Sent: Mon, 24 Jun 2019 14:36:34 -0700
Subject: Re: Workshop on Innovation - Dec 4-5, 2019 Washington DC - Feedback requested on SOT & Planning Committee
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: "Shah, Cecilia" <cshah@nas.edu>
Cc: "Bright, Rick (OS/ASPR/BARDA)" <Rick.Bright@hhs.gov>, Eva Harris <eharris@berkeley.edu>, "Jennifer Gardy [redacted]", Kent Kester <Kent.Kester@sanofipasteur.com>, Mary Wilson <mary_wilson@harvard.edu>, Peter Daszak <daszak@ecohealthalliance.org>, "Ogawa, V. Ayano" <VOgawa@nas.edu>, Brooke Genovese <bgenovese@ucdavis.edu>, Rafael Obregon <robregon@unicef.org>

Dear Ceci,
I think Ian Lipkin <wil2001@cumc.columbia.edu> or Simon Anthony <sja2127@cumc.columbia.edu> from Columbia &/or Linfa Wang from NUS-Singapore [redacted] would be great for the first bullet on the SOT.
Overall, I think John Brownstein <John.Brownstein@childrens.harvard.edu> from Harvard, Boston Children's, HealthMap, FluNearYou, etc. would be great for the overall scope.
Thanks for the good meeting in New York,
Jonna

On Fri, Jun 14, 2019 at 1:29 PM Shah, Cecilia <cshah@nas.edu> wrote:

Dear Forum Members,

Thanks to all of you who were able to join us this week for the workshop on convergence on IDs and NCDs. All the feedback that I have received so far has been incredibly positive. Videos of the presentations as well as power point slides will be posted on our website next week.

I am writing to ask for your feedback on:

1. **Statement of Task (SOT) for Dec Workshop** (attached): During the closed session, we discussed the statement of task for the Dec workshop and the updated version attached with the feedback we received. We are planning to submit the SOT to leadership for approval by the end of next week so please let us know if you would like to suggest any additional edits.

2. **Workshop Planning Committee**: We asked forum members who wanted to volunteer for the workshop planning committee as well as suggestions for external members who we can invite to the planning committee. The forum members who have volunteered so far are:

- Rick Bright
- Peter Daszak
- Eva Harris
- Kent Kester
- Jonna Mazet
- Rafael Obregon
- Mary Wilson

Please let me know if I missed anyone and if you would like to suggest external members to the planning committee. I'd appreciate if you could send suggestions **by Monday, June 24th.**

Best,

Ceci

Cecilia Mundaca Shah, MD, DrPH

Director, Forum on Microbial Threats

Board on Global Health

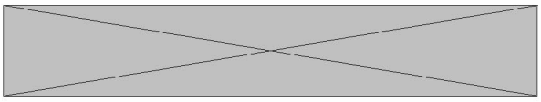
Health and Medicine Division | Find us at nationalacademies.org/HMD

The National Academies of Sciences, Engineering, and Medicine

500 Fifth Street, NW

Washington, DC 20001

Phone: 202 334 2622
E-mail: cshah@nas.edu



From: Andrew Clements <aclements@usaid.gov>
Sent: Thu, 15 Aug 2019 16:00:52 -0600
Subject: Re: I have email connection again
To: David J Wolking <djwolking@ucdavis.edu>
Cc: Elizabeth Leasure <ealeasure@ucdavis.edu>, Katherine Leasure <kaleasure@ucdavis.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, "lparish@usaid.gov" <lparish@usaid.gov>, "predictmgt@usaid.gov" <predictmgt@usaid.gov>

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 15, 2019, at 12:49 PM, David J Wolking <djwolking@ucdavis.edu> wrote:

> Hi Andrew,
> We have our scheduled P2 Senior Management Team meeting next week Tuesday August 20th at our usual time (8:30AM Pacific). I will have most of the priority items, concerns, and questions in the agenda.

Welcome back!

David

On Thu, Aug 15, 2019 at 9:38 AM Elizabeth Leasure <ealeasure@ucdavis.edu> wrote:

> Welcome back! I'll have an equipment approval request coming your way soon (freezers for sample storage), but I don't think there is anything else currently pending your approval.
>
> 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, August 14, 2019 6:03 PM
> **To:** Elizabeth Leasure <ealeasure@UCDAVIS.EDU>; Katherine Leasure <kaleasure@ucdavis.edu>; Jonna Mazet <jkmazet@ucdavis.edu>; David John Wolking <djwolking@ucdavis.edu>
> **Cc:** lparish@usaid.gov; predictmgt@usaid.gov

Subject: I have email connection again

Hi everyone,

As I'm catching up over the next couple of days, please let me know if there are any outstanding actions/approvals that I need to respond to.

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: Andrew Clements <aclements@usaid.gov>
Sent: Thu, 15 Aug 2019 16:01:04 -0600
Subject: Re: I have email connection again
To: Elizabeth Leasure <ealeasure@ucdavis.edu>
Cc: Katherine Leasure <kaleasure@ucdavis.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, David John Wolking <djwolking@ucdavis.edu>, "lparish@usaid.gov" <lparish@usaid.gov>, "predictmgt@usaid.gov" <predictmgt@usaid.gov>

Thanks, Liz.

Andrew P. Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
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>
> *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: Jonna Mazet <jkmazet@ucdavis.edu>
Cc: Chris Johnson <ckjohnson@ucdavis.edu>, Peter Daszak <daszak@ecohealthalliance.org>, Suzan Murray <MurrayS@si.edu>, "sja2127@cumc.columbia.edu" <sja2127@cumc.columbia.edu>, Karen Saylors <ksaylors@metabiota.com>, David J Wolking <djwolking@ucdavis.edu>, "Corina Grigorescu Monagin" <cgmonagin@ucdavis.edu>, Ava Sullivan <sullivan@ecohealthalliance.org>, Kevin Olival <olival@ecohealthalliance.org>
Subject: Re: Bali Day 1 opening session
Sent: Wed, 28 Aug 2019 15:02:24 +0000

Sounds good to me.
BK

On Aug 27, 2019, at 10:02 PM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:

Hello,
As I already told Ava, Andrew will be videotaping his opening remarks for the Bali meeting, as he does not have travel approval to attend. From USAID, we are expecting Cara, Amalhin, Ricardo, Tim, Lisa Kramer, and Zandra (maybe). We're getting a confirmed list now.
Andrew will ask Tim to get us preferred opening people from Mission/Embassy and GoI to invite. If nothing comes, we should invite Tim to speak on behalf of USAID/I and invite our own choice from GoI. Imung should also speak/welcome, I would think.

Then we will have our opening panel, for which I have Chris, Peter, Suzan, Karen, Simon, Billy, and myself slated to speak. If the opening remarks keep to 30 minutes, we will have 1:30 to speak. Breaking it evenly that will be approximately 12 minutes each to give the broad overview of Predict. We are hoping this panel would serve as an introduction to the guests, as well as a celebration of our successes. If you're feeling up for that charge, please respond to this email with your participation confirmation.

I will introduce you and take the final position for give highlights of our successes not otherwise covered by you all.
A straw man for the schedule & session would then be:
Suzan: community & stakeholder engagement, including USG
Chris: surveillance findings & implication for risk
Karen: behavior & motivation for recommendations
Simon: lab strengthening & discovery
Peter: risk modeling & highlights of developing recommendations
Billy: turning from data to improved engagements & policy
myself: additional highlights of successes & potential for long-term impacts with teasers for rest of meeting

Please let me know what you think of the above & make suggestions for improvements.
The rest of the panels are coming together & will, for the most part, be moderated by one global person & one in-country leader. To spread the visibility & leadership of the meeting, most of us on the opening panel won't be moderating those panels, but there are some strategic exceptions. Corina & David will email you if there are additional expectations for you to complete the organization and coordination of a panel.

Let me know what you think,
Jonna

P.S. Once we have settled on our scope & roles, we'll have a Zoom closer to the meeting time to make sure we will be well coordinated and won't overlap in our comments.

From: Andrew Clements <aclements@usaid.gov>
Sent: Wed, 25 Sep 2019 21:18:45 +0200
Subject: Re: Reminder: PREDICT MT Call Tuesday October 1, 2019 @ 8:30AM Pacific
To: David J Wolking <djwolking@ucdavis.edu>
Cc: Alisa Pereira Emerging Threats Division <apereira@usaid.gov>, Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, Peter Daszak <daszak@ecohealthalliance.org>, PREDICTMGT <predictmgt@usaid.gov>, "Prof. Jonna Mazet" <jkmazet@ucdavis.edu>, "William B. Karesh" <karesh@ecohealthalliance.org>, Karen Saylors <ksaylors@labyrinthgh.com>, "Cara J. Chrisman" <cchrisman@usaid.gov>, Alison Andre <andre@ecohealthalliance.org>, Catherine Machalaba <Machalaba@ecohealthalliance.org>, Ava Sullivan <sullivan@ecohealthalliance.org>, Evelyn Luciano <luciano@ecohealthalliance.org>, "predict@ucdavis.edu" <predict@ucdavis.edu>, Tracey Goldstein <tgoldstein@ucdavis.edu>, "Prof. Woutrina Smith" <wasmith@ucdavis.edu>

Hi,

Would like to hear about estimated timing for the various analyses that are being conducted (e.g. ranking of A/H interfaces).

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 Wed, Sep 25, 2019 at 8:48 PM David J Wolking <djwolking@ucdavis.edu> wrote:

> Hi there,
> Just a reminder about next week's management team call. Please let me know if you have any pertinent items for discussion and I'll incorporate them into the agenda (to be shared Friday or Monday next week).

Best,

David

From: Andrew Clements <aclements@usaid.gov>
To: David J Wolking <djwolking@ucdavis.edu>
CC: Alisa Pereira Emerging Threats Division <apereira@usaid.gov>;Christine Kreuder Johnson <ckjohnson@ucdavis.edu>;Peter Daszak <daszak@ecohealthalliance.org>;PREDICTMGT <predictmgt@usaid.gov>;Prof. Jonna Mazet <jkmazet@ucdavis.edu>;William B. Karesh <karesh@ecohealthalliance.org>;Karen Saylors <ksaylors@labyrinthgh.com>;Cara J. Chrisman <cchrisman@usaid.gov>;Alison Andre <andre@ecohealthalliance.org>;Catherine Machalaba <Machalaba@ecohealthalliance.org>;Ava Sullivan <sullivan@ecohealthalliance.org>;Evelyn Luciano <luciano@ecohealthalliance.org>;predict@ucdavis.edu <predict@ucdavis.edu>;Tracey Goldstein <tgoldstein@ucdavis.edu>;Prof. Woutrina Smith <wasmith@ucdavis.edu>
Sent: 9/25/2019 12:19:21 PM
Subject: Re: Reminder: PREDICT MT Call Tuesday October 1, 2019 @ 8:30AM Pacific

Plus, an update on the status of country close-outs.

Andrew Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
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Mobile phone: 1-571-345-4253
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To: Andrew Clements <aclements@usaid.gov>
CC: David J Wolking <djwolking@ucdavis.edu>;Alisa Pereira Emerging Threats Division <apereira@usaid.gov>;Christine Kreuder Johnson <ckjohnson@ucdavis.edu>;Peter Daszak <daszak@ecohealthalliance.org>;PREDICTMGT <predictmgt@usaid.gov>;Prof. Jonna Mazet <jkmazet@ucdavis.edu>;William B. Karesh <karesh@ecohealthalliance.org>;Karen Saylors <ksaylors@labyrinthgh.com>;Cara J. Chrisman <cchrisman@usaid.gov>;Alison Andre <andre@ecohealthalliance.org>;Catherine Machalaba <Machalaba@ecohealthalliance.org>;Ava Sullivan <sullivan@ecohealthalliance.org>;Evelyn Luciano <luciano@ecohealthalliance.org>;predict@ucdavis.edu <predict@ucdavis.edu>;Tracey Goldstein <tgoldstein@ucdavis.edu>;Prof. Woutrina Smith <wasmith@ucdavis.edu>
Sent: 9/25/2019 12:30:25 PM
Subject: Re: Reminder: PREDICT MT Call Tuesday October 1, 2019 @ 8:30AM Pacific

Got it, thanks Andrew.

David

On Wed, Sep 25, 2019 at 12:19 PM Andrew Clements <aclements@usaid.gov> wrote:
Plus, an update on the status of country close-outs.

Andrew Clements, Ph.D.
Senior Scientific Advisor
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Best,

David

From: Elizabeth Leasure <ealeasure@UCDAVIS.EDU>
To: Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>, Tracey Goldstein <tgoldstein@ucdavis.edu>, David John Wolking <djwolking@ucdavis.edu>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, [redacted], predict Sympa List <predict@ucdavis.edu>, Hannah R Chale <hrchale@UCDAVIS.EDU>, Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>
Subject: RE: [predict] Re: Review (Tasks): PREDICT MT & EB agendas for tomorrow - October 1, 2019 Call
Sent: Tue, 1 Oct 2019 00:04:42 +0000

I'd rather keep it an 8:30 start, as well.

Elizabeth Leasure
Financial Operations Manager
One Health Institute
REDACTED
Skype: ealeasure

From: Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>
Sent: Monday, September 30, 2019 4:52 PM
To: Tracey Goldstein <tgoldstein@ucdavis.edu>; David John Wolking <djwolking@ucdavis.edu>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>; [redacted]; Elizabeth Leasure <ealeasure@UCDAVIS.EDU>; predict Sympa List <predict@ucdavis.edu>; Hannah R Chale <hrchale@UCDAVIS.EDU>; Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>
Subject: Re: [predict] Re: Review (Tasks): PREDICT MT & EB agendas for tomorrow - October 1, 2019 Call

Based on recent polling, we were expecting SMT to be 8:30-9:30 and EB to be 9:30-10:30.
8:00 start might be tough for me personally at the moment.
/ckj

From: Tracey Goldstein <tgoldstein@ucdavis.edu>
Date: Monday, September 30, 2019 at 3:28 PM
To: David John Wolking <djwolking@ucdavis.edu>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, [redacted], Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>, Elizabeth Leasure <ealeasure@UCDAVIS.EDU>, predict Sympa List <predict@ucdavis.edu>, Hannah R Chale <hrchale@UCDAVIS.EDU>, Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>
Subject: Re: [predict] Re: Review (Tasks): PREDICT MT & EB agendas for tomorrow - October 1, 2019 Call

Yes, I can do that

On Mon, Sep 30, 2019 at 2:30 PM David J Wolking <djwolking@ucdavis.edu> wrote:
Hi there,

I sent a reminder to EB last week that we changed the call to Tuesday 9:30-10:30AM this week instead of our usual Weds time. If we can get USAID to commit to 8-9AM tomorrow instead of 8:30AM then we can switch to the 9-10 spot for EB during the extension.

Want me to share the MT agenda with EB as well as placeholder content? Not sure we have anything additional to cover, just perhaps more depth on each topic.

David

On Mon, Sep 30, 2019 at 1:18 PM Jonna Mazet <jkmazet@ucdavis.edu> wrote:
Thanks,
I made suggestions on the google doc.
I still have EB as 9-11 on Wednesday. Did we get that rescheduled to 9:30-10:30 tomorrow (re your reference to meetings tomorrow)? I think our long-term goal was to move MT to 8-9 & EB to 9-10, but I'm not sure which things have and haven't been changed.

I think David is going to call me soon, but we should include an update of the sample disposition. Corina or Tracey, can you provide an update with those last three countries sorted today?
I think there is a sample & data sharing document or tracker that has the POC for samples & data, etc.. Where is that & is it in good shape? we should be sharing that with USAID, as well.
We really should include something on equipment disposition. I need to review first. Hannah, may I see that tracker today, please?
Have a nice day,
Jonna

On Mon, Sep 30, 2019 at 6:24 AM David J Wolking <djwolking@ucdavis.edu> wrote:
Hi Jonna, Chris, and Liz,

Below and at this link is the draft MT agenda. EB is largely the same agenda though likely with a different tone to discussions and more depth (e.g., Bali meeting next steps, close-out, and extension).

Feel free to edit the Google Doc and I'll finish it up and share with both MT and EB lists later today.

David

PREDICT Management Team Meeting Agenda
Tuesday,October 1, 2019
8:30-9:30AM PST/11:30-12:30pm EST
Zoom link: [redacted]
Additional Zoom info below agenda

USAID Updates

1. Administrative items
- Bangladesh/Core funding updates
- Bali feedback and next steps

2. On close-out - standing item
- Review/discussion of USAID close-out tracker (as needed)
  - Sample and data
  - Equipment and supplies
  - Close-out meetings
  - Final reports

3. Extension plans and discussion
- Leadership
- Estimated timing for testing and various analyses (e.g., A/H interfaces, etc.)
- Final report plans

4. Mission, partner communications & country roundup essentials

5. Publication, media, and conference updates
- Lancet commentary "Do we need a Global Virome Project"
- Le Figaro article on PREDICT and EBO-SURSY released last week
- ID week 2019, Infectious Disease Society of America, Washington DC (October 2-6, 2019)

- DTRA Monkeypox Networking event, Dakar Senegal (November 18-20, 2019)

- 19th International Congress on Infectious Diseases, Kuala Lumpur (February 20-23, 2020)

6. AOB

--
Tracey Goldstein, PhD
Associate Director, Professor
One Health Institute
School of Veterinary Medicine
University of California
Davis, CA 95616
REDACTED
E-mail: tgoldstein@ucdavis.edu

From: Dennis Carroll [redacted]
Sent: Tue, 12 Nov 2019 16:46:33 -0500
Subject: Re: BCA meeting in February
To: Cara Chrisman <cchrisman@usaid.gov>, Eddy Rubin <[redacted] [redacted]
Jonna Mazet <jkmazet@ucdavis.edu>, Nathan Wolfe <nwolfe@metabiota.com>, Peter Daszak <daszak@ecohealthalliance.org>, Samtha Maher <maher@ecohealthalliance.org>

[redacted] thanks for moving this forward.

ALL-PLEASE NOTE.

I did not receive the original email as it was sent to my closed USAID account. PLEASE delete this email account and REPLACE with [redacted]

Thanks

On Tue, Nov 12, 2019 at 4:31 PM [redacted] wrote:

> Dear Steve, Colin, Gavin, and Mukesh,
>
> I am following up to schedule an in-person meeting for the Global Virome Project Benefit Cost Analysis (BCA). Following the call confirmed on January 16, the BCA team would like to meet for an in-person, one-and-a-half day meeting with you in February. The proposed location is Washington DC or NYC.
>
> Would you be able to share your availability for the following options?
>
> (1) Feb 12 (all day) + Feb 13 (morning)
>
> (2) Feb 12 (afternoon) + Feb 13 (all day)
>
> (3) Feb 13 (all day) + Feb 14 (morning)
>
> (4) Feb 13 (afternoon) + Feb 14 (all day)
>
> I would appreciate your response by Tuesday **November 19**. If none of the options work, I will circle back with alternatives, so please let me know. As a reminder, the January call will take place on Thursday January 16, 10am PT/1pm ET (90 min). We will share call-in details closer to the meeting.
>
> Thank you for your continued cooperation,
>
> [redacted]

--
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: Dennis Carroll [redacted] Cara Chrisman <cchrisman@usaid.gov>, Eddy Rubin [redacted], Jonna Mazet <jkmazet@ucdavis.edu>, Nathan Wolfe <nwolfe@metabiota.com>, Peter Daszak <daszak@ecohealthalliance.org>, Samtha Maher <maher@ecohealthalliance.org>
Subject: RE: Senator Leahy's statement on viral threats
Sent: Thu, 14 Nov 2019 21:56:40 +0000

Wow, this is wonderful. Well done Dennis!

From: Dennis Carroll [redacted]
Sent: Thursday, November 14, 2019 1:25 PM
To: Cara Chrisman <cchrisman@usaid.gov>; Eddy Rubin [redacted] Jonna Mazet <jkmazet@ucdavis.edu>; Nathan Wolfe <nwolfe@metabiota.com>; Peter Daszak <daszak@ecohealthalliance.org>; Samtha Maher <maher@ecohealthalliance.org>
Subject: Fwd: Senator Leahy's statement on viral threats

See twitter link below and further link to his formal statement

:)

---------- Forwarded message ---------
From: **Dennis Carroll** [redacted]
Date: Thu, Nov 14, 2019 at 4:21 PM
Subject:
To: [redacted]

https://mobile.twitter.com/SenatorLeahy/status/1195087951954358272?s=20

Shared via the Google app

Sent from my iPhone
--
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: Andrew Clements <aclements@usaid.gov>
To: David J Wolking <djwolking@ucdavis.edu>
CC: Christine Kreuder Johnson <ckjohnson@ucdavis.edu>;Jonna Mazet <jkmazet@ucdavis.edu>;Elizabeth Leasure <ealeasure@ucdavis.edu>;Predict inbox <predict@ucdavis.edu>;PREDICTMGT <predictmgt@usaid.gov>
Sent: 11/25/2019 8:38:57 AM
Subject: Re: GAO audit of GHS programs

sounds good. 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
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On Mon, Nov 25, 2019 at 5:36 PM David J Wolking <djwolking@ucdavis.edu> wrote:
Hi Andrew,

I'll add this to our management team agenda for discussion tomorrow.

Thanks!

David

On Mon, Nov 25, 2019 at 2:36 AM Andrew Clements <aclements@usaid.gov> wrote:
Hi Chris,

I'm writing to let you know that USAID is in the engagement stage of a USG-wide Government Accountability Office (GAO) Global Health Security (GHS) audit. The key questions under review are:

1. To what extent have U.S. Agencies defined their roles and responsibilities on global health security, including in any strategy documents?
2. What is the status of U.S. agencies' global health security funding?
3. What global health security activities have these funds supported?

The GAO plans to visit four countries (Senegal, Ethiopia, Vietnam, Indonesia) between early December 2019 and mid-January 2020 to directly observe GHS activity implementation (note: all of these were PREDICT-2 countries). Even though PREDICT-2 recently ended in-country activities, it was active when USAID shared its list of active projects with the GAO auditors. As a result, GAO may be asking questions about PREDICT-2 during their visits to the four countries.

In discussions with USAID staff in these countries, we have asked our EPT/GHSA POCs in-country to be prepared to speak about the activities conducted by PREDICT-2. **ACTION ITEM:** To make sure our EPT/GHSA staff have the latest information on PREDICT-2 activities in their country, please send me the end of project country reports for Senegal, Ethiopia, Vietnam, Indonesia (even if still in draft form; if so, mark accordingly).

In addition, I wanted to let you know that you or your PREDICT-2 colleagues may be contacted by GAO. Please refer to your corporate policy regarding what type of information you provide to them. Please note that USAID has not provided country level budgets to the GAO at this time.

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: David J Wolking <djwolking@ucdavis.edu>
To: Andrew Clements <aclements@usaid.gov>
CC: Christine Kreuder Johnson <ckjohnson@ucdavis.edu>;Jonna Mazet <jkmazet@ucdavis.edu>;Elizabeth Leasure <ealeasure@ucdavis.edu>;Predict inbox <predict@ucdavis.edu>;PREDICTMGT <predictmgt@usaid.gov>
Sent: 11/26/2019 1:42:03 PM
Subject: Re: GAO audit of GHS programs

Hi Andrew,

Attaching a zip file with our "ultralight" final reports used in close-out activities, the available One Health case studies, and our latest GHSA report. I reduced the file sizes for ease of sharing.

