton, Deborah (HR/CSP/RS)" <dmelton@usaid.gov>, "WPressman@usaid.gov" <WPressman@usaid.gov>, "Johnson, Claire (OFM/HAITI)" <cljohnson@usaid.gov>, Robbin Boyer <rboyer@usaid.gov>, "bgustafson@usaid.gov" <bgustafson@usaid.gov>

Greetings Office Directors/Deputies/Team Leads:

In response to Congressional directives and inquiries, BRM is attempting to capture information regarding the Agency's investments, across all sectors, between U.S. based, and host countries Higher Education Institutions (HEI) that support capacity development.

The Bureau for Global Health has been tasked to provide historical/projected information in response to this Data Call on New Partnerships with U.S. Higher Education Institutions. In addition to Mark Murray's email, attached are three items: a memo, directive definition, and a data entry template/sheet, that will guide you through the process.

Please complete and e-mail me (caustin@usaid.gov) the attached template by 12 noon on the 21st of March (next Tuesday). I would like to provide a consolidated response to BRM by 12 noon on the 22nd of March (next Wednesday). I am available at 571-551-7103 if you have questions, or need clarification or guidance on this tasking.

Thanks,

Clairmont (Andy) Austin (GH/OPPP/PIBM)

Budget Analyst

571-551-7103

Service! Always!

---------- Forwarded message ----------
From: **Mark Murray** <mmurray@usaid.gov>
Date: Wed, Mar 15, 2017 at 4:01 PM
Subject: ACTION Due March 31: Data Call on New Partnerships with U.S. Higher Education Institutions
To: "BRM's Program Offices Mail List (USAID)" <brmsprogramoffices@usaid.gov>
Cc: BRM <brm@usaid.gov>, "Kowal, Stephen (EGAT/ED/PT)" <skowal@usaid.gov>, Grace Lang <glang@usaid.gov>, Monica Pons <mpons@usaid.gov>

ATTACHMENTS: (1) Memo; (2) directive definition; (3) data entry template/sheet

Hi Program Officers,

The FY 2016 appropriations act (HR 2029 Omnibus, p. 1403-1405) contains a $35 million directive related to new higher education partnerships focused on capacity development:

> (2) HIGHER EDUCATION.—Of the funds appropriated by title III of this Act, not less than $225,000,000 shall be made available for assistance for higher education, including not less than $35,000,000 for new partnerships between higher education institutions in the United States and developing countries: Provided, That such funds may be made available notwithstanding any other provision of law that restricts assistance to foreign countries, and shall be subject to the regular notification procedures of the Committees on Appropriations.

Given the limited information available at this level of detail and granularity in existing Agency planning and reporting systems (e.g. the Operational Plan), we have identified the need for a data call to collect additional information. More information is provided in the attached memo and its annexes.

Purpose

The purpose of this data call is to gain additional information regarding the Agency's investments, across all sectors, related to active programs that involve partnerships with U.S. higher education institutions to support capacity development in host country higher education institutions. This is in response to Congressional directives and inquiries focused on this issue.

Instructions

Using the attached table/template, please send a comprehensive list of all ongoing and planned/new activities with U.S. higher education institutions (including funding from any program area in the standard program structure) that meets the following description:

Activity focuses on or includes a major component supporting institutional capacity development of a host country higher education institution. "ES.2-1 Number of host country tertiary education institutions receiving capacity development support with USG assistance" is a standard foreign assistance indicator that provides a working definition for capacity development. While USAID has no single definition of capacity or capacity development, the following excerpt from the indicator reference sheet can be used to define institutional capacity development:

- "Capacity development support is comprised of a range of activities, interventions, processes, and approaches that may include, but are not limited to: institutional partnerships; professional development; training; coaching; technical assistance; participatory assessments; process mapping and improvement; etc. These may be focused on a range of specific topics, including but not limited to: human resources, management and administration, instruction, research, infrastructure, facilities, fund raising, etc."

Thanks,
Mark

Mark Murray
Budget Analyst for Economic Growth, Education, and Environment
USAID Office of Budget and Resource Management
1300 Pennsylvania Avenue NW | RRB 6.09-061 | Washington, DC 20523
phone 202-712-1656 | direct email mmurray@usaid.gov | office email brm@usaid.gov

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Miruna Mosincat
Administrative Assistant
USAID I Office of Infectious Disease
Phone: (571) 551-7096
Cell: REDACTED

--

Marilyn Crane
Senior International Higher Education Advisor
Emerging Threats Division

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

Telephone: (202) 712-4724
Cell Phone: REDACTED
E-mail: mcrane@usaid.gov

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--

Marilyn Crane
Senior International Higher Education Advisor
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Telephone: (202) 712-4724
Cell Phone: REDACTED
E-mail: mcrane@usaid.gov

March 15, 2017

MEMORANDUM

TO: USAID Operating Units Worldwide

FROM: Mark Murray, Office of Budget and Resource Management (BRM)

SUBJECT: Data Call: Partnerships with U.S. Higher Education Institutions to Support Capacity Development in Host Country Higher Education Institutions - Due Close of Business on Friday, March 31, 2017

Purpose

The purpose of this data call is to gain additional information regarding the Agency's investments, across all sectors, related to active programs that involve partnerships with U.S. higher education institutions to support capacity development in host country higher education institutions. This is in response to Congressional directives and inquiries focused on this issue.

Instructions

Using the attached table/template, please send a comprehensive list of *all* ongoing and planned/new activities[1] (including funding from *any* program area in the standard program structure) that meets the following description:

Activity focuses on or includes a major component supporting institutional capacity development of a host country higher education institution. "ES.2-1 Number of host country tertiary education institutions receiving capacity development support with USG assistance" is a standard foreign assistance indicator[2] that provides a working definition for capacity development. While USAID has no single definition of capacity or capacity development, the following excerpt from the indicator reference sheet can be used to define institutional capacity development: "Capacity development support is comprised of a range of activities, interventions, processes, and approaches that may include, but are not limited to: institutional partnerships; professional development; training; coaching; technical assistance; participatory assessments; process mapping and improvement; etc. These may be focused on a range of specific topics, including but not limited to: human resources, management and administration, instruction, research, infrastructure, facilities, fund raising, etc."

Responses are due by close of business on Friday, March 24, 2017. Send your completed Excel worksheet to Steve Kowal (skowal@usaid.gov), Grace Lang (glang@usaid.gov), and Mark Murray (mmurray@usaid.gov).

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[1] Activities funded through field support should be included in the list of the operating unit funding the activity (*not* the operating unit receiving the field support transfer).

[2] This exercise is *not* limited to operating units that report on this indicator. The definition is being used simply as a point of reference.

The attached table has additional fields that will help BRM and E3/ED to further identify those activities that include "partnerships with U.S. universities," that may be considered "new," and that were "awarded on an open and competitive basis" -- additional criteria that will help the Agency provide Congress with a comprehensive report regarding USAID support for partnerships with U.S. higher education institutions that focus on capacity development of host country higher education institutions as well as a report on how USAID is complying with the directive, including the provisions for "new" activities that are "awarded on an open and competitive basis."

1. Operating Unit
2. Activity Title
3. Activity Overview Description
4. Support for Institutional Capacity Development in Host County Higher Education Institution(s)?
5. Partnership with U.S. HEI?
6. Prime Implementing Partner / Awardee
7. U.S. Higher Education Institutions Involved
8. Host Country Higher Education Institutions Involved
9. Start Date
10. End Date
11. Total Estimated Cost
12. How much of the Total Estimated Cost can be attributed to partnerships with U.S. higher education institutions to support capacity development of host country higher education institutions?
13. FY 2016 Funds Planned for Obligation into Award / Activity (Higher Education)
14. FY 2016 Funds Planned for Obligation into Award / Activity (Other Program Areas)
15. Name of Other Program Areas for FY 2016 Funds Planned for Obligation into Award / Activity
16. Was this award (or major sub-awards for partnerships and capacity development) made on an open and competitive basis?
17. Award / Agreement Number
18. Additional information / relevant hyperlink(s)

Background

The FY 2016 appropriations act (HR 2029 Omnibus, p. 1403-1405) contains the following directive:

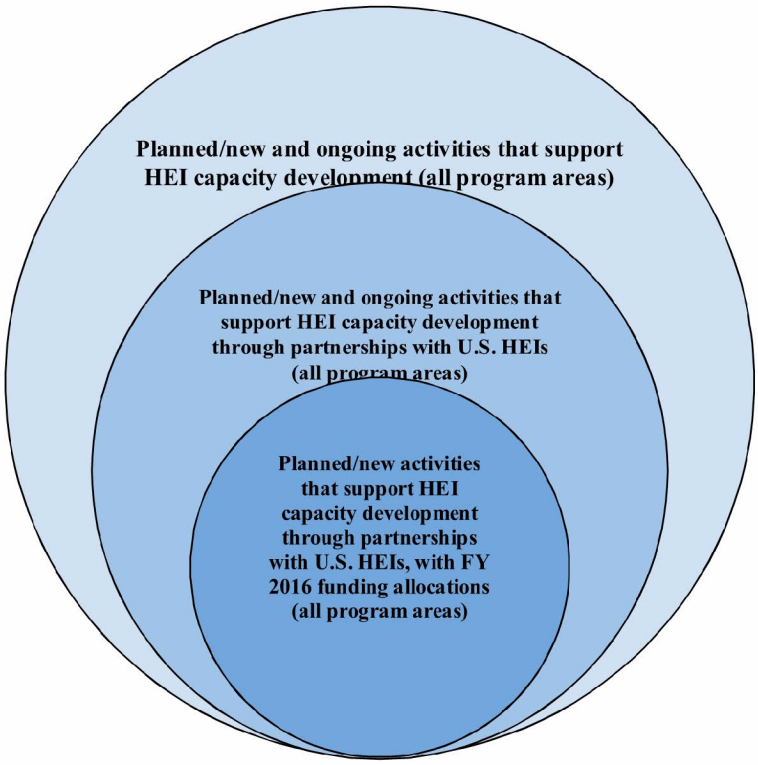
> (2) HIGHER EDUCATION.—Of the funds appropriated by title III of this Act, not less than $225,000,000 shall be made available for assistance for higher education, including not less than $35,000,000 for new partnerships between higher education institutions in the United States and developing countries: Provided, That such funds may be made available notwithstanding any other provision of law that restricts assistance to foreign countries, and shall be subject to the regular notification procedures of the Committees on Appropriations.

The statement of managers further provided:

Higher Education. - Funds made available for new partnerships between higher education institutions in the United States and developing countries shall be for institutional capacity building and awarded on an open and competitive basis.

In order to lessen the number of directives included in budget allocations, the Office of Budget and Resource Management (BRM) and the Bureau for Economic Growth, Education, and Environment's Office of Education (E3/ED) have attempted to identify programming that is "naturally" occurring in the Agency's portfolio that fits the parameters of this directive. Given the limited information available at this level of detail and granularity in existing Agency planning and reporting systems (e.g. the Operational Plan), we have now identified the need for a data call to collect additional information. The information that you provide will be used not only for ensuring that the Agency meets the FY 2016 directives but also informs decision-making related to similar directives in FY 2017 and future years, which is NOT to say that responding to this data call indicates that you will be a target in out years. In future years, should this directive continue, we expect to reach out to Missions before assigning specific Missions with funds associated with this directive.

While the innermost circle is of critical importance for meeting the directive, the "universe" of activities to be included in this exercise are *all* of the following:



All activities inside this scope must be included in responses to this data call. Activities outside of this scope are *not* to be included in responses this data call.

Attachments

1. U.S.-Host Country Higher Education Partnerships for Capacity Development - FY 2016 Directive Definitions and Parameters
2. Higher Education Data Call Template

Produced in Native Format

U.S.-Host Country Higher Education Partnerships for Capacity Development
FY 2016 Directive Definitions and Parameters

The FY 2016 appropriations act (HR 2029 Omnibus, p. 1403-1405) contains the following directive:

> (2) HIGHER EDUCATION.—Of the funds appropriated by title III of this Act, not less than $225,000,000 shall be made available for assistance for higher education, including not less than $35,000,000 for new partnerships between higher education institutions in the United States and developing countries: Provided, That such funds may be made available notwithstanding any other provision of law that restricts assistance to foreign countries, and shall be subject to the regular notification procedures of the Committees on Appropriations.

The statement of managers further provided:

> Higher Education. - Funds made available for new partnerships between higher education institutions in the United States and developing countries shall be for institutional capacity building and awarded on an open and competitive basis.

In order to be counted under this directive, activities must satisfy *all* of the definitions provided below.[1] No prior year funds may be counted toward meeting this directive (i.e. the FY 2016 directive may only be met through allocations of FY 2016 funds to activities that meet all definitions below).

Focus on or include a major component supporting institutional capacity development of a host country higher education institution. "ES.2-1 Number of host country tertiary education institutions receiving capacity development support with USG assistance" is a standard foreign assistance indicator that provides a working definition for capacity development. While USAID has no single definition of capacity or capacity development, the following excerpt from the indicator reference sheet can be used to define institutional capacity development: "Capacity development support is comprised of a range of activities, interventions, processes, and approaches that may include, but are not limited to: institutional partnerships; professional development; training; coaching; technical assistance; participatory assessments; process mapping and improvement; etc. These may be focused on a range of specific topics, including but not limited to: human resources, management and administration, instruction, research, infrastructure, facilities, fund raising, etc."

"ES.2-1 Number of host country tertiary education institutions receiving capacity development support with USG assistance" is a standard foreign assistance indicator that provides a working definition for higher education institutions: "A tertiary education institution is an organization that provides educational opportunities that build on secondary education, providing learning activities in specialized fields. It aims at learning at a high level of complexity and specialization. Tertiary education includes what is commonly understood as academic education but also

[1] These definitions are meant to be applied only for the purposes of establishing the parameters for this directive.

includes advanced vocational or professional education. This may include public or private universities, colleges, research institutes, training institutes, etc."

Involve a partnership with a U.S. higher education institution and a host country higher education institution. USAID is defining the term "partnership" in a broad sense to recognize the array of implementing mechanisms used in our development programming. For example, a partnership could be a direct award to a U.S. university to support a twinning relationship with a host-country higher education institution. It could also be a larger contract or grant that would fund a U.S. or host-country higher education institution as the prime awardee, perhaps leading a consortium of implementers supporting one or more host country higher education institutions. Another arrangement that has been successful is an award to a non-university implementer (e.g. NGO, firm) for a project that include specific components to create and support partnerships between U.S. and host country higher education institutions (e.g. through sub-grants).

New. "New" activities are defined as activities that are funded through a new direct award (e.g. contract, grant, cooperative agreement) or new sub-award (e.g. sub-contract, sub-grant) awarded on or after the start of the fiscal year in which funds were appropriated (e.g. for purposes of the FY 2016 directive, an activity that was awarded at any point in FY 2016 or later would be considered new). Modifications to existing awards would generally not be considered new.

Awarded on an open and competitive basis. This includes: awards that were made through a solicitation (e.g. RFA, RFP, APS) issued by USAID and posted publicly online (e.g. Grants.gov; FedBizOpps.gov); and awards that were made through a solicitation issued by a USAID implementing partner (for sub-awards) and posted publicly online.

From: Tracey Goldstein <tgoldstein@ucdavis.edu>
Sent: Mon, 1 May 2017 09:46:39 -0700
Subject: Re: Coordinating the two GVP lab working groups
To: Wang Linfa <linfa.wang@duke-nus.edu.sg>, "Lipkin, Ian W." <wil2001@cumc.columbia.edu>
Cc: "Briese, Thomas" <tb2047@cumc.columbia.edu>, Brooke Watson <watson@ecohealthalliance.org>, "Kahn, Eleanor J." <ejk2162@cumc.columbia.edu>, Danielle Anderson <danielle.anderson@duke-nus.edu.sg>, "Claes, Filip (FAORAP)" REDACTED Peter Daszak <daszak@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>, "Morzaria, Subhash (FAORAP)" REDACTED
GVP Lab Implementation Update May 1 2017.docx

Dear All,

Thank you for sharing the Lab Platform concept note.

Please find the update from the Lab Implementation team attached. We include some information on challenges of implementation in country, some information on comparison of lab methods, as well as suggestions for coordination between the two lab groups.

Brooke are you collating all files for the May 1 deadline?

Best, Tracey and Filip

On Mon, May 1, 2017 at 12:08 AM, Wang Linfa <linfa.wang@duke-nus.edu.sg> wrote:

Dear Thomas,

Thanks for taking the leadership on this.

Attached pls find the added edits/comments from us (me and Danielle).

All the best,

LF

Linfa (Lin-Fa) WANG, PhD FTSE

Professor & Director

Programme in Emerging Infectious Disease

REDACTED

E-mail:linfa.wang@duke-nus.edu.sg

Tel: REDACTED

Fax:

From: Briese, Thomas [mailto:tb2047@cumc.columbia.edu]

Sent: Friday, 28 April, 2017 4:27 AM
To: Wang Linfa; Lipkin, Ian W.
Cc: Brooke Watson; Kahn, Eleanor J.; Danielle Anderson; Claes, Filip (FAORAP); Tracey Goldstein; Peter Daszak; Alison Andre

Subject: Re: Coordinating the two GVP lab working groups

Hi Linfa and Danielle,

Attached I'm sending our concept draft for your comments and input.

Best wishes, Thomas

From: Wang Linfa <linfa.wang@duke-nus.edu.sg>
Date: Saturday, April 22, 2017 at 7:53 AM
To: "Lipkin, Ian W." <wil2001@cumc.columbia.edu>
Cc: Brooke Watson <watson@ecohealthalliance.org>, "Kahn, Eleanor J." <ejk2162@cumc.columbia.edu>, Thomas Briese <tb2047@cumc.columbia.edu>, Danielle Anderson <danielle.anderson@duke-nus.edu.sg>, "Claes, Filip (FAORAP)" [redacted] Tracey Goldstein <tgoldstein@ucdavis.edu>, Peter Daszak <daszak@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>
Subject: Re: Coordinating the two GVP lab working groups

Ok thanks.

Sent from my iPhone

On 22 Apr 2017, at 7:27 PM, Lipkin, Ian W. <wil2001@cumc.columbia.edu> wrote:

> We have a ME/CFS center grant due at NIH on May 2. Fortunately, Thomas isn't involved in that proposal. I'll circle back with him tomorrow/Monday.

Ian

On Apr 22, 2017, at 1:20 AM, Wang Linfa <linfa.wang@duke-nus.edu.sg> wrote:

> Thanks Brooke.
>
> Ian and Thomas, at the last tel conf you stated that you will have a go with the drafting and then circulate. Can we have a draft by 26 April pls? I and Danielle will then work on it before the due date.
>
> Thanks

LF

Linfa (Lin-Fa) WANG, PhD FTSE

Professor & Director

Programme in Emerging Infectious Disease

REDACTED

E-mail:linfa.wang@duke-nus.edu.sg

Tel:

Fax: REDACTED

From: Brooke Watson [mailto:watson@ecohealthalliance.org]
Sent: Thursday, 20 April, 2017 11:44 PM
To: Lipkin, Ian W.; Kahn, Eleanor J.; Briese, Thomas; Wang Linfa; Danielle Anderson; Claes, Filip (FAORAP); Tracey Goldstein; Peter Daszak; Alison Andre
Subject: Coordinating the two GVP lab working groups

Dear colleagues,

As we approach May, I want to ensure that all the Science and Techonology working group co-chairs have had the opportunity to coordinate with their corresponding Implementations thematic area co-chairs. Copied on this email are all co-chairs (and deputy co-chairs) from the **Lab Platform** and **Laboratory and Biosafety Implementation** working groups. I hope this email will provide an opportunity to open communication channels and synchronize your working group plans if you have not already been in conversation.

As the Science Thematic areas work toward their working group concept notes for May 1, please share drafts and seek feedback from your Implementation partners. Likewise, if the Implementation leads have specific questions about the Science and Technology platforms, please feel free to reach out to your colleagues.

Please let me know if you have any questions or need assistance setting up a conference line. We look forward to receiving your concept notes on May 1.

Best,

Brooke Watson

--

Brooke Watson, MSc
Research Scientist

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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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Important: This email is confidential and may be privileged. If you are not the intended recipient, please delete it and notify us immediately; you should not copy or use it for any purpose, nor disclose its contents to any other person. Thank you.

--

Tracey Goldstein, PhD
One Health Institute
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University of California
Davis, CA 95616
Phone: (530) 752-0412
Fax: (530) 752-3318
E-mail: tgoldstein@ucdavis.edu

GVP Lab Implementation Update May 1 2017 (Co-leads T. Goldstein, F. Claes)

- Suggest closer coordination between the Lab Platform and Lab Implementation teams to avoid possible overlap and duplication of work
    - Need for clear TORs
    - Need for communication platform between groups (regular calls?)
    - Need for decision on who will do the implementation at country level: (in proposed TOR of platform group the suggest they would implement in field, while I understood they would suggest the platforms and our group would determine was what implementable and excecute?)
- Propose a combination of cPCR and HTS may be implemented for GVP
- Experience from PREDICT and FAO has shown:
    i. 60% of targeted labs were able to implement cPCR,
    ii. of those a subset (60%) were able to implement cloning and sanger sequencing (either in-house or by sending to a commercial lab) to confirm positives, and needed bioinformatics support to analyze sequences
    iii. a subset (14%) developed the ability to prepare libraries for HTS but needed bioinformatics support to analyze the data
- Comparison of cPCR and HTS:
    cPCR - 37/184 viruses
    HTS - 147/184 viruses *BUT* 120 viruses were from a family not targeted by cPCR
    cPCR picked up all viruses in targeted families that HTS detected
- Comparison of HTS approaches, regular HTS vs VirCapSeq
    i. Regular HTS: Able to pick up divergent (i.e. truly novel) viruses but less sensitive, requires high viral loads to get good coverage
    ii. VirCapSeq: Very sensitive, good genome coverage, even when viral load is low, bias towards known (often: human) viruses
    iii. Evaluate country level preparedness for implementation. Start to create an overview of technical capacities in different countries (based on PREDICT labs –both wildlife and livestock)
    iv. Evaluate feasibility of implementation in different countries based upon existing laboratory capacity

Suggested strategy for implementation?

Triage of samples using viral family screening → Sequence confirmation → Determine appropriate HTS pipeline

From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Peter Daszak <daszak@ecohealthalliance.org>
CC: Brooke Watson <watson@ecohealthalliance.org>
Sent: 5/31/2017 3:42:40 PM
Subject: Re: GVP timeline thing

My edits in the attachment.
Some was likely a little insulting to my teams (maybe even me), so I softened. I don't have time to add any detail on my Implementation stuff, but I think this version with my edits is okay for now, as long as we say that we will refine this plan over time. We may want to refer in a cover email or in the document that teams will need to coordinate closely throughout development and may merge over time.
Thanks for the draft,
J

On Wed, May 31, 2017 at 2:31 PM, Peter Daszak <daszak@ecohealthalliance.org> wrote:

Here's my draft. Let me know what you think and I'll send it round.

I need to send this by 7pm my time (4pm your time), so if you have chance to skim, but not to comment, just send me a quick text with ideas…

Cheers,

Peter

Peter Daszak

President

EcoHealth Alliance

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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.

Clarifying goals, membership and timelines of S&T WGs vs. Implementation WGs

Propose the following:

- S&T lab and metadata WGs will design, test and recommend the primary techniques/methodologies to be used in the GVP.
- Implementation lab and metadata WGs will manage the development of global protocols and training and roll out of these methodologies in-country.
- S&T lab and metadata WGs will continue to conduct evaluation of systems and new technologies and advise on new, promising approaches as the project proceeds.
- S&T lab and metadata WGs will conduct periodic assessments throughout the GVP to identify whether protocols are sufficiently supporting a standardized approach and quality data.
- Implementation lab and data WGs will work throughout the GVP to manage global and in-country efforts so that they remain standardized, according to the assessments.
- Membership of the S&T lab and metadata WGs will include senior leaders in their fields, along with some more junior staff who can ensure tasks are successfully completed in a timely manner.
- Implementation lab and data WGs will be comprised of global implementation leads and strategic implementing partners.
- Modeling & Analytics WG will work initially to identify most cost-effective strategy for targeting of surveillance, then continue this targeting throughout design of each phase of the GVP (modifying as new countries or sites come on-line). M&A WG will maintain activities throughout the GVP to ensure targets are being met, to re-analyze viral diversity estimates, and to act as an overall monitor of GVP success rate.
- Membership of M&A WG will consist primarily of mid-level staff with some senior leadership.

Clarifying timelines of the Working Groups

Tasks to be completed by:

- July 1st 2017: WG work plans are finalized
- August 1st 2017: Members have been invited to join
- September 15th 2017: All WGs have conducted conference calls to assign tasks
- November 1st 2017: All WGs report to Core Group/SC
- January 2018: WGs meet at PMAC!

From: "Kone, Philippe (FAOCD)" <[redacted]
To: Sarah Paige <spaige@usaid.gov>, "Saila-Ngita, Diafuka" <Diafuka.Saila_Ngita@tufts.edu>, "Soumare, Baba (FAORAF)" [redacted]
Cc: Ricardo Echalar <rechalar@usaid.gov>, "Morzaria, Subhash (TCE)" [redacted] predict@ucdavis.edu" <predict@ucdavis.edu>, Irene Naigaga <[redacted] "Amuguni, Janetrix Hellen M." <Janetrix.Amuguni@tufts.edu>, Bethany Haberer <bhaberer@usaid.gov>, "Dennis Carroll" <dcarroll@usaid.gov>, "Makonnen, Yilma (FAOKE)" [redacted] William Bazeyo [redacted] Alisa Pereira <apereira@usaid.gov>, Lindsay Parish <lparish@usaid.gov>, Mike Cranfield <[redacted], Marilyn Crane <mcrane@usaid.gov>, "Sylvia Wanzala" <wanza003@umn.edu>, Izetta Simmons <isimmons@usaid.gov>, "Jean-Felly Numbi" <jnumbi@usaid.gov>, Katey Pelican <pelicank@umn.edu>, Jessica Pettit <jpettit@usaid.gov>, Kirsten Gilardi <kvgilardi@ucdavis.edu>, "Ngona Idi Abdullah" [redacted], Jeff Bender <bende002@umn.edu>, Lisa Kramer <lkramer@usaid.gov>, Shana Gillette <sgillette@usaid.gov>, Eddy Kambale [redacted], David J Wolking <djwolking@ucdavis.edu>, Nadira Kabir <nkabir@usaid.gov>, Placide Mbala <pmbala@metabiota.com>, Innocent Rwego <irwego@umn.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, "Soumare, Baba (FAORAF)" [redacted], Andrew Clements <aclements@usaid.gov>, "Tzipori, Saul" <Saul.Tzipori@tufts.edu>, gasp [redacted] "Andrea Long-Wagar" <alongwagar@usaid.gov>, Malangu Doyen <[redacted] Ashna Kibria <akibria@usaid.gov>, Dr Prime Mulembakani <pmulembakani@metabiota.com>, Prince Kimpanga [redacted]
Subject: RE: [Update] EPT2 - GHSA Workplan Coordination Call - DRC
Sent: Wed, 16 Aug 2017 12:13:17 +0000
DRC_ Workplan Coordination Call - FY18_kp.docx

Dear Sarah,
Please receive inputs from FAO
Best regards
Philippe

De : Sarah Paige [mailto:spaige@usaid.gov]
Envoyé : mercredi 16 août 2017 13:08
À : Saila-Ngita, Diafuka <Diafuka.Saila_Ngita@tufts.edu>
Cc : Ricardo Echalar <rechalar@usaid.gov>; Morzaria, Subhash (TCE) [redacted] predict@ucdavis.edu; Irene Naigaga [redacted] Amuguni, Janetrix Hellen M. <Janetrix.Amuguni@tufts.edu>; Bethany Haberer <bhaberer@usaid.gov>; Dennis Carroll <dcarroll@usaid.gov>; Makonnen, Yilma (FAOKE) [redacted]; William Bazeyo [redacted]; Alisa Pereira <apereira@usaid.gov>; Lindsay Parish <lparish@usaid.gov>; Kone, Philippe (FAOCD) [redacted] Mike Cranfield <[redacted] Marilyn Crane <mcrane@usaid.gov>; Sylvia Wanzala <wanza003@umn.edu>; Izetta Simmons <isimmons@usaid.gov>; Jean-Felly Numbi <jnumbi@usaid.gov>; Katey Pelican <pelicank@umn.edu>; Jessica Pettit <jpettit@usaid.gov>; Kirsten Gilardi <kvgilardi@ucdavis.edu>; Ngona Idi Abdullah [redacted] Jeff Bender <bende002@umn.edu>; Lisa Kramer <lkramer@usaid.gov>; Shana Gillette <sgillette@usaid.gov>; Eddy Kambale [redacted]; David J Wolking <djwolking@ucdavis.edu>; Nadira Kabir <nkabir@usaid.gov>; Placide Mbala <pmbala@metabiota.com>; Innocent Rwego <irwego@umn.edu>; Jonna Mazet <jkmazet@ucdavis.edu>; Soumare, Baba (FAORAF) <[redacted]; Andrew Clements <aclements@usaid.gov>; Tzipori, Saul <Saul.Tzipori@tufts.edu>; gasp [redacted] Andrea Long-Wagar <alongwagar@usaid.gov>; Malangu Doyen <[redacted]; Ashna Kibria <akibria@usaid.gov>; Dr Prime Mulembakani <pmulembakani@metabiota.com>; Prince Kimpanga [redacted]
Objet : Re: [Update] EPT2 - GHSA Workplan Coordination Call - DRC

Thank you, Diafuka. Edits are noted and appreciated.

Best,
Sarah

Sarah Paige, PhD, MPH
Senior Infectious Disease Advisor
[redacted]
Desk: +[redacted]
Mobile [redacted]
E-mail: spaige@usaid.gov

On Tue, Aug 15, 2017 at 2:36 PM, Saila-Ngita, Diafuka <Diafuka.Saila_Ngita@tufts.edu> wrote:
My edits attached.
Diafuka

Diafuka Saila-Ngita, DVM, MSc., Ph.D.
Research Assistant Professor, Cummings School of Veterinary Medicine
Department of Infectious Diseases and Global Health
Tufts University,
North Grafton, MA 01536 - USA
USAID Grantee| Emerging Pandemic Threats (EPT)
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Tel.: REDACTED (Mobile)
REDACTED (Mobile/Whatsapp)
REDACTED (Mobile)
Skype: REDACTED
Twitter:

From: Sarah Paige [spaige@usaid.gov]
Sent: Tuesday, August 15, 2017 10:27 AM
To: Ricardo Echalar; Subhash (FAORAP) Morzaria; predict@ucdavis.edu; Irene Naigaga; Amuguni, Janetrix Hellen M.; Bethany Haberer; Dennis Carroll; Makonnen, Yilma (FAORNE); William Bazeyo; Alisa Pereira; Lindsay Parish; Kone, Philippe (FAOCD); Mike Cranfield; Marilyn Crane; Sylvia Wanzala; Izetta Simmons; Jean-Felly Numbi; Katey Pelican; Jessica Pettit; Saila-Ngita, Diafuka; Kirsten Gilardi; Ngona Idi Abdullah; Jeff Bender; Lisa Kramer; Shana Gillette; Eddy Kambale; David J Wolking; Nadira Kabir; Placide Mbala; Innocent Rwego; Jonna Mazet; Soumare, Baba (RAF); Andrew Clements; Tzipori, Saul; gasp; Andrea Long-Wagar; Malangu Doyen; Ashna Kibria; Sarah Paige; Dr Prime Mulembakani; Prince Kimpanga
Subject: Re: [Update] EPT2 - GHSA Workplan Coordination Call - DRC

Dear DRC EPT2/GHSA partners

Thank you all for joining and contributing to the conversation last week. And thank you very much for your patience with the phone issues. Please find attached the notes from our workplanning coordination call that took place last Thursday. Given the challenges of the phone lines and call quality, please review your sections and edit as appropriate.

Best
Sarah

Sarah Paige, PhD, MPH
Senior Infectious Disease Advisor
REDACTED
Desk: REDACTED
Mobile: REDACTED
E-mail: REDACTED

EPT2/GHSA Country Coordination Call

Special Workplan Edition

DRC Team
10 August 2017

Facilitator: Lisa Kramer

Attendees: OHW and OCHEA- Prince Kimpanga, Diafuka Saila-Ngita, Ngona Idi Abdullah, Carrie Coslin, Amy McMillen, Sylvia Wanzala
PREDICT 2- Prime Mulembakani, Mike Cranfield, Karen Salyors, James Ayukekbong, David Wolking
FAO- Philippe Kone
USAID Mission: Jean-Felly Numbi, Bethany Haberer, Izetta Moniku-Moreau
USAID HQ: Sarah Paige, Ashna Kibria, Marilyn Crane

Highlights of project plans for FY18 (October 1, 2017 through September 30, 2018) organized by GHSA Action Package.

AMR

- OHW-
  - Training 300 final year students in vet, pharmacy, medicine, on AMR. A modified version will be delivered to government officials as in-service training.
  - Initiating antimicrobial resistance surveillance activities targeting the animal health sector using designated faculty at veterinary, medical, pharmacy, and nursing schools
- FAO
  - Draft of project with France Veterinary International to determine gene resistance of E. coli in DRC (funds not yet available);
  - Studies on (Assessment of national veterinary capabilities to test antimicrobial resistance; collect data on AB imported into DRC; use of AB in poultry farms);
  - Support an on-site training on Lab AMR testing capacity
  - Support the development of national plan of detection of AMR in pathogens with government and partners including OHW
- PREDICT- no activity planned

BSS

- PREDICT-
  - Will partner with INRB and FAO to train up to 50 people on biosafety and biosecurity protocol including use of PPE, waste management
- FAO-
  - Conduct onsite training on biosafety and biosecurity best practices for safe, secure and responsible conduct (France Veterinary International) with P2 (INRB training?)
  - Identify biosafety and biosecurity focal points in selected laboratories including University Labs
  - Support training of National LMT focal points (3) to become LMT assessors, and on how to use the LMT country portal
- OHW
  - Collaborate with P2 for a workshop in ISO standards, and get some of their students into the PREDICT training

Zoonotic Diseases

- PREDICT
  - Continue target taxa sampling, human biological surveillance, and human behavioral surveillance in Kinshasa and Bas Uele
  - Supporting MOH to follow refugees for risky practices facilitating zoonotic disease transmission
  - Targeting hunting, bushmeat markets, extractive industry sites (forestry and diamonds), and bonobo sanctuary
  - Framing this work as a One Health capacity building initiative through engagement of local government partners from MOH and MOF in the day to day work
- FAO
  - Conduct an assessment of the surveillance system of the Animal Health sector/RENES (indicator based-system, data collection/ validation/ integration/ analysis, interconnectivity/inter-operability with the Public Health surveillance system) using Surveillance System Evaluation Tool (SET);
  - Conduct a meeting to review the report of the surveillance system of the Animal Health sector/RENES and partners (JICA, VETLABs, Veterinary Service, MoH, MoE);
  - Conduct a national workshop with experts from different sectors (RENES, DPSA, SQAV, LABVETs and IPAPEL) to think about the organization and

validation of the National Surveillance System of animal diseases at country level

- Reinforce the animal surveillance system (regulatory texts harmonization, technical) with the storage and analysis (FAO i-EMA tool) in 2 pilot provinces;
- Develop or update national contingency and surveillance plans for 3 to 5 identified priority zoonotic disease (PZD) selected (Rabies, Ebola, Influenza);
- Conduct risk assessment/mapping for HPAI
- Reinforce the capacities of 50 field veterinarians to recognize animal diseases mainly PZD (case definition, clinical signs and lesions), collect epidemiological data , simulation exercise, risk communication, etc. from 5 provinces in the center and North of the country.

- OHW
  - Nothing

Laboratory Systems Strengthening

- PREDICT
  - Build capacity to detect viruses through sharing protocols with national public health and central veterinary lab
  - Train up Lab Coordinator in Bas Uele province on PREDICT protocol
- FAO
  - Support the training of personal of central (3) and provincial (4) labs to conduct core tests (rabies, AI/ND)
  - Evaluation the LVL (Veterinary Laboratory of Lubumbashi) capacities in term of diagnosis testing, QA, biosecurity and biosafety with LMT tools
  - Supply the national veterinary laboratory with key materials/items and reagents required for the core tests including reference antigens/sera for HPAI diagnosis
  - Support confirmatory laboratory testing (AI) of samples submitted
  - Provision of on-line ordering service for primers/probes
  - Provision of on-line ordering service for sequencing
  - Provision of reference antigens by International Ref Lab (AI/ rabies)
  - Support for maintenance and renovate/repair of laboratory equipment including incinerator (LCVK, LVL)
  - Support the training and establishment of software for stock management to improve stocks supply and management systems
  - Supply vet labs with diagnostics for rabies and HPAI

        - Provide SOPs to improve local transports conditions
        - Support IT tools for data collection and sample traceability
        - Support three (3) lab technicians to participate to the regional workshop on samples collection, packaging and shipment.
        - Support a regional training on Lab. Quality management, QA assessment
        - Support a regional training on the calibration and equipment maintenance of laboratory materials

    - OHW
        - Nothing

Surveillance

- PREDICT
    - Working with government to share results and reconcile with current process for surveillance
- FAO
    - Consolidate network of veterinary labs (Kinshasa, Goma, Lubumbashi) into one surveillance system
    - Provide training on algorithms to detect outbreaks
- OHW
    - Nothing

Reporting

- PREDICT
    - (unclear)
- FAO
    - Nothing-
- OHW
    - Nothing

Workforce Development

- PREDICT
    - Training government counterparts
    - Hosting faculty from University of Kinshasa to visit lab
    - Train FETP participants on behavioral surveillance
- FAO
    - Support participation of Veterinary experts/ministry of fisheries and Livestock in country IHR Auto-evaluation (JEE).
    - Support 10 veterinarians and/or technicians for FETP basic level course (3 months)

- Facilitate country's participation in a regional workshop to adopt a systematic approach (definition of curricula, partnership, etc.) for a regional FETPv (Field Veterinary Epidemiology Training Programme) programme in collaboration with the Dakar-based Inter-States Veterinary School (EISMV), CDC (Centre for Disease Control and Prevention)/OHW (One Health Workforce), WAHO (West African Health Organization) and OIE (World Organization for Animal Health), AFENET (African Field Epidemiology Network)
- Support the curriculum revision of vet universities in OH and epidemiology
-

- OHW (13 activities)
  - Operationalize Human Resources for OH across disciplines through the online platform developed during EPT1
  - Student field attachments in Lumata (Lubumbashi) and Nsele (Kinshasa)
  - Four scientific talks and panel discussions on OH topics will be organized in Lubumbashi and Kinshasa
  - Intensive six-month English Language training for students enrolled in 3 new Msc programs being launched in wildlife health and management, infectious disease and global health, and environmental health
    First cohort for the Master's degree course in Wildlife Health and Management
  - Expand Territory Administrator's Training (Areas affected by past major outbreaks)
  - Conduct monitoring and performance assessment of the 87 administrators from Kongo Central province who were trained in last year's territory administrator training course (collaborate with CDC on this because of Emergency Preparedness linkages)
  - Place junior faculty in attachments at partner IPs
  - Establish a vet ambulatory clinic at Lubumbashi (supported by Tufts and World Bank)
  - OCHEA to support faculty exchanges from the region for the new Master's in Wildlife Health and Management
  - Establish 10 scholarships for students enrolled in the new Master's in Wildlife Health and Management
  - Support review of the curriculum for animal health vet technicians to include new OH competencies, AMR, participatory epidemiology

(supported by World Bank and led by Ministry in charge of vocational education)

Emergency Preparedness or EOC

- PREDICT
  - Nothing
- OHW
  - (already mentioned in Workforce)
- FAO
  - (lost the call)

Other: In case of outbreak, PREDICT can be requested to support the govt. Also conducting risk characterization, risk mapping, risk mitigation, modeling and hotspot mapping. FAO can also be requested to support outbreaks.

Highlights of priority areas of coordination across partners

- FAO and OHW training and vet schools on BSS
  - Possible collaboration in the initial AMR surveillance activity.
  - Possible collaboration in the online HR tool once it is up and running
- FAO and CDC on OHW's Territory Administrators' training in Emergency Preparedness

From: Sarah Paige <spaige@usaid.gov>
Sent: Fri, 12 Jan 2018 08:47:20 -0500
To: Lisa Kramer <lkramer@usaid.gov>
Cc: Izetta Simmons <isimmons@usaid.gov>, Jean-Felly Numbi <jnumbi@usaid.gov>, Jessica Pettit <jpettit@usaid.gov>, "Saila-Ngita, Diafuka" <diafuka.saila_ngita@tufts.edu>, Predict inbox <predict@ucdavis.edu>, Ngona Idi Abdullah REDACTED Bethany Haberer <bhaberer@usaid.gov>, Eddy Kambale REDACTED Placide Mbala <pmbala@metabiota.com>, Lindsay Parish <lparish@usaid.gov>, Andrew Clements <aclements@usaid.gov>, "Kone, Philippe (FAOCD)" REDACTED Malangu Doyen REDACTED Mike Cranfield REDACTED Marilyn Crane <mcrane@usaid.gov>, Kambale Syaluha Eddy REDACTED Dr Prime Mulembakani <pmulembakani@metabiota.com>, Prince Kimpanga <prince.kimpanga@unikin.ac.cd>
Subject: [predict] Re: [Update] DRC IP Monthly Coordination Calls

Dear Lisa

Thank you for the update regarding the planned Eastern DRC meeting. I look forward to seeing those communications. Let me know if I can help or support in any way.

Best
sarah

Sarah Paige, PhD, MPH
Senior Infectious Disease Advisor
USAID Africa Bureau/Health Division
Desk: REDACTED
Mobile: REDACTED
E-mail: spaige@usaid.gov

On Fri, Jan 12, 2018 at 12:49 AM, Lisa Kramer <lkramer@usaid.gov> wrote:

> Sarah,
>
> Thank you for the notes and thank you to OHW and FAO for your updates.
>
> Regarding your meeting about the vet labs in Eastern DRC, the meeting did not happen, but each of the projects sent me written communications about the lab situation and planned activities. The ball is in my court to consolidate the information and recirculate.
>
> Lisa

Lisa Kramer
Regional Emerging Pandemic Threats Advisor
USAID/Kenya and East Africa
REDACTED

On Thu, Jan 11, 2018 at 10:40 PM, Sarah Paige <spaige@usaid.gov> wrote:

> Greetings Team DRC
>
> Thank you to OHW/OHCEA for joining the call today, and thank you to those folks who let me know they were unable to join. And thank you to Philippe for sharing this FAO update.
> Here is a link to the google document with IP updates. P2, please add your updates to this document. https://docs.google.com/[redacted]
> REDACTED
>
> In the mean time, I'd like to know of P2 (Gorilla Doctors) and FAO were able to meet at the end of November to discuss the Vet Lab rehab work that was being considered for Eastern DRC. Is there a read-out from that meeting?

Thank you very much!

Best
Sarah

Sarah Paige, PhD, MPH
Senior Infectious Disease Advisor
USAID Africa Bureau/Health Division
Desk: REDACTED
Mobile: REDACTED
E-mail: spaige@usaid.gov

On Tue, Jan 9, 2018 at 4:25 PM, <spaige@usaid.gov> wrote:

> Hi All
>
> Happy 2018! I hope everyone is well. I'd like to be sure we connect this week. I need to get up to speed with IP plans and accomplishments. I'l lbe sending around an agenda tomorrow.
>
> thank you!

DRC IP Monthly Coordination Calls

Dear Teams
Thank you for joining our monthly coordination call. The purpose of the call is to provide greater support from USAID/Washington to the mission and partners through improved communication.

The standing agenda is:

1) USAID updates (5 minutes)
2) Partner updates (accomplishments from past month, plans for current month- 10 minutes each)
3) Issues or Action items
4) AOB

(U.S. and Canada): REDACTED
International dial-in number: REDACTED
Conference code: REDACTED
Host: REDACTED

When Thu Jan 11, 2018 9am – 10am Eastern Time

Where (U.S. and Canada): REDACTED International dial-in number: REDACTED Conference code: REDACTED (map)

Who
- spaige@usaid.gov - organizer
- jnumbi@usaid.gov
- pmulembakani@metabiota.com
- REDACTED
- lparish@usaid.gov
- Prince Kimpanga
- REDACTED
- isimmons@usaid.gov
- bhaberer@usaid.gov

- Kambale Syaluha Eddy
- lkramer@usaid.gov
- predict@ucdavis.edu
- REDACTED
- mcrane@usaid.gov
- pmbala@metabiota.com
- aclements@usaid.gov
- REDACTED
- jpettit@usaid.gov
- diafuka.saila_ngita@tufts.edu

To: Yung-Ting Bonnenfant <ybonnenfant@usaid.gov>
Cc: Andrew Clements <aclements@usaid.gov>, Ashna Kibria <akibria@usaid.gov>, Andrea Long-Wagar <alongwagar@usaid.gov>, [redacted] Amanda Paust <apaust@usaid.gov>, Alisa Pereira <apereira@usaid.gov>, Jeff Bender <bende002@umn.edu>, <david.mutonga@thepalladiumgroup.com>, Diafuka Saila-Ngita <diafuka.saila_ngita@tufts.edu>, "Woldtsadique, Feleseta (FAOET)" [redacted] <[redacted] Innocent Rwego <irwego@umn.edu>, hellen Amuguni <Janetrix.Amuguni@tufts.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, Jack Mortenson <jmortenson@usaid.gov>, Lisa Kramer <lkramer@usaid.gov>, Lindsay Parish <lparish@usaid.gov>, Marilyn Crane <mcrane@usaid.gov>, Margaret Morehouse <mmorehouse@trg-inc.com>, "Nigatu kebede" [redacted] Thierry Nyatanyi <nthierry@umn.edu>, Katey Pelican <pelicank@umn.edu>, Ricardo Echalar <rechalar@usaid.gov>, Innocent Rwego [redacted] "Tzipori, Saul" <saul.tzipori@tufts.edu>, Serge Nzietchueng <[redacted], Shana Gillette <sgillette@usaid.gov>, "Susan Scribner" <[redacted] Woutrina A Smith <wasmith@ucdavis.edu>, "Awoke, Wondwosen (FAOET)" <[redacted] Yirgalem Gebremeskel <ygebremeskel@usaid.gov>, "Makonnen, Yilma (FAORNE)" <[redacted]
Subject: Re: Ethiopia GHSA biweekly update
From: <[redacted]
Sent: Wed, 24 Jan 2018 06:40:00 -0500
Ethiopia GHSA Implementation Biweekly Janury 24.docx

Dear Yung-Ting,

Please find attached P&R biweekly update.
Best regards,

Abebe Wossene Wolde
National One Health Technical Advisor,
USAID EPT-2 Prepardeness and Response Project
[redacted]
[redacted]
e-mail: [redacted]

Websites:
www.dai.com/
www.prepardnessandresponse.org.

From: "Yung-Ting Bonnenfant" <ybonnenfant@usaid.gov>
To: "Lisa Kramer" <lkramer@usaid.gov>, "Woutrina A Smith" <wasmith@ucdavis.edu>, "hellen Amuguni" <Janetrix.Amuguni@tufts.edu>, "Innocent Rwego" [redacted] "Diafuka Saila-Ngita" <diafuka.saila_ngita@tufts.edu>, "Serge Nzietchueng" [redacted] david.mutonga@thepalladiumgroup.com, "Katey Pelican" <pelicank@umn.edu>, "Nigatu kebede" [redacted] "Lindsay Parish" <lparish@usaid.gov>, "Andrea Long-Wagar" <alongwagar@usaid.gov>, "Alisa Pereira" <apereira@usaid.gov>, "Ashna Kibria" <akibria@usaid.gov>, "Andrew Clements" <aclements@usaid.gov>, "Shana Gillette" <sgillette@usaid.gov>, "Jonna Mazet" <jkmazet@ucdavis.edu>, "Margaret Morehouse" <mmorehouse@trg-inc.com>, "Tzipori, Saul" <saul.tzipori@tufts.edu>, "Makonnen, Yilma (FAORNE)" [redacted], "Abebe Wolde (P&R)" <[redacted]>, "Marilyn Crane" <mcrane@usaid.gov>, "Innocent Rwego" <irwego@umn.edu>, [redacted] "Thierry Nyatanyi" <nthierry@umn.edu>, "Ricardo Echalar" <rechalar@usaid.gov>, "Jeff Bender" <bende002@umn.edu>, "Susan Scribner" [redacted] "Amanda Paust" <apaust@usaid.gov>, "Yirgalem Gebremeskel" <ygebremeskel@usaid.gov>, "Woldtsadique, Feleseta (FAOET)" [redacted] "Awoke, Wondwosen (FAOET)" [redacted] "Jack Mortenson" <jmortenson@usaid.gov>, [redacted]
Date: 01/22/2018 08:19 AM
Subject: Ethiopia GHSA biweekly update

Dear Ethiopia GHSA colleagues,

It's time for the biweekly update on GHSA activities in Ethiopia. This update should cover all activities from January 15-26. Please use the attached Word document for your updates, and please send in all updates by Wednesday, January 24 COB. Thanks.

Best wishes,

Yung-Ting

Yung-Ting Bonnenfant, PhD, MPH
Global Health Security Technical Advisor
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT
[redacted]

[redacted]
www.usaid.gov/ethiopia | ybonnenfant@usaid.gov | @USAIDEthiopia[attachment "GHSA_Ethiopia_BiWeekly_Updates Template.docx" deleted by Abebe Wolde/PRP/Projects/DAI]

Ethiopia GHSA Implementation Bi-Weekly Updates

USAID Implementing Partners

Date Submitted	January 24, 2018
Project	Preparedness and Response

I. Highlighted Updates: Please list (maximum five) major updates on activity implementation in Ethiopia.

FORMAT: Insert 1 sentence summary of update (bold). Insert 1-3 sentences of additional information.

- ✓ P&R is finalizing the OH strategic plan document by incorporating feedback obtained from various stakeholders over the past two weeks. The final strategic plan will be presented for endorsement during the next OHSC meeting scheduled to be held on January 31st, 2018 at EPHI.
- ✓ P&R participated in the OH-SMART workforce planning workshop organized by OHWF/OHCEAN at Addis Ababa from January 15-18, 2018. The workshop involved deliberation on the synthesis of existing national health workforce need prepared by consultants and use of OH-SMART process to map existing multi-agency, cross-sectoral collaboration for prioritized zoonotic disease outbreaks namely Rabies, Anthrax, Brucellosis and HPAI. Based on the challenges, an action plans was developed to improve multi-agency, cross-sectoral collaboration during zoonotic disease outbreaks at national level with emphasis on workforce needs.
- ✓ P&R participated in the monthly EPT-2 partners and beyond meeting held at the conference room of FAO on January 23, 2018. Partners in attendance of the meeting were FAO, OHWF, USAID, CDC, WHO and Cornell University. USAID P&R presented its activity update on the status the National OH strategy document, MoU on zoonosis and on the establishment of the OH advocacy taskforce. The OH advocacy taskforce will undertake its first meeting on Thursday, January 25, 2018 at the MoLF.

II. Coordination: Please describe any activities in Ethiopia that may benefit from coordination with other GHSA implementing partners or USG agencies (e.g. CDC, USDA, DTRA, etc.) and how.

The development of a One Health Strategy, formalization and launch of the OHSC/OHP require close coordination and collaboration among EPT2 partners and other OH players.

III. Challenges: Please describe any significant challenges related to planning or implementation of GHSA activities in Ethiopia.

IV. Upcoming GHSA related TDYs: Please provide the information requested below on all GHSA-related TDYs to Ethiopia for the next six weeks. Insert additional rows as necessary.

Traveler(s)	Location	Dates	Trip Objectives	Trip Impact (including

	(areas to be visited)			**deliverables)** *This should also specify if/how this TDY will build host nation capacity and contributes to overarching GHS objectives*

V. <u>Upcoming major GHSA related meetings/trainings/events</u> for the next six weeks (if information is not captured in TDY table above)

Meeting/Training/ Event Topic	Location	Dates	Objectives	Number and type of participants

From: "Dr. Juncai MA" <[redacted]
To: 'Eddy Rubin' <[redacted], 'Peter Daszak' <daszak@ecohealthalliance.org>, 'Jonna Mazet' <jkmazet@ucdavis.edu>, 'Brooke Watson' <watson@ecohealthalliance.org>, [redacted], 'Dennis Carroll' <dcarroll@usaid.gov>
Subject: 答复: Metadata Platform to start with: Differences between GVP and PREDICT's data platform needs
Sent: Sun, 28 Jan 2018 18:45:15 +0800

Dear Eddy,

I am in Beijing airport for Bangkok now.

This afternoon I had a meeting with George Fu GAO. He mentioned to me that China will create large number of data, we will develop our data system,
and he asked me to make our contribution for the development of GVP data system.

Best regards,

Juncai

发件人: Eddy Rubin [mailto:[redacted]
发送时间: 2018年1月28日 16:37
收件人: [redacted] Peter Daszak; Jonna Mazet; Brooke Watson; [redacted]; Dennis Carroll
主题: Metadata Platform to start with: Differences between GVP and PREDICT's data platform needs

Hi,
Having a data platform for the initial countries involved in GVP's launch, so that there is a central placer for data storage from the very beginning, seems essential. EIDITH, the PREDICT database, has been developed with many of GVPs needs in mind. As a pragmatic approach a version of EIDITH could rapidly and at a reasonable cost be put together for the initial GVP roll out. Attached is a power point I put together with the EIDITH team to assess basic difference and needs of a GVP data platform versus that of PREDICT. This is viewed as a data platform to start with and not as the final solution.
I wanted to get this out to you as it may serve as the background to discussions over the next few days.
Eddy

From: "Katherine Leasure" <kaleasure@ucdavis.edu>
To: "'Anthony, Simon J.'" <sja2127@cumc.columbia.edu>, "'Brian Bird'" <bhbird@ucdavis.edu>, "'Hannah R Chale'" <hrchale@ucdavis.edu>, "'Peter Daszak'" <daszak@ecohealthalliance.org>, "'Megan Doyle'" <mmdoyle@ucdavis.edu>, "'Beth Edison'" <bedison@metabiota.com>, "'Jon Epstein'" <epstein@ecohealthalliance.org>, <eskew@ecohealthalliance.org>, <francisco@ecohealthalliance.org>, "[redacted]", "'Tracey Goldstein'" <tgoldstein@ucdavis.edu>, "[redacted]'Denise Greig'" "[redacted]" <gutierrez@ecohealthalliance.org>, <hagan@ecohealthalliance.org>, "'Christine Kreuder Johnson'" <ckjohnson@ucdavis.edu>, "'Billy Karesh'" <karesh@ecohealthalliance.org>, "'Lucy Keatts'" "[redacted]", "'Jennifer K Lane'" <jklane@ucdavis.edu>, <clange@metabiota.com>, "'Elizabeth Leasure'" <ealeasure@ucdavis.edu>, <machalaba@ecohealthalliance.org>, "'Jonna Mazet'" <jkmazet@ucdavis.edu>, "'Corina Grigorescu Monagin'" <cgmonagin@ucdavis.edu>, "'Murray, Suzan'" <MurrayS@si.edu>, <torourke@metabiota.com>, "[redacted]", <ross@ecohealthalliance.org>, <erubin@metabiota.com>, "'Karen Saylors'" <ksaylors@metabiota.com>, "'Woutrina A Smith'" <wasmith@ucdavis.edu>, "'Ava Sullivan'" <sullivan@ecohealthalliance.org>, "[redacted]", "'Molly Turner'" <turner@ecohealthalliance.org>, "'Marcela Uhart'" <muhart@ucdavis.edu>, "'Vodzak, Megan E.'" <VodzakME@si.edu>, "'Brooke Watson'" <watson@ecohealthalliance.org>, <zambrana@ecohealthalliance.org>, "'Zimmerman, Dawn'" <ZimmermanD@si.edu>, "'Alisa Pereira'" <apereira@usaid.gov>, "'King, Lonnie'" <king.1518@osu.edu>, "'Hughes, James M'" <jmhughe@emory.edu>
Subject: PREDICT Semi-Annual Meeting in Napa
Sent: Fri, 6 Apr 2018 16:22:31 -0700
PREDICT Semi-Annual Logistics Guide.pdf
P2 Napa Semi-annual Meeting Agenda (April 2018)_final.pdf

Hello all,

The PREDICT Semi-Annual Meeting (April 10-11, 2018) is just a few days away! We are including a couple of resources here to help you prepare for the meeting, including a logistics guide and a copy of the meeting agenda.

We look forward to seeing you all in Napa for a productive meeting!

Best,
Katie

Katherine Leasure
HR/Payroll/Financial Assistant
One Health Institute
University of California, Davis
530-752-7526
530-752-3318 FAX
kaleasure@ucdavis.edu

PREDICT Semi-Annual Meeting

Date: April 10-11, 2018
Location: Andaz Napa, 1450 1st St, Napa, CA 94559
Telephone Number: 707-687-1234
Website: https://napa.andaz.hyatt.com/en/hotel/home.html
Onsite Contact: REDACTED

Arrival:
Reservations have been booked for all meeting participants via rooming list, in coordination with each partner's administrative team. Confirmation numbers have been sent to those individuals for further distribution. Check-in begins at 4:00pm; the hotel may be able to accommodate requests for early check-in, subject to room availability. Guests will need to provide a credit card upon check-in for their room, tax, and incidental expenses, or will need to coordinate with their administrative team to put a credit card authorization on file.

The meeting is scheduled to begin at 8:15am on Tuesday, April 10 (see attached agenda for details). For those driving from Davis or Sacramento that morning, we would recommend allowing 1.5-2 hours travel time to the meeting location in Napa.

Parking:
If you will be driving to Napa, please note that complimentary self-parking is available in the Clay Street Garage directly behind the hotel. ***It is only 2 hour parking on the 1st and 2nd floor, so be sure to park on the 3rd floor and above for all-day parking with in and out privileges***.

Presentations:
For those of you that will have materials to present during the meeting, please note that we will have a projector and screen setup in the room. We will be bringing a dedicated laptop to be connected to the projector, so please use the following link to upload the final version of your presentation to the meeting Dropbox folder: https://ucdavis.box.com/s/u7krg4kpyojzb7ghpbqxng9naqeemqii

Meals and Refreshments:
We have made arrangements for breakfast, lunch, and AM/PM breaks on both days of the meeting. Please note that hotel event staff will clear breakfast and lunch at the end time noted on the agenda; items served at break will be left out until the end of the day. Dietary needs have been provided by each partner's administrative team, and shared with the hotel. Please contact REDACTED if you have any questions or comments.

We will close the first day of our meeting with a team dinner at Celadon (https://www.celadonnapa.com/). The restaurant is located 0.5 miles from the hotel, or about a 10 minute walk. Our reservation is at 7:00pm; the group will be seated after everyone has arrived, so please be prompt. If you RSVP'd for the dinner, but later find that you will be unable to attend, please notify REDACTED prior to our scheduled reservation time, so she can provide the hostess with an updated head count. The menu will include select options for your starter, entrée, and dessert; available beverages include coffee, tea, and iced tea. Guests may pay cash for additional drinks outside of the options provided. ***For those with dietary restrictions, please advise the server of your needs when placing your order, so the chef can accommodate accordingly***.