Hope this helps,

David

On Mon, Nov 25, 2019 at 8:39 AM Andrew Clements <aclements@usaid.gov> wrote:
sounds good. thanks.

Andrew Clements, Ph.D.
Senior Scientific Advisor
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On Mon, Nov 25, 2019 at 5:36 PM David J Wolking <djwolking@ucdavis.edu> wrote:
Hi Andrew,

I'll add this to our management team agenda for discussion tomorrow.

Thanks!

David

On Mon, Nov 25, 2019 at 2:36 AM Andrew Clements <aclements@usaid.gov> wrote:
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PREDICT-2 FY19Q4 GHSA
Phase I Semi-Annual Report

All Phase I countries will submit progress reports on GHSA implementation on a semi-annual basis. Now, Phase II countries will report annually, using a separate template. The US Embassy in each country is responsible for preparing and submitting the required progress reports to the interagency. To aid USAID Missions in completing their report utilizing implementing partner activities and progress, USAID asks implementing partners to submit semi-annual reports for Phase I countries. Partners will be requested report on specific progress toward raising a country's capacity levels. As previously mentioned, the focus of USAID's GHSA work is to make progress on the AP capacity levels measured by WHO's JEE tool.

The timeline for FY19 is below. Due to ad hoc reporting and effective project monitoring, USAID may need to adjust the reporting schedule, but will do its best to give advance notice. Reports are due to the USAID GHSA Washington team and the project AOR.

Report	Due Date
FY19Q2 Mid-year Progress Report	April 15, 2019
FY19Q4 End of the Year Progress Report	September 23, 2019

Notes:
-The FY19 Q2 reporting timeline is from October 1, 2018-March 31, 2019
-The FY19 Q4 reporting timeline is from April 1, 2019-September 30, 2019
-For more information on action packages, capacity levels and indicators, please use the JEE Tool:
http://apps.who.int/iris/bitstream/10665/204368/1/9789241510172_eng.pdf
-Please see the attached document titled "Additional Information on the Joint External Evaluation Level of Capacity Score Descriptions," which provides supplementary information on many of the capacity levels.
-Send relevant pictures with captions/photo credit to enhance reporting
-Please fill all sections of the template for relevant countries, including Sections 2-4 after the chart.

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Africa

Country
1. Burkina Faso
2. Cameroon
3. Cote d'Ivoire
4. Ethiopia
5. Guinea
6. Kenya
7. Liberia
8. Mali
9. Senegal
10. Sierra Leone
11. Tanzania
12. Uganda

Asia

Country
1. Bangladesh
2. India
3. Indonesia
4. Vietnam

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Burkina Faso

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1	2	3	4
USAID's GHSA Technical Focus Areas	**GHSA Indicator**	**Specific progress made toward capacity level**	**Comments**
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens		
	P.4.2: Veterinary or Animal Health Workforce		
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis		
Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)		
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		

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	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)		
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system		
	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country		
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements		
Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		

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	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		
	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		
	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements
Section 3: Challenges and potential solutions (if applicable)
Section 4: Outbreak response (if applicable)

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Cameroon

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1 USAID's GHSA Technical Focus Areas	2 GHSA Indicator	3 Specific progress made toward capacity level	4 Comments
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	PREDICT continued to support Cameroon's national surveillance system and strengthen local capacity for zoonotic disease surveillance in collaboration with the ministries of health, livestock, wildlife & forestry and environment (from the national, regional and district levels) using a One Health approach for the development of Cameroon's GHSA roadmap. As part of efforts to strengthen and institutionalize One Health in Cameroon, PREDICT provided technical expertise on zoonotic disease public health events and the development of multi-sectoral strategic plans for zoonotic disease surveillance, prevention, and response. This year, PREDICT's focus in Cameroon shifted from concurrent animal and human sampling in high-risk areas toward risk characterization, stakeholder engagement, and outreach to communicate zoonotic disease	PREDICT's zoonotic disease surveillance was strategically designed to train, equip, and enable surveillance personnel to collect data for both priority zoonoses (filo- and influenza viruses) and emerging and re-emerging pathogens in vulnerable and high-risk areas. Shared animal and human surveillance data and findings helped catalyze formal information sharing between animal and human surveillance systems. In addition, surveillance activities engaged local communities in high-risk areas for disease transmission and emergence and fosters improved recognition of zoonotic diseases and awareness of transmission pathways and prevention and control options. Since 2014, the PREDICT/Cameroon team has conducted over 900 behavioral risk interviews through questionnaires, ethnographic interviews and focus groups, and sampled and tested over 3,600 animals and people for zoonotic diseases and emerging threats. Samples are securely stored at the

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		transmission risks with national and community-level partners in the South region. Now at the close of the project, PREDICT-2 zoonotic disease surveillance results have been shared at community levels to foster improved awareness of zoonotic diseases and transmission pathways along with potential prevention and control strategies. PREDICT shifted focus to modeling and analytics projects aimed at developing interventions and policy related to human interactions with bats and exploring bat-hunter behavioral risk hotspots, bat-tourist interactions, and fruit bat-livestock-orchard overlap. Additionally, efforts intensified towards knowledge and technology transfer as information, data, and recommendations were provided to ministry partners at the subnational and national levels.	Ministry of Defense Military Health Research Centre (CRESAR) where they will remain securely and safely archived as a health and conservation resource.
	P.4.2: Veterinary or Animal Health Workforce	PREDICT/Cameroon worked with the Directorate of Veterinary Services of the Ministry of Livestock to develop training materials for zoonotic disease surveillance in wildlife for Ministry of Wildlife staff (eco-guards). These training were deployed during three national training sessions and affect twenty protected areas in Cameroon. This newly constituted network aims to implement a wildlife event-based surveillance system to collect weekly health information on disease cases and mortality in protected areas.	PREDICT/Cameroon's primary animal health workforce collaborators were the Ministry of Forestry and Wildlife, the Central Veterinary Laboratory, the National Program for the Control and Fight Against Emerging and Re-emerging Zoonoses (National Program for Zoonoses), and researchers from the University of Douala and the University of Maroua. PREDICT/Cameroon provided opportunities for student training through field and lab internships in all aspects of zoonotic disease surveillance: detection, prevention, response, and control.
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis	PREDICT/Cameroon continued to work with EPT-2 partners (P&R, FAO, OHCEA) in the operationalization of the One Health Strategic Plan to support multi-sectoral coordination mechanisms for zoonotic disease surveillance, prevention, and response.	PREDICT has contributed, in collaboration with GHSA partners (FAO, CDC), to the development of strategic surveillance plans for priority zoonoses (rabies, anthrax, avian influenza, monkeypox and brucellosis).

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Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)		
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		
	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)	Since 2014, PREDICT has performed over 56,000 tests on animal and human samples at the Military Health Research Center (CRESAR) in Yaoundé. All samples were tested for priority zoonotic diseases using PREDICT protocols for filoviruses (including Ebola and Marburg), influenza viruses (including HPAI), coronaviruses, and paramyxoviruses. Confirmed results were shared with ministry partners for approval prior to release, which provided opportunities for data sharing and coordination across human and animal health laboratory partners, an area highlighted for improvement in Cameroon's JEE.	The PREDICT/Cameroon partner lab is the Military Health Research Center (CRESAR) in Yaoundé CRESAR is equipped to perform the full range of activities required for safe detection of priority zoonotic diseases and emerging viral threats to global health security. PREDICT/Cameroon completed testing animal and human samples at CRESAR, which also serves as a key training center for students and professionals, including government staff from other nodes in the national lab system (LANAVET, LNSP). PREDICT/Cameroon supported CRESAR in strengthening detection and surveillance capabilities across both the human and animal sectors, in providing referral services to the national lab system, and by contributing integral data for surveillance reporting.
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system		

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	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE	Findings from One Health surveillance of priority zoonotic diseases were routinely shared with all government partners to improve multisectoral communication and data flow. PREDICT has shared results with government partners (ministries responsible for health, livestock, research, defense, wildlife and environment, and the National Zoonoses Program).	The government of Cameroon approved the release of test results for samples collected during the life of the project from PREDICT wildlife disease surveillance and human syndromic surveillance in the South Region of Cameroon. Test results and project findings approved for public release by the Cameroon government are available to the public in an interactive map at www.data.predict.global
	D.3.2 Reporting network and protocols in country		
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements	PREDICT has provided training to more than 200 individuals, including ongoing refresher training for project staff and initial training for university students in core skills required for safe and effective zoonotic disease surveillance and detection. Enhancing the One Health skills of graduate students in clinical biology, public health, and veterinary medicine (from University of Yaoundé, University of Montagnes, Catholic University, and University and Strategic Institute of Estuary) builds the capacity of Cameroon's future health workforce to safely detect priority zoonoses and emerging viral threats. PREDICT lab internships also continued training and mentoring postgraduate students in laboratory safety and disease detection, providing them the opportunity to gain invaluable in-service experience in a national laboratory.	PREDICT provided ongoing opportunities for government and future animal and human health professionals (students, interns) using the One Health approach. PREDICT/Cameroon provided training in core One Health skills to more than 200 people to date.

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Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		
	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency		
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		
	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		
	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements

PREDICT/Cameroon completed all planned activities and worked closely with Government of Cameroon partners to share findings, insights, recommendations, and to transfer knowledge and skills for long-term sustainability of One Health surveillance and zoonotic disease detection efforts. In addition, the team worked closely with community partners on outreach to raise awareness of zoonotic disease risks and to share risk reduction recommendations. On September 24, PREDICT held the final

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close-out meeting, briefing ministry officials and key stakeholders on 10 years of project achievements, impact, and recommendations for continued success towards the early identification, detection, and response to zoonotic disease threats.

Section 3: Challenges and potential solutions (if applicable)

NA

Section 4: Outbreak response (if applicable)

NA

Cote D'Ivoire

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1 USAID's GHSA Technical Focus Areas	2 GHSA Indicator	3 Specific progress made toward capacity level	4 Comments
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	PREDICT put One Health in action, integrating animal and human health sectors in zoonotic disease surveillance and viral detection, an area highlighted for strengthening in CIV's JEE. Since 2014, the PREDICT team sampled more than 1,100 animals and people as part of One Health surveillance activities. LANADA and IPCI staff were also trained to	PREDICT's aggressive viral testing timeline had a positive impact on laboratory workflow, as staff learned how to work on a large number of specimens within a short time-frame. This is especially beneficial for outbreak preparedness training, as rapid diagnostics are key to response and control efforts. All SOPs were provided by PREDICT. The

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		jointly analyze all animal and human samples. Lab technicians at both labs successfully completed testing for the five viral families targeted by PREDICT; interpretation of the results is pending.	laboratory protocols are widely used and shared among staff members. The screening of PREDICT specimens for other viral agents (Lassa, Monkeypox) as well as bacterial and blood parasitic agents (HAT, Malaria) is being discussed. In collaboration with FAO, PREDICT helped train new veterinarians from LANADA and the Veterinarians Services Directorate (DSV). While the project is now complete, PREDICT has impacted country officials' interest in pursuing sampling and detection of viral agents in fauna, and by transferring knowledge and protocols to partners engaged in the national surveillance system.
	P.4.2: Veterinary or Animal Health Workforce	PREDICT trained veterinarians and laboratory technicians in wildlife surveillance, directly contributing to enhanced capacity of the national animal health workforce, an area targeted for strengthening in the country's JEE. All individuals were trained in biosafety and PPE, laboratory safety, and cold chain management and training is ongoing. The laboratory technicians joined the IPCI laboratory team for analysis of samples. PREDICT/CIV completed a wildlife surveillance training in June 2019 with stakcholdcrs of thc GHSA and thc Animal Health Technical Working Group (GTTSA) together with Abidjan Zoo staff and students from the Felix Houphouet Boigny University.	PREDICT trained more than 350 individuals since the start of activities, including staff from the agriculture, veterinary and wildlife sectors in Côte d'Ivoire. In addition to completing training for members of different institutions involved in Côte d'Ivoire animal (domestic and wildlife) disease surveillance, PREDICT/CIV also trained staff that work in laboratories dealing with animal health.
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis	PREDICT/CIV completed all surveillance activities in the field and two clinics, as well as sampling in hospitals. PREDICT/CIV staff actively participated in USAID GHSA Implementation Partner Meetings in Côte d'Ivoire and other GHSA-FETP workshops.	Despite ending of surveillance and active sampling, members of PREDICT/CIV team continued to raise awareness in communities and in the Bouaflé Hospital.

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Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)		
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		
	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)	PREDICT/CIV strengthened partner laboratories (LANADA and IPCI) through continued capacity building, site visits and discussions with the new LANADA Bingerville head. PREDICT/CIV provided IPCI and LANADA laboratories with equipment, reagents and protocols to analyze samples and detect priority zoonotic virus. PREDICT/CIV continued working with FAO, and the Veterinarians Services Directorate (DSV) to develop collaborative sampling and testing plans for livestock samples.	PREDICT actively worked with partner laboratories LANADA and IPCI to improve laboratory capacity, data management, and information sharing between the animal and human health sectors. PREDICT/CIV and the USAID Mission performed an advisory and mentoring role which aimed to improve sample collection, storage and analysis in the future. Results from zoonotic disease testing were shared with the laboratory network, including several LANADA laboratories across the country (Abidjan-Central, Yamoussoukro, Bouaké, Korhogo), once findings were approved for release by authorities. This approach ensured that findings and information were broadcast from the central, national level to the district level.
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems	PREDICT and other partners, such as FAO, supported the DSV in the creation of the GTTSA in Côte d'Ivoire, which has the potential for long-term impact for the surveillance, detection, and management of zoonoses in Cote d'Ivoire.	

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	D.2.2 Interoperable, interconnected, electronic real-time reporting system		
	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country		
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements	PREDICT trained over 350 individuals in core skills required for disease surveillance according to PREDICT e-book protocols. Trainings included members of CIV's national health system and were supported by hands-on opportunities during wildlife sample analysis in the laboratory. This increases the number of the workforce able to be mobilized in the laboratory, should a quick response be required due to an outbreak.	.
Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented	PREDICT/CIV continued to collaborate with IPCI to identify directions for future implementation of an Outbreak Response Team due to the emergence of highly pathogenic agents along the country's borders (Lassa fever, Monkeypox).	
	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency		

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	R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		
	R.5.2 Internal and partner communication and coordination	PREDICT/CIV shared the "One Health in Action Case Study Booklet" and delivered project summary reports to the Technical Secretariat of the GHSA, the USAID Mission, and other critical coordinating groups working on animal and human health such as the Wildlife and Game Hunting Resources Directorate (DFRC), the Office for Parks and Reserves (OIPR), and the Directorate of Veterinary Services (DSV). In addition, PREDICT/CIV completed the final workshop in Abidjan in September 2019.	
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities	PREDICT/CIV shared the *Living Safely with Bats* risk and behavior change communication resource as a useful tool to communicate on the risks of disease transmission associated with bats in all communities in September 2019.	
	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)	PREDICT played a key role in drafting the national "One Health" platform plan and the priority diseases selection. PREDICT was acknowledged as "the face of One Health" in Cote d'Ivoire and as a practical training for officials and decision makers involved in the creation of the national "One Health" platform, held in Abidjan in May 2019.	

Section 2: Major success stories/notable achievements

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NA

Section 3: Challenges and potential solutions (if applicable)
NA

Section 4: Outbreak response (if applicable)
NA

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Ethiopia

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1 USAID's GHSA Technical Focus Areas	2 GHSA Indicator	3 Specific progress made toward capacity level	4 Comments
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	PREDICT's zoonotic disease surveillance was strategically designed to train, equip, and enable surveillance personnel to collect data and build the evidence base for both priority zoonoses and emerging and re-emerging pathogens such as Ebola and MERS-COV in vulnerable and high-risk areas. Our surveillance engaged local communities in high-risk areas for disease transmission and emergence and fostered improved recognition of zoonotic diseases and awareness of transmission pathways and prevention and control options. This period, laboratory analysis continued on all collected samples with confirmatory testing planned into PREDICT's no cost extension period (October 2019). Additionally, PREDICT/Ethiopia team members participated in regular activities organized by the National One Health Steering Committee, as well as	Surveillance activities were implemented in the Awash Region and Bati Regions by the Aklilu Lemma Institute of Pathobiology (ALIPB – University) at Addis Ababa University, in close coordination with district level veterinary and public health professionals including local health center staff Human syndromic surveillance activities at both the Awash Health Center and Bati Health Center were completed in October 2018. 311 patients were enrolled and sampled since human surveillance activities began in early 2018. Wildlife sampling activities were also completed. Sample analysis was conducted at both the ALIPB and EPHI PREDICT-2 laboratories. In addition, human and wildlife samples continue to be analyzed at the UC Davis laboratory for confirmatory testing and sequence analysis.

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		contributed to efforts in developing a National One Health Communication Network (OHCN) in Ethiopia, in collaboration with the Government Communication Affairs Office.	
	P.4.2: Veterinary or Animal Health Workforce	PREDICT provided critical in-service training opportunities through a deliberately designed One Health zoonotic disease surveillance program that encouraged hands-on development of core skills lacking in the current animal health workforce. The PREDICT team trained animal health professionals (e.g. government vets, extension officers, lab technicians in animal health labs, researchers, and local community members), thereby directly strengthening the capability of the current workforce to successfully and safely conduct core functions of their job on the frontlines of zoonotic disease control. Specifically, 2 EPHI laboratory team members completed training in conventional PCR (cPCR) techniques during a training led by PREDICT staff from the ALIPB	PREDICT/Ethiopia primary animal health workforce implementing partner was the Aklilu Lemma Institute of Pathobiology (ALIPB – University) at Addis Ababa University. In addition, we engaged with the Ethiopian Wildlife Conservation Authority (EWCA) to build capacity for wildlife surveillance in the country. A role for the ALIPB lab is as a training center for the animal health sector and providing reference support to the national surveillance system. Through ALIPB, PREDICT provided multiple opportunities for critical training of animal and public health professionals across the educational and government sectors on many aspects of zoonotic disease surveillance, detection, prevention, response, and control.
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis	PREDICT/Ethiopia team members participated in regular activities organized by the National One Health Steering Committee, as well as contributed to efforts in developing a National One Health Communication Network (OHCN) in Ethiopia, in collaboration with the Government Communication Affairs Office. In addition, PREDICT shared laboratory findings with government stakeholders EWCA and EPHI/MoH.	Through our implementing partners AAU ALIPB and the Ethiopia Public Health Institute (EPHI), our One Health network in Ethiopia engaged various ministries and agencies such as the Ministry of Health, Ministry of Environment, FAO, and Center for Disease Control in Ethiopia. PREDICT established data sharing agreements with all implementing partners and procedures for sharing data (including project information and findings) with all ministry partners and other government and non-governmental organizations across both animal and human health sectors. As the project was by design One Health in action, we shared data, information, and reports to catalyze regularly scheduled meetings between sectors and encourage active discussion and communication among sectors.

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Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)		
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		
	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)	PREDICT strengthened the national laboratory systems by enabling disease detection through a One Health laboratory network based at partner labs the Aklilu Lemma Institute of Pathobiology (ALIPB – University) at Addis Ababa University along with the public health lab at the Ethiopia Public Health Institute. These laboratories maintained strong ties to the national system and protocols, and information was shared across animal and human health labs working to actively improve interlinkages and coordination. Through in-service training opportunities, PREDICT provided staff from the national system (EPHI, NAHDIC) opportunities to enhance skills in biosafety, lab safety and methods for detecting emerging threats. This period, human and wildlife sample testing for five viral families was completed both at ALIPB and EPHI; confirmed results from UC Davis lab were interpreted and shared with the relevant ministries in Ethiopia. Government approvals were obtained from EWCA for wildlife test results and approvals of human sample test results are in process.	PREDICT partner labs at Aklilu Lemma Institute of Pathobiology (ALIPB – University) at Addis Ababa University, as well as Ethiopia Public Health Institute (EPHI) are equipped for most of the activities required for safely detecting zoonotic viruses, including biosafety and biosecurity, cold chain, safe sample storage, data management, safe sample transport and shipping, and molecular viral detection techniques. The lab personnel were also accordingly trained. As a result, these two labs have the capacity to safely detect priority zoonotic diseases and emerging viral threats. The lab at ALIPB actively tested animal samples and served as key training center for students and professionals, including government staff from the national lab system. The lab at EPHI also actively tested human samples collected from Awash and Bati health centers.
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		

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Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system		
	D.2.3 Analysis of surveillance data D.2.4 Syndromic surveillance systems		
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country		
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements	Through in-service trainings, PREDICT worked to directly enhance skills of the existing health workforce and recruited wildlife personnel, especially in the animal health sector with a niche focus on biosafety and safe capture and handling of mammals, such as bats and primates, which represent the highest risk for viral spillover and spread to people. The PREDICT partners were training institutions that actively promoted and engaged students and career professionals in continuing education. Providing training opportunities across the spectrum of surveillance, detection, and response, PREDICT worked to build human resources to implement IHR core capacity requirements.	The lead implementing partner for PREDICT in Ethiopia was the Aklilu Lemma Institute of Pathobiology at Addis Ababa University, a primary training ground for animal health professionals in-country. PREDICT Ethiopia team was based within ALIPB and the project provided ongoing opportunities for government and university staff to engage in project activities. In addition, field activities engaged and involved animal health professionals providing opportunities to strengthen skills in zoonotic disease surveillance and detection with hands-on learning for safe capture and sampling of wildlife, cold chain and safe sample transport, and viral detection at collaborating labs.
Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		
	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency		

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	R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.) R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		
	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements
PREDICT/Ethiopia was the first known project to utilize a One Health approach for zoonotic disease surveillance in bats in Ethiopia and that implemented new field methods for wildlife disease surveillance. By creating new collaborations between universities, institutions, sectors and countries, PREDICT put One Health in action and helped support the establishment of the Ethiopian National One Health Steering Committee.

Section 3: Challenges and potential solutions (if applicable)
NA

Section 4: Outbreak response (if applicable)
NA

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Guinea

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1 USAID's GHSA Technical Focus Areas	2 GHSA Indicator	3 Specific progress made toward capacity level	4 Comments
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	PREDICT/Guinea's zoonotic disease surveillance activities shifted from animal sampling to risk characterization, stakeholder engagement, and outreach with national and community-level partners in the Forest region of the country. In addition, PREDICT Guinea worked with district and regional level animal and human health officers to transfer knowledge, skills, and capacity to strengthen Guinea's One Health workforce. PREDICT/Guinea organized risk communication and community engagement events in urban communities and rural communities engaging thousands of stakeholders. At the school level, primary schools and thousands of children participated in PREDICT/Guinea risk communication sessions. During these sessions,	PREDICT's zoonotic disease surveillance was strategically designed to train, equip, and enable surveillance personnel to collect data and build the evidence base for both priority zoonoses and emerging and re-emerging pathogens, specifically Ebola, in vulnerable and high-risk areas. Shared animal surveillance data and findings helped catalyze formal information sharing between animal and human surveillance systems. In addition, our surveillance engaged local communities in high-risk areas for disease transmission and emergence and fostered improved recognition of zoonotic diseases and awareness of transmission pathways and prevention and control options. Animal surveillance activities were completed by September 30, 2018. PREDICT teams shifted efforts towards data analysis and stakeholder/community engagement (development of risk communication and outreach strategies) to ensure project findings informed local and national One Health surveillance

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		PREDICT/Guinea distributed *Living Safely with Bats* books to school directors. These books are being used as reading exercises and as a tool for child-to-child communication. PREDICT/Guinea recorded an interactive podcast about the *Living safely with Bats* book. This podcast was broadcast on a rural radio station in French and 4 national dialects (Kissi, Toma, Guerze, and Malinke). The broadcastings reached the entire Forest Region with an estimated audience population of 1,335,274 inhabitants. PREDICT/Guinea trained government officers from the Ministry of Health, the Ministry of Livestock and Animal Productions, the Ministry of Environment, Water and Forest, and the Ministry of Higher Education and Scientific Research in risk communication and community engagement techniques. PREDICT/Guinea took a "train the trainers" approach so that all trained individuals could now spread the knowledge to others across Guinea. Samples stored at the VHF laboratory in Nongo are in process of transfer for archival to UC Davis at the request of the Government of Guinea officials.	plans for priority diseases in close coordination with district level veterinary and public health professionals. PREDICT also aimed to identify behaviors associated with zoonotic disease transmission risk and communicate these findings with relevant national partners to enable improved awareness and communication of potential disease threats and opportunities for prevention and control. Finally, PREDICT worked to foster discussions and collaborations on multi-sectoral zoonosis detection and response, in coordination with the national One Health Platform and provided technical input when requested.
	P.4.2: Veterinary or Animal Health Workforce	The PREDICT/Guinea team continued to provide partners from the Ministry of Livestock and Ministry of Environment with in-service training to hone technical skills in the field, including safe sampling techniques, PPE, and biosafety and biosecurity. The PREDICT/Guinea team also worked in close coordination with National, Prefecture, and District-level veterinary and environment professionals (Prefecture/District Veterinary Officers, and Prefecture/District Environmental Officers), integrating staff from	PREDICT provided critical in-service training opportunities, identified as a challenge in the JEE, through a deliberately designed One Health zoonotic disease surveillance program that encouraged hands-on development of core skills lacking in the current animal health workforce. These trainings directly strengthened the capability of the current workforce to successfully and safely conduct core functions of their job on the frontlines of zoonotic disease control.

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		both sectors at the subnational level helping forge a One Health workforce for zoonotic disease surveillance in areas most at-risk for emerging health security threats. PREDICT/Guinea trained over 80 individuals, including government laboratory technicians from the animal health sector in a variety of topics including PPE, safe animal sampling, and biosafety and biosecurity.	
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis	PREDICT/Guinea worked to support pathogen detection capacity of the VHF Laboratory, a critical node of Guinea's surveillance network. Simultaneous analysis of samples at VHF and UC Davis offered unique opportunities for continued trainings. PREDICT/Guinea disseminated laboratory results to Guinean national stakeholders, including a critical finding (Bombali ebolavirus – see success stories below). PREDICT also continued information sharing with Guinea's National One Health platform targeting improvements in the national zoonotic disease surveillance system.	PREDICT/Guinea was based at the Viral Hemorrhagic Fever Lab of Guinea (VHF Lab-Guinea), and our animal health workforce team was supported by the Ministry of Environment, Ministry of Livestock, Ministry of Health, and Ministry of Higher Education and Research. Through the VHF-Guinea and Government partners, PREDICT provided opportunities to strengthen multisectoral communications, and fostered cross-training activities with all partners where feasible to encourage and promote the One Health approach.
Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)	PREDICT/Guinea trained over 30 government laboratory technicians from animal and human health sectors. This training of trainers covered a variety of One Health topics including safely sampling small animals, sample transport and cold chain, PPE, data entry, and biosafety and biosecurity.	
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		

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	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)	Areas identified by the Guinea JEE for strengthening include: strengthen lab infrastructure, equipment, technical platforms, personnel and logistics; and strengthen the capacity of animal health laboratories for diagnosis of priority zoonotic diseases. Thus, PREDICT/Guinea provided the Viral Hemorrhagic Fever Laboratory (VHF Lab-Guinea) with the following equipment: • 1 Owl D3-14 Wide Gel Electrophoresis System • 2 Labnet spectrafuge mini microcentrifuge • 2 SimpliAmp Thermal Cycler • 2 Power stations- Goal Zero PREDICT/Guinea worked with the reference laboratory in the US for sample analysis to ensure data and findings were available to inform surveillance and health policy in Guinea. PREDICT/Guinea shipped samples to the UC Davis reference laboratory so simultaneous analysis could in Guinea and the US.	PREDICT strengthened national laboratory systems by enabling disease detection through a One Health laboratory network based at partner lab VHF Lab - Guinea. VHF Lab-Guinea is within the national system, and protocols and information were shared openly with other animal and human health labs working to actively improve interlinkages. Through in-service training opportunities, PREDICT provided staff from the national system opportunities to enhance skills in biosafety, lab safety and methods for detecting emerging threats. PREDICT reinforced VHF lab with new equipment that strengthened disease detection capacity for Guinea. VHF maintained strong ties to the national system and protocols and information were shared openly with health labs within the national system to strengthen detection and surveillance capabilities across both sectors. Findings from PREDICT's Ebola Host Project were shared across sectors and provided opportunities for staff from national lab systems to communicate as a linked network.
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system		

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	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country		
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements	The PREDICT/Guinea team, all based at local government or university institutions, conducted trainings to advance national zoonotic disease workforce capabilities. All staff, government workers, and students, were trained in core skills required for safe and effective zoonotic disease surveillance and disease detection. The trainings in risk communication and community engagement focused understanding the context and risks for zoonotic disease transmission and spread and how to communicate those risks to various stakeholders and groups within a community. Ultimately, this training and work will help identify feasible mitigation and intervention strategies that better inform and educate local communities leading to improved two-way information flows between formal and informal surveillance systems.	PREDICT/Guinea partnered with the Ministry of Livestock, the Ministry of Environment, Ministry of Health, and the Ministry of Higher Education and Research at the National, Prefecture, and District level. PREDICT was embedded within the VHF-Lab Guinea, and the project provided ongoing opportunities for students, interns, and staff to engage in project activities. In addition, field activities (training and community engagement) engaged and involved animal health professionals, providing opportunities to strengthen skills in zoonotic disease surveillance and detection with hands-on learning for safe capture and sampling of wildlife, cold chain, safe sample transport, and viral detection at collaborating labs.
Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		
	R.1.2 Priority public health risks and resources are mapped and utilized		

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Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency		
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		
	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		
	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements

Detection of Bombali ebolavirus in bats
Link to full press release

As part of the Ebola Host Project, the PREDICT/Guinea team detected the sixth ebolavirus, Bombali virus, in insect-eating Angolan free-tailed bats roosting inside people's houses in Guéckedou and Kissidougou. PREDICT first discovered the Bombali virus **in Angolan and little free-tailed bats in Sierra Leone**. Bombali virus is distinct from the five previously known ebolaviruses, including Zaire ebolavirus, which caused a massive outbreak in West Africa in 2013-2016. Bombali virus was also found **in an Angolan free-tailed bat in Kenya in May 2018**. Research teams used similar methods to detect the virus and, collectively, results suggest Bombali virus has a wide distribution.

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PREDICT is continuing efforts to determine if Bombali virus has spilled over into humans or if it can cause disease in humans or animals. Results to date show that Bombali virus can infect human cells, and studies are ongoing to understand more about the risk it may pose. The discovery of Bombali virus first in insect-eating bats in Sierra Leone, and now in Guinea, marks the first time that scientists discovered a new ebolavirus species in a host before detection in an infected human or sick animal.

> "The detection of Bombali virus first in Sierra Leone, and now also in Kenya and Guinea, suggests that ebolaviruses seem to be more widely distributed than previously thought," said Tracey Goldstein, PREDICT Pathogen detection lead and associate director of the One Health Institute.

Team members engaged with local communities throughout the project and together with the government of Guinea, researchers and international partners, met with local communities to share results, convey what is known about the new virus, answer questions and address how to reduce risk of exposure and live safely with bats.

> "Since the start of the project in Guinea, our team has engaged over 5,000 community members — most of them school-aged children — through training and risk reduction communication," said Corina Monagin, PREDICT global lead for Guinea. "In light of this finding, it's incredibly important that PREDICT continue to take the extra steps to build awareness and capacity in Guinea."

> "PREDICT integrated the concept of One Health in Guinea by working with the Prefectural-level Government officers of Health, Agriculture and Environment," said Professor Alpha Oumar Camara, PREDICT/Guinea country coordinator. "PREDICT created the platform where these officers could work together and take ownership of the project themselves. This finding is an invitation for all three health sectors to continue to work together for a One Health approach to disease prevention and detection."

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Section 3: Challenges and potential solutions (if applicable)
NA

Section 4: Outbreak response (if applicable)
NA

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Kenya

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1 USAID's GHSA Technical Focus Areas	2 GHSA Indicator	3 Specific progress made toward capacity level	4 Comments
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	PREDICT integrated animal and human health professionals promoting cross-sectoral communication and collaboration through lab-based zoonotic disease testing of wildlife (bats, rodents, non-human primates) and human samples that were collected from a high-risk human-livestock-wildlife interface site in Laikipia County. Over 1,800 samples were tested for four priority viral families (coronaviruses, paramyxoviruses, orthomyxoviruses, and filoviruses). Two coronaviruses were detected in bats. These findings and surveillance data are available at www.data.predict.global During the testing process, staff trained multiple students in zoonotic disease detection protocols at the PREDICT lab, the Institute of Primate Research (IPR).	PREDICT's zoonotic disease surveillance was strategically designed to train, equip, and enable surveillance personnel to collect data and build capacity to test for both priority zoonoses and emerging and re-emerging pathogens, such as rabies, brucellosis, anthrax and Rift Valley Fever Virus (RVF) in vulnerable and high-risk areas. Shared animal and human surveillance data and findings helped catalyze formal information sharing between animal and human surveillance systems. In addition, our surveillance engaged local communities in high-risk areas for disease transmission and emergence and fostered improved recognition of zoonotic diseases and awareness of transmission pathways and prevention and control options. PREDICT sampling and testing of animals and humans was completed. Over the life of the project, the PREDICT/Kenya team collected ove than 11,000 samples from >1,500 animals and 300 people.

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	P.4.2: Veterinary or Animal Health Workforce	PREDICT continued training students from local universities and mentoring graduate student projects, leveraging project goals and protocols. All staff and students received training (and refresher trainings) on PREDICT field and lab protocols, gaining skills in safe animal handling, biological sampling, biosafety, and laboratory methodology, amongst others. Upon graduation, trained students and interns are expected to fill critical public health positions, now armed with knowledge of a One Health approach to disease surveillance and outbreak response PREDICT also engaged the communities living in and around our sampling sites in Laikipia, Kenya. In collaboration with USAID's OHW/OHCEA, outreach included discussing zoonotic disease risks with community human and livestock health liaisons.	PREDICT provided critical in-service training opportunities identified as a challenge in the JEE through a deliberately designed One Health zoonotic disease surveillance program that encourages hands-on development of core skills lacking in the current animal health workforce. We offered trainings to animal health professionals (county veterinary officers, wildlife service, lab technicians in animal health labs, and local community members), directly strengthening the capability of the current workforce to successfully and safely conduct core functions of their job on the frontlines of zoonotic disease control. PREDICT-2 worked closely with partners involved in One Health to ensure Kenya's foundation and work force is strengthened. PREDICT/Kenya participated in the development of a curriculum for the University of Nairobi's Master of Science program in Infectious Diseases and Global Health (IDGH), which is a one health related course targeting graduates in the medical or biomedical fields that would be called upon in response to an outbreak.
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis	PREDICT worked with government partners on diseases of national interest, such as MERS-CoV. PREDICT-Kenya attended the MERS-CoV technical working group meeting that provided updates on surveillance and testing.	PREDICT worked with government and local partners to strengthen national capacity for zoonotic disease surveillance using a broadly applicable, rapidly deployable, and easily adaptable system that emphasizes core skills needed for biological sampling for surveillance for a broad range of zoonotic disease threats. This system is easily transferrable to priority diseases in Kenya, as well as for other unknown and potentially emerging viral threats. Through PREDICT reporting mechanisms, we facilitated cross-sector communication and encouraged multi-disciplinary discussions. PREDICT/Kenya worked within the One Health field, to include Ministry of Agriculture and Livestock, University of Nairobi, and OHCEA to encourage cross-collaboration and training in bio surveillance of zoonoses. PREDICT/Kenya actively participated in the One Health Coordinating Unit

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			under the umbrella of Zoonotic Disease Unit (ZDU) and contributed to the development of the One Health Strategic Plan. PREDICT also maintained active linkages with other partners researching zoonoses in Kenya, such as International Livestock Research Institute, Kenya Wildlife Service, and the Mpala Research Centre, and OHCEA at the University of Nairobi.
Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)	PREDICT continued to offer pre-service BSS training to staff and students working on the project, as well as through university lectures. During previous trainings, PREDICT/Kenya identified a gap in biosafety and biosecurity practices within the national laboratories - predominantly in waste management. As a result, PREDICT Kenya held a waste management training workshop in June 2019, with focus on BSS best practices, targeting government research organizations. The training focused on "training the trainers" within the national lab system, offering a measure of sustainability, a key point identified as a necessary direction in the JEE.	Through in-service training opportunities, PREDICT provided staff from the national system opportunities to enhance skills in biosafety, lab safety and methods for detecting emerging threats. Trainees included animal (both livestock and wildlife) and human health workers combined within a general workshop, to help facilitate curriculum consistency as well as collaboration among disciplines and sectors, representing an area the JEE reported in need of strengthening.
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		
	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)	Since the start of the project, PREDICT partner labs in Kenya performed more than 8,000 tests on animal and human samples for priority zoonotic diseases and emerging threats. This testing capability, now present in both project labs (IPR and KEMRI) and with staff trained within other governmental labs (KALRO, CVL/RVL (Regional Veterinary Labs), FMD, NPHL (National Public Health	PREDICT worked with local partners that are well-integrated with Kenya's national laboratory network and animal and public health sectors, and initiated viral testing at the Institute of Primate Research (IPR) lab using techniques transferrable for detection of a broad range of disease threats, including priority zoonotic diseases. PREDICT/Kenya partner lab, IPR, serves as a key

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		Labs – Nairobi County), and University of Nairobi labs), is a valuable resource for secondary confirmation, an area highlighted in the JEE as an opportunity for improving detection and IHR reporting for public health emergencies of international concern. Reports with viral detection findings were shared with the relevant Kenyan ministries, and approved for release.	training center for students and professionals, including government staff from the national lab system.
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system		
	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country		
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements	Since the start of the project, PREDICT/Kenya provided training to many individuals in the One Health approach, biosafety, and technical skills necessary for effective disease surveillance and detection. PREDICT/Kenya continued to provide training in both field and laboratory protocols for community members,	Through in-service trainings, PREDICT directly enhanced skills of the existing health workforce, especially the animal health sector, with a niche focus on biosafety and safe capture and handling of small mammals, such as bats and rodents, which represent the highest risk for viral spillover and spread to people. Our partners at IPR and KEMRI are training

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		human and livestock liaisons for their communities.	institutions that actively promote and engage students and career professionals in continuing education; we provided these training opportunities across the full spectrum of surveillance, detection, and response. PREDICT was embedded within the One Health network of Kenya, and provided opportunities for students/interns and animal/human health professionals to engage in project activities and thereby strengthen skills in zoonotic disease surveillance and detection.
Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		
	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency		
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		
	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		

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	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements
As the first zoonotic disease surveillance project in Kenya to heavily focus on wildlife viral surveillance, PREDICT highlighted gaps in communication and information-sharing between human domestic animal and wildlife health sectors, sand helped identify recommendations for improving multi-sectoral communication for improved zoonotic disease prevention, detection and response. In addition, as part of community engagement and outreach events, PREDICT adapted the Smithsonian's National Museum of Natural History's mobile "Outbreak!" DIY exhibition materials to engage the local community, while providing context during dissemination of project results and intervention strategies.

Section 3: Challenges and potential solutions (if applicable)
NA

Section 4: Outbreak response (if applicable)
NA

Liberia

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1 **USAID's GHSA Technical Focus Areas**	2 **GHSA Indicator**	3 **Specific progress made toward capacity level**	4 **Comments**
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		

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	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	PREDICT helped Liberia reach a health security milestone by identifying a nationally recognized priority zoonotic disease in wildlife, an area highlighted as a priority action in the JEE. PREDICT detected genetic material from Ebola Zaire virus in a *Miniopterus inflatus* bat, a validation of efforts from our Ebola Host Project, which strengthened capacity for wildlife surveillance of zoonotic threats such as Ebola over the past several years. Following confirmation of the finding, which was the same species of ebolavirus that caused the 2014 West Africa outbreak, PREDICT worked with Government of Liberia partners on risk communication strategies and to design follow-up field sampling efforts focused specifically on *Miniopterus inflatus* bats. 123 *M. inflatus* bats were sampled over 2 field trips. In addition, the behavioral risk team along with the field team revisited several sites to collect demographic data required for the Ebola Host Project. The National Public Health Institute (NPHI), Liberia was formally engaged in communications and community outreach related to the Ebola finding, along with recent filovirus findings by our PREDICT team in Sierra Leone, and lab scientist from NPHI Lab (NPHIL) has undergone training with PREDICT's partner and global reference lab at Columbia University, empowering staff and helping enable future testing for priority zoonotic diseases at the NPHIL lab. This period efforts focused on outreach and risk communication of the finding using	PREDICT's zoonotic disease surveillance was strategically designed to train, equip, and enable surveillance personnel to collect data and build the evidence base for both priority zoonoses and emerging and re-emerging pathogens, such as Ebola in vulnerable and high-risk areas. Shared animal and human surveillance data and findings helped catalyze formal information sharing between animal and human surveillance systems. In addition, our surveillance engaged local communities in high-risk areas for disease transmission and emergence and fostered improved recognition of zoonotic diseases and awareness of transmission pathways and prevention and control options. The PREDICT/Liberia team sampled more than 5,300 wild animals and completed testing as part of the Ebola Host Project, detecting genetic material from Ebola Zaire virus in a bat.

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		PREDICT's behavior change communication and risk reduction resource *Living Safely with Bats.*	
	P.4.2: Veterinary or Animal Health Workforce	PREDICT staff maintained their level of training with refresher courses in zoonotic disease surveillance protocols including hands-on field-based trainings in PPE, biosafety, safe animal capture and sampling, and cold chain.	PREDICT has made significant progress in strengthening Liberia's animal health workforce towards JEE goals. See success stories for details.
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis	PREDICT worked to build in-field veterinary capacity for disease surveillance, a challenge identified in the JEE, through ongoing mentoring of the core team working intensively on wildlife sampling and surveillance for potential reservoir hosts of Ebolaviruses, a priority zoonotic disease. As part of efforts to strengthen and institutionalize One Health in Liberia, PREDICT served on four of the One Health technical working groups: surveillance, laboratory, workforce development and rabies, to provide technical expertise on any zoonotic disease related public health event in the country, and to provide technical advice at the weekly National Emergency Preparedness and Response Committee meeting on all zoonotic disease events. Response to the finding of Zaire ebolavirus in a bat engaged the NPHIL and MoH communications team, which coordinated public dissemination of information and internal communications within the Government of Liberia. Materials were developed with technical inputs from PREDICT that were used in the communications effort.	PREDICT worked with established channels, (One Health Technical Working Group and others engaged in the operationalization of the One Health Strategic Plan) to communicate findings and recommendations for improved zoonotic disease prevention, detection, and control, providing technical assistance and data and information (e.g., the means for more regular information exchanges between animal and human sectors).

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Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)		
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		
	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)	PREDICT/Liberia sent a Liberian scientist to visit a PREDICT partner laboratory at Columbia University Mailman School of Public Health for further training in PREDICT protocols, advanced laboratory methods and bioinformatics analysis. This training effort was conducted in follow up to the Ebola Zaire finding in an insectivorous bat sample from Liberia. While all Ebola Host Project samples were tested at Columbia University to meet project timelines and deliverables, in-country lab staff did receive trainings running duplicate aliquots of project samples to validate their ability to produce reliable results. Confirmed laboratory results were presented to the Ministers of Health and Agriculture and the Managing Director of the Forestry Development Authority for approval and public release.	In collaboration with GHSA partners, PREDICT/Liberia worked to build capacity at NPHIL by identifying equipment needs, assisting with necessary procurement, and training staff with experience from the Ebola outbreak on advanced disease detection techniques, which will include testing animal samples.
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		

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	D.2.2 Interoperable, interconnected, electronic real-time reporting system		
	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country	Response to the finding of Zaire ebolavirus in a bat engaged the NPHIL and MoH communications teams, which coordinated public dissemination of information and internal communications within the Government of Liberia. Materials were developed with technical inputs from PREDICT that were used in the communications effort. Additionally, the USAID office at the embassy was part of the communications team and worked closely with the MoH, and facilitated communication with USG partners when appropriate.	
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements	Continuing to address Liberia's need for more highly trained veterinary and animal health professionals (a major challenge in the country's JEE) PREDICT worked with the Forestry Development Authority through placements of PREDICT staff in FDA operations. Field-based trainings covered biosafety and safe wildlife capture and sampling techniques, helping prepare the animal health workforce for wildlife disease investigations.	SCNL, the lead implementing partner for PREDICT, is the primary training ground for animal health professionals in-country. As the leading conservation organization in Liberia, SCNL has a very close working relationship with the FDA on several important national level projects, including PREDICT. As a result, PREDICT provided opportunities for students, interns, FDA staff & early career professionals to engage in project activities. In addition, field activities engaged and involved animal health professionals, providing opportunities to strengthen skills in zoonotic disease surveillance and detection with hands-on learning for safe capture and sampling of wildlife, cold chain, safe sample transport, and viral detection at collaborating labs.

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Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		
	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency		
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		
	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		
	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements

Following the detection of Zaire ebolavirus in a bat, PREDICT efforts focused on community engagement and our team successfully conducted outreach and public awareness visits to all communities involved throughout the course of the Ebola Host Project in Liberia. With these community stakeholders, our team reported project findings and shared the *Living Safely with Bats* behavior change and risk communication resource, which was initially developed following the detection of Bombali virus in Sierra Leone and has since been rolled out in all PREDICT countries, in a diversity of languages, and multitude of contexts with prominent bat-human interfaces throughout the world.