Departure:
Check-out ends at 12:00pm. For those departing on April 11, the hotel can hold your luggage in their bell closet until the meeting ends.

PREDICT Semi-annual Consortium Meeting
Andaz Hotel
1450 First Street, Napa, CA
April 10-11, 2018

Agenda

Day 1 - April 10: Great Room 1

9:00 am	Welcome and plans for the next two days (Jonna)
9:15 am	One Health partnership & evaluation plans (Billy and Catherine)
10:00 am	Lab implementation update (Tracey and Simon)
10:45 am	Break
11:00 am	Ebola Host Project update (Brian)
11:30 am	Serology discussion (All)
12:00 pm	Lunch
1:00 pm	Behavioral risk updates (Leilani and Karen)
1:45 pm	Surveillance update and targets for next 6 months (Chris, Megan + discussion all)
3:00 pm	Break
3:15 pm	Stakeholder engagement, education, and outreach - best practices and lessons learned for successful planning (David + discussion)
7:00 pm	**Team dinner at Celadon (500 Main Street)**

Day 2 - April 11: Sun Room

9:00 am	Overview and plans for the day
9:15 pm	Intervention planning workshop: overview of frameworks and approaches, analysis tools, and opportunities for collaboration (All technical teams)
11:00 am	Strategic plan towards interventions (Jonna)
11:15 am	M&A - additional timelines, targets, and products (Peter)
12:00 pm	Lunch
1:00 pm	Interface risk characterization using P1 data (Chris)
1:15 pm	Spillover viral risk ranking update ([REDACTED] and Jonna)
1:30 pm	Deep Forest update (Carlos)
1:45 pm	Livestock 2050 update (Carlos)
2:00 pm	Break
2:15 pm	Capacity team: needs assessment for final push (Woutrina)
3:15 pm	Telling the "PREDICT story" and final report planning (David et al...)
4:00 pm	Road map wrap up for project completion, bridging strategies for sustainability, and the future (Jonna + discussion)

From: Andrew Clements <aclements@usaid.gov>
Sent: Fri, 11 May 2018 11:07:20 +0200
Subject: Re: Change to Approved ITA - K. Saylors (France, DRC)
To: Jonna Mazet <jkmazet@ucdavis.edu>
Cc: Brian Bird <bhbird@ucdavis.edu>

Thanks. I'll take the temperature in Washington to see if the current situation might warrant a removal or increase in the cap.

On Fri, May 11, 2018 at 10:59 AM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:

> Hi Andrew,
> While it might be valid and interesting, I'm afraid that the remaining DRC spending cap limits our ability to finish the project as planned and will not allow any additional field activities. As you know a big part of this limitation has to do with previous outbreak expenditures in DRC.
> If you think it is a priority, we'll have to discuss the cap or a funding source, as well as feasibility and logistics.
> Let us know,
> Jonna

On Fri, May 11, 2018 at 12:56 AM, Andrew Clements <aclements@usaid.gov> wrote:

> Is there an opportunity with Karen soon to be in DRC for advocating/planning for possible field sampling?

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

Begin forwarded message:

> **From:** Jean-Felly Numbi <jnumbi@usaid.gov>
> **Date:** May 11, 2018 at 9:53:08 AM GMT+2
> **To:** Cassandra Louis Duthil <clouisduthil@usaid.gov>
> **Cc:** Izetta Minko-Moreau <isimmons@usaid.gov>, "Kramer, Lisa (Nairobi/EA/RHH)" <lkramer@usaid.gov>, Andrew Clements <aclements@usaid.gov>, Alisa Pereira <apereira@usaid.gov>, Katie Leasure <kaleasure@ucdavis.edu>
> **Subject: Re: Change to Approved ITA - K. Saylors (France, DRC)**
>
> Hi Cassandra,
> The Mission concurs with this trip.
>
> Thanks,
>
> Jean-Felly
>
> On Thu, May 10, 2018 at 10:26 PM, Cassandra Louis Duthil <clouisduthil@usaid.gov> wrote:
>
> > **2nd Attempt:**

Cassandra Louis Duthil
Program Assistant
Emerging Threats Division
U.S. Agency for International Development (USAID)
Telephone:571-551-7430 Cell: REDACTED | **clouisduthil@usaid.gov**

On Mon, May 7, 2018 at 3:29 PM, Cassandra Louis Duthil <clouisduthil@usaid.gov> wrote:

Hello team DRC,

Please see the travel changes to a recently approved PREDICT travel request.

Please let us know if you have any questions. **We will assume this trip is still approved unless notified otherwise. No action required.**

AMENDED ITA:
Metabiota would like to request approval for Karen Saylors to travel from Lusaka, Zambia to Paris, France from May 17-20, 2018 to present on PREDICT Ebola Host Project activities. From Paris, France she will travel to Kinshasa, Democratic Republic of Congo from May 20-25, 2018 for planning and coordination meetings with PREDICT implementing and host country partners.

Trip Purpose: France – Dr. Saylors, Deputy Coordinator for Behavioral Risk and Lead for Metabiota activities, will be traveling to Paris, France at the invitation of the OIE where she will present on PREDICT's Ebola Host Project activities to the Technical Advisory group of the EU-funded EBO-SURSY project. Karen will come to Paris from Zambia, where she will be working on another HIV transmission network study (DHAPP). DRC – from Paris, France she will travel to DRC for PREDICT surveillance coordination, risk characterization and intervention discussions, and an update meeting with the USAID PREDICT Embassy focal point. [*$4000 airfare/$631 (Paris), $394 (Kinshasa) max daily per diems] *During this DRC trip, Karen will also launch a new DRC DHAPP HIV care and treatment project, so this trip represents a cost share with DHAPP.*

PREVIOUS ITA:
Metabiota would like to request travel approval for Dr. Karen Saylors to travel from San Francisco, California, USA to Kinshasa, Democratic Republic of Congo from April 30 to May 5, 2018 to meet with Metabiota PREDICT DRC team.

Trip purpose: To meet with the Metabiota PREDICT DRC team to provide supervisory support and oversight of PREDICT operations. **Dr. Saylors will be traveling to DRC for a non-USAID funded project. Costs will be shared between the two projects.*

Cassandra Louis Duthil
Program Assistant
Emerging Threats Division
U.S. Agency for International Development (USAID)
Telephone:571-551-7430 Cell: REDACTED | clouisduthil@usaid.gov

---------- Forwarded message ----------
From: **Andrew Clements** <aclements@usaid.gov>
Date: Sat, Apr 28, 2018 at 3:20 AM
Subject: Re: Change to Approved ITA - K. Saylors (France, DRC)
To: Katherine Leasure <kaleasure@ucdavis.edu>

Cc: PREDICTMGT <predictmgt@usaid.gov>, predict@ucdavis.edu, "Prof. Jonna Mazet" <jkmazet@ucdavis.edu>

Sorry, forgot to say that Paris travel approved.
Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Apr 28, 2018, at 9:19 AM, Andrew Clements <aclements@usaid.gov> wrote:

Approved subject to mission concurrence (since the DRC dates have shifted significantly)

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Apr 28, 2018, at 1:09 AM, Katherine Leasure <kaleasure@ucdavis.edu> wrote:

Hi Andrew. Metabiota has submitted an amendment to the previously approved ITA for Karen Saylors' travel to DRC. Her travel dates have been rescheduled in order to coordinate with additional travel to France to present on PREDICT Ebola Host Project activities, and revised activity dates in DRC. The previous and amended ITAs are included below for reference. Please let me know if you have any questions. Thanks!

AMENDED ITA:
Metabiota would like to request approval for Karen Saylors to travel from Lusaka, Zambia to Paris, France from May 17-20, 2018 to present on PREDICT Ebola Host Project activities. From Paris, France she will travel to Kinshasa, Democratic Republic of Congo from May 20-25, 2018 for planning and coordination meetings with PREDICT implementing and host country partners.

Trip Purpose: France – Dr. Saylors, Deputy Coordinator for Behavioral Risk and Lead for Metabiota activities, will be traveling to Paris, France at the invitation of the OIE where she will present on PREDICT's Ebola Host Project activities to the Technical Advisory group of the EU-funded EBO-SURSY project. Karen will come to Paris from Zambia, where she will be working on another HIV transmission network study (DHAPP). DRC – from Paris, France she will travel to DRC for PREDICT surveillance coordination, risk characterization and intervention discussions, and an update meeting with the USAID PREDICT Embassy focal point. [*$4000 airfare/$631 (Paris), $394 (Kinshasa) max daily per diems] *During this DRC trip, Karen will also launch a new DRC DHAPP HIV care and treatment project, so this trip represents a*

cost share with DHAPP.

PREVIOUS ITA:

Metabiota would like to request travel approval for Dr. Karen Saylors to travel from San Francisco, California, USA to Kinshasa, Democratic Republic of Congo from April 30 to May 5, 2018 to meet with Metabiota PREDICT DRC team.

Trip purpose: To meet with the Metabiota PREDICT DRC team to provide supervisory support and oversight of PREDICT operations. **Dr. Saylors will be traveling to DRC for a non-USAID funded project. Costs will be shared between the two projects.*

Katherine Leasure

HR/Payroll/Financial Assistant

One Health Institute

University of California, Davis

530-752-7526

530-752-3318 FAX

kaleasure@ucdavis.edu

--

Jean Felly Numbi
USAID-DRC TB& Infectious Disease Advisor
Office Phone #: +243 81 555 45 22
Cellular Phone #: +[redacted]

--

Andrew Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
E-mail: aclements@usaid.gov

For more information on USAID's Emerging Pandemic Threats program, see: http://www.usaid.gov/ept2

Sent: Sat, 12 May 2018 04:11:02 -0700
Subject: Re: Change to Approved ITA - K. Saylors (France, DRC)
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Predict inbox <predict@ucdavis.edu>

For our records, handled through text communications

On Fri, May 11, 2018 at 8:40 AM, Andrew Clements <aclements@usaid.gov> wrote:

> Sounds like the mission might want Predict to help with setting up the mobile lab in the field. Is this something Predict did last year (it sounds familiar)?
> I think the mobile lab is being shipped out of Kinshasa this weekend or early next week.

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On May 11, 2018, at 11:07 AM, Andrew Clements <aclements@usaid.gov> wrote:

> Thanks. I'll take the temperature in Washington to see if the current situation might warrant a removal or increase in the cap.

On Fri, May 11, 2018 at 10:59 AM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:

> Hi Andrew,
> While it might be valid and interesting, I'm afraid that the remaining DRC spending cap limits our ability to finish the project as planned and will not allow any additional field activities. As you know a big part of this limitation has to do with previous outbreak expenditures in DRC.
> If you think it is a priority, we'll have to discuss the cap or a funding source, as well as feasibility and logistics.
> Let us know,
> Jonna

On Fri, May 11, 2018 at 12:56 AM, Andrew Clements <aclements@usaid.gov> wrote:

> Is there an opportunity with Karen soon to be in DRC for advocating/planning for possible field sampling?

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

Begin forwarded message:

From: Jean-Felly Numbi <jnumbi@usaid.gov>
Date: May 11, 2018 at 9:53:08 AM GMT+2
To: Cassandra Louis Duthil <clouisduthil@usaid.gov>
Cc: Izetta Minko-Moreau <isimmons@usaid.gov>, "Kramer, Lisa (Nairobi/EA/RHH)" <lkramer@usaid.gov>, Andrew Clements <aclements@usaid.gov>, Alisa Pereira <apereira@usaid.gov>, Katie Leasure <kaleasure@ucdavis.edu>
Subject: Re: Change to Approved ITA - K. Saylors (France, DRC)

Hi Cassandra,
The Mission concurs with this trip.

Thanks,

Jean-Felly

On Thu, May 10, 2018 at 10:26 PM, Cassandra Louis Duthil <clouisduthil@usaid.gov> wrote:

2nd Attempt:

Cassandra Louis Duthil
Program Assistant
Emerging Threats Division
U.S. Agency for International Development (USAID)
Telephone:571-551-7430 Cell: REDACTED | clouisduthil@usaid.gov

On Mon, May 7, 2018 at 3:29 PM, Cassandra Louis Duthil <clouisduthil@usaid.gov> wrote:

Hello team DRC,

Please see the travel changes to a recently approved PREDICT travel request.

Please let us know if you have any questions. **We will assume this trip is still approved unless notified otherwise. No action required.**

AMENDED ITA:
Metabiota would like to request approval for Karen Saylors to travel from Lusaka, Zambia to Paris, France from May 17-20, 2018 to present on PREDICT Ebola Host Project activities. From Paris, France she will travel to Kinshasa, Democratic Republic of Congo from May 20-25, 2018 for planning and coordination meetings with PREDICT implementing and host country partners.

Trip Purpose: France – Dr. Saylors, Deputy Coordinator for Behavioral Risk and Lead for Metabiota activities, will be traveling to Paris, France at the invitation of the OIE where she will present on PREDICT's Ebola Host Project activities to the Technical Advisory group of the EU-funded EBO-SURSY project. Karen will come to Paris from Zambia, where she will be working on another HIV transmission network study (DHAPP). DRC – from Paris, France she will travel to DRC for PREDICT surveillance coordination, risk characterization and intervention discussions, and an update meeting with the USAID PREDICT Embassy focal point. [*$4000 airfare/$631 (Paris), $394 (Kinshasa) max daily per diems] *During this DRC trip, Karen will also launch a new DRC DHAPP HIV care and treatment project, so this trip represents a cost share with DHAPP.*

PREVIOUS ITA:
Metabiota would like to request travel approval for Dr. Karen Saylors to travel from San Francisco, California, USA to Kinshasa, Democratic Republic of Congo from April 30 to May 5, 2018 to meet with Metabiota PREDICT DRC team.

Trip purpose: To meet with the Metabiota PREDICT DRC team to provide supervisory support and oversight of PREDICT operations. **Dr. Saylors will be traveling to DRC for a non-USAID funded project. Costs will be shared between the two projects.*

Cassandra Louis Duthil
Program Assistant
Emerging Threats Division
U.S. Agency for International Development (USAID)
Telephone:571-551-7430 Cell: [redacted] | **clouisduthil@usaid.gov**

---------- Forwarded message ----------
From: **Andrew Clements** <aclements@usaid.gov>
Date: Sat, Apr 28, 2018 at 3:20 AM
Subject: Re: Change to Approved ITA - K. Saylors (France, DRC)
To: Katherine Leasure <kaleasure@ucdavis.edu>
Cc: PREDICTMGT <predictmgt@usaid.gov>, predict@ucdavis.edu, "Prof. Jonna Mazet" <jkmazet@ucdavis.edu>

Sorry, forgot to say that Paris travel approved.
Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Apr 28, 2018, at 9:19 AM, Andrew Clements <aclements@usaid.gov> wrote:

> Approved subject to mission concurrence (since the DRC dates have shifted significantly)

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Apr 28, 2018, at 1:09 AM, Katherine Leasure <kaleasure@ucdavis.edu> wrote:

> Hi Andrew. Metabiota has submitted an amendment to the previously approved ITA for Karen Saylors' travel to DRC. Her travel dates have been rescheduled in order to coordinate with additional travel to France to present on PREDICT Ebola Host

Project activities, and revised activity dates in DRC. The previous and amended ITAs are included below for reference. Please let me know if you have any questions. Thanks!

AMENDED ITA:

Metabiota would like to request approval for Karen Saylors to travel from Lusaka, Zambia to Paris, France from May 17-20, 2018 to present on PREDICT Ebola Host Project activities. From Paris, France she will travel to Kinshasa, Democratic Republic of Congo from May 20-25, 2018 for planning and coordination meetings with PREDICT implementing and host country partners.

Trip Purpose: France – Dr. Saylors, Deputy Coordinator for Behavioral Risk and Lead for Metabiota activities, will be traveling to Paris, France at the invitation of the OIE where she will present on PREDICT's Ebola Host Project activities to the Technical Advisory group of the EU-funded EBO-SURSY project. Karen will come to Paris from Zambia, where she will be working on another HIV transmission network study (DHAPP). DRC – from Paris, France she will travel to DRC for PREDICT surveillance coordination, risk characterization and intervention discussions, and an update meeting with the USAID PREDICT Embassy focal point. [*$4000 airfare/$631 (Paris), $394 (Kinshasa) max daily per diems]*
**During this DRC trip, Karen will also launch a new DRC DHAPP HIV care and treatment project, so this trip represents a cost share with DHAPP.*

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**Dr. Saylors will be traveling to DRC for a non-USAID funded project. Costs will be shared between the two projects.*

Katherine Leasure

HR/Payroll/Financial Assistant

One Health Institute

University of California, Davis

530-752-7526

530-752-3318 FAX

kaleasure@ucdavis.edu

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Jean Felly Numbi
USAID-DRC TB& Infectious Disease Advisor
Office Phone #: +243 81 555 45 22
Cellular Phone #: +[redacted]

--

Andrew Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
E-mail: aclements@usaid.gov

For more information on USAID's Emerging Pandemic Threats program, see: http://www.usaid.gov/ept2

From: Andrew Clements <aclements@usaid.gov>
To: ksaylors@metabiota.com <ksaylors@metabiota.com>;Jonna Mazet <jkmazet@ucdavis.edu>;bhbird@ucdavis.edu <bhbird@ucdavis.edu>
Sent: 6/12/2018 12:28:35 PM
Subject: Bad-Uélé

Heard that the sample tested negative for Ebola.

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

From: Andrew Clements <aclements@usaid.gov>
Sent: Mon, 2 Jul 2018 09:47:09 -0700
Subject: Re: Next Predict Brownbag
To: Jonna Mazet <jkmazet@ucdavis.edu>
Cc: Peter Daszak <daszak@ecohealthalliance.org>, "cchrisman@usaid.gov" <cchrisman@usaid.gov>, Alisa Pereira <apereira@usaid.gov>, "djwolking@ucdavis.edu" <djwolking@ucdavis.edu>, "ashek@usaid.gov" <ashek@usaid.gov>

Yes, of course. Sorry, Chris!

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Jul 2, 2018, at 5:40 PM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:

> Thanks for organizing -- just reminding that the NEXT Brownbag is Christine Kreuder Johnson on July 13, then Peter on July 30.
> Have a happy fourth,
> Jonna

On Mon, Jul 2, 2018 at 8:07 AM, Peter Daszak <daszak@ecohealthalliance.org> wrote:

> Great – let's do July 30th. I'm assuming that we'd get more people if my talk was scheduled around lunch – so would 12pm work?
>
> Cheers,
>
> Peter
>
> **Peter Daszak**
>
> *President*
>
> EcoHealth Alliance

460 West 34th Street – 17th Floor

New York, NY 10001

Tel. +1 212-380-4474

www.ecohealthalliance.org

@PeterDaszak

@EcoHealthNYC

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: Andrew Clements [mailto:aclements@usaid.gov]
Sent: Friday, June 29, 2018 10:30 AM
To: Peter Daszak
Cc: cchrisman@usaid.gov; Alisa Pereira; Jonna Mazet; djwolking@ucdavis.edu; ashek@usaid.gov
Subject: Next Predict Brownbag

Hi Peter,

Jonna said you were open on either July 30 or Aug 1 for the next brown bag.

July 30 after 11:00 and before 1:30 or after 3:30 is good for me.

Andrew

Andrew P. Clements, Ph.D.

Senior Scientific Advisor

Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health

U.S. Agency for International Development

Mobile phone: 1-571-345-4253

Email: aclements@usaid.gov

From: "William B. Karesh" <karesh@ecohealthalliance.org>
To: Woutrina A Smith <wasmith@ucdavis.edu>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>
Subject: Re: September 10 Speaker at UC Davis?
Sent: Sat, 7 Jul 2018 13:54:25 +0000

Hi Woutrina,
Apologies, I thought I responded but must not have. Unfortunately, the timing will not work for me but thanks s much for thinking of me.

BK

Sent from my iPhone
William B. Karesh, D.V.M
Executive Vice President for Health and Policy

EcoHealth Alliance
460 West 34th Street - 17th Floor
New York, NY 10001 USA

+1.212.380.4463 (direct)
+1.212.380.4465 (fax)
www.ecohealthalliance.org

President, OIE Working Group on Wildlife

Co-chair, IUCN Species Survival Commission - Wildlife Health Specialist Group

EPT Partners Liaison, USAID Emerging Pandemic Threats - PREDICT-2 Program

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.

On Jul 6, 2018, at 7:01 PM, Woutrina A Smith <wasmith@ucdavis.edu> wrote:

> resending to billy so this invite is at the top of the inbox. if not available then i should reach out to peter or others… though sometimes my emails end up in spam, so chris or jonna can you mention this to billy if you talk with him soon? woutrina

---

> On Jun 28, 2018, at 5:27 PM, Woutrina A Smith <wasmith@ucdavis.edu> wrote:
>
> Hi Billy,
>
> It is my pleasure to invite you to speak on a panel at the UC Davis Mondavi Center on the morning of Monday, September 10, 2018. The California Department of Conservation is co-sponsoring with UC Davis the Global Climate Action Summit affiliated event, a symposium titled: **"Managing Lands in a Changing Climate to Improve Agricultural Resiliency, Food Security and Health"**. Governor Jerry Brown is invited to open the event.
>
> Jonna will be facilitating the opening plenary panel, and we thought of you as an excellent speaker who could represent a One Health approach to detecting and managing disease emergence as land use changes. The draft description of the plenary panel summary is below:

9:30 – 10:30 Plenary Panel: Integrating Science for Effective Actions

Integrated approaches are key to managing the numerous resource components of landscapes and to designing climate actions that balance population and planetary health needs. The panel will debate new approaches and models of success to tackle complex challenges that can be shared and scaled.

Please hold the date of September 10 if you can participate, and more information will be sent out in the coming weeks. This event is an official Affiliate Event of the Global Climate Action Summit to be held Sept 12-14 at Moscone Center in SF:

https://globalclimateactionsummit.org/about-the-summit/

Please let me know at your earliest opportunity if you can participate in the symposium. Feel free to give me a call if helpful, and thank you for your consideration of this event.

Best wishes, Woutrina

Woutrina Smith, DVM, MPVM, PhD
Professor of Infectious Disease Epidemiology
Co-Director, UCGHI Planetary Health Center of Expertise
USAID PREDICT-2 Global Capacity Team and Ethiopia lead
UCD Vet Med: One Health Institute
1089 Veterinary Medicine Dr
Davis, CA 95616 USA
wasmith@ucdavis.edu
530 219-1369

From: Elizabeth Leasure <ealeasure@UCDAVIS.EDU>
To: Cara Chrisman <cchrisman@usaid.gov>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, REDACTED Andrew Clements <aclements@usaid.gov>, Alisa Pereira <apereira@usaid.gov>, Predict inbox <predict@ucdavis.edu>
Subject: RE: GVP Pipeline Status?
Sent: Tue, 17 Jul 2018 20:54:18 +0000

Thanks, Cara! I should be able to get you the info you need by the requested deadline. I've already got it on my "to do" list, so your email is very timely. ☺

Thanks,
Liz

Elizabeth Leasure
Financial Operations Manager
One Health Institute
REDACTED *(cell)*
530-754-9034 (office)
Skype: ealeasure

From: Cara Chrisman <cchrisman@usaid.gov>
Sent: Tuesday, July 17, 2018 8:22 AM
To: Elizabeth Leasure <ealeasure@UCDAVIS.EDU>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>; REDACTED Andrew Clements <aclements@usaid.gov>; Alisa Pereira <apereira@usaid.gov>; Predict inbox <predict@ucdavis.edu>
Subject: GVP Pipeline Status?

Hi Liz,

Hope all is well with you! We're working on budget planning and Dennis recommended that we reach out to your team to get a sense of the pipeline for GVP activities within PREDICT-2. Would you be able to provide us an update of the current pipeline, ideally by the end of next week (7/27)?

Just to note, on last week's call, Dennis approved the work with Science Animated that REDACTED is leading. I'm not clear on the current budget figure for that activity (there's a proposed range from $1K-$4K), but wanted to make sure you were aware that there was an additional item pending to factor into your calculations in case you weren't already.

Thanks,
Cara

Cara J. Chrisman, PhD
Senior Infectious Diseases Technical Advisor
U.S. Agency for International Development (USAID) Contractor
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division
2100 Crystal Drive, CP3-8091A, Arlington, VA 22202
Desk: (571) 551-7413
Cell: REDACTED
E-mail: cchrisman@usaid.gov

GHSI-III - Social Solutions International, Inc. prime contractor

Sent: Thu, 19 Jul 2018 09:57:01 -0700
Subject: Economic analysis contract via USAID Predict
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: "djamison@uw.edu" <djamison@uw.edu>
Cc: Dennis Carroll <DCarroll@usaid.gov>, [redacted], Cara Chrisman <cchrisman@usaid.gov>

Dear Dean,
It was nice to speak with you briefly at the Forum on Microbial Threats workshop. I have spoken with Dennis Carroll, and we would like to move forward with getting you what you need to conduct the work.

My One Health Fellow, [redacted], who you might have also met at the Forum, will help us with the contract details once we solidify the plans and mechanism.

Are you free at all this afternoon or tomorrow morning to discuss the scope and optimal mechanism with me briefly? I will be heading to Tanzania tomorrow mid-morning, so it will be great to get things moving. Dennis also mentioned a couple of requirements you had, and I want to make sure I understand them so that we satisfy them fully.

Depending on the mechanism, we may need a scope of work, budget & timeline, but there are possible ways to streamline that, too.

Looking forward to speaking with you,
Jonna

Jonna AK Mazet, DVM, MPVM, PhD
Professor of Epidemiology & Disease Ecology
Executive Director, One Health Institute
Global Director, PREDICT Project of USAID Emerging Pandemic Threats Program

School of Veterinary Medicine
University of California
1089 Veterinary Medicine Drive
Davis, CA 95616, USA
+1-530-752-3630
onehealthinstitute.net

For scheduling and logistical issues, please contact:
REDACTED

From: Elizabeth Leasure <ealeasure@UCDAVIS.EDU>
To: Cara Chrisman <cchrisman@usaid.gov>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, [redacted], Andrew Clements <aclements@usaid.gov>, Alisa Pereira <apereira@usaid.gov>, Predict inbox <predict@ucdavis.edu>
Subject: RE: GVP Pipeline Status?
Sent: Tue, 31 Jul 2018 16:48:51 +0000

Hi Cara. The pipeline provided accounts for participant travel for the China and Thailand meetings, as well as $10K as a placeholder for potential China meeting costs since those plans are still in flux.

Thanks,
Liz

Elizabeth Leasure
Financial Operations Manager
One Health Institute
[redacted] *(cell)*
530-754-9034 (office)
Skype: ealeasure

From: Cara Chrisman <cchrisman@usaid.gov>
Sent: Monday, July 30, 2018 10:21 AM
To: Elizabeth Leasure <ealeasure@UCDAVIS.EDU>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>; [redacted] Andrew Clements <aclements@usaid.gov>; Alisa Pereira <apereira@usaid.gov>; Predict inbox <predict@ucdavis.edu>
Subject: Re: GVP Pipeline Status?

Hi Liz,

Thanks so much for providing this information, really appreciate it. If I'm reading the Thailand/China part correctly, what is currently included is participant travel right now, as opposed to anything around the actual meeting planning (correct me if I'm wrong). I don't have a sense of the thinking for the China meeting, so that is helpful to understand as we think about future needs.

Thanks again,
Cara

Cara J. Chrisman, PhD
Senior Infectious Diseases Technical Advisor
U.S. Agency for International Development (USAID) Contractor
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division
2100 Crystal Drive, CP3-8091A, Arlington, VA 22202
Desk: (571) 551-7413
Cell: [redacted]
E-mail: cchrisman@usaid.gov

GHSI-III - Social Solutions International, Inc. prime contractor

On Fri, Jul 27, 2018 at 11:53 AM, Elizabeth Leasure <ealeasure@ucdavis.edu> wrote:

Hi Cara. The GVP funding pipeline you requested is below. Committed costs include $300K for VirCapSeq and training of two labs in Thailand, as well as funds for travel related to the anticipated meetings in Thailand and China. Please let me know if you have any questions or need any additional information.

Obligated to date: $2,400,000
Spent through June 2018: $1,347,134
Committed July-Sept 2018: $821,433
October 1 pipeline: $231,433

Thanks,
Liz

Elizabeth Leasure
Financial Operations Manager
One Health Institute
REDACTED *(cell)*
530-754-9034 (office)
Skype: ealeasure

From: Cara Chrisman <cchrisman@usaid.gov>
Sent: Tuesday, July 17, 2018 8:22 AM
To: Elizabeth Leasure <ealeasure@UCDAVIS.EDU>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>; REDACTED Andrew Clements <aclements@usaid.gov>; Alisa Pereira <apereira@usaid.gov>; Predict inbox <predict@ucdavis.edu>
Subject: GVP Pipeline Status?

Hi Liz,

Hope all is well with you! We're working on budget planning and Dennis recommended that we reach out to your team to get a sense of the pipeline for GVP activities within PREDICT-2. Would you be able to provide us an update of the current pipeline, ideally by the end of next week (7/27)?

Just to note, on last week's call, Dennis approved the work with Science Animated that [redacted] is leading. I'm not clear on the current budget figure for that activity (there's a proposed range from $1K-$4K), but wanted to make sure you were aware that there was an additional item pending to factor into your calculations in case you weren't already.

Thanks,
Cara

Cara J. Chrisman, PhD
Senior Infectious Diseases Technical Advisor
U.S. Agency for International Development (USAID) Contractor
Bureau for Global Health, Office of Infectious Disease, Emerging Threats Division
2100 Crystal Drive, CP3-8091A, Arlington, VA 22202
Desk: (571) 551-7413
Cell: REDACTED
E-mail: cchrisman@usaid.gov

GHSI-III - Social Solutions International, Inc. prime contractor

From: Andrew Clements <aclements@usaid.gov>
To: Karen Saylors <ksaylors@metabiota.com>
CC: Jonna Mazet <jkmazet@ucdavis.edu>;David Wolking <djwolking@ucdavis.edu>
Sent: 8/9/2018 1:17:55 PM
Subject: Re: DRC Outbreak Strain

Thanks, Karen

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Aug 9, 2018, at 8:04 PM, Karen Saylors <ksaylors@metabiota.com> wrote:

I believe there was some reporting confusion at the MOH meeting. The samples used for sequencing were the samples collected from the first cases of Ebola in Mangina. These strains from Mangina are closely related to the strain of Likati in 2017. In fact, there were no positive samples sequenced from Beni, only from Mangina, so it's best to rely on the data from the INRB report.

From: "Ogawa, V. Ayano" <VOgawa@nas.edu>
To: 'Jonna Mazet' <jkmazet@ucdavis.edu>, "'daszak@ecohealthalliance.org'" <'daszak@ecohealthalliance.org'>, "'dmrizzo@ucdavis.edu'" <'dmrizzo@ucdavis.edu'>, "'george.poste@asu.edu'" <'george.poste@asu.edu'>, "'jeff.duchin@kingcounty.gov'" <'jeff.duchin@kingcounty.gov'>, "'mary_wilson@harvard.edu'" <'mary_wilson@harvard.edu'>, "'Jennifer.gardy@bccdc.ca'" <'Jennifer.gardy@bccdc.ca'>, "'Hughes, James M'" <jmhughe@emory.edu>, 'Gail Hansen' [redacted], "'Barton Behravesh, Casey (CDC/OID/NCEZID)'" <dlx9@cdc.gov>, "'King, Lonnie'" <king.1518@osu.edu>, "'Anderson, Kevin'" <Kevin.Anderson@HQ.DHS.GOV>, "'Hermsen, Elizabeth D'" <elizabeth.hermsen@merck.com>, "'Miller, Sally'" <miller.769@osu.edu>
Cc: "Shah, Cecilia" <cshah@nas.edu>, "Tran, Thu Anh" <TTran@nas.edu>, [redacted] Stephanie Calderone <Stephanie.Calderone@asu.edu>, '[redacted], Alison Andre <andre@ecohealthalliance.org>
Subject: OHAC call #11 materials: Aug 22, 4pm ET
Sent: Mon, 20 Aug 2018 20:55:58 +0000

OHAC Mtg 11 Agenda FINAL.pdf
OHAC Roster August 2018.pdf
Bio of Elizabeth Mumford.pdf
OHAC topics for deliverables 2018.pdf

Dear One Health Action Collaborative,

As a reminder, the next OHAC call will take place this **Wednesday, August 22 at 4-5pm (Eastern Time)**. Please review the attached meeting agenda and materials.

In addition, the One Health workforce survey that Eri has been working on is finally ready for your feedback! **Please fill out the survey below** prior to the call (will only take a few minutes) and be prepared to give feedback. We will go over any issues on the call. If you are unable to participate in the call, we would still like you to take the survey and get your comments via email.

➔ **Survey link**: https://ucdavis.co1.qualtrics.com/jfe/form/SV_1li11y0IM4QnObX

To join the meeting, please use the Zoom video conferencing information below. NOTE: This info is different from the usual call-in number.

- Join from PC, Mac, Linux, iOS or Android: [redacted]
- Or iPhone one-tap : US: [redacted]
- Or Telephone: Dial (for higher quality, dial a number based on your current location):
  US: +[redacted]
  Meeting ID: REDACTED
  International numbers available: https://zoom.us/u/bOPbL4Weh

As always, please feel free to contact me if you have any questions. We look forward to diving back into the discussions!
Best,
Ayano

V. Ayano Ogawa, S.M.
Program Officer
Board on Global Health | Health and Medicine Division
The National Academies of Sciences, Engineering, and Medicine
500 Fifth Street, NW, Washington, DC 20001
Phone: 202.334.1349
The National Academies of
SCIENCES · ENGINEERING · MEDICINE

The National Academies of
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FORUM ON MICROBIAL THREATS
ONE HEALTH ACTION COLLABORATIVE ROSTER 2018

FORUM MEMBERS (7) ----------

Jonna A. K. Mazet, D.V.M., M.P.V.M., Ph.D. *(chair)*
Professor of Epidemiology & Disease Ecology
Executive Director, One Health Institute
School of Veterinary Medicine
University of California, Davis
Davis, CA

Kevin Anderson, Ph.D.
Senior Program Manager
Science and Technology Directorate
Department of Homeland Security
Washington, DC

Peter Daszak, Ph.D.
President
EcoHealth Alliance
New York, NY

Jennifer L. Gardy, Ph.D.
Associate Professor and Canada Research Chair in
Public Health Genomics
University of British Columbia
Vancouver, BC, Canada

Elizabeth D. Hermsen, Pharm.D., M.B.A.
Head of Global Antimicrobial Stewardship
Merck & Co., Inc.
Omaha, NE

Sally A. Miller, Ph.D.
Professor of Plant Pathology
State Extension Specialist for Vegetable Pathology,
Ohio Agricultural Research and Development Center
The Ohio State University
Wooster, OH

Mary E. Wilson, M.D.
Clinical Professor of Epidemiology & Biostatistics
UCSF School of Medicine
San Francisco, CA

EXTERNAL MEMBERS (7) ----------

Casey Barton Behravesh, D.V.M., Dr.P.H., M.S.
Captain, U.S. Public Health Service
Director, One Health Office in National Center for
Emerging and Zoonotic Infectious Diseases
U.S. Centers for Disease Control and Prevention
Atlanta, GA

Jeffrey S. Duchin, M.D.
Health Officer and Chief
Communicable Disease Epidemiology &
Immunization Section for Public Health for
Seattle & King County
Seattle, WA

Gail R. Hansen, D.V.M., M.P.H.
Senior Advisor
Hansen Consulting, LLC
Washington, DC

James M. Hughes, M.D.
Professor of Medicine and Public Health
Emory University
Atlanta, GA

Lonnie J. King, D.V.M., M.S., M.P.A.
Professor and Dean Emeritus
College of Veterinary Medicine
The Ohio State University
Columbus, OH

George H. Poste, D.V.M., Ph.D.
Chief Scientist, Complex Adaptive Systems Network
Arizona State University—SkySong
Scottsdale, AZ

David M. Rizzo, Ph.D.
Chair, Department of Plant Pathology
University of California, Davis
Davis, CA

Elizabeth Mumford, D.V.M., M.S.
One Health Country Operations team
Department of Country Health Emergency Preparedness and IHR
World Health Organization

Biography:
Elizabeth Mumford trained as a veterinarian in the USA. After completing a post-graduate degree and working in equine practice, she returned to academia to work on field epidemiology projects in equine influenza and other equine respiratory diseases, vesicular stomatitis, and food-borne zoonoses including BSE. From 2002, Dr Mumford moved to Switzerland and engaged in international disease issues with the Swiss Federal Veterinary Office, and led national capacity building projects in countries including Viet Nam, Egypt, and Serbia.
Since 2006, Dr Mumford has been working at the World Health Organization in Geneva, initially with the Global Influenza Programme as the project lead for human-animal interface influenza activities and liaison with the international agencies in WHO's influenza work. Her current activities include the integrated assessment of influenza risks at the human animal interface and rapid risk assessment for zoonotic diseases generally, the facilitation of cross-institutional collaborations and networks, and development and implementation of cross-sectoral approaches to address health risks at the human-animal interface.

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FORUM ON MICROBIAL THREATS

ONE HEALTH ACTION COLLABORATIVE (OHAC) CALL #11
Wednesday, August 22, 2018
4-5pm (ET)

PARTICIPANTS

MEMBERS:
Jonna Mazet, Kevin Anderson, Jeff Duchin, Jennifer Gardy, Gail Hansen, Jim Hughes, Sally Miller, and Dave Rizzo (*Tentative/Absent:* Casey Barton Behravesh, Peter Daszak, Elizabeth Hermsen, Lonnie King, George Poste, and Mary Wilson)

STAFF: Ayano Ogawa, Ceci Mundaca Shah, and Anh Tran (National Academies); REDACTED (UC Davis)

ATTACHMENTS

- Updated membership roster 2018
- Potential member: Elizabeth Mumford bio
- Link to One Health workforce survey
- List of topics for potential deliverables 2018-2019

AGENDA ITEMS

1. Welcome (Ayano)
    - Introduction of new members (Kevin and Sally)
    - Updates on members who have rotated off – see updated roster
2. Membership (Jonna and Ayano)
    - Review of newly developed membership terms and conditions
    - Adding new members to fill missing expertise – International perspective (see bio for Elizabeth Mumford)? Social/behavioral sciences? Environmental health?
3. One Health workforce deliverable (Jonna and REDACTED
    - Updates on survey development – see link, survey will also be shown during call
    - Subcommittee membership – Katie Pelican, University of Minnesota?
4. New deliverables for 2018 and 2019 (Jonna)
    - See running topic list attached
    - Possible Forum workshop on One Health in 2019?
5. Other brief updates
    - Conversation with Cheryl Stroud from One Health Commission (Jonna)
    - Core competencies paper presentation at the Int'l One Health Congress REDACTED
    - Pre-workshop event and Forum workshop on "Readiness for Microbial Threats 2030: Exploring Lessons Learned Since the 1918 Influenza Pandemic" (Ceci):
        - November 26, 2018 at National Academies Building in DC
        - November 27-28, 2018 at the National Academies Keck Center in DC
6. Next steps and action items (Ayano)
    - Call #12: Tuesday, October 9 at 2-3pm ET

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ONE HEALTH ACTION COLLABORATIVE

Running List of Topics for Potential Deliverables 2018-2019
(Note: topics not listed in order of importance)

- **US and One Health**
  - Weigh in on follow on activities of the U.S. One Health Zoonotic Disease Prioritization Workshop and Joint External Evaluation report (Casey)

- **Global health security/biodefense and One Health**
  - Explore how the One Health approach can bolster national and global health security and defense (George)

- **Global Virome Project**
  - Support and advise the Global Virome Project (Jonna and Peter)

- **Food security and safety**
  - Link food safety and its direct impacts on human and animal health (Lonnie)

- **Socio-structural boundaries for behavior change**
  - Bring in social and behavioral science angle to One Health (Gail)

- **A framework/model of collaboration for One Health in schools**
  - Create a model of collaboration and education that can be adopted by U.S. schools and in specific regions of need, based on the findings of the One Health workforce paper (OHAC deliverable #2 in progress) (Lonnie)

- **FAO/OIE/WHO tripartite's efforts in One Health**
  - Review the tripartite's effectiveness in advancing the One Health approach (Peter)

- **Communicating about One Health**
  - Communicate a clear definition of One Health and its success stories that would resonate with multiple audiences (Peter and Jenn)
  - Propose how One Health and other similar approaches/disciplines like Planetary Health, Ecohealth, and Geohealth should find ways to communicate and coordinate better with each other (Peter)

From: Corina Grigorescu Monagin <cgmonagin@ucdavis.edu>
To: Amy Diallo <aqdiallo@usaid.gov>, Laura Campbell <lcampbell@usaid.gov>
Cc: Jaber Amine Belkhiria <jabelkhiria@ucdavis.edu>, KANE Yaghouba <[redacted]>, Philippe Mutwa <pmutwa@usaid.gov>, "predict@ucdavis.edu" <predict@ucdavis.edu>, "predictmgt@usaid.gov" <predictmgt@usaid.gov>, "Andrew Clements" <aclements@usaid.gov>, David John Wolking <djwolking@ucdavis.edu>
Sent: Tue, 28 Aug 2018 20:56:58 +0000
Subject: [predict] Re: Please send FY19 workplan
PREDICT_Senegal_FY19 Brief_DRAFT.pdf

Dear Amy,

Please see attached for the PREDICT Senegal FY19 Country Brief. Please note that this is a draft.

Any questions, please let us know.

Regards,

Corina Monagin, MPH, DrPH
Project Scientist, PREDICT Project of USAID
One Health Institute
School of Veterinary Medicine
University of California Davis
1089 Veterinary Medicine Drive
Davis, CA 95616, USA

Mobile: [redacted]

From: Amy Diallo <aqdiallo@usaid.gov>
Date: Tuesday, August 28, 2018 at 3:36 AM
To: Laura Campbell <lcampbell@usaid.gov>
Cc: Aline Kane <akane@ghscta.org>, Mame Cor Ndour <Mame_Ndour@abtsn.com>, Babacar Gueye <bgueye@intrahealth.org>, Isseu Toure <Isseu_Toure@abtassoc.com>, "Isaiah Ndong (indong@hrh2030program.org)" <indong@hrh2030program.org>, Moussa Mbaye <Moussa_Mbaye@abtsn.com>, "Dufils, Jean-Michel" <jdufils@rti.org>, "[redacted]", Youssouf KABORE <[redacted]>, KANE Yaghouba <[redacted]>, Ismaila kane <[redacted]>, Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>, Judith Nguimfack Tsague <[redacted]>, Doudou Diop <[redacted]>, Savadogo Madi <savadogo.madi@ohcea.org>, "mawofall@rti.org" <mawofall@rti.org>, Babacar Lo <blo@usaid.gov>, Oumar Sagna <osagna@usaid.gov>, Khadidiatou Aw <kaw@usaid.gov>, Philippe Mutwa <pmutwa@usaid.gov>, Fatou Ndiaye <fndiaye@usaid.gov>, Hassane Yaradou <hyaradou@usaid.gov>, "Diouf, Mame Birame (DAKAR/HEALTH)" <mbdiouf@usaid.gov>, Emma Din <edin@usaid.gov>
Subject: Please send FY19 workplan

Dear COPs,

Kindly share the current version of your FY19 workplan. I understand these are not yet approved, but they will be very helpful to me as I finalize our FY19 operational plan on a tight timeline. Please copy your AOR/COR/Activity Manager.

Thank you,
Amy

On Tue, Jul 10, 2018 at 4:37 PM Laura Campbell <lcampbell@usaid.gov> wrote:
Dear COPs,

I have a few items/issues/actions to update you on. As always, I welcome your thoughts and questions.

Summer Coverage
L'été est arrivé! Amy will be traveling until August 14th. I will be out of the office on REDACTED REDACTED. Rama will be out of the office August 13th - September 12th.

- Rama will be Acting Office Director from July 20 - August 14.
- Amy will be Acting Office Director from August 14 - September 12th.
- Emma Din will be Acting Deputy Director for the entirety of the duration and will be supporting Rama and Amy throughout the transitions.

We will also have two folks from Washington, DC here - Chris Penders and Liz Lugten - copied here. They will be supporting the team through the summer and will be a good resource.

As always, your AOR/COR or Activity Manager is your first point of contact. Should you need to reach the management team during the summer transition please make sure to copy those people who are covering/supporting so we can respond in a timely way.

DakarReporting - dakarreporting@usaid.gov
During the IP meeting our RAAO office discussed the new reporting email address.

"As discussed in the March 27, 2018 Implementing Partners' meeting, starting with the quarter ending March 30, 2018, we kindly ask that all partners copy the USAID/Senegal reporting mailbox (dakarreporting@usaid.gov) when they submit their grant / contract deliverables (e.g. quarterly / annual reports, studies, etc.) to their A/COR. This includes draft and final versions."

He followed up with an email to all partners, but I realize that many of you have not recieved it because of the bilateral vs. field support mechanism difference.

ACTION: Please send your last quarterly report to dakarreporting@usaid.gov and copy your AOR/COR and activity manager. Please also keep dakarreporting@usaid.gov in CC whenever you send future reports.

New AMELP Template
The Program office has shared a new Activity, Monitoring, Evaluation and Learning Plan template with our team. We would like to make an effort on the health team to standardize our AMELPs so we are looking at the same format/presentation across projects.

Please consider this format as you work on your work plans and indicators for the next year's workplan. Ibrahima Top is the point of contact for this new format and will be meeting with the project M&E team to walk through the new format. Note that we do not want you to re-create the enormous tables that you have already created to track all of your indicators - those can still serve as attachments to this document. This document is to make sure that we have a good understanding of the learning agenda across programs and track the questions and learning that is happening. Please contact Ibrahima with questions: Ibrahima Top <itop@usaid.gov>.

Media Tracker
The Program Office is make an effort to track any event or meeting that might end up published in the media. When you are planning any event which may involve the participation of any type of media please inform your respective USAID Project Manager (AOR, COR, Activity Manager) with a few sentences explaining the **purpose of the event, where and when it will take place.**

This will allow us, among other things, to inform the USAID and US Embassy leadership prior to any event which may appear in the media. If you have any questions please consult your AOR/COR or Activity manager and cc: our DOC Thomas Yocum <tyocum@usaid.gov>.

Thank you very much for your cooperation with this request.

Peace Corps
Amy has been discussing an opportunity that may be of interest to you - and I wanted to gauge interest with you all. There are many Peace Corps volunteers that would prefer to stay a third year in Senegal and start their fledgling careers in international development with an organization like yours. Third year volunteers are supported by Peace Corps with a nominal stipend and would be available to work in regional bureaus (they are not allowed to work in Dakar). They speak local languages and English fluently and are anxious to get even just basic experience working with a partner. This could be a great way to get an eager young person on your team, in the field, documenting successes, helping with communications activities and SBCC.....or

other tasks that you need done in the field. If this is of interest to you or your colleagues, please email Amy Diallo - aqdiallo@usaid.gov - she will be coordinating with Peace Corps upon her return.

Laura Campbell
Health Office Director
USAID/Senegal
Tel: (221) 33 879 4000 x4972
Mobile: REDACTED

--

Amy Quinn Diallo
Deputy Health Office Director
USAID/Senegal

aqdiallo@usaid.gov
+REDACTED

SENEGAL
Year 5 (October 2018-September 2019)

Implementing Partners: University of California, Davis; Ecole Inter États Sciences et de Médecine Vétérinaires (Inter State School of Veterinary Science and Medicine of Dakar; EISMV) de Dakar; Université Cheikh Anta Diop de Dakar (Cheikh Anta Diop University; UCAD); Institut Sénégalais de Recherches Agricoles (Senegalese Institute of Agricultural Research; ISRA)
Primary Investigators: Dr. Yaghouba Kane, EISVM ; Dr. Modou Moustapha Lo, ISRA ; Dr. Daouda Ndiaye, UCAD
Global Points of Contact: Dr. Corina Monagin and Dr. Jaber Belkhiria, UC Davis

Partners

- Cabinet du Premier Ministre, Sénégal (Prime Minister's Cabinet, Senegal), Dakar
- Defense Threat Reduction Agency/Cooperative Biological Engagement Program (DTRA/CBEP)
- Direction des Parks Nationaux (DPN)
- Institut Pasteur de Dakar (IPD), Dakar
- ISRA/*Laboratoire* National d'Elevage et de Recherches Vétérinaires (National Livestock and Veterinary Research Laboratory; LNERV), Dakar
- Ministère de l'Agriculture et de l'Equipment Rural (Ministry of Agriculture and Rural Equipment ; MAER), Dakar
- Ministère de l'Elevage et des Productions animales (Ministry of Livestock and Animal Production; MEPA), Dakar
- Ministère de l'Environnement et du Développement Durable (Ministry of the Environment and Sustainable Development; MEDD), Dakar
- Ministère de la Santé et de l'Action Sociale (Ministry of Health and Social Action; MSAS), Dakar
- Organisation des Nations Unies pour l'Alimentation et l'Agriculture (the Food and Agriculture Organization of the United Nations; FAO), Dakar
- Organisation mondiale de la Santé Sénégal (World Health Organisation Senegal), Dakar
- REDISSE (World Bank), Dakar
- UCAD / Hôspital Aristide le Dantec (Dantec University Hospital), Dakar
- US CDC, Dakar
- USAID EPT One Health Workforce

Where we work

Bandia, Sindia region. The Bandia area is a biodiverse private reserve in Senegal and a major tourist attraction, receiving many national and international visitors that are exposed to non-human primates, rodents, and bats through informal contact at locations such as outdoor restaurants. In collaboration with government, GHSA, and EPT-2 partners, PREDICT is investigating risks for zoonotic disease transmission at several sites in the area due to the high

potential for viral spillover at this important animal-human interface. Targeted sites include: **the Sindia district**, home to frequented clinics of residents who live near the Bandia reserve and are regularly exposed to wildlife in their daily lives; and the **Bandia Bambara, Escale, Ngaparou, and Keniammbour villages**, which are home to Bandia Reserve workers who live near the Bandia reserve and are regularly exposed to wildlife in their daily lives.

Prevent and Detect Zoonotic Disease

Areas identified by the Senegal JEE for strengthening: Ensuring lab integrated surveillance and diagnostic capacities; creating links between human and animal health laboratories; informing, educating and communicating with the population

PREDICT/Senegal directly supports the national surveillance system, contributes to the development and implementation of the country GHSA roadmap, and provides opportunities to strengthen mechanisms for responding to priority zoonotic diseases, such as avian influenza and hemorrhagic fevers (Rift Valley, Ebola, Marburg, etc.). In addition, PREDICT continues to support the development of Senegal's One Health workforce from the national to district level through field and lab-based training and engagement of staff from the Ministries of Health, Agriculture, Livestock, and Environment, national research institutes, universities, and non-governmental organizations in surveillance and disease detection activities.

In Year 5, PREDICT activities will shift from concurrent animal and human sampling to risk characterization, stakeholder engagement, and outreach with national and community-level partners at our Sindia region sites. Data analysis and risk communication will be a central focus to encourage data and information sharing with Senegal's One Health platform targeting improvements in the national zoonotic disease surveillance system. Additionally, PREDICT will continue to work with district and regional level animal and human health officers to transfer knowledge, skills, and capacity to strengthen Senegal's One Health workforce.

Strengthening Laboratory Systems

Areas identified by the Senegal JEE for strengthening: Strengthen laboratories in terms of equipment and technical capacities; better organize the current laboratory system; harmonize diagnostic procedures; improve communication between the various stakeholders in the laboratory system; strengthen biosafety and biosecurity measures in laboratories.

PREDICT directly supports the national laboratory system in Senegal and continues to contribute to an integrated One Health laboratory network by engaging the animal health lab at the Institut Sénégalais de Recherches Agricoles (ISRA), along with the human lab at the Université Cheikh Anta Diop de Dakar (UCAD). At these labs, PREDICT strengthens capacity for detection of priority zoonotic diseases (e.g., zoonotic influenza viruses and VHFs - Ebola, Marburg, and Influenza) and other emerging threats. PREDICT's One Health

laboratory network fosters communication and coordination between animal and human labs and ministries; provides joint training exercises and routine information exchanges among lab managers, technicians, and ministry focal points; communicates data and findings to inform surveillance; and works to transfer knowledge and capacity to other labs in the national system.

In Year 5, PREDICT laboratory activities will focus on completing analysis of PREDICT animal and human samples and strengthening Senegal's capacity for viral detection. Viral findings will contribute to analysis and risk characterization efforts that will inform the strategies for risk communication and community outreach campaigns.

Workforce Development and Improving Real-time Surveillance

Areas identified by the Senegal JEE for strengthening: Provide training and motivation to ensure the development of a qualified public health workforce; strengthen the event-based surveillance system; further integrate hospitals into the surveillance system.

PREDICT provides training to strengthen One Health workforce capacity in Senegal, as central, regional, and local ministry staff participate in zoonotic disease surveillance activities. PREDICT engages the Ministry of Agriculture, the DPN, the GHSA Task Force, as well as the newly established COUS (Health Emergency Operation Center) at the Ministry of Health in efforts to strengthen national capacity for zoonotic disease surveillance, especially for the animal health sector by training DPN staff in One Health skills and safe wildlife capture and sampling during targeted surveillance operations. PREDICT also works with COUS and other GHSA partners to strengthen data platforms and improve communications and linkages across animal and human sectors, as project data and findings on zoonotic diseases and enabling behaviors underlying transmission are shared and discussed. PREDICT will continue to serve as a resource for the development and operationalization of Senegal's One Health Strategic Plan with local university, government, and research organization personnel.

In addition, when requested by the government (and approved by the PREDICT Management Team) PREDICT also supports outbreak response and preparedness through field investigations, diagnostic testing, and epidemiological support.

In Year 5, PREDICT workforce development activities will target knowledge and technology transfer and skill development across the full spectrum of our surveillance, detection and prevention scope to foster sustainable zoonotic disease surveillance platforms beyond the life of the project.

Year 5 Activities by GHSA and JEE Action Package

Supplementary information will be provided in the GHSA workplan template

Action Package	Indicator	PREDICT Activities

Zoonotic Diseases	P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens	• Risk communication and stakeholder engagement at national and community levels to foster improved awareness of zoonotic diseases and transmission pathways along with potential prevention and control strategies.
Zoonotic Diseases	P.4.1 Veterinary or Animal Health Workforce	• Targeted trainings for the current One Health workforce to transfer skills and knowledge and equip partners with the field, lab and data analysis skills required for successful zoonotic disease surveillance.
Zoonotic Disease	P.4.3 Mechanisms for responding to zoonosis and potential zoonosis are established and functional	• Data analysis and risk characterization to build the evidence base for priority zoonoses and emerging and re-emerging pathogens.
National Lab Systems	D.1.1 Laboratory testing for detection of priority diseases	• Continuation of laboratory testing and viral detection at partner labs both in and outside of Senegal, to complete testing of samples for priority zoonotic diseases and other emerging threats. • PREDICT will continue to engage with multiple labs within the national network to increase capacity to strengthen detection capabilities across both human and animal health sectors. • Developing biosecure sample and data storage and archival plans and sharing plans with national partners to foster a rich biobank of wildlife and human specimens for further disease diagnostic and risk characterization work.
Surveillance	D.2.2 Inter-operable, interconnected, electronic real-time reporting system	• Target One Health cross-sectoral collaboration and communication, capacity development and coordination, particularly through the sharing of project data, information, and findings targeting improvements to national surveillance for zoonotic diseases and emerging viral threats.
Workforce Development	D.4.1 Human resources are available to implement IHR core capacity requirements	• Continued trainings targeting knowledge and technology transfer and skill development across the full spectrum of PREDICT's surveillance, detection and prevention scope to foster sustainable zoonotic disease surveillance platforms beyond the life of the project.

Emergency Operations Centers	R.2.1 Capacity to activate Emergency Operations	• Provide outbreak readiness and preparedness plans to assist government partners if requested by the Government and approved by PREDICT Management Team.
Other Y5 Activities to Strengthen Capacity for Sustainable One Health Surveillance and Viral Detection		• Participation in a PREDICT All-country meeting to share findings, successes, and lessons learned and to catalyze One Health partnerships and networks across the West, Central, and East Africa region.

From: "William B. Karesh" <karesh@ecohealthalliance.org>
To: Jonna Mazet <[redacted]>
Subject: One Health Workforce Search Grants | GRANTS.GOV
Sent: Thu, 25 Oct 2018 18:35:33 +0000

Just in case you or one of the gang might be interested.

BK

https://www.grants.gov/custom/viewOppDetails.jsp?oppId=309813

Search Grants | GRANTS.GOV

Invitation: Pre-Application Conference

TentativeDates: November 29, 2018(Washington, DC) and December 7, 2018 (London, UK)

DearInternational Development Community:

The United States Agency for International Development (USAID) invitesorganizations working on the prevention, detection, and response of infectiousdisease threats to participate in one of two pre-application conferences beingorganized by USAID's Emerging Threats Division that will be held on November29, 2018, in Washington, DC, and on December 7, 2018, in London, UK. At thesemeetings, USAID plans to discuss a Request for Information (RFI) that isanticipated to be released in approximately 30 days from this publication inorder to solicit feedback from a broad range of stakeholders, including thehigher education community, on a planned activity to equip current and futureworkforces with the multisectoral skills and competencies required to addressinfectious disease threats.

Addressinginfectious disease threats requires workforces that not only have the technicalskills and competencies to function within their own discipline and sector, butalso possess the skills to effectively and sustainably work across sectors anddisciplines. USAID has invested fornearly a decade in the development of two regional OH university networks inAfrica and Southeast Asia that are committed to transforming health workforcesto function more effectively and across sectors: One Health Central and EastAfrica (OHCEA), which is based in Kampala, Uganda, and Southeast Asian OneHealth University Network (SEAOHUN), which is based in Chiangmai, Thailand.These networks are comprised of 144

schoolsand faculties in 84 universities across 12 countries. Under OHW NextGeneration, USAID plans to build on this investment by strengthening theorganizational capacity of these two networks to use assessments ofmultisectoral workforce capacity to inform the design and adaptation oftraining and educational offerings, develop and deliver educational offeringsin alignment with prioritized One Health core competencies and technicalskills, and acquire and manage direct donor funding.

Onecooperative agreement will be awarded to a qualified higher educationinstitution that will

represent a coalition of universities and other publicand private sector organizations that will work with OHCEA and SEAOHUN, asbeneficiary institutions. Moreinformation on eligibility can be found under the "Eligibility" section of thisSynopsis.

Thisis an open invitation, however, the meetings will have limited capacity. Assuch, USAID kindly requests that all organizations planning to participate tolimit attendance to two (2) participants. USAID also recommends thatparticipants represent their organization's technical expertise as well astheir business management capabilities (e.g., grants, contracts, financialaspects).