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Section 3: Challenges and potential solutions (if applicable)
NA

Section 4: Outbreak response (if applicable)
NA

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Mali

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1 USAID's GHSA Technical Focus Areas	2 GHSA Indicator	3 Specific progress made toward capacity level	4 Comments
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens		
	P.4.2: Veterinary or Animal Health Workforce		
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis		
Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)		
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		

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	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)		
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system		
	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country		
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements		
Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		

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	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		
	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		
	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements
Section 3: Challenges and potential solutions (if applicable)
Section 4: Outbreak response (if applicable)

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Senegal

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1 USAID's GHSA Technical Focus Areas	2 GHSA Indicator	3 Specific progress made toward capacity level	4 Comments
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	PREDICT/Senegal completed surveillance activities in the Sindia region for priority zoonotic diseases and other emerging threats. All samples were safely stored at partner laboratories, testing was completed, and results shared with ministry partners. PREDICT/Senegal engaged partners from the Ministry of Health, Agriculture and the Environment in training activities providing field-based opportunities to increase technical skills and capacity. PREDICT/Senegal focused efforts on data analysis and stakeholder/community engagement (development of risk communication and outreach strategies) to ensure project findings informed local and national One Health surveillance plans for priority diseases in close coordination with district level, veterinary, environmental and	PREDICT's zoonotic disease surveillance was strategically designed to train, equip, and enable surveillance personnel to collect data and build the evidence base for both priority zoonoses (such as zoonotic influenza and viral hemorrhagic fevers) and emerging and re-emerging pathogens, such as MERS-CoV in vulnerable and high-risk areas. PREDICT engaged local Ministry partners to build capacity in One Health surveillance strategies. Shared animal and human surveillance data and findings helped catalyze formal information sharing between animal and human surveillance systems. In addition, our surveillance engaged local communities in high-risk areas for disease transmission and emergence and fostered improved recognition of zoonotic diseases and awareness of transmission pathways and prevention and control options. PREDICT provided critical in-service training opportunities identified as a challenge in the JEE through a deliberately designed One Health zoonotic

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		public health professionals. Moreover, PREDICT/Senegal actively engaged communities in Sindia and neighboring regions about the risks of zoonotic diseases, and how to live safely with bats and other wildlife.	disease surveillance program that encourages hands-on development of core skills lacking in the current animal health workforce.
	P.4.2: Veterinary or Animal Health Workforce	PREDICT/Senegal partner, the Ecole Inter-États des Sciences et Médecine Vétérinaires (EISMV) collaborated with the Direction des Parks Nationaux (DPN) to build capacity of DPN staff on One Health surveillance skills. Over 20 animal health specialists from the Ministry of the Environment (DPN and Water and Forest) were engaged in field trainings that included biosafety and biosecurity, PPE and safe wildlife sampling techniques increasing capacity of the national animal health workforce. In addition, PREDICT/Senegal worked with the Senegal Emergency Operations Center (COUS) and implemented table-top exercises to improve Senegal's capacity to implement One Health outbreak responses to emerging diseases.	PREDICT provided critical in-service training opportunities identified as a challenge in the JEE through a deliberately designed One Health zoonotic disease surveillance program that encourages hands-on development of core skills lacking in the current animal health workforce. We offered trainings to animal health professionals (district-level veterinary officers, environment staff, lab technicians in animal health labs, and local community members), directly strengthening the capability of the current workforce to successfully and safely conduct core functions of their job on the frontlines of zoonotic disease control.
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis	PREDICT/Senegal actively worked to support the National One Health Platform and contributed to the development of the One Health Strategic Plan, areas identified as a challenge in the JEE. PREDICT team members participated in ongoing meetings with One Health Taskforce Partners: (the Prime Minister's Office, the Health Emergency Operations Center (COUS), FAO, WHO, and CDC), as well as the Ministry of Health, Agriculture and the Environment. These meetings provided opportunities to present ongoing activities in Senegal, encouraged coordination between various One Health groups (human and animal), and offered our team the opportunity to provide guidance on	Through our implementing partners EISMV, ISRA, and UCAD, our One Health network in Senegal engaged all ministries and government partners, such as the Ministry of Agriculture, Ministry of Livestock, Ministry of Environment, Ministry of Health. Our team actively participated in the National GHSA Task Force, the National One Health Platform, as well as the COUS, and served as a resource for the development and operationalization of Senegal's One Health Strategic Plan. We also maintained active linkages to One Health Workforce. PREDICT also helped facilitate communication between the different local stakeholders in order to share information on emerging threats more efficiently. Finally, through the joint laboratory

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		increasing the capacity for surveillance and response for priority zoonoses and emerging threats. In addition, PREDICT/Senegal utilized the *Living Safely with Bats* risk and behavior change communication book to engage with communities in the Sindia region (PREDICT surveillance site). Risk communication and zoonotic disease awareness sessions occurred with the help of community leaders and local stakeholders.	efforts of UCAD and ISRA, PREDICT/Senegal improved knowledge and information on priority and emerging threats and communicated these findings to state and national authorities and the global community with recommendations for prevention and control across both the animal and human health sectors. PREDICT/Senegal was seen as a reference for technical expertise on disease surveillance utilizing a One Health approach. The Government of Senegal regularly reached out to the PREDICT/Senegal team for technical expertise related to One Health disease detection and response in both the human and animal sectors (as seen with the request by the COUS to present an outbreak simulation event).
Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)	PREDICT/Senegal organized refresher trainings for members of the human and wildlife teams focused on aspects of safe sampling, PPE, data entry, human and animal welfare and biosecurity/biosafety.	PREDICT/Senegal partners were training institutions that actively promote and engage students and career professionals in continuing education and we provide ongoing hands-on opportunities for students, interns, and staff to build technical skills and knowledge in field and lab settings. The PREDICT team engaged animal, wildlife/ecosystem, and human health professionals in field and laboratory trainings, providing opportunities to strengthen skills across the full spectrum of surveillance, detection, and response.
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		
	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)	PREDICT/Senegal engaged with partner labs at UCAD and ISRA to strengthen capacity for detection and discovery of zoonotic viruses with epidemic and pandemic potential. Both labs performed over 23,000 tests for zoonoses across five viral families (filovirus, flavivirus, influenza, paramyxovirus and coronavirus),	PREDICT partner labs at ISRA and UCAD have been trained and equipped in the full range of activities required for safely detecting zoonotic viruses, including biosafety and biosecurity, cold chain, safe sample storage, data management, safe sample transport and shipping, and molecular viral detection techniques. Both labs have capacity to safely detect

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		which constitute a threat for Senegal and other West African countries. The advanced detection capability in the ISRA lab (part of the national lab system) and at UCAD (a major training center) are addressing concerns highlighted in the JEE. PREDICT findings are helping strengthen biosecurity and national surveillance and laboratory systems, while improving the stability of these systems through One Health workforce development.	priority zoonotic diseases (Rift Valley Fever, zoonotic influenza viruses, and viral hemorrhagic fevers such as Ebola) and other emerging viral threats. Both labs also serve as key training centers for students and professionals, including government staff from the national lab system. PREDICT reinforced both UCAD and ISRA with new equipment that strengthened disease detection capacity for Senegal. Both labs maintain strong ties to the national system and protocols and information will be shared openly with other animal and human health labs within the national system to strengthen detection and surveillance capabilities across both sectors.
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system		
	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country		

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Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements	The PREDICT/Senegal team, all based at local government or university institutions, conducted trainings to advance national zoonotic disease workforce capabilities. All project staff, future one health workforce partners, as well as local partners in the Ministry of Health, Agriculture and Environment collaborating with our team, were trained in core skills required for safe and effective zoonotic disease surveillance and disease detection. Trained individuals (more than 70 over the life of project) have also undergone refresher trainings for those courses requiring annual certification. Through participation in surveillance and community engagement activities, doctors, nurses and community health workers from the district of Popenguine (which includes the Sindia field site) strengthened their capacity for surveillance and detection of viral pathogens. Moreover, PREDICT/Senegal reinforced communications and strengthened collaborations between the human and animal health workforce sectors in the region.	The lead implementing partner for PREDICT wildlife sampling in Senegal was EISMV, the primary training ground for animal health professionals in-country. PREDICT is embedded within EISMV, ISRA, and UCAD, and the project provided opportunities for students, interns, and staff to engage in project activities. In addition, community engagement and training activities engaged and involved animal and human health professionals, providing opportunities to strengthen skills in zoonotic disease surveillance and detection with hands-on learning for safe capture and sampling of wildlife, cold chain, safe sample transport, and viral detection at collaborating labs.
Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		
	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency		
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency		

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Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		
	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		
	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements
NA

Section 3: Challenges and potential solutions (if applicable)
NA

Section 4: Outbreak response (if applicable)
NA

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Sierra Leone

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1 USAID's GHSA Technical Focus Areas	2 GHSA Indicator	3 Specific progress made toward capacity level	4 Comments
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	PREDICT/Sierra Leone concluded zoonotic disease surveillance for ebolaviruses in wildlife at high-risk human-animal interfaces as part of the Ebola Host Project, operational in seven districts of the country (Bombali, Falaba, Kambia, Koinadugu, Kono, Pujehun, and Western Area). Through the Ebola Host Project, PREDICT contributed to Sierra Leone's growing One Health workforce by providing on-the-job training opportunities for government staff from national to subnational levels, including university staff and students. Field activities included refresher trainings for the PREDICT team and all local governmental staff involved in PREDICT activities. PREDICT/Sierra Leone continued their regular communications with district and community leaders down to the household level and worked across ministries and sectors to help build and	PREDICT's zoonotic disease surveillance was strategically designed to train, equip, and enable surveillance personnel to collect data and build the evidence base for both priority zoonoses and emerging and re-emerging pathogens, specifically Ebola, in vulnerable and high-risk areas. Shared animal surveillance data and findings help catalyze formal information sharing between animal and human surveillance systems. In addition, our surveillance engaged local communities in high-risk areas for disease transmission and emergence and fosters improved recognition of zoonotic diseases and awareness of transmission pathways and prevention and control options. Animal surveillance activities in Sierra Leone were completed on September 30, 2018. PREDICT teams shifted efforts towards data analysis and stakeholder/community engagement to ensure project findings inform local and national One Health surveillance plans for priority diseases in close

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		operationalize the national One Health platform.	coordination with district level veterinary and public health professionals. PREDICT also aimed to identify behaviors associated with zoonotic disease transmission risk and communicate these findings with relevant national partners to enable improved awareness and communication of potential disease threats and opportunities for prevention and control. PREDICT continued to foster discussions and collaborations on multi-sectoral zoonosis detection and response, in coordination with the national One Health Platform and provide technical input when requested.
	P.4.2: Veterinary or Animal Health Workforce	PREDICT/Sierra Leone engaged with partners from the Ministry of Agriculture and Forestry (MAF) and Ministry of Health and Sanitation, in addition to working with our regular core of 54 government contacts at the district level. PREDICT/Sierra Leone also worked in close coordination with National and District-level veterinary and environment professionals by integrating staff across sectors at the subnational level, directly contributing to the One Health workforce for zoonotic disease surveillance in areas most at-risk for emerging health security threats.	PREDICT provided critical in-service training opportunities, identified as a challenge in the JEE, through a deliberately designed One Health zoonotic disease surveillance program that encourages hands-on development of core skills lacking in the current animal health workforce. These trainings directly strengthened the capability of the current workforce to successfully and safely conduct core functions of their job on the frontlines of zoonotic disease control.
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis	The PREDICT/Sierra Leone team, based at the University of Makeni Infectious Disease Laboratory, worked in close collaboration with local stakeholders to improve response strategies for potential new emerging threats, an identified area for reinforcement in the country's JEE. In addition, PREDICT provided expertise to strengthen zoonotic disease response capacity through participation in Ministry of Health and Sanitation strategic planning retreats and zoonotic disease prioritization workshops. Finally, PREDICT worked closely ensure the	PREDICT/Sierra Leone was based at the University of Makeni (UNIMAK) Infectious Disease Research Laboratory, and our animal health workforce team coordinated with the Central Animal-Veterinary Laboratory (TEKO), Central Public Health Laboratory (CPHRL), Ministry of Agriculture and Forestry, and Ministry of Health and Sanitation to ensure training opportunities are shared. Through laboratory and government partners, PREDICT provided opportunities to strengthen multisectoral communications, and fostered cross-training activities with all partners where feasible to encourage and promote the One Health approach.

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		success the US Defense Advanced Research Projects Agency (DARPA) PREEMPT project, which is focusing on surveillance of Lassa virus (a priority zoonotic disease) and is continuing to support gains in wildlife surveillance and disease detection capacity for zoonotic disease threats.	
Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)		
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		
	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)		PREDICT strengthened national laboratory systems by enabling disease detection through a One Health laboratory network based at partner lab University of Makeni (UNIMAK). UNIMAK is within the national system, and protocols and information were shared openly with other animal and human health labs working to actively improve interlinkages. Through in-service training opportunities, PREDICT provided staff from the national system opportunities to enhance skills in biosafety, lab safety and methods for detecting emerging threats. PREDICT reinforced the UNIMAK lab with new equipment that strengthened disease detection capacity for Sierra Leone.
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		

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Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system		
	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country		
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements	The PREDICT/Sierra Leone team, all based at local government or university institutions, conducted trainings to advance national zoonotic disease workforce capabilities reaching over 100 individuals, including project staff, government workers, and students. Trainings focused on core skills required for safe and effective zoonotic disease surveillance and disease detection.	PREDICT/Sierra Leone partnered with the Ministry of Agriculture and Forestry and Ministry of Health and Sanitation at the National, Sub-National, and District level. PREDICT was physically embedded within the Ministry of Health and Sanitation Public Health National Emergency Operations Center and provided direct technical assistance in areas of zoonotic disease surveillance to the newly created One Health Technical Working Group of the MOHS and in Bombali district at the UNIMAK lab, and the project provided ongoing opportunities for students, interns, and staff to engage in project activities. In addition, field activities engaged and involved animal health professionals, providing opportunities to strengthen skills in zoonotic disease surveillance and detection with hands-on learning for safe capture and sampling of wildlife, cold chain, safe sample transport, and viral detection at partnering labs.
Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		

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	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)	PREDICT/Sierra Leone participated in a workshop to review a draft message guide on zoonotic diseases in Sierra Leone organized by the Ministry of Health and Sanitation Health Education Division and Breakthrough Action. The message guide was intended to inform activities and materials to raise awareness, mobilize communities, and promote healthy behaviors for preventing zoonotic disease. In addition, PREDICT/Sierra Leone expanded the scope of positive result dissemination to unaffected sites in the Bombali district, where the team engaged communities with *Living Safely With Bats*, a risk and behavior change communication picture book created to address questions from the community about zoonotic diseases, address the public's concerns, and reduce the potential for panic, while also raising awareness of zoonotic disease risks from bats and appropriate ways to reduce risks and prevent disease transmission.	PREDICT/Sierra Leone collaborated with the Government of Sierra Leone to raise awareness of zoonotic disease risk, while sharing ways to reduce risk and prevent disease transmission. PREDICT/Sierra Leone engaged in risk communication to address questions from communities about zoonotic disease by sharing the risk mitigation picture book, *Living Safely with Bats*.
	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		

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	R.5.5 Dynamic listening and rumor management	Following the Bombali ebolavirus and Marburg virus discoveries in Sierra Leone, PREDICT worked with government partners and communities to alleviate concerns and fears, and to dispel and address rumors and misinformation to bring greater awareness of zoonotic disease risks, risk reduction options and general sense of ease to the communities.	PREDICT/Sierra Leone supported the Ministry of Agriculture and Forestry and Ministry of Health and Sanitation at the National, Sub-National, and District level to dissipate concerns and rumors related to the dissemination of animal surveillance results.
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements

PREDICT/Sierra Leone increased national capacities for virus surveillance by working at more than 50 independent locations. During the project, the team sampled and tested over 9,500 animals, including many species that are important sources of human infection and spillover such as bats, rodents, livestock, dogs, cats, and non-human primates. Highlighting the impact of our work, our team reported the discovery of an entirely new species of ebolavirus (Bombali ebolavirus) in insect-eating bats in 2018. This marked the first time that any ebolavirus was discovered before known human or animal illnesses or death. A few months later and for the first time in West Africa, our team reported the discovery of a closely related and deadly known virus (Marburg virus) in fruit-eating bats with our colleagues at the US Centers for Disease Control and Prevention (CDC) and Njala University. The complete impact of PREDICT in Sierra Leone will take years to fully appreciate, as our staff continue to promote One Health as a key component of global health security and health systems strengthening in future roles as leaders in health, agriculture and the environment.

Section 3: Challenges and potential solutions (if applicable)
NA

Section 4: Outbreak response (if applicable)
NA

Tanzania

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1	2	3	4
USAID's GHSA Technical Focus Areas	**GHSA Indicator**	**Specific progress made toward capacity level**	**Comments**

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Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	Working towards improved linkage of animal and human health sectors in zoonotic disease surveillance, a challenge identified in the JEE, PREDICT/Tanzania's One Health team completed One Health surveillance and behavioral risk investigations and shifted focus towards applying data and findings to inform policy and surveillance strategies. In August 2019, the PREDICT/Tanzania team went on a results sharing road trip, engaging 22 villages and 2 health centers, and reaching over 1,500 individuals including community, political and religious leaders, community members, teachers and school children from secondary and primary schools, clinicians, and nurses from local dispensaries, police officers, and game reserve officers. Our team also provided feedback to authorities in all 4 districts reaching more than 30 key stakeholders including: 17 District Medical Officers, health officers, surveillance officers, clinicians, and nurses, 7 District Veterinary Officers and Livestock Field Officers, 12 Gombe National Park staffs, District Executive Officers in Uvinza and Kibondo, and the Kyerwa District Administrative Secretary.	PREDICT's zoonotic disease surveillance was strategically designed to train, equip, and enable surveillance personnel to collect data and build the evidence base for both priority zoonoses and emerging and re-emerging diseases, such as viral hemorrhagic fevers (a challenge identified in the JEE) in vulnerable and high-risk areas. Shared animal and human surveillance data and findings helped catalyze formal information sharing between animal and human surveillance systems. In addition, our surveillance engaged local communities in high-risk areas for disease transmission and emergence and fostered improved recognition of zoonotic diseases and awareness of transmission pathways and prevention and control options. PREDICT/Tanzania conducted over 1,500 behavioral risk interviews, sampled over 5,000 animals and people, and tested the samples for priority zoonotic diseases and emerging viral threats. Reports of viral findings and their practical implications have been shared with Government of Tanzania partners and are available to the public at www.data.predict.global

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	P.4.2: Veterinary or Animal Health Workforce	Since the start of the project, PREDICT has trained over 250 individuals in the core skills required for zoonotic disease surveillance and detection, including staff in national surveillance systems on the front lines of disease spillover and spread (see success stories below).	PREDICT provided critical in-service training opportunities, identified as a challenge in the JEE, through a deliberately designed One Health zoonotic disease surveillance program that encourages hands-on development of core skills lacking in the current animal health workforce. We offer trainings to animal health professionals (District Veterinary Officers, Veterinary Investigation Centres, Livestock Extension Officers, lab technicians in animal health labs, and local community members), directly strengthening the capability of the current workforce to successfully and safely conduct core functions of their job on the frontlines of zoonotic disease control.
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis	PREDICT joined the GHS partners meetings in support of the Government of Tanzania's Ebola Contingency and Preparedness Plans. PREDICT also shared findings reports from One Health surveillance and viral testing with all ministry partners and members of the One Health Coordination Desk (OHCD). In addition, our team worked with GHSA partners, the OHCD, and national health systems to organize and prepare for a One Health Workshop (see below) designed to convene national and district-level health professionals for trainings and discussions on operationalizing the One Health Strategic Plan in the country's most at-risk areas, areas targeted by the developing Ebola Contingency Plan.	Through our implementing partners, SUA and the Ifakara Health Institute, PREDICT/Tanzania's One Health network engages all ministries and universities, such as Muhimbili University of Health and Allied Sciences and Nelson Mandela. Our team actively supported the National One Health Platform and contributed to the development of the One Health Strategic Plan. We also maintained active linkages to the South African Centre for Infectious Disease Surveillance, Afrique One, and OHCEA.

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Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)		
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		
	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)	PREDICT/Tanzania continued to extend the capabilities of Tanzania's zoonotic disease detection system as both human and animal health labs maintained expertise for testing for known priority viruses and potentially unknown and emerging threats such as the recently listed "Disease X" in WHO's blueprint for research on priority diseases. PREDICT's One Health lab team began extending this expertise and knowledge to the national laboratory system through One Health short-courses in disease detection (see success stories). Through a One Health workshop, professionals from veterinary and public health sectors received training in biosafety and viral detection techniques and gained hands-on practice and experience. PREDICT's labs completed testing of all samples collected during One Health surveillance for the targeted five viral families (corona, flavi, filo, influenza, and paramyxo viruses); test results are undergoing interpretation and will be shared with focal points from Tanzania's One Health Coordination Desk providing opportunities for multi-sectoral dialogue and collaboration (another challenge in the JEE under the Zoonotic Disease Action Package).	PREDICT partner labs at Sokoine University of Agriculture and Ifakara Health Institute were trained and equipped in the full range of activities required for safely detecting zoonotic viruses, including biosafety and biosecurity, cold chain, safe specimen storage, data management, safe specimen transport and shipping, and molecular viral detection techniques. As a result, both labs have capacity to safely detect priority zoonotic diseases (Ebola and Marburg, Rift Valley Fever, and zoonotic influenza viruses) and emerging viral threats. Both labs have completed testing animal and human samples and are serving as key training centers for students and professionals, including government staff from the national lab system. In addition, both SUA and IHI labs are considered referral nodes that strengthen detection and surveillance capabilities across both sectors, and SUA provides referral services to the national lab system and contributes data for surveillance reporting.

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	P.1.2: Specimen referral and transport system (focused on animal health) D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system		
	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country		
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements	PREDICT/Tanzania completed an innovative One Health specialist short-course for national and subnational professionals working around Tanzania, with a focus on those from districts bordering DR Congo, Uganda, Burundi, and Rwanda to raise zoonotic disease awareness, enhance technical skills, and promote cross-sectoral collaboration, especially among regional and district-level staff on the frontlines of zoonotic disease emergence. This workshop, which took place over the course of one month (late March to early April), was designed to equip these professionals to work	The lead implementing partner for PREDICT in Tanzania is the Sokoine University of Agriculture's College of Veterinary Medicine, the primary training ground for animal health professionals in-country. PREDICT was embedded within SUA, and the project provides ongoing opportunities for students, interns, and staff to engage in project activities. In addition, field activities engaged and involved animal health professionals, providing opportunities to strengthen skills in zoonotic disease surveillance and detection with hands-on learning for safe capture and sampling of wildlife, cold chain, safe sample transport, and viral detection at collaborating labs.

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		collaboratively and to stand ready to combat dangerous and emerging diseases threatening national health security (see success stories for details).	
Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		
	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency		
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		
	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication	As part of community engagement activities in the Lake Zone, near the ongoing Ebola outbreak in the Democratic Republic of Congo, PREDICT shared posters, education materials and our *Living Safely with Bats* risk reduction and behavior change communication resource with each of the villages as part of ongoing Ebola preparedness activities led by the Ministry of Health, in collaboration with WHO, CDC and other partners. Communities and local government officials were appreciative of the results sharing and zoonotic disease and health education, and there is demand for more! Recommendations	

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		from the community on ways to enhance the messaging include: ▪ Engaging local media, such as radio and TV ▪ Continuing to share education materials especially with schools ▪ Using a Training of Trainers approach to expand reach ▪ Including local community leaders in outbreak preparedness and response training, particularly in at-risk border regions	
	R.5.4 Communication engagement with affected communities		
	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements

Workforce Training to Address Animal Surveillance Capacity Needs
In 2019, PREDICT hosted a One Health specialist short-course for national and subnational managers in Tanzania. The workshop integrated laboratory (human and animal), regional and district-level veterinary staff, medical doctors, nurses, health port officers, wildlife researchers, and integrated disease surveillance and response focal points to enhance knowledge and technical skills of critical members of the health workforce and strengthen local One Health networks for improved multi-sectoral communication and information sharing.

Due to the specificity of skills covered, participants were split into groups for targeted field and human and animal laboratory training, but came together to work on community engagement for zoonotic disease control and subnational surveillance. ***This demonstrates a key operational tenant for One Health: strengthening the specialized capacity of each sector while providing pathways to bring information and action together in coordinated fashion.***

The applied format of the one-month course – at multiple geographic scales- allowed participants to identify practical opportunities to overcome One Health implementation barriers. Among these are the need for synchronization of standard operating procedures for zoonotic diseases for surveillance and pathogen detection, improved networking between field and laboratory teams, and establishment of feedback mechanisms to communities to facilitate their engagement in disease reporting and control. Through the workshop, PREDICT demonstrated successful proof of concept and solutions for these challenges and provided opportunities that the country can build on and adapt to address a variety of disease contexts and preparedness objectives.

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As the first country to host a Joint External Evaluation (JEE) of the IHR Core Capacities and develop a multi-sectoral costed National Action Plan for Health Security, Tanzania is a leader in its commitment to health security. Surveillance in the human health sector has significantly improved since the JEE in 2016, with real-time surveillance and reporting enhancements for priority diseases. Gaps still remain in linking human cases to animal or environmental exposures at subnational and community level, in part because of a front-line workforce shortage: only 6% of villages have animal health staff, contributing to limited communication and sharing of information between institutions.

Applied and in-depth trainings such as the PREDICT workshop help strengthen field-based skills and enhance awareness of pathways for integration of zoonotic disease prevention, detection, and response measures in the surveillance system. Through PREDICT/Tanzania, more than 250 individuals have been trained in core sills required for One Health and zoonotic disease surveillance, and over 30 viruses have been detected and characterized to date; ultimately, the capacity developed and the data and information generated by this team will help inform animal and human health authorities about possible threats, target or refine potential diagnostics in veterinary and public health labs for more rapid and comprehensive disease detection, and inform risk reduction policies and practices from national to community level.

Section 3: Challenges and potential solutions (if applicable)
NA

Section 4: Outbreak response (if applicable)
NA

Uganda

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1 USAID's GHSA Technical Focus Areas	2 GHSA Indicator	3 Specific progress made toward capacity level	4 Comments
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		

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Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	PREDICT/Uganda worked to build capacity for and conduct One Health surveillance to elucidate ecological and behavioral contributors to wildlife zoonotic pathogen spillover in a high-risk region of southwestern Uganda, the Bwindi-Mgahinga Conservation Area, a region where emerging infectious diseases such as Ebola and Marburg viruses have infected people. Communities in the Bwindi area experience frequent direct and indirect contact with wildlife in the forest, on their farms, and in their homes. PREDICT/Uganda's One Health team completed One Health surveillance and behavioral risk investigations, as well as viral testing for priority zoonoses and emerging threats at PREDICT's partner laboratory, UVRI in Entebbe.	PREDICT's zoonotic disease surveillance was strategically designed to train, equip, and enable surveillance personnel to collect data and build the evidence base for both priority zoonoses and emerging and re-emerging pathogens, such as Ebola and MERS-CoV in wildlife in vulnerable and high-risk areas. Shared animal and human surveillance data and findings helped catalyze formal information sharing between animal and human surveillance systems. In addition, our surveillance engaged local communities in high-risk areas for disease transmission and emergence and fostered improved recognition of zoonotic diseases and awareness of transmission pathways and prevention and control options. PREDICT/Uganda team conducted more than 350 behavioral risk interviews, sampled over 3,400 animals and people, and completed zoonotic disease testing for prioritized samples.
	P.4.2: Veterinary or Animal Health Workforce	Since the start of the project, PREDICT/Uganda has trained over 90 individuals, including veterinary students attending Makerere University's College of Veterinary Medicine, Animal Resources and Biosecurity (COVAB) in the classroom on project modules and protocols for zoonotic disease, biosecurity, and animal handling and sampling. Students then obtained *in situ* experience in the One Health approach and with wildlife field surveillance activities, where they gained hands-on skills in safely and humanely capturing and sampling bats and rodents in and around people's farms and dwellings.	PREDICT provided critical in-service training opportunities through a deliberately designed One Health zoonotic disease surveillance program that encourages hands-on development of core skills lacking in the current animal health workforce. We offered trainings to animal health professionals (government veterinarians, extension officers, lab technicians in animal health labs, and local community members), directly strengthening the capability of the current workforce to successfully and safely conduct core functions of their job on the frontlines of zoonotic disease.
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis		Systematizing the exchange of zoonotic data between the human and animal health sectors was identified as a weakness in the JEE. PREDICT established data sharing agreements with all implementing partners, and procedures for sharing data (including project

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			information and findings) with all ministry partners and other government and non-governmental organizations across both animal and human health sectors. As the project is by design One Health in action, we shared data, information, and reports to catalyze regularly scheduled meetings between sectors and encourage active discussion and communication among sectors. In addition, PREDICT/Uganda provided technical assistance and works with established channels (National Task Force on Epidemic Preparedness and Response and the National One Health Platform One Health Technical Working Group) to communicate findings and recommendations for improved zoonotic disease prevention, detection, and control; we provide regular information on wildlife health threats to animal and human sectors.
Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)		
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		
	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)	In partnership with the Uganda Virus Research Institute, a national referral laboratory, testing was performed on human and wildlife samples collected by PREDICT/Uganda for priority zoonotic diseases such as influenza and the viral hemorrhagic fevers Ebola, Marburg, and RVF, along with other emerging threats from viral families considered high-risk for zoonotic disease transmission, including coronaviruses like MERS and SARS, as well as paramyxoviruses such as Nipah and Hendra virus. Over 14,00 tests were performed across	PREDICT strengthened Uganda's national laboratory systems by enabling viral disease detection at our partner laboratory, Uganda Virus Research Institute (UVRI), one of the three primary national reference laboratories in Uganda. This lab maintains strong ties to the national system and plans to provide protocols and information and in-service training opportunities with animal and human health labs working to actively improve interlinkages and expand capabilities for detecting zoonotic disease threats.

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		five families, including filoviruses and flaviviruses. Confirmed results were shared with government partners prior to release and provided opportunities for multi-sectoral information and data sharing.	
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system		
	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country		
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements	PREDICT/Uganda trained over 90 individuals, including veterinary medicine student interns from Makerere University College of Veterinary Medicine in biosafety and safe animal capture for wildlife disease surveillance and a one health approach to wildlife conservation. The interns were assigned on attachment with PREDICT and gained valuable hands-on experience putting core One Health skills in action.	PREDICT provided critical in-service training opportunities through a deliberately designed One Health zoonotic disease surveillance program that encourages hands-on development of core skills lacking in the current health workforce. The project provided ongoing opportunities for students and interns to learn during project activities, and field work engages animal and human health professionals, providing opportunities to strengthen skills in zoonotic disease surveillance and detection.

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Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		
	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency		
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		
	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		
	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements

Since the start of the project, PREDICT has supported the Uganda National Task force for Epidemic Preparedness and Response in its investigations of several disease outbreaks to better understand the role that wildlife may play in these events, and to learn lessons for the future. Our team has strengthened the National Task Force by encouraging a One Health approach to disease outbreak investigations, control, and prevention, resulting in the incorporation of wildlife investigations into disease outbreak response planning, a lasting legacy for Uganda's national health security and the East and Central Africa region as a whole.

Section 3: Challenges and potential solutions (if applicable)

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NA

Section 4: Outbreak response (if applicable)
NA

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Bangladesh

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1 USAID's GHSA Technical Focus Areas	2 GHSA Indicator	3 Specific progress made toward capacity level	4 Comments
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	PREDICT worked to strengthen One Health surveillance capacity in Bangladesh through collaborations and partnerships with local institutions and departments. Our work has extended and bolstered the surveillance systems in areas identified as potentially high-risk for zoonotic disease spillover. PREDICT completed the syndromic surveillance in hospitals with patients with fevers of unknown origin at Faridpur Medical College Hospital along with community-based surveillance in 3 locations with humans that have frequent contact with high-risk wildlife species and livestock. Samples were safely transported to the project lab at IEDCR where they are undergoing testing for priority zoonotic viruses and emerging threats. PREDICT completed data collection for the One Health Economic Analysis of Zoonotic Diseases in Bangladesh, to identify and	PREDICT's zoonotic disease surveillance was strategically designed to train, equip, and enable surveillance and other associated personnel, representing the human and animal health sectors, to use the data to build the evidence base for both priority zoonoses and emerging and re-emerging diseases, as well as increase the public awareness of these health threats, in vulnerable and high-risk areas. Shared animal and human surveillance data and findings helped catalyze formal information sharing between animal and human surveillance systems. In addition, our surveillance engaged local communities in high-risk areas for disease transmission and emergence and fostered improved recognition of zoonotic diseases and awareness of transmission pathways and prevention and control options. PREDICT/Bangladesh team conducted over 900 behavioral risk interviews, sampled over 20,000 animals and people, and tested samples from for priority zoonoses and emerging viral threats.

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		characterize the expenditures and secondary economic losses associated with avian influenza, Nipah virus, rabies, and anthrax among households, the private sector, the government, and the public in Bangladesh and to estimate the cost to various economic sectors (e.g., health, livestock, and environment) and to society as a whole. Further, PREDICT's One Health team worked in the local communities to build trust and awareness of zoonotic disease threats. Our team held discussions with community members and leaders to engage the community and increase zoonotic disease awareness and sensitize them to the importance of a One Health approach. Insights from behavioral risk investigations, an essential component of community engagement for learning about disease risks were used to support the identification of zoonotic disease transmission risks and potential intervention strategies.	PREDICT also worked to assess the economic impact of four priority zoonotic diseases to the public and private sectors as well as individual households, to improve the understanding of the economic implications of disease avoidance behaviors. Given Bangladesh's strong interest and leadership in advancing One Health collaboration, this information will assist country partners in developing disease prevention and control strategies that optimize resource allocation to promote 'whole-of-society' benefits.
	P.4.2: Veterinary or Animal Health Workforce	PREDICT provided technical support for the Field Epidemiology and Training Program, Bangladesh (FETP, B) (Veterinary) fellows to build capacity in biosafety and bio-security during animal sampling, and to provide instruction in using a One Health approach during outbreak investigations. PREDICT strengthened the cross-partner collaborations and triangulation of surveillance efforts with FAO and the animal health sector and met with FAO to discuss the progress of FAO's field work and laboratory analyses. FAO in collaboration with Government of Bangladesh veterinarians and animal health staff, has sampled over 100 buffalo from multiple cities. FAO personnel have entered this livestock surveillance and testing data into the EIDITH database.	
	P.4.3: Mechanisms for	PREDICT actively supported the current One	

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	responding to infectious zoonosis and potential zoonosis	Health Secretariat and contributed to the further development of the One Health platform and the establishment of viral testing priorities. PREDICT was invited to share expertise, present and lead panel discussions on One Health surveillance for emerging and re-emerging zoonotic disease at several meetings, workshops and conferences with government partners and universities. PREDICT worked with the One Health Secretariat to share information across sectors via project reports and updates within the government.	
Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)	PREDICT provided technical support for the Field Epidemiology and Training Program, Bangladesh (FETP, B) (Veterinary) fellows to build capacity in biosafety and bio-security during animal sampling. The team also focuses on how to conduct a One Health outbreak investigation. PREDICT trained FETP, B (Veterinary) fellow and Senior Scientific Officer from the Central Disease Investigation Laboratory (DLS) on wildlife sampling techniques, PPE and biosecurity – including safe animal carcass disposal during outbreak investigations.	
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		
	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)	PREDICT worked to strengthen laboratory capacity for both animal and human sectors in Bangladesh and improve linkages and multi-sectoral information sharing. Through training and using PREDICT protocols, our partner	The PREDICT partner laboratories, IEDCR and icddr,b, were trained and equipped to perform the full range of activities required for safely detecting PREDICT priority zoonotic viruses. This includes regular training on biosafety and biosecurity, cold

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		laboratory (for human surveillance activities) at IEDCR now has the capability to test for priority zoonotic diseases and emerging threats at the viral family level. In addition, the animal health lab at icddr,b expanded their diagnostic expertise and ability to test for known emerging threats. PREDICT's labs have performed over 86,000 tests across five viral families (corona, flavi, filo, influenza, and paramyxo viruses); interpretation has been completed for the majority of tests and multiple government reports were produced and shared with the One Health Secretariat and local government ministries catalyzing multi-sectoral One Health dialogue and collaboration between the animal and human health communities in Bangladesh. The government approved PREDICT results are publicly released via reports to USAID and through Health Map. Additionally, these findings were prepared to be shared with stakeholders and communities in order to support a multi-sectoral dialogue.	chain, safe sample storage, data management, safe sample transport and shipping, and molecular viral detection techniques. A PREDICT partner and One Health Bangladesh Lab Network facility, icddr,b is a premier laboratory in Bangladesh and a key training center for students and professionals, including government staff from the national lab system.
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system		
	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		

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Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country		
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements	In addition to animal health sector trainings noted above, the PREDICT country coordinator mentored U.S. CDC FETP,B fellows, based at IEDCR, as site supervisor on wildlife disease surveillance. They were trained on wildlife disease surveillance, outbreak investigation, data analysis, and report writing. PREDICT/Bangladesh also supported a One Health Policy Fellow, who conducted the economic analysis of the benefits of the One Health approach to disease response in Bangladesh. The country coordinator also supervised a Masters in Microbiology student from Noakhali Science and Technology University, Bangladesh as co-supervisor of his thesis work.	PREDICT, through implementing partners such as IEDCR, provided training focused on a hands-on approach to teaching field surveillance techniques and laboratory testing standard operating procedures. In support of building the public health workforce, PREDICT supported a One Health symposium at the 25th Annual International Scientific Conference of Bangladesh Society for Veterinary Education and Research (BSVER), Bangladesh Agriculture University, Mymensingh.
Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		
	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency		
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		

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	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		
	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements

PREDICT provided technical, logistical and laboratory support to the Government of Bangladesh with activities in response to suspected zoonotic disease outbreak investigations of animal or human cases, including suspected avian influenza virus outbreaks. In response to a request for training by the Government of Bangladesh following the occurrence of another crow die-off the PREDICT team provided technical advice on preparing to respond to the outbreak, appropriate PPE and sampling procedures. The government formed a multidisciplinary outbreak response team (including staff from the Department of Livestock Services (DLS), the Institute of Epidemiology, Disease Control and Research (IEDCR) and the Food and Agriculture Organization (FAO). PREDICT staff members joined the team for the first few days in the field to conduct field training in the following topics: wildlife sampling, appropriate PPE and biosecurity – including safe animal carcass disposal. 2019 is the first year since 2016 that PREDICT did not conduct the sampling during a crow-mortality event. This is evidence that a sustainable transfer of knowledge has occurred whereby the Government of Bangladesh will continue to be able to respond to such crow mortality events in the future.

Section 3: Challenges and potential solutions (if applicable)
NA

Section 4: Outbreak response (if applicable)
NA

UCDUSR0011397

India

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1 USAID's GHSA Technical Focus Areas	2 GHSA Indicator	3 Specific progress made toward capacity level	4 Comments
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		

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Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	PREDICT/India collected samples from wildlife and people at high-risk interfaces for zoonotic disease transmission. At partner lab Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow Uttar Pradesh (SGPGIMS), technologists processed samples collected by the field team using standard protocols. Data upload on EIDITH commenced.	PREDICT worked with government and local partners to strengthen national capacity for zoonotic disease surveillance using a broadly applicable, rapidly deployable, and easily adaptable system that emphasizes core skills needed for biological sampling for surveillance for a broad range of zoonotic disease threats. This system is easily transferrable to priority diseases in India, as well as for other unknown and potentially emerging viral threats.
	P.4.2: Veterinary or Animal Health Workforce	PREDICT enhanced core One Health professional skills required for conducting field investigations (community sensitization and outreach on zoonotic disease risks, biosafety and PPE, safe sample collection from wildlife, livestock, and people, cold chain, safe sample storage and transport, behavioral risk investigations, and data management). PREDICT was also willing to impart training to additional field staff. PREDICT provided technical expertise to the members of laboratory partner SGPGIMS in detection protocols, outbreak response, biosafety and PPE, cold chain management, laboratory safety and ethical research practices, all skills related to the detection of priority zoonotic diseases and threats.	
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis	To encourage multi-sectoral information sharing across animal and human health sectors, PREDICT distributed reports on laboratory, capacity and surveillance progress to the USAID Mission, GHSA cell (including US CDC) in New Delhi, local institutions	

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		including the Forestry Department, government partners, and university collaborators. In an effort to coordinate across local institutions, PREDICT also shared information and reported to the Indian Council of Medical Research, National Centre for Disease Control, and UP State Health Department. PREDICT/India's Country Coordinator and global lead were invited to participate in a One Health meeting in Ahmedabad. Participants included animal and human health officials from state and federal government agencies. The meeting featured discussions of the efficacy of a One Health approach to disease surveillance, including the Nipah virus outbreak and the animal health sector response.	
Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)		
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		
	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)	Trained lab technicians analyzed field samples using standard protocols for molecular viral detection techniques (nucleic acid extraction, cDNA synthesis, conventional polymerase chain reaction, and results interpretation). Reports to USAID and to the Government of India were generated from the project database. Trainings ensured that staff will produce quality reports when interpreted results with practical implications are available. Lab personnel were fully trained to	PREDICT strengthened national laboratory systems by enabling disease detection through a One Health laboratory network based at partner labs mainly at the Sanjay Gandhi Institute of Postgraduate Medicine, Lucknow Uttar Pradesh. This lab maintains strong ties to the national system, and protocols and information will be shared openly with animal and human health labs working to actively improve interlinkages. Through in-service trainings, PREDICT provided staff from the national system opportunities to enhance skills in virology, quality systems,

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		safely detect priority zoonotic diseases and other emerging threats in human and animal samples. This is a major capacity gain for an apex laboratory in Lucknow in a state which has among the highest rates of unknown acute encephalitis cases in India.	biosafety, lab safety, and methods for detecting zoonotic diseases and emerging threats.
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system		
	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country		
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements	PREDICT provided multiple in-person trainings on topics such as maintaining cold chain storage and achieving informed consent during human syndromic surveillance to health professionals and health care workers in the field areas in Gorakhpur and Maharajgan, thus enhancing skills of these health workers in managing zoonotic infections in future.	The lead implementing partner for PREDICT in India was SGPIMS, Lucknow, a tertiary care hospital and a premier research institute in medical sciences in India. PREDICT was embedded within SGPIMS, and the project provides ongoing opportunities for students, interns, and staff to engage in project activities and upgrade their skills.

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Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		
	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency		
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		
	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		
	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements

NA

Section 3: Challenges and potential solutions (if applicable)
NA

UCDUSR0011402

Section 4: Outbreak response (if applicable)
NA

Indonesia

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1 USAID's GHSA Technical Focus Areas	2 GHSA Indicator	3 Specific progress made toward capacity level	4 Comments
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		
	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	PREDICT/Indonesia strengthened surveillance systems at the animal-human interface, with particular focus on the high-risk animal market value chains. Our team characterized and analyzed viral, ecological, and behavioral data from Sulawesi to help identify potential disease prevention, control, and response plans for more effective and efficient zoonotic disease surveillance systems.	PREDICT data was analyzed, with in-country scientists, to support improved decision-making and management of zoonotic diseases threats, and efficient allocation of resources and future surveillance efforts to the most vulnerable and at-risk areas. PREDICT/Indonesia team has sampled over 3,600 animals and people, conducted over 980 behavioral risk interviews, and completed zoonotic disease testing sharing findings and results with government partners.
	P.4.2: Veterinary or Animal Health Workforce	PREDICT/Indonesia provided on-site trainings to animal health professionals aimed at directly	PREDICT/Indonesia's implementing partners at the Primate Research Center at Bogor Agricultural

UCDUSR0011403

		strengthening the capability of the current workforce to successfully and safely conduct core functions of their job on the frontlines of zoonotic disease control. In addition, PREDICT hosted international fellows for extended in-service training in One Health surveillance and laboratory diagnostics as part of USAID's One Health Workforce 2018 Internship Program. The fellows, sponsored by South East Asia One Health University Network (SEAOHUN), were from Malaysia and Bangladesh – helping to further strengthen cross-border animal health surveillance and workforce development across the region.	University (PRC-IPB) and Eijkman Institut for Molecular Biology (EIMB), provided multiple training opportunities for students and personnel, and in-depth projects in the field and lab, and internships on all aspects of zoonotic disease surveillance, detection, prevention, response, and control. The SEAOHUN One Health Fellows trained this year, continued strengthening of international network of One Health works. PREDICT/Indonesia met with government animal health representatives on a regular basis regarding workforce development, and included participants from the Ministry of Agriculture, from Province or District levels, to join in field sampling trainings where relevant.
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis	PREDICT/Indonesia engaged ministry partners to foster a multisectoral dialogue on zoonotic disease surveillance, and outbreak preparedness and response from the ministry to local levels. Activities included ongoing support of the Animal Disease Investigation Centers (DICs), including ongoing technical advice around core skills needed for biological sampling for surveillance and testing for priority diseases such as coronaviruses, Influenza viruses, filoviruses, flaviviruses, paramyxoviruses, as well as unknown and potentially emerging zoonotic disease threats. PREDICT/Indonesia hosted the project's final "All-country meeting" in Bali in September 2019 (see success stories below).	PREDICT/Indonesia conducted in-service training for local and government animal health staff bolstering skills for safe sampling for zoonotic disease surveillance, and enhancing core One Health professional skills required for conducting field investigations (community sensitization, outreach on zoonotic disease risks, biosafety and PPE, safe sample collection from wildlife and domestic animals, cold chain, safe sample storage and transport, behavioral risk investigations, and data management).
Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)		
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		

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	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)	PREDICT/Indonesia worked with national laboratory partners across animal and public health sectors to strengthen capability and professional skills for detection of priority zoonotic diseases and other viruses. PREDICTs lab teams continued testing wildlife and human samples for 5 priority zoonotic viral families. PREDICT labs in country have performed over 49,000 tests while also completing the sequencing of novel and known viruses from animals and humans.	PREDICT/Indonesia's partner labs at PRC-IPB and EIMB were well trained and equipped to perform activities required for safely testing and detecting zoonotic viruses, including biosafety and biosecurity, cold chain and safe sample storage, data management, safe sample transport and shipping and molecular viral detection techniques (nucleic acid extraction, cDNA synthesis, conventional polymerase chain reaction, and results interpretation). As a result, both labs have the capacity to safely detect known and novel viral viruses including priority zoonotic diseases (Nipah virus, Influenza viruses, and SARS and MERS CoVs).
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system	PREDICT/Indonesia provided technical advice to the national One Health Platform under the Coordinating Ministry of Human Development and Cultural Affairs (Kemenko PMK) regarding the development of an integrated information system combining an EID and zoonotic disease early warning system and integrated risk mapping system (Sistem Informasi Zoonosis dan Emerging Infectious Diseases - SIZE).	
	D.2.3 Analysis of surveillance data		
	D.2.4 Syndromic surveillance systems		

UCDUSR0011405

Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country		
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements		
Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		
	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency		
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency		
Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		
	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		
	R.5.5 Dynamic listening and rumor management		

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Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements

The PREDICT/Indonesia team, in close collaboration with the PREDICT's headquarters and management team organized and coordinated the PREDICT Project's final "All-country meeting" in Bali Indonesia from September 15-17, 2019. The meeting, a celebration of 10 years of project achievements, successes, impact, and ongoing legacy brought together PREDICT team members from 25 countries, along with representatives from the US CDC, USAID, FAO and Government of Indonesia, and provided a platform for information sharing, discussions on how to leverage project successes for continued long-term impact, and opportunities for leveraging capacities and knowledge gained to improve health security towards the prevention of pandemic threats. The meeting program, materials, and details can be found at this link: https://p2.predict.global/meeting-2019

Section 3: Challenges and potential solutions (if applicable)
NA

Section 4: Outbreak response (if applicable)
NA

Vietnam

SECTION 1: SUMMARY OF HEALTH SECURITY CAPACITIES AND CHANGES IN CAPACITY

1	2	3	4
USAID's GHSA Technical Focus Areas	**GHSA Indicator**	**Specific progress made toward capacity level**	**Comments**
Antimicrobial Resistance (AMR)	P.3.1 Antimicrobial resistance detection		
	P.3.2 Surveillance of infections caused by AMR pathogens		

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	P.3.3 Healthcare associate infection (HCAI) prevention and control programs		
	P.3.4 Antimicrobial stewardship activities		
Zoonotic Disease	P.4.1: Surveillance systems in place for priority zoonotic diseases/pathogens	PREDICT's One Health team worked with national, provincial, and district-level veterinary and medical officers to strengthen multi-sectoral information sharing (a challenge identified in the JEE) and to extend Viet Nam's surveillance system to high-risk areas for zoonotic disease transmission including sites with high rates of wildlife trade and intensive farming of wildlife. PREDICT's concurrent surveillance at high-risk sites contributed to Viet Nam's syndromic surveillance of febrile patients at district and provincial hospitals, screening of people in the community with occupational risk to zoonotic diseases through wildlife trade and wildlife farming, wildlife disease surveillance, and surveillance for pathogens of pandemic potential in livestock in collaboration with FAO and the Department of Animal Health (DAH) of the Ministry of Agricultural and Rural Development (MARD). PREDICT/Viet Nam completed all One Health surveillance activities and behavioral risk interviews. All samples were safely transported to 3 PREDICT partner laboratories, including the National Institute of Hygiene and Epidemiology (NIHE), the laboratory at the Viet Nam National University of Agriculture (VNUA) in Ha Noi	PREDICT's zoonotic disease surveillance was strategically designed to train, equip, and enable surveillance personnel from the animal and human health sectors to collect data and build the evidence base for both priority zoonoses and emerging and re-emerging diseases such as viral hemorrhagic fevers in vulnerable and high-risk areas. Shared animal and human surveillance data and findings help catalyze formal information sharing between animal and human surveillance systems. In addition, our surveillance engaged local communities in high-risk areas for disease transmission and emergence and fostered improved recognition of zoonotic diseases and awareness of transmission pathways and prevention and control options. PREDICT/Viet Nam team conducted over 1,000 behavioral risk interviews, sampled over 6,000 animals and people and collected thousands of specimens. The PREDICT/Viet Nam team completed zoonotic disease testing on prioritized samples. Findings were shared with government partners, though some data is still undergoing analysis to identify zoonotic disease transmission risks and potential intervention strategies.