To RSVP, organizationsshould email ohwnextgen@usaid.gov with the following information:

EMAILSUBJECT: OHW Next Gen Pre-Application Conference (indicate Washington, DC orLondon, UK)

RSVPINFORMATION: Full name, title, organization, email, phone of up to two (2)participants

RSVPsto this event must be acknowledged by USAID, as space is limited. The RSVPacknowledgment will provide more detail regarding the meeting location andtime. Only those participants who receive an email acknowledgment will beallowed to participate in the Pre-Application Conferences. RSVPs will beaccepted until the meeting capacity is met or through Friday, November 23,2018.

Any questions about thepre-application conferences may be directed to ohwnextgen@usaid.gov. Please noteQUESTION: OHW Next Gen Consultation Meeting in the Subject Line.

Thank you for yourinterest in USAID's Emerging Threats Programming.

THIS NOTICE IS NOT A COMMITMENT TO AWARD. A Request forInformation (RFI) will be released on Grants.gov prior to the pre-applicationconferences. ***This Notice is being issued so that interested parties areaware of USAID's intention to post this RFI in the near term and hold thepre-application conferences. Questions and comments on the RFI and its commentsshould be submitted once it is posted. Please note that USAID will not reimburse travel and transportationexpenses or any other expenses to attend the pre-application conference inWashington, DC or London, UK.***

All of theinformation contained in this Notice is subject to change.

William B. Karesh, D.V.M
Executive Vice President for Health and Policy

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President, OIE Working Group on Wildlife

Co-chair, IUCN Species Survival Commission - Wildlife Health Specialist Group

EPT Partners Liaison, USAID Emerging Pandemic Threats - PREDICT-2 Program

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: Andrew Clements <aclements@usaid.gov>
Sent: Wed, 20 Mar 2019 21:04:14 +0100
Subject: Re: Pending equipment approval for Jordan?
To: Elizabeth Leasure <ealeasure@ucdavis.edu>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, William Karesh <Karesh@ecohealthalliance.org>, "dawson@ecohealthalliance.org" <dawson@ecohealthalliance.org>, David John Wolking <djwolking@ucdavis.edu>, "predictmgt@usaid.gov" <predictmgt@usaid.gov>

can you remind me: did we send you the last $200,000 of Mission funds (for year 5) with an earlier obligation?

Andrew Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
E-mail: aclements@usaid.gov

For more information on USAID's Emerging Pandemic Threats program, see: http://www.usaid.gov/ept2

On Wed, Mar 20, 2019 at 9:02 PM Elizabeth Leasure <ealeasure@ucdavis.edu> wrote:

> Hi Andrew. It is with me. It got put on hold with all of the back and forth regarding the delay in receiving the balance of our Y5 funding, which includes the $200K from the Jordan Mission for Y5.
>
> Thanks,
>
> Liz
>
> *Elizabeth Leasure*
>
> *Financial Operations Manager*
>
> *One Health Institute*
>
> REDACTED *(cell)*
>
> *530-754-9034 (office)*
>
> *Skype: ealeasure*

From: Andrew Clements <aclements@usaid.gov>
Sent: Wednesday, March 20, 2019 12:53 PM
To: Elizabeth Leasure <ealeasure@UCDAVIS.EDU>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>; William Karesh <Karesh@ecohealthalliance.org>; dawson@ecohealthalliance.org; David John Wolking <djwolking@ucdavis.edu>; predictmgt@usaid.gov
Subject: Pending equipment approval for Jordan?

Hi Liz,

Is there an equipment approval coming for Jordan? When I was there in October, there was mention of it, but I don't recall having approved anything. The mission was asking about the status of this.

Thanks!

Andrew

Andrew P. Clements, Ph.D.

Senior Scientific Advisor

Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health

U.S. Agency for International Development

Mobile phone: 1-571-345-4253

Email: aclements@usaid.gov

From: [redacted]
To: Cara Chrisman <cchrisman@usaid.gov>, Dennis Carroll <dcarroll@usaid.gov>, "nwolfe@metabiota.com" <nwolfe@metabiota.com>, "erubin@metabiota.com" <erubin@metabiota.com>, Peter Daszak <daszak@ecohealthalliance.org>, Samtha Maher <maher@ecohealthalliance.org>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, [redacted]
Subject: Upcoming GVP calls
Sent: Thu, 13 Jun 2019 14:31:15 +0000

Hi everyone,

Jonna and I wanted to give you a heads up regarding our upcoming GVP calls through the end of July, schedule as of today.

June 20 – Jonna and [redacted] unavailable
June 27 – Jonna joining, [redacted] unavailable
July 4 - Independence day!
July 11 – Jonna joining, [redacted] unavailable
July 18 – Jonna and [redacted] unavailable
July 25 – Jonna and [redacted] joining

I will be in Tanzania for a month so there is a slight chance that I will join, if circumstances allow.

Best,
[redacted]

Sent: Thu, 15 Aug 2019 20:39:13 -0700
Subject: Re: PREDICT Emerging Disease Insights for USAID Products Package
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Peter Daszak <daszak@ecohealthalliance.org>, Kevin Olival <olival@ecohealthalliance.org>
Cc: Jon Epstein <epstein@ecohealthalliance.org>, Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, Alison Andre <andre@ecohealthalliance.org>, [redacted] [redacted] Jaber Belkhiria <jabelkhiria@ucdavis.edu>
EDI Spillover article_zg JM.docx
Insights on geographic distribution of insectivore bats in Sierra Leone_V5_jb JM.docx

My edits on these, if you'd like to review the version with edits.
Thanks to [redacted] & Jaber for drafting!
Jonna

On Mon, Aug 12, 2019 at 10:51 AM [redacted] wrote:

> Hi everyone,
>
> Attached are two of four EDI pieces for review from [redacted] & Jaber. Jonna will be co-reviewing these with you all. Deadline for review is **August 19th** – please track your changes.
>
> Two more EDI pieces will follow in the coming days. Let me know if you have any questions!
>
> Thanks,
>
> [redacted]

From: [redacted]
Date: Friday, July 26, 2019 at 1:27 PM
To: Peter Daszak <daszak@ecohealthalliance.org>, Jon Epstein <epstein@ecohealthalliance.org>, Kevin Olival <olival@ecohealthalliance.org>, Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>
Cc: Alison Andre <andre@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>
Subject: PREDICT Emerging Disease Insights for USAID Products Package

Hi Peter, Kevin, Jon, and Chris,

Jonna asked me to give you all a heads-up that she has three EDI pieces in the works to be featured in the August Products Package / Newsletter for USAID. [redacted], Nistara, and Diego intend to have drafts for review by the M&A team no later than **August 12th,** and we'd like to have drafts reviewed and finalized 1 week from then (**Aug. 19).**

We're also going to include the EDI that Peter just sent out and will link out to the full version. If you have any EDI's in the works that you'd like to have featured in this upcoming products package, please let us know and plan to have those ready for review by August 12th. Our graphic design guru, Eunah, will be laying out the EDI's into a common format (just like the Pathogen Discovery piece that went out in July) so she'll just need finalized text and figures (with captions) for formatting after the 19th. Note: These EDI's will double as content for the PREDICT digital report/website, just as the PD package does.

If you have any questions, please let Jonna or I know.

Thank you!

REDACTED

REDACTED

PREDICT Project Support

Executive Analyst

One Health Institute

School of Veterinary Medicine

REDACTED

o: 530-752-3630

Insights on the geographic distribution of *Mollosidae* species bats in Sierra Leone and Guinea

Large-scale Ebola virus outbreaks are becoming more frequent, suggesting that the virus may have become endemic in certain regions of Africa, potentially by circulation among animal populations. Without identification of these possible animal sources and prevention programs to block transmission from animals to people, it is likely that future "spillover" of filoviruses, such as Ebola and Marburg from animals to humans will continue to occur.

Virus findings indicate that filoviruses, such as ebolaviruses and Marburg virus, as well as other pathogens circulate in bats (**1-2**). Because human contact with bats is very common in West Africa, identifying which of them may act as reservoir and transmission hosts is critical to develop and implement targeted prevention measures to reduce the risk of further spillover and outbreaks. PREDICT sought to fulfill this aim by undertaking the largest and most comprehensive multi-country investigation of potential filovirus hosts and reservoirs to date through the USAID PREDICT Ebola Host Project.

PREDICT and other groups have shown that insectivorous bats, particularly from the *Molossidae* family, have been found to carry multiple viruses including the newly identified *Bombali ebolavirus* (BOMV) (**3-5**). *Molossidae* are typically small bats that may live nearby or even inside of human dwellings, increasing the risk of viral spillover (**3-4**). Little is known about the specific ecological characteristics or habitats preferred by these bats and the geographic distribution of these species across West Africa.

In direct response to our virus findings and in recognition of the limited data available regarding bat distribution in the region, the Government of Guinea requested assistance identifying areas in the country at highest risk for virus spillover from bats. Identification of these areas will assist the implementation of targeted community engagement programs to reduce the likelihood of virus emergence and spillover in these high-risk zones.

Methods

We developed a spatial distribution model (Maxent) to identify areas that are ecologically suitable for habitation of *Molossidae* sp. bats in Guinea and Sierra Leone. The Maxent approach is commonly used to model the distribution of species in many ecology studies and has been found to have high prediction accuracy (**6**). We trained the model with highly accurate GPS coordinates of collection sites where individual bats were captured and identified as *Molossidae* family species (e.g., *Mops condylurus and Chaerephon pumilus*) by the PREDICT teams in Sierra Leone and Guinea. Potential predictor variables consisted of temperature, rainfall, humidity, wind, elevation, landcover, and distance to water. Correlated variables were removed prior to executing the model and adjustments made for sample selection bias.

Results

The final model (AUC= 0.91) was based on average precipitation (37.7%), distance to water (34.6%), landcover (15.3%), average minimum temperature (10.8%), and average maximum temperature (1.5%). Highly suitable areas for *Molossidae sp.* bats in Guinea include the region

of N'Zérékoré and the lower part of Boké, and in Sierra Leone, the districts of Kambia, Bombali, Tonkolili, Western Areas (Freetown), Kono, and Kailahun were identified.

Conclusion

Due to the devastating impacts of Ebola in West Africa, PREDICT focused additional efforts to better address the threat of filoviruses by understanding their animal origins, while simultaneously strengthening capacity to build and reinforce emerging disease surveillance and detection systems in the region. Using PREDICT data, our model identified areas in Guinea and Sierra Leone that are suitable for habitation by *Mollosidae sp.* bats. These bats include the *Mops condylurus* bat, that is now known to harbor the *Bombali ebolavirus* and suggest it may be present at higher densities in these locations, resulting in increased human contact and possibly higher virus spillover risk. Tools such as this model can assist the Governments of Guinea and Sierra Leone to better target wildlife surveillance and community-based risk reduction activities. These efforts will help to raise awareness regarding potential risk-enhancing behaviors among the people most likely to be affected by virus spillover while promoting how to live safely with bats.

PREDICT/Guinea Global Leads: jabelkhiria@ucdavis.edu and cgmonagin@ucdavis.edu

References:

1. Towner JS, Amman BR, Sealy TK, Carroll SA, Comer JA, Kemp A, et al. Isolation of genetically diverse Marburg viruses from Egyptian fruit bats. PLoS Pathog. 2009;5:e1000536. doi: 10.1371/journal.ppat.1000536
2. Leroy EM, Kumulungui B, Pourrut X, Rouquet P, Hassanin A, Yaba P, et al. Fruit bats as reservoirs of Ebola virus. Nature 438, 575–576 (2005). doi : 10.1038/438575a
3. Goldstein T, Anthony SJ, Gbakima A, Bird BH, Bangura J, Tremeau-Bravard A, et al. (2018) The discovery of Bombali virus adds further support for bats as hosts of ebolaviruses. Nature Microbiology 3, 1084-1089. doi: 10.1038/s41564-018-0227-2
4. Forbes KM, Webala PW, Jääskeläinen, Abdurahman S, Ogola J, Masika MM, et al. (2019) Bombali Virus in Mops condylurus Bat, Kenya. EID. 25;5. doi: 10.3201/eid2505.181666
5. Karan LS, Makenov MT, Korneev MG, Sacko N, Boumbaly S, Yakovlev SA, et al. (2019) Bombali Virus in Mops condylurus Bats, Guinea. EID. 17;25(9). doi: 10.3201/eid2509.190581
6. Phillips SJ, Dudík M. (2008) Modeling of species distributions with Maxent: new extensions and a comprehensive evaluation. Ecography. 31;2. doi: 10.1111/j.0906-7590.2008.5203.x

Figure : This spatial model shows the probable geographic distribution of *Mollosidae sp.* bats in Sierra Leone and Guinea.

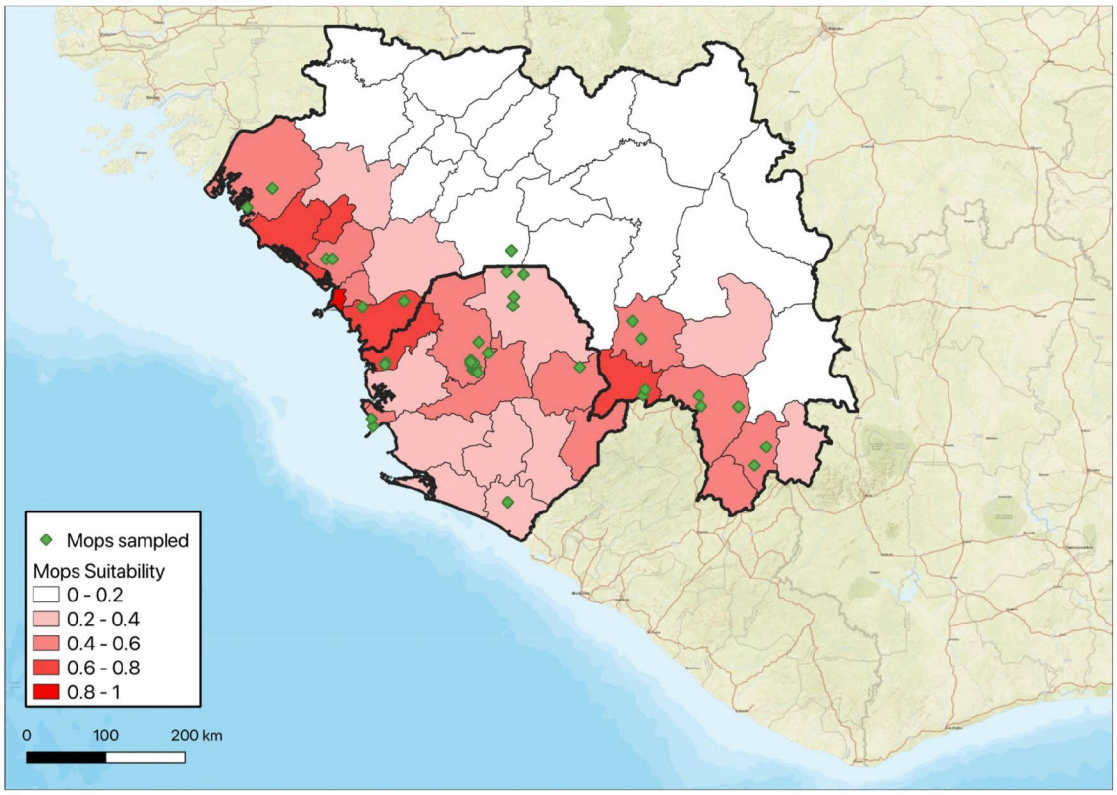

Photo #1 : The PREDICT/Guinea team educates school children in the Forest Region of Guinea on how to live safely with bats using a data-driven behavior change and risk reduction resource that seeks to balance health and conservation goals. Credit : PREDICT/Guinea.

Photo #2 : Members of the PREDICT/Guinea field team safely and humanely collect samples from bats in the Forest Region of Guinea. Credit : PREDICT/Guinea.

SpillOver: A new tool for ranking the risk of viral spillover from animals to humans

It is estimated that there are more than 500,000 undiscovered viruses in animals with the potential to spillover into people. Of this large pool, how do we determine which viruses pose the greatest threat to humans? The PREDICT Project of the U.S. Agency for International Development (USAID) Emerging Pandemic Threats Program has identified more than a thousand known and novel viruses in wildlife at high-risk disease transmission interfaces around the world. The project has rapidly expanded our knowledge of viral threats but also has raised questions about the risk these viruses pose to humans. To address this problem, the PREDICT team has developed a new tool to systematically evaluate wildlife viruses in terms of their zoonotic (transmission from animals to humans) and pandemic potential using a scientifically informed process.

The Value of Expert Opinion

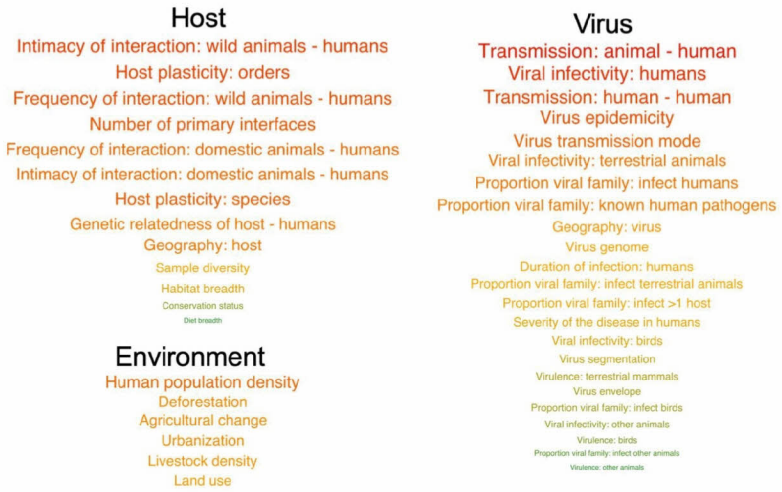

Figure 1 A list of host, virus and environmental risk factors included in SpillOver: Viral Risk Ranking, scaled in size and color (green-orange-red) according it's contribution (none to high) to the risk of viral spillover from animals to humans.

A number of ecological and behavioral characteristics may influence zoonotic transmission potential and the ability of a virus to spread and cause disease in humans. Using knowledge gained through extensive literature review and research in the field, we identified 42 host, virus, and environmental risk factors thought to be important for a virus to be able to transmit and spread in humans. However, the risk factors do not contribute equally. Using an unbiased approach, the PREDICT team conducted a risk assessment survey of 66 international experts in the fields of virology, epidemiology, ecology, molecular biology, public health, veterinary and human medicine, and One Health. Each participant ranked risk factors identified as important contributors to viral spillover from no risk to high risk. By soliciting expert opinion, we

identified the top perceived contributors to spillover risk including virus transmission abilities, and frequent/intimate interactions between humans and animals (Fig. 1).

Development of the SpillOver: Viral Risk Ranking Tool

Figure 2 Components of the SpillOver: Viral Risk Ranking website tool

The PREDICT team created an interactive website application, called SpillOver: Viral Risk Ranking (Fig. 2). The tool uses a risk ranking framework to produce a detailed spillover risk report for each virus by combining expert opinion, records of virus detection, and external data sources for the 42 risk factors, much like a bank's credit report for financial loans. The SpillOver Virus Report details the relative risk of host, viral, and environmental factors that contribute to a virus' overall Spillover Risk Score. The simple design of SpillOver Ranking Comparison page allows non-technical users and policy makers, as well as the general public to compare and explore the relative public health risk of viruses belonging to families of concern to human health and the opportunity to filter viruses on a selection of key attributes, including country and animal species.

As viral discovery efforts reduce the unknown burden of what is out there and our understanding of zoonotic processes increases, the SpillOver Rank Your Virus tool provides an adaptive platform to collate and rank new and existing viruses and to improve our assessment of their risks, with the ultimate aim of forecasting and preventing future disease outbreaks.

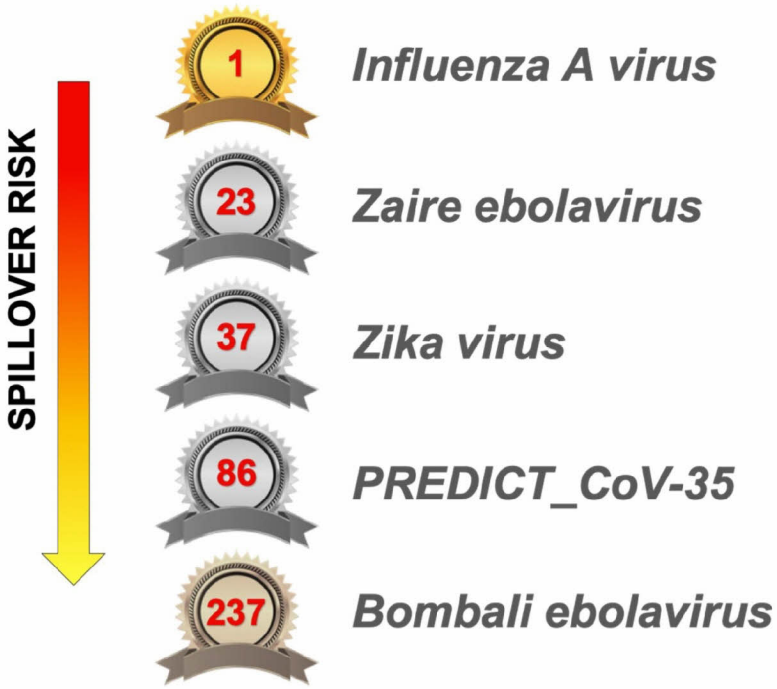

Figure 3 A selection of preliminary results from the SpillOver viral risk ranking assessment including the top ranked virus (Influenza A virus), viruses responsible for recent zoonotic outbreaks (Zaire ebolavirus, Zika virus) and novel viruses discovered during PREDICT (PREDICT_CoV-35, Bombali ebolavirus).

Creating Order Out of Chaos

SpillOver helps bring some rationality and management of risk when discovering new viruses. To date, SpillOver has ranked 687 viruses, including 79 known zoonotic viruses. The top 45 ranked viruses were all known zoonotic viruses that have had previously-documented spillover from animals to humans. *Influenza A virus,* a ubiquitous zoonotic virus causing frequent and severe disease in humans, was the highest ranked virus.

Of the 614 viruses detected in the first phase of PREDICT, 35 viruses were assigned higher spillover risk values than previously-known zoonotic viruses, such as Coronavirus PREDICT_CoV-35. PREDICT_CoV-35 provisionally ranks in position 86 out of 687. This virus has been found in *Chiroptera* bats in Cambodia, Cameroon, Democratic Republic of the Congo, and Viet Nam at high-risk disease transmission interfaces including hunting and human dwellings.

The PREDICT-discovered *Bombali ebolavirus* detected in bats living inside houses in Sierra Leone did not rank as highly. However, given the short timeframe since its identification, it is likely that we do not know the full host and geographic range of *Bombali ebolavirus* and more information as it is discovered could change risk estimations.

A Major Step Towards Predicting Viral Spillover

Combining multiple sources and analytics, the simple design of SpillOver requires only a few pieces of readily available information to produce a comparative risk report and addresses calls for an infrastructure to interpret global infectious disease data. All future viral detections from PREDICT and related projects will be reported on this system, and we encourage collaborative participation from external viral discovery efforts.

By creating SpillOver, PREDICT has developed a globally accessible springboard to prompt scientists and policy makers to move towards solutions in the pandemic era. The innovative design is fully customizable for future developments, including updating new and existing risk factors and incorporation of newly-developed and updated data sets. By creating a starting point, we attempt to address the burden of uncertainty created by viral discoveries, while identifying targets for further investigation that could lead to public health interventions prior to a zoonotic outbreak, instead of the costly, in both the economic and societal sense, reactionary response the world has used to date.

From: Noam Ross <ross@ecohealthalliance.org>
Sent: Sat, 17 Aug 2019 10:56:25 -0400
Subject: Re: PREDICT Emerging Disease Insights for USAID Products Package
To: Kevin Olival <olival@ecohealthalliance.org>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, Jaber Belkhiria <jabelkhiria@ucdavis.edu>, REDACTED, Peter Daszak <daszak@ecohealthalliance.org>, Jon Epstein <epstein@ecohealthalliance.org>, Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, Alison Andre <andre@ecohealthalliance.org>, REDACTED
edi-template.Rmd
edi-template.docx

REDACTED and Jaber,
We use R Markdown to generate our EDIs. If you use this workflow, you can produce the same format by installing our "ehastyle" package in R (`remotes::install_github("ecohealthalliance/ehastyle")`) and using the attached .Rmd template. If not, the attached MS Word document can serve as a template.

Best,

Noam

--

Dr. Noam Ross
Senior Research Scientist

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

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+1.212.380.4465 (fax)
@noamross (twitter)
www.ecohealthalliance.org

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.

On Sat, Aug 17, 2019 at 6:40 AM Kevin Olival <olival@ecohealthalliance.org> wrote:

> Dear REDACTED and Jaber,
> I've added in my edits and comments for consideration, on top of Jonna's versions. Well done!
>
> I'm off on vacation soon… so cc'ing Noam here so he can follow up on sending the EDI code for you to modify and use the template as needed (as I promised in my comments).
>
> Cheers,
> Kevin
>
> **Kevin J. Olival, PhD**
> *Vice President for Research*
>
> EcoHealth Alliance
> 460 West 34th Street, Suite 1701
> New York, NY 10001

1.212.380.4478 (direct)
REDACTED (mobile)
1.212.380.4465 (fax)
www.ecohealthalliance.org

On Aug 15, 2019, at 11:39 PM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:

My edits on these, if you'd like to review the version with edits.
Thanks to REDACTED & Jaber for drafting!
Jonna

On Mon, Aug 12, 2019 at 10:51 AM REDACTED > wrote:

Hi everyone,

Attached are two of four EDI pieces for review from REDACTED & Jaber. Jonna will be co-reviewing these with you all. Deadline for review is **August 19th** – please track your changes.

Two more EDI pieces will follow in the coming days. Let me know if you have any questions!

Thanks,

REDACTED

From: REDACTED >
Date: Friday, July 26, 2019 at 1:27 PM
To: Peter Daszak <daszak@ecohealthalliance.org>, Jon Epstein <epstein@ecohealthalliance.org>, Kevin Olival <olival@ecohealthalliance.org>, Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>
Cc: Alison Andre <andre@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>
Subject: PREDICT Emerging Disease Insights for USAID Products Package

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If you have any questions, please let Jonna or I know.

Thank you!

REDACTED

REDACTED

PREDICT Project Support

Executive Analyst

One Health Institute

School of Veterinary Medicine

REDACTED

o: 530-752-3630

<EDI Spillover article_zg JM.docx><Insights on geographic distribution of insectivore bats in Sierra Leone_V5_jb JM.docx>

EMERGING DISEASE INSIGHTS

Research from the PREDICT Modeling & Analytics team

Title of document

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A Sub-heading

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August 17, 2019

For more information
contact me@hello.foo

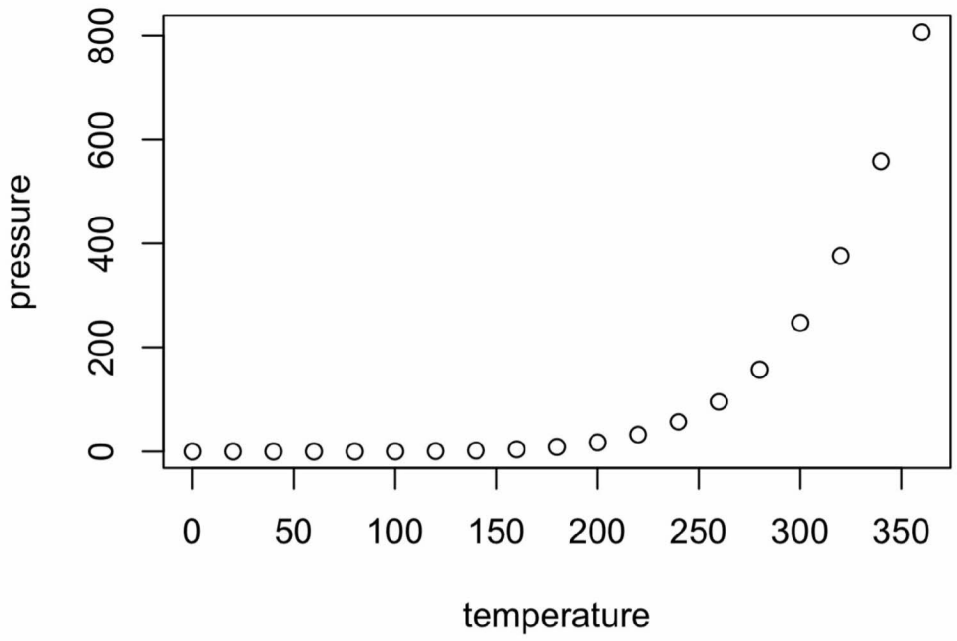

Figure 1: Caption for a figure

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[1] A footnote - these only work on the second page or after

From: Eunah Regina Cho <eecho@ucdavis.edu>
To: [redacted]
Cc: David John Wolking <djwolking@ucdavis.edu>, Jonna Mazet <jkmazet@ucdavis.edu>
Subject: RE: PREDICT Emerging Disease Insights for USAID Products Package
Sent: Wed, 21 Aug 2019 20:58:20 +0000
M&A-Mollosid.pdf

Hi all,
Here's the layout for Jaber's EDI. Right now the header is a Mops image from Adobe Stock. Corina is confirming with Brian to make sure it's definitely a Mops, and may be considering purchasing it ($10). For now it is just a placeholder.

Cheers,
Eunah

From: [redacted]
Sent: Wednesday, August 21, 2019 12:53 PM
To: Eunah Regina Cho <eecho@ucdavis.edu>
Cc: David John Wolking <djwolking@ucdavis.edu>
Subject: FW: PREDICT Emerging Disease Insights for USAID Products Package

Here's Jaber's EDI. Can you cc Jonna when you send the PDF'ed version later so she has it for her achives?

4 down, 2 to go!

- REDACTED

From: Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>
Date: Wednesday, August 21, 2019 at 12:45 PM
To: [redacted]
Cc: Jaber Belkhiria <jabelkhiria@ucdavis.edu>
Subject: Re: PREDICT Emerging Disease Insights for USAID Products Package

Hey REDACTED

Here's the updated text with new map including Liberia. Also the blurb from Jaber: Helping governments of Liberia, Sierra Leone and Guinea better target community engagement via a model on the geographic distribution of *Mollosid* bats in West Africa.

C

From: [redacted]
Date: Wednesday, August 21, 2019 at 12:16 PM
To: Jaber Amine Belkhiria <jabelkhiria@ucdavis.edu>, Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>
Subject: Re: PREDICT Emerging Disease Insights for USAID Products Package

Hi Jaber,

In addition, could you send a 1 sentence blub describing your particular EDI? Here are some examples from/for Kevin & Diego's for context:

1) an interactive *viral accumulation curve* tool to allow in-country staff to explore the rates of viral discovery, identify new targets for additional sampling, and compare the efficacy of different sampling protocols
2) 2) a study of viral shedding in bats to determine whether surveillance can be targeted seasonally to a period when the risk of disease emergence is greatest

---

From: Jaber Belkhiria <jabelkhiria@ucdavis.edu>
Date: Wednesday, August 21, 2019 at 9:02 AM

To: Noam Ross <ross@ecohealthalliance.org>
Cc: Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>, Kevin Olival <olival@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>, [redacted] Peter Daszak <daszak@ecohealthalliance.org>, Jon Epstein <epstein@ecohealthalliance.org>, Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>, Alison Andre <andre@ecohealthalliance.org>, [redacted]
Subject: Re: PREDICT Emerging Disease Insights for USAID Products Package

I actually started playing with R and forgot to answer.
Thanks Noam, I will keep you posted. Looking forward seeing you in person in Bali.
J

On Wed, Aug 21, 2019 at 4:40 PM Noam Ross <ross@ecohealthalliance.org> wrote:
Corina and Jaber

That makes sense to me. Jon can answer questions about the sampling priorities and scheme if relevant. Here is the extract of bats sampled in Liberia with IDs and locations, as well as relevant info about id certainty, recorder, etc. for provenance. I'm including the extract code if needed for future reference, as well.

Noam

--

Dr. Noam Ross
Senior Research Scientist

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New York, NY 10001

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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.

On Wed, Aug 21, 2019 at 11:22 AM Jaber Belkhiria <jabelkhiria@ucdavis.edu> wrote:
This is very interesting and surprising !
I could expand my predictions to Liberia and include your sampling coordinates in my sample selection bias layer if that is okay with you.
Let me know what you think,
J

On Wed, Aug 21, 2019 at 4:09 PM Noam Ross <ross@ecohealthalliance.org> wrote:
Dear Corina and Jaber,

I've consulted with Jon on this and was just pulling these locations but I realized that I don't think any Mollosid bats were sampled in Liberia. Here's the family/genus breakdown from EIDITH of bats sampled in Liberia. Given this, is the data useful for the purposes of this EDI?

family	genus	n
HIPPOSIDERIDAE	Hipposideros	4321

MINIOPTERIDAE	Miniopterus	572
NYCTERIDAE	Nycteris	63
PTEROPODIDAE	Eidolon	24
PTEROPODIDAE	Epomophorus	12
PTEROPODIDAE	Lissonycteris	139
PTEROPODIDAE	Megaloglossus	1
PTEROPODIDAE	Micropteropus	2
RHINOLOPHIDAE	Rhinolophus	36
NA	Chiroptera	12

--

Dr. Noam Ross
Senior Research Scientist

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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.

On Tue, Aug 20, 2019 at 3:59 PM Corina Grigorescu Monagin <cgmonagin@ucdavis.edu> wrote:

Dear Kevin and Noam,

Thanks for your feedback on the Mops EDI product. You mentioned that it would be more interesting if we could include data from a larger group of countries in West Africa and we agree! If you would like to share the data you have from Liberia on location of bats sampled (lat and long) plus bat family, Jaber can expand and refine the graphics.

In order to include the Liberian data in the model for this EDI submission, we would need to data today or tomorrow morning at the latest. Let us know if this is something you would like to pursue.

Thanks again.

corina

---------- Forwarded message ---------
From: **Noam Ross** <ross@ecohealthalliance.org>
Date: Sat, Aug 17, 2019 at 3:56 PM
Subject: Re: PREDICT Emerging Disease Insights for USAID Products Package
To: Kevin Olival <olival@ecohealthalliance.org>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, Jaber Belkhiria <jabelkhiria@ucdavis.edu>, [redacted], Peter Daszak <daszak@ecohealthalliance.org>, Jon Epstein <epstein@ecohealthalliance.org>, Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, Alison Andre <andre@ecohealthalliance.org>, [redacted]

[redacted] and Jaber,

We use R Markdown to generate our EDIs. If you use this workflow, you can produce the same format by installing our "ehastyle" package in R

(`remotes::install_github("ecohealthalliance/ehastyle")`) and using the attached .Rmd template. If not, the attached MS Word document can serve as a template.

Best,

Noam

--

Dr. Noam Ross
Senior Research Scientist

EcoHealth Alliance
460 West 34th Street, Ste. 1701
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www.ecohealthalliance.org

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.

On Sat, Aug 17, 2019 at 6:40 AM Kevin Olival <olival@ecohealthalliance.org> wrote:
Dear [redacted] and Jaber,

I've added in my edits and comments for consideration, on top of Jonna's versions. Well done!

I'm off on vacation soon… so cc'ing Noam here so he can follow up on sending the EDI code for you to modify and use the template as needed (as I promised in my comments).

Cheers,
Kevin

Kevin J. Olival, PhD
Vice President for Research

EcoHealth Alliance
460 West 34th Street, Suite 1701
New York, NY 10001

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On Aug 15, 2019, at 11:39 PM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:

My edits on these, if you'd like to review the version with edits.
Thanks to REDACTED & Jaber for drafting!
Jonna

On Mon, Aug 12, 2019 at 10:51 AM REDACTED wrote:
Hi everyone,

Attached are two of four EDI pieces for review from REDACTED & Jaber. Jonna will be co-reviewing these with you all. Deadline for review is **August 19th** – please track your changes.

Two more EDI pieces will follow in the coming days. Let me know if you have any questions!

Thanks,
REDACTED

From: REDACTED
Date: Friday, July 26, 2019 at 1:27 PM
To: Peter Daszak <daszak@ecohealthalliance.org>, Jon Epstein <epstein@ecohealthalliance.org>, Kevin Olival <olival@ecohealthalliance.org>, Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>
Cc: Alison Andre <andre@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>
Subject: PREDICT Emerging Disease Insights for USAID Products Package

Hi Peter, Kevin, Jon, and Chris,

Jonna asked me to give you all a heads-up that she has three EDI pieces in the works to be featured in the August Products Package / Newsletter for USAID. REDACTED Nistara, and Diego intend to have drafts for review by the M&A team no later than **August 12th,** and we'd like to have drafts reviewed and finalized 1 week from then (**Aug. 19).**

We're also going to include the EDI that Peter just sent out and will link out to the full version. If you have any EDI's in the works that you'd like to have featured in this upcoming products package, please let us know and plan to have those ready for review by August 12th. Our graphic design guru, Eunah, will be laying out the EDI's into a common format (just like the Pathogen Discovery piece that went out in July) so she'll just need finalized text and figures (with captions) for formatting after the 19th. Note: These EDI's will double as content for the PREDICT digital report/website, just as the PD package does.

If you have any questions, please let Jonna or I know.

Thank you!
REDACTED

REDACTED
PREDICT Project Support
Executive Analyst
One Health Institute
School of Veterinary Medicine

REDACTED
o: 530-752-3630

<EDI Spillover article_zg JM.docx><Insights on geographic distribution of insectivore bats in Sierra Leone_V5_jb JM.docx>

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PREDICT

Insights on the Geographic Distribution of *Mollosid* bats in West Africa

Large-scale Ebola virus outbreaks are becoming more frequent, suggesting that the virus may have become endemic in certain regions of Africa, potentially by circulation among animal populations. Without identification of these possible animal sources and prevention programs to block transmission from animals to people, it is likely that future "spillover" of filoviruses, such as Ebola and Marburg from animals to humans will continue to occur.

Virus findings indicate that filoviruses, such as ebolaviruses and Marburg virus, as well as other pathogens circulate in bats (1-2). Because human contact with bats is very common in West Africa, identifying which of them may act as reservoir and transmission hosts is critical to develop and implement targeted prevention measures to reduce the risk of further spillover and outbreaks. PREDICT sought to fulfill this aim by undertaking the largest and most comprehensive multi-country investigation of potential filovirus hosts and reservoirs to date through the USAID PREDICT Ebola Host Project.

PREDICT and other groups have shown that insectivorous bats, particularly from the Molossidae family, have been found to carry multiple viruses including the newly identified and geographically widespread Bombali ebolavirus (BOMV) (3-5). Molossidae are typically small bats that may live nearby or even inside of human dwellings, increasing the risk of viral spillover (3-4). Little is known about the specific ecological characteristics or habitats preferred by these bats and the geographic distribution of these species across West Africa.

In direct response to our virus findings and in recognition of the limited data available regarding bat distribution in the region, the Government of Guinea requested assistance identifying areas in the country at highest risk for virus spillover from bats. Identification of these areas will assist the implementation of targeted community engagement programs to reduce the likelihood of virus emergence and spillover in these high-risk zones.

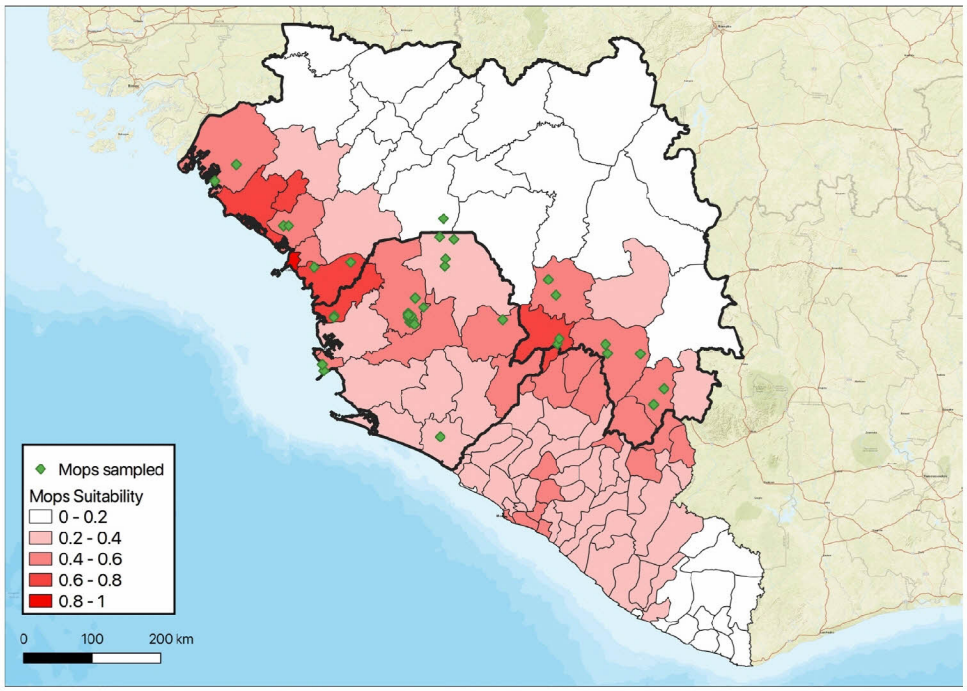

Figure: This spatial model shows the probably geographical distribution of Mollosidae sp. bats in Sierra Leone, Guinea and Liberia

METHODS

We developed a spatial distribution model (Maxent) to identify areas that are ecologically suitable for habitation of *Molossidae* sp. bats in Guinea, Sierra Leone and Liberia. The Maxent approach is commonly used to model the distribution of species in many ecology studies and has been found to have high prediction accuracy (6). We trained the model with highly accurate GPS coordinates of collection sites where individual bats were captured and identified as *Molossidae* family species (e.g., *Mops condylurus* and *Chaerephon pumilus*) by the PREDICT teams in Sierra Leone, Guinea and Liberia. Potential predictor variables consisted of temperature, rainfall, humidity, wind, elevation, landcover, and distance to water. Correlated variables were removed prior to executing the model and adjustments made for sample selection bias.

RESULTS

The final model (AUC= 0.90) was based on average precipitation (37.7%), distance to water (34.6%), landcover (15.3%), average minimum temperature (10.8%), and average maximum temperature (1.5%). A suitable environment for *Molossidae* sp. bats could be described as swamp forest, thicket and shrubland close to water sources with an ideal temperature variating between 23 and 30 degrees Celsius and yearly precipitations between 250 and 280mm. Areas that fit this description in Guinea include the region of N'Zérékoré and the lower part of Boké, and in Sierra Leone, the districts of Kambia, Bombali, Tonkolili, Western Areas (Freetown), Kono, and Kailahun were identified. No areas in Liberia have been classified as highly suitable (>0.6) in this model, however, presence of *Molossidae* sp. in Liberia should not be dismissed.

Members of the PREDICT/Guinea field team safely and humanely collect samples from bats in the Forest Region of Guinea. Credit: PREDICT/Guinea

CONCLUSION

Due to the devastating impacts of Ebola in West Africa, PREDICT focused additional efforts to better address the threat of filoviruses by understanding their animal origins, while simultaneously strengthening capacity to build and reinforce emerging disease surveillance and detection systems in the region. Using PREDICT data, our model identified areas in Guinea and Sierra Leone that are suitable for habitation by Mollosidae sp. bats. These bats include the Mops condylurus bat, that was found to harbor multiple ebolaviruses and suggest it may be present at higher densities in these locations, resulting in increased human contact and possibly higher virus spillover risk. Tools such as this model can assist the Governments of Guinea,Sierra Leone and Liberia to better target wildlife surveillance and community-based risk reduction activities. These efforts will help to raise awareness regarding potential risk-enhancing behaviors among the people most likely to be affected by virus spillover while promoting how to live safely with bats.

PREDICT/Guinea Global Leads: jabelkhiria@ucdavis.edu and cgmonagin@ucdavis.edu

Reference:

1. Towner JS, Amman BR, Sealy TK, Carroll SA, Comer JA, Kemp A, et al. Isolation of genetically diverse Marburg viruses from Egyptian fruit bats. *PLoS Pathog*. 2009;5:e1000536. doi: 10.1371/journal.ppat.1000536
2. Leroy EM, Kumulungui B, Pourrut X, Rouquet P, Hassanin A, Yaba P, et al. Fruit bats as reservoirs of Ebola virus. *Nature* 438, 575–576 (2005). doi : 10.1038/438575a
3. Goldstein T, Anthony SJ, Gbakima A, Bird BH, Bangura J, Tremeau-Bravard A, et al. (2018) The discovery of Bombali virus adds further support for bats as hosts of ebolaviruses. *Nature Microbiology* 3, 1084-1089. doi: 10.1038/s41564-018-0227-2
4. Forbes KM, Webala PW, Jääskeläinen, Abdurahman S, Ogola J, Masika MM, et al. (2019) Bombali Virus in Mops condylurus Bat, Kenya. *EID*. 25;5. doi: 10.3201/eid2505.181666
5. Karan LS, Makenov MT, Korneev MG, Sacko N, Boumbaly S, Yakovlev SA, et al. (2019) Bombali Virus in Mops condylurus Bats, Guinea. *EID*. 17;25(9). doi: 10.3201/eid2509.190581
6. Phillips SJ, Dudík M. (2008) Modeling of species distributions with Maxent: new extensions and a comprehensive evaluation. *Ecography*. 31;2. doi: 10.1111/j.0906-7590.2008.5203.x

The PREDICT/Guinea team educates school children in the Forest Region of Guinea on how to live safely with bats using a data-driven behavior change and risk reduction resource that seeks to balance health and conservation goals. Credit: PREDICT/Guinea

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Satellite Enhanced Epidemic & Disease Network Model

Advances in mobility have enabled humans and animals to travel far and wide, and in tandem, allowed for the rapid dissemination of infectious diseases. If we can better predict how diseases spread and how they react to different interventions, we stand an improved chance of mitigating and controlling them. We developed a modeling framework using fine-grained satellite data on areas of human settlements and high-resolution population data, to build a road-connected network upon which to model disease spread. Prior to modeling disease spread, we incorporated mobility patterns in this network by estimating the commuting rates between the road-connected settlement/urban areas. We demonstrate this approach for Rwanda and simulate the spread of the 2009 pandemic H1N1 influenza across the constructed network.

Modeling of H1N1 influenza outbreak across the network

To test the created network as a framework upon which to model infectious diseases, we simulated the spread of pandemic influenza A H1N1 via an SEIR (susceptible, exposed, infectious, recovered) compartmental model, where the disease spread is simulated both within and between urban areas. In the SEIR model, a susceptible person becomes infected upon contact with an infectious individual and transitions to the exposed or latent compartment, after which the individual becomes infectious (symptomatic or asymptomatic) and subsequently recovers with immunity to future infections. The disease transmission parameters used in the model were obtained from existing literature on pandemic influenza.1,2,3,4

Simulation results

The simulated outbreaks accurately forecasted influenza spread in terms of outbreak lengths and the order in which areas were infected.

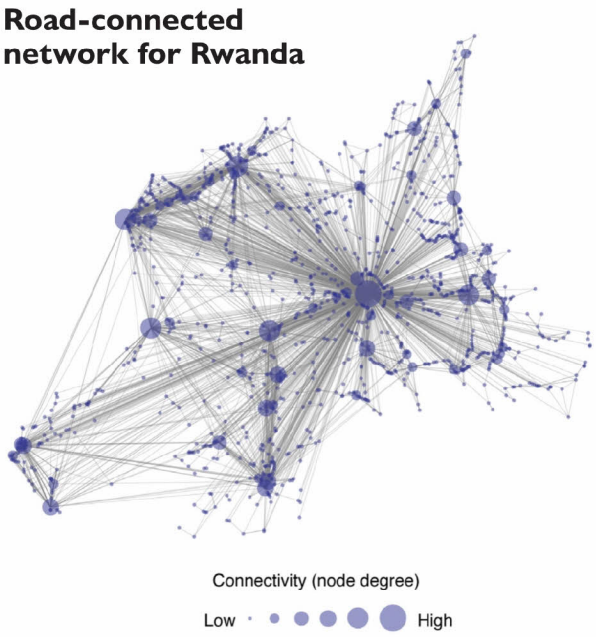

Figure: Connectivity of urban areas in the Rwandan human settlement network

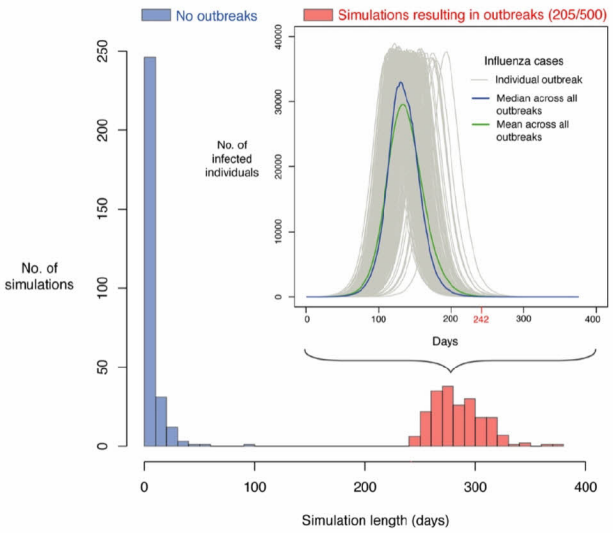

Figure 2: Histogram of simulation lengths (epidemic sizes) and inset showing infectious epidemic curves of those simulations (205/500) that resulted in widespread geospatial outbreaks. The red arrow points out the reported length of the observed 2009 pH1N1 outbreak in Rwanda (242 days).

Order of influenza spread in observed vs simulated outbreaks

★ Influenza surveillance sites

Order		Start time (days)	
Observed	**Simulated**	**Mean**	**95% CI**
★ Kigali	Kigali (origin)		
Rubavu	Rubavu	58.50	56.00-60.99
Muhanga	Musanze	59.84	57.38-62.30
★ Musanze	Muhanga	63.19	60.80-65.58
★ Cyangugu	Huye	72.17	69.59-74.74
★ Huye	Cyangugu	84.52	81.91-87.14
★ Kibungo	Kibungo	101.22	98.46-103.97

★ Additional areas were found infected between and after these cities observed in the actual outbreak

Figure 3: Comparison between observed and simulated outbreak spreads across Rwanda. Left: map showing the location of influenza surveillance sites and the cities documented to have confirmed pH1N1 influenza clusters. Right: comparison between the observed and simulated order of pandemic influenza spread in Rwanda. The dashed line depicts additional cities found to be infected during the course of simulated outbreaks.

Future directions

The modeling framework developed above has been used to write an R package which facilitates the application of this model to other diseases in different geographic regions.

Reference:

1. Pourbohloul B, Ahued A, Davoudi B et al. Initial human transmission dynamics of the pandemic (H1N1) 2009 virus in north america. *Influenza Other Respi Viruses* 2009; 3: 215–22.
2. Tuite AR, Greer AL, Whelan M et al. Estimated epidemiologic parameters and morbidity associated with pandemic H1N1 influenza. *CMAJ* 2010; 182: 131–6.
3. Longini IM Jr, Nizam A, Xu S et al. Containing pandemic influenza at the source. *Science* 2005; 309: 1083–7.
4. Balcan D, Gonçalves B, Hu H, Ramasco JJ, Colizza V, Vespignani A. Modeling the spatial spread of infectious diseases: The Global epidemic and mobility computational model. *J Comput Sci* 2010; 1: 132–45.

From: Eunah Regina Cho <eecho@ucdavis.edu>
To: Diego Felipe Montecino <dmontecino@ucdavis.edu>
Cc: [redacted], [redacted], Jonna Mazet <jkmazet@ucdavis.edu>, Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>
Subject: RE: FW: PREDICT Emerging Disease Insights for USAID Products Package
Sent: Thu, 22 Aug 2019 18:00:37 +0000
M&A-Diego.pdf

Thanks for sending the edits! Here's the updated EDI layout.
Cheers,
Eunah

From: Diego Montecino <dmontecino@ucdavis.edu>
Sent: Thursday, August 22, 2019 10:28 AM
To: Eunah Regina Cho <eecho@ucdavis.edu>
Cc: [redacted]; [redacted] Jonna Mazet <jkmazet@ucdavis.edu>; Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>
Subject: Re: FW: PREDICT Emerging Disease Insights for USAID Products Package

HI Eunah

Please at the end of the first page italize Eidolon helvum
In the conclusion it says:

with a ~4 times higher increase in the proportion of feces positive to these.

It should say

with a ~4 times higher proportion of feces positive to these.

Finally, right below the previous sentence it says

The detection of juvenile straw-colored fruit bats during the wet season can be useful to establish period of high shedding

It should say

The detection of juvenile straw-colored fruit bats during the wet season can be useful to establish the periods of high shedding

Thank you!

On Thu, Aug 22, 2019 at 10:18 AM Eunah Regina Cho <eecho@ucdavis.edu> wrote:
Here's the layout for Diego's EDI

From: Diego Montecino <dmontecino@ucdavis.edu>
Sent: Wednesday, August 21, 2019 3:28 PM
To: [redacted]; Eunah Regina Cho <eecho@ucdavis.edu>; Brooke Genovese <bgenovese@ucdavis.edu>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>; Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>
Subject: Re: FW: PREDICT Emerging Disease Insights for USAID Products Package

Thank you, [redacted]

here is the final version. Please [redacted] check the english in the last sentences modified (it is 2 of them).

Best

On Wed, Aug 21, 2019 at 2:16 PM [redacted] wrote:

Hi Brooke, Diego, and Nistara,

Here are a few suggested edits in EDIs from my side.
Great work and neat writeup!

REDACTED

On Tue, Aug 20, 2019 at 12:14 PM REDACTED > wrote:

Hey REDACTED

Thanks for taking a look at these as an extra set of eyes! Once you make edits (tracked changes) please attach to this thread and send back for Nistara & Diego to consider & incorporate as needed in their final version.

REDACTED

From: REDACTED
Date: Friday, August 16, 2019 at 10:03 AM
To: Peter Daszak <daszak@ecohealthalliance.org>, Kevin Olival <olival@ecohealthalliance.org>
Cc: Jon Epstein <epstein@ecohealthalliance.org>, Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>, Alison Andre <andre@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>
Subject: Re: PREDICT Emerging Disease Insights for USAID Products Package

Hi all,

I'm attaching two more EDI's here from Diego & Nistara. Jonna has already passed through these two with edits.

Thanks!
REDACTED

From: Jonna Mazet <jkmazet@ucdavis.edu>
Date: Thursday, August 15, 2019 at 8:40 PM
To: Peter Daszak <daszak@ecohealthalliance.org>, Kevin Olival <olival@ecohealthalliance.org>
Cc: Jon Epstein <epstein@ecohealthalliance.org>, Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>, Alison Andre <andre@ecohealthalliance.org>, REDACTED >, REDACTED REDACTED >, Jaber Belkhiria <jabelkhiria@ucdavis.edu>
Subject: Re: PREDICT Emerging Disease Insights for USAID Products Package

My edits on these, if you'd like to review the version with edits.
Thanks to REDACTED & Jaber for drafting!
Jonna

--
REDACTED
B.V.Sc. & A.H., MPVM, PhD
Postdoctoral Scholar
One Health Institute, School of Veterinary Medicine
University of California Davis

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PREDICT

Seasonal Shedding of Coronaviruses in Straw-colored Fruit Bats at Urban Roosts in Africa

The adaptation of bats (order Chiroptera) to use and occupy human dwellings across the planet has created intensive bat-human interfaces. Because bats provide important ecosystem services and also host and shed zoonotic viruses, these interfaces represent a double challenge: i) the conservation of bats and their services and ii) the prevention of viral spillover.

Many species of bats have evolved a seasonal life history that has resulted in the development of specific reproductive and foraging activities during distinctive periods of the year. For example, many species mate, give birth, and nurse during particular and predictable times of the year. Moreover, bat migration can produce predictable variations in colony sizes during a typical year, from a complete absence of bats to the aggregation of millions of individuals depending on the season. The seasonal changes in the reproductive activities and colony occupancy are expected to produce temporal modifications in the contact rate between bats and likely alter their susceptibility to infection, causing differing levels of transmission, and therefore, infection. If this hypothesis is correct then: i) the proportion of bats shedding viruses and the risk of viral spillover will follow temporal variations that can be predictable and ii) high-risk spillover periods could be established in colonies that have not been studied independently of the ideal but expensive and logistically difficult sampling of bats. However, before the PREDICT Project, the dynamics of viral shedding in bats over time has been assessed in only a restricted number of species and mostly in single colonies. Thus, the elucidation of seasonal high-risk periods can lead to the use of non-lethal methods to prevent spillover supporting bat populations, such as the banning of hunting and bat consumption temporally or restricting access to colony grounds during high-risk periods. Beyond the ethical debate on lethal management, its application has caused counterproductive results in the past[1].

For these reasons, we assessed the seasonality of coronavirus (CoV) shedding by the straw-colored fruit bat (*Eidolon helvum*) by passively collecting 97 fecal samples on a monthly basis during a entire year in two urban colonies: Accra, Ghana (West Africa) and Morogoro, Tanzania (East Africa; Fig 1). Sampling collection was conducted under the same trees during the study period. This species of fruit bat shows a single birth pulse during the year, its colonies show spectacular periodical changes in size, and similarly to other tree-roosting megabats, several roosts are located in busy urban centers across sub-Saharan Africa. Moreover, we concomitantly collected data on the roost sizes and precipitation levels over time, and we established the reproductive periods through the year (birth pulse, weaning of pups, and the rest of the year). The reproductive periods were based on previous literature on *Eidolon helvum* and PREDICT data from other locations in Tanzania.