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		and the laboratory at the Department of Animal Health's Regional Animal Health Office No. 6 (RAHO6) in Ho Chi Minh city, where they have undergone molecular viral family level testing to identify potential zoonotic diseases such as viral hemorrhagic fevers and other emerging threats.	
	P.4.2: Veterinary or Animal Health Workforce	PREDICT provided on-the-job trainings in molecular diagnostic techniques for viral pathogens to laboratory technicians working in partner laboratories. In addition, PREDICT provided ongoing training to improve the quality of information on zoonotic disease transmission in Viet Nam by frequently updating partners on any changes to sample collection protocols and sharing techniques for improving data collection through administration of questionnaires to collect data on human risk behavior.	PREDICT built capacity for novel virus detection and identification of potential zoonotic viral pathogens strengthening capacity in Viet Nam's national public health and animal health laboratories.
	P.4.3: Mechanisms for responding to infectious zoonosis and potential zoonosis	A key challenge in the JEE is working to increase involvement of the wildlife sector in coordination mechanism. PREDICT played a critical role in this regard, as data and information on wildlife and human surveillance activities was routinely shared across animal and human health sectors from national to subnational levels. PREDICT contributed to strengthening mechanisms for responding to infectious zoonosis and One Health approaches to zoonotic disease surveillance and viral detection by sharing	As a member of the One Health Partnership for Zoonosis in Viet Nam, PREDICT contributed to the development of the Viet Nam One Health Strategic Plan for the period 2016 to 2020, led by the Ministry of Agriculture and Rural Development together with the Ministry of Health (MoH). PREDICT contributions included providing guidance on research, surveillance and laboratory approaches designed to detect potential emerging zoonotic threats. PREDICT staff also serve on the Technical Advisory Committee (TAC) of the project entitled "Strengthening the capacity for the implementation of

UCDUSR0011409

		information and lessons learned with other members of the One Health Partnership (OHP) for Zoonosis in Viet Nam during OHP "Research to Policy" workshops. PREDICT also contributed to quarterly One Health Communication Network meetings and briefed the One Health Partnership on the successful establishment of concurrent surveillance at two sites in Viet Nam, outlining the mechanisms used to coordinate the timing of surveillance activities in humans, wildlife, and livestock populations, and summarizing test progress in project partner laboratories.	One Health in Viet Nam, Phase 2" with the objective of supporting One Health policy, research, and field activities related to preventing, detecting, and responding to emerging and serious infectious disease threats. The most recent meeting of the TAC took place on March 26, 2019. Finally, PREDICT improved One Health information sharing delivering project reports, updates, and information to Viet Nam's One Health Partnership for Zoonosis co-chaired by the Department of Animal Health of the Ministry of Agriculture and Rural Development and the General Department of Preventive Medicine (GDPM) of the Ministry of Health.
Biosafety and Biosecurity	P.6.2: BSS training and practices (focused on animal health)		
Immunization	P.7.1 Vaccine coverage (measles) as part of national program		
	P.7.2 National vaccine access and delivery		
Laboratory Systems Strengthening	D.1.1: Laboratory testing for detection of priority diseases (focused on animal health)	PREDICT extended the capabilities of Viet Nam's zoonotic disease detection system at the main national human and animal health laboratories in the country. The laboratories have active capability to test for known priority viruses and potentially unknown and emerging threats. PREDICT laboratories in Viet Nam have performed over 35,000 tests across five viral families (coronaviruses, flaviviruses, filoviruses, influenzas, and	PREDICT partnered with the national animal health (Department of Animal Health's Regional Animal Health Office No. 6) and public health diagnostic laboratories (National Institute of Hygiene and Epidemiology) in Viet Nam as well as the laboratory of the Veterinary Faculty at the Viet Nam National University of Agriculture. These laboratories in Viet Nam are the trained in the full range of activities required for safely detecting zoonotic viruses, including biosafety and biosecurity, cold chain, safe

UCDUSR0011410

		paramyxoviruses); test results were shared with the laboratories and national focal points in the Ministry of Agriculture and Rural Development and Ministry of Health providing opportunities for multi-sectoral dialogue and collaboration.	sample storage, data management, safe sample transport and shipping, and molecular viral detection techniques. As a result, the laboratories have capacity to safely detect priority zoonotic diseases and contribute to the national surveillance for emerging viral threats. The laboratories are both training and reference centers for the national animal and public health laboratory systems respectively and contribute to data for surveillance reporting.
	P.1.2: Specimen referral and transport system (focused on animal health)		
	D.1.4: Laboratory Quality System (focused on animal health)		
Real Time Surveillance	D.2.1 Indicator and event-based surveillance systems		
	D.2.2 Interoperable, interconnected, electronic real-time reporting system		
	D.2.3 Analysis of surveillance data (Amanda LISN workshop JRA)	PREDICT contributed to the joint analysis of surveillance data across the human and public health sectors through participation in the LISN initiative with FAO, WHO, and Government of Viet Nam partners DAH, Ministry of Agriculture and Rural Development, and GDPM, Ministry of Health. This year, PREDICT took part in a Joint Risk Assessment training and workshop organized with technical support from WHO and FAO. Risk for emergence of highly pathogenic avian influenza and a potential new pandemic of wildlife origin were assessed for specific	Representatives from the Department of Animal Health, MARD, and General Department of Preventive Medicine, MoH, were very enthusiastic about the adaptation and application of the JRA model and approach for implementation in Viet Nam. Links were made to utilization of the approach by the Emergency Operations Centers and for assessing risk of zoonotic disease transmission.

UCDUSR0011411

		areas of the country in simulation type exercises. The workshop highlighted the importance of cross-sectoral sharing of data for joint analysis of surveillance data across the animal and public health sectors.	
	D.2.4 Syndromic surveillance systems (Amanda LISN plus numbers of syndromic patients)	PREDICT contributed to syndromic surveillance systems in Viet Nam by increasing the diagnostic tests run on SARI patients in collaboration with WHO SARI sites and the LISN initiative with FAO, WHO, and Government of Viet Nam Ministry of Agriculture and Rural Development and Ministry of Health. Additionally, PREDICT contributed to syndromic surveillance by enrolling patients with fevers of unknown origin and conducting behavioral risk questionnaires and viral family-level testing.	
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE		
	D.3.2 Reporting network and protocols in country	PREDICT shared surveillance and testing results through reporting channels of various sectors covering animal and public health, and wildlife management (CITES Management Authority). These reporting channels for surveillance data and test results were agreed to by the relevant government agencies.	PREDICT contributed to systems for efficient reporting through participation in the LISN initiative with FAO, WHO, and Government of Viet Nam Ministry of Agriculture and Rural Development and Ministry of Health.
Workforce Development	D.4.1: Human resources are available to implement IHR core capacity requirements	PREDICT provided in-service trainings, designed to enhance skills of the existing health workforce, especially the animal health sector with a niche focus on biosafety and safe sample collection with small mammals, such as bats and rodents, which represent the	One of the lead implementing partners for PREDICT in Viet Nam was the Viet Nam National University of Agriculture's Faculty of Veterinary Medicine, the primary training grounds for animal health professionals in-country. PREDICT worked closely with VNUA faculty and the VNUA National Key

UCDUSR0011412

		highest risk for viral spillover and spread to people. PREDICT has trained over 200 individuals (36% female) in Viet Nam, including government staff working on the frontlines of disease surveillance and detection, and local and international students who are future One Health workforce. PREDICT trained personnel are based in national government laboratories or university institutions where they utilize their experience and skills learned to conduct PREDICT biological and behavioral risk surveillance to implement IHR core capacities at their institutions.	Laboratory of Veterinary Biotechnology Faculty of Veterinary Medicine which is an important PREDICT partner laboratory. The engagement with VNUA provided ongoing opportunities for students, interns, and staff to engage in project activities with opportunities to strengthen skills in zoonotic disease surveillance and detection with hands-on learning for safe capture and sampling of wildlife, cold chain and safe sample transport, and viral detection. PREDICT trained personnel were also embedded in national government institutions and the veterinary and public health faculties of national universities of agriculture and health. PREDICT trained staff were present and have the skills to implement IHR core capacity requirements.
Preparedness	R.1.1 Multi-hazard national public health emergency preparedness and response plan is developed and implemented		
	R.1.2 Priority public health risks and resources are mapped and utilized		
Medical Countermeasures and Personnel Deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency		
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency		

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Risk Communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)		
	R.5.2 Internal and partner communication and coordination		
	R.5.3 Public communication		
	R.5.4 Communication engagement with affected communities		
	R.5.5 Dynamic listening and rumor management		
Other relevant Action Package (fill in)	(fill in appropriate indicator)		

Section 2: Major success stories/notable achievements
NA

Section 3: Challenges and potential solutions (if applicable)
NA

Section 4: Outbreak response (if applicable)
N A

UCDUSR0011414



OPERATIONALIZING ONE HEALTH
CÔTE D'IVOIRE

Significant achievements have been made to advance health security in Côte d'Ivoire, including the President's recent signing of two decrees establishing, allocating, organizing and operating the public health emergency operations center (Decree No. 2019-292 of 3 April 2019) and the One Health national platform (Decree No. 2019-293 of 03 April 2019). Both show that Côte d'Ivoire has a strong opportunity to build on the willingness of sectors to collaborate and make One Health operational to improve Sustainable Development outcomes. However, One Health in practice remains limited, in part due to the broad scope of human, animal and environmental health and lack of clarity on how and where it can offer optimal benefits.

What One Health Added

PREDICT organized a workshop at the Institut Pasteur of Côte d'Ivoire (IPCI) on operationalizing One Health in the country. Putting the World Bank One Health Operational Framework to use, the workshop focused on practical, value-added ways to integrate multi-sectoral collaboration, bringing together authorities from Ministries of Health, Veterinary Services, Wildlife, Environment, Security, Rural Development, and Economics and Finance as well as local NGOs and academic partners. An exercise on investing in One Health used three case studies to examine multi-sectoral impacts of African Swine Fever (ASF), lagoon pollution, and impacts from construction of the Soubre dam. For example, communities in northern CIV were heavily impacted by the livestock disease ASF; while not zoonotic, the major losses incurred by smallholder farmers have potentially devasting immediate and long-term socioeconomic impacts, including ability to pay for healthcare services, and possible wider pricing implications (e.g., on military food sources) (see diagram). For lagoon pollution, impacts are typically primarily viewed as environmental or aesthetic, but can be far-reaching, including impacts on food safety and security, water quality, and tourism. Impacts do not necessarily have to be precisely quantified to offer an entry point for discussion and coordinated decision making on possible solutions to reduce upstream risks as well as downstream impacts.

The workshop identified the need for formalizing support for One Health at the level of the Prime Minister's Office and an optimal mechanism to manage and coordinate the One Health platform and promote additional collaboration in daily functions and planning processes, both in emergencies and peacetime. The need to develop synergistic research and science investigation programs between state agencies and research laboratories (government or universities) was underlined. Workshop participants also discussed the need to invest in human and animal health surveillance system strengthening and develop a formal wildlife disease surveillance program. This is a relatively new area of capacity for the country and a plan is needed to ensure that wildlife disease surveillance and risk management be sustained and integrated into human, animal, and environmental health systems to strengthen zoonotic disease surveillance.

PARTNERS: USAID, IPCI, World Bank, EcoHealth Alliance, Food and Agriculture Organization, PREDICT-2

GHSA: PREVENT-2: Zoonotic Disease; DETECT-2&3: Real-Time Surveillance; DETECT-5: Workforce Development; Sustainable Financing



UCDUSR0011416

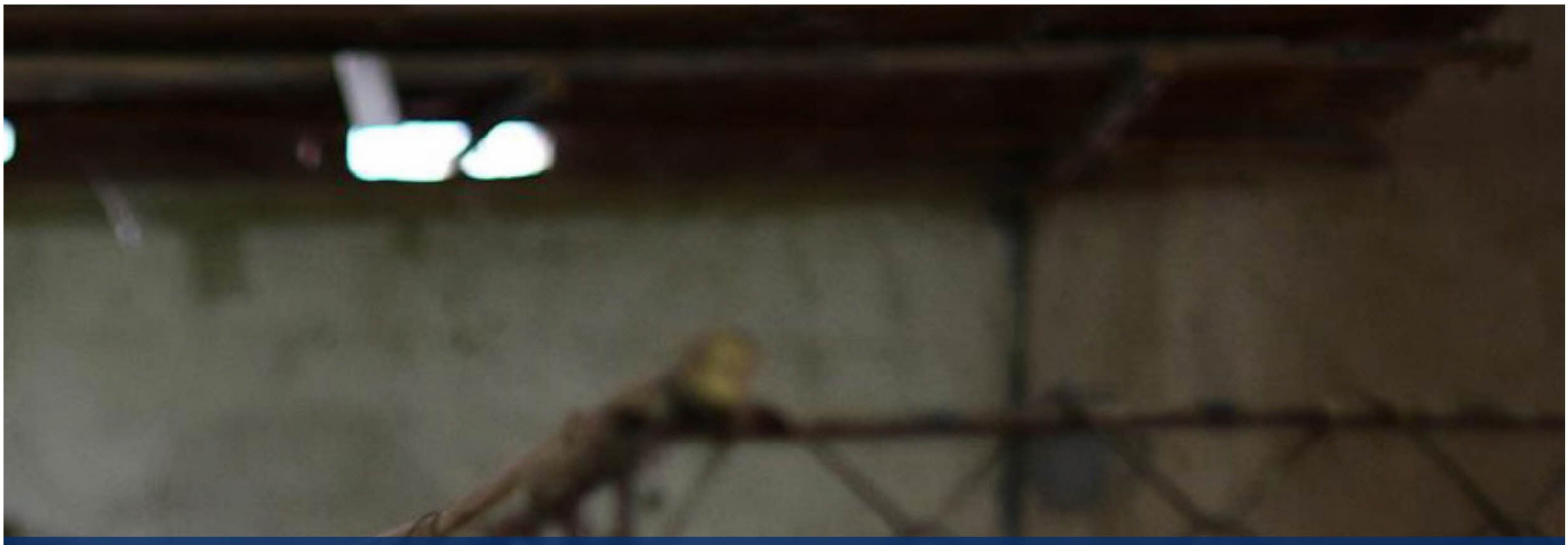


VIET NAM

Preventing pandemics, protecting global health

In Viet Nam, the Wildlife Conservation Society is responsible for implementing PREDICT activities in collaboration with the Viet Nam Ministry of Health, Ministry of Agriculture and Rural Development, and other partners. PREDICT-2 in Viet Nam is focused on investigating and understanding the potential transmission of infectious diseases between wildlife, livestock and humans at key human/wildlife/domestic animal interfaces to prevent pandemic disease emergence and negative impacts on human health. The interfaces are found along animal value chains and animal production systems, including the wildlife trade, live animal markets, wildlife farms and bat guano collection sites. PREDICT-2 also conducts behavioral surveillance to gather relevant information about human behavior and practices to provide a better understanding of the drivers for zoonotic disease spillover and host-pathogen dynamics to inform interventions and disease prevention.





Capacity building forms an essential component of PREDICT-2 in Viet Nam to ensure the quality of data and long-term sustainability of the approach. We have trained over 150 field health officers in areas such as safe animal capture and handling, sample collection and storage, biosafety, and the use of Personal Protective Equipment (PPE). This training enables ongoing surveillance at the wildlife/livestock/human interface and the mainstreaming of core One Health capacities within national animal health and public health institutions. The project has also built critical capacity in national animal health and public health laboratories for novel virus detection in Viet Nam.

Learn more at **www.predict.global**

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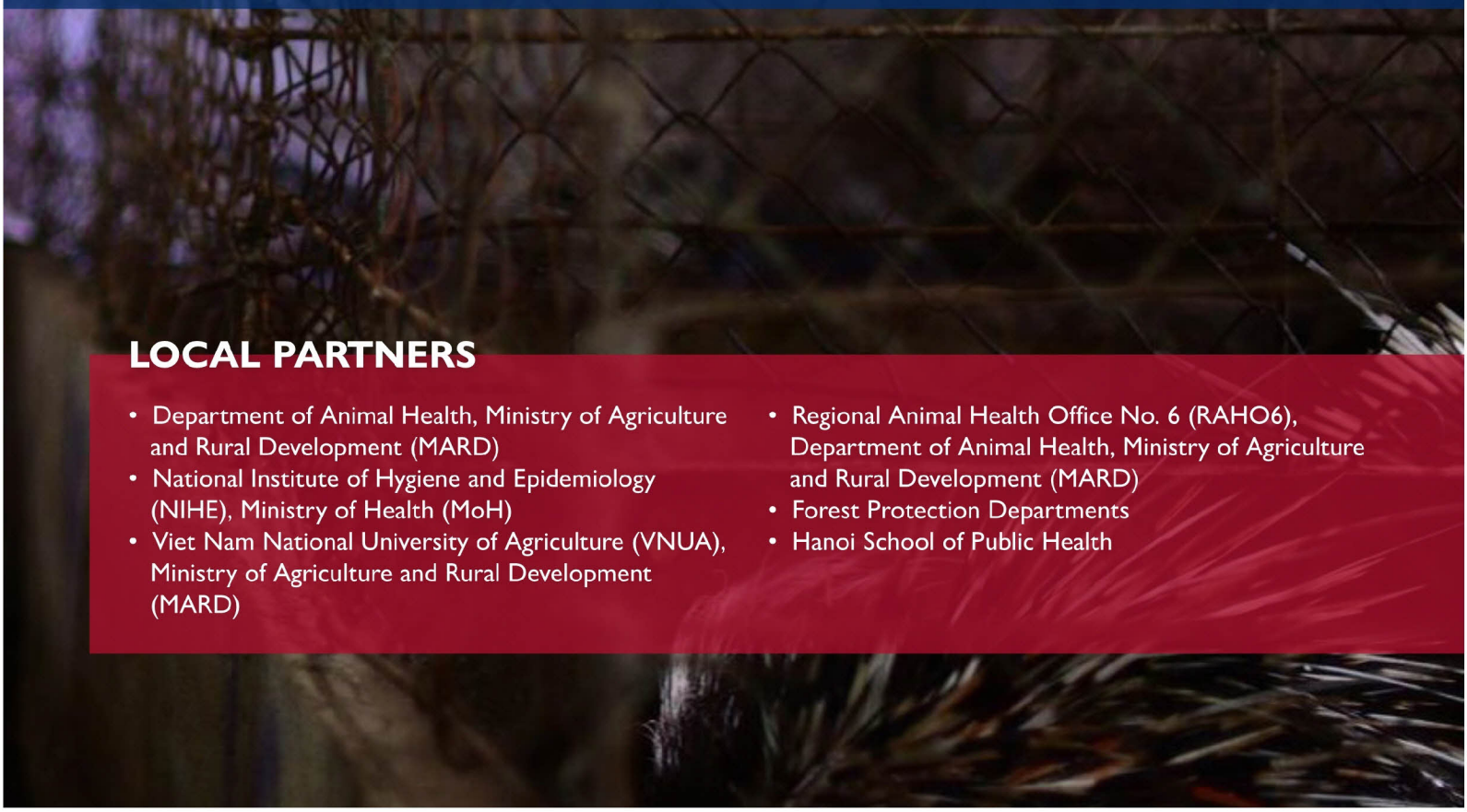
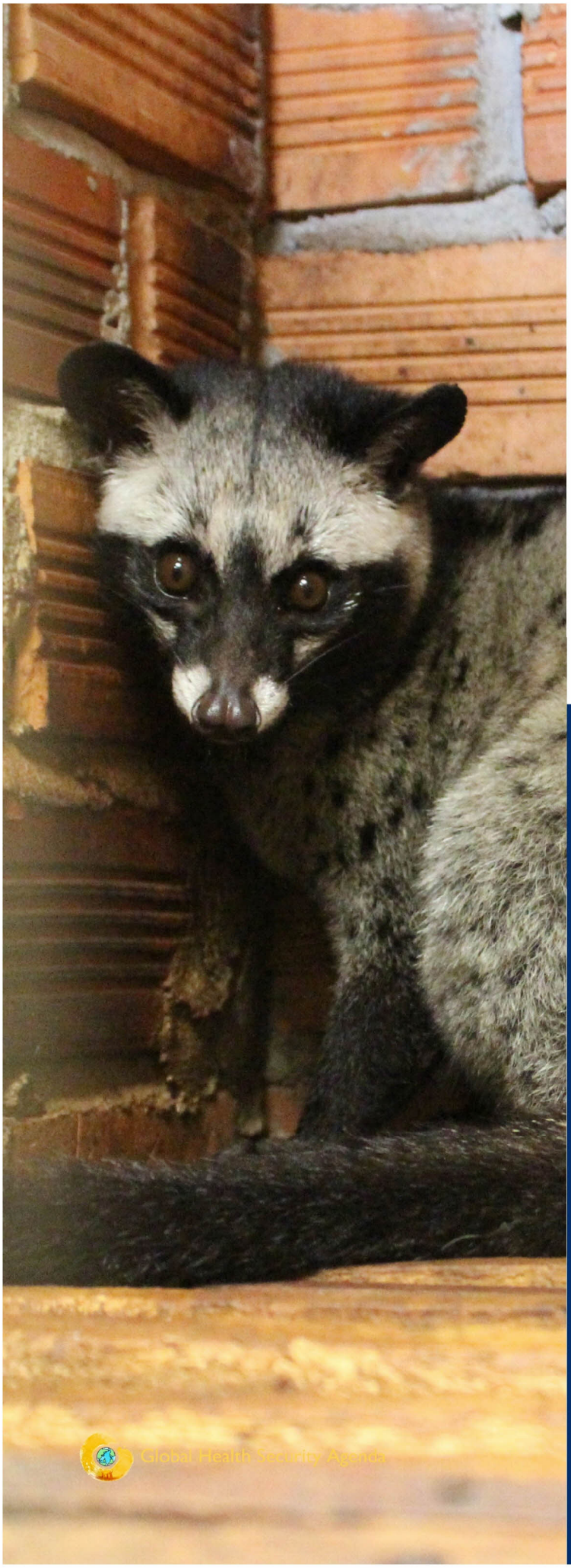


LOCAL PARTNERS

- Department of Animal Health, Ministry of Agriculture and Rural Development (MARD)
- National Institute of Hygiene and Epidemiology (NIHE), Ministry of Health (MoH)
- Viet Nam National University of Agriculture (VNUA), Ministry of Agriculture and Rural Development (MARD)
- Regional Animal Health Office No. 6 (RAHO6), Department of Animal Health, Ministry of Agriculture and Rural Development (MARD)
- Forest Protection Departments
- Hanoi School of Public Health



>200

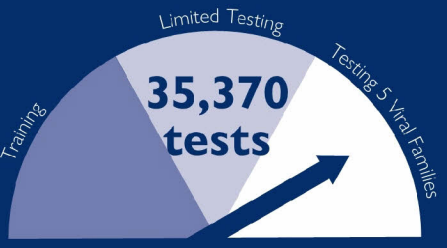
DEVELOPED the One Health Workforce by training more than 200 people in Viet Nam.

>6.7K

OPERATIONALIZED One Health surveillance and sampled over 6.7K animals and people, helping minimize the spillover of zoonotic disease threats from animals into human populations.

LABORATORY STRENGTHENING

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



Since 2014

26 PREDICT

12 KNOWN

DETECTED 38 unique viruses in both animal and human populations.

*Preliminary findings from 2014-2019

VIET NAM

Findings as of July 2019

UCDUSR0011419



NGUYEN THI THANH NGA

PREDICT/Viet Nam, Health Team Manager

Wildlife Conservation Society

"I started my career as a member of the PREDICT Project. Being a part of the team helps me deepen my expertise, improves my skills, and gives me a golden chance to explore the area that I'm interested in—wildlife, wildlife health and zoonotic diseases. PREDICT has helped me enhance my veterinary skills and its findings bring value to animal health, especially wildlife health, in Viet Nam."



PHAM THI BICH NGOC

PREDICT/Viet Nam, Veterinary Program Officer

Wildlife Conservation Society

"Being a junior staff in PREDICT 2 VIETNAM has helped strengthen my knowledge of the dynamics of zoonotic virus evolution, spillover from animals to human, amplification, and spread; my skills in identifying the "hot spots" of high-risk disease transmission interfaces to address wildlife trafficking in the region; and my ability to help? prevent the devastating and destabilizing effects of a disease pandemic."







MAJOR ACHIEVEMENTS

- Implemented biological concurrent surveillance to detect viral sharing and spillover in human, domestic animal, and wildlife populations.
- Conducted behavioral risk surveillance to identify risk factors associated with zoonotic disease transmission along the wildlife trade animal value chain to inform intervention recommendations for disease prevention as a contribution to Viet Nam's National One Health Strategic Plan.
- Built capacities for One Health disease surveillance and viral discovery in national animal health and public health laboratories.
- Built on expanded relationships and knowledge to submit technical advice on related subjects to Government; for example, recommendations related to the inclusion of provisions for wildlife disease outbreak response in the new animal health law in Viet Nam.
- Once approved by government for release, all PREDICT/ Viet Nam surveillance and test result data will appear on the OneHealthMap, which makes data on the distribution of viruses of pandemic potential publicly available to inform disease prevention and control.



USAID FROM THE AMERICAN PEOPLE

UCDAVIS VETERINARY MEDICINE One Health Institute

WCS

EcoHealth Alliance

METABIOTA™

Smithsonian Institution

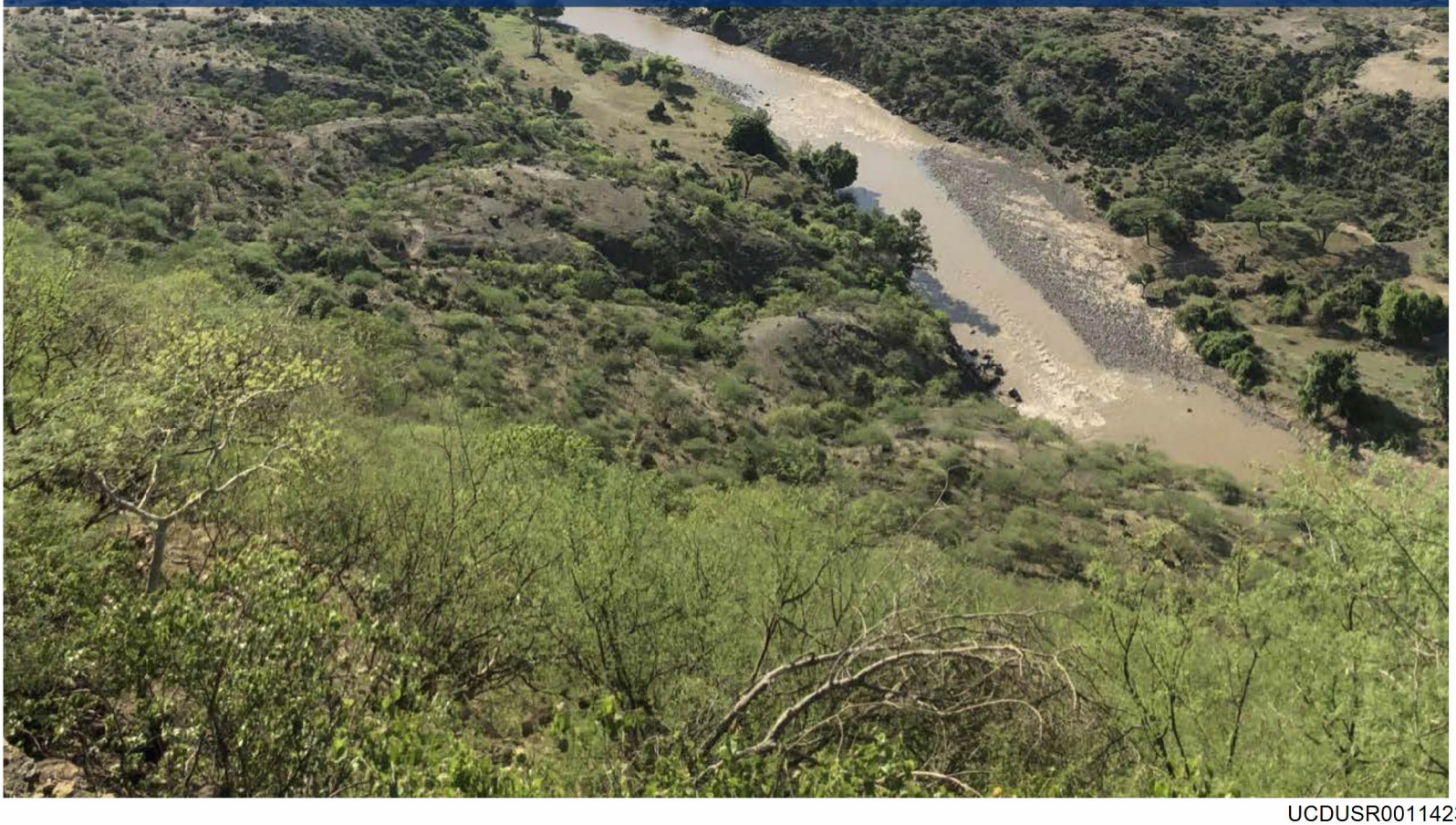


UCDUSR0011422

ETHIOPIA

Promoting vigilance for viral spillover from wildlife to people

Identified as a priority region, PREDICT/Ethiopia kicked off activities in 2015 with partners including UC Davis, the Aklilu Lemma Institute of Pathobiology at Addis Ababa University, and the Ethiopian Public Health Institute. PREDICT/Ethiopia is the first project we are aware of in Ethiopia that takes a One Health approach to address wildlife zoonoses posing substantial threats to human, animal and economic health. Through consultation with partners including the Ministries of Health and the Ethiopian Wildlife Conservation Authority, concurrent surveillance sites for wildlife and humans in high-risk interfaces included the Awash pastoral area and Bati camel holding ground communities were selected for investigation of viral spillover from wildlife hosts to humans. Community engagement throughout the length of the project has been paramount to ensuring the success and safety of our field teams, especially given some of the civil unrest and political instability in the country that occurred during project activities. An example of regional capacity building at its finest, PREDICT/Ethiopia teams benefitted from the knowledge and technical skills of PREDICT teams in Tanzania and Uganda; these relationships and professional networks will continue long after project activities cease.



Through forging new partnerships, introducing novel wildlife surveillance methods, building laboratory and workforce capacity, improving capacity for surveillance of zoonotic diseases, PREDICT/Ethiopia put One Health into action through concurrent surveillance of wildlife (bats and non-human primates) and febrile humans for new and emerging viral diseases. Working in support of the Global Health Security Agenda in Ethiopia, PREDICT/Ethiopia's overall goals were to identify animal reservoirs and amplification hosts for zoonotic viruses, enhance real time disease surveillance and work force capacity, and participate in collaborative One Health platforms that reduce the risk of disease spillover, amplification, and spread. PREDICT/Ethiopia enhanced two molecular diagnostic laboratories in country that are now capable of performing surveillance for new and emerging viral disease threats, and contributing to building a One Health workforce capable of responding to, and diagnosing, such threats. Wildlife and human samples are concurrently screened for five prioritized viral families suspected to be sources for new potential zoonotic pathogens impacting people. Through risk analysis of Ethiopian and and PREDICT/Global data, PREDICT/Ethiopia is able to educate communities and health professionals on behavior changing strategies designed to protect people and wildlife from disease threats.

Learn more at **www.predict.global** and follow us on social media: **@PREDICTproject**

LOCAL PARTNERS

- Addis Ababa University, Aklilu Lemma Institute of Pathobiology (AAU, ALIPB)
- Ethiopian Public Health Institute (EPHI)
- Ministry of Health
- Awash Health Center
- Bati Health Center
- Ministry of Culture & Tourism
- Ethiopian Wildlife Conservation Authority
- Ministry of Livestock Development and Fisheries (MoLDF)
- National Animal Health Diagnostics and Investigation Center (NAHDIC)
- Food and Agricultural Organization (FAO)



Global Health Security Agenda

30

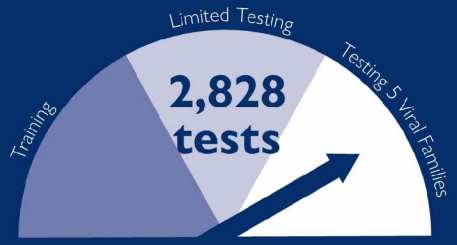
DEVELOPED the One Health Workforce by training 30 people in Ethiopia.

>1.3K

OPERATIONALIZED One Health surveillance and sampled over 1.3K animals and people, helping minimize the spillover of zoonotic disease threats from animals into human populations.

LABORATORY STRENGTHENING

· Addis Ababa University, Aklilu Lemma Institute of Pathobiology



Since 2014

4 PREDICT **4** KNOWN

DETECTED 8 unique viruses in both animal and human populations.

*Preliminary findings from 2014-2019

ETHIOPIA

Findings as of July 2019

UCDUSR0011425



DESALEGN BELAY

PREDICT/Ethiopia, Human Surveillance Lead

Ethiopian Public Health Institute

"Prevention starts with detection, and PREDICT has brought new lab capacity and a One Health surveillance approach to prevent outbreaks."



YOHANNES NEGASH

PREDICT/Ethiopia, Wildlife Surveillance Laboratory Lead

Addis Ababa University, Aklilu Lemma Institute of Pathobiology

"PREDICT is one of the best coordinated projects I've ever seen. I have learned a lot of techniques from field sampling to laboratory testing. We have learned how to organize tasks and how to collaborate with others, and how to manage a whole project. PREDICT has taught me to follow up and harmonize all activities and to share an approach across countries. PREDICT can detect emerging and known zoonotic viruses which is very important for early warning and detection of potential pandemics."







MAJOR ACHIEVEMENTS

- First known project to utilize a One Health approach for zoonotic disease surveillance in bats in Ethiopia
- Implemented new field methods for wildlife disease surveillance
- Created new collaborations between universities, institutions, sectors and countries
- Established conventional PCR laboratory techniques in two laboratories in country
- Participated in the establishment of the Ethiopian National One Health Steering Committee made of representatives from EPHI, Ministry of Agriculture, Ministry of Forestry, Environment and Climate Change, four universities, EWCA, Ministry of Higher Education, and included partners from the WHO, CDC, and FAO.
- Strengthened regional networks and communication channels across East Africa





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PREDICT
SENEGAL
One Health in action (2014-2019)
*Preliminary findings as of July 2019



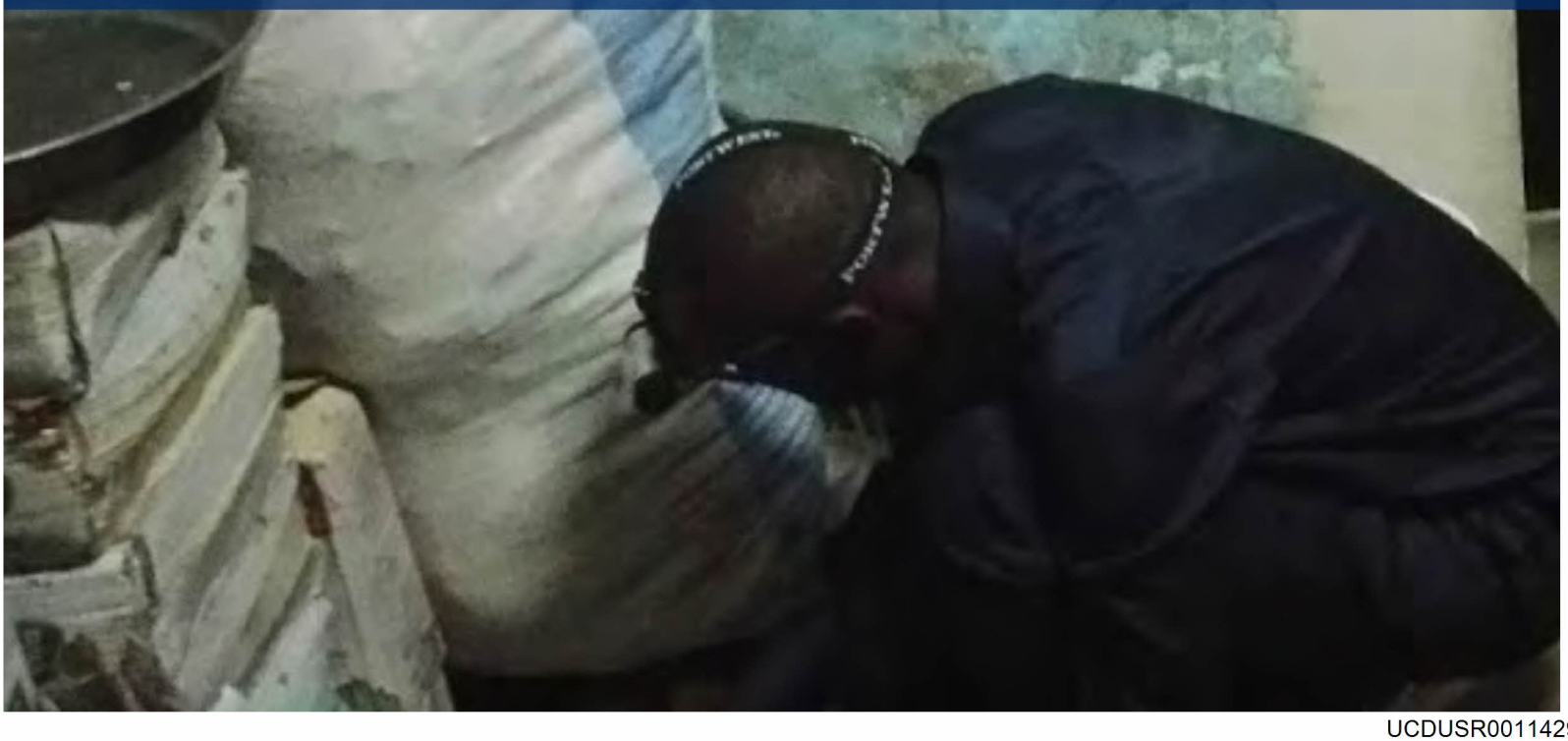
SENEGAL

Le projet PREDICT/Sénégal, en collaboration avec les autorités locales, a mis en œuvre des activités de surveillance selon l'approche une seule santé («One Health») au niveau de l'interface homme-animal-environnement à haut risque afin de renforcer la capacité du Sénégal à détecter les menaces de zoonoses et à y faire face.

En raison de nombreuses épidémies intervenues dans des pays voisins de l'Afrique de l'Ouest, le Sénégal s'efforce activement d'améliorer la surveillance, la détection et la riposte afin de mieux contrôler les maladies infectieuses émergentes et réémergentes, dont 75% sont d'origine animale. Ainsi, le gouvernement a entrepris plusieurs initiatives dans ce sens dont l'implémentation de l'approche une seule santé («One Health»). C'est dans ce cadre que le projet USAID/PREDICT Sénégal est venu appuyer la stratégie "One Health" au Sénégal.

PREDICT/Sénégal a été implémentée par une équipe de professionnels de la santé humaine, animale et environnementale de 3 entités (École interétatique de science et de médecine vétérinaires (EISMV) de Dakar ; Institut sénégalais de recherche agricole (ISRA) ; Université Cheikh Anta Diop de Dakar). L'objectif visé est d'identifier et de prévenir les maladies émergentes et réémergentes au Sénégal avant qu'elles ne se propagent aux populations humaines.

PREDICT/Sénégal a élaboré et implémenté, en collaboration avec les partenaires gouvernementaux et non gouvernementaux, un plan de surveillance selon l'approche une seule santé («One Health») pour les maladies zoonotiques prioritaires et les autres menaces émergentes dans la zone de Sindia qui présente une interface à fort potentiel de transmission des maladies zoonotiques de la faune sauvage aux animaux domestiques et aux humains. Ainsi, des échantillons ont été collectés sur des animaux de la faune et sur des humains, puis analysés par les laboratoires partenaires sénégalais conformément aux protocoles PREDICT.





Les équipes multidisciplinaires de PREDICT/Sénégal, composés de professionnels de la santé animale, de la santé humaine et de celle des écosystèmes au Sénégal, ont aussi pour autre objectif de renforcer les capacités nationales en ressources humaines en matière de surveillance et de riposte aux maladies zoonotiques. C'est dans ce cadre que PREDICT/Sénégal a organisé diverses formations sur le terrain et en laboratoire permettant ainsi le renforcement des compétences en surveillance, détection, et en riposte.

Tout au long du projet, les communautés des villages de Sindia se sont intéressées, de plus en plus, aux activités du projet PREDICT. De même, les équipes de PREDICT/Sénégal ont activement mobilisé et impliqués les leaders des communautés de ces villages au cours des différentes étapes du projet. Ils ont également bien sensibilisé sur les risques liés au contact avec la faune sauvage (rongeurs, chauves-souris) en transmettant, par ce contact, les pathogènes dangereux et comment vivre avec cette faune en réduisant ces risques. Ainsi, cette sensibilisation a permis aux communautés de bien s'approprier les messages clés permettant de réduire le risque de transmission et de propagation de ces pathogènes.

To learn more, visit: **www.predict.global**

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LOCAL PARTNERS

- Cabinet du Premier Ministre, Sénégal
- Defense Threat Reduction Agency/Cooperative Biological Engagement Program
- Direction des Parks Nationaux
- Institut Pasteur de Dakar, Dakar
- Ministère de l'Agriculture et de l'Equipment Rural
- Ministère de l'Elevage et des Productions animales
- Ministère de l'Environnement et du Développement Durable
- Ministère de la Santé et de l'Action Sociale
- Organisation des Nations Unies pour l'Alimentation et l'Agriculture (FAO), Dakar
- Organisation mondiale de la Santé Sénégal (WHO), Dakar
- REDISSE (World Bank), Dakar
- UCAD / Hôspital Aristide le Dantec, Dakar
- US CDC, Dakar
- USAID EPT One Health Workforce
- Réserve de Bandia



Global Health Security Agenda

>70

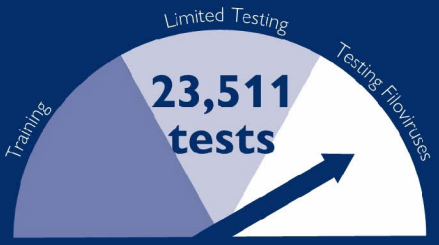
DEVELOPED the One Health Workforce by training more than 70 people in Senegal.

>1.6K

OPERATIONALIZED One Health surveillance and sampled over 1.6K animals and people, helping minimize the spillover of zoonotic disease threats from animals into human populations.

LABORATORY STRENGTHENING

· Laboratoire de Fievres Hemorrhagiques
· UC Davis One Health Institute



Since 2014

5 KNOWN

DETECTED 5 unique viruses in both animal and human populations.