Straw-colored fruit bat in net (credit: PREDICT/Tanzania)

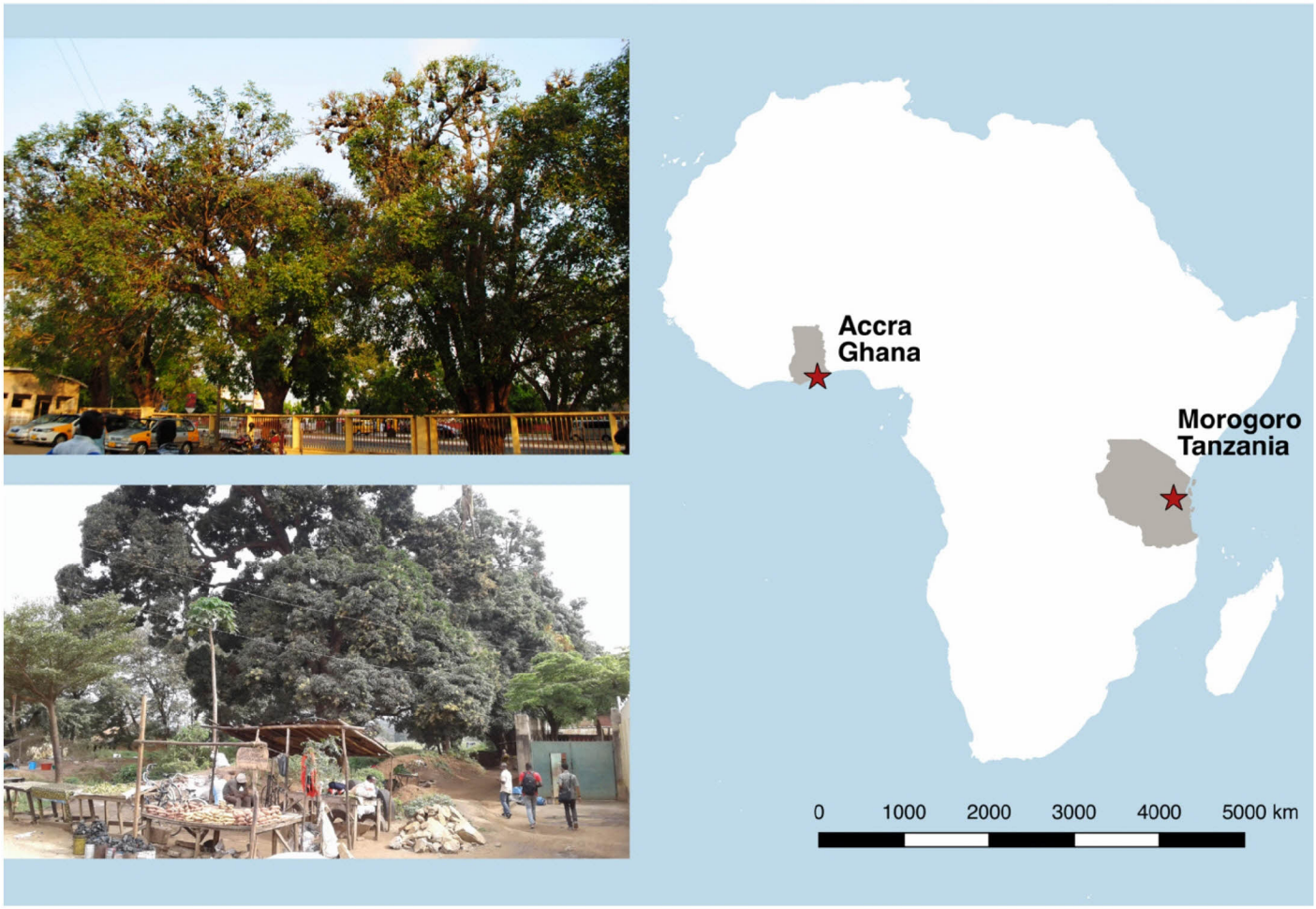


Figure 1: Location of the assessed E. helvum roost in Accra, Ghana, and in Morogoro, Tanzania. The frames at the left show some of the trees occupied at former and later colonies, respectively.

Data from over two thousand samples revealed three patterns consistent in both colonies: i) CoV shedding varied over time; ii) CoV shedding peaked during the period pups are being weaned; and iii) CoV shedding peaked during the wet season (Fig. 2).

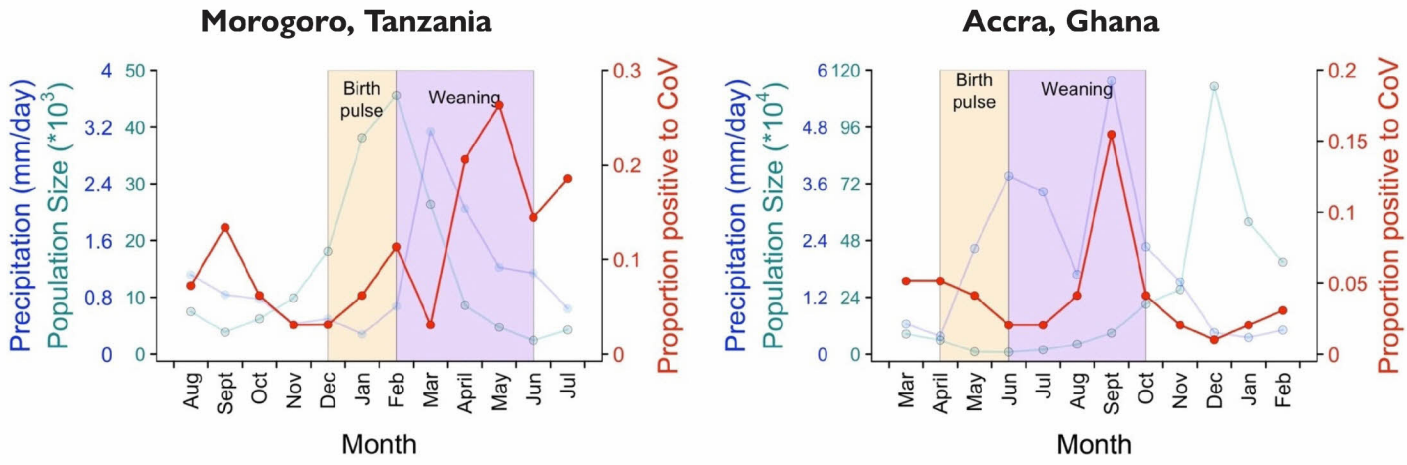


Figure 2: Monthly Eidolon helvum roost size (green dots and line), precipitation (mm/day; grey dots and lines), and the proportion of E. helvum feces that were found positive for coronaviruses (red dots and lines) in Morogoro, Tanzania, between August 2017 and July 2018; and in Accra, Ghana, between March 2017 and February 2018. The pale orange and purple areas show the inferred birth pulse and the weaning of pups in both colonies, respectively.

Specifically, the proportion of positive feces to CoV increased to at least 15% during the "weaning of pups" from about 5% observed in the "rest of the year" and "birth pulse" periods. The peak detection values were observed a month prior to the end of the "weaning of pups". From this point in time, the proportion of feces positive to CoV decreases, and following the results in Accra, it stabilizes in values similar to the observed before the start of the weaning period.

Thanks to the longitudinal sampling collection in two roosts, we could observe that the increase in CoV detection occurs independently of the changes in the roost size (Accra). This conclusion would not have been possible if only a single colony had been studied. In Morogoro, the weaning period matched the peak in colony size; therefore, if the study had only included this roost, higher CoV detections would have seemed positively associated with colony size. Finally, the birth pulse–weaning of pups periods matched the wet season in both cases. The co-occurrence of these periods is expected because *E. helvum* seems to have adapted to wean at the end of the wet season when more fruit is available for juveniles becoming independent of the dams[2,3].

Conclusion

Data strongly supports the association between CoV shedding in urban *E. helvum* roosts and the reproductive cycle of these bats, with a ~4 times higher proportion of feces positive to these viruses during the period when the pups are being weaned compared to detections in other seasons of the year. The detection of juvenile straw-colored fruit bats during the wet season can be useful to establish the periods of high shedding in unstudied urban colonies of straw-colored fruit bats across its sub-Saharan range. Because the identification of juveniles may not be easy in this species[4], the wet season could be used as a proxy for identifying periods of high CoV shedding. The establishment of these seasons can guide spillover mitigation efforts efficiently, through mechanisms promoting the conservation of these bats. These mechanisms may include the seasonal banning of hunting or consumption of bats or the exclusion of people from the roosting grounds.

References:

1. Amman BR et al. 2014 Marburg virus resurgence in Kitaka Mine bat population after extermination attempts, Uganda. *Emerg. Infect. Dis.* 20, 1761–1764.
2. Mutere FA. 1967 The breeding biology of equatorial vertebrates: reproduction in the fruit bat, *Eidolon helvum*, at latitude 0 20' N. *J. Zool.* 153, 153–161.
3. Fayenuwo JO, Halstead LB. 1974 Breeding cycle of straw-colored fruit bat, *Eidolon helvum*, at Ile-Ife, Nigeria. *J. Mammal.* 55, 453–454.
4. Peel AJ et al. 2017 How does Africa's most hunted bat vary across the continent? Population traits of the straw-coloured fruit bat (*Eidolon helvum*) and its interactions with humans. *Acta Chiropt.* 19, 77–92.

From: Dennis Carroll <[redacted]>
Sent: Wed, 23 Oct 2019 12:52:23 +0100
Subject: Re: GVP Inc. Certificate of Incorporation
To: Peter Daszak <daszak@ecohealthalliance.org>
Cc: Cara Chrisman <cchrisman@usaid.gov>, Carlos Zambrana-Torrelio <zambrana@ecohealthalliance.org>, Eddy Rubin <erubin@metabiota.com>, [redacted], Jonna Mazet <jkmazet@ucdavis.edu>, Samtha Maher <maher@ecohealthalliance.org>

Congratulations Peter. Well done. Great seeing you all in DC. I for one am ready for the launching of GVP

d

On Wed, Oct 23, 2019 at 4:18 AM Peter Daszak <daszak@ecohealthalliance.org> wrote:

> Great to see you all in DC.
>
> I got the attached pdf from the lawyers this evening – we're now an incorporated organization – "The Global Virome Project, Inc."!
>
> Note that the name and address of the Incorporator is me, at EHA's offices, but this doesn't mean I have any particular control over anything in the organization – this is all laid out in the bylaws, which I'll send a final version of in the next couple of days (I'll have to copy over the explanatory notes that I previously sent round to everyone into the finalized version of the docs, because Dennis hasn't seen any of these yet).
>
> I'll get the doc ready for all Board members to sign once the lawyers send me details of next steps – the filing of our tax exemption status, which I'm told will probably take 2-3 months, depending on the State's workload.
>
> We're ready to launch!!
>
> Cheers,
>
> Peter
>
> **Peter Daszak**
>
> *President*
>
> EcoHealth Alliance

460 West 34th Street – 17th Floor

New York, NY 10001

Tel. +1 212-380-4474

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.

--
Dr Dennis Carroll
Senior Fellow, Scowcroft Institute of International Affairs at the Bush School of Government and Public Service, Texas A&M University
Counselor and Advisor to the Faculty of Tropical Medicine at Mahidol University

mobile: REDACTED
email: REDACTED

From: [redacted]
To: Peter Daszak <daszak@ecohealthalliance.org>, predict Sympa List <predict@ucdavis.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, Cara Chrisman <cchrisman@usaid.gov>, Dennis Carroll [redacted] Eddy Rubin <erubin@metabiota.com>
Subject: RE: NYTimes.com: Scientists Were Hunting for the Next Ebola. Now the U.S. Has Cut Off Their Funding.
Sent: Fri, 25 Oct 2019 15:47:09 +0000

This is a really great piece!
[redacted]

-----Original Message-----
From: Peter Daszak [mailto:daszak@ecohealthalliance.org]
Sent: Friday, October 25, 2019 8:16 AM
To: predict Sympa List <predict@ucdavis.edu>; Jonna Mazet <jkmazet@ucdavis.edu>; Cara Chrisman <cchrisman@usaid.gov>; [redacted] Dennis Carroll [redacted]; Eddy Rubin <erubin@metabiota.com>
Subject: NYTimes.com: Scientists Were Hunting for the Next Ebola. Now the U.S. Has Cut Off Their Funding.

Great piece from NY Times today - please circulate and share widely - it's the right tone - not too critical but highlighting the successes…

From The New York Times:

Scientists Were Hunting for the Next Ebola. Now the U.S. Has Cut Off Their Funding.

Predict, a government research program, sought to identify animal viruses that might infect humans and to head off new pandemics.

https://www.nytimes.com/2019/10/25/health/predict-usaid-viruses.html

Cheers,

Peter

Peter Daszak
(Sent from my iPhone)

President
EcoHealth Alliance

460 West 34th Street, New York, NY10001, USA

www.EcoHealthAlliance.org

From: Andrew Clements <aclements@usaid.gov>
Sent: Thu, 21 Nov 2019 11:08:29 -0800
Subject: Fwd: 6min 20 question SURVEY - Global Burden of Animal Diseases
To: "Wantanee (FAORAP) Kalpravidh" <[redacted]>, "Juan (AGAH) [redacted]) Lubroth" <[redacted]>, William Karesh <Karesh@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>, Elizabeth Mumford <[redacted]>

FYI y'all

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

Begin forwarded message:

From: Lindsay Parish <lparish@usaid.gov>
Date: November 21, 2019 at 8:03:49 PM GMT+1
To: "GHSD Unit Mail List (USAID)" <ghsdunitmaillistusaid@usaid.gov>
Subject: Fwd: 6min 20 question SURVEY - Global Burden of Animal Diseases

6 min survey on global burden of animal disease. May be of interest to some on our team.

---------- Forwarded message ---------
From: **Huntington, Benjamin** <[redacted]>
Date: Thu, Nov 21, 2019 at 9:14 AM
Subject: 6min 20 question SURVEY - Global Burden of Animal Diseases
To: Rushton, Jonathan <[redacted]>, Kevin Watkins <[redacted]>
Cc: Global Burden of Animal Diseases <[redacted]>

Dear Participant

https://www.surveymonkey.com/r/GBADs2

We are conducting a survey and would welcome your input on the feasibility and value of tracking the Global Burden of Animal Diseases (GBADs). Please complete the survey by Friday December 6 -- we will send reminders. You can change the language of the survey by clicking on ENGLISH at the top right hand corner of the page and selecting either FRANÇAIS or ESPAÑOL.

Standardized means for collecting, analyzing and disseminating information related to animal populations, productivity and disease can improve evidence-based decision-making for producers, diagnosticians, policy makers, and innovators while enhancing achievement of the UN Sustainable Development Goals of health, environment, hunger and poverty.

This project is funded by the Bill and Melinda Gates Foundation and the UK's Department for International Development, and managed through the University of Liverpool.

If you know others who work in animal health policy in government, NGOs or international organisations, who may wish to take part in this survey please forward this email to them and cc [redacted].

https://www.surveymonkey.com/r/GBADs2

Visit our website for more information www.animalhealthmetrics.org

Kind regards

Ben

Ben Huntington

Global Burden of Animal Diseases Project Manager

Honorary Research Fellow

[redacted]

Mailing address: [redacted]

Tel: [redacted]

Mobile: [redacted]

Skype: [redacted]

www.animalhealthmetrics.org

"Making animals count"

--

Lindsay Parish, PhD
Infectious Disease and Vaccine Advisor

Dual Appointment:
Emerging Threats Division, Office of Infectious Disease
USAID/Washington, Bureau for Global Health
Research Division, Office of Agriculture Research & Policy
USAID/Washington, Bureau for Food Security
Office: (202) 712-4838

From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Katherine Leasure <kaleasure@ucdavis.edu>
CC: Peter Daszak <daszak@ecohealthalliance.org>;Samtha Maher <maher@ecohealthalliance.org>;Mary Radford <maradford@ucdavis.edu>
Sent: 2/4/2020 8:49:22 AM
Subject: Re: FW: UC Davis Agreement A50707 with the National Academy of Sciences

Hi Katie,
Thanks for pinging me on that! Yes, we will need a projector & screen. We can use our own laptops. No need for microphone or anything else, I don't think.
Copying in Peter & Sam because I don't know if we have any videoconference needs, but I'm guessing we can use one of our laptops if someone is joining us remotely.
Really appreciate your help,
Jonna

On Tue, Feb 4, 2020 at 8:42 AM Katherine Leasure <kaleasure@ucdavis.edu> wrote:

Hi Jonna,

Are there any details with regard to room setup or A/V needs that you would like me to relay to Patsy for the February 13 meeting at the Keck Center?

Thanks,

Katie

From: Powell, Patsy [mailto:PPowell@nas.edu]
Sent: Thursday, January 30, 2020 9:15 AM
To: 'Katherine Leasure'
Subject: RE: UC Davis Agreement A50707 with the National Academy of Sciences

Hi Katie,

Yes I have everything we need for now. As we get closer to the event, please send me your a/v requirements and agenda. I'll need a copy of your participant list on Wednesday, 2/13 so I can give to our security team.

Thanks for checking,

Patsy

From: Katherine Leasure <kaleasure@ucdavis.edu>
Sent: Thursday, January 30, 2020 11:36 AM
To: Powell, Patsy <PPowell@nas.edu>
Subject: Re: UC Davis Agreement A50707 with the National Academy of Sciences

Good morning Patsy,

It looks like Brian included the signed agreement and certificate of insurance in his email. I just wanted to confirm that you have everything you need from us in order to finalize the reservation?

Thank you,

Katie

On Thu, Jan 30, 2020 at 8:12 AM Powell, Patsy <PPowell@nas.edu> wrote:

Brian,

Thank you,

Patsy

From: Brian E Fitzgerald <bfitzgerald@ucdavis.edu>
Sent: Thursday, January 30, 2020 10:41 AM
To: Powell, Patsy <PPowell@nas.edu>
Cc: Katherine Leasure <kaleasure@ucdavis.edu>; Pamela M Roualdes <proualdes@ucdavis.edu>; Mary Radford <maradford@ucdavis.edu>
Subject: RE: UC Davis Agreement A50707 with the National Academy of Sciences

Good Morning Patsy,

Please find attached, for your records, the Purchase Agreement from UC Davis.

Thank you,

Brian Fitzgerald

Procurement Analyst - Buyer

bfitzgerald@ucdavis.edu | 530-754-1384

UC Davis Supply Chain Management

Procurement & Contracting Services

From: Powell, Patsy <PPowell@nas.edu>
Sent: Thursday, January 30, 2020 5:07 AM
To: Brian E Fitzgerald <bfitzgerald@ucdavis.edu>
Cc: Katherine Leasure <kaleasure@ucdavis.edu>
Subject: RE: UC Davis Agreement A50707 with the National Academy of Sciences

Should have said countersigned agreement attached - sorry

From: Powell, Patsy
Sent: Thursday, January 30, 2020 8:07 AM
To: 'Brian E Fitzgerald' <bfitzgerald@ucdavis.edu>
Cc: Katherine Leasure <kaleasure@ucdavis.edu>
Subject: RE: UC Davis Agreement A50707 with the National Academy of Sciences

Countersigned agreement needed

From: Brian E Fitzgerald <bfitzgerald@ucdavis.edu>
Sent: Wednesday, January 29, 2020 5:23 PM
To: Powell, Patsy <PPowell@nas.edu>
Cc: Katherine Leasure <kaleasure@ucdavis.edu>
Subject: RE: UC Davis Agreement A50707 with the National Academy of Sciences

Thank you so much Patsy,

I've signed and attached the revised agreement.

Best Regard,

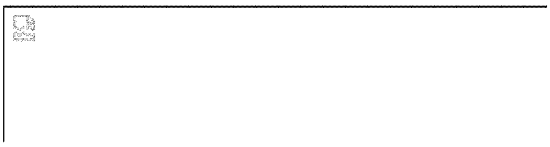
Brian Fitzgerald

Procurement Analyst - Buyer

bfitzgerald@ucdavis.edu | 530-754-1384

UC Davis Supply Chain Management

Procurement & Contracting Services



From: Powell, Patsy <PPowell@nas.edu>
Sent: Wednesday, January 29, 2020 12:47 PM
To: Brian E Fitzgerald <bfitzgerald@ucdavis.edu>
Cc: Katherine Leasure <kaleasure@ucdavis.edu>
Subject: RE: UC Davis Agreement A50707 with the National Academy of Sciences

Good news - we can accept the proposed modification to the indemnification clause below and have removed the jurisdiction clause (i.e., remain silent). Attached is the updated contract.

Thank you,

Patsy

From: Brian E Fitzgerald <bfitzgerald@ucdavis.edu>
Sent: Wednesday, January 29, 2020 11:05 AM
To: Powell, Patsy <PPowell@nas.edu>
Cc: Katherine Leasure <kaleasure@ucdavis.edu>
Subject: RE: UC Davis Agreement A50707 with the National Academy of Sciences

Good Morning Patsy,

Would you please check with your legal and insurance team to see if the Indemnification Statement could be changed to

To the fullest extent permitted by law, the Parties shall indemnify and hold harmless each other and their officers,

employees, and agents (Indemnified Parties), against any and all liability, loss, damages, or claims, including reasonable attorney fees and other defense costs, asserted against the Indemnified Parties by any third party but only in proportion to and to the extent such liability, loss, damages, or claims, including reasonable attorney's fees and other defense costs are caused by or arises out of the negligent or wrongful acts of the other Party, its guests, invitees, employees, independent contractors or any person under the control of the Party.

Also, would you please check to see if we can "remain silent" on the Governing Law clause?

Thank you,

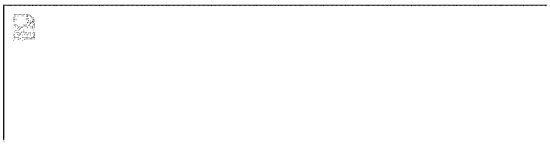
Brian Fitzgerald

Procurement Analyst - Buyer

bfitzgerald@ucdavis.edu | 530-754-1384

UC Davis Supply Chain Management

Procurement & Contracting Services



From: Powell, Patsy <PPowell@nas.edu>
Sent: Tuesday, January 28, 2020 12:20 PM
To: Brian E Fitzgerald <bfitzgerald@ucdavis.edu>
Cc: Katherine Leasure <kaleasure@ucdavis.edu>
Subject: RE: UC Davis Agreement A50707 with the National Academy of Sciences

Hi Brian,

I heard back from our legal and insurance offices and the original contract stands as is as the requested changes are not consistent with our facility use agreement.

Thank you,

Patsy

From: Powell, Patsy
Sent: Thursday, January 23, 2020 1:52 PM
To: 'Brian E Fitzgerald' <bfitzgerald@ucdavis.edu>
Subject: RE: UC Davis Agreement A50707 with the National Academy of Sciences

Hello Brian,

I'll have to send the document to our legal counsel for review approval and any edits.

I'll get back to you once I receive information from legal.

Thank you,

Patsy

From: Brian E Fitzgerald <bfitzgerald@ucdavis.edu>
Sent: Thursday, January 23, 2020 1:47 PM
To: Powell, Patsy <PPowell@nas.edu>
Subject: UC Davis Agreement A50707 with the National Academy of Sciences

Good Morning Patsy,

I've attached the Facility Use Agreement for the UC Davis One Health Institute reservation. There are certain terms and conditions that the University requests to have included in agreements that it enters into. I've made some requested edits to the Agreement and included the University's additional terms as Attachment 1.

Regarding Governing Law & Venue: The University is a California public institution and that allows us two options when dealing with governing law and venue: Either the clause reads State of California or we strike any such reference and agree to remain silent on the issue. Please let me know which option would be preferred.

Please review the document. If everything is acceptable, return a countersigned copy to me at your earliest convenience.

Thank you,

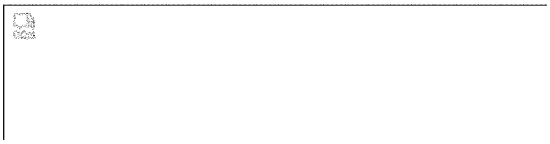
Brian Fitzgerald

Procurement Analyst - Buyer

bfitzgerald@ucdavis.edu | 530-754-1384

UC Davis Supply Chain Management

Procurement & Contracting Services



--

Katherine Leasure

HR/Payroll/Financial Assistant

One Health Institute
530-752-7526

From: Peter Daszak <daszak@ecohealthalliance.org>
To: Jonna Mazet <jkmazet@ucdavis.edu>, Dennis Carroll <[redacted]>, Eddy Rubin <erubin@metabiota.com>, "Dr. Suzan Murray" <MurrayS@si.edu>, "Gardy Jennifer" <Jennifer.Gardy@gatesfoundation.org>, Peter Bogner <[redacted]>, "[redacted]", "Oyewale Tomori ([redacted]" <[redacted]>
Cc: Samtha Maher <maher@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>, Aleksei Chmura <chmura@ecohealthalliance.org>, Cara Chrisman <cchrisman@usaid.gov>, "cheryl@gisaid.org" <cheryl@gisaid.org>, "graca@usf.edu" <graca@usf.edu>, "nmercer@gvn.org" <nmercer@gvn.org>, [redacted]
Subject: RE: Global Virome Project Board of Directors - First Meeting Documents
Sent: Thu, 20 Feb 2020 02:27:41 +0000

Great quote. Tweeting now.

Cheers,

Peter

Peter Daszak
President

EcoHealth Alliance
460 West 34th Street – 17th Floor
New York, NY 10001

Tel. +1 212-380-4474
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: Jonna Mazet [mailto:jkmazet@ucdavis.edu]
Sent: Wednesday, February 19, 2020 9:23 PM
To: Peter Daszak; Dennis Carroll; Eddy Rubin; Dr. Suzan Murray; Gardy Jennifer; Peter Bogner; [redacted]; Oyewale Tomori ([redacted]
Cc: Samtha Maher; Alison Andre; Aleksei Chmura; Cara Chrisman; cheryl@gisaid.org; graca@usf.edu; nmercer@gvn.org; REDACTED
Subject: Re: Global Virome Project Board of Directors - First Meeting Documents

Nice coverage of GVP in *Time*:
https://time.com/5780683/coronavirus-ai/
Have a nice night,
Jonna

On Mon, Feb 10, 2020 at 6:22 AM Peter Daszak <daszak@ecohealthalliance.org> wrote:

Dear All,

In advance of our Board of Directors meeting, please find Global Virome Project documents which will require our signatures on the day. Please read through and get ready with any questions.

1) Certificate of Incorporation

2) Resolutions of the Incorporator

3) Resolutions of the Board of Directors

4) Bylaws

5) Bylaws with explanatory notes

6) Application for Non-Profit Tax Exempt Authority

Also, attached are two published pieces on the Global Virome Project along with our agenda.

I am looking forward to our first meeting this Thursday!

Cheers,

Peter

Peter Daszak
President

EcoHealth Alliance
460 West 34th Street – 17th Floor
New York, NY 10001

Tel. +1 212-380-4474
Website: www.ecohealthalliance.org
Twitter: @PeterDaszak

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

From:	Murray, Suzan <MurrayS@si.edu>
To:	jkmazet@ucdavis.edu <jkmazet@ucdavis.edu>;Peter Daszak <daszak@ecohealthalliance.org>
Sent:	2/21/2020 2:52:49 PM
Subject:	Fwd: Invitation from the House Science, Space, and Technology Committee

FYI - was just invited to this - haven't opened invite yet so don't know who else is there

Sent from my iPhone

Begin forwarded message:

From: "Buchanan, Caitlin"
Date: February 21, 2020 at 3:02:04 PM EST
To: "Murray, Suzan"
Cc: "Abbott, Greg"
Subject: Invitation from the House Science, Space, and Technology Committee

External Email - Exercise Caution
Good afternoon Dr. Murray,

Please find attached your invitation to appear at the Full Committee hearing "Beyond Coronaviruses: Understanding the Spread of Infectious Diseases and Mobilizing Innovative Solutions." The hearing will be held on Thursday, March 5, 2020 at 9:00 AM.

Please let me know if you have any questions.

Best,
Caitlin

Caitlin Buchanan
U.S. House of Representatives
Committee on Science, Space, & Technology
Research Assistant, Subcommittee on Investigations & Oversight
https://science.house.gov/

EDDIE BERNICE JOHNSON, Texas
CHAIRWOMAN

FRANK D. LUCAS, Oklahoma
RANKING MEMBER

Congress of the United States
House of Representatives
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

2321 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515–6301
(202) 225–6375
www.science.house.gov

February 21, 2020

Dr. Suzan Murray, DVM, DACZM
Program Director, Smithsonian's Global Health Program
Smithsonian's National Zoo & Conservation Biology Institute
3001 Connecticut Ave NW
Washington DC 20008

Dear Dr. Murray:

The Committee on Science, Space, and Technology of the U.S. House of Representatives will hold a hearing titled, "*Beyond Coronaviruses: Understanding the Spread of Infectious Diseases and Mobilizing Innovative Solutions*" on March 5, 2020 at 9:00 am in room 2318 of the Rayburn House Office Building. I am writing to invite you to testify at this hearing.

The purpose of the hearing is to discuss emerging infectious diseases, in light of the 2019 novel coronavirus outbreak, and the modeling tools used to detect, predict, and understand the spread of such diseases. The Committee will discuss how some infectious agents spread from animals to humans and how predictive modeling can help control and mitigate the effects of emerging diseases. The Committee will also explore how investments in U.S. research may help combat epidemics and pandemics.

In your testimony, please discuss the mechanisms by which zoonotic transmission occurs and how increased animal-human interactions may lead to the emergence and spread of novel viruses and infectious diseases. Please describe environmental and ecological factors that contribute to spillover events and ways that the Federal government can best support research and development into technologies that detect pathogens, predict potential outbreaks, and strengthen preparedness and response efforts.

In order to allow sufficient time for questions at the hearing, you should highlight the most significant points of your testimony in an oral presentation of no more than five minutes. Your written statement may be as extensive as you wish and will be included in the hearing record in its entirety. Oral statements and answers to questions will be printed as part of the record of the hearing; only technical, grammatical, and typographical errors will be corrected.

Witnesses testifying before the Committee on Science, Space, and Technology must observe the procedures governing witness testimony. These procedures are described in the following enclosures:

- The first enclosure outlines the rules governing appearance before the Committee.
- The second enclosure explains the Committee's Hearing Room Capabilities.
- The third enclosure includes the Truth-In-Testimony Instructions and the Truth-In-Testimony Disclosure Form. This includes the disclosure of financial interests relevant to the subject matter of the witness testimony.

Please email your testimony, biography, and disclosure form to Caitlin Buchanan at caitlin.buchanan@mail.house.gov as soon as it is available, but not less than 48 hours before the hearing. Thirty-five copies of your testimony must also be hand delivered to the Committee's main office, room 2321 Rayburn, 48 hours before the hearing. Due to increased security measures in place at House office buildings, you will need to contact Caitlin Buchanan to arrange for the delivery of your testimony. I recommend that you attach your biography to the testimony and make double-sided copies of the document to conserve paper.

If you have any questions concerning your appearance, please contact Caitlin Buchanan of the Committee on Science, Space, and Technology at (202) 225-6375. I look forward to your participation in the hearing.

Sincerely,

Eddie Bernice Johnson
Chairwoman
House Committee on Science, Space, and Technology

Attachments

Enclosure 1

MEMORANDUM

TO: **WITNESSES APPEARING BEFORE THE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY DURING THE 116TH CONGRESS**

FROM: **COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY**

RE: **RULES GOVERNING TESTIMONY**

The following procedures govern witnesses testifying before the Committee on Science and Technology for the 116th Congress:

1. The Rules of the Committee require all witnesses appearing before the Committee to complete the attached Truth-In-Testimony Form. Should you need extra space, please provide additional information on a separate sheet of paper.

2. Witnesses testifying before the Committee must submit to the Committee the following materials **no less than 48 hours before** they are to testify, excluding weekends and Federal holidays:

    - An electronic copy of your final written testimony, preferably in searchable PDF format, including any supporting graphs, charts, or slideshows. This electronic version will be posted on the Committee website, and will be accessible by the public;
    - Thirty-five (35) **collated, stapled** hard copies of a short narrative biography and your final written testimony, including any supporting graphs, charts, or materials, **in that order**;
    - An electronic copy of a short narrative biography and your Curriculum Vitae;
    - An electronic copy of your completed Truth-In-Testimony Form;
    - Two (2) hard copies of your Curriculum Vitae; and,
    - Two (2) hard copies, including one signed original, of your completed Truth-In-Testimony Form.

3. Witnesses testifying before the Committee must contact the Committee **no less than 48 hours in advance** should they decide to use any multimedia capabilities available in our hearing room (this includes video-conferences, overhead presentations, etc.). Additionally, all material presented in this fashion must be provided in hard copy format to the Committee. Please see enclosure #2 for further explanation of hearing room capabilities.

4. Witnesses testifying before the Committee, or their designee, who are using any of the room's multimedia capabilities need to arrive no less than 30 minutes before the

designated start time of the hearing to allow for set-up. Failure to do so could result in the multimedia portion of the presentation being canceled.

5. Transcripts of hearings conducted by the Committee shall be published in substantially verbatim form, subject only to technical, grammatical, and typographical corrections.

Section 210 of the Congressional Accountability Act of 1995, applies the rights and protections covered under the Americans with Disabilities Act of 1990 to the United States Congress. Accordingly, the Committee on Science strives to accommodate/meet the needs of those requiring special assistance. If you need special accommodation, please contact the Committee on Science in advance of the scheduled event (3 days requested) at (202) 225-6375 or FAX (202) 225-3895 or TTY (202) 226-4410. Should you need Committee materials in alternative formats, please contact the Committee as noted above.

Enclosure 2

2318 Rayburn Building
Committee on Science, Space, and Technology Hearing Room

I. Equipment Capabilities

A) PROJECTION—The hearing room is equipped with multiple monitors capable of displaying computer graphics and video feeds. The Committee recommends that material to be displayed be created on a computer set for a video resolution of 1024 x 768 pixels in order to best match the resolution of the screens.

B) REAR VIDEO MONITOR—The rear of the hearing room is equipped with a large screen viewable from the dais and side seats.

C) WALL-MOUNTED MONITORS—The hearing room is equipped with two monitors, one on each side of the room, for audience viewing.

D) WITNESS MONITOR—A monitor will also be in place in front of the witness table so witnesses can see the screen as well.

II. Computer- Based Presentation

Please bring your presentation on a memory stick or on your personal laptop to the hearing room at least a half-hour before the hearing so that we may help you set it up at the witness table. Your laptop should be equipped with a functioning graphics port with either a VGA or MAC external connector. Because there are many makes and models of laptops, please be prepared to operate the external graphics port for your own laptop.

III. Audiovisual/Multimedia Capabilities

A) The room supports the following transmission methods to broadcast committee activities to remote sites:

1. Telephone Conferencing (Audio Only).
2. Live Audio-Video Streaming (Webcasting).
3. Video Teleconferencing.
4. Video and Audio overflow transmission to room 2325.

B) The room receives House Cable TV feeds for display.

C) The hearing room equipment can playback and display compact disks, dvd discs, and overhead slides.

IV. Equipment Support

Questions should be directed to Larry Whittaker, Systems Manager at Science_IT@mail.house.gov

Enclosure 3

INSTRUCTIONS FOR COMPLETING THE TRUTH-IN-TESTIMONY DISCLOSURE FORM

In General The accompanying form is intended to assist witnesses appearing before the Committee on Science, Space, and Technology in complying with Rule XI, clause 2(g)(5) of the Rules of the House of Representatives, and Rule III, clause (b)(5) of the Rules of the Committee, requiring that:

In the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include a curriculum vitae and a disclosure of any Federal grants, cooperative agreements, or contracts or payments originating with a foreign government, received during the current calendar year or either of the two previous calendar years by the witness or by an entity represented by the witness and related to the subject matter of the hearing. The disclosure shall include the amount and source of each Federal grant (or subgrant thereof), cooperative agreement, or contract (or subcontract thereof) related to the subject matter of the hearing; and the amount and country of origin of any payment or contract related to the subject matter of the hearing originating with a foreign government. Such statements, with appropriate redactions to protect the privacy or security of the witness, shall be made publicly available in electronic form not later than one day after the witness appears.

Please complete and return the following form. If you have additional questions, please contact the Committee at (202) 225-6375.

Truth in Testimony Disclosure Form

In accordance with Rule XI, clause 2(g)(5)*, of the *Rules of the House of Representatives*, witnesses are asked to disclose the following information. Please complete this form electronically by filling in the provided blanks.

Committee: Science, Space, and Technology

Subcommittee: _____

Hearing Date: _____

Hearing Subject:

Witness Name: _____

Position/Title: _____

Witness Type: ○ Governmental ○ Non-governmental

Are you representing yourself or an organization? ○ Self ○ Organization

If you are representing an organization, please list what entity or entities you are representing:

If you are a non-governmental witness, please list any federal grants, cooperative aggrements, or contracts (including subgrants or subcontracts) related to the hearing's subject matter that you or the organization(s) you represent at this hearing received in the current calendar year and previous two calendar years. Include the source and amount of each grant, cooperative agreement, or contract. *If necessary, attach additional sheet(s) to provide more information.*

If you are a non-governmental witness, please list any contracts or payments originating with a foreign government and related to the hearing's subject matter that you or the organization(s) you represent at this hearing received in the current year and previous two calendar years. Include the amount and country of origin of each contract or payment. *If necessary, attach additional sheet(s) to provide more information.*

False Statements Certification

Knowingly providing material false information to this committee/subcommittee, or knowingly concealing material information from this committee/subcommittee, is a crime (18 U.S.C. § 1001). This form will be made part of the hearing record.

_____ _____

Witness signature Date

If you are a <u>non-governmental witness</u>, please ensure that you attach the following documents to this disclosure. Check both boxes to acknowledge that you have done so.

☐ Written statement of proposed testimony

☐ Curriculum vitae

Rule III of the Rules of the Committee on Science, Space, and Technology provides:
(5) In the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include a curriculum vitae and a disclosure of any Federal grants, cooperative agreements, or contracts, or contracts or payments originating with a foreign government, received during the current calendar year or either of the two previous calendar years by the witness or by an entity represented by the witness and related to the subject matter of the hearing. The disclosure shall include the amount and source of each Federal grant (or subgrant thereof), cooperative agreement, or contract (or subcontract thereof) related to the subject matter of the hearing; and the amount and country of origin of any payment or contract related to the subject matter of the hearing originating with a foreign government. Such statements, with appropriate redactions to protect the privacy or security of the witness, shall be made publicly available in electronic form not later than one day after the witness appears.

From: David J Wolking <djwolking@ucdavis.edu>
Sent: Sat, 25 Apr 2020 12:04:29 -0700
Subject: Re: Reminder: P2 EB Call - Monday April 27 @ 11AM PDT
To: David J Wolking <djwolking@ucdavis.edu>
Cc: Aleksei Chmura <chmura@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>, Amanda Fine [redacted] Ava Sullivan <sullivan@ecohealthalliance.org>, Brian Bird <bhbird@ucdavis.edu>, Carolina Chrurchill [redacted] Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, Corina Grigorescu Monagin <cgmonagin@ucdavis.edu>, Dawn Zimmerman [redacted], Elizabeth Leasure <ealeasure@ucdavis.edu>, Jon Epstein <epstein@ecohealthalliance.org>, Karen Saylors [redacted] Kevin Olival <Olival@ecohealthalliance.org>, "Murray, Suzan" [redacted], Nicole Gardner <nrgardner@ucdavis.edu>, Peter Daszak <daszak@ecohealthalliance.org>, "predict@ucdavis.edu" <predict@ucdavis.edu>, "Prof. Jonna Mazet" <jkmazet@ucdavis.edu>, "Prof. Woutrina Smith" <wasmith@ucdavis.edu>, Sarah Olson [redacted] Simon Anthony <sja2127@columbia.edu>, "Tammie O'Rourke" <torourke@metabiota.com>, Tracey Goldstein <tgoldstein@ucdavis.edu>, "William B. Karesh" <karesh@ecohealthalliance.org>
04.21.20 - USAID COVID-19 Global Response Fact Sheet #1.pdf

Hi there,
Below is the agenda for Monday's call.

Enjoy the weekend,

David

PREDICT Executive Board Meeting
Monday, April 27, 2020
11:00AM-12:00PM PDT/2:00-3:00pm EDT
Zoom link: [redacted]
Additional Zoom info below agenda

1. USAID updates
USAID Fact Sheet - attached
On PPE procurement - guidance from Andrew

2. Extension plans and next steps
Status of awards
Follow-up/continued engagement of P2 global network
New developments/needs?

3. Data sharing
Human data guidance feedback?
Genbank release April 30th
DDL update - develop plan for countries with data not yet approved

4. Final Report (as time allows)...
Vol 2 - Country reports - moving to USAID reviews...
Vol 1 - Global report - reality check, timeline, strategy...

5. Media, publication and conference updates
6. Upcoming funding opportunities
7. Consortium author list
- Link to Google Sheet (on authorship vs. acknowledgements)

Zoom Call-in info
Topic: PREDICT EB Call
Join Zoom Meeting: [redacted]

Meeting ID: [redacted]

One tap mobile

REDACTED US (San Jose)
US (New York)

Dial by your location

REDACTED US (San Jose)
US (New York)

Meeting ID: REDACTED

On Thu, Apr 23, 2020 at 6:16 PM David J Wolking <djwolking@ucdavis.edu> wrote:

> Hi EB,
> Just a reminder about our call on Monday (April 27 @ 11AM PDT). I'll follow-up with a real agenda but you can bet your bottom dollar it will include P2 extension strategy/plans, updates on data sharing (Genbank release April 30!), and the final report. Agenda comfort food ;-)

Talk soon,

David

--
David J. Wolking
Senior Manager, Global Programs, One Health Institute
Global Operations Officer, PREDICT Project of USAID Emerging Threats Division
Senior Manager, PREEMPT Project
School of Veterinary Medicine
University of California, Davis

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School of Veterinary Medicine
University of California, Davis

USAID
FROM THE AMERICAN PEOPLE

COVID-19 – GLOBAL RESPONSE

FACT SHEET #1, FISCAL YEAR (FY) 2020 APRIL 21, 2020

KEY FIGURES*

2,402,250
Total Number of Confirmed COVID-19 Cases Worldwide

163,097
Total Number of Deaths Related to COVID-19 Worldwide

213
Number of Areas, Countries, and Territories, with Confirmed COVID-19 Cases

**Source: The UN World Health Organization (WHO), April 21, 2020; Figures are subject to change due to periodic adjustment and updating.*

KEY DEVELOPMENTS

- In response to the coronavirus disease (COVID-19) pandemic, the U.S. Department of State (DoS) and USAID announced $100 million in emergency health funding, under USAID's Emergency Reserve Fund (ERF-USAID) on February 7, to assist the world's most vulnerable countries in fighting the COVID-19 outbreak.
- Separately, on March 6, U.S. President Donald J. Trump signed the Coronavirus Preparedness and Response Supplemental Appropriations Act 2020, which provided an additional $250 million for the Economic Support Fund (ESF) account, $435 million for the Global Health Programs (GHP-USAID) account—of which $200 million is to be merged with the ERF-USAID—and $300 million in International Disaster Assistance (IDA) for DoS and USAID's COVID-19 global response.
- On March 9, USAID activated the COVID-19 Task Force to coordinate USAID's response to COVID-19 and ensure USAID can continue its life-saving mission across the world. On March 13, USAID's Office of U.S. Foreign Disaster Assistance (USAID/OFDA) activated a COVID-19 Response Management Team to support USAID Office of Food for Peace (USAID/FFP) and USAID/OFDA operations and coordinate COVID-19 readiness and response activities in existing humanitarian crises.
- Furthermore, President Trump signed the Coronavirus Aid, Relief, and Economic Security Act on March 27, which provided an additional $258 million for USAID's humanitarian programming and $95 million in operational expenses to ensure the safety and security of the USAID workforce.
- As of April 17, USAID had obligated nearly $100 million to support infection prevention and control (IPC)—including cleaning and disinfection protocol, educating staff on personal protective equipment (PPE) use, establishing isolation areas, and implementing triage mechanisms—the provision of PPE, COVID-19 case management, and water, sanitation, and hygiene (WASH) support, as well as capacity building and training. This assistance builds upon decades of bilateral U.S. support to strengthen public health capacity around the world, helping equip countries to respond to the outbreak.

TOTAL USAID FUNDING[1] FOR THE COVID-19 RESPONSE	
USAID/GH[2]	$99,000,000
	$99,000,000

[1] Year of funding indicates the date of obligation—a legal commitment of funds in an Agency's accounting system with a corresponding procurement action—not appropriation, of funds. Funding represents amounts obligated as of April 17, 2020.
[2] USAID's Bureau for Global Health (USAID/GH)

GLOBAL RESPONSE STRATEGY

- In responding to the COVID-19 pandemic, USAID, together with DoS, launched the Strategy for Supplemental Funding to Prevent, Prepare for, and Respond to Coronavirus Abroad. Through four interrelated pillars, DoS and USAID are working to accomplish the following:
  - Protect American citizens and the U.S. Government (USG) community overseas, facilitate the continuation of USG work overseas, and communicate effectively;
  - Prevent, prepare for, respond to, and bolster health institutions to address the COVID-19 pandemic and the possible re-emergence of the disease;
  - Prevent, prepare for, and respond to COVID-19 in existing complex emergency settings, and address the potential humanitarian consequences of the pandemic; and
  - Prepare for, mitigate, and address second-order economic, security, stabilization, and governance impacts of COVID-19.
- To achieve these interrelated objectives, USAID is tailoring assistance based on country capacity and reported needs through implementing the USG Action Plan to Support the International Response to COVID-19 (SAFER Action Plan). The SAFER Action Plan is focused on scaling up community approaches to slow the spread of COVID-19; addressing critical needs of health care facilities, health care workers, and patients; identifying, investigating, and responding to COVID-19 cases through expanded disease detection and surveillance mechanisms; employing strategies to address second order impacts of COVID-19; and developing plans for the utilization of therapeutics, vaccines, and other life-saving supplies.
- USAID is working with DoS, the U.S. Centers for Disease Control and Prevention and other interagency partners to prioritize countries to receive funding for the COVID-19 response. The prioritization process is based on a series of factors, such as caseload and existence of community transmission, data indicating connectivity to a COVID-19 hotspot, unstable political situations or displaced populations, weak ranking of health system stability and limited compliance with international health regulations; and assessment that USG support can make an impact on containing or mitigating COVID-19 in the country. Once USAID prioritizes a country for available funding, the Agency works with various stakeholders, including DoS and USAID country staff, to select the most appropriate mechanisms to fill identified response gaps. USAID is also collaborating with governments, multilateral organizations, non-governmental organizations (NGOs), the private sector, and other actors working on the ground to support the COVID-19 response.

AFRICA

- While relatively few African countries have reported high caseloads to date, health experts note that many health systems are likely underprepared to respond to a rising number of confirmed COVID-19 cases. Nevertheless, due to movement and border restrictions as well as school closures, individuals and households are already feeling strains on their lives and livelihoods. USAID continues to monitor data and provide support as needed.
- USAID is committed to building upon decades of assistance in Africa through the COVID-19 response, deploying nearly $22 million in funding as of April 17 to Angola, Burkina Faso, Cameroon, Côte d'Ivoire, Ethiopia, Kenya, Mozambique, Nigeria, Rwanda, Senegal, South Africa, Tanzania, Zambia, and Zimbabwe to respond to and prevent the spread of COVID-19. USAID-supported activities in Africa include community engagement, health systems and laboratory capacity strengthening, IPC, risk communication, disease surveillance, the delivery of essential medications, and WASH support.
- For example, USAID provided approximately $1.4 million to support risk communication and WASH activities in Burkina Faso to mitigate the spread of COVID-19 in the country and throughout the region. In addition, USAID had provided nearly $4 million in COVID-19 response funds as of April 17 to support health assistance in South Africa, ensuring that frontline workers have the tools they need to properly respond to the outbreak.

ASIA

- USAID had provided nearly $40 million in assistance to countries in the region as of April 17, including Bangladesh, Burma, Cambodia, and Indonesia, to address the immediate effects of the COVID-19 crisis. USAID funding is supporting rapid diagnostic and case management capacity, IPC in health centers, testing and laboratory capacity, surveillance, the provision of PPE, and risk communication activities.

- For example, USAID provided $3.4 million to Bangladesh for COVID-19 preparedness and response activities. The assistance will support response coordination, COVID-19 case management, disease surveillance, and the provision of WASH supplies, among other activities. USAID also provided critically needed PPE to Burma on March 6—31,500 masks, 1,500 face shields, 1,500 gowns, 1,500 shoe covers, and 1,000 safety goggles—from an emergency stockpile co-managed with WHO in Dubai, United Arab Emirates. This equipment protected healthcare workers in the early weeks of the outbreak.

EUROPE & EURASIA

- With Italy recording more than 181,228 confirmed cases as of April 21 and Spain registering 200,210 confirmed cases as of the same date, the pandemic has had a dramatic impact on the region.
- In response to the effects of the COVID-19 pandemic in Europe and Eurasia (E&E), USAID had provided approximately $12.4 million in assistance as of April 17 in Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kosovo, Moldova, North Macedonia, Serbia, and Ukraine to help activate case management and surveillance mechanisms, prepare laboratory systems, support IPC in health facilities, and share risk communication information with at-risk populations throughout the region.

LATIN AMERICA & THE CARIBBEAN

- USAID had allocated approximately $7.3 million in funding to countries in Latin America and the Caribbean (LAC) as of April 17 for COVID-19 prevention and response activities. The funding will support risk communication activities, disease surveillance, IPC, capacity building, and WASH interventions to stem the spread of the disease while also building upon USAID's continued health assistance in the region.

MIDDLE EAST & NORTH AFRICA

- USAID had provided nearly $1.9 million in funding to support COVID-19 emergency prevention and preparedness activities in Iraq, Morocco, and Tunisia, as of April 17. Supported activities include technical assistance for disease surveillance and rapid response, IPC, and laboratory diagnostics. Through local partner organizations, USAID also plans to provide support for awareness and youth engagement campaigns through social media, IPC, and laboratory strengthening in the Middle East and North Africa (MENA).

CONTEXT

- On December 31, 2019, the WHO Country Office in mainland People's Republic of China (PRC) reported that it became aware of several cases of pneumonia with an unknown cause in Wuhan City, Hubei Province, PRC. In January, Chinese authorities identified a new type of coronavirus, which is responsible for the current COVID-19 pandemic. Shortly after, on January 13 and 15 respectively, the Ministry of Public Health in Thailand and the Ministry of Health, Labor, and Welfare in Japan reported the first cases of laboratory-confirmed COVID-19 outside of PRC. As of April 21, COVID-19 has spread to 213 areas, countries, and territories, infecting 2,402,250 people.
- Following the worldwide spread of the disease, WHO declared the COVID-19 outbreak a Public Health Emergency of International Concern on January 30 and a global pandemic on March 11.
- In response, on March 9, USAID activated the COVID-19 Task Force to protect the safety and security of USAID's global workforce, ensure that USAID can continue its life-saving mission across the world, and support partner countries in their response to COVID-19. Furthermore, on March 13, USAID/OFDA activated a COVID-19 Response Management Team based in Washington, D.C., to support readiness and response activities related to COVID-19 in existing humanitarian crises, coordinate readiness and response efforts with other USAID offices, and address USAID/FFP and USAID/OFDA staff safety and operational issues.

USAID FUNDING OBLIGATED FOR THE COVID-19 RESPONSE[1]

ACTIVITY	LOCATION	AMOUNT
USAID/GH		
AFRICA		
Health, WASH	Angola, Burkina Faso, Cameroon, Cote d'Ivoire, Ethiopia, Kenya, Mozambique, Nigeria, Rwanda, Senegal, South Africa, Tanzania, Zambia, Zimbabwe	$21,600,000
TOTAL USAID/GH FUNDING FOR THE COVID-19 RESPONSE IN AFRICA		**$21,600,000**
ASIA		
Health, WASH	Afghanistan, Bangladesh, Burma, Cambodia, India, Indonesia, Kazakhstan, Kyrgyzstan, Laos, Mongola, Nepal, Pakistan, Papua New Guinea, the Pacific Islands, the Philippines, Sri Lanka, Takijistan, Thailand, Timor Leste, Turkmenistan, Uzbekistan, Vietnam	$38,101,145
TOTAL USAID/GH FUNDING FOR THE COVID-19 RESPONSE IN ASIA		**$38,101,145**
EUROPE AND EURASIA		
Health, WASH	Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kosovo, Moldova, North Macedonia, Serbia, and Ukraine	$12,350,000
TOTAL USAID/GH FUNDING FOR THE COVID-19 RESPONSE IN E&E		**$12,350,000**
LATIN AMERICA AND THE CARIBBEAN		
Health, WASH	Caribbean, Dominican Republic, Haiti, Jamaica, and Paraguay	$7,300,000
TOTAL USAID/GH FUNDING FOR THE COVID-19 RESPONSE IN LAC		**$7,300,000**
MIDDLE EAST AND NORTH AFRICA		
Health, WASH	Iraq, Morocco, and Tunisia	$1,890,000
TOTAL USAID/GH FUNDING FOR THE COVID-19 RESPONSE IN MENA		**$1,890,000**
GLOBAL AND REGIONAL		
Health, WASH	Various	$17,758,855
USAID/GH FUNDING FOR COVID-19 RESPONSE – GLOBAL AND REGIONAL		**$17,758,855**
TOTAL USAID FUNDING FOR THE COVID-19 GLOBAL RESPONSE[2]		**$99,000,000**

[1] Year of funding indicates the date of obligation, not appropriation, of funds. Funding figures reflect funding obligated as of April 17, 2020. The total does not include most of the $500 million in USG assistance for the COVID-19 pandemic announced to date. Implementing partners include NGOs, private organizations, and UN agencies.
[2] Please note that this total does not include funding for USAID operating expenses (OE). Of the $102 million appropriated for OE-COVID as of April 17, approximately $19 million had been obligated as of the same date.

ADDITIONAL INFORMATION

- The most effective way people can assist relief efforts is by making cash contributions to organizations that are conducting relief operations. USAID encourages cash donations because they allow aid professionals to procure the exact items needed; can be transferred quickly and without transportation costs; support the economy of the disaster-stricken region; and ensure culturally, dietarily, and environmentally appropriate assistance.
    - More information can be found at USAID Center for International Disaster Information: www.cidi.org.
- USAID has established an inbox (covid19tf_pse@usaid.gov) to coordinate private sector engagement around the COVID-19 response. In addition, the UN supports an initiative for businesses seeking to donate money, goods or services. Please visit connectingbusiness.org for more information.
- Finally, USAID reminds the public that it may accept unsolicited applications and proposals. The Agency has set up a COVID-19 Concepts portal at: https://www.usaid.gov/coronavirus/funding-requests-unsolicited-proposals.

Sent: Wed, 20 May 2020 10:07:05 -0700
Subject: Re: Good news from FDA & need input ASAP!
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Eddy Rubin <[redacted]>
Cc: Dennis Carroll <[redacted]>, Peter Daszak <daszak@ecohealthalliance.org>, [redacted] <[redacted]>, Samtha Maher <maher@ecohealthalliance.org>

Hi Eddy, sent you the document from FDA in the other chain, but can you or Dennis send me & [redacted] the data platform document you shared with Rockefeller? I don't believe I have that. The FDA document doesn't have funding or scoping in it. That's what we are trying to add to their justification.
Thanks,
Jonna

On Tue, May 19, 2020 at 9:03 PM Eddy Rubin <erubin@metabiota.com> wrote:

> This is great news! I would like to review but cannot get into the attachments to review. Could you please send to [redacted] (Much better email to use for me than the Metabiota address) I am particularly interested in looking at the budget and justification for the data platform. When the Rockefeller Foundation reviewed what we gave them they were correctly concerned that we had put together an unreasonably small budget for the platform.
> Thanks
> Eddy

On Tue, May 19, 2020 at 1:41 PM Jonna Mazet <jkmazet@ucdavis.edu> wrote:

> Hi,
> Great news from FDA that they would like to move forward with a white paper to start the process of contributing to GVP. We discussed making the white paper budget around $10 million for now, but that we could also describe additions showing what it would take to scale investments out. According to FDA, they had a call with their NIH and USDA partners (they have a three-way MOU that was mentioned and I found online: https://olaw.nih.gov/guidance/finalmou.htm), and NIH wants to join FDA in supporting the GVP. They were very unclear about whether that would be additional funding beyond what we initially propose or helping them to come up with the $10 million. Apparently the contact at NIH is Pat Brown who is director of the Office of Laboratory Animal Welfare (OLAW), who will also be bringing the concept to Michael Lauer, the Deputy Director for Extramural Research. Apparently, USDA also interested, but less information was provided there.

In the next 48 hours, they would like us to develop a 3-5 page white paper with budget that is "urgent and compelling and tied to outcomes and deliverables". I asked if they wanted to support virus detection in the US or elsewhere and for more details on scope, they said "All of it!" and mentioned CONUS, OCONUS, and Emerging, then went on about tying to WHO and/or CDC lists of prioritized diseases. So really, they were all over the board, but it is clear that they would like to make an ask for emergency COVID funds. There are, of course, some major timing problems with that for operating during sheltering, and they also mentioned training their staff, as well as US Public Health Officers (majority hold advanced degrees). They offered that they have already discussed it with their contracts officer, who suggested that they could use a sole source contract, which will require our also documenting what we're offering that no one else can do.

Brianna has drafted the attached justification that is intended for incorporation into the 3-5 page white paper and may give us a bit more guidance.

I need input by COB tomorrow on best scope, etc. to include for this group. [redacted] and I can use language we developed for the MacArthur competition but scaling to the best option for an FDA partnership will be a major challenge, when they want the moon. I think they are open to some of their funding going to the hub, but they definitely want active virus detection in there, likely training as well.

Please weigh in, as they want the whole thing wrapped up this week with funding to be allocated to the 501(c)3 in 30-60 days. **Peter, do we have it ready and available to receive funds?**

Thanks in advance!
Jonna

Preview attachment ONE HEALTH w PREDICT GVP justification.docx

ONE HEALTH w PREDICT GVP justification.docx
21 KB

Sent: Thu, 21 May 2020 15:57:59 -0700
Subject: Re: Good news from FDA & need input ASAP!
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Dennis Carroll <[redacted]>, Peter Daszak <daszak@ecohealthalliance.org>, Eddy Rubin <erubin@metabiota.com>
Cc: [redacted], Samtha Maher <maher@ecohealthalliance.org>
ONE HEALTH GVP Partnership Justification May 21 2020.docx

Just closing the loop. We met our 48hr timeline request -- again huge thanks to [redacted] & really benefitted from being able to work around the clock because of her Scotland and my California hours. So, attached is the working draft of the requested white paper I just shared with FDA. We'll see where it goes. There will likely be a round of edits with them, so if there is anything you'd like me to change, please let me know.
Have a nice evening,
Jonna

On Tue, May 19, 2020 at 1:41 PM Jonna Mazet <jkmazet@ucdavis.edu> wrote:

> Hi,
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> Please weigh in, as they want the whole thing wrapped up this week with funding to be allocated to the 501(c)3 in 30-60 days. **Peter, do we have it ready and available to receive funds?**
>
> Thanks in advance!
> Jonna

Preview attachment ONE HEALTH w PREDICT GVP justification.docx

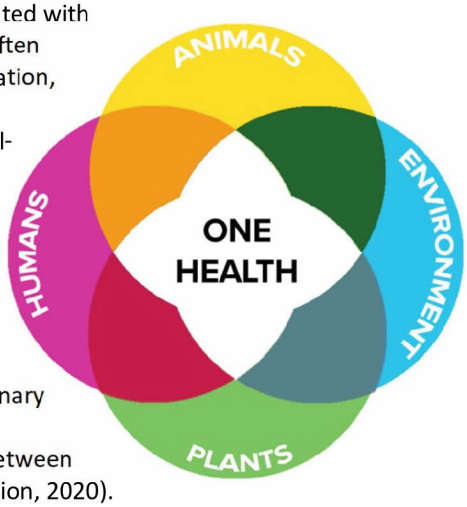
ONE HEALTH w PREDICT GVP justification.docx
21 KB

Stakeholders Collaboration in FDA's One Health Steering Committee

Justification for collaboration:

Epidemics or pandemics arising from the emergence of infectious diseases can have significant adverse public health impacts with high morbidity and mortality rates. Infectious disease health disasters can be devastating to populations, and response activities can be costly over time leading to many years for full recovery. The Kaiser Family Foundation estimates the cost of treating uninsured hospitalized patients in the United States infected with the current 2019 coronavirus disease (SARS-CoV-2) will range from approximately $13.9 billion to $41.8 billion (Kaiser Family Foundation, 2020). Costs for prevention of Ebola viral disease in Sierra Leone during the 2014-2017 timeframe was estimated to be $13 million versus the $635 million dollars estimated for social and economic losses (Kellerborg et al., 2020). The overwhelming consequences of epidemics and pandemics gives relevance to the importance of evidence-based methods to prevent epidemics or pandemics from initially occurring. Health prevention and promotion should be at the center of FDA's regulatory responsibilities.

Approximately 75% of new or emerging infectious diseases are of animal origin (Centers for Disease Control and Prevention [CDC], 2017). In 2019, the CDC in collaboration with the United States Department of Agriculture and the Department of Interior listed eight zoonotic diseases of national concern (CDC, 2019). In 2018, the World Health Organization published a document identifying global diseases to prioritize with research and development based on their severity and potential to emerge into a public health emergency for which medical countermeasures are either absent or insufficient (World Health Organization [WHO], 2018). A majority of the threats listed in the 2018 WHO document are a result of zoonotic pathogens (WHO, 2018).



Besides their impact on health, there are a host of challenges associated with zoonoses that are complex. The dynamics of zoonotic disease transmission often correlate with disease drivers triggered by one or more factors (e.g., globalization, socioeconomics, political issues, human susceptibility, and biophysical environmental changes) (Olson et al., 2015). These drivers often precede spill-over events which can lead to health issues linked to the human-animal interface requiring a need for a holistic and multidisciplinary approach (National Research Council, 2010; Olson et al., 2015). The One Health approach would be most ideal to implement, since the concept embraces a model incorporating a collaborative working endeavor among various health professions on many levels and with multiple sectors. One Health is a model that is vital for sustainability of optimizing positive public health outcomes. It is defined as "… a collaborative, multisectoral, and trans-disciplinary approach – working at local, regional, national, and global levels – to achieve optimal health and well-being outcomes, recognizing the interconnections between people, animals, plants and their shared environment" (One Health Commission, 2020). Partnering with stakeholders interested in preventing pandemics aligns with FDA's current One Health objectives and the key priorities of the FDA Commissioner announced in January 2020. Since FDA's mission may overlap in a variety of ways with stakeholders, the agency will benefit from working collaboratively with others to protect and improve public health. Sharing of information and resources is essential to FDA's overall public health mission.

Spotlight on viral threats to human health and food security

We now live in an era in which threats posed by viral pandemics are a global reality. As we have seen, a single lethal virus can emerge suddenly and spread rapidly to every household and every

community without regard to national borders or to social and economic standing. The SARS, Ebola and Zika outbreaks did little to prepare us for the COVID-19 pandemic that has swept across the world and serves as a strong reminder that we are vulnerable to emerging viral threats. Since the mid-20th century, new and deadly diseases have emerged at an alarming rate, and the threats from this vast pool of unknown viruses are accelerating exponentially, driven by our expanding population, demand for food and global travel.

If viruses are our enemy, we do not know our enemy very well. The zoonotic viruses we do know are barely the tip of the iceberg. It has been estimated there are more than 500,000 animal viruses, about which we know nothing or very little, that have the potential to spillover from animals to humans and cause disease. Without change, there is a very real risk of another pandemic. Success in preventing future pandemics requires thinking and acting differently. We don't have to be unprepared. Advances in science and technology make it possible to pivot to a One Health approach, embracing collabot=ration and benefitting from the expertise of multiple engaged stakeholders. We can move from repeatedly responding to outbreaks to proactively preparing for them. To achieve this goal, we must not only further our knowledge of the hosts, ecology and drivers of priority zoonotic diseases, but also fill the knowledge gap for unknown viruses that are waiting to emerge and could cause the next pandemic, like SARS-CoV-2 was just months ago.

Stakeholders:

Below is a list of potential stakeholders identified as being involved One Health activities. The type and extent of stakeholder involvement may vary and depend on the context of the FDA One Health Steering Committee's goals, objectives, decision-making authority, purpose of the engagement, available resources, and organizational structure.

Global Virome Project (GVP)

UC Davis One Health Institute (OHI)

USAID's PREDICT and One Health Workforce – Next Generation Projects

One Health Commission

About the Global Virome Project (GVP)

The Global Virome Project is a strategic One Health response to the growing need to better predict, prevent and respond to future viral pandemic threats and to protect us all from their worst consequences. By bringing together multi-disciplinary projects and interested parties we will create a global network partnership among public, private, philanthropic and civil organizations with a mission to detect and identify the greatest zoonotic viral threats that can provide much needed strategies to prepare for and stop future costly and devastating pandemics.

The global vision of the GVP is a world safe from the threat of emerging viral diseases. In order to make this vision a reality, the collaboration aims to:

- Detect and identify the vast majority of zoonotic viral threats to human health and food security
- Connect and share the work of global thought leaders across research, industry, philanthropy and government
- Strengthen local, regional and global capacities to monitor, respond and prevent spillover while viruses are still evolving in animal populations
- Characterize risk for the development of targeted risk mitigation measures
- Foster new strategies for the development of diagnostics, vaccines, pharmaceuticals and other new classes of countermeasures using resulting data and bioinformatics

- Build a world safe from emerging viral diseases by informing health policy, disease prevention, patient diagnosis and treatment, animal conservation and economics

As a functionally collaborative and fully integrated team, GVP has the knowledge and capability to achieve its mission, benefiting from over 30 years' expertise in global pandemic prevention and One Health applications encompassing disease surveillance, capacity building, risk characterization and public health policy.

GVP brings together partners that align with its vision from around the world through a hub and spoke model, amplifying the collective impact of consortium contributions. Led by a board of directors and executive team at the hub, partners of the consortium benefit from access to large volumes of cross-disciplinary information that is organized, assimilated and distributed by the hub. This approach eliminates the silo effect through the coordination of regional and global networks and increases strategic capabilities of its partners by providing its technical guidance and intellectual and material resources, collaborative project management and implementation (e.g., advanced viral discovery), information sharing, training and operational and administrative support.

Why partner with the Global Virome Project (GVP)

There are over 1500 mammalian and avian species in the United States described by the IUCN Red List (accessed May 2020), with likely many more species yet to be identified. Detection and characterization (excluding personnel and operational costs) of the majority of viruses of concern to human health within the United States would cost approximately $300 million. However, given the disease transmission risks of import and export of animals and increasing international travel of people, it is important to consider the risk of emerging threats from animal sources outside of the United States of America, an interconnected global network. Therefore, GVP estimates it will cost approximately $3.7 Billion dollars to discover the majority of the global viral zoonotic threats to humans (Carroll et al. 2018).

The FDA at large, and especially the Office of Counterterrorism and Emerging Threats, plays a critical role in protecting the United States and the world from emerging infectious disease threats (both CONUS and OCONUS activities). By partnering with GVP, the FDA will benefit from strategic support to expand it's One Health platform and capacities for detection and prevention of priority zoonotic diseases and emerging viral threats to food and health security. The FDA will benefit exponentially by developing a high capacity workforce of leaders trained in pandemic prevention, preparedness and emergency response capable of training others throughout the USG and beyond; developing a strong virus sampling and testing infrastructure; and securing international partnerships to ensure an international response to a massively important global health challenge.

Additionally, as one of the founding partners of the Global Virome Project, the FDA will gain access to a network of global health professionals and national and international emerging virus and One Health experts; GVP's online information hub of procedures, protocols and educational materials; and the GVP database. In addition, the FDA will gain the right to nominate a representative to the Scientific Advisory Committee, GVP Working Groups, and appropriate Regional Networks. For contribution of $10 Million USD, the FDA will also become a Platinum Sponsor of the GVP, with the right to nominate geographic or species targets to the Target List and nominate a representative to the Supporter Council.

Deliverables

With a one year $10 million-dollar investment, the GVP will work with FDA to:

- Establish the legal, regulatory and ethical framework for safe sample, data, information and benefit sharing for the partnership

- Provide zoonotic disease surveillance training materials (for remote delivery if necessary) for virus discovery (surveillance, field biology, lab proficiency, biosafety)
- Implement a data management platform
- Identify 3 high-priority pilot project sites (1 CONUS, 2 OCONUS to be prioritized with FDA) for demonstration of intensive viral discovery sampling and testing of animals (while discovering virus from those sites)
- Use laboratory platforms that have proven capacity to identify novel viruses, next-generation sequencing and unbiased approaches to increase speed and efficiency
- Conduct a risk analysis of viruses identified at the pilot project sites
- Identify high-value virus targets for ongoing monitoring and future development of diagnostics and interventions

Timeline

Project Timeline – 1 year	**Quarters**			
Activity/ Quarter	1	2	3	4
Administrative startup	X	X		
Data management	X	X	X	X
Site selection	X	X		
Training (field and lab)	X	X	X	
Demonstration site virus detection		X	X	X
Virus ID/Laboratory analysis			X	X
Data analysis			X	X
Reporting				X

NOTE: *Timeline for deliverables are subject to lockdown COVID-19 restrictions being lifted and the ability to conduct work and/or travel safely*

Budget

Item (inclusive of indirect costs)	**Cost**
Operational Support (incl. personnel, collaborative activities, reporting, administration)	$1,000,000
Training and viral discovery (3 sites @ $3M USD/site)	$9,000,000
Viral discovery & characterization of 24,000 samples (or 24 species) @ $175 per sample	*$4,200,000*
Data management, Training, Logistics	*$3,800,000*
TOTAL	**$10,000,000**

Projected impact

The United Nations estimates that the global population will reach 9.7 billion by 2050 (United Nations, 2017). With an increasing population, it is expected there will be unprecedented demands on food supply and resources and thus opportunities for zoonotic disease emergence.

The proposed deliverables will inform science-based approaches to reduce the risk of preventable human infection that until now has been responsible for pandemics, such as SARS-CoV-2 (COVID-19) and Ebola, with both local and global impacts on human health. Other benefits include an increase in data for risk analysis and the data necessary for the creation of new tools for diagnosis, prevention and

treatment of disease, as well as opportunities for improving legal, regulatory and policy frameworks for global health surveillance and protection of essential biodiversity for the planet's health.

Using GVP techniques, the collaboration will increase the capacity of the FDA to monitor, predict and prevent the emergence of zoonotic viruses, initiating a sea change of disease prevention. Given the high cost of epidemic events, data produced will provide substantial return on investment by enhancing diagnostic capacity in the early stages of a disease outbreak to facilitate local control and by rapidly facilitating preventive behavior change about how to live safely with hosts in their environment.

If expanded to long-term, the collaboration will provide orders-of-magnitude more information about future threats to local and global health and biosecurity than exists today. Broad-scale prevention approaches could provide immediate impact and return on investment, halting potential pandemics at their source of spillover. For example, identification of novel viruses in hunted, traded or farmed wildlife will be used to enhance biosecurity in markets and farming systems, reducing public health risk and increasing food safety. With outputs intended to serve the global public good, the GVP has a transparent and equitable strategy to share data and viral samples which could lead to targeted development of drugs and vaccines, facilitating additional long-term impact with further time and investment.

References

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Sent: Fri, 22 May 2020 15:17:50 -0700
Subject: Re: Good news from FDA & need input ASAP!
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Peter Daszak <daszak@ecohealthalliance.org>
Cc: Dennis Carroll <[redacted]>, Eddy Rubin <erubin@metabiota.com>, [redacted], Samtha Maher <maher@ecohealthalliance.org>

Will do -- they had put in that stakeholder list, not me, so not sure where they were going with that. Though, it was a little confusing as to whether they wanted to reach out to UCD or GVP in the beginning. Trying to steer them to GVP. Happy to add in EHA, if they want to keep the list in the document.
Have a great weekend everybody,
Jonna

On Fri, May 22, 2020 at 2:17 PM Peter Daszak <daszak@ecohealthalliance.org> wrote:

> Great to see this - please include EcoHealth alliance as a partner next to Uc Davis.
> Also letting you all know the bank account for GVP is open and ready!!

Nice job jonnA!

Cheers,

Peter

Peter Daszak
(Sent from my iPhone)

President
EcoHealth Alliance

460 West 34th Street, New York, NY10001, USA

www.EcoHealthAlliance.org

> On May 21, 2020, at 6:58 PM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:
>
> Just closing the loop. We met our 48hr timeline request -- again huge thanks to [redacted] & really benefitted from being able to work around the clock because of her Scotland and my California hours. So, attached is the working draft of the requested white paper I just shared with FDA. We'll see where it goes. There will likely be a round of edits with them, so if there is anything you'd like me to change, please let me know.
> Have a nice evening,
> Jonna
>
> On Tue, May 19, 2020 at 1:41 PM Jonna Mazet <jkmazet@ucdavis.edu> wrote:
>
> > Hi,
> > Great news from FDA that they would like to move forward with a white paper to start the process of contributing to GVP. We discussed making the white paper budget around $10 million for now, but that we could also describe additions showing what it would take to scale investments out. According to FDA, they had a call with their NIH and USDA partners (they have a three-way MOU that was mentioned and I found online: https://olaw.nih.gov/guidance/finalmou.htm), and NIH wants to join FDA in supporting the GVP. They were very unclear about whether that would be additional funding beyond what we initially propose or

helping them to come up with the $10 million. Apparently the contact at NIH is Pat Brown who is director of the Office of Laboratory Animal Welfare (OLAW), who will also be bringing the concept to Michael Lauer, the Deputy Director for Extramural Research. Apparently, USDA also interested, but less information was provided there.

In the next 48 hours, they would like us to develop a 3-5 page white paper with budget that is "urgent and compelling and tied to outcomes and deliverables". I asked if they wanted to support virus detection in the US or elsewhere and for more details on scope, they said "All of it!" and mentioned CONUS, OCONUS, and Emerging, then went on about tying to WHO and/or CDC lists of prioritized diseases. So really, they were all over the board, but it is clear that they would like to make an ask for emergency COVID funds. There are, of course, some major timing problems with that for operating during sheltering, and they also mentioned training their staff, as well as US Public Health Officers (majority hold advanced degrees). They offered that they have already discussed it with their contracts officer, who suggested that they could use a sole source contract, which will require our also documenting what we're offering that no one else can do.

Brianna has drafted the attached justification that is intended for incorporation into the 3-5 page white paper and may give us a bit more guidance.

I need input by COB tomorrow on best scope, etc. to include for this group. REDACTED and I can use language we developed for the MacArthur competition but scaling to the best option for an FDA partnership will be a major challenge, when they want the moon. I think they are open to some of their funding going to the hub, but they definitely want active virus detection in there, likely training as well.

Please weigh in, as they want the whole thing wrapped up this week with funding to be allocated to the 501(c)3 in 30-60 days. **Peter, do we have it ready and available to receive funds?**

Thanks in advance!
Jonna

Preview attachment ONE HEALTH w PREDICT GVP justification.docx

ONE HEALTH w PREDICT GVP justification.docx
21 KB

<ONE HEALTH GVP Partnership Justification May 21 2020.docx>

From: Sudarat Damrongwatanapokin <sdamrongwatanapokin@usaid.gov>
Sent: Wed, 27 May 2020 19:28:36 +0700
Subject: Re: interview on PREDICT and GVP in largest belgian newspaper
To: Dennis Carroll [redacted]
Cc: "Claes, Filip (FAORAP)" [redacted] Daniel Schar <dSchar@usaid.gov>, Jonna Mazet <jkmazet@ucdavis.edu>, Subhash Morzaria [redacted] Tracey Goldstein <tgoldstein@ucdavis.edu>, "William B. Karesh" <karesh@ecohealthalliance.org>, daszak <daszak@ecohealthalliance.org>

It's a great interview, thank you for sharing. I also loop in Andrew and Karoon.

Best regards,
Sudarat Damrongwatanapokin, D.V.M., Ph.D.
Regional Animal Health Advisor
[redacted]
[redacted]
E-mail: sdamrongwatanapokin@usaid.gov
Tel: [redacted]
Telework: Monday-Friday 8.00 am- 5.00 pm

On Wed, May 27, 2020 at 6:22 PM Dennis Carroll [redacted] wrote:

Well done Filip. Great interview. With advocates like you GVP will be a great success

d

On Wed, May 27, 2020 at 4:00 AM Claes, Filip (FAORAP) [redacted] wrote:

Dear Dennis et al

Yesterday I got interviewed on PREDICT and GVP by the largest Belgian newspaper. Only told good things of course. SO now everyone in Belgium knows PREDCIT and GVP … pity there are only 11 million Belgians ;-)

Translation:

Het Laatste Nieuws [The Latest News - Belgians largest news paper – 27 May 2020]

Is there a way to anticipate the next pandemic? The American PREDICT project has been researching dangerous viruses that pass from animals to humans for ten years. Its much more ambitious successor the Global Virome Project wants to map half a million viruses. A miracle solution to rule out future pandemics? "No. But it might teach us which viruses we can use to make preventative vaccines. That way we will be better prepared. "

Ten years ago, the United States International Development Agency (USAID) began funding a large study. The aim was to identify animal viruses around the world that could be potentially dangerous to humans. The PREDICT project grew into a network of scientists and laboratories in more than 30 countries. The Belgian Filip Claes - lab expert and virologist employed by the Food and Agriculture Organization of the UN [FAO] - collaborated from Bangkok.

"Predict was actually a 'proof of concept', a method to demonstrate whether an idea is feasible. We know that there are about 25 virus families. With epidemiologists and biologists, we looked into which of these families contains the most viruses that can be transmitted from animal to human. Five virus families remained: corona, influenza, flavi, filo and paramyxoviruses. After consultation with ecologists, areas were identified where the chances of finding new viruses are highest. For example, where bat manure is 'grown', areas that have recently been

deforested for agriculture or poor urban areas where people live with their pets and rodents. In those hot spots, mainly in Asia and Africa, samples were taken from around 150,000 animals and people. Result: a thousand new viruses. ”

The intention was to discover them before they jumped to humans and take appropriate measures in time. Checks on wild animals or pets, for example. Or advise you to stay away or be careful in certain regions. Another aim was to look for similarities with already known viruses to develop a kind of broader working vaccine. Claes believes that Predict has worked well as a “proof of concept”. Although - he admits - SARS-CoV-2 has surpassed everyone in speed.

Predict is now drawing to a close. The next step is the Global Virome Project. A much more ambitious setup. It comes from the mind of the now retired director of USAIDs Emerging Threats program – donor of PREDICT, Dennis Carroll. "The aim is to identify in 10 years time all viruses that we do not yet know but that we need to know in order to be better prepared for the next pandemic," says Filip Claes. That's about half a million. By taking about 2,000 samples from each animal species in 108 places in the world, the researchers – many of them already working for PREDICT - expect to pick up 70 to 80% of all unknown viruses. Price tag: 3 billion.

Virologist Marc Wathelet (ULB) - the first to warn severely about Covid-sars-2 in our country - is a rather cool lover of the scheme. “As a virologist, I naturally find the idea of cataloging viruses scientifically interesting. But there are other priorities. In the first instance, good health care is needed to fight a pandemic. I also see some problems. You've mapped those viruses, but then what? It is very difficult to determine which ones are dangerous and which are not based on their genome alone. If one starts to check how all these viruses reproduce in animal and human cells, they are guaranteed to cause accidents. Even if you do the work in labs of the highest safety categories (BSL3 and BSL4, ed.), this remains a very heavy, slow and expensive work. And a BSL2 lab is simply not safe enough for that. There is also a danger in collecting those samples: contact with the animal, transport to the lab. Is that going to happen safely all over the world? This is certainly not a miracle solution. Besides, we have known all viruses that have caused pandemics for a long time. But it has not prevented the pandemic from spreading. ”

Filip Claes knows the criticism. "They say we 'collect stamps'. That looking at the DNA / RNA does not go far enough. People are asking questions - given the main participating an lead researchers are from the US - where all that data will be stored. And that it costs too much. Look, 3 billion to 'collect stamps' does indeed seem like a lot of money. But now the costs of this crisis are much higher. Mapping even those unknown viruses may already provide enough knowledge to know which viruses we can use to produce preventive vaccines. This way we will be better prepared for the next pandemic. Because it is not the question whether it will come, only when. Thanks to this work, we may already have 'something on the shelf'. ”

Large quote: Before the next pandemic we better have something ready ‘on the shelf’

Red quote: 3 billion to ‘collect stamps’ or simply to look at DNA/RNA sound like a lot of money. But the current crisis costs way more

Filip Claes, PhD

Regional Laboratory Coordinator

Emergency Centre for Transboundary Animal Diseases (ECTAD)

Food and Agriculture Organization of the United Nations (FAO)

REDACTED

REDACTED

Tel: REDACTED

Email: REDACTED

Food and Agriculture Organization of the United Nations

--

Dr Dennis Carroll
President, Global Virome Project
Senior Fellow, Scowcroft Institute of International Affairs at the Bush School of Government and Public Service, Texas A&M University
Counselor and Advisor to the Faculty of Tropical Medicine at Mahidol University, Bangkok, Thailand

mobile: REDACTED
email: REDACTED

From: Dennis Carroll <[redacted]>
Sent: Wed, 3 Jun 2020 17:37:32 -0400
Subject: Re: PNAS Opinion Piece with GVP mentioned on BoD Zoom
To: Jonna Mazet <jkmazet@ucdavis.edu>
Cc: Aleksei Chmura <chmura@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>, Cara Chrisman <cchrisman@usaid.gov>, "Dr. Suzan Murray" <MurrayS@si.edu>, Eddy Rubin <erubin@metabiota.com>, Jennifer Gardy <Jennifer.Gardy@gatesfoundation.org>, "Oyewale Tomori ([redacted]>, "Pablos-Mendez, Ariel" <ap39@cumc.columbia.edu>, Peter Daszak <daszak@ecohealthalliance.org>, Samantha Maher <maher@ecohealthalliance.org>, [redacted]

Congratulations. Great piece, and glad to see Smithsonian getting the press release out so fast

Well done

d

On Wed, Jun 3, 2020 at 4:39 PM Jonna Mazet <jkmazet@ucdavis.edu> wrote:

> Hi all,
> The PNAS opinion piece is live & attached. I have sent it on to our OHI Comms team, as Smithsonian is discussing a press release. We can do that through OHI, unless GVP is ready to handle such things independently and you prefer that.
> Have a nice day,
> Jonna

On Tue, May 19, 2020 at 11:01 AM Samantha Maher <maher@ecohealthalliance.org> wrote:

> Hi All,
> We will be having our monthly GVP Board of Directors call next week on Thursday, May 28th at 1pm EST. The agenda items we discussed during the last meeting that we will be focusing on are:

1. Deep-dive on consortium memberships and requirements for participation
2. Follow up 3-5 big ticket funding targets
3. Review and discuss criteria for board member selection (see Eddy's email with selection criteria rubric)

For those who haven't gone through the documents that [redacted] put together regarding Item #1, I am re-attaching those documents here.

We also discussed looping Ariel into the next call. Provided it is ok with everyone, Dennis, would you mind linking him in?

The zoom meeting details remain the same:

Join Zoom Meeting [redacted]
Please let me know if there are any additional items.

Best,

Sam
--

Samantha Maher, MESc
Research Scientist, Conservation and Health

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

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[redacted] (mobile)
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EcoHealth Alliance develops science-based solutions to prevent pandemics and promote conservation.

--

Dr Dennis Carroll
President, Global Virome Project
Senior Fellow, Scowcroft Institute of International Affairs at the Bush School of Government and Public Service, Texas A&M University
Counselor and Advisor to the Faculty of Tropical Medicine at Mahidol University, Bangkok, Thailand

mobile: REDACTED
email: REDACTED

From: Dennis Carroll <REDACTED>
Sent: Fri, 5 Jun 2020 14:52:36 -0400
Subject: Re: Simon?
To: "Murray, Suzan" <MurrayS@si.edu>
Cc: Peter Daszak <daszak@ecohealthalliance.org>, "Prof. Jonna Mazet" <jkmazet@ucdavis.edu>, Samantha Maher <maher@ecohealthalliance.org>

The address I have is

sja2127@cumc.columbia.edu

On Fri, Jun 5, 2020 at 2:22 PM Murray, Suzan <MurrayS@si.edu> wrote:

> Dear GVP cohort
>
> Would any of you know how to reach Simon? The smithsonian magazine wants to put content on line but can't until they hear back from him. If anyone knows how to reach him we would appreciate it
>
> Thanks so much
>
> Suzan

--
Dr Dennis Carroll
President, Global Virome Project
Senior Fellow, Scowcroft Institute of International Affairs at the Bush School of Government and Public Service, Texas A&M University
Counselor and Advisor to the Faculty of Tropical Medicine at Mahidol University, Bangkok, Thailand

mobile: REDACTED
email: REDACTED

From: Andrew Clements <aclements@usaid.gov>
Sent: Tue, 30 Jun 2020 14:04:19 +0200
Subject: Re: May 2020 P2 Ebola financial report
To: Elizabeth Leasure <ealeasure@ucdavis.edu>
Cc: predict Sympa List <predict@ucdavis.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, Alisa Pereira <apereira@usaid.gov>, Amalhin Shek <ashek@usaid.gov>

Thanks

Andrew Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
E-mail: aclements@usaid.gov

For more information on USAID's Emerging Pandemic Threats program, see: http://www.usaid.gov/ept2

On Mon, Jun 29, 2020 at 10:29 PM Elizabeth Leasure <ealeasure@ucdavis.edu> wrote:

> Hi Andrew. The Ebola financial report for May 2020 is attached. Let me know if you have any questions.
>
> Thanks,
>
> Liz
>
> *Elizabeth Leasure*
>
> *Financial Operations Manager*
>
> *One Health Institute*
>
> REDACTED *(cell)*
>
> *530-754-9034 (office)*
>
> *Skype: ealeasure*

From:	Peter Daszak <daszak@ecohealthalliance.org>
To:	Johnson Christine Kreuder (ckjohnson@ucdavis.edu)" <ckjohnson@ucdavis.edu>;David John Wolking <djwolking@ucdavis.edu>;Jonna Mazet (jkmazet@ucdavis.edu) <jkmazet@ucdavis.edu>
CC:	Kevin Olival <olival@ecohealthalliance.org>;Alison Andre <andre@ecohealthalliance.org>;Ava Sullivan <sullivan@ecohealthalliance.org>
Sent:	7/22/2020 8:22:06 AM
Subject:	First shot at M&A final report section - my edits still to do

Look forward to talking today. Here's a first draft from Kevin. I'll be editing this over next 2 days, so you will have a revised draft by COB Friday.

Apologies for the rough nature of it and for delays..

Cheers,

Peter

Peter Daszak
President

EcoHealth Alliance
520 Eighth Avenue, Suite 1200
New York, NY 10018-6507
USA

Tel.: +1-212-380-4474
Website: www.ecohealthalliance.org
Twitter: @PeterDaszak

EcoHealth Alliance develops science-based solutions to prevent pandemics and promote conservation

Chapter: Predicting Spillover (Kevin/Peter/Jonna/Chris) ~10 pages max

DRAFT 15 July 2020 v1

INTRODUCTION

Something general about how new EIDs are difficult to predict, but possible.

Over the last 5 years, the PREDICT global Modeling & Analytics team has worked closely with other operational teams (surveillance, laboratory diagnostics, and information management) and in-country partners to push the field of spillover and disease prediction forward. These efforts have led to the development of new analytical strategies and open-source tools to analyze the risk of disease emergence from spillover, to amplification, to onward spread. PREDICT's modeling and analysis efforts have been guided by an inclusionary principal to train and support the capacity for risk analyses among in-country scientists and to make the tools, analytical products, and data outputs available to a wide audience. For example, the PREDICT M&A team worked closely with the Information Management team to develop the open-source EIDITH R package to facilitate the cleaning and collaborative analysis of project data by in-country teams and global staff. PREDICT has led the way in multi-disciplinary 'One Health' analyses to predict and prevent emerging infectious diseases by harnessing the diverse expertise of our team in areas of disease ecology, spatial analysis, epidemiology, evolutionary biology, virology, computer and data science, and behavioral research.

The robust datasets PREDICT has collected for over 10 years, including ecological and site characteristics, viral testing, detection and sequence data, host species distributions, and human behavioral risk data, have been harnessed to increase the efficiency of surveillance activities and fine-tune sites and targets for broad-based intervention strategies available now and in the future. We have worked closely with EPT partners (including FAO and WHO) and country governments and stakeholders to produce maps, models, and other products that help them design their programs, test hypotheses, and hone their One Health strategic plans.

Below we highlight some key findings from PREDICT (2014-19) in developing novel approaches to predict where, why, from what species, when, and among whom zoonotic diseases are most likely to emerge.

Why are diseases emerging?

Emerging infectious disease (EID) events are occurring more frequently, and pose a grave threat to global health security as made clear by the emergence of SARS-CoV-2 and Ebola virus. At the start of PREDICT, 10 years ago, we published the first robust analysis to identify the drivers of new emerging infectious disease events (Jones et al 2008) which identified human population density and wildlife biodiversity (mammal species richness) as the two main spatial risk factors for EIDs. In 2017, the PREDICT team significantly updated this analysis with new analytical methods (machine learning), improved bias correction to deal with uneven disease surveillance around the world, and new and updated datasets to better understand the ecological, biogeographic, and anthropogenic risk factors for zoonotic disease spillover (Allen et al. 2017). The ranking of these factors confirms the importance of mammal biodiversity and human demographic factors like population density and growth, but also

identified factors that measure global ecological change (e.g. converting forest to pasture) as major drivers for EIDs globally (Fig 1).

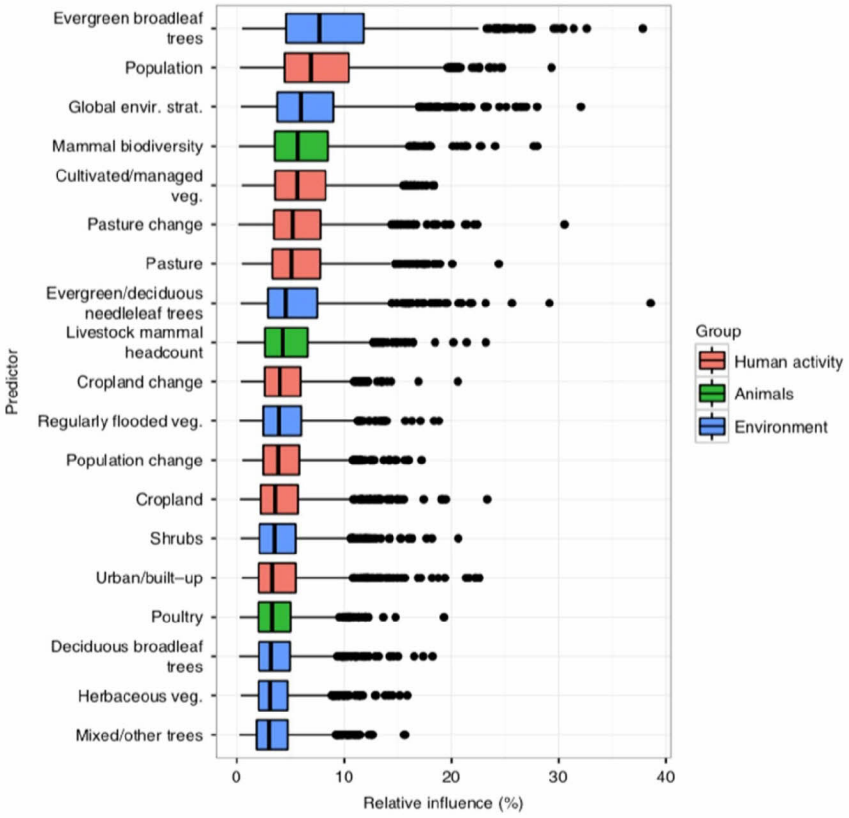


Fig 1. The relative influence of predictors on zoonotic disease emergence probability, ranked from top to bottom. The box plots show the spread of relative influence across 1000 replicate model runs to account for uncertainty in EID event location (see above). From Allen et al. 2017.

Using a complementary network modeling approach, PREDICT also ranked disease transmission interfaces and the key ecological and epidemiological processes influencing the evolution, spillover, amplification, and spread of viral threats (Johnson et al., 2015). This analysis identified additional, local level risk factors for zoonotic transmission, including from animal contact around human dwellings, hunting and consuming wildlife, and ecotourism activities.

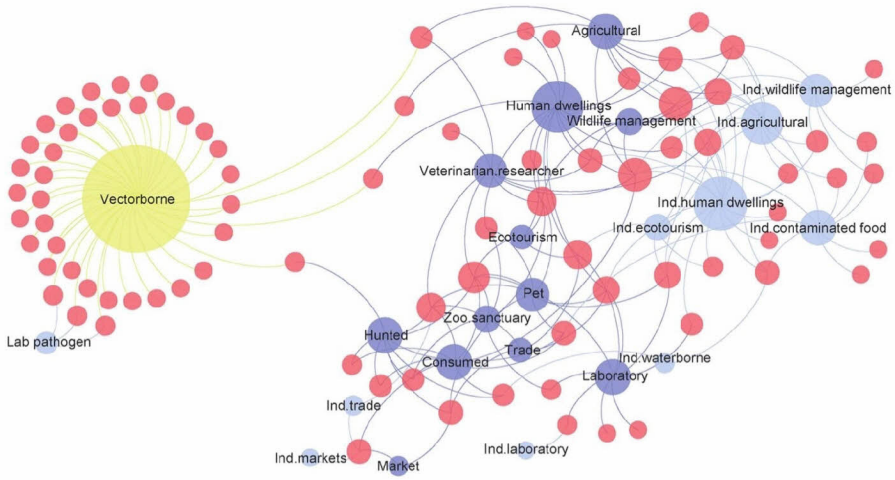


Fig 2. Epidemiologic network map showing high-risk disease transmission interfaces shared by zoonotic viruses transmitted from wildlife to humans. Node size is proportionate to the number of viruses reported for each transmission interface, categorized according to (1) direct contact with wildlife (dark blue), (2) indirect contact with wildlife (light blue) and (3) transmission by vector (yellow). Virus node size (red, n = 86 viruses) reflects the number of connections to different transmission interfaces and ecological plasticity of viruses through use of multiple transmission opportunities. Highly connected and more central interfaces facilitated transmission of more viruses, providing an epidemiologic picture of circumstances likely to promote future disease emergence and important targets for disease surveillance and preventive measures.

IDEEAL land use change

As a necessary step in to better understand the link between zoonotic disease emergence and human-modified ecological change, PREDICT worked closely with EPT partners to update, aggregate, and visualize global datasets for landuse change and livestock production (Fig X-X). Country level visualizations for each of these maps were shared with PREDICT country teams during a risk mapping expercise for all country partners at our annual meeting in 2018. PREDICT also closely collaborated with FAO on the Africa Sustainable Livestock 2050 (ASL2050) project to specifically model the risk of disease emergence in the face of expanding future livestock production in Africa.

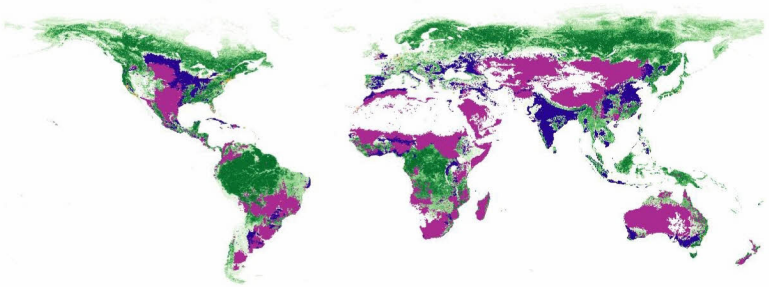


Fig X. Global changes in land use (urban, pasture, and cropland) from 1970 and 2005 to highlight areas with the greatest change in the last several decades, and thus higher emergence risk.

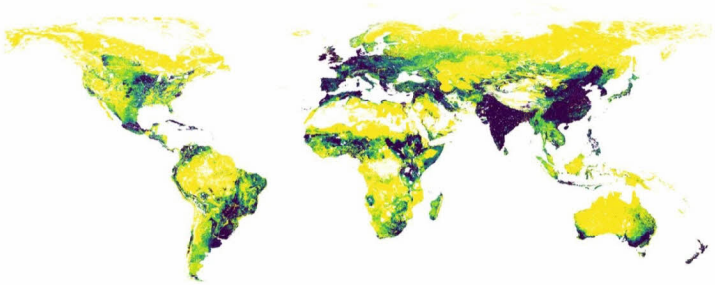


Fig X. Updated aggregate map of global mammalian livestock density, an important predictor of zoonotic disease risk. Livestock often act as "bridge hosts" allowing spillover of pathogens from wildlife to people, and here we show the total combined livestock population density of buffaloes, cattle, goats, pigs, and sheep. These densities are calculated from an FAO model that combines animal census data with predictors of livestock density including several vegetation, climate, topography, and demography variables.

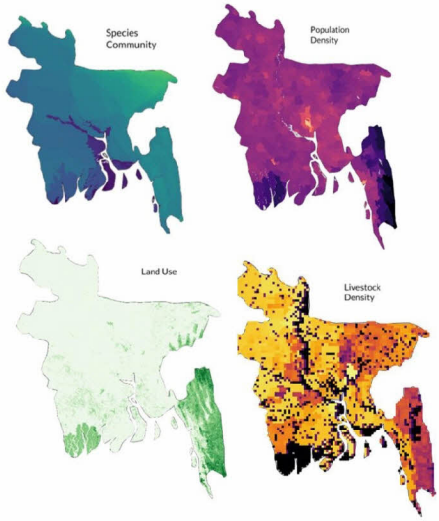


Fig X. Example for Bangladesh of downscaled, country-level maps for key contributing factors to zoonotic disease risk. Map were shared with each PREDICT country team and other stakeholders to facilitate discussions around zoonotic disease surveillance priorities in each country.

Deep Forest?

In order to better understand the mechanisms behind an increased risk of disease spillover from wildlife due to land use change, the PREDICT *Deep Forest* project was designed to include systematic sampling across a tropical land-use gradient on three continents Uganda, Brazil, and Malaysia. Data were collected over X years, including human/animal contact rates, type of human/animal contacts, as well as viral and host diversity and abundance data to derive a probability of spillover. Preliminary findings show...

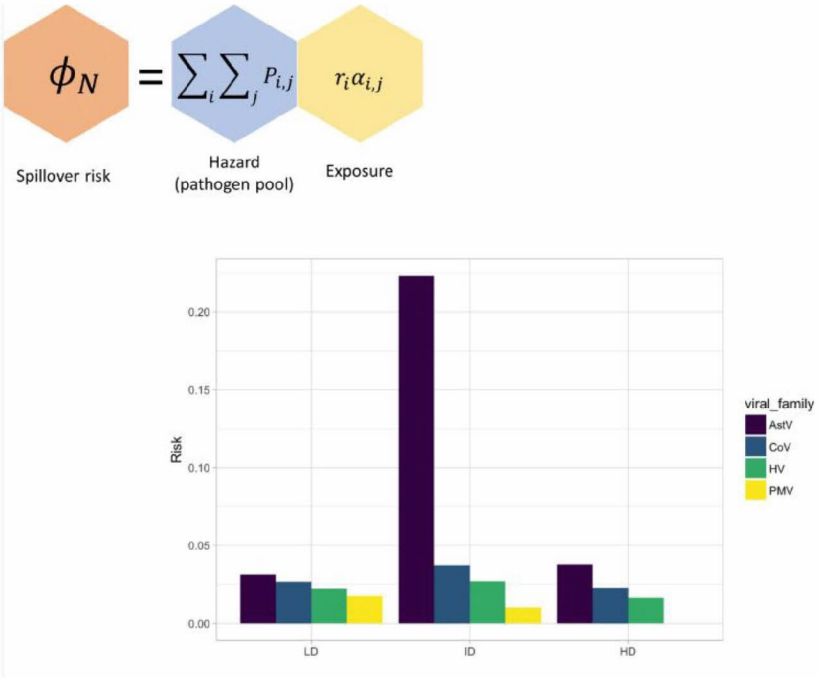


Fig X. Spillover risk - modeled across disturbance gradients (low disturbance, intermediate disturbance, and high disturbance) for 4 viral families. Data shown for XXXX country.

Where will Disease X spillover? Where will it spread?

The geographic risk of a new zoonotic disease emergence event, i.e. Disease X, is not uniform around the world. PREDICT's updated EID Hotspots 2.0 analysis published in *Nature Communications* shows that zoonotic disease spillover risk is greatest in tropical regions with high levels of biodiversity, expanding human populations, and rapid ecological change (Fig X map). Outputs of these models and code are publicly available, allowing researchers around the world to access this important information. Further,

these maps were downscaled to a finer resolution for each PREDICT country and shared with country teams as a surveillance planning tool (Fig X, blown up maps).

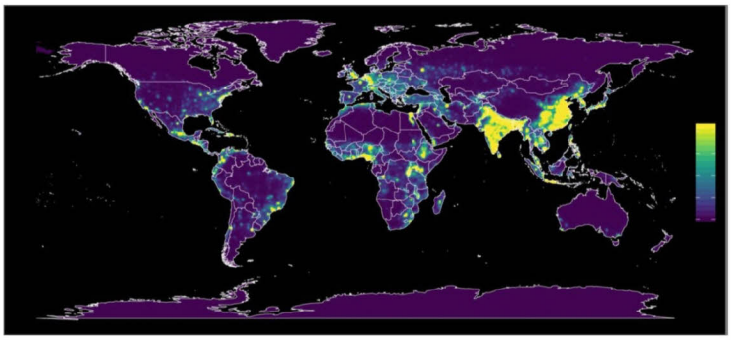


Fig X. Hotspot map showing the relative risk of a new emerging zoonotic disease. Yellow = highest, purple = lowest risk. This map is corrected for global variations in reporting effort to give a true measure geographic spillover risk. Model constructed using variables from Fig 1.

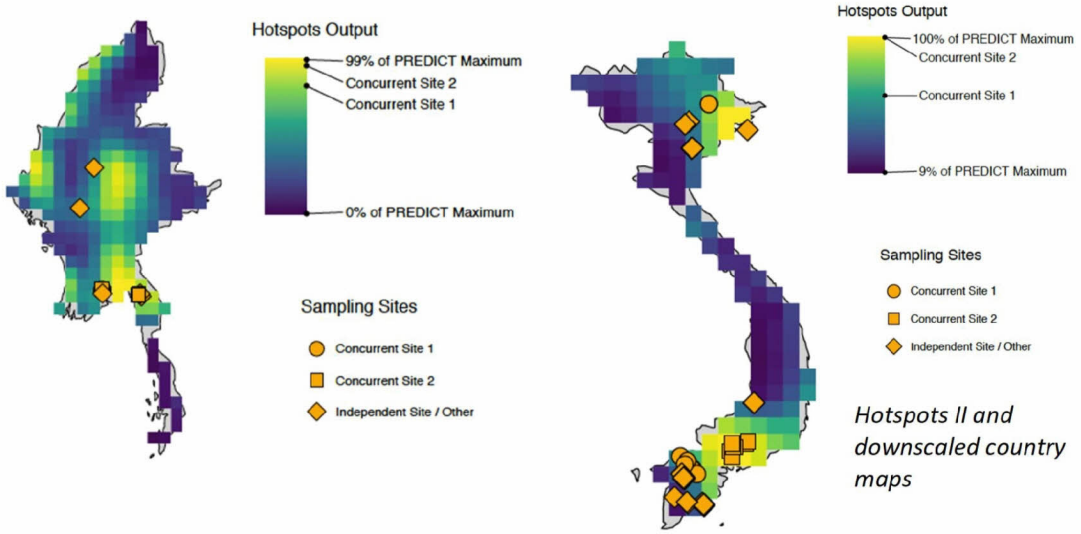


Fig X. Downscaled versions of country-specific spatial zoonotic risk maps were presented to each of the 28 PREDICT country teams at the all-country meeting in 2018 to give higher resolution maps for in-country use and surveillance planning, examples shown for Myanmar and Vietnam with PREDICT sampling sites overlaid on the spatial risk projections.

Missing zoonoses

One of the challenges with forecasting new zoonotic disease spillover events is a lack of knowledge of where viruses occur given imperfect sampling and taxonomic biases in surveillance. The PREDICT team used the model of zoonotic disease risk from (Olival et al. 2017) to generate "missing zoonoses" maps to identify hotpots for as-of-yet discovered zoonotic virus diversity. These maps were again downscaled, and expanded to forecast viral richness for all mammals globally, and distributed to PREDICT country teams as a planning tool and risk mapping exercise.

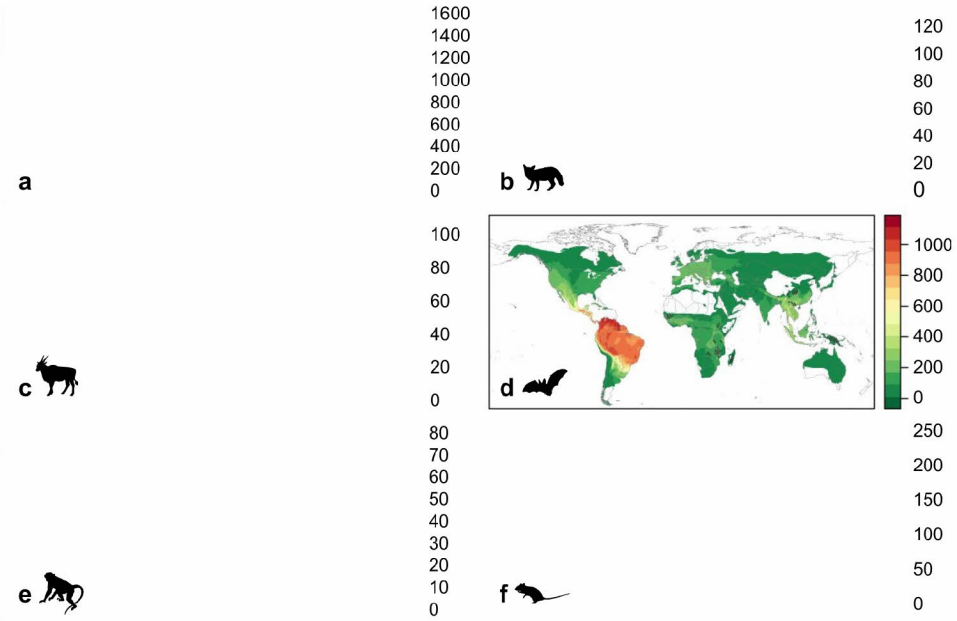


Fig X. Global distribution of the predicted number of 'missing zoonoses' by mammal order. Warmer colors highlight areas predicted to have the highest diversity of novel, as-of-yet discovered viruses with zoonotic potential.

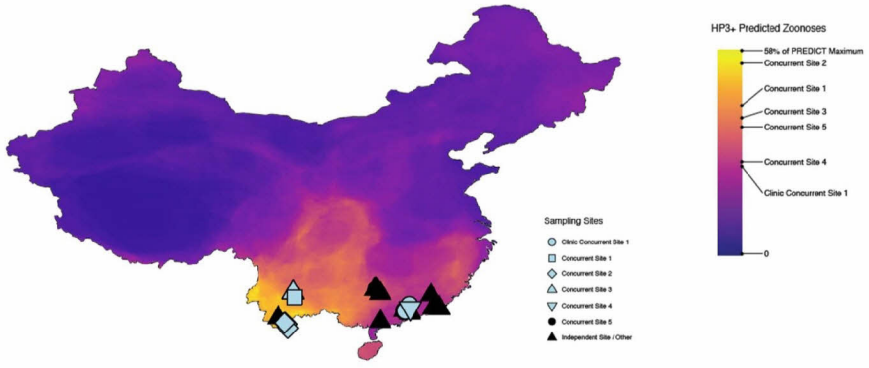
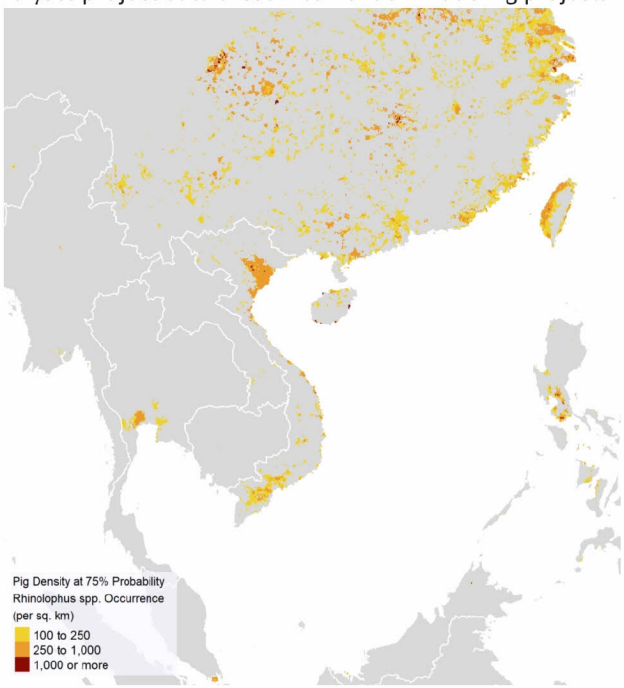


Fig X. Example of country-specific missing zoonoses map for China, including expanded predictions for all mammalian species and showing a hotspot for undetected viruses (lighter color) in Southwest China.

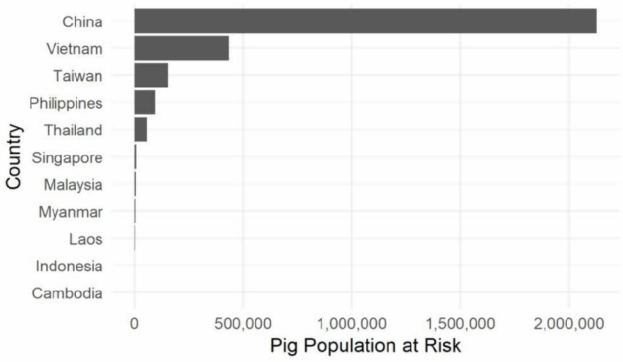
SADS and SARS-r specific maps and analyses

The PREDICT M&A team supported a series of analyses to assess potential evidence-based risk interventions, and define the boundaries under which interventions might prove successful. In addition, great progress has been made this year by PREDICT technical teams and country staff to conduct analyses project data these intervention modeling projects intended to provide rapid answers to design or test the feasibility of proposed intervention strategies to mitigate spillover.



As part of one project (prior to SARS-CoV-2 emergence), a regional map of *Rhinopholus* bats and pig overlap was produced to help target surveillance **for mitigating future spillover events of the new Severe Acute Diarrheal Syndrome Coronavirus (SADS-CoV)**, recently discovered to have emerged from bats to swine. These maps have relevance to also predicting future SARS-related CoV emergence, as the same *Rhinolophus* bat hosts carry both groups of viruses.

Left: Areas of greatest risk for SADS-CoV and SARSr-CoV spillover from bats to swine. Based on species distribution models for three Rhinolophus *host species where probability of occurrence is high (>75%) and there is overlap with pig densities that are indicative of intensive pig farming (>100 heads per km^2)*



FLIRT - predicting human-mediated spread

Human movement patterns can predict the spread of human-to-human transmitted viruses and can inform mitigation measures, including heightened surveillance and staging of outbreak response supplies & equipment. The PREDICT supported flight risk tracker (FLIRT) app uses airline data and a model of passenger movement to forecast disease spread for human transmitted diseases. The app was used to map flights out of Wuhan, China in mid-January 2019, and map potential cities for early spread of the

virus. This predictive tool correctly showed Bangkok as highly likely destination for passengers out of Wuhan during the same week that the PREDICT Thailand team supported the Ministry of Public Health to identify the first imported case of COVID-19 on Jan 13th, 2020 -- the first documented instance of international spread.

What species are carrying the next SARS or the next Disease X?

Next SARSr-CoV: Latinne et al

The spillover and spread of coronaviruses from bats to people or livestock (e.g. SARS-CoV, SARS-CoV-2, SADS-CoV) represents a major and continued threat to human health and food security. **To better understand the origins and cross-species transmission of coronaviruses**, we used a Bayesian phylogenetic analysis to reconstruct the bat hosts and locations (provinces) in China most likely to be the source of host-jumps for alpha- and betacoronaviruses using PREDICT data (Latinne et al. 2020). We found that Vespertilionidae and Rhinolophidae bat families are the evolutionary sources of Alpha-CoVs, while Rhinolophidae, Vespertilionidae and Pteropodidae are the evolutionary sources of Beta-CoVs. In the same analysis, we discovered that Southwestern and Southern China

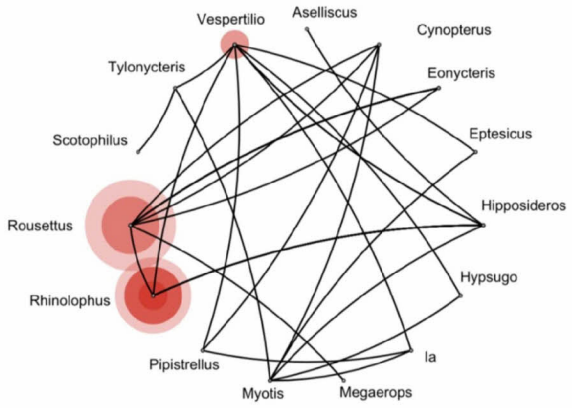


Fig X. Evolutionary origins and cross-species transmission of bat coronaviruses in China. Analysis shows that three bat genera are the most important source of strain diversity in beta-coronaviruses, the group that includes SARS and MERS

are the evolutionary hotspots of Alpha- and Beta-CoVs.

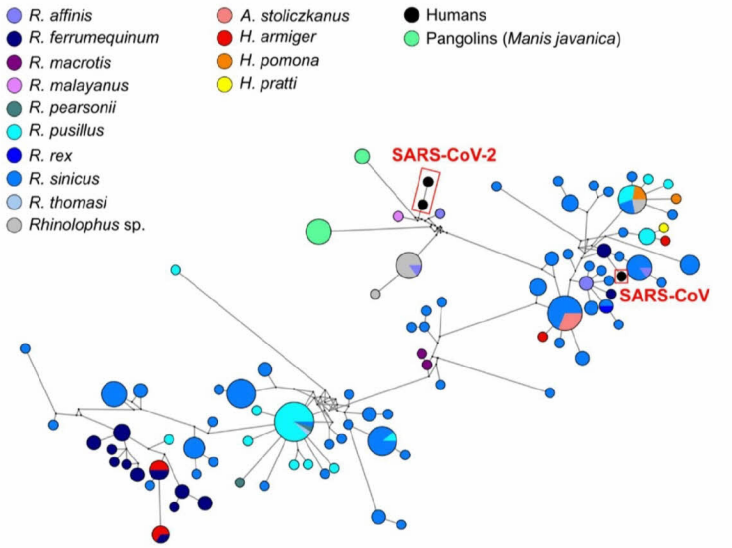


Fig X. Phylogenetic network analysis showing the diversity of SARS-related CoVs found from bats in China and used to predict host range and host switching using Bayesian phylogenetic and ancestral host reconstruction models (from Latinne et al. 2020, *Nature Communications*)

Disease X: HP3

PREDICT developed a new strategy to identify sites on the planet that likely have the highest number of unknown high-risk viruses that are yet-to-be-discovered ("missing zoonoses"). The manuscript was published in *Nature* in June 2017, and showed that bats, rodents and primates all are host a large number of zoonotic viruses, and that the number of viruses and zoonoses a given mammal species can harbor is predictable (Olival et al. 2017). The genetic relatedness of two host species, their geographic overlap, and other traits like body mass determine the zoonotic virus richness for each mammal species.

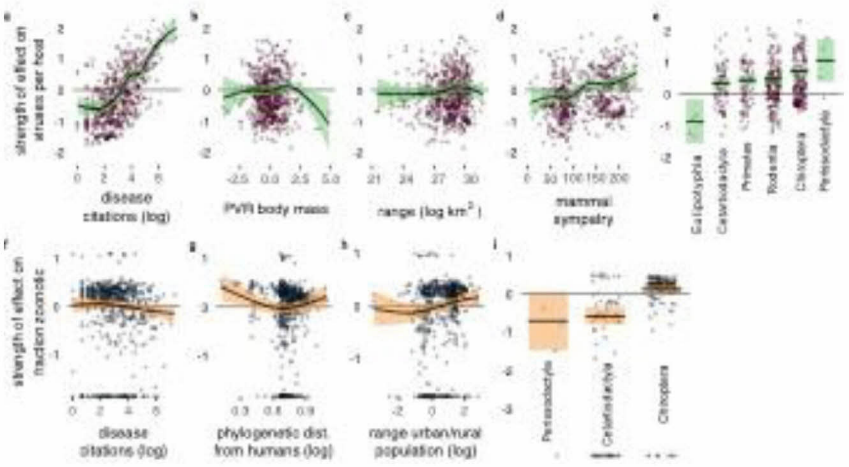


Fig X. Predictors of total viral richness (top row) and zoonotic virus richness (bottom row) for mammal species (from Olival et al. 2017). Plots on far right (e and i) show which groups of mammals harbor a greater diversity of viruses (above line) then would be predicted using the other species-specific traits. These models were used to construct 'missing zoonoses' and 'missing viruses' maps to improve cost-effectiveness of viral discovery efforts (see Fig X).

Building off this work to model zoonotic disease risk, the PREDICT team expanded forecast of viral sharing between all mammal species globally (Albery et al. 2020). These findings have relevance for epizootic diseases (i.e. wildlife pathogens) as well as zoonotic diseases. 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.

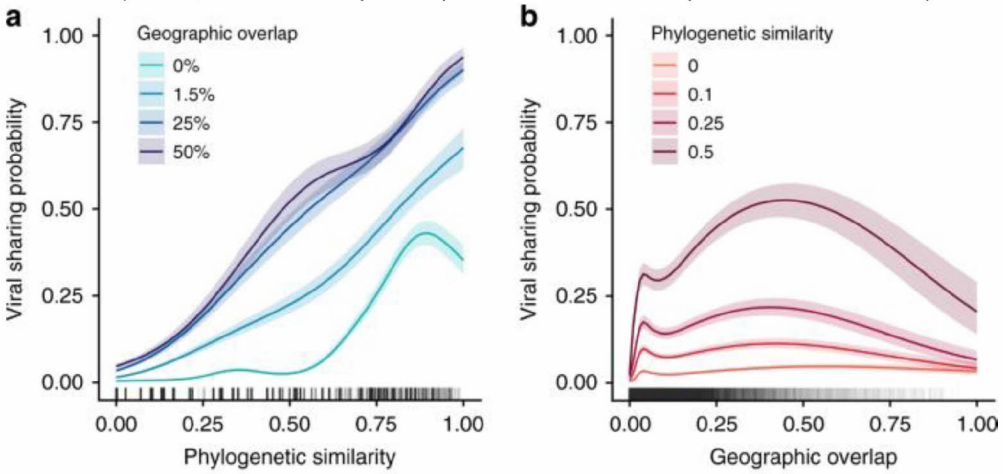


Fig X. New PREDICT model to examine factors that determine viral sharing among all known mammal species. These plots show the interacting, non-linear effect of host species relatedness (left) and geographic overlap (right). **a)** Predicted viral sharing probability increases with increasing phylogenetic relatedness; the different colored lines represent different geographic overlap values. **b)** Predicted viral sharing probability increases with increasing geographic overlap; the different colored lines represent different phylogenetic relatedness values.

What viruses will emerge, and how many?

One of the key findings from PREDICT's global analyses is that the factors that determine which viruses are likely to emerge and which are not, are predictable. Some of these traits, such as being a single-stranded RNA virus (vs. DNA viruses) more prone to rapid evolution, or having the ability to recombine or replicate in the cytoplasm are intuitively and relatively easy to know once a virus is characterized. However, PREDICT also showed that virus-specific factors like host plasticity or host breadth, a measure of the taxonomic diversity of known hosts for each virus, can confer a surprising ability to determine if a virus has zoonotic potential or not (Johnson et al. 2015; Olival et al. 2017). PREDICT used these traits in combination with ecological and epidemiological risk factors for emergence to develop ranking algorithms to prioritize newly discovered viruses for further characterization and downstream

laboratory experiments (Fig X). For example, a select number of the ~700 unique CoV strains detected in bats in China were targeted for receptor binding studies and in vivo studies. The PREDICT Spillover App was developed to combine all known virus-specific and virus-independent risk factors to rank all viruses discovered in under the PREDICT project as well as from external researchers.

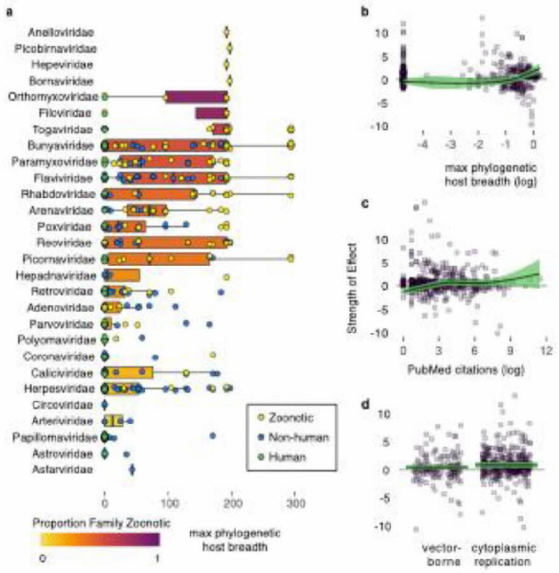


Fig X. Ranking of all mammalian viruses known prior to the start of PREDICT by phylogenetic host breadth (a), a risk factor for zoonotic disease potential that measures the genetic distance between known hosts. Also showing other virus-specific predictors of zoonotic potential (b-d) from Olival et al. 2017. This analysis was incorporated in to the Spillover App to rank all PREDICT-discovered viruses for their potential to spillover.

Using the phylogeographic model (based on species geographic overlap and genetic relatedness) and network analysis approach of Albery et al. 2020, PREDICT developed a tool to identify probable mammalian hosts for any given virus. This model showed a surprisingly strong ability to predict observed host species for 250 viruses with at least two known (non-human) mammal hosts. These species-level rankings can be used to set sampling priorities for public health efforts seeking to identify hosts of a novel zoonotic virus, where one or more hosts are already known. Across all 250 viruses, the median ranking of the left-out host was 72 out of a potential 4196 mammals (i.e., in the top 1.7% of potential hosts), but ability to predict a virus' hosts varied by viral family (see Fig X below).

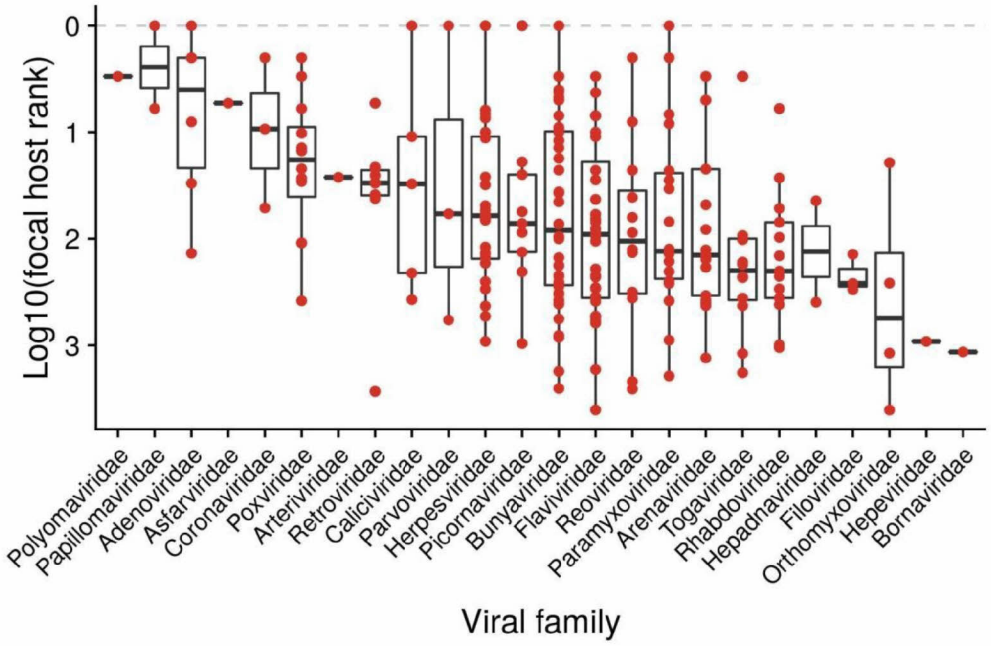
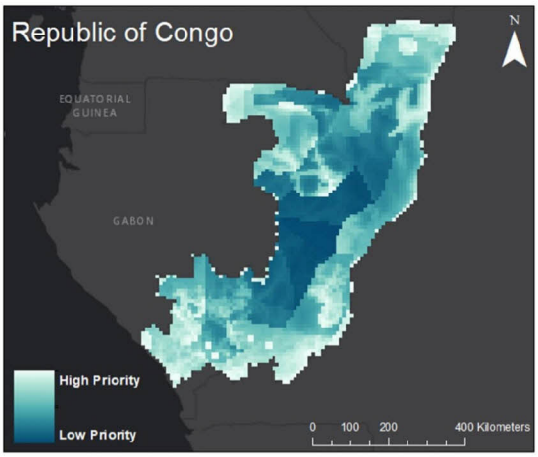


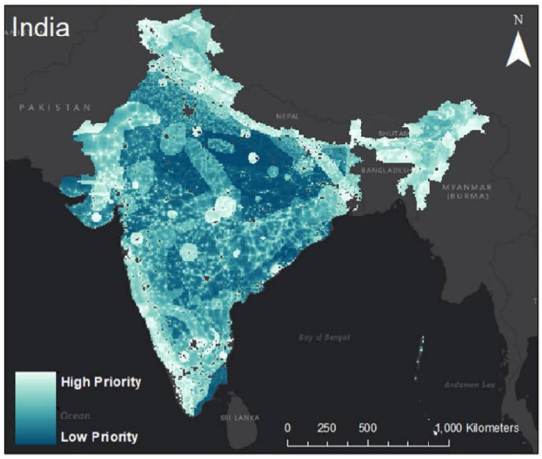
Fig X: The phylogeographic predictability of viruses' reservoir hosts varied considerably across viral families, although the family-level random effect did not account for much of the model's variance. Families are ordered along the x axis in order of decreasing predictability. The y axis displays the mean rank of the focal host in our reservoir host prediction simulation, on a reversed log10-scale. Values closer to the top of the figure represent viruses with more predictable hosts. The whiskers represent the range of the data, minus outliers; Box plots represent the quartiles, with the median in the centre.

Expanding our knowledge of virus host range. PREDICT's extensive sampling of mammal species throughout Asia, Africa, and the Middle East has greatly expanded our knowledge of host range for key viruses and viral families. ADD IN FIG FOR MURINE COV and maybe global figure.

GVP projections and maps

To estimate the costs and optimize potential sampling sites to enable planning and strategizing for the Global Virome Project, we used spatial analyses which combined maps of mammal and waterbird biodiversity, hotspot risk, 'missing zoonoses' and access costs. This strategy initially identified 108 global sites where a global sampling strategy would be most cost-efficient in identifying the maximum number of unique viruses. These analyses were then run independently for each PREDICT country to support planning for National Virome Projects as they come online.





PREDICT contributed to the analysis of the Global Virome Project's (GVP) predicted viral diversity and costs of viral discovery recently published in *Science*.

Using PREDICT findings, the team estimates that there are 631,000-827,000 undiscovered viruses capable of infecting humans.

Building on this work, the PREDICT team has developed a spatial modeling approach to identify priority sites for optimal viral sampling in wildlife at a 10 x 10 km resolution in countries around the world. The first country with a completed, new GVP site selection analysis was Thailand, in preparation for a Thailand National Virome Project workshop to be held in Bangkok in October 2018, where the findings will be presented to Thai government stakeholders.

PREDICT's M&A team supported the development and strategic design of the Global Virome Project (GVP). The PREDICT team has designed a spatial modeling approach to identify priority sites for targeted wildlife sampling at a 10 x 10 km resolution in countries of relevance to the GVP. PREDICT developed specific maps for the Thai National Virome Project 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.

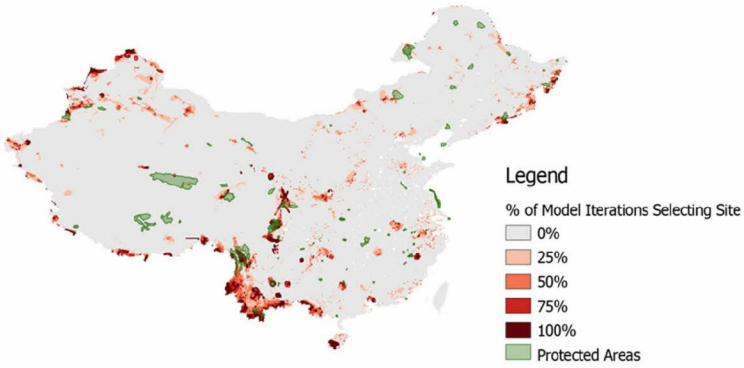


Fig X. Site optimization analysis to support country-level implementation of GVP in China. Darker red areas on map are sites that were consistently identified by the model as the optimal areas to discover the greatest number of viruses using the fewest resources. Protected areas in China shown in green.

Viral accumulation curves for PREDICT

Using PREDICT data, we developed an interactive *viral accumulation curve* tool and searchable table to allow in-country staff to explore viral discovery data and compare the efficacy of different sampling protocols and near real-time adjustment of sampling priorities to maximize viral discovery.

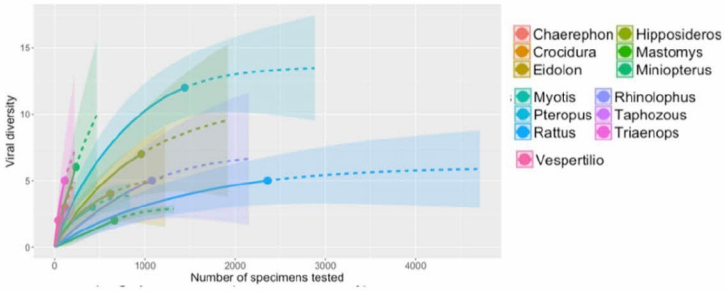


Fig X. A viral accumulation curve for paramyxoviruses that is part of an interactive tool developed for PREDICT teams to explore viral discovery data and adjust sampling targets and protocols as needed to maximize viral discovery.

When are the riskiest periods for emergence?

(Bat seasonality, NiV seasonality, etc.)

The PREDICT M&A team conducted analyses 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 seroprevelance 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. 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.

Fig X. 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.

We also developed a model to test for seasonal patterns in bat viral shedding while accounting for other potentially important factors (e.g., age, gender, reproductive status) and controlling for methodological and technical variation within the data. This analysis uses a hierarchical Bayesian model and demonstrates the value of big datasets such as PREDICT's to the global science community to understand risk factors for spillover and periods of the greatest value for sampling wildlife to identify viruses.

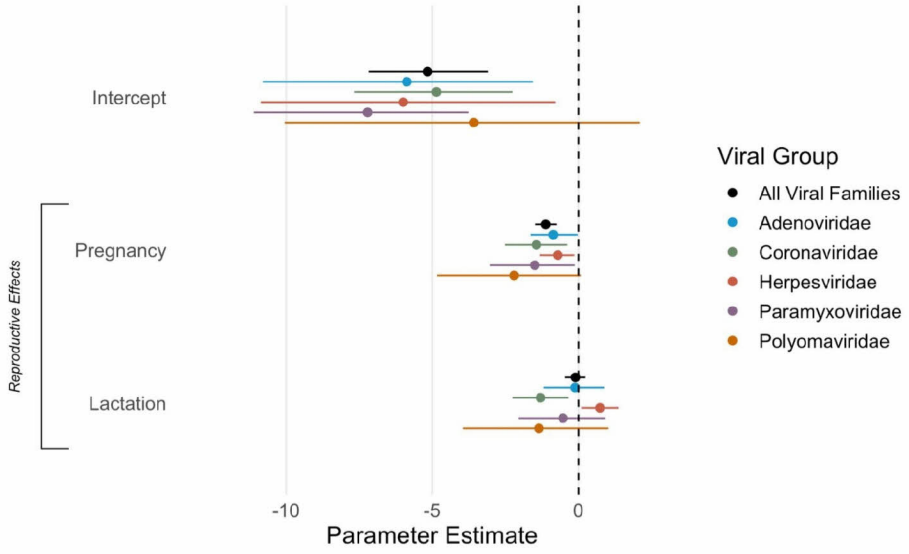


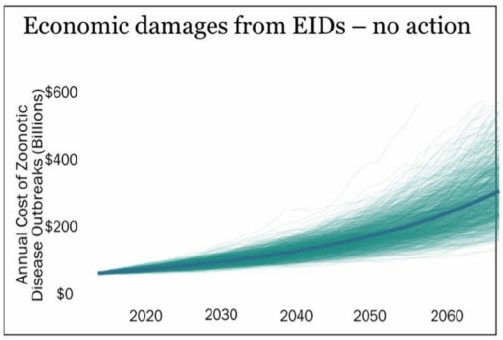
Fig X. Modeled predictions of viral detection (shedding) against bat reproductive status and viral family. PREDICT data and posterior distributions from the models depicted in Fig. 7 were used to generate 50 viral prevalence predictions (each based on 1,000 samples) for each reproductive condition within each viral group. This shows that, in general, pregnant bats have a lower predicted viral prevalence than non-pregnant bats (model parameter estimate below 0 = lower viral shedding)

When is the best time for a global strategy to prevent pandemics?

(Economic analyses Peter)

Exploring long-term trends in pandemic risk and novel strategies to discover new viruses

To assess long-term trends in pandemic risk, we calculated expected global economic damages from EIDs over the next 50 years (figure above) using data from the Emerging Infectious Disease Repository (EIDR), which is partially funded by PREDICT work.



Analysis of the likely economic cost of emerging infectious diseases over the next 50 years if no coordinated global action is taken. Total cost is $3.6 trillion. Investing in a control program that reduces the number of events or size of events by only 5% gives a 96:1 return-on-investment.

PREDICT conducted training with the Indonesia One Health Network (INDOHUN) for three weeks in March 2018 to help them design an economic model of land conversion for the Riau Province; and for two weeks in September 2018 to help finalize the economic modeling. This is a collaborative EPT project between PREDICT M&A and the One Health Workforce including INDOHUN and the University of Minnesota.

PREDICT's M&A representative collaborates with INDOHUN and University of Minnesota on the economics of land conversion in Indonesia.

PREDICT organized a Modeling & Analytics workshop in partnership with INDOHUN (One Health Workforce) and participants from USAID and FAO. The Indonesian workshop, September 4 - 6, included an introduction to R and Economic Modeling, and future workshops will include Advanced R, GIS, and Economics (pic below).

PREDICT collaborated with the World Bank to organize the Economics of One Health workshop January 30 - February 2, 2017. The team provided modeling expertise to promote cross-sectoral understanding of One Health and propose

Who is at the most risk?

This could go below under the interface chapter…

Link to Thailand bat guano EDI with PPE simulation analysis. " Simulating Outbreak Scenarios: Novel Bat Coronavirus from Guano Harvest"

PREVIOUS OUTLINE FOR GLOBAL M&A REPORT with UCD comments - Jan 28, 2020

Predictive Modeling of Virus Spillover and Spread (Modeling and Analytics Team)

SUMMARY OF LAST 10 YEARS

- Answering the 5 Big Questions for Disease X Emergence (the 5 "W's"):
  - **Where will Disease X spill over?**
    - Hotspots 2.0
    - HP3 missing zoonoses
    - Next Zika spatial risk (CKJ and EHA's analyses)
    - Country-level hotspot maps and risk factors (from P2 Y4)
    - Future SADS-CoV emergence (IMPACT bat ecological niche modeling and pig density)
    - *Eidolon helvum* habitat suitability for Ghana (w M&A fellow, Richard);
    - AMR hotspots (also "Why")
    - Global Virome Project site selection (global and country level maps, e.g. China and Thailand)
  - **How will Disease X spread?**
    - Human movement predicts spread of human-to-human transmitted viruses & can inform mitigation measures, including heightened surveillance and staging of outbreak response supplies & equipment:
      - Flight risk analysis (Flirt app)
      - Movement via road networks informs spread of influenza and where vaccination deployment can have the biggest impact
      - Fine-scale GIS and road networks can be used to rapidly address response needs during Ebola outbreaks, using the West Africa epidemic as the model
    - Virus and host geographic range modeling:
      - Bat genetics to understand Nipah virus spread;
      - China CoV origins and spread
      - Mollosid distribution in EHP countries for ebolavirus risk
    - What-if scenario Thai CoV emergence (EDI)
    - Bushmeat value chain analysis in Sulawesi, Indonesia
    - MERS-CoV missing cases in Africa analysis
  - **What species is carrying the next EID?**
    - HP3 and CKJ's network modeling
    - Predicting hosts using networks (Albery et al.)
    - Ebola host analysis
  - **What viruses will emerge, and how many?**
    - HP3 viral analysis
    - Next Zika
    - Spillover app and framework
    - How many unknown viruses– viral curve analyses using P2 data
  - **Why are diseases emerging (risk factors)?**
    - Global zoonotic emergence risk factors (Hotspots 2.0)
    - Africa Sustainable Livestock 2050 – risk of future livestock production
    - Bat seasonality analysis (role of host life history)

        - Deep Forest – risk factors associated with deforestation and viral spillover risk
        - Influenza in Markets EDI (P1)
        - Symptomatic vs. asymptomatic animal sampling (P1)
        - Transmission pathway analysis (P1)
    - **Who is at the most risk?**
        - Bat guano harvester interactions (IMPACT)
        - Select M&A/Behavioral analyses – e.g. LASSOs and others
        - Reference to Behavioral Risk sections or report
    - **When are the riskiest periods for emergence?**
        - Paramyxovirus and Filovirus serology modeling – using longitudinal data to estimate timing of viral shedding and peak risk (Noam)
        - Bat seasonality
        - Role of climate change (e.g. P1, Henipavirus risk in future)
    - **When is the best time for a global strategy to prevent pandemics?**
        - Economic cost-benefit analysis for EID control
        - Quantifying EID economic impact
        - GVP justification
- **INSIGHTS** (each ~2 pages, with a reference to them in main text above):
    - IMPACT studies to highlight:
        - IMPACT #11 - Risk of future bat-pig spillover in SE Asia
    - Emerging Disease Insights already completed (each 2-3 pages)
        - Future bat-pig spillover risk (same as IMPACT 11 above)
        - Viral curves
        - GVP Economics
        - Next Zika
        - Hotspots 2.0
        - Seasonality of Bangladesh bat viral shedding
        - MERS-CoV in Africa
        - Thai CoV what-if
        - Bat population genetics and NiV spread
        - Spillover App (UCD)
        - Seasonal shedding of E. helvum (UCD)
        - Satellite Enhanced Epidemic and Disease outbreak model (UCD)
    - Emerging Disease Insights on way to completion (each 2-3 pages)
        - AMR hotspot map and risk factors
        - HP3 hosts and missing zoonoses
        - China CoV origins -- host and virus evolutionary analysis
        - Identifying unknown hosts – HP3 extension (Albery et al)
        - ASL2050
        - Deep Forest
        - Other Figs and examples from P2 country reports, e.g. change in host range for known viruses pre- and post- PREDICT; prevalence in hosts by viral family

From: Beatriz Martinez Lopez <beamartinezlopez@UCDAVIS.EDU>
To: Nistara Randhawa <nrandhawa@ucdavis.edu>
Cc: Brian H Bird <bhbird@ucdavis.edu>, Elizabeth VanWormer <liz.vanwormer@unl.edu>, Zikankuba Sijali [redacted] Alphonce Msigwa [redacted], David John Wolking <djwolking@ucdavis.edu>, Woutrina A Smith <wasmith@ucdavis.edu>, Rudovick Kazwala [redacted] Abel Ekiri [redacted] Christopher Kilonzo [redacted] aziza samson [redacted] Jon Epstein <epstein@ecohealthalliance.org>, Abel Bulamu Ekiri <[redacted]>, Rudovick Kazwala [redacted], Jonna Mazet <jkmazet@ucdavis.edu>
Subject: Re: Bat tracking draft
Sent: Wed, 5 Aug 2020 05:02:34 +0000

Congrats Nistara!!

> On Aug 4, 2020, at 9:49 PM, Nistara Randhawa <nrandhawa@ucdavis.edu> wrote:
>
> Dear All,
>
> I'm happy to say that our paper was accepted after incorporating revisions per the reviewers' comments!
> It will be published online by tomorrow and here's the link to view it: https://rdcu.be/b55qs
>
> Thank you very much for your help and support in getting this out!
> Warm regards,
> Nistara
>
> Nistara Randhawa
> BVSc & AH, MVSc, MPVM, PhD
> One Health Institute
> UC Davis School of Veterinary Medicine
> nistara.net

Sent: Wed, 5 Aug 2020 05:09:57 +0000 (UTC)
From: Alphonce Msigwa [redacted]
To: "beamartinezlopez@UCDAVIS.EDU" <beamartinezlopez@UCDAVIS.EDU>, Nistara Randhawa <nrandhawa@ucdavis.edu>
Cc: Brian H Bird <bhbird@ucdavis.edu>, Elizabeth VanWormer <liz.vanwormer@unl.edu>, Zikankuba Sijali [redacted], David John Wolking <djwolking@ucdavis.edu>, Woutrina A Smith <wasmith@ucdavis.edu>, Rudovick Kazwala [redacted], Abel Ekiri [redacted], Christopher Kilonzo [redacted], aziza samson [redacted], Jon Epstein <epstein@ecohealthalliance.org>, Abel Bulamu Ekiri <ab.ekiri@surrey.ac.uk>, Rudovick Kazwala [redacted] Jonna Mazet <jkmazet@ucdavis.edu>
Subject: Re: Bat tracking draft

Hi Nistara,
Congratulations for the achievement... Will follow the link and read the paper once it's online

Regards
Alphonce

Sent from Yahoo Mail on Android

On Wed, Aug 5, 2020 at 8:02 AM, Beatriz Martinez Lopez <beamartinezlopez@UCDAVIS.EDU> wrote:

Congrats Nistara!!

> On Aug 4, 2020, at 9:49 PM, Nistara Randhawa <nrandhawa@ucdavis.edu> wrote:
>
> Dear All,
>
> I'm happy to say that our paper was accepted after incorporating revisions per the reviewers' comments!
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> Warm regards,
> Nistara
>
> Nistara Randhawa
> BVSc & AH, MVSc, MPVM, PhD
> One Health Institute
> UC Davis School of Veterinary Medicine
> nistara.net

From: Zikankuba Sijali [REDACTED]
Sent: Wed, 5 Aug 2020 12:18:56 +0300
Subject: Re: Bat tracking draft
To: aziza samson [REDACTED]
Cc: Nistara Randhawa <nrandhawa@ucdavis.edu>, Brian Bird <bhbird@ucdavis.edu>, Elizabeth VanWormer <liz.vanwormer@unl.edu>, Alphonce Msigwa [REDACTED] David John Wolking <djwolking@ucdavis.edu>, Woutrina A Smith <wasmith@ucdavis.edu>, Beatriz Martinez Lopez <beamartinezlopez@ucdavis.edu>, Rudovick Kazwala [REDACTED] Abel Ekiri [REDACTED], Christopher Kilonzo [REDACTED] Jon Epstein <epstein@ecohealthalliance.org>, Abel Bulamu Ekiri <ab.ekiri@surrey.ac.uk>, Rudovick Kazwala [REDACTED] Jonna Mazet <jkmazet@ucdavis.edu>

Congratulations Nistara.
Looking forward to connect the link.

On Wed, Aug 5, 2020 at 9:52 AM aziza samson <[REDACTED]> wrote:

> Congratulations Nistara and the team
>
> Sent from my iPhone
>
> On 5 Aug 2020, at 07:49, Nistara Randhawa <nrandhawa@ucdavis.edu> wrote:
>
> Dear All,
>
> I'm happy to say that our paper was accepted after incorporating revisions per the reviewers' comments!
> It will be published online by tomorrow and here's the link to view it: https://rdcu.be/b55qs
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> Thank you very much for your help and support in getting this out!
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> Nistara
>
> Nistara Randhawa
> BVSc & AH, MVSc, MPVM, PhD
> One Health Institute
> UC Davis School of Veterinary Medicine
> nistara.net

--
Zikankuba Sijali (BVM)
PREDICT Tanzania Country Cordinator,
Research Scientist HALI PROJECT, Sokoine University of Agriculture
[REDACTED]

From: Jon Epstein <epstein@ecohealthalliance.org>
Sent: Wed, 5 Aug 2020 10:00:27 -0400
Subject: Re: Bat tracking draft
To: Nistara Randhawa <nrandhawa@ucdavis.edu>
Cc: Brian Bird <bhbird@ucdavis.edu>, Elizabeth VanWormer <liz.vanwormer@unl.edu>, Zikankuba Sijali [redacted] Alphonce Msigwa [redacted] David John Wolking <djwolking@ucdavis.edu>, Woutrina A Smith <wasmith@ucdavis.edu>, Beatriz Martinez Lopez <beamartinezlopez@ucdavis.edu>, Rudovick Kazwala [redacted] Abel Ekiri [redacted], Christopher Kilonzo [redacted] aziza samson [redacted], Abel Bulamu Ekiri <ab.ekiri@surrey.ac.uk>, Rudovick Kazwala [redacted], Jonna Mazet <jkmazet@ucdavis.edu>

Congratulations, Nistara!
Well done, all.
Cheers,
Jon

On Wed, Aug 5, 2020 at 12:49 AM Nistara Randhawa <nrandhawa@ucdavis.edu> wrote:

Dear All,

I'm happy to say that our paper was accepted after incorporating revisions per the reviewers' comments!
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Thank you very much for your help and support in getting this out!
Warm regards,
Nistara

Nistara Randhawa
BVSc & AH, MVSc, MPVM, PhD
One Health Institute
UC Davis School of Veterinary Medicine
nistara.net

--
Jonathan H. Epstein DVM, MPH, PhD

Vice President for Science and Outreach

EcoHealth Alliance
520 Eighth Avenue, Ste. 1200

New York, NY 10018
1.212.380.4467 (direct)
[redacted] (mobile)

web: ecohealthalliance.org

Twitter: @epsteinjon

EcoHealth Alliance develops science-based solutions to prevent pandemics and promote conservation

From: Rudovick Kazwala [redacted]
Sent: Thu, 6 Aug 2020 12:13:35 +0300
Subject: Re: Bat tracking draft
To: Nistara Randhawa <nrandhawa@ucdavis.edu>
Cc: Brian Bird <bhbird@ucdavis.edu>, Elizabeth VanWormer <liz.vanwormer@unl.edu>, Zikankuba Sijali [redacted], Alphonce Msigwa [redacted] David John Wolking <djwolking@ucdavis.edu>, Woutrina A Smith <wasmith@ucdavis.edu>, Beatriz Martinez Lopez <beamartinezlopez@ucdavis.edu>, Abel Ekiri [redacted] Christopher Kilonzo [redacted] aziza samson <[redacted], Jon Epstein <epstein@ecohealthalliance.org>, Abel Bulamu Ekiri <[redacted], Jonna Mazet <jkmazet@ucdavis.edu>

Hi Nistara,
That is great news, congratulations!!

Rudovick R. Kazwala
Professor Ecosystems and Public Health
Department of Veterinary Medicine and Public Health
[redacted]
Phone: +[redacted]
Email: [redacted]

On Wed, 5 Aug 2020 at 07:49, Nistara Randhawa <nrandhawa@ucdavis.edu> wrote:

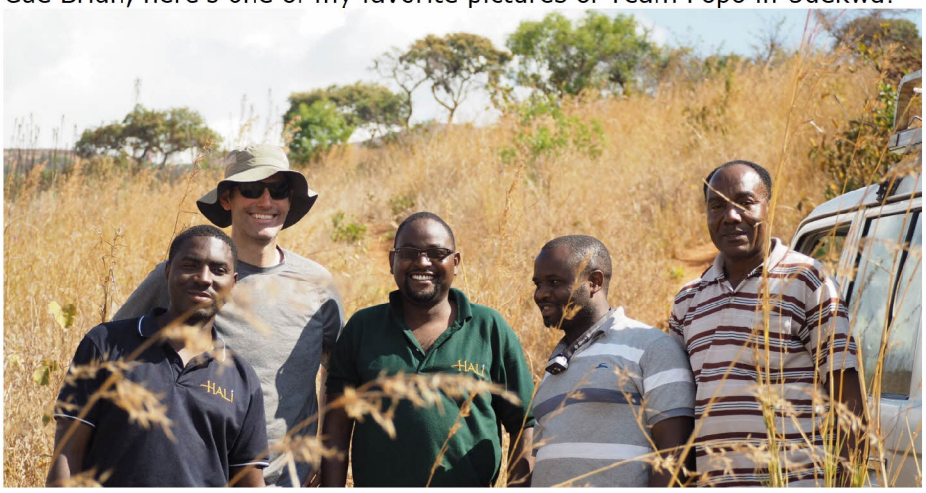
> Dear All,
>
> I'm happy to say that our paper was accepted after incorporating revisions per the reviewers' comments!
> It will be published online by tomorrow and here's the link to view it: https://rdcu.be/b55qs
>
> Thank you very much for your help and support in getting this out!
> Warm regards,
> Nistara

Nistara Randhawa
BVSc & AH, MVSc, MPVM, PhD
One Health Institute
UC Davis School of Veterinary Medicine
nistara.net

From: Nistara Randhawa <nrandhawa@ucdavis.edu>
Sent: Thu, 6 Aug 2020 11:24:56 -0700
Subject: Re: Bat tracking draft
To: Rudovick Kazwala [redacted]
Cc: Brian Bird <bhbird@ucdavis.edu>, Elizabeth VanWormer <liz.vanwormer@unl.edu>, Zikankuba Sijali [redacted] Alphonce Msigwa [redacted] David John Wolking <djwolking@ucdavis.edu>, Woutrina A Smith <wasmith@ucdavis.edu>, Beatriz Martinez Lopez <beamartinezlopez@ucdavis.edu>, Abel Ekiri [redacted] Christopher Kilonzo [redacted], aziza samson [redacted] Jon Epstein <epstein@ecohealthalliance.org>, Abel Bulamu Ekiri [redacted], Jonna Mazet <jkmazet@ucdavis.edu>

Thank you very much for all your kind comments and for helping in different aspects of this project as well!

Cue Brian, here's one of my favorite pictures of Team Popo in Udekwa!



Asante sana,
Nistara

Nistara Randhawa
BVSc & AH, MVSc, MPVM, PhD
One Health Institute
UC Davis School of Veterinary Medicine
nistara.net

On Thu, Aug 6, 2020 at 2:14 AM Rudovick Kazwala <[redacted] wrote:

> Hi Nistara,
> That is great news, congratulations!!

Rudovick R. Kazwala
Professor Ecosystems and Public Health
Department of Veterinary Medicine and Public Health
[redacted]
[redacted]
Phone: [redacted]
Email: [redacted]

On Wed, 5 Aug 2020 at 07:49, Nistara Randhawa <nrandhawa@ucdavis.edu> wrote:

> Dear All,
>
> I'm happy to say that our paper was accepted after incorporating revisions per the reviewers' comments!
> It will be published online by tomorrow and here's the link to view it: https://rdcu.be/b55qs
>
> Thank you very much for your help and support in getting this out!
> Warm regards,

Nistara Randhawa
BVSc & AH, MVSc, MPVM, PhD
One Health Institute
UC Davis School of Veterinary Medicine
nistara.net

From: Dennis Carroll [redacted]
Sent: Tue, 18 Aug 2020 15:21:09 -0400
Subject: Re: FW: The Trinity Challenge communications workshop - follow up note 13/08/20
To: [redacted]
Cc: Amy Bond [redacted] Jonna Mazet <jkmazet@ucdavis.edu>, Peter Daszak <daszak@ecohealthalliance.org>

[redacted] thanks Are you available for a chat later this week - To get a better read on the ask?

Thanks

On Tue, Aug 18, 2020 at 9:31 AM [redacted] wrote:

Hi Dennis,

I attended this comms call with Trinity Challenge and they have the following request (also see below):

Ask: What we would really appreciate from you is confirmation that you will be able to provide a quote from your CEO (or senior

exec lead) for press and external use, as well as a short video clip to add to the website and use across digital channels, so if you can let me know that is possible that would be great – if you have any rules or preferences around where and when your quotes

can be used then just let us know that too, as a minimum we would want the option to use on The Trinity Challenge website.

Can you or other board members provide what they requested?

Cheers,

From: Amy Bond <REDACTED

Date: Thursday, August 13, 2020 at 10:45 PM

To: REDACTED

Subject: Fwd: The Trinity Challenge communications workshop - follow up note 13/08/20

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

From: **Emily Teller** <[redacted]>

Date: Thu, Aug 13, 2020 at 2:16 PM

Subject: RE: The Trinity Challenge communications workshop - follow up note 13/08/20

To: heleana.greeves@aviva.com <heleana.greeves@aviva.com>,

[redacted]

msugrue@fb.com <msugrue@fb.com>,

mcubeta@fb.com <mcubeta@fb.com>,

mblake@ucdavis.edu <mblake@ucdavis.edu>,

[redacted]

cmeaden@google.com <cmeaden@google.com>,

srowley@google.com <srowley@google.com>,

[redacted],

acole@internews.org <acole@internews.org>,

John.Godfrey@group.landg.com <John.Godfrey@group.landg.com>,

[redacted]

s.nargi@northeastern.edu <s.nargi@northeastern.edu>,

Patty.OHayer@rb.com <Patty.OHayer@rb.com>,

lancyma@tencent.com <lancyma@tencent.com>,

jonathan@zenysis.com <jonathan@zenysis.com>

CC: Mitchell Cuddihy <Mitchell_Cuddihy@mckinsey.com>, Connor Rochford <[redacted]
TRINITY CHALLENGE <[redacted]

Hi all

Thanks again to those who could join the call today, considering the late notice we had a really good turn out and I hope we gave you a much better idea of what

The Trinity Challenge is and what we can collectively do with our comms effort to raise the profile and encourage participation. Building on Mitch's helpful briefing we thought it would helpful to include a bit more information on the Challenge itself, including

the questions that are at the heart of The Trinity Challenge – the attached 'overview' doc is still a work in progress so is for your information and background only at this stage

We promised to try not to overload your inboxes with loads of attachments and documents so we will aim to get the shared folder / shared drive up and running

ASAP and use that as the main repository for the tools, products and information. However I'm just sneaking in one more attachment, which is the slide from today with the list of those things we said we would provide. Please do take a look and let me know

if there is anything else we should be adding to that list that would be helpful?

Ask: What we would really appreciate from you is confirmation that you will be able to provide a quote from your CEO (or senior

exec lead) for press and external use, as well as a short video clip to add to the website and use across digital channels, so if you can let me know that is possible that would be great – if you have any rules or preferences around where and when your quotes

can be used then just let us know that too, as a minimum we would want the option to use on The Trinity Challenge website.

We will arrange another all comms lead meeting for two weeks' time (provisionally 27th September at the same time) when hopefully we will all have

some updates on activity to share but will keep in touch in the interim.

Please do drop me a line any time, you can reach the whole Brunswick team on

REDACTED and Mitch and Connor from the secretariat are also cc'd in so between us we will be able to respond to any questions, queries, or ideas.

Speak soon, and thanks again.

Emily and the Brunswick team

Emily Teller

Director

REDACTED

REDACTED

Tel

REDACTED

Direct REDACTED Mobile REDACTED

From: Emily Teller

Sent: 13 August 2020 10:07

To: Greg Amrofell <amrofell@uw.edu>;

[redacted]; Catherine Meaden <[redacted]; Sarah Rowley <[redacted]>; Hayley Sandford <hayley.sandford@aviva.com>; Steve Ellis <steve@metia.com>; Nargi, Shannon <s.nargi@northeastern.edu>; 'heleana.greeves@aviva.com' <heleana.greeves@aviva.com>; [redacted] <[redacted]; [redacted] <[redacted]; [redacted] 'msugrue@fb.com' <msugrue@fb.com>; [redacted]>; 'mblake@ucdavis.edu' <mblake@ucdavis.edu>; [redacted]; [redacted] 'acole@internews.org' <acole@internews.org>; 'John.Godfrey@group.landg.com' <John.Godfrey@group.landg.com> [redacted] 'Patty.OHayer@rb.com' <Patty.OHayer@rb.com>; 'lancyma@tencent.com' <lancyma@tencent.com>; 'jonathan@zenysis.com' <jonathan@zenysis.com>

Cc: Mitchell Cuddihy <Mitchell_Cuddihy@mckinsey.com>; 'Connor Rochford' <[redacted]>; TRINITY CHALLENGE <[redacted]

Subject: The Trinity Challenge communications workshops - agenda 13/08/20

Hi all

Thank you to everyone who can make the zoom call later today and for doing so at short notice, and for those of you that can't we will keep everyone up to date

via email.

Pease find below a short agenda, and attached are a couple of background documents. We won't go through the whole comms plan in detail so this is mostly just

for your reference, and the Founder contributions document aims to spark ideas rather than be set in stone asks.

Agenda: The Trinity Challenge communications workshop 13/08/20

1.

Welcome: *Emily Teller (Brunswick)*

2.

Introduction to The Trinity Challenge:

Mitch Cuddihy (McKinsey)

3.

Overview of comms planning:

Emily Teller (Brunswick)

4.

Launch day, September 14th – what it will look like, and the launch event:

Laura Archer and Hebe Trotter (Brunswick)

5.

What can you do and what do you need?:

Emily Teller / all

6.

Future meetings

7.

AoB

Hope that all makes sense, and looking forward to speaking later

With best wishes

Emily

Emily Teller

Director

REDACTED

REDACTED

Tel

REDACTED
Direct REDACTED | Mobile REDACTED

www.brunswickgroup.com | LinkedIn | Twitter

Read the Brunswick Review – The Integrity Issue

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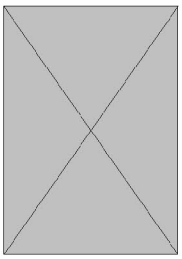
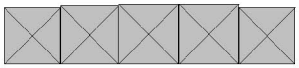


AMY BOND

Chief Marketing Officer

www.gorilladoctors.org



--
Dr Dennis Carroll
President, Global Virome Project
Senior Fellow, Scowcroft Institute of International Affairs at the Bush School of Government and Public Service, Texas A&M University
Counselor and Advisor to the Faculty of Tropical Medicine at Mahidol University, Bangkok, Thailand

mobile: REDACTED
email REDACTED

From: Peter Daszak <daszak@ecohealthalliance.org>
To: Aleksei Chmura <chmura@ecohealthalliance.org>, "Jonna Mazet (jkmazet@ucdavis.edu)" <jkmazet@ucdavis.edu>
Subject: Some of Jonna's emails to me were blocked.
Sent: Fri, 11 Sep 2020 04:40:16 +0000
Jonna's email.jpg

Aleksei – please check this out with Ripple tomorrow. One sent on Sun sept 6th 3.10pm CA time was blocked – (see image)

Jonna – I got one from you on Thursday at 4:05pm my time, so it might be just temporary glitch, but we'll look into it.

Can you send a response to this just so we can see if it's still blocking.

Cheers,

Peter

Peter Daszak
President

EcoHealth Alliance
520 Eighth Avenue, Suite 1200
New York, NY 10018-6507
USA

Tel.: +1-212-380-4474
Website: www.ecohealthalliance.org
Twitter: @PeterDaszak

EcoHealth Alliance develops science-based solutions to prevent pandemics and promote conservation

Mail Delivery Subsystem <mailer-d... Sun, Sep 6, 3:10 PM (4 days ago)

to me

Message blocked

Your message to **daszak@ecohealthalliance.org** has been blocked. See technical details below for more information.

The response from the remote server was:

```
451 4.7.1 Received too many messages from a new or untrusted IP:
108.177.16.5 (Z27/44A9A9A) (G28)
```

Reply Forward

Sent: Wed, 25 Jan 2017 06:33:02 -0800
Subject: Re: Follow up from Liberia call
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Alisa Pereira <apereira@usaid.gov>
Cc: "Andrew (GH/HIDN) Clements" <AClements@usaid.gov>, "kchittenden@usaid.gov" <kchittenden@usaid.gov>, "predictmgt@usaid.gov" <predictmgt@usaid.gov>, "predict@ucdavis.edu" <predict@ucdavis.edu>

I'm available now if you'd like to discuss. I have a meeting with our team by phone in 1.5 hours to continue collecting information for our internal investigation. If you have information pertinent to my providing them instructions regarding information to collect or that would change the course of that process, I'd like to hear those in advance. If not, we can schedule a follow-up. Please just let me know. I've had to cancel my meetings with Dennis today, so my availability is slightly better than anticipated.
Appreciate any information you can provide,
Jonna

On Wednesday, January 25, 2017, Alisa Pereira <apereira@usaid.gov> wrote:

> Jonna,
>
> We had the call with the Liberia mission this morning. I know the next few days are particularly busy for you, but please let us know when you are available to have a call to discuss the information we received.
>
> Thanks
> Alisa
>
> Sent from my iPhone

From: Ashna Kibria <akibria@usaid.gov>
Sent: Mon, 27 Feb 2017 10:12:35 -0500
To: Jean Felix Kinani [redacted]
Cc: Andrew Kitua [redacted] Irene Naigaga <inaigaga@ohcea.org>, Juvenal Kagarama [redacted] Manassé Nzayirambaho <mnzayira@nursph.org>, Mike Cranfield [redacted], "Norah Bwaya (Norah@CoachAFrica.com)" <norah@coachafrica.com>, Robert Kibuuka [redacted] "Sambe Duale/PRP/Projects/DAI" [redacted], Sarah Paige <spaige@usaid.gov>, Serge Nzietchueng [redacted], Thierry Nyatanyi <nthierry@umn.edu> [redacted] jnziza <[redacted]>, martin [redacted], predict@ucdavis.edu, "Kramer, Lisa (Nairobi/EA/RHH)" <lkramer@usaid.gov>, John Mckay <jmckay@usaid.gov>, Richard Munyaneza <rmunyaneza@usaid.gov>, Alisa Pereira <apereira@usaid.gov>, Andrew Clements <aclements@usaid.gov>, Etienne Rugigana [redacted]
Subject: [predict] Re: Update requested on HPAI response in Rwanda

We've now received updates from everyone. Many thanks for the quick turn around on the bullets.
Best,
Ashna

On Wed, Feb 22, 2017 at 11:30 AM, Ashna Kibria <akibria@usaid.gov> wrote:

> Dear all,
> Thanks very much to the P&R and OHW teams for the updates. Anything else to add to the PREDICT training piece?
>
> Ashna

On Wed, Feb 22, 2017 at 11:17 AM, Jean Felix Kinani [redacted] wrote:

> Dear Ashna
>
> In Rwanda, P&R has provided the technical support to the Rwanda One Health Steering Committee (OHSC)
>
> - to convene meetings with One Health government sectors, PREDICT, local leaders, selected border posts and the national response teams in selected districts. For instance a brief on use of PPE, risk communication channel among stakeholder involve in disease response
> - to mobilize public and poultry farmers on mitigate any risk of exposure to the H5 during the AI alert in Uganda.
> - to review and update the HPAI H5N1 2006 preparedness and response plan.
>
> Thank you
>
> --
> **Dr. Jean Felix KINANI Sangwa**

--
Ashna Kibria, MPH
Public Health Advisor
Emerging Threats Division
USAID/Washington, Bureau for Global Health
Phone: 202.712.1210 (office) | [redacted] (cell)
Email: akibria@usaid.gov

--
Ashna Kibria, MPH
Public Health Advisor
Emerging Threats Division
USAID/Washington, Bureau for Global Health
Phone: 202.712.1210 (office) | [redacted] (cell)

Email: akibria@usaid.gov

Sent: Wed, 29 Mar 2017 20:52:24 -0700
Subject: Re: P2-wide M&A Call, Thursday March 2nd
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Anna Willoughby <willoughby@ecohealthalliance.org>
Cc: "Kevin Olival, PhD" <olival@ecohealthalliance.org>, Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, Damien Joly <djoly@metabiota.com>, Peter Daszak <daszak@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>, Liz Chase <eschase@ucdavis.edu>

Hi Anna,
I can give an update on the viral risk ranking,
Jonna

On Fri, Mar 10, 2017 at 12:52 PM, Anna Willoughby <willoughby@ecohealthalliance.org> wrote:

> Dear all,
> Thank you for filling out the doodle. The next M&A call is scheduled for April 4th at 11 am PST/2pm EST. Please let me know asap if this does not work for you. The conference line is [REDACTED]. Please circulate any agenda items you may have.

Thank you,
Anna

On Fri, Mar 3, 2017 at 11:03 AM, Anna Willoughby <willoughby@ecohealthalliance.org> wrote:

> Dear all,
> Please find the notes from yesterday's call attached. Below is a doodle poll to find a time for the next call, sometime during April 3 - 14. I will follow up once the poll is complete with the time for April's call, or alternative times if need be.

http://doodle.com/poll/ep4c2ubtuchi9agu

Thank you,
Anna

On Thu, Mar 2, 2017 at 12:03 PM, Anna Willoughby <willoughby@ecohealthalliance.org> wrote:

> password: [REDACTED]

On Thu, Mar 2, 2017 at 12:02 PM, Anna Willoughby <willoughby@ecohealthalliance.org> wrote:

> Dear all,
>
> I apologize, the conference line is [REDACTED]. Please text Kevin if you have issues.
>
> Thanks,
>
> Anna

On Thu, Mar 2, 2017 at 10:55 AM, Kevin Olival, PhD <olival@ecohealthalliance.org> wrote:

> In case you haven't reviewed yet, a slightly updated version of the GVP EDI attached.
> Cheers,
> Kevin

--

Anna Willoughby
Research Assistant

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

1.646.868.4713 (direct)
1.212.380.4465 (fax)
REDACTED (cell)

www.ecohealthalliance.org

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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Sent: Thu, 13 Apr 2017 07:09:44 -0700
Subject: Re: Global Virome Project and UNESCO
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Dennis Carroll <dcarroll@usaid.gov>
Cc: Peter Daszak <daszak@ecohealthalliance.org>, Eddy Rubin <erubin@metabiota.com>, Nathan Wolfe <nwolfe@metabiota.com>, Brooke Watson <watson@ecohealthalliance.org>, Elizabeth S Chase <eschase@ucdavis.edu>, Cara Chrisman <cchrisman@usaid.gov>

Definitely worth exploring further,
J

On Thu, Apr 13, 2017 at 6:56 AM, Dennis Carroll <dcarroll@usaid.gov> wrote:

> Interesting outreach. Thoughts?
>
> d
>
> ---------- Forwarded message ----------
> From: **Vizzini, Casimiro** <REDACTED
> Date: Thu, Apr 13, 2017 at 8:58 AM
> Subject: Global Virome Project and UNESCO
> To: "dcarroll@usaid.gov" <dcarroll@usaid.gov>
> Cc: "Da Silva, Alex" <REDACTED

Dear Dr. Carroll,

It was a great pleasure meeting you last week at the AAAS Science Diplomacy 2017 Conference in Washington D.C. !

I wanted to reach out to you again with regards to our stimulating conversation about your involvement in launching the Global Virome Project and its ongoing activities.

Having read up on the project background and its key deliverables, I am convinced that - similar to our ongoing and longstanding support and structural framework provided to the Human Variome Project Initiative - the Division of Science Policy and Capacity-Building at UNESCO would be able to offer its collaboration and find valuable synergies to help foster the ongoing policy activities and broaden the international network the GVP Initiative.

I would be delighted to discuss these matters with you further and stay in touch with you.

Kindest regards,

Casimiro Vizzini

Dr Casimiro Vizzini

Expert

Division of Science Policy and Capacity Building

United Nations

Educational, Scientific and

Cultural Organization

REDACTED

Tel : REDACTED

--

Dr. Dennis Carroll
Director, Emerging Threats Program
Bureau for Global Health
U.S. Agency for International Development

Office: 202-712-5009
Mobile: REDACTED

From: Andrew Clements <aclements@usaid.gov>
Sent: Wed, 19 Apr 2017 10:17:33 +0200
Subject: Re: Change to approved ITA: Corina Monagin travel to Senegal cancelled
To: Katherine Leasure <kaleasure@ucdavis.edu>
Cc: PREDICTMGT <predictmgt@usaid.gov>, Jonna Mazet <jkmazet@ucdavis.edu>, "predict@ucdavis.edu" <predict@ucdavis.edu>

Thanks. Sorry to hear that. if/when she reschedules, please submit as a new request.

Andrew P. Clements, Ph.D.
Senior Scientific Adviser
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Apr 19, 2017, at 2:26 AM, Katherine Leasure <kaleasure@ucdavis.edu> wrote:

> Hi Andrew. Corina Monagin's travel to Sierra Leone (previously approved ITA below for reference) has been cancelled for REDACTED. Thanks!
>
> 1. UC Davis would like to request travel approval for Corina Monagin to travel from Los Angeles, California, USA to Dakar, Senegal from April 29 to May 7, 2017 for meetings with partners, and to prepare for surveillance activities.
> **Trip purpose:** Dr. Corina Monagin will be traveling to Dakar, Senegal to have working meetings with PREDICT-2 program partners at the Interstate School of Veterinary Medicine and Sciences of Dakar (EISMV), the University Cheikh Anta Diop (UCAD), and the Senegalese Institute of Agricultural Research (ISRA). These working meetings will focus on preparations for the roll-out of surveillance activities in the country. Dr. Monagin is new to the PREDICT-2 UC Davis Senegal team and is using this opportunity to introduce herself to the partners.
>
> *Katherine Leasure*
> HR/Payroll/Financial Assistant
> One Health Institute
> University of California, Davis
> 530-752-7526
> 530-752-3318 FAX
> kaleasure@ucdavis.edu
>
> --

Sent: Mon, 22 May 2017 10:16:26 -0700
Subject: Re: PMAC update
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Dennis Carroll <dcarroll@usaid.gov>

Now?
You can get me on REDACTED today before 4 pm your time,
J

On Mon, May 22, 2017 at 7:37 AM, Dennis Carroll <dcarroll@usaid.gov> wrote:

> Sister, at your convenience can we chat about the meeting in Montreux. a few updates for you.

d

--
Dr. Dennis Carroll
Director, Emerging Threats Program
Bureau for Global Health
U.S. Agency for International Development

Office: 202-712-5009
Mobile: REDACTED

From: Peter Daszak <daszak@ecohealthalliance.org>
To: Jonna Mazet (jkmazet@ucdavis.edu) <jkmazet@ucdavis.edu>;Brooke Watson <watson@ecohealthalliance.org>
Sent: 5/31/2017 2:31:29 PM
Subject: GVP timeline thing

Here's my draft. Let me know what you think and I'll send it round.

I need to send this by 7pm my time (4pm your time), so if you have chance to skim, but not to comment, just send me a quick text with ideas…

Cheers,

Peter

Peter Daszak
President

EcoHealth Alliance
460 West 34th Street – 17th Floor
New York, NY 10001

+1.212.380.4473 (direct)
+1.212.380.4465 (fax)
www.ecohealthalliance.org

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Clarifying goals, membership and timelines of S&T WGs vs. Implementation WGs

Propose the following:

- S&T lab and metadata WGs will design, test and recommend the primary techniques/methodologies to be used in the GVP. Implementation lab and metadata WGs will manage the roll out of these methodologies in country.
- S&T lab and metadata WGs will continue to conduct testing of systems and advise on new approaches as the project proceeds.
- S&T lab and metadata WGs will conduct periodic assessments throughout the GVP to identify whether protocols are sufficiently standardized. Implementation lab and metadata WGs will work throughout the GVP to manage country efforts so that they remain standardized, according to the assessments.
- Membership of the S&T lab and metadata WGs will include senior leaders in their fields, along with some more junior staff who can ensure tasks are successfully completed in a timely manner. Implementation lab and metadata WGs will be comprised primarily of mid-level staff members who are actively working on implementation of the project.
- Modeling & Analytics WG will work initially to identify most cost-effective strategy for targeting of surveillance, then continue this targeting throughout design of each phase of the GVP (modifying as new countries or sites come on-line). M&A WG will maintain activities throughout the GVP to ensure targets are being met, to re-analyze viral diversity estimates, and to act as an overall monitor of GVP success rate.
- Membership of M&A WG will consist primarily of mid-level staff with some senior leadership.

Clarifying timelines of the Working Groups

Tasks to be completed by:

- July 1st 2017: WG work plans are finalized
- August 1st 2017: Members have been invited to join
- September 15th 2017: All WGs have conducted conference calls to assign tasks
- November 1st 2017: All WGs report to Core Group/SC
- January 2018: WGs meet at PMAC!

From: Andrew Clements <aclements@usaid.gov>
Sent: Tue, 27 Jun 2017 16:42:11 +0200
Subject: Richard and Robbin available at 4:45 EDT today for quick chat -- are you available?
To: Jonna Mazet <jkmazet@ucdavis.edu>, [redacted]
Cc: Elizabeth Leasure <ealeasure@ucdavis.edu>, David J Wolking <djwolking@ucdavis.edu>, Shana Gillette <sgillette@usaid.gov>, Alisa Pereira <apereira@usaid.gov>

Hi Jonna

Let me know if you are available. Sorry for the short notice.

Andrew P. Clements, Ph.D.
Senior Scientific Adviser
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

From: Sarah Paige <spaige@usaid.gov>
Sent: Tue, 15 Aug 2017 10:27:13 -0400
Subject: Re: [Update] EPT2 - GHSA Workplan Coordination Call - DRC
To: Ricardo Echalar <rechalar@usaid.gov>, "Subhash (FAORAP) Morzaria" [REDACTED] predict@ucdavis.edu, Irene Naigaga [REDACTED], Hellen Amuguni <janetrix.amuguni@tufts.edu>, Bethany Haberer <bhaberer@usaid.gov>, Dennis Carroll <dcarroll@usaid.gov>, "Makonnen, Yilma (FAORNE)" [REDACTED] William Bazeyo [REDACTED], Alisa Pereira <apereira@usaid.gov>, Lindsay Parish <lparish@usaid.gov>, "Kone, Philippe (FAOCD)" [REDACTED] Mike Cranfield [REDACTED], Marilyn Crane <mcrane@usaid.gov>, Sylvia Wanzala <wanza003@umn.edu>, Izetta Simmons <isimmons@usaid.gov>, Jean-Felly Numbi <jnumbi@usaid.gov>, Katey Pelican <pelicank@umn.edu>, Jessica Pettit <jpettit@usaid.gov>, "Saila-Ngita, Diafuka" <diafuka.saila_ngita@tufts.edu>, Kirsten Gilardi <kvgilardi@ucdavis.edu>, Ngona Idi Abdullah [REDACTED] Jeff Bender <bende002@umn.edu>, Lisa Kramer <lkramer@usaid.gov>, Shana Gillette <sgillette@usaid.gov>, Eddy Kambale [REDACTED] David J Wolking <djwolking@ucdavis.edu>, Nadira Kabir <nkabir@usaid.gov>, Placide Mbala <pmbala@metabiota.com>, Innocent Rwego <irwego@umn.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, "Soumare, Baba (RAF)" [REDACTED] Andrew Clements <aclements@usaid.gov>, "Tzipori, Saul" <saul.tzipori@tufts.edu>, gasp [REDACTED] Andrea Long-Wagar <alongwagar@usaid.gov>, Malangu Doyen [REDACTED] Ashna Kibria <akibria@usaid.gov>, Sarah Paige <spaige@usaid.gov>, Dr Prime Mulembakani <pmulembakani@metabiota.com>, Prince Kimpanga <prince.kimpanga@unikin.ac.cd>
DRC_ Workplan Coordination Call - FY18.docx.docx

Dear DRC EPT2/GHSA partners

Thank you all for joining and contributing to the conversation last week. And thank you very much for your patience with the phone issues. Please find attached the notes from our workplanning coordination call that took place last Thursday. Given the challenges of the phone lines and call quality, please review your sections and edit as appropriate.

Best
Sarah

Sarah Paige, PhD, MPH
Senior Infectious Disease Advisor
USAID Africa Bureau/Health Division
Desk: +1-202-712-1814
Mobile: [REDACTED]
E-mail: spaige@usaid.gov

EPT2/GHSA Country Coordination Call

Special Workplan Edition

DRC Team
10 August 2017

Facilitator: Lisa Kramer

Attendees: OHW and OCHEA- Prince Kimpanga, Diafuka Saila-Ngita, Ngona Idi Abdullah, Carrie Coslin, Amy McMillen, Sylvia Wanzala
PREDICT 2- Prime Mulembakani, Mike Cranfield, Karen Salyors, James Ayukekbong, David Wolking
FAO- Philippe Kone
USAID Mission: Jean-Felly Numbi, Bethany Haberer, Izetta Moniku-Moreau
USAID HQ: Sarah Paige, Ashna Kibria, Marilyn Crane

Highlights of project plans for FY18 (October 1, 2017 through September 30, 2018) organized by GHSA Action Package.

AMR

- OHW-
  - Training 300 final year students in vet, pharmacy, medicine, on AMR. A modified version will be delivered to government officials as in-service training.
  - Initiating antimicrobial resistance surveillance activities targeting the animal health sector using designated faculty at veterinary, medical, pharmacy, and nursing schools
- FAO
  - Working with poultry sector and possibly training students on AMR in agriculture (i didn't get this point well)
- PREDICT- no activity planned

BSS

- PREDICT-
  - Will partner with INRB and FAO to train up to 50 people on biosafety and biosecurity protocol including use of PPE, waste management
- FAO-
  - Partner with P2 on that INRB training
  - Train staff at Central Veterinary Lab
- OHW

        - Collaborate with P2 for a workshop in ISO standards, and get some of their students into the PREDICT training

Zoonotic Diseases

- PREDICT
    - Continue target taxa sampling, human biological surveillance, and human behavioral surveillance in Kinshasa and Bas Uele
    - Supporting MOH to follow refugees for risky practices facilitating zoonotic disease transmission
    - Targeting hunting, bushmeat markets, extractive industry sites (forestry and diamonds), and bonobo sanctuary
    - Framing this work as a One Health capacity building initiative through engagement of local government partners from MOH and MOF in the day to day work
- FAO
    - Conduct an assessment of animal health surveillance system to harmonize with overall surveillance systems
    - 2 other activities in here? Anything about HPAI?
- OHW
    - Nothing

Laboratory Systems Strengthening

- PREDICT
    - Build capacity to detect viruses through sharing protocols with national public health and central veterinary lab
    - Train up Lab Coordinator in Bas Uele province on PREDICT protocol
- FAO
    - Training on HPAI and Rabies detection
    - Supply vet labs with diagnostics for rabies and HPAI
    - Provide supply chain training on lab equipment
- OHW
    - Nothing

Surveillance

- PREDICT
    - Working with government to share results and reconcile with current process for surveillance
- FAO
    - Consolidate network of veterinary labs (Kinshasa, Goma, Lubumbashi) into one surveillance system
    - Provide training on algorithms to detect outbreaks

- OHW
  - Nothing

Reporting

- PREDICT
  - (unclear)
- FAO
  - Nothing
- OHW
  - Nothing

Workforce Development

- PREDICT
  - Training government counterparts
  - Hosting faculty from University of Kinshasa to visit lab
  - Train FETP participants on behavioral surveillance
- FAO
  - (lost the call)
- OHW (13 activities)
  - Operationalize Human Resources for OH across disciplines through the online platform developed during EPT1
  - Student field attachments in Lumata (Lubumbashi) and Nsele (Kinshasa)
  - Four scientific talks and panel discussions on OH topics will be organized in Lubumbashi and Kinshasa
  - Intensive six-month English Language training for students enrolled in 3 new Msc programs being launched in wildlife health and management, infectious disease and global health, and environmental health
  - First cohort for the Master's degree course in Wildlife Health and Management
  - Expand Territory Administrator's Training (to which province?)
  - Conduct monitoring and performance assessment of the 87 administrators from Kongo Central province who were trained in last year's territory administrator training course (collaborate with CDC on this because of Emergency Preparedness linkages)
  - Place junior faculty in attachments at partner IPs
  - Establish a vet ambulatory clinic at Lubumbashi (supported by Tufts and World Bank)
  - OCHEA to support faculty exchanges from the region for the new Master's in Wildlife Health and Management

- Establish 10 scholarships for students enrolled in the new Master's in Wildlife Health and Management
- Support review of the curriculum for animal health vet technicians to include new OH competencies (supported by World Bank and led by Ministry in charge of vocational education)

Emergency Preparedness or EOC

- PREDICT
  - Nothing
- OHW
  - (already mentioned in Workforce)
- FAO
  - (lost the call)

Other: In case of outbreak, PREDICT can be requested to support the govt. Also conducting risk characterization, risk mapping, risk mitigation, modeling and hotspot mapping. FAO can also be requested to support outbreaks.

Highlights of priority areas of coordination across partners

- FAO and OHW training and vet schools on BSS
  - Possible collaboration in the initial AMR surveillance activity.
  - Possible collaboration in the online HR tool once it is up and running
- FAO and CDC on OHW's Territory Administrators' training in Emergency Preparedness

From: "Saila-Ngita, Diafuka" <Diafuka.Saila_Ngita@tufts.edu>
To: Sarah Paige <spaige@usaid.gov>, Ricardo Echalar <rechalar@usaid.gov>, "Subhash (FAORAP) Morzaria" [redacted] "predict@ucdavis.edu" <predict@ucdavis.edu>, Irene Naigaga [redacted] "Amuguni, Janetrix Hellen M." <Janetrix.Amuguni@tufts.edu>, Bethany Haberer <bhaberer@usaid.gov>, Dennis Carroll <dcarroll@usaid.gov>, "Makonnen, Yilma (FAORNE)" [redacted], William Bazeyo [redacted] "Alisa Pereira" <apereira@usaid.gov>, Lindsay Parish <lparish@usaid.gov>, "Kone, Philippe (FAOCD)" [redacted] Mike Cranfield [redacted] Marilyn Crane <mcrane@usaid.gov>, "Sylvia Wanzala" <wanza003@umn.edu>, Izetta Simmons <isimmons@usaid.gov>, "Jean-Felly Numbi" <jnumbi@usaid.gov>, Katey Pelican <pelicank@umn.edu>, Jessica Pettit <jpettit@usaid.gov>, Kirsten Gilardi <kvgilardi@ucdavis.edu>, "Ngona Idi Abdullah" [redacted] Jeff Bender <bende002@umn.edu>, Lisa Kramer <lkramer@usaid.gov>, Shana Gillette <sgillette@usaid.gov>, Eddy Kambale [redacted] David J Wolking <djwolking@ucdavis.edu>, Nadira Kabir <nkabir@usaid.gov>, Placide Mbala <pmbala@metabiota.com>, Innocent Rwego <irwego@umn.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, "Soumare, Baba (RAF)" [redacted] Andrew Clements <aclements@usaid.gov>, "Tzipori, Saul" <Saul.Tzipori@tufts.edu>, gasp [redacted] Andrea Long-Wagar <alongwagar@usaid.gov>, Malangu Doyen [redacted] Ashna Kibria <akibria@usaid.gov>, "Dr Prime Mulembakani" <pmulembakani@metabiota.com>, Prince Kimpanga <prince.kimpanga@unikin.ac.cd>
Subject: RE: [Update] EPT2 - GHSA Workplan Coordination Call - DRC
Sent: Tue, 15 Aug 2017 18:36:29 +0000
DRC_ Workplan Coordination Call - FY18.docx

My edits attached.
Diafuka

Diafuka Saila-Ngita, DVM, MSc., Ph.D.
Research Assistant Professor, Cummings School of Veterinary Medicine
Department of Infectious Diseases and Global Health
Tufts University,
North Grafton, MA 01536 - USA
USAID Grantee| Emerging Pandemic Threats (EPT)
[redacted]
Tel.: [redacted] (Mobile)
[redacted] (Mobile/Whatsapp)
(Mobile)
Skype: [redacted]
Twitter:

From: Sarah Paige [spaige@usaid.gov]
Sent: Tuesday, August 15, 2017 10:27 AM
To: Ricardo Echalar; Subhash (FAORAP) Morzaria; predict@ucdavis.edu; Irene Naigaga; Amuguni, Janetrix Hellen M.; Bethany Haberer; Dennis Carroll; Makonnen, Yilma (FAORNE); William Bazeyo; Alisa Pereira; Lindsay Parish; Kone, Philippe (FAOCD); Mike Cranfield; Marilyn Crane; Sylvia Wanzala; Izetta Simmons; Jean-Felly Numbi; Katey Pelican; Jessica Pettit; Saila-Ngita, Diafuka; Kirsten Gilardi; Ngona Idi Abdullah; Jeff Bender; Lisa Kramer; Shana Gillette; Eddy Kambale; David J Wolking; Nadira Kabir; Placide Mbala; Innocent Rwego; Jonna Mazet; Soumare, Baba (RAF); Andrew Clements; Tzipori, Saul; gasp; Andrea Long-Wagar; Malangu Doyen; Ashna Kibria; Sarah Paige; Dr Prime Mulembakani; Prince Kimpanga
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Sarah Paige, PhD, MPH
Senior Infectious Disease Advisor
[redacted]
Desk: [redacted]
Mobile:
E-mail: spaige@usaid.gov

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- FAO and CDC on OHW's Territory Administrators' training in Emergency Preparedness

From: Andrew Clements <aclements@usaid.gov>
Sent: Wed, 23 Aug 2017 16:11:02 -0400
To: David J Wolking <djwolking@ucdavis.edu>
Cc: "predict@ucdavis.edu" <predict@ucdavis.edu>, Alisa Pereira <apereira@usaid.gov>, Shana Gillette <sgillette@usaid.gov>, Amalhin Shek <ashek@usaid.gov>, Cara Chrisman <cchrisman@usaid.gov>, William Karesh <karesh@ecohealthalliance.org>, Molly Turner <turner@ecohealthalliance.org>, Karen Saylors <ksaylors@metabiota.com>, Elizabeth Leasure <ealeasure@ucdavis.edu>
Subject: Re: [predict] ACTION: Separate Congressional INFORMATION REQUEST on ROC

Thanks!

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Aug 23, 2017, at 3:54 PM, David J Wolking <djwolking@ucdavis.edu> wrote:

Hi Andrew,
Responses to the questions are below. Big thanks to Billy's EHA team and Karen at Metabiota for the quick turnaround. Let is know if you or Andrea need anything else.

David

The ROC Desk officer is fielding questions from a congressional appropriator via LPA on USAID funded projects in ROC.

Can you help me answer these 2 questions:
1A) Does Predict have any permanent staff in country?

PREDICT's Republic of Congo activities are undergoing a management change from consortium partner Metabiota to EcoHealth Alliance (EHA). Currently Metabiota maintains 3 staff members in-country, all of them independent consultants. EHA has no staff at this time.

1B) Do they fund a local ROC organization?

In 2016-2017, Metabiota terminated engagement with all in-country implementing partners. At this time PREDICT is not funding any organizations in-country. For 2017-2018, EHA plans to engage LNSP and LDVB through subawards and these subaward packets were submitted to the USAID AO for review as part of the ceiling increase proposal (which is currently pending).

2) Do any funds go to the ROC government or a local ROC organization?

There no agreements in place with local ROC organizations at this time.

On Wed, Aug 23, 2017 at 8:33 AM, Andrew Clements <aclements@usaid.gov> wrote:

See request below on ROC with a deadline of today. Sorry about the short turn-around.

Andrew P. Clements, Ph.D.

Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

Begin forwarded message:

From: Andrea Long-Wagar <alongwagar@usaid.gov>
Date: August 23, 2017 at 9:57:21 AM EDT
To: PREDICTMGT <predictmgt@usaid.gov>
Subject: Fwd: ACTION: Separate Congressional INFORMATION REQUEST on ROC

Hello Andrew and Predict Management team,
The ROC Desk officer is fielding questions from a congressional appropriator via LPA on USAID funded projects in ROC.

Can you help me answer these 2 questions:
1) Does Predict have any permanent staff in country? Do they fund a local ROC organization?
2) Do any funds go to the ROC government or a local ROC organization?

Thank you
Andrea

Andrea Long-Wagar, ScM, MPH, CPH
Senior Infectious Disease Advisor
USAID Africa Bureau
REDACTED
E-mail: alongwagar@usaid.gov

---------- Forwarded message ----------
From: **Samantha Schasberger** <sschasberger@usaid.gov>
Date: Wed, Aug 23, 2017 at 9:50 AM
Subject: Re: ACTION: Separate Congressional INFORMATION REQUEST on ROC
To: Andrea Long-Wagar <alongwagar@usaid.gov>

Dear Andrea,
Per our discussion, there has been a follow-up to the Congressional inquiry. They would like to know what organizations are serving as our implementing partners in ROC and do they have permanent staff there. I discussed with LPA and it is okay if we identify the Prime. It would also be good to confirm that the Prime is receiving all the funding for this award.

If possible could you respond to me today on this? (If not by noon tomorrow would be okay)
thanks,
Samantha

On Wed, Aug 16, 2017 at 4:13 PM, Samantha Schasberger <sschasberger@usaid.gov> wrote:

Andrew,
We've received a Congressional request on what USAID is doing in ROC. Would you be

comfortable with us pulling the language from the first paragraph from the cleared fact-sheet as part of our Congressional response?--I've inserted ROC in first sentence below. (NB: The response will all be going through LPA.) --Good to also know if you would be comfortable with that factsheet being shared with Congressional staff?

PREDICT 2 works in 33 countries, including the Republic of Congo, 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 caused devastating disease and required dramatic and resource-intensive responses. Project activities aim to develop and operationalize strategies to improve disease detection and reduce zoonotic pathogen spillover, amplification, and spread using standardized methods for training, surveillance, lab testing, and analysis. The combined activities in all countries will greatly enhance knowledge about local and global public health risk associated with animal diseases in order to reduce risk.

thanks,
Samantha

Sent: Tue, 14 Nov 2017 17:31:42 -0800
Subject: Re: PMAC 2018 Side Event on AMR - DRAFT AGENDA
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: "Mundaca-Shah, Ceci" <CMundaca@nas.edu>
Cc: "Hermsen, Elizabeth D" <elizabeth.hermsen@merck.com>, "Wilson, Mary E." <mewilson@hsph.harvard.edu>, Anchalee Jatapai <ajatapai@usaid.gov>, "Benigno, Carolyn (FAORAP)" [redacted], "Black, Peter (FAORAP)" [redacted], "Damrongwatanapokin, Sudarat (RDMA/OPH)" <sdamrongwatanapokin@usaid.gov>, Daniel Schar <dschar@usaid.gov>, "DeBalogh, Katinka (FAORAP)" [redacted], Dennis Carroll <dcarroll@usaid.gov>, "Gordoncillo, Mary (FAORAP)" [redacted], "Huszar, Anthony" [redacted], Jeff Duchin <Jeff.Duchin@kingcounty.gov>, Jeremy Knox [redacted], Jim Hughes <jmhughe@emory.edu>, "Kalpravidh, Wantanee (FAORAP)" [redacted], Kevin Anderson <kevin.anderson@dhs.gov>, Kumanan Rasanathan <krasanathan@unicef.org>, Lonnie King <king.1518@osu.edu>, Mary Wilson <mary_wilson@harvard.edu>, "Ogunseitan, Oladele" <OgunseitanO@state.gov>, "Patriarchi, Alessandro (AGAH)" [redacted], Peter Sands [redacted], "Petrillo, Jessica E" <PetrilloJE@state.gov>, "Taylor, Jami [GCSOUS]" [redacted], "Ogawa, V. Ayano" <VOgawa@nas.edu>, "Tran, Thu Anh" <TTran@nas.edu>
AMR PMAC Side Event Draft Agenda_11.08.17 MW_edh_JM.docx

A couple more minor suggestions in case you need them.
Sorry to be late,
Jonna

On Mon, Nov 13, 2017 at 7:54 PM, Mundaca-Shah, Ceci <CMundaca@nas.edu> wrote:

Thanks so much, Elizabeth and Mary!

Ceci

From: Hermsen, Elizabeth D <elizabeth.hermsen@merck.com>
Sent: Monday, November 13, 2017 6:19 PM
To: Wilson, Mary E.; Mundaca-Shah, Ceci; Anchalee Jatapai; Benigno, Carolyn (FAORAP); Black, Peter (FAORAP); Damrongwatanapokin, Sudarat (RDMA/OPH); Daniel Schar; DeBalogh, Katinka (FAORAP); Dennis Carroll; Gordoncillo, Mary (FAORAP); Huszar, Anthony; Jeff Duchin; Jeremy Knox; Jim Hughes; jkmazet@ucdavis.edu; John Rex; Kalpravidh, Wantanee (FAORAP); Kevin Anderson; Kumanan Rasanathan; Lonnie King; Mary Wilson; Ogunseitan, Oladele; Patriarchi, Alessandro (AGAH); 'Peter Sands'; Petrillo, Jessica E; Taylor, Jami [GCSOUS]; Thomas W Scott
Cc: Ogawa, V. Ayano; Tran, Thu Anh
Subject: RE: PMAC 2018 Side Event on AMR - DRAFT AGENDA

Thank you, Ceci. I have included a number of suggestions in the attached version, building on the version Mary sent.

Kind regards,

Elizabeth

From: Wilson, Mary E. [mailto:mewilson@hsph.harvard.edu]
Sent: Sunday, November 12, 2017 1:41 PM
To: Mundaca-Shah, Ceci; Anchalee Jatapai; Benigno, Carolyn (FAORAP); Black, Peter (FAORAP); Damrongwatanapokin, Sudarat (RDMA/OPH); Daniel Schar; DeBalogh, Katinka (FAORAP); Dennis Carroll; Hermsen, Elizabeth D; Gordoncillo, Mary (FAORAP); Huszar, Anthony; Jeff Duchin; Jeremy Knox; Jim Hughes; jkmazet@ucdavis.edu; John Rex; Kalpravidh, Wantanee (FAORAP); Kevin Anderson; Kumanan Rasanathan; Lonnie King; Mary Wilson; Ogunseitan, Oladele; Patriarchi, Alessandro (AGAH); 'Peter Sands'; Petrillo, Jessica E; Taylor, Jami [GCSOUS]; Thomas W Scott
Cc: Ogawa, V. Ayano; Tran, Thu Anh
Subject: Re: PMAC 2018 Side Event on AMR - DRAFT AGENDA

Thanks, Ceci. This is shaping up into a terrific session.

I have suggested a few names for possible speakers/panelists.

Please find the attached.

Best,

Mary

From: "Mundaca-Shah, Ceci" <CMundaca@nas.edu>
Date: Wednesday, November 8, 2017 at 1:04 PM
To: Anchalee Jatapai <ajatapai@usaid.gov>, "Benigno, Carolyn (FAORAP)" <[redacted]>, "Black, Peter (FAORAP)" <[redacted]>, "Damrongwatanapokin, Sudarat (RDMA/OPH)" <sdamrongwatanapokin@usaid.gov>, Daniel Schar <dschar@usaid.gov>, "DeBalogh, Katinka (FAORAP)" <[redacted]>, Dennis Carroll <dcarroll@usaid.gov>, Elizabeth Hermsen <elizabeth.hermsen@merck.com>, "Gordoncillo, Mary (FAORAP)" <[redacted]>, "Huszar, Anthony" <[redacted]>, "Jeff.Duchin@kingcounty.gov" <Jeff.Duchin@kingcounty.gov>, Jeremy Knox <[redacted]>, "JMHUGHE@emory.edu" <jmhughe@emory.edu>, "jkmazet@ucdavis.edu" <jkmazet@ucdavis.edu>, John Rex <John.Rex@adventLS.com>, "Kalpravidh, Wantanee (FAORAP)" <[redacted]>, "kevin.anderson@dhs.gov" <kevin.anderson@dhs.gov>, Kumanan Rasanathan <krasanathan@unicef.org>, "king.1518@osu.edu" <king.1518@osu.edu>, "mary_wilson@harvard.edu" <mary_wilson@harvard.edu>, "Ogunseitan, Oladele" <OgunseitanO@state.gov>, "Patriarchi, Alessandro (AGAH)" <[redacted]>, 'Peter Sands' <[redacted]>, "Petrillo, Jessica E" <PetrilloJE@state.gov>, "Taylor, Jami [GCSOUS]" <[redacted]>, Thomas W Scott <twscott@ucdavis.edu>
Cc: "Ogawa, V. Ayano" <VOgawa@nas.edu>, "Tran, Thu Anh" <TTran@nas.edu>
Subject: PMAC 2018 Side Event on AMR - DRAFT AGENDA

Dear all,

I would like to thank you for contributing to the development of the concept note and first draft of the agenda (see attachment) for our AMR side event at the Prince Mahidol Award Conference (PMAC) 2018. I am sending this to you because you have expressed interest in supporting the planning of this activity. If this has changed, please let me know and I'd be happy to remove your name from future communications related to this event.

The concept note we submitted has been accepted so we would like to finalize the agenda with your input as soon as possible. We would appreciate if you could provide suggestions for speakers, moderators and panelists even if there is a name assigned to the presentations. We have not confirmed yet that those included in the agenda are available to attend so we need at least 2 alternative names for each presentation. **Please share those with us by Monday, November 13 so we can move ahead with sending invitations.**

Thanks again for all your support.

Best,

Ceci Mundaca-Shah, MD, DrPH

Director, Forum on Microbial Threats

Board on Global Health

Health and Medicine Division | Find us at nationalacademies.org/HMD

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The National Academies of
SCIENCES · ENGINEERING · MEDICINE

"A One Health Approach for Tackling Antimicrobial Resistance:
Moving from Knowledge to Action"
A Side Event for the 2018 Prince Mahidol Conference

Draft Agenda
January 30, 2018
Centara Grand at Central World Hotel

Context

An unprecedented acceleration in rates of antimicrobial resistance (AMR) has emerged as a defining 21st century global public health challenge. Absent interventions, wide ranging impacts are expected, from increasing clinical treatment failures and associated morbidity and pre-mature mortality to losses in livestock productivity and animal-source protein. AMR-associated economic losses—estimated at more than 3% of global economic output annually[1]—are formidable. Enhanced by recent high level advocacy at global fora, including the United Nations General Assembly, World Health Assembly and G7 and G20 meetings, the full utilization of human, veterinary, and environmental health expertise, complemented by a diverse constituency of government, industry, academic, and international organization stakeholders, is making measurable progress toward addressing AMR.

Originating from a Royal Thai Government-hosted Global Health Security Agenda forum in 2015 that defined gaps in a multi-sectoral approach to AMR, a 2016 Prince Mahidol Award Conference (PMAC) side meeting was convened to further identify drivers of AMR[2] and priority areas in Asia for a focused, near term approach, including:

- the role of inadequate veterinary oversight;
- insufficient and inconsistent regulatory frameworks governing antimicrobial use (AMU);
- sub-optimal enforcement and compliance with existing globally adopted intergovernmental standards and guidelines;
- low levels of AMR awareness;
- scarcity of baseline measurements of AMU and established targets;
- absence of economic impact assessments and associated financial incentives (or understanding) for reduced usage; and
- inadequate commitment to AMU stewardship.

Following the PMAC 2016 side meeting, a second 2017 PMAC side meeting built upon these core issues, and identified in greater depth those priority areas where short term efforts will yield advancements in enhanced AMU stewardship, and strengthen efforts to minimize AMR, particularly

[1] O'Neill. Review on Antimicrobial Resistance. Tackling Drug-Resistant Infections Globally: Final Report and Recommendations. May 2016 (https://amr-review.org/sites/default/files/160525_Final%20paper_with%20cover.pdf)
[2] Addressing Antimicrobial Usage in Asia's Food Animal Production Sector: Towards a Unified One Health Approach to Preventing and Controlling Resistance; Proceedings of PMAC side meeting 27–29 January 2016 Bangkok, Thailand

in animal production sectors in Asia. These two PMAC side meetings have helped guide the development of the agenda for the overall PMAC 2018 conference, "Making the World Safe from the Threats of Emerging Infectious Diseases."

Subsequently, on June 20-21, 2017 in Washington, DC, the United States National Academies of Sciences, Engineering, and Medicine (NASEM) hosted a two-day public workshop that examined key areas in human, animal, and environmental health that contribute to the emergence and spread of antimicrobial resistance (AMR). Through a One Health approach, this workshop discussed gaps in these areas and presented the complexities of bridging the different sectors and disciplines to address this global threat. A key focus of the workshop was to explore immediate and short term actions and research needs that will have the greatest impact on reducing AMR. Over 100 workshop speakers and discussants contributed perspectives from government, academia, private, and nonprofit sectors. A proceedings of the presentations and discussions from the workshop will be prepared and published in accordance with NASEM' institutional guidelines by December 2017.

While the global community led by the Interagency Coordination Group (IACG) on Antimicrobial Resistance has made commendable progress on the identified priority areas, the fight ahead needs continued commitment and support of national and global actors. Building on this workshop and the 2016 and 2017 PMAC AMR side meetings, we propose a side event at PMAC 2018 to gather international experts across the One Health domains to further articulate a near term, action-oriented agenda to address AMR across multi-sectoral cross-cutting topics: 1) Surveillance under a One Health Approach; 2) Rational Use of Antimicrobials; and 3) Global Policy and Coordination.

Objectives

- To review key outputs from the IACG and prior consultations, including the referenced 2017 NASEM workshop, 2016 and 2017 PMAC side meetings, and other fora, establishing a foundation upon which a refined strategy for near-term action is developed;
- To understand the present impediments to executing AMR mitigation measures, and assess the acceptability and applicability of identified key priorities and approaches to different regional, national, and local contexts and realities across the three thematic areas; and
- To explore mechanisms to strengthen collaboration across countries and identify opportunities to guide and facilitate the practical implementation of the AMR agenda based on countries' successful experiences in the fight against AMR.

Tuesday, January 30, 2018

8:30 **Registration**

9:00 **Welcome Remarks and Overview**
PETER SANDS
Member, Forum on Microbial Threats, U.S. NASEM
Senior Fellow, Harvard University

Session I: Setting the Scene

9:15 This session will set the scene for the side event discussions and provide updates on the development of the global landscape to fight AMR.

Prince Mahidol Conference 2017 and 2018 – Regional Efforts on AMR
DAN SCHAR
Senior Regional Emerging Infectious Diseases Advisor
United States Agency for International Development Regional Development Mission – Asia

An Update from IACG: Current Activities and Looking Ahead to United Nations General Assembly discussions on AMR in 2018-19
SALLY DAVIES
Co-Convener, IACG
Chief Medical Officer, England

Session II: Surveillance under a One Health Approach

9:45 **PART I – Short Presentations**

There is a clear consensus on the imperative of ensuring that there is a truly 'One Health' approach to the delivery of a response to AMR, particularly the data that will inform the development of strategies and action plans, but this remains challenging in practice. With a particular focus on Asia and low and middle-income countries, what are the particular challenges of developing and implementing multisectoral surveillance efforts and what are the examples of best practices in the region? This session will include discussions on:

- Reviewing current platforms for global, regional, and national tracking of geographic and temporal trends in resistance that aim to incorporate a One Health approach now or in the future, including WHO Global Antimicrobial Resistance Surveillance System
- Optimizing data acquisition, leveraging existing data and integrating data sources on AMR across human, agriculture, and environmental sources from both public and private sectors
- Assessing and strengthening laboratory capacity for AMR detection and implementing

standards for antimicrobial susceptibility testing in human and veterinary diagnostic laboratories as well as for environmental samples
- Developing and implementing surveillance and monitoring systems for AMR and AMU that are harmonized for human and agricultural production settings

Tripartite Surveillance Efforts – Harmonized Platforms to Address Antimicrobial Resistance
TBD
WHO Advisory Group on Integrated Surveillance of Antimicrobial Resistance (AGISAR)

The Surveillance and Epidemiology of Drug Resistant Infections Consortium (SEDRIC)
SHARON PEACOCK
Chair of the Consortium

10:15 **PART II – Panel Discussion**

Questions to consider:
- What are the particular challenges of developing and implementing multi-sectoral surveillance efforts, and what are the examples of best practices in the region?
- Where are the gaps, and how are they being addressed?
- How is the gap in understanding the impact of AMR in the environment being addressed?
- Is there a process in place to learn among regions?

Moderator: TBD

European Antimicrobial Resistance Surveillance Network (EARS-Net)
Panelist TBD

Surveillance Efforts in Asia and Africa
CHARLES PENN
Fleming Fund

The Latin American AMR Surveillance Network (ReLAVRA) – A country perspective
Panelist TBD

11:20 **Coffee Break**

Session III: Rational Use of Antimicrobials

11:45 **PART I – Short Presentations**

Changing patient and provider behavior, animal health service provider and farmer behavior to improve patterns of antimicrobials prescription as well as consumption and use is one of the critical challenges to mitigate AMR across the One Health domains. This session will include discussions on:

- Developing feedback and accountability mechanisms based on social and behavioral science principles for providers who prescribe antimicrobials
- Walking the line between excess use of antimicrobials vs. access of antimicrobials particularly for marginalized communities
- Applying accepted stewardship principles supported by appropriate incentives to optimize the judicious use of antimicrobials for both food and companion animals
- Capturing best practices in agriculture in countries across Asia to promote prudent use of antimicrobials and identify those practices that need to be modified
- Discussing how push funding initiatives and pull incentives can be married with improved access to new and existing antimicrobials; and, in turn, how widening access in low-income settings can be balanced with better stewardship and more prudent use of antimicrobials
- Coordinating with the sub-regional groups in Asia on promoting and implementing prudent use of antimicrobials

Moderator: JOHN REX, Carb-X

Global Framework for Development & Stewardship to Combat Antimicrobial Resistance
PETER BEYER
WHO

Partnerships to Incentivize the Rational Use of Antimicrobials in Medicine and Agriculture
TBD
WHO SEARO

Incentives for Drug Development and Stewardship Policies to Fight AMR and Guaranteeing Access to Antimicrobials for Vulnerable Communities – How Can They Be *All* Addressed?
MANICA BALASEGARAM
Director
GARDP

Antibiotic Smart Use Program – How can it be implemented and sustained?
NITHIMA SUMPRADI
Thai Food and Drug Administration

12:30 **Lunch**

13:30 **PART II – Q&A with Speakers**

Session IV: Global Policy and Coordination

14:00 **PART I – Presentations**

While global and regional guidance have been produced to help curb antimicrobial resistance, many countries face challenges in developing and implementing effective national action plans. How can national action plans be successfully executed, and how can partnerships facilitate this? This session will include discussions on:

- Exploring the key challenges faced by policy makers (particularly in low- and middle-income countries) when implementing national action plans, the drivers of rising drug resistance in their countries, and best practices in tackling AMR
- Understanding how global and regional guidance are helpful with this process, and how this can be meaningfully supported by the UN-led process and the work of the Interagency Coordination Group and WHO.
- Assessing how partnerships across sectors and with multiple stakeholders can help implementation of national action plans, and how will they be sustained
- Identifying how to bridge gaps between low and middle-income countries and high-income countries, and between the global scientific and policymaking communities
- Examining to what extent all of these efforts are integrated with the IHR core capacity building/Global Health Security Agenda and the work needed to achieve the Sustainable Development Goals and Universal Health Coverage

Moderator: ED WHITING, Wellcome Trust

Recent Activities to Support the Interagency Coordination Group on AMR
IACG co-convener

Linking AMR with the Sustainable Development Goals, Universal Health Coverage, and International Health Regulations: Opportunities and Challenges to Improve Health Worldwide
STEFAN SWARTLING PETERSON
Chief of Health
UNICEF

Global and Regional Support for the Development and Implementation of National Actions Plans – How do we know it is effective?
Anthony So
React North America

15:30 **Coffee Break**

16:00 **PART II – Panel Discussion: How can the regional and global support be more effective at the country level?**

AFRO country rep

SEARO country rep

PAHO country rep

Session V: Concluding Session

17:15 **Closing Remarks**
PETER SANDS
Member, Forum on Microbial Threats, U.S. NASEM
Senior Fellow, Harvard University

17:30 **Adjourn**

From: Dennis Carroll <dcarroll@usaid.gov>
Sent: Tue, 28 Nov 2017 15:40:17 -0800
Subject: Re: GVP launch at PMAC?
To: Sudarat Damrongwatanapokin <sdamrongwatanapokin@usaid.gov>
Cc: Andrew Clements <aclements@usaid.gov>, "Daniel Schar (RDMA/OPH)" <dSchar@usaid.gov>, Jonna Mazet <jkmazet@ucdavis.edu>

Thanks sister

Dr Dennis Carroll
Director, Emerging Threats Program
U.S. Agency for International Development
Office: (202) 712-5009
Mobile: REDACTED

On Nov 28, 2017, at 6:06 PM, Sudarat Damrongwatanapokin <sdamrongwatanapokin@usaid.gov> wrote:

> Will check with PMAC Secretariat. The correspondence person is Jonna Mazet (from the concept note).
> Best regards,
> Sudarat

Sent from my mobile.

On Nov 29, 2017, at 3:12 AM, Dennis Carroll <dcarroll@usaid.gov> wrote:

> I talked with Sudarat last night. She said it was, but is checking
>
> d

On Tue, Nov 28, 2017 at 2:08 PM, Andrew Clements <aclements@usaid.gov> wrote:

> Hi Sudarat,
> Do you know if the GVP side meeting was approved?

Thanks!

Andrew

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

--
Dr. Dennis Carroll
Director, Emerging Threats Program
Bureau for Global Health
U.S. Agency for International Development

Office: 202-712-5009
Mobile: REDACTED

Sent: Wed, 29 Nov 2017 13:22:19 -0800
Subject: Re: GVP launch at PMAC?
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Andrew Clements <aclements@usaid.gov>
Cc: Sudarat Damrongwatanapokin <sdamrongwatanapokin@usaid.gov>, Dennis Carroll <dcarroll@usaid.gov>, "Daniel Schar (RDMA/OPH)" <dSchar@usaid.gov>

We had provided a draft to Cara and Dennis to finalize and submit, asking for the final agenda to be fleshed out and the provided draft edited to their liking. [redacted] and I were listed as POCs on that draft as requested by Cara and Dennis to have non-USAID contacts and because we had developed the content so far. We thought maybe Cara would be added, since she was submitting, but didn't understand the background on the request to have non-USAID people. On the GVP calls, Cara had indicated that they would manage the submission and would likely send to the Mission for submission, as she understood that tho be the best process. We clearly submitted to her on Oct. 11, asking that the submission occur by Oct. 15. Cara responded on Oct 12 with a couple of minor questions and indicated that she would manage from there and get it submitted. I don't know where it ended after that.
I'm confused,
Jonna

On Tue, Nov 28, 2017 at 10:53 PM, Andrew Clements <aclements@usaid.gov> wrote:

Thanks. Jonna thought the POC was Cara.

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Nov 29, 2017, at 12:06 AM, Sudarat Damrongwatanapokin <sdamrongwatanapokin@usaid.gov> wrote:

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> Hi Sudarat,
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Thanks!

Andrew

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

--

Dr. Dennis Carroll
Director, Emerging Threats Program
Bureau for Global Health
U.S. Agency for International Development

Office: 202-712-5009
Mobile: REDACTED

From: Jonna Mazet <jkmazet@ucdavis.edu>
To: daszak@ecohealthalliance.org <daszak@ecohealthalliance.org>
Sent: 12/29/2017 9:28:23 AM
Subject: Holiday Closure RE: Towards a genomics-informed real-time global pathogen surveillance sys.._ (2).pdf

Thank you for your message. I am away and will only have intermittent access to email until January 3rd. I and REDACTED will be able to assist with urgent requests intermittently REDACTED.

Happy Holiodays,
Jonna

Jonna AK Mazet, DVM, MPVM, PhD
Professor of Epidemiology & Disease Ecology
Executive Director, One Health Institute

School of Veterinary Medicine
University of California
1089 Veterinary Medicine Drive (VM3B)
Davis, CA 95616, USA
+1-530-752-3630

From: Andrew Clements <aclements@usaid.gov>
To: [redacted]
CC: Jonna Mazet <jkmazet@ucdavis.edu>;bhbird@ucdavis.edu <bhbird@ucdavis.edu>;Tracey Goldstein <tgoldstein@ucdavis.edu>
Sent: 2/1/2018 2:20:26 AM
Subject: Re: call with Sierra Leone regarding PREDICT

thanks. will check.

On Wed, Jan 31, 2018 at 9:00 PM, [redacted] wrote:

Hi Andrew,

The Davis team could do **4:00pm/8:00am PST on Feb 7,** but the 4:30pm timeslot isn't ideal (they all have a call at 9:00am and would have to hop off). **Tuesday, Feb 6: 4:00pm SL time / 8:00am PST** works for the Davis team and allows for a full hour of discussion (if needed). Let me know if this day/time works out for you and the Mission. We could also push up the call to 7:30am PST on either day (Tuesday or Wednesday) if at all helpful.

Thank you!

REDACTED

From: Andrew Clements <aclements@usaid.gov>
Date: Tuesday, January 30, 2018 at 12:45 AM
To: [redacted]
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, Brian Bird <bhbird@ucdavis.edu>, Tracey Goldstein <tgoldstein@ucdavis.edu>
Subject: Fwd: call with Sierra Leone regarding PREDICT

See request for another day/time.

If it doesn't work, please suggest an alternative.

Thanks

Andrew P. Clements, Ph.D.

Senior Scientific Advisor

Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health

U.S. Agency for International Development

Mobile phone: 1-571-345-4253

Email: aclements@usaid.gov

Begin forwarded message:

From: Kendra Chittenden <kchittenden@usaid.gov>
Date: January 30, 2018 at 12:56:34 AM GMT+1
To: Andrew Clements <aclements@usaid.gov>
Subject: Re: call with Sierra Leone regarding PREDICT

Andrew

Dorothy asked if Feb 7th at 4:30 PM would work. Khadijat has a PMI call at 5 PM on Feb 8th. Kendra

On Fri, Jan 26, 2018 at 1:13 PM, Andrew Clements <aclements@usaid.gov> wrote:

Hi Kendra,

Predict has identified a day/time that is good for them: Wednesday, Feb 8 at 5:00 PM in Freetown.

Can you check to see if the Mission is available then?

Thanks!

Andrew

Andrew P. Clements, Ph.D.

Senior Scientific Advisor

Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health

U.S. Agency for International Development

Mobile phone: 1-571-345-4253

Email: aclements@usaid.gov

Begin forwarded message:

From: [redacted]
Date: January 25, 2018 at 8:05:22 PM GMT+1
To: Andrew Clements <aclements@usaid.gov>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, Brian Bird <bhbird@ucdavis.edu>, "Tracey Goldstein" <tgoldstein@ucdavis.edu>
Subject: Re: call with Sierra Leone regarding PREDICT

Hi Andrew – Feb 8 at 9:00am PST works for Jonna, Brian, and Tracey (cc'ed here). Does this time work for you?

REDACTED

Kendra Chittenden, Ph.D. | Senior Infectious Disease Advisor| USAID | mobile (703-209-5424) |KChittenden@usaid.gov

--

Andrew Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
E-mail: aclements@usaid.gov

For more information on USAID's Emerging Pandemic Threats program, see: http://www.usaid.gov/ept2

From: Andrew Clements <aclements@usaid.gov>
Sent: Fri, 4 May 2018 02:41:10 -0700
Subject: Fwd: Time Sensitive ITA - J. Bangura to Guinea May 8-11
To: tbah@usaid.gov
Cc: clouisduthil@usaid.gov, kaleasure@ucdavis.edu, Jonna Mazet <jkmazet@ucdavis.edu>, djwolking@ucdavis.edu, kchittenden@usaid.gov

Hi Tamar,
See below for Predict travel request for Guinea with a request for mission concurrence.

Thanks

Andrew

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

Begin forwarded message:

From: "Katherine Leasure" <kaleasure@ucdavis.edu>
Date: May 4, 2018 at 3:07:33 AM GMT+2
To: "'PREDICTMGT'" <predictmgt@usaid.gov>
Cc: <predict@ucdavis.edu>, "'Prof. Jonna Mazet'" <jkmazet@ucdavis.edu>
Subject: Time Sensitive ITA - J. Bangura to Guinea May 8-11

Hi Andrew. Please find below a travel request for Mr. James Bangura to Guinea. Our apologies for the short turnaround of this request. Given the opportunity this trip presents to coordinate with the PREDICT Guinea team, James will utilize the time required for visa processing to meet with them for cross-training and to share best practices. As the PREDICT Guinea team will be engaged with the scheduled USAID activities the following week, and James has limited availability prior to the conference, these were the dates identified for travel. Please let me know if you have any questions. Thank you!

Travel Request –

1. UC Davis would like to request travel approval for Mr. James Bangura to travel from Freetown, Sierra Leone to Conakry, Guinea from May 8-11, 2018 to obtain travel visa for the International One Health Congress in Saskatoon, Canada.

Trip purpose: This travel will enable Mr. Bangura to obtain the travel visa required for entry to Canada. Mr. Bangura is co-chairing a session at the International One Health Congress alongside session chair and lead P.I. for the PREDICT project, Dr. Jonna Mazet, entitled "Infectious Diseases from an EcoHealth Perspective". While in Saskatoon, he will attend relevant network disease ecology and epidemic talks from leaders in the field of outbreak response and emerging infectious disease preparedness. **The Congress will be covering Mr. Bangura's registration, flights, and accommodation during the conference (June 21-26).*

Katherine Leasure
HR/Payroll/Financial Assistant
One Health Institute
University of California, Davis
530-752-7526

530-752-3318 FAX
kaleasure@ucdavis.edu

--

From: Andrew Clements <aclements@usaid.gov>
Sent: Mon, 2 Jul 2018 09:46:32 -0700
Subject: Re: Next Predict Brownbag
To: Peter Daszak <daszak@ecohealthalliance.org>
Cc: "cchrisman@usaid.gov" <cchrisman@usaid.gov>, Alisa Pereira <apereira@usaid.gov>, Jonna Mazet <jkmazet@ucdavis.edu>, "djwolking@ucdavis.edu" <djwolking@ucdavis.edu>, "ashek@usaid.gov" <ashek@usaid.gov>

Good for me.

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Jul 2, 2018, at 5:07 PM, Peter Daszak <daszak@ecohealthalliance.org> wrote:

> Great – let's do July 30th. I'm assuming that we'd get more people if my talk was scheduled around lunch – so would 12pm work?
>
> Cheers,
>
> Peter
>
> **Peter Daszak**
> *President*
>
> EcoHealth Alliance
> 460 West 34th Street – 17th Floor
> New York, NY 10001
>
> Tel. +1 212-380-4474
> www.ecohealthalliance.org
> @PeterDaszak
> @EcoHealthNYC
>
> *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:** Andrew Clements [mailto:aclements@usaid.gov]
> **Sent:** Friday, June 29, 2018 10:30 AM
> **To:** Peter Daszak
> **Cc:** cchrisman@usaid.gov; Alisa Pereira; Jonna Mazet; djwolking@ucdavis.edu; ashek@usaid.gov
> **Subject:** Next Predict Brownbag
>
> Hi Peter,
>
> Jonna said you were open on either July 30 or Aug 1 for the next brown bag.
>
> July 30 after 11:00 and before 1:30 or after 3:30 is good for me.

Andrew

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

From: Andrew Clements <aclements@usaid.gov>
Sent: Sun, 5 Aug 2018 16:06:53 -0700
To: David J Wolking <djwolking@ucdavis.edu>
Cc: PREDICTMGT <predictmgt@usaid.gov>, predict-outbreak@ucdavis.edu, "predict@ucdavis.edu" <predict@ucdavis.edu>, Brian Bird <bhbird@ucdavis.edu>
Subject: [predict] [predict-outbreak] Re: PREDICT DRC- EVD outbreak North Kivu Province Aug 4 2018

Thanks, David.

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Aug 5, 2018, at 12:17 PM, David J Wolking <djwolking@ucdavis.edu> wrote:

Hi there,

Just filling in for Brian over the weekend. Another update report attached here. The DR Congo MOH also released a Sit Rep today with details on response plans, set up of mobile lab, and establishing treatment centers and cold chain for vaccinations. These seem to be going out via a MailChimp subscriber service and can be found at this link (with link to subscribe for those interested): https://mailchi.mp/8bfa0c09fe7b/ebola_kivu_4aout?e=f27b7f5a19

Our team is informed and taking part in meetings (Kinshasa and Goma) and helping us track the ebb and flow of information as more details emerge and are shared. No request for PREDICT assistance has been received.

Best,

David

--

<PREDICT DRC Ebola North Kivu Outbreak Report_04_August_2018_final.pdf>

From: Peter Daszak <daszak@ecohealthalliance.org>
To: [redacted]
Cc: Jonna Mazet <jkmazet@ucdavis.edu>
Subject: Just to let you know that I filled in the survey on One Health Workforce
Sent: Sat, 1 Dec 2018 02:00:17 +0000

Hi [redacted]/Jonna - Just completed it – great survey – well done!

I was surprised that I didn't know as much as I should about the field….

Cheers,

Peter

Peter Daszak
President

EcoHealth Alliance
460 West 34th Street – 17th Floor
New York, NY 10001

Tel. +1 212-380-4474
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: David J Wolking <djwolking@ucdavis.edu>
Sent: Thu, 6 Jun 2019 12:44:15 -0700
Subject: Action required: feedback on P2 Country Report Cards (due Friday June 7, 2019)
To: Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, Karen Saylors [redacted] Peter Daszak <daszak@ecohealthalliance.org>, William Karesh <karesh@ecohealthalliance.org>, Woutrina A Smith <wasmith@ucdavis.edu>, Kevin Olival <olival@ecohealthalliance.org>, Catherine Machalaba <Machalaba@ecohealthalliance.org>, Emily Hagan <hagan@ecohealthalliance.org>, Stephanie Martinez <martinez@ecohealthalliance.org>, Nicole Gardner <nrgardner@ucdavis.edu>, Bridgette Phebean Smith <brpsmith@ucdavis.edu>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, Evelyn Luciano <luciano@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>, Amanda Andre <amanda.andre@ecohealthalliance.org>, Ava Sullivan <sullivan@ecohealthalliance.org>, Molly Turner <turner@ecohealthalliance.org>, [redacted], "predict@ucdavis.edu" <predict@ucdavis.edu>

Hi again,
Even though the EB call is cancelled next week, we still need technical team feedback on the country report cards so we can keep moving forward with plans to roll out to our teams this month via surveillance call. Feedback was due yesterday and as of today **we are still waiting for input from the Capacity, Behavioral Risk, Surveillance, M&A, and One Health Partnerships teams, hence the smaller distribution targeted by this message.**

The current version of the sheet is at this link.

Please do your best to weigh in on content by the end of this week (Friday June 7, 2019).

Happy to address any questions and thanks to all of those that did take the time to contribute, especially the Metabiota team's very thorough pilot with a mix of global and country personnel, gold star ;-)

David

On Wed, May 29, 2019 at 11:53 AM David J Wolking <djwolking@ucdavis.edu> wrote:

> Hi there,
> As discussed on the call today, here is a link to the Google Sheet where we redesigned our country "report card".
>
> Each technical team, please review, edit, and add in your updates to best reflect the suite of deliverables you need for country tracking and successful wind down. We plan to share with global leads/country liaisons each month for more real-time assessments of progress towards close-out.
>
> **Please share all contributions with me by Wednesday June 5, 2019.**
>
> Let me know if you have any questions...
>
> David
>
> On Wed, May 29, 2019 at 10:03 AM Tammie O'Rourke <torourke@metabiota.com> wrote:
>
> > Hi all,
> > Below is this week's EIDTH indicator report.

Indicator
countries with data
countries with tests approved by government
animals sampled
humans sampled
human questionnaires
specimens
tests

animals tested
humans tested
animal specimens tested
human specimens tested
tests approved by government
tests active testing ongoing
sequences interpreted
sequences waiting interpretation
individuals barcoded
average days between event and data submission
average days between event and data submission for data submitted in last 2 weeks
number of events/test batches waiting for country input
number of events waiting for IM review
number of test batches waiting for IM review
number of barcode test batches waiting for IM review

On Tue, May 28, 2019 at 12:24 PM David J Wolking <djwolking@ucdavis.edu> wrote:

Hi EB,
Below is the agenda and Zoom link for tomorrow's call. Please note we are starting at 9:30 am PT/12:30pm ET.

Best,

David

PREDICT Executive Board Meeting
Wednesday, May 29, 2019
9:30-11:00am PST/12:30-2:00pm EST
Zoom link: [redacted]
Additional Zoom info below agenda

1. **Administrative updates**
   - TVPA and Y5 obligation updates
   - Products package for USAID (vol.1 "Viral Discovery" in progress)
   - Asia bat book feedback
   - PREDICT country confidence card - sneak preview
   - Upcoming events & opportunities

2. **All-country meeting plans and agenda topics**

3. **Objective team updates**

4. **Mission communications & country roundup essentials**
   - Indonesia outbreak investigation update
   - DRC outbreak updates
   - Others?

5. **Publication, media, and conference updates**
   - Global Health Security 2019, Sydney (June 18-20, 2019)
   - ASM Microbe 2019, San Francisco (June 20-24, 2019)

- Bat One Health Research Network Meeting, Phuket Thailand (July 26-28, 2019)
- DTRA Biological Threat Reduction Program Review meeting Warsaw, Poland (Sep 17-19, 2019)
- ID week 2019, Infectious Disease Society of America, Washington DC (October 2-6, 2019)
- 19th International Congress on Infectious Diseases, Kuala Lumpur (February 20-23, 2020)

6. AOB

Zoom Call-in info
Zoom link: [redacted]
Or iPhone one-tap :
US: [redacted]
Or Telephone:
Dial(for higher quality, dial a number based on your current location):
US: [redacted]
Meeting ID: REDACTED
International numbers available [redacted]

On Fri, May 24, 2019 at 9:58 AM [redacted] wrote:

Hi PREDCIT EB,

This is a friendly reminder that your next EB call is scheduled on Wednesday May 29 at 9:30 am PT/12:30pm ET. Please let me know if there are any agenda items you would like to discuss.

Have a great long weekend,

REDACTED

--
Tammie O'Rourke
Metabiota
Senior Information Management Developer
Emerging Pandemic Threats - PREDICT Program
tel +1-250-618-2460

From: Tracey Goldstein <tgoldstein@ucdavis.edu>
Sent: Thu, 25 Jul 2019 08:47:12 -0700
Subject: Re: Bomabli Virus in Mops condylurus Bats, Guinea
To: Andrew Clements <aclements@usaid.gov>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, David Wolking <djwolking@ucdavis.edu>, Brian Bird <bhbird@ucdavis.edu>, PREDICTMGT <predictmgt@usaid.gov>
Ahead of Print - Bombali Virus in Mops condylurus Bats, Guinea - Volume 25, Number 9—September 2019 - Emerging Infectious Diseases journal - CDC.pdf

Yes, we saw it - the paper is attached in case you don't have a copy.

Corina and our country coordinator are hoping to meet with Dr. Sakoba today to figure out the plan forward. We will keep you informed.

Best Tracey

On Thu, Jul 25, 2019 at 8:27 AM Andrew Clements <aclements@usaid.gov> wrote:

> Looks like a Russian group just published on Bombali virus in bats in Guinea.

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

Begin forwarded message:

From: Tamar Bah <tbah@usaid.gov>
Date: July 25, 2019 at 8:37:27 AM MDT
To: Andrew Clements <aclements@usaid.gov>
Cc: Corina Grigorescu Monagin <cgmonagin@ucdavis.edu>, Jaber Amine Belkhiria <jabelkhiria@ucdavis.edu>, Alpha Oumar Camara <REDACTED Izetta Simmons <isimmons@usaid.gov>, Andrew Williams <andwilliams@usaid.gov>
Subject: Fwd: Bomabli Virus in Mops condylurus Bats, Guinea

Hello Andrew and Corina,
I am sure you already saw this article on Russian Central Research Institute of Epidemiology publication regarding their findings in bats here in Guinea.
I would like to know whether you have any news on the plan on the way forward.
Please note that Dr. Sakoba mentioned in the past and recently that **Guinea does not want to have a press release**, but they are not opposed to publication internationally.
I understand Predict was not comfortable to publish ahead of the country press release. This release from government has become a sensitive issue due political weight and also Ebola fatigue.
We would like to know your thoughts on the way forward.

Thanks!

Tamar T. Bah, MPH
Acting Health Office Director
Global IIealth Security Agenda Advisor
USAID Guinea
Office: REDACTED
Cell: REDACTED

---------- Forwarded message ---------
From: **Alpha Oumar Camara** [redacted]
Date: Wed, Jul 24, 2019 at 10:39 AM
Subject: Bomabli Virus in Mops condylurus Bats, Guinea
To: Tamar Bah <tbah@usaid.gov>

Bonjour
Je vous envois le lien à l'article en objet pour information. Je suis très désolé par l'action de l'autorité en Guinée face au résultat de PREDICT dont les discussions se poursuivent pour la communication.
https://wwwnc.cdc.gov/eid/article/25/9/19-0581_article

Cordialement,
Alpha

--
Tracey Goldstein, PhD
One Health Institute
School of Veterinary Medicine
University of California
Davis, CA 95616
Phone: (530) 752-0412
Fax: (530) 752-3318
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ISSN: 1080-6059

Volume 25, Number 9—September 2019

Research Letter

Bombali Virus in *Mops condylurus* Bats, Guinea

Lyudmila S. Karan, Marat T. Makenov, Mikhail G. Korneev, Noumany Sacko, Sanaba Boumbaly, Sergey A. Yakovlev, Kerfalla Kourouma, Roman B. Bayandin, Anastasiya V. Gladysheva, Andrey V. Shipovalov, Irina A. Yurganova, Yana E. Grigorieva, Marina V. Fedorova, Svetlana A. Scherbakova, Vladimir V. Kutyrev, Alexander P. Agafonov, Renat A. Maksyutov, German A. Shipulin, Viktor V. Maleev, Mamadou Boiro, Vasiliy G. Akimkin, and Anna Y. Popova

Author affiliations: Central Research Institute of Epidemiology, Moscow, Russia (L.S. Karan, M.T. Makenov, Y.A. Grigorieva, M.V. Fedorova, V.V. Maleev, V.G. Akimkin); Russian Research Anti-Plague Institute, Saratov, Russia (M.G. Korneev, S.A. Yakovlev, S.A. Scherbakova, V.V. Kutyrev); International Center for Research of Tropical Infections in Guinea, N'Zerekore, Guinea (N. Sacko, S. Boumbaly); Research Institute of Applied Biology of Guinea, Kindia, Guinea (N. Sacko, S. Boumbaly, K. Kourouma, M. Boiro); State Research Center of Virology and Biotechnology VECTOR, Kol'tsovo, Russia (R.B. Bayandin, A.V. Gladysheva, A.V. Shipovalov, I.A. Yurganova, A.P. Agafonov, R.A. Maksyutov); Center of Strategical Planning and Biomedical Health Risks Management, Moscow (G.A. Shipulin); Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing, Moscow (A.Y. Popova)

Suggested citation for this article

Abstract

In 2018, a previously unknown Ebola virus, Bombali virus, was discovered in Sierra Leone. We describe detection of Bombali virus in Guinea. We found viral RNA in internal organs of 3 Angolan free-tailed bats (*Mops condylurus*) trapped in the city of N'Zerekore and in a nearby village.

In 2018, a new species of the genus *Ebolavirus* (family *Filoviridae*), Bombali virus (BOMV), was discovered in Sierra Leone (*1*). The virus was detected in oral and rectal swab specimens from 2 free-tailed bat species, *Chaerephon pumilus* (little free-tailed bat) and *Mops condylurus* (Angolan free-tailed bat). Both bat species are widespread in Africa, and their ranges include countries where human Ebola virus disease (EVD) outbreaks have occurred. Forbes et al. (*2*) detected BOMV RNA in mouth swabs and internal parenchymal organs, except kidneys, of *M. condylurus* bats in Kenya in May 2018.

Most known outbreaks of EVD among humans were Zaire Ebola virus, including the large epidemic in West Africa during 2013–2016 (*3*). The reservoir hosts of Ebola virus (EBOV) remain unclear, but bats commonly are suspected. Viral RNA and EBOV antibodies have been detected in a few species of fruit bats (*4*,*5*). The discovery of BOMV supports the hypothesis regarding the role of bats as hosts of EBOVs, but further study is required to determine the bat species involved in viral transmission, prevalence of the virus in bat populations, and geographic distribution of the virus.

We detected BOMV RNA in free-tailed bats in N'Zerekore Prefecture, Guinea. We trapped bats in Guinea and Liberia during 2018–2019 (Table; Appendix) and detected BOMVRNA by reverse transcription PCR in the pools of kidney (cycle threshold [C_t] 17.4) and lung (C_t 19.6) samples from 2 *M. condylurus* bats captured in Yalenzou village in May 2018 and in a pool of liver and spleen tissues (C_t 28.2) of an *M. condylurus* bat from a school in the city of N'Zerekore in March 2019 (Table). Blood, intestin and brain samples were negative for viral RNA. Sequencing of the 483-bp fragment of the large gene (GenBank accession no. MK543447) demonstrated 99.3% identity with BOMV RNA from Sierra Leone (accession no. NC039345) and 98.3% identity with BOMV RNA from Kenya (accession no. MF319186).

Marí Saéz et al. (*5*) suggested that the Angolan free-tailed bat was the most plausible zoonotic source of the EVD epidemic in West Africa. In addition, EBOV nucleotide sequences previously have been found in *Hypsignathus monstrosus*, *Epomops franqueti*, and *Myonycteris torquata* bats in Gabon (*6*). He et al. (*7*) detected filovirus RNA in brown fruit bats (*Rousettus leschenaultia*) in China, and another study showed that 3 distinct groups of unclassified filoviruses are circulating in *Eonycteris spelaea* and *Rousettus* spp. fruit bats in China (*8*). These studies demonstrate that bats are promising targets for identifying emerging filoviruses, and additional Chiroptera species, both insectivorous and fruit bats, should be examined for EBOVs.

EBOV IgG was were detected in the human population of Sierra Leone in 2006, 8 years before the EVD outbreak began in that country (*9*). Seroprevalence to EBOVs was also found in the medical staff of hospitals that were not involved in treating EVD-positive patients and in community contacts that worked with villages where EVD was not detected (*10*). The highest seroprevalence to EBOVs was found in the inhabitants of villages with the lowest number of documented EVD cases during the 2013–2016 outbreak in Sierra Leone (*10*). Cross-reactivity or nonspecific binding could be responsible for artifacts of immunoassay. However, other plausible explanations for the presence of antibodies against EBOV among persons with no symptoms of EVD exist, including subclinical EBOV infection in humans and antibody reactions to previously undiscovered, nonpathogenic filoviruses. The newly discovered BOMV could be a causative agent of these types of asymptomatic infections that produce antibodies with cross-reactivity to other EBOVs. Other undiscovered filoviruses also could be circulating in the region. Further surveillance with family-level primers is needed for insectivorous bats, as well as fruit bats and patients with acute infections.

Although BOMV had been detected in the northern part of Sierra Leone (*1*) and in the Taita Hills area of Kenya (*2*), we isolated it from bats in Guinea, far from these sites. Our finding provides additional evidence that BOMV is more widely distributed than previously suspected. Consequently, we advise screening of free-tailed bats for BOMV across their range. The high concentration of BOMV RNA we found in the internal organs of *M. condylurus* bats provides additional confirmation that BOMV could amplify in these bats and that this species is a reservoir host of this virus.

Mrs. Karan is the head of research group of Vector-borne and Zoonotic Diseases at Central Research Institute of Epidemiology, Moscow, Russia. Her research interests include tick-borne and mosquito-borne diseases and related molecular diagnostics.

Top

References

1. Goldstein T, Anthony SJ, Gbakima A, Bird BH, Bangura J, Tremeau-Bravard A, et al. The discovery of Bombali virus adds further support for bats as hosts of ebolaviruses. Nat Microbiol. 2018;3:1084–9. DOI PubMed
2. Forbes KM, Webala PW, Jääskeläinen AJ, Abdurahman S, Ogola J, Masika MM, et al. Bombali virus in *Mops condylurus* bat, Kenya. Emerg Infect Dis. 2019;25:955–7. DOI PubMed
3. Baize S, Pannetier D, Oestereich L, Rieger T, Koivogui L, Magassouba N, et al. Emergence of Zaire Ebola virus disease in Guinea. N Engl J Med. 2014;371:1418–25. DOI PubMed
4. Pourrut X, Délicat A, Rollin PE, Ksiazek TG, Gonzalez JP, Leroy EM. Spatial and temporal patterns of *Zaire ebolavirus* antibody prevalence in the possible reservoir bat species. J Infect Dis. 2007;196(Suppl 2):S176–83. DOI PubMed
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6. Leroy EM, Kumulungui B, Pourrut X, Rouquet P, Hassanin A, Yaba P, et al. Fruit bats as reservoirs of Ebola virus. Nature. 2005;438:575–6. DOI PubMed
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9. Richardson ET, Kelly JD, Barrie MB, Mesman AW, Karku S, Quiwa K, et al. Minimally symptomatic infection in an Ebola 'hotspot': A cross-sectional serosurvey. PLoS Negl Trop Dis. 2016;10:e0005087. DOI PubMed
10. Mafopa NG, Russo G, Wadoum REG, Iwerima E, Batwala V, Giovanetti M, et al. Seroprevalence of Ebola virus infecti in Bombali District, Sierra Leone. J Public Health Africa. 2017;8:732. DOI PubMed

Top

Table

Table. Locations where free-tailed bats trapped and tested for Bombali virus, Guinea and Liberia

Top

Suggested citation for this article: Karan LS, Makenov MT, Korneev MG, Sacko N, Boumbaly S, Yakovlev SA, et al. Bombali virus in *Mops condylurus* bats, Guinea. Emerg Infect Dis. 2019 Sep [*date cited*]. https://doi.org/10.3201/eid2509.190581

DOI: 10.3201/eid2509.190581

Original Publication Date: 7/16/2019

Table of Contents – Volume 25, Number 9—September 2019

Page created: July 16, 2019
Page updated: July 16, 2019
Page reviewed: July 16, 2019

From: Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>
To: Tamar Bah <tbah@usaid.gov>
Cc: Jaber Amine Belkhiria <jabelkhiria@ucdavis.edu>, Andrew Clements <aclements@usaid.gov>, Alpha Oumar Camara <[redacted] Izetta Simmons <isimmons@usaid.gov>, Andrew Williams <andwilliams@usaid.gov>, predict Sympa List <predict@ucdavis.edu>, Brian H Bird <bhbird@ucdavis.edu>, Tracey Goldstein <tgoldstein@ucdavis.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, David John Wolking <djwolking@ucdavis.edu>
Subject: Re: Bomabli Virus in Mops condylurus Bats, Guinea
Sent: Fri, 26 Jul 2019 03:52:47 +0000

Hi Tamar,

At the moment, we are waiting on further discussions with Sakoba but we would like to try and move as quickly as possible to work on a community engagement plan in coordination with the ANSS. We are happy to announce the PREDICT finding at the next One Health Platform meeting and put out a UC Davis press release at that time (which has been already shared and approved by the Government of Guinea). There are no concerns on our end regarding the Guinean Government not doing a big press release on their end.

We are in daily contact with the PREDICT Guinea team and will continue to update you on progress as we continue. Any questions, let us know!

Regards,
Corina

From: Tamar Bah <tbah@usaid.gov>
Date: Thursday, July 25, 2019 at 7:37 AM
To: Andrew Clements <aclements@usaid.gov>
Cc: Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>, Jaber Amine Belkhiria <jabelkhiria@ucdavis.edu>, Alpha Oumar Camara <[redacted], Izetta Simmons <isimmons@usaid.gov>, Andrew Williams <andwilliams@usaid.gov>
Subject: Fwd: Bomabli Virus in Mops condylurus Bats, Guinea

Hello Andrew and Corina,
I am sure you already saw this article on Russian Central Research Institute of Epidemiology publication regarding their findings in bats here in Guinea.
I would like to know whether you have any news on the plan on the way forward.
Please note that Dr. Sakoba mentioned in the past and recently that **Guinea does not want to have a press release**, but they are not opposed to publication internationally.
I understand Predict was not comfortable to publish ahead of the country press release. This release from government has become a sensitive issue due political weight and also Ebola fatigue.
We would like to know your thoughts on the way forward.

Thanks!

Tamar T. Bah, MPH
Acting Health Office Director
Global Health Security Agenda Advisor
USAID Guinea
Office: [redacted]
Cell: [redacted]

---------- Forwarded message ---------
From: **Alpha Oumar Camara** <[redacted]
Date: Wed, Jul 24, 2019 at 10:39 AM
Subject: Bomabli Virus in Mops condylurus Bats, Guinea
To: Tamar Bah <tbah@usaid.gov>

Bonjour
Je vous envois le lien à l'article en objet pour information. Je suis très désolé par l'action de l'autorité en Guinée face au résultat de PREDICT dont les discussions se poursuivent pour la communication.
https://wwwnc.cdc.gov/eid/article/25/9/19-0581_article

Cordialement,
Alpha

From: Noam Ross <ross@ecohealthalliance.org>
Sent: Tue, 20 Aug 2019 14:28:28 -0400
Subject: Re: PREDICT Emerging Disease Insights for USAID Products Package
To: REDACTED
Cc: Kevin Olival <olival@ecohealthalliance.org>, Peter Daszak <daszak@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>, David John Wolking <djwolking@ucdavis.edu>, Eunah Regina Cho <eecho@ucdavis.edu>
SADS-CoV-EDI-2019-07-23.docx

Dear REDACTED
Here's the MS Word version of the SADS-CoV EDI.

Noam

--

Dr. Noam Ross
Senior Research Scientist

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

+1.212.380.4471 (direct)
+1.212.380.4465 (fax)
@noamross (twitter)
www.ecohealthalliance.org

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.

On Mon, Aug 19, 2019 at 2:02 PM REDACTED wrote:

> Hey Kevin, Noam, & Peter,
>
> Thanks for sending the template along! I checked with David and we're actually going to generate new templates that resemble the final report layout / digital report layout we've been working on. That way we're not duplicating efforts later on.
>
> Noam, since Kevin is out on vacation would you mind sending the SADS-CoV EDI and the viral curve EDI over to us in a workable format for Eunah (word doc is fine). That way she can easily copy the text and figures over and drop them in the uniform template.
>
> Thanks!
>
> REDACTED

From: Noam Ross <ross@ecohealthalliance.org>
Date: Saturday, August 17, 2019 at 7:56 AM
To: Kevin Olival <olival@ecohealthalliance.org>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, Jaber Belkhiria <jabelkhiria@ucdavis.edu>, REDACTED

[redacted], Peter Daszak <daszak@ecohealthalliance.org>, Jon Epstein <epstein@ecohealthalliance.org>, Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>, Alison Andre <andre@ecohealthalliance.org>, [redacted]
Subject: Re: PREDICT Emerging Disease Insights for USAID Products Package

[redacted]and Jaber,

We use R Markdown to generate our EDIs. If you use this workflow, you can produce the same format by installing our "ehastyle" package in R

(`remotes::install_github("ecohealthalliance/ehastyle")`) and using the attached .Rmd template. If not, the attached MS Word document can serve as a template.

Best,

Noam

--

Dr. Noam Ross
Senior Research Scientist

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www.ecohealthalliance.org

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On Sat, Aug 17, 2019 at 6:40 AM Kevin Olival <olival@ecohealthalliance.org> wrote:

Dear [redacted]and Jaber,

I've added in my edits and comments for consideration, on top of Jonna's versions. Well done!

I'm off on vacation soon… so cc'ing Noam here so he can follow up on sending the EDI code for you to modify and use the template as needed (as I promised in my comments).

Cheers,

Kevin

Kevin J. Olival, PhD
Vice President for Research

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www.ecohealthalliance.org

On Aug 15, 2019, at 11:39 PM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:

My edits on these, if you'd like to review the version with edits.

Thanks to REDACTED & Jaber for drafting!

Jonna

On Mon, Aug 12, 2019 at 10:51 AM REDACTED wrote:

Hi everyone,

Attached are two of four EDI pieces for review from Zoe & Jaber. Jonna will be co-reviewing these with you all. Deadline for review is **August 19th** – please track your changes.

Two more EDI pieces will follow in the coming days. Let me know if you have any questions!

Thanks,

REDACTED

From: REDACTED
Date: Friday, July 26, 2019 at 1:27 PM
To: Peter Daszak <daszak@ecohealthalliance.org>, Jon Epstein <epstein@ecohealthalliance.org>, Kevin Olival <olival@ecohealthalliance.org>, Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>
Cc: Alison Andre <andre@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>
Subject: PREDICT Emerging Disease Insights for USAID Products Package

Hi Peter, Kevin, Jon, and Chris,

Jonna asked me to give you all a heads-up that she has three EDI pieces in the works to be featured in the August Products Package / Newsletter for USAID. [redacted] Nistara, and Diego intend to have drafts for review by the M&A team no later than **August 12th,** and we'd like to have drafts reviewed and finalized 1 week from then (**Aug. 19).**

We're also going to include the EDI that Peter just sent out and will link out to the full version. If you have any EDI's in the works that you'd like to have featured in this upcoming products package, please let us know and plan to have those ready for review by August 12th. Our graphic design guru, Eunah, will be laying out the EDI's into a common format (just like the Pathogen Discovery piece that went out in July) so she'll just need finalized text and figures (with captions) for formatting after the 19th. Note: These EDI's will double as content for the PREDICT digital report/website, just as the PD package does.

If you have any questions, please let Jonna or I know.

Thank you!

[redacted]

[redacted]

PREDICT Project Support

Executive Analyst

One Health Institute

School of Veterinary Medicine

[redacted]

o: 530-752-3630

<EDI Spillover article_zg JM.docx><Insights on geographic distribution of insectivore bats in Sierra Leone_V5_jb JM.docx>

EMERGING DISEASE **INSIGHTS**

Research from the PREDICT Modeling & Analytics team

Extensive overlap of three SADS-CoV bat hosts within intensive pig farming regions in Asia

In October 2016, a novel coronavirus, swine acute diarrhea syndrome coronavirus (SADS-CoV) was discovered at commercial swine farms in Guangdong Province, China[1]. The death of nearly 25,000 piglets was attributed to infection with SADS-CoV, a virus of likely bat-origin as very closely-related CoVs have been identified in *Rhinolophus* spp. horseshoe bats (*R. affinis*, *R. sinicus*, *R. pusillus*, and *R. rex*) roosting in caves near infected farms.

SADS-CoV threatens commercial pig populations at bat-pig interfaces where other viral pathogens (e.g. Nipah, Menangle, and Ebola Reston viruses) also have been found. It is therefore critical to identify geographic areas with the greatest potential for bat-pig transmission to mitigate the risk of SADS-CoV and other viral spillover and to prioritize surveillance. Here we use spatial analyses to identify areas of greatest risk of SADS-CoV emergence across China and Southeast Asia by modeling the distribution of key *Rhinolophus* host species and their overlap with commercial pig farms.

Regions of Greatest Overlap

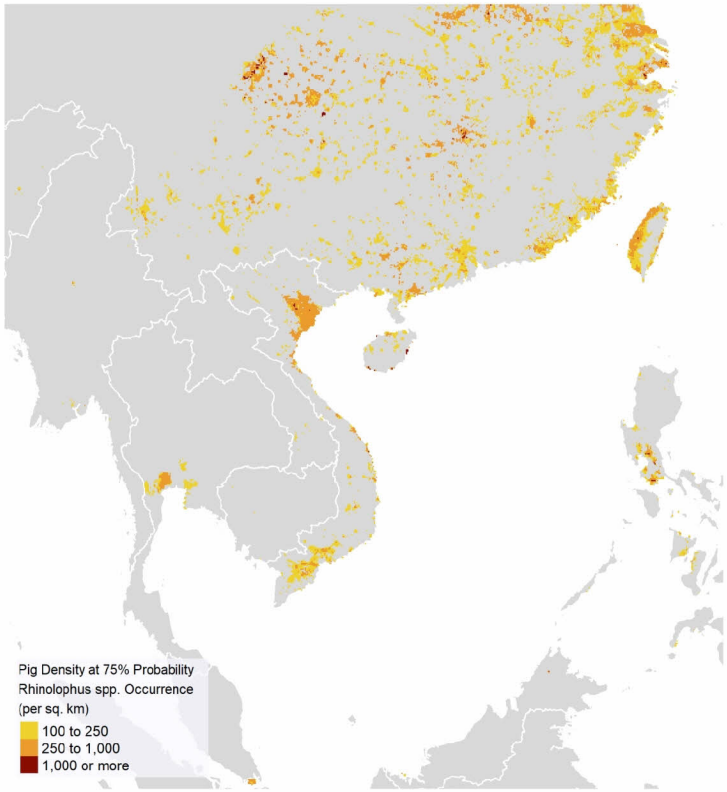


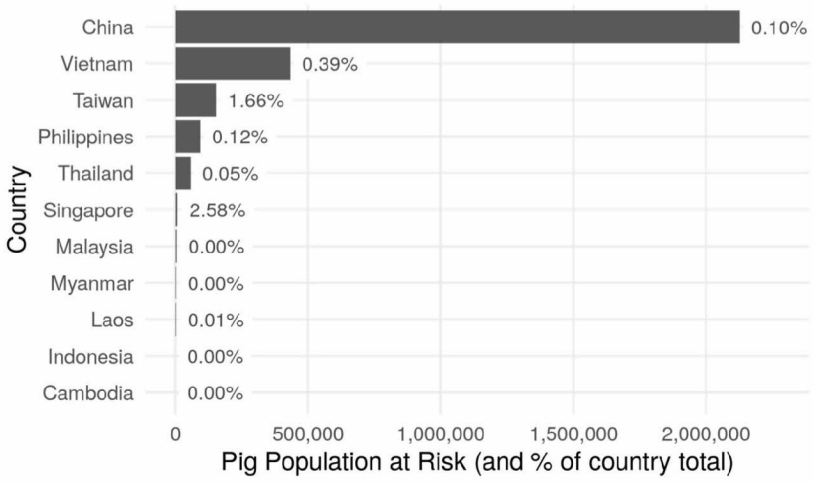
Figure 1. Areas of bat-pig overlap where probability of SADS-CoV *Rhinolophus* spp. reservoir occurrence is high (>75%) and pig densities are indicative of intensive pig farming (>100 pigs per km^2).

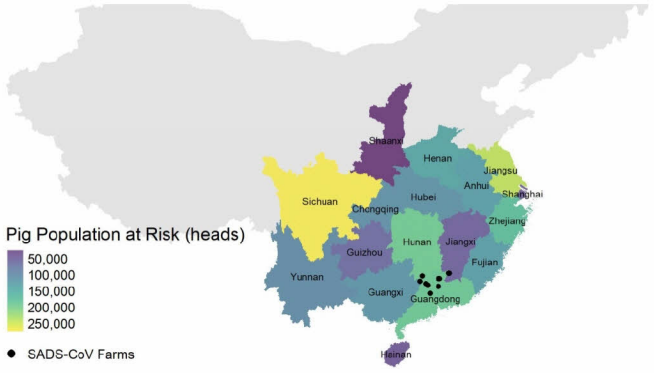
For details on methods or analysis contact: PREDICTmodeling@ecohealthalliance.org

USAID FROM THE AMERICAN PEOPLE | PREDICT | EcoHealth Alliance | UCDAVIS VETERINARY MEDICINE One Health Institute | WCS | METABIOTA | Smithsonian Institution

The largest areas of spatial overlap among SADS-CoV host species and pig farms are localized mainly to Southern China (including Taiwan), throughout Vietnam, the Philippines, and Thailand. Compared to other countries, China had the largest area of bat-pig overlap with 330,000 km² (3.4% of total country area with a density of >100 pigs per km²) and 2,130,000 pigs located within predicted bat distributions. By Chinese province, the largest area of overlap was found in Jiangsu (242,000 pigs over an area 35,200 km² amounting to 34.3% of the province's area). Sichuan had the largest pig population at risk: 274,000 pigs over 26,000 km² (5.4% of the total area of the province).

Conclusion: This analysis uses the best available science to identify key regions where the likelihood of SADS-CoV spillover is highest. It allows better geographic targeting of future research to understand SADS-CoV and interventions to block spillover across the pig-bat interface.

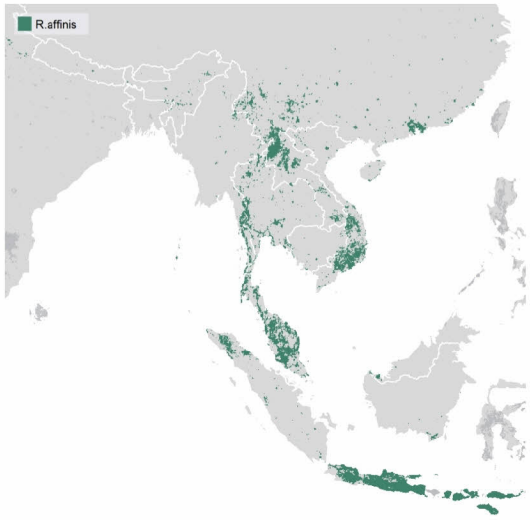


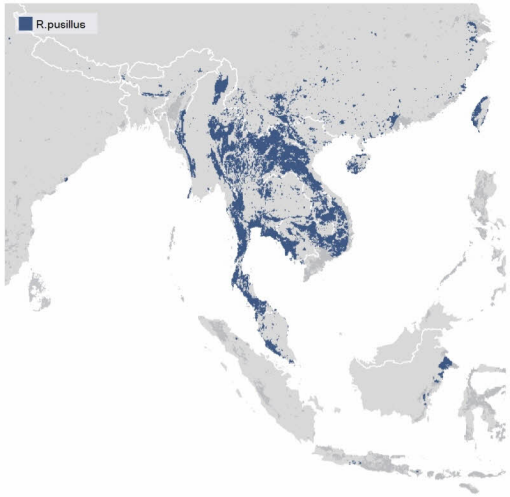


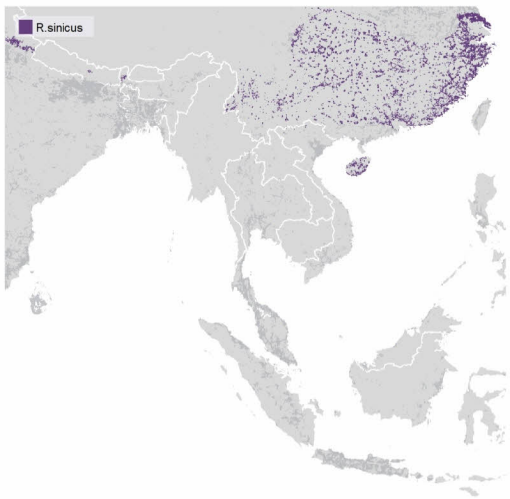
Figures 2-3. Total pig population at risk by country (and percentage of total), and by Chinese province. Pig population at risk is defined by the number of pigs within an area that intersects with predicted bat occurrence. Among China's 2,130,000 pigs in spatial overlap areas, Sichuan and Jiangsu provinces each had over 200,000 pigs in areas of SADS-CoV spillover risk.

Species Distribution Modeling

The PREDICT-2 Modeling & Analytics team used MaxEnt to create species distribution models for *Rhinolophus affinis*, *R. pusillus*, and *R. sinicus*, potential hosts implicated in the initial SADS-CoV spillover event. There were insufficient occurrence records to model the species distribution for *R. rex*, the fourth bat species in which SADS-CoV was previously detected[1]. Occurrence records for each host species were derived from PREDICT-1, PREDICT-2, and NIAID 1R01AI110964 data, and the Global Biodiversity Information Facility (GBIF). Fourteen bioclimatic variables from BIOCLIM, land cover type, karst landscapes, night time lights, and human population density were inputs for the model. Predictive accuracy was high for the best-fitting models, with mean AUC values of 0.82 (R. affinis), 0.80 (R. pusillus), and 0.72 (R. sinicus).







Figures 4-6. Species distribution models of *R. affinis*, *R. pusillus*, and *R. sinicus* projected to IUCN species range extents (colored), and predicted distributions outside of IUCN range in grey. These bat species distribution models were used to map bat-pig overlap in Figure 1.

References

1. Zhou P, Fan H, Lan T, Yang XL, Shi WF, Zhang W, et al. Fatal acute diarrhoea syndrome caused by an HKU-2 related coronavirus of bat origin. Nature. 2018; 556(7700):255-258. doi: 10.1038/s41586-018-0010-9.

2. Proosdij ASJ, Sosef MSM, Wieringa JJ, Raes N. Minimum required number of specimen records to develop accurate species distribution models. Ecography. 2015; 39(6):542-552. doi: 10.1111/ecog.01509.

3. Duan R, Kong XQ, Huang MY, Fan WY, Wang ZG. The predictive performance and stability of six species distribution models. PLoS One. 2014; 9(11). doi: 10.1371/journal.pone.0112764. Pig populations and spatial distributions were drawn from the FAO Gridded Livestock of the World 2.0.[4]

4. Robinson TP, Wint GRW, Conchedda G, Van Boeckel TP, Ercoli V, Palamara E, et al. (2014) Mapping the Global Distribution of Livestock. PLoS ONE 9(5): e96084. doi: 10.1371/journal.pone.0096084

Sent: Sun, 25 Aug 2019 21:05:20 -0700
Subject: Re: questions below from the Indonesia mission
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Alice Latinne <latinne@ecohealthalliance.org>
Cc: Ava Sullivan <sullivan@ecohealthalliance.org>, David J Wolking <djwolking@ucdavis.edu>, Elizabeth Leasure <ealeasure@ucdavis.edu>, Kevin Olival <olival@ecohealthalliance.org>, Peter Daszak <daszak@ecohealthalliance.org>

Thanks to you both!
J

On Sun, Aug 25, 2019 at 3:17 AM Alice Latinne <latinne@ecohealthalliance.org> wrote:

> Hi Jonna,
> What Kevin meant is that FAO doesn't have the MoA's approval to release the livestock data publicly or even to share the data with the in-country and global PREDICT team. Without access to the data, there is nothing we (in-country and global PREDICT) can do to help with the analysis for now. During our call with FAO in early August, it was decided that they would send us a draft concept plan for the analysis but they didn't share anything yet.
> We are also working to get the wildlife data approved for public release, all reports are submitted to the government and we are following up with them. The human reports have just been approved last week.

I'll talk to the team regarding the other points mentioned in Andrew's email.

Thanks,
Alice

On Sun, Aug 25, 2019 at 5:38 AM Jonna Mazet <jkmazet@ucdavis.edu> wrote:

> Hi & thanks for this bit.
> I'm not sure I have the background that makes the following clear: "Obviously gov't approval to release human, wildlife, and livestock data is one limitation to doing analyses now, but we are supportive and moving the process forward."
> Sorry if I missed comms that explained or if you discussed on a call I missed.
> Maybe Alice can fill me in.
> Hope you're having a nice time,
> Jonna

On Fri, Aug 23, 2019 at 6:19 AM Kevin Olival <olival@ecohealthalliance.org> wrote:

> Hi Jonna,
> I'm on vacation, but cc'ing Alice here. Alice has been with the team in Indonesia the last couple of weeks, so may have some insight into the discussions re: below and invitations for GOI for Bali.

Regarding this point:

> • Can USAID/W help encourage PREDICT to work with FAO to carry out the analysis for the triangulated surveillance, so that it can be shared on Sept 12? **[AC note: in my opinion, this would only be considered if super easy--which I suspect is not the case--but please weigh in.]**

We had a call with FAO and PREDICT on August 6th about triangulated analyses. Obviously gov't approval to release human, wildlife, and livestock data is one limitation to doing analyses now, but we are supportive and moving the process forward. One of the next steps was to have FAO (Farida) draft a concept plan for the analysis that the MoA needs to sign off on to give approval to share data with PREDICT. Since these data are not in EIDITH, we are working with FAO/MoA to find the best mechanism to share the data and draft an analytical plan. Filip from FAO also suggested that for virus interpretation it would best to have Tracey and Simon do a first pass on interpretation of the livestock sequences, using sequence libraries and methods consistent with PREDICT wildlife, which he said he would follow up on (this is also pending MoA approval to share the seqs - which most people on the call thought was feasible). Another hickup is that the DG of MoA/Livestock health is changing again this month, so some felt that it may be tricky for him

to approve releasing data out of the country before leaving office.

As for materials for sharing at close-out, we have shared the "light Indonesia Final report" with our country teams, which could be one output to share immediately.

That's all from me for now…

Cheers,
Kevin

Kevin J. Olival, PhD
Vice President for Research

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New York, NY 10001

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www.ecohealthalliance.org

On Aug 23, 2019, at 4:14 AM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:

We should discuss before we answer,
J
---------- Forwarded message ---------
From: **Andrew Clements** <aclements@usaid.gov>
Date: Thu, Aug 22, 2019 at 8:40 AM
Subject: questions below from the Indonesia mission
To: Jonna Mazet <jkmazet@ucdavis.edu>, David J Wolking <djwolking@ucdavis.edu>, Elizabeth Leasure <ealeasure@ucdavis.edu>
Cc: PREDICTMGT <predictmgt@usaid.gov>, Predict inbox <predict@ucdavis.edu>

Hi all,

Some questions below from the Indonesia mission. Not urgent--let me know by end of next week.

- For the PREDICT Bali meeting, what GOI representation is expected/invited? (Note that GOI is normally invited as an observer or host for international events and not doing so could cause some headaches later on. If invited, funding support may be requested, as a heads up.)
- For the Bali meeting, will there be a comms POC for press releases, social media and such? The Embassy would welcome amplifying messages during the global meeting as appropriate. Also, will media be invited?
- For the current closeout,
  - What is the planned documentation/final report of P-2 work in Indonesia that can be shared with the Govt? (policy briefs, any kind of technical recommendation/s that can be provided to the Govt, etc?)
  - Can USAID/W help encourage PREDICT to work with FAO to carry out the analysis for the triangulated surveillance, so that it can be shared on Sept 12? **[AC note: in my opinion, this would only be considered if super easy--which I suspect is not the case--but please weigh in.]**

Thanks!

Andrew

Andrew Clements, Ph.D.

Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
E-mail: aclements@usaid.gov

For more information on USAID's Emerging Pandemic Threats program, see: http://www.usaid.gov/ept2

--

Alice Latinne, PhD

Research Scientist
PREDICT-2 Country Liaison, Thailand and Indonesia
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EcoHealth Alliance leads cutting-edge scientific research into the critical connections between human and wildlife health and delicate ecosystems. With this science, we develop solutions that prevent pandemics and promote conservation.

From: David J Wolking <djwolking@ucdavis.edu>
Sent: Mon, 9 Sep 2019 07:11:05 -0700
Subject: Re: FW: Invitation for Farida to participate in the PREDICT Global Closing Workshop in Bali
To: David J Wolking <djwolking@ucdavis.edu>
Cc: "Claes, Filip (FAORAP)" [redacted] Jonna Mazet <jkmazet@ucdavis.edu>, "William B. Karesh" <karesh@ecohealthalliance.org>, "Kalpravidh, Wantanee (FAORAP)" [redacted] "McGrane, James (FAOID)" [redacted]

Hi Filip,
This is going to be fine. We assume Farida will join us for dinner on Sunday and Monday evenings? We will send out the letter of invitation shortly.

Thanks!

David

On Mon, Sep 9, 2019 at 7:04 AM David J Wolking <djwolking@ucdavis.edu> wrote:

> Hi Filip,
> I'll check with the organizing committee but I expect this is fine and we'd love to welcome Farida to the meeting. Unfortunately our room block at the Sofitel Nusa Dua is completely full so guests are now spilling over into the Westin which we have heard is still taking guests and is in walking distance to the meeting.

Once I confirm, I'll follow-up with more info, including the letter of invitation and meeting details.

Best,

David

On Mon, Sep 9, 2019 at 2:34 AM Claes, Filip (FAORAP) [redacted] wrote:

> Hello David et al.,
>
> Please see below a request from our FAO Indonesia country team.
>
> They would kindly request if possible for Farida to attend the meeting
>
> She is the one that did most of the work in Indonesia on the FAO side and the one coordinating with pak Joko on triangulated surveillance
>
> For your consideration
>
> Best wishes,
>
> Filip

From: McGrane, James (FAOID) [redacted]
Sent: Monday, September 9, 2019 4:10 PM
To: Claes, Filip (FAORAP) [redacted]
Cc: McGrane, James (FAOID) [redacted] Farida Camallia Zenal [redacted]
Subject: Invitation for Farida to participate in the PREDICT Global Closing Workshop in Bali

Dear Filip,

I wonder whether it might be possible to get an invitation sent to Farida to attend the PREDICT Global Closing Workshop in Bali on 15, 16 and 17th September? Farida has been very heavily involved in triangulated surveillance activities in Indonesia and has worked closely with the PRREDICT Indonesia team.

Please let us know if this might be possible. We can support her travel to Bali from the ECTAD Indonesia EPT2 project.

Best regards,

Jim

James McGrane

Team Leader

FAO ECTAD

REDACTED

Skype: REDACTED

Tel: + REDACTED Mob: REDACTED

Food and Agriculture Organization of the United Nations

From:	Murray, Suzan <MurrayS@si.edu>
To:	Peter Daszak <daszak@ecohealthalliance.org>
CC:	jkmazet@ucdavis.edu <jkmazet@ucdavis.edu>;William B. Karesh" <karesh@ecohealthalliance.org>
Sent:	2/21/2020 4:56:21 PM
Subject:	Re: Invitation from the House Science, Space, and Technology Committee

Thanks. Perhaps we can chat on Monday. I spoke with them last week and suggested they contact you both so am glad they did. Would love assistance in preparations. Many thanks Peter

Sent from my iPhone

On Feb 21, 2020, at 7:08 PM, Peter Daszak wrote:

External Email - Exercise Caution
That's great!!

Cc'ing Billy also. I spoke with them today and I know they've spoken with people at UC Davis (assume that was you, Jonna). They asked great questions about what the gaps are in our pandemic preparedness, and specific questions around what led to PREDICT not being renewed.

Great opportunity to set the record straight on how PREDICT work got closer than any other group to identifying coronaviruses in China as a key risk for the next pandemic…

Happy to send you lots of information/graphs/ phylogenies etc. for your testimony, and here's a summary that I sent out to Andrew a few weeks back:

- During the 10 years of Predict, and with supplemental funding from NIH, we sampled 10,074 bats and ~2,000 other mammals at 47 sites across S. China and used Predict protocol Coronaviridae family-level PCR
- Discovered >500 coronaviruses from bats, including 52 novel SARS-related CoVs. Found 172 novel β-CoVs >350 novel α-CoVs
- Found the closest known relative of the COVID-19 virus (SARS-CoV-2) in a horseshoe bat in Yunnan Province (96.2% identical on whole genome, much closer than the pangolin viruses)
- Discovered a new coronavirus killing >25,000 pigs in Guangdong province in 2017/18: Swine Acute Diarrheal Syndrome Virus SADS-CoV
- Found SARS-related CoVs that can bind to human cells, and that cause SARS-like disease in humanized mouse models. Showed that vaccine candidate against SARS-CoV did not prevent infection by this virus and the disease was not treatable by almost all of the monoclonal therapies being developed for SARS.
- Showed serological evidence that 3% of people living at the wildlife-human interface in rural China were seropositive for bat-CoVs (i.e. are being exposed in their daily lives) – marking bat-CoVs as a 'clear and present danger' for epidemic emergence.

Cheers,

Peter

Peter Daszak
President

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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: Murray, Suzan [mailto:MurrayS@si.edu]
Sent: Friday, February 21, 2020 5:53 PM
To: jkmazet@ucdavis.edu; Peter Daszak
Subject: Fwd: Invitation from the House Science, Space, and Technology Committee

FYI - was just invited to this - haven't opened invite yet so don't know who else is there

Sent from my iPhone

Begin forwarded message:

From: "Buchanan, Caitlin"
Date: February 21, 2020 at 3:02:04 PM EST
To: "Murray, Suzan"
Cc: "Abbott, Greg"
Subject: Invitation from the House Science, Space, and Technology Committee

External Email - Exercise Caution
Good afternoon Dr. Murray,

Please find attached your invitation to appear at the Full Committee hearing "Beyond Coronaviruses: Understanding the Spread of Infectious Diseases and Mobilizing Innovative Solutions." The hearing will be held on Thursday, March 5, 2020 at 9:00 AM.

Please let me know if you have any questions.

Best,
Caitlin

Caitlin Buchanan
U.S. House of Representatives
Committee on Science, Space, & Technology
Research Assistant, Subcommittee on Investigations & Oversight
https://science.house.gov/

From: David J Wolking <djwolking@ucdavis.edu>
Sent: Mon, 27 Apr 2020 11:34:10 -0700
Subject: Re: Reminder: P2 EB Call - Monday April 27 @ 11AM PDT
To: David J Wolking <djwolking@ucdavis.edu>
Cc: Aleksei Chmura <chmura@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>, Amanda Fine [redacted] Ava Sullivan <sullivan@ecohealthalliance.org>, Brian Bird <bhbird@ucdavis.edu>, Carolina Chrurchill [redacted] Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, Corina Grigorescu Monagin <cgmonagin@ucdavis.edu>, Dawn Zimmerman [redacted] Elizabeth Leasure <ealeasure@ucdavis.edu>, Jon Epstein <epstein@ecohealthalliance.org>, Karen Saylors [redacted] Kevin Olival <Olival@ecohealthalliance.org>, "Murray, Suzan" [redacted], Nicole Gardner <nrgardner@ucdavis.edu>, Peter Daszak <daszak@ecohealthalliance.org>, "predict@ucdavis.edu" <predict@ucdavis.edu>, "Prof. Jonna Mazet" <jkmazet@ucdavis.edu>, "Prof. Woutrina Smith" <wasmith@ucdavis.edu>, Sarah Olson [redacted] Simon Anthony <sja2127@columbia.edu>, "Tammie O'Rourke" <torourke@metabiota.com>, Tracey Goldstein <tgoldstein@ucdavis.edu>, "William B. Karesh" <karesh@ecohealthalliance.org>
Human Data Guidance (EB).docx

Hi there,
Here's the human data guidance document for quick reference. Take a look and if any concerns or feedback send it over by tomorrow COB.

Thanks!

David

On Sat, Apr 25, 2020 at 12:04 PM David J Wolking <djwolking@ucdavis.edu> wrote:

> Hi there,
> Below is the agenda for Monday's call.

Enjoy the weekend,

David

PREDICT Executive Board Meeting
Monday, April 27, 2020
11:00AM-12:00PM PDT/2:00-3:00pm EDT
Zoom link: [redacted]
Additional Zoom info below agenda

1. USAID updates
USAID Fact Sheet - attached
On PPE procurement - guidance from Andrew

2. Extension plans and next steps
Status of awards
Follow-up/continued engagement of P2 global network
New developments/needs?

3. Data sharing
Human data guidance feedback?
Genbank release April 30th
DDL update - develop plan for countries with data not yet approved

4. Final Report (as time allows)...
Vol 2 - Country reports - moving to USAID reviews...
Vol 1 - Global report - reality check, timeline, strategy...

5. Media, publication and conference updates
6. Upcoming funding opportunities
7. Consortium author list

- Link to Google Sheet (on authorship vs. acknowledgements)

Zoom Call-in info
Topic: PREDICT EB Call
Join Zoom Meeting: [redacted]

Meeting ID: [redacted]

One tap mobile
+[redacted] US (San Jose)
+ US (New York)

Dial by your location
[redacted] US (San Jose)
US (New York)
Meeting ID: [redacted]

On Thu, Apr 23, 2020 at 6:16 PM David J Wolking <djwolking@ucdavis.edu> wrote:

> Hi EB,
> Just a reminder about our call on Monday (April 27 @ 11AM PDT). I'll follow-up with a real agenda but you can bet your bottom dollar it will include P2 extension strategy/plans, updates on data sharing (Genbank release April 30!), and the final report. Agenda comfort food ;-)

Talk soon,

David

--
David J. Wolking
Senior Manager, Global Programs, One Health Institute
Global Operations Officer, PREDICT Project of USAID Emerging Threats Division
Senior Manager, PREEMPT Project
School of Veterinary Medicine
University of California, Davis

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Senior Manager, Global Programs, One Health Institute
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University of California, Davis

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Senior Manager, Global Programs, One Health Institute
Global Operations Officer, PREDICT Project of USAID Emerging Threats Division
Senior Manager, PREEMPT Project
School of Veterinary Medicine
University of California, Davis

PREDICT HUMAN DATA USE AND SHARING

Ethics in human research and consent forms has been rapidly changing in the past decade as the ease and benefits of data-sharing have grown, and technology has facilitated biobanking and secondary-use of collected biospecimens. The evolving best practices for obtaining informed consent and handling human data is complicated by the fact that standards established for research in the U.S. (NIH guidelines, HHS regulations 45 CFR part 46 "Common Rule", HIPAA, etc.) are not always straightforward as to their application in other countries.

The PREDICT Informed Consent Form, which was included in the institutional review board (IRB) and ethics committee protocols across all active human subject research sites, contained multiple data and sample consent statements that are consistent with best practices in protection of research subject privacy. PREDICT's original research scope was to detect known and new viruses in people and animals using research assays for broad detection of viruses in RNA vial families. Therefore, we forewent plans to share data at the individual level and implemented protocols for sharing human data at the summary level only. Thus PREDICT's informed consent form lacked broad data-sharing language that would allow for de-identified individual-level data sharing outside of project staff and study collaborators. We have an obligation to honor this original consent agreement and to protect the individuals enrolled into our study, which includes limiting the data that is shared in open access platforms and publications.

Clauses in PREDICT approved Human Consent Form

Related to data-sharing:

> III. After samples are collected, they will be tested in a laboratory. A summary of the viruses detected and the findings at this site will be provided to your physician and/or local health officials during the study period. No personally identifying information will be linked to the summary of findings, and your participation will be confidential.
>
> IX. Will my data and samples be kept confidential? Information that you or your child provide(s) and laboratory results will remain confidential and will only be used in this study. […] Your health information will not be used by or disclosed (released) to another institution. Any documents produced or reports published or shared will not contain your personal identifying information.

Related to future sample use and data storage:

> Signature page: At the end of this study in ten years, all samples, as well as all accompanying information, will be destroyed.

Rules for using and sharing PREDICT human data

Human Data in Reports, Publications, and Data Repositories

- Individual behavioral responses and virus testing results must be aggregated / summarized following HIPAA de-identification guidelines before sharing: https://privacyruleandresearch.nih.gov/pr_08.asp
- The rules below are required for alignment with HIPAA guidelines in the context of international sites:
    - Human data cannot be shared at the individual level, even after de-identification of personal identifying information.

- Individual sampling sites cannot be named or described in a way that can be specifically identified below the level of small towns/cities/regions with a minimum of 20,000 people. Must use district or regional-level groupings, or more broadly "rural communities in the southwest of country".
- Do not identify individual hospitals as sampling sites unless they serve a broad and varied population in a city greater than 20,000 people.
- Do not provide descriptive/detailed information on human sampling locations that are rare enough that they could be specifically identified with the information provided.
- Consider the safety of individuals that provided information on controversial or illegal practices/trades. If country level authorities could identify individuals or groups of people, that could cause them legal repercussions or otherwise target specific groups, this information needs to be aggregated further.

Rules for Inclusion of Human Data on PREDICT's Public Data Site (HealthMap)

- Aggregate data to non-specific GPS location at the district level or country level (currently using country centroid)
- Aggregate data to year sampled (not month or day)
- Virus species and strain information, disease transmission interface(s), GenBank accession number may be included

Additional Resources

Ethics of Data Access, Use, and Sharing for Human Subjects Research Workshop

https://www.primr.org/datasharing-workshop/summary/

Multiregional Clinical Trials Informed Consent Template contains language for sharing and future use

https://mrctcenter.org/blog/resources/2015-03-23-template-informed-consent-template-external-sponsor/

Sent: Wed, 3 Jun 2020 13:38:52 -0700
Subject: PNAS Opinion Piece with GVP mentioned on BoD Zoom
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: "Oyewale Tomori ([redacted]>, "Dr. Suzan Murray" <MurrayS@si.edu>, Jennifer Gardy <Jennifer.Gardy@gatesfoundation.org>, Eddy Rubin <erubin@metabiota.com>, Dennis Carroll <[redacted]>, Peter Daszak <daszak@ecohealthalliance.org>, "Pablos-Mendez, Ariel" <ap39@cumc.columbia.edu>
Cc: [redacted], Samantha Maher <maher@ecohealthalliance.org>, Aleksei Chmura <chmura@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>, Cara Chrisman <cchrisman@usaid.gov>
PNAS- Intercepting Pandemics Through Genomics.pdf

Hi all,
The PNAS opinion piece is live & attached. I have sent it on to our OHI Comms team, as Smithsonian is discussing a press release. We can do that through OHI, unless GVP is ready to handle such things independently and you prefer that.
Have a nice day,
Jonna

On Tue, May 19, 2020 at 11:01 AM Samantha Maher <maher@ecohealthalliance.org> wrote:

> Hi All,
> We will be having our monthly GVP Board of Directors call next week on Thursday, May 28th at 1pm EST. The agenda items we discussed during the last meeting that we will be focusing on are:
>
> 1. Deep-dive on consortium memberships and requirements for participation
> 2. Follow up 3-5 big ticket funding targets
> 3. Review and discuss criteria for board member selection (see Eddy's email with selection criteria rubric)
>
> For those who haven't gone through the documents that [redacted] put together regarding Item #1, I am re-attaching those documents here.
>
> We also discussed looping Ariel into the next call. Provided it is ok with everyone, Dennis, would you mind linking him in?
>
> The zoom meeting details remain the same:
>
> Join Zoom Meeting [redacted]
> Please let me know if there are any additional items.
>
> Best,
>
> Sam
> --

Samantha Maher, MESc
Research Scientist, Conservation and Health

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OPINION

Intercepting pandemics through genomics

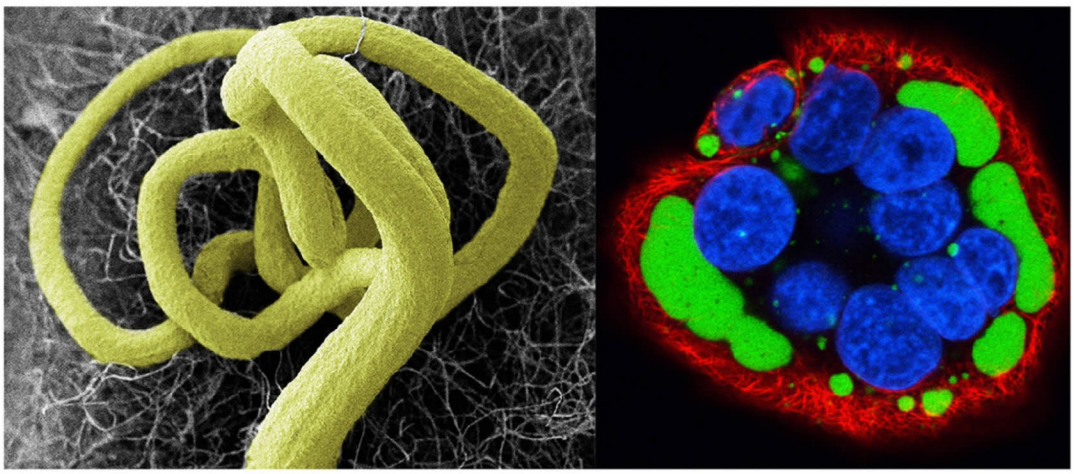
W. John Kress[a,1], Jonna A. K. Mazet[b], and Paul D. N. Hebert[c]

Ecological interactions that cross domains of life have major impacts on ecosystems and human health. Although the coronavirus disease 2019 (COVID-19) pandemic makes this point with destructive clarity, it is clear that zoonotic pathogens pose a standing threat to our species as demonstrated by Ebola, Middle East respiratory syndrome (MERS), and severe acute respiratory syndrome (SARS). Other species experience similar pandemics and are both sources of, and sensitive to, shared pathogens.

Hence, there is an urgent need to establish a global, genomic-based biosurveillance platform, a development which would be of immense value to biosecurity, biodefense, and the economy. If implemented, this "pandemic interception system" would hugely advance our understanding of the natural world.

Three major research programs are poised to support this effort: BIOSCAN, the Earth BioGenome Project (EBP), and the Global Virome Project (GVP). Each of these global programs is now working to develop approaches in comparative genomics that are needed to discover all species and to reveal their interactions. The diversity of infectious agents involved in host–pathogen interactions needs immediate clarification, especially with regard to those agents that transfect phylogenetically divergent lineages. Such information will enable a surveillance system that facilitates preemptive strikes and rapid responses to outbreaks as well as early development of diagnostic pipelines and vaccines. If pursued with a tiny fraction of the resources devoted toward the suppression of COVID-19, rapid progress could be made in identifying every pathogen hosted by birds and mammals with the potential to transfer to humans.

If protecting human life were the sole concern, this effort might be enough. However, our well-being as a species demands environmental sustainability, which can only be achieved by tracking all species as part of our planetary life support system. Achieving this goal means counting species and tracking shifts in their



More than a century ago, *Cryphonectria parasitica* (*Left*), the virus that causes Chestnut blight, devastated the American Chestnut tree. Until its eradication in 2011, *Rinderpest morbillivirus* (*Right*) decimated cattle and other ungulate populations. A biosurveillance system would help prevent future deadly and economically devastating pathogen outbreaks. Image credit: Paul Beales/UK Crown Copyright (*Left*); © Bioimaging at The Pirbright Institute (*Right*).

[a]National Museum of Natural History, Smithsonian Institution, Washington, DC 20013-7012; [b]One Health Institute, School of Veterinary Medicine, University of California, Davis, CA 95616; and [c]Centre for Biodiversity Genomics, University of Guelph, Guelph, Ontario N1G 2W1, Canada

The authors declare no competing interest.

[1]To whom correspondence may be addressed. Email: kressj@si.edu.

abundances as well as understanding the role of biotic interactions in driving such changes.

A pandemic interception system needs to be based on detailed knowledge of symbiomes (1), which are the constellations of organisms that interact with all multicellular species. Efforts to describe the structure of symbiomes are motivated by the fact that parasites, parasitoids, and microbes can devastate host populations, especially those that are evolutionarily naïve. Symbiome complexity is governed by rules. Just as large continents support more species than small islands, large-bodied, abundant species have more diverse symbiomes than small, rare taxa.

Now is the time to use the full power of science through cooperative efforts among initiatives such as BIOSCAN, GVP, and EBP to advance our understanding of the complex web of interactions that span the domains of life.

Range expansion also influences symbiome complexity; invasive species soon attract local parasites and microbes. Similarly, anthropogenic change can be a major driver for the emergence of pathogenicity, when host shifts occur as a result of changing land use and the associated encroachment of humans and their domestic animals into previously pristine areas (2). Reflecting our large body size, abundance, and broad distribution, the human symbiome is very diverse. Among our 423 species of eukaryote parasites, just 10% are specialists; most are shared with other mammals or birds (3). The same patterns of cross-taxon associations are true for pathogenic bacteria and viruses (4).

Because of the shifting distributions and abundances of disease-causing agents, symbiomes are in flux. More than 300 emerging disease events have had an impact on human populations over the past 50 years (5). About 44% involved RNA viruses and 25% involved bacteria; three eukaryote lineages (protozoans, fungi, and helminths) accounted for the rest. When viewed from the perspective of pandemic risk, viruses and bacteria are preeminent because they can be transmitted by close contact and aerosols. By contrast, most parasitic eukaryotes are vectored through food (6) or via biting arthropods (7), which are transmission paths that generally limit pandemic potential.

Broadly speaking, two strategies exist for preventing a global pandemic: Either we curb the spread of viral infections once they have started, or we proactively prevent infections by understanding the causes and processes behind pathogen transfers. The latter strategy is more desirable medically, economically, socially, and scientifically. Both actions may be necessary into the foreseeable future.

Indeed, secure systems never rely on a single safeguard, and pandemic protection will require both systematic societal change and scientific progress. Two obvious implementable actions are: 1) halting the trafficking and farming of wildlife to disrupt and prevent the transfer of many pathogens to humans; and 2) temporary cessation of all travel at the first sign of an outbreak to impede the expansion of an epidemic beyond its source region. The public health systems of developed countries should also be reoriented so that they go beyond known pathogens and those affecting their own country. Otherwise diseases, such as COVID-19, can slip through the cracks.

An alternate intervention, one likely to receive broader societal support and to require far less funding than an outbreak response, is the development of a pandemic interception system. Such a system would be founded on comprehensive knowledge of pathogens, their hosts, and their environmental interactions. This knowledge would be coupled with advanced diagnostic methods, and, where justified, anticipatory development of defenses based on detailed evaluation of the susceptibilities of each pathogen.

Part and parcel of a pandemic interception system would be to immediately expand our understanding of the diversity of viral and microbial communities to identify potential pathogens and to clarify their life histories and host interactions before they spill over into vulnerable and susceptible populations (8). To diminish risks to our species, initial work should screen populations of all 15,000 bird and mammal species, because they are the primary hosts for the pathogens most likely to infect humans. A decade ago a project with this scope was impossible, but the exponential rise in output of DNA sequencing platforms has broken this technical barrier.

This research will require a grand alliance. Biodiversity researchers will need to lead specimen acquisition; population biologists will need to track ecological interactions in the field; pathobiologists will need to optimize sampling protocols; genomicists will need to generate complete genomic libraries for all species and screen samples for pathogens. To be fully effective, epidemiologists, computer scientists, and mathematicians will then need to assemble these data to evaluate risks and propose mitigation measures for implementation by public health managers and policymakers. The library of potentially pathogenic agents and their risk characterizations would answer current uncertainties and enable rapid responses. For example, a registry of *Betacoronavirus* lineages would have meant that the primary host of COVID-19 was known long before the current outbreak and would have ensured that diagnostic tests, and perhaps even a vaccine, were rapidly available for deployment.

The foundation for this pandemic interception system is already in place with three ongoing research programs. Since its activation in 2010, the International Barcode of Life (iBOL) Consortium has been using targeted amplicon sequencing to advance the understanding of eukaryote diversity (9). Its current project, BIOSCAN, is radically accelerating species discovery and revealing species interactions by using automated protocols based on minimal sequence

information as well as using multi-gene scans. Involving research organizations with strong capabilities in biodiversity science in more than 30 nations, BIOSCAN is perfectly positioned to collect the required specimens and to verify their identification through DNA-based methods.

Advances in sequencing technologies over the last decade that enable the rapid, efficient, and inexpensive generation of complete genomes led to the emergence of the EBP, which aims to sequence, catalog, and characterize the genomes of all known eukaryotes (10). Currently sequenced genomes are available for fewer than 0.2% of these species. This project will produce new knowledge on the organization, evolution, functions, and interactions among species across the planet. Now a consortium of 32 institutions in 16 countries, EBP is working to generate and analyze genomes across the eukaryotic tree of life to address major issues facing the planet, including the impact of climate change, the conservation of biodiversity, and major perturbations to ecosystem functioning. EBP is very well positioned to provide the genomic data needed to clarify the origins of host–pathogen interactions and the spread of diseases across ecosystems.

The GVP was conceived in 2016 by researchers and policymakers from different disciplines and professional sectors around the globe in response to the repeated, unpredictable emergence and reemergence of high-impact viral epidemics and pandemics compromising global health security and human and animal well-being (11). The GVP benefits from a leadership team with decades of experience in developing and implementing innovative solutions in pandemic prevention and advocating for, and working in, global emerging infectious disease research, policy, and capacity strengthening. The GVP's standard operating procedures and technological and modeling innovations have already enabled the discovery, detection, and risk characterization of 1,200 potentially zoonotic viruses from 35 countries, including more than 100 novel coronaviruses. Its mission will be achieved through a collaborative partnership among public, private, philanthropic, and civil organizations to detect the majority of our planet's unknown virus threats to prepare for and stop future epidemics.

Progress toward a pandemic interception system will be hugely enabled and reinforced by a closer relationship between these three programs. BIOSCAN can lead and support the assembly of properly identified specimens required for analyses and can help to negotiate the complexities linked to sample acquisition. GVP can lead the optimization of both sampling and analytical protocols required to maximize the recovery of novel viruses. EBP can lead and standardize the genome sequence practices needed to better understand interactions within the symbiome structure, the phylogenetic affinities of taxa, and the genomic basis for host susceptibility to pathogens (12). Other global initiatives may well join this effort.

Given the societal and economic disruptions caused by COVID-19, a near-term focus on pathogen surveys related to human health is justified. However, our species is not alone in confronting pandemics. After its introduction into Africa, the rinderpest virus killed millions of cattle, provoking mass starvation in human populations while also decimating all 72 species of African antelopes, which led to severe ecosystem alterations (13). Whereas RNA viruses have often played a central role, fungal pathogens have driven amphibians (14), bats (15), and diverse species of trees (16) to near extinction.

Although the record of past pandemics is clear for larger life, cryptic pandemics likely rage in other groups. Is it possible, for example, that the unexplained recent collapse of global insect populations reflect pandemics linked to introduced pathogens, such as that now decimating honeybee colonies (17)? Pathogenic impacts are well documented for alien parasites that coinvade with their host, but past work has largely focused on eukaryotes. Just as diseases introduced by Europeans decimated the indigenous peoples of the New World (18), invasive species may have unleashed pandemics impacting diverse domains of life across the planet.

Despite the passage of two millennia from the earliest recorded human pandemics (bubonic plague, smallpox, cholera) to their emerging counterparts (H1N1, influenza, SARS, MERS, Ebola, COVID-19), we still react rather than prepare. Currently no coordinated global pandemic interception system exists. Now is the time to use the full power of science through cooperative efforts among initiatives such as BIOSCAN, GVP, and EBP to advance our understanding of the complex web of interactions that span the domains of life. Although most of these interactions are benign or beneficial, a few bring devastation. And while the prevention of future pandemics motivates such efforts, this study of life is sure to bring benefits that extend far beyond the protection of our species to the well-being of our planetary ecosystem.

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3 R. W. Ashford, W. Crewe, *The Parasites of Homo Sapiens: An Annotated Checklist of the Protozoa, Helminths and Arthropods for which we are Home* (CRC Press, Liverpool, UK, 1998).
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12 J. Damas *et al.*, Broad host range of SARS-CoV-2 predicted by comparative and structural analysis of ACE2 in vertebrates. bioRxiv: 10.1101/2020.04.16.045302 (18 April 2020).
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17 G. E. Budge *et al.*, Chronic bee paralysis as a serious emerging threat to honey bees. *Nat. Commun.* **11**, 2164 (2020).
18 R. S. Walker, L. Sattenspiel, K. R. Hill, Mortality from contact-related epidemics among indigenous populations in Greater Amazonia. *Sci. Rep.* **5**, 14032 (2015).

From:	Andrew Clements <aclements@usaid.gov>
To:	Jonna Mazet <jkmazet@ucdavis.edu>;William Karesh <Karesh@ecohealthalliance.org>;daszak@ecohealthalliance.org <daszak@ecohealthalliance.org>;Christine Kreuder Johnson <ckjohnson@ucdavis.edu>;djwolking@ucdavis.edu <djwolking@ucdavis.edu>
CC:	predictmgt@usaid.gov <predictmgt@usaid.gov>
Sent:	9/8/2020 7:50:48 AM
Subject:	Trump administration restarts disease research after backlash

I continue to be baffled by the fact that people don't seem to be able to tell the difference between Predict and Stop Spillover. Now they're throwing in the new NIH work and making it more confusing.

https://news.yahoo.com/trump-administration-restarts-disease-research-233420449.html

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

Sent: Tue, 8 Sep 2020 14:35:28 -0700
Subject: Re: Y6Q4 P2 Accruals for review/approval
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Elizabeth Leasure <ealeasure@ucdavis.edu>
Cc: Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, predict Sympa List <predict@ucdavis.edu>

Thanks -- approved!
Jonna

On Thu, Sep 3, 2020 at 4:33 PM Elizabeth Leasure <ealeasure@ucdavis.edu> wrote:

> Hi Jonna and Chris. The Y6Q4 accruals for Andrew are below and attached for review and approval. Let me know if you have any questions. Thanks!
>
> July: $687,347
>
> August: $806,806
>
> September: $1,349,486
>
> October 1 Pipeline: $0 ($0 Core + $0 Ebola)
>
> *Elizabeth Leasure*
>
> *Financial Operations Manager*
>
> *One Health Institute*
>
> REDACTED *(cell)*
>
> *530-754-9034 (office)*
>
> *Skype: ealeasure*
>
> **From:** Andrew Clements <aclements@usaid.gov>
> **Sent:** Thursday, September 3, 2020 1:53 AM
> **To:** David Whitfield <David_Whitfield@dai.com>; David John Wolking <djwolking@ucdavis.edu>; Jonna Mazet <jkmazet@ucdavis.edu>; Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>; Katie Taratus <REDACTED>; Elizabeth Leasure <ealeasure@UCDAVIS.EDU>; Goodtree, Hannah <hgoodtree@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; VStewart@nas.edu
> **Cc:** PREDICTMGT <predictmgt@usaid.gov>; P&RMGT <prmgt@usaid.gov>; NASEMMGT <nasemmgt@usaid.gov>
> **Subject:** USAID request: FY20 Q4 accrual information
>
> Hi all,
>
> It is accruals time again. I would appreciate your assistance in providing the following information no later than COB Monday, September 14.

- Projected/Actual July Expenses
- Projected August Expenses
- Projected September Expenses
- Projected Pipeline for October 1, 2020 (Total and broken out by Ebola and Core funding if applicable)
- Projected total expenditure amount (broken out by Ebola and Core if applicable) through September 30, 2020
- If funds obligated by country, expenditures by country and account through June 30, 2020

Thanks!

Andrew

Andrew Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health

U.S. Agency for International Development

Mobile phone: 1-571-345-4253
E-mail: aclements@usaid.gov

For more information on USAID's Emerging Pandemic Threats program, see: http://www.usaid.gov/ept2

From: Andrew Clements <aclements@usaid.gov>
Sent: Tue, 8 Sep 2020 23:23:56 -0700
Subject: Re: USAID request: FY20 Q4 accrual information
To: Elizabeth Leasure <ealeasure@ucdavis.edu>
Cc: David John Wolking <djwolking@ucdavis.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, PREDICTMGT <predictmgt@usaid.gov>

Thanks, Liz

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Sep 9, 2020, at 12:07 AM, Elizabeth Leasure <ealeasure@ucdavis.edu> wrote:

> Hi Andrew. Requested accrual figures for P2 are below. Thanks!
>
> July: $687,347
>
> August: $806,806
>
> September: $1,349,486
>
> October 1 Pipeline: $0 ($0 Core + $0 Ebola)
>
> *Elizabeth Leasure*
> *Financial Operations Manager*
> *One Health Institute*
> REDACTED *(cell)*
> *530-754-9034 (office)*
> *Skype: ealeasure*
>
> **From:** Andrew Clements <aclements@usaid.gov>
> **Sent:** Thursday, September 3, 2020 1:53 AM
> **To:** David Whitfield <REDACTED>; David John Wolking <djwolking@ucdavis.edu>; Jonna Mazet <jkmazet@ucdavis.edu>; Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>; Katie Taratus <REDACTED>; Elizabeth Leasure <ealeasure@UCDAVIS.EDU>; Goodtree, Hannah <hgoodtree@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; VStewart@nas.edu
> **Cc:** PREDICTMGT <predictmgt@usaid.gov>; P&RMGT <prmgt@usaid.gov>; NASEMMGT <nasemmgt@usaid.gov>
> **Subject:** USAID request: FY20 Q4 accrual information
>
> Hi all,
>
> It is accruals time again. I would appreciate your assistance in providing the following information no later than COB Monday, September 14.
>
> - Projected/Actual July Expenses
> - Projected August Expenses
> - Projected September Expenses

- Projected Pipeline for October 1, 2020 (Total and broken out by Ebola and Core funding if applicable)
- Projected total expenditure amount (broken out by Ebola and Core if applicable) through September 30, 2020
- If funds obligated by country, expenditures by country and account through June 30, 2020

Thanks!

Andrew

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For more information on USAID's Emerging Pandemic Threats program, see: http://www.usaid.gov/ept2