*Preliminary findings from 2014-2019

SENEGAL

Findings as of July 2019

UCDUSR0011431



MODOU MOUSTAPHA LO

PREDICT/Sénégal, ISRA PI

Institut Sénégalais de Recherches Agricoles

« Au Sénégal, PREDICT est le programme le plus impliqué dans l'implémentation de l'approche une seule santé (One Health) à travers ses activités en matière de surveillance des zoonoses prioritaires. En effet, avec les 6 maladies zoonotiques prioritaires identifiées pour la surveillance au Sénégal, PREDICT s'est activement impliquée à la 4ème grâce aux activités de ses équipes émanant des 3 principales structures intervenant dans la santé humaine, animale et environnementale. »



MAME CHEIKH SECK

PREDICT/Sénégal, Human Sampling Lead

Université Cheikh Anta Diop de Dakar

« L'approche One Health est une réalité au Sénégal. En effet, dans le cadre du projet PREDICT/Sénégal, différents professionnels (médecins, vétérinaires et écologistes) s'unissent pour surveiller, détecter et réagir aux menaces endémiques à l'interface 'homme- animal-environnement. »



AMADOU ALASSANE N'DIAYE

PREDICT/Sénégal, Responsible de l'échantillonnage anima

Université Cheikh Anta Diop de Dakar

« L'approche One Health est une réalité au Sénégal. En effet, dans le cadre du projet PREDICT/Sénégal, différents professionnels (médecins, vétérinaires et écologistes) s'unissent pour surveiller, détecter et réagir aux menaces endémiques à l'interface 'homme- animal-environnement. »







MAJOR ACHIEVEMENTS



- PREDICT a créé la première équipe multidisciplinaire (médecins, vétérinaires, environnementalistes, biologistes, etc.) capable de surveiller en toute sécurité la faune sauvage au Sénégal.
- Des compétences formés et opérationnels pour la surveillance de familles virales prioritaires pouvant émergées de la faune sauvage
- Des plateaux de biologie moléculaire renforcés par la mise place de protocole pour la détection de zoonoses prioritaires pour le Sénégal
- 830 humaine échantillonnés pour la surveillance.
- 1860 animaux sauvages échantillonnés pour la surveillance des animaux (chauves-souris, rongeurs et primates non humains).
- 5810 tests effectués au laboratoire de l'UCAD pour les prélèvements humains.
- 14959 tests effectués au Laboratoire National de l'Elevage et de Recherches Vétérinaire de l'ISRA pour les échantillons des animaux sauvages.
- 26 agents des parcs nationaux et des eaux et forêts formés en surveillance de la faune sauvage et en échantillonnage reposant sur des mesures de biosûreté et de biosécurité.
- 25 techniciens et étudiants formés aux techniques de laboratoire pour l'identification de virus à potentiel épidémique suite à des mesures de biosûreté et biosécurité.
- 865 personnes (notables, chefs de village, guides religieux, associations de jeunes et de femmes, travailleurs et étudiants) sensibilisées à la manière de vivre en bonne santé avec la faune sauvage.
- Un exercice de simulation sur la détection et la riposte face à un foyer de l'infection à filovirus à Sindia organisé par PREDICT et a rassemblé 45 participants : administrateurs, ministéres techniques, élus locaux, universitaires, partenaires techniques et financiers.
- Mise en place d'une plateforme de partage de données et d'information qui permet d'améliorer l'interopérabilité entre les différents secteurs concernés du PSSM



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PREDICT
INDONESIA
One Health in action (2009-2019)
*Preliminary findings as of July 2019



INDONESIA

Supporting the Government of Indonesia to strengthen health security and prevent, detect, and rapidly respond to the spillover of infectious pathogens from wildlife to humans

Indonesia has abundant biodiversity, including endemic species of non-human primates, rodents and bats. Rampant rates of tropical deforestation, thriving wildlife trade and hunting networks, and a growing human population, together threaten Indonesia's unique biodiversity and increase the risk of zoonotic disease emergence. As an archipelago, Indonesia's seas and oceans may have historically limited spread of species of wild animals and the pathogens they may carry. However, globalization and resulting changes in human activities are increasing movement across and beyond the country and therefore heightening the risk of cross-species transmission and the spread of pathogens. Rapid ecological changes, such as clearing of peat swamp and tropical rain forests for oil palm plantations, are bringing humans into close contact with wildlife species that were previously rarely seen.

Since 2009, PREDICT/Indonesia has worked with central government and local partners from Ministry of Agriculture (Local Animal Health Offices at Provincial and District levels) to better understand the mechanisms of virus spillover from wildlife to livestock and people and to strengthen capabilities and professional skills for the detection of priority zoonotic diseases and other viruses across high-risk, human-animal interfaces. PREDICT activities are centered at several sites on the Island of Sulawesi, the fourth largest island in Indonesia. Sulawesi is an important site for the wildlife trade and is undergoing rapid land conversion and exploitation of its local fauna. PREDICT One Health surveillance sites were targeted to capture high-risk animal-human interfaces along the wildlife value chain in Sulawesi.





Together with our partners, PREDICT worked to strengthen key capacity gaps in wildlife health and conducted One Health surveillance providing critical data and insights on ecological and epidemiological risk factors and zoonotic diseases for the ministry partners. PREDICT also worked with partners across animal and public health sectors and at the national and subnational levels to strengthen the national laboratory system for detection of priority zoonoses and emerging viral threats. Through field-based trainings, our team helped establish One Health best practices for local and government staff, and provided a model of One Health in action bridging sectors and strengthening networking, collaboration, and surveillance and diagnostic capabilities.

Over the past 10 years, our team has identified at-risk human-animal interfaces and explored behaviors, beliefs and practices that may be associated with zoonotic disease transmission risk. Moving from data to action, PREDICT is working together with the Government of Indonesia to develop policy recommendations and intervention strategies for improved zoonotic disease prevention, detection, and response.

To learn more, visit: **www.predict.global**

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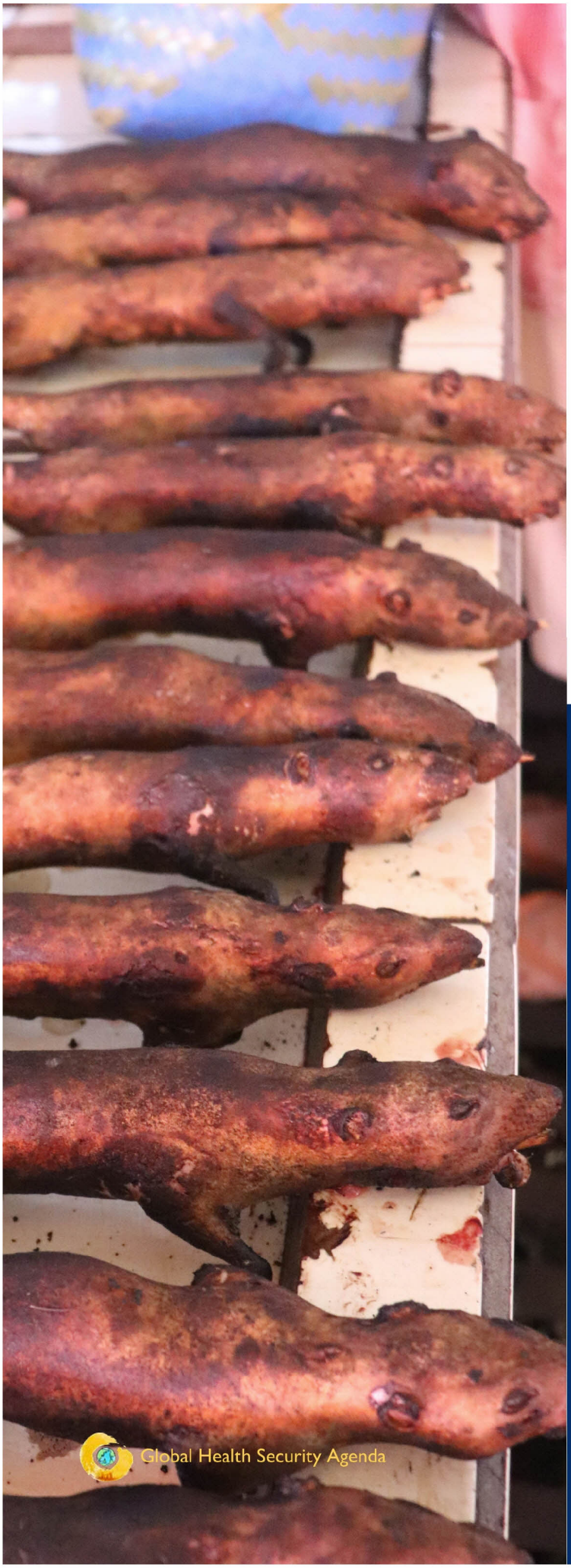
LOCAL PARTNERS

- Food & Agriculture Organization of the United Nations
- Gorontalo University
- Indonesia One Health University Network
- International Federation of Red Cross and Red Crescent Societies
- Ministry of Agricultural Republic Indonesia—Directorate General of Livestock and Animal Health Services
- Ministry of Environment and Forestry Republic Indonesia
- Ministry of Health Republic Indonesia
- Ministry of Research, Technology and Higher Education
- Noongan Hospital
- Primary Health Care Center of Kawangkoan
- Sam Ratulangi University of Manado
- USAID Preparedness and Response
- World Health Organization of the United Nations





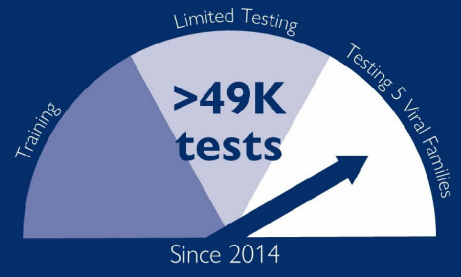
DEVELOPED the One Health Workforce by training more than 250 people in Indonesia.

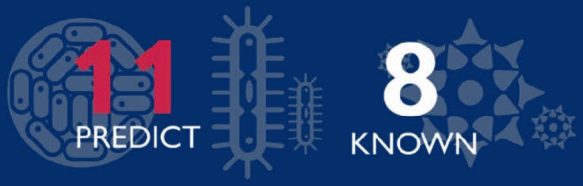


OPERATIONALIZED One Health surveillance and sampled over 3.6K animals and people, helping minimize the spillover of zoonotic disease threats from animals into human populations.

LABORATORY STRENGTHENING

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





DETECTED 19 unique viruses in both animal and human populations.

*Preliminary findings from 2014-2019

INDONESIA

Findings as of July 2019

UCDUSR0011437



TINA KUSUMANINGRUM, MSc

PREDICT/Indonesia, Field Coordinator

Emerging Virus Research Unit, Eijkman Institute for Molecular Biology

"There is no doubt that joining PREDICT is one of the best decisions in my researcher career. Learning how to design and implement a surveillance project, maintain networking and professional relationships with partners, and communicate the results back to the communities and decision makers—these were all exceptional experiences that will be very useful for my future career."

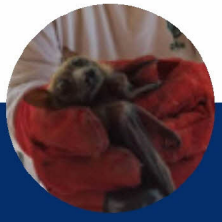


RACHMITASARI NOVIANA, SKH, MSi

PREDICT/Indonesia, Widlife Data Manager

Microbiology & Immunology Laboratory, PRC—IPB University

"Since working with PREDICT/Indonesia, I've learned so much and I have changed my point of view about animal and viral findings. I have also improved my ability in information technology. I am honored to be a member of the Data Management team."

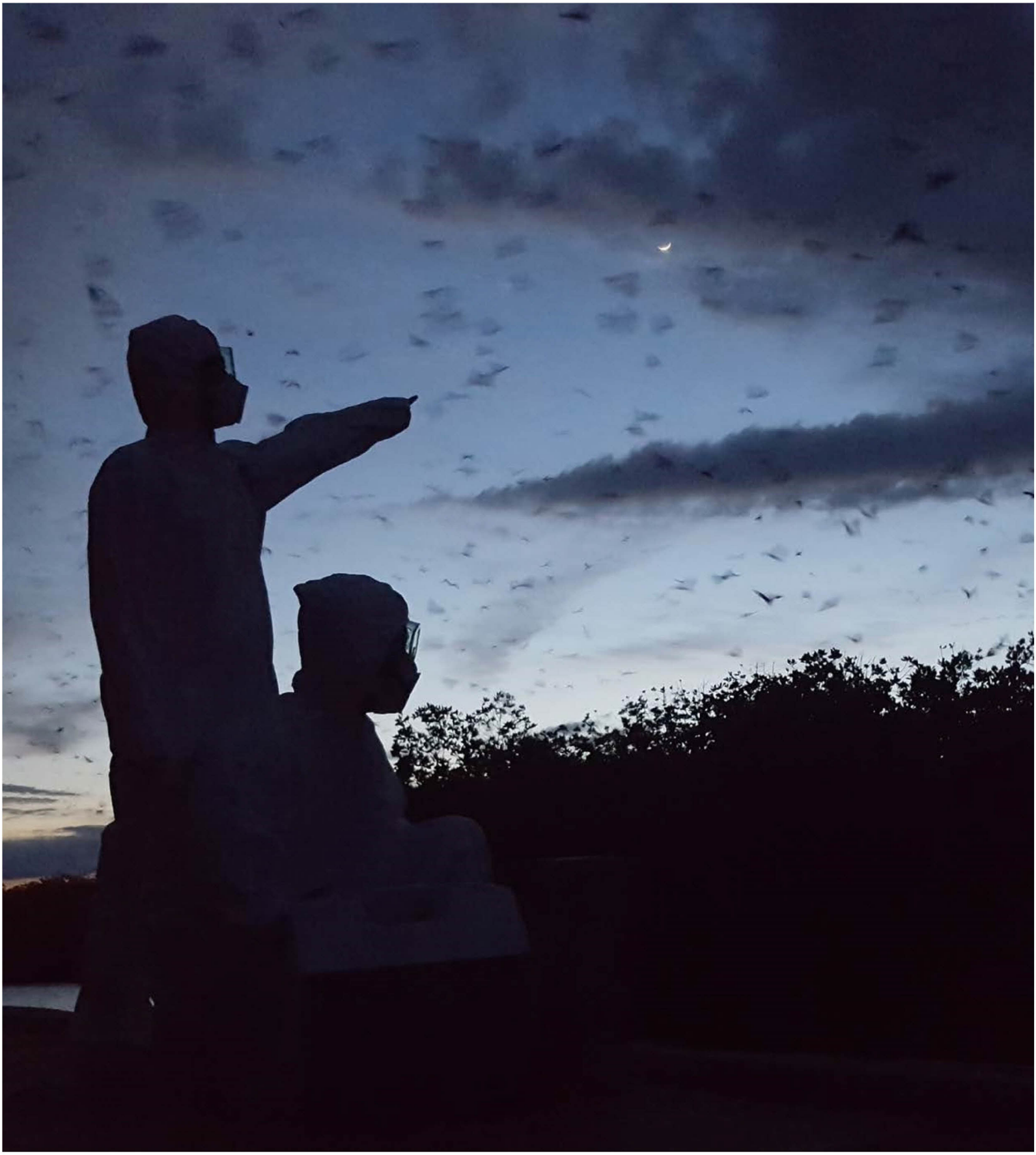






MAJOR ACHIEVEMENTS

- Trained > 130 individuals critical for Indonesia's One Health workforce in core skills required for zoonotic disease surveillance and detection.
- Sampled > 3600 individuals (2,966 animals and 673 people) in at-risk areas for zoonotic virus spillover and spread.
- Interviewed > 300 people to better understand the social and behavioral factors associated with zoonotic disease transmission risk.
- Strengthened two laboratories essential for supporting the national laboratory system improving detection of priority zoonoses and other viral threats and enabling advanced bioinformatics analysis.
- Together with FAO and the Ministry of Agriculture, trained and empowered eight National Veterinary Disease Investigation Centers (DICs – Denpasar, Maros, Medan, Lampung) to detect new and emerging viruses in domestic animals.
- Provided government partners with disease detection support during two outbreak response investigations for diseases of unknown origin.
- Promoted safe behaviors and practices for risk reduction in communities at-risk for zoonotic disease transmission.
- Engaged Government of Indonesia partners and advocated for zoonotic disease promotion and prevention programs.



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PRIORITIZING & OPERATIONALIZING RISK REDUCTION
VIET NAM

Viet Nam has been a leader in advancing One Health in practice since 2006 through development of coordinated approaches to tackle Highly Pathogenic Avian Influenza and in its current role as a co-lead for the Global Health Security Agenda (GHSA) Zoonotic Diseases Action Package. In 2016 the country established an updated 5-year One Health Strategic Plan for zoonotic diseases, which integrates One Health across more than 20 national sectoral and topical plans to strengthen capacity, enhance preparedness, and reduce impact of priority zoonoses and antimicrobial resistance. The plan's six main focus areas include a dedicated item on prevention of infectious disease emergence (Focus Area 3: One Health approaches for managing zoonotic agents with pandemic potential that are yet to emerge), with specific outcome indicators on: i) Identification of risk factors or interfaces associated with spill-over, amplification and/or spread, and ii) Implementation of risk reduction strategies based on identified risk factors. The plan also recognizes the need for environmental health research on disease drivers (for example, on land use practices) and greater engagement overall of the environment sector through guidelines, policies, and resource allocation to support One Health capacity building.

What One Health Added

To date, the emphasis for novel disease outbreaks has been on mobilizing effective and rapid response to avoid international disease spread. Viet Nam's application of One Health promotes a preventive stance that moves upstream to target pathogen spillover at the source to avoid or reduce human and animal disease and their associated health and economic consequences. The plan has been made operational through initial activities at key interfaces where wildlife-human exposure is common and presents potential zoonotic disease transmission pathways (e.g., live animal markets, bat guano collection sites, and wildlife restaurants). PREDICT has been a key partner in strengthening capacity for sample collection and screening for novel pathogens, addressing key challenges identified in the plan, including workforce development for risk monitoring and mitigation at high-risk animal-human interfaces (wildlife farms, bat guano harvest sites, and rodent trade routes) through on-the-job training for Dong Nai Province Forest Protection Department, the Regional Animal Health Office No. 6 & 7, and National Institute of Hygiene and Epidemiology staff who participated in PREDICT surveillance planning, sample collection, and diagnostic activities. With PREDICT's support, all partner laboratories, including national public health and animal health laboratories in Viet Nam, are trained in the full range of activities required for safely detecting zoonotic viruses, such as biosafety and biosecurity, cold chain, safe sample storage, data management, safe sample transport and shipping, and molecular viral detection techniques.

The country has also recognized the need for multisectoral information sharing to promote biodiversity and health mainstreaming across a range of stakeholders. For example, PREDICT shared results and lessons on human health risks associated with the illegal wildlife trade at a United Nations Office on Drugs and Crime (UNODC) training on the Penal Code in July 2018, helping to strengthen awareness about a potential driver of disease emergence in addition to biodiversity loss. Viet Nam's national commitment to reducing the threat of novel pathogens is a model for all countries to get ahead of disease emergence events, which is adaptable to high-risk species and exposure interfaces relevant to each country or community.

PARTNERS: Wildlife Conservation Society; Department of Animal Health, Ministry of Agriculture and Rural Development; National Institute of Hygiene and Epidemiology, Ministry of Health; Viet Nam National University of Agriculture; Regional Animal Health Office No. 6 & 7; Dong Nai Province Forest Protection Department; PREDICT-2

GHSA: PREVENT-2: Zoonotic Disease; DETECT-5: Workforce Development; RESPOND-2: Linking Public Health

From:	Andrew Clements <aclements@usaid.gov>
To:	<undisclosed-recipients:>
BCC:	jkmazet@ucdavis.edu
Sent:	12/16/2019 3:31:49 AM
Subject:	December 16, 2019 Emerging PandemicThreat update

Summary: 17 poultry outbreaks/events and 99 human infections with 10 pathogens (various avian influenza viruses, Ebola, Lassa, and MERS-CoV) were reported by 9 countries between November 19 and December 15, 2019. These outbreaks/infections occurred between June and November 2019.

Specific pathogens and countries affected:

"H5" High Pathogenicity Avian Influenza (HPAI) – 1 new poultry outbreak (China)

Viral pedigree: no information available.

"H5" Low Pathogenicity Avian Influenza (LPAI) – 1 new poultry event (UK)

Viral pedigree: no information available.

H5N2/Asia HPAI – 11 new poultry outbreaks (China)
A total of 970 bird outbreaks (7.8 million birds affected) have been reported by 1 country since virus first detected in 2012; no human infections reported to date.

Viral pedigree: Influenza A sub-type H5N2/Asia HPAI is related to H5N1/Asia HPAI which was first detected in 1996 and has since donated genetic segments to many new influenza A HPAI viruses (including several below). Influenza A viruses have caused four pandemics since 1918.

H5N5 HPAI – 1 new poultry outbreak (China) [This may be a new variant of this viral sub-type]
A total of 3 bird outbreaks (22,292 birds affected) have been reported by 1 country since virus first detected in 2019.

Viral pedigree: no information available.

H5N6 LPAI – 1 new poultry event (Nigeria) [First-ever report of this viral sub-type in this country]

Viral pedigree: no information available.

H5N8/Asia (variant) HPAI – 2 new poultry outbreaks (South Africa)
A total of 2,916 bird outbreaks (33.6 million birds affected) have been reported by 53 countries since virus first detected in 2016; no human infections reported to date.

Viral pedigree: Influenza A sub-type H5N8/Asia (variant) HPAI is related to H5N1/Asia HPAI (see above).

H9N2 LPAI – 2 new human infections (China)
A total of 54 human infections (2% average case fatality rate) have been reported by 5 countries since 1999.

Viral pedigree: no information available.

Ebola/Zaire – 49 new confirmed human cases (DR Congo) [This outbreak is the largest ever reported in DR Congo (now exceeding 3,330 cases) and the 2nd largest Ebola epidemic ever reported in any region. Excluding the 2014-2016 West Africa Ebola epidemic, the on-going DRC outbreak is now larger (in terms of cases and deaths) than the total for all of the other 25 Ebola outbreaks since 1976.]
At least 34,501^ human infections (44% average case fatality rate) with all Ebola viruses have been reported by 18 countries between 1976 and 2019. *^ Total includes confirmed, probable, and suspected cases.*

Viral pedigree: the Central African Ebola/Zaire virus has caused 16 outbreaks with 4,856 human infections (70% average case fatality rate) in 5 countries since first being detected in 1976.

Lassa – 43 new confirmed human cases (Liberia, Netherlands, Nigeria, Sierra Leone)

At least 3,987^ human infections (22% average case fatality rate) have been reported by 16 countries since 2000. ^ *Total includes confirmed, probable, and suspected cases.*

MERS-CoV – 5 new confirmed human cases (Saudi Arabia)

A total of 36 camel outbreaks and at least 2,497 confirmed human infections (34% average case fatality rate) have been reported by 27 countries since virus first detected in 2012.

Viral pedigree: MERS-CoV is in the beta-coronavirus family which also includes the SARS virus which caused a pandemic in 2003 with more than 8,000 human infections (10% average case fatality rate) in 27 countries.

Examples of reporting during the past month (with 2018 global comparisons for select viruses):

Country	Pathogen detected	Affected population	Number of events	Median days from event start to lab testing	Median days from event start to report*
UK	"H5" LPAI	poultry	1	5	7
2018 global median	9 HPAI^ and 9 LPAI viruses^^	poultry, wild birds	656 (37 countries)	3.5	12
China	"H5" HPAI, H5N2/Asia HPAI, H5N5/Asia HPAI	poultry	13	2	15
Netherlands	Lassa	human	2	NR	17
China	H9N2 LPAI	human	2	NR	36.5
2018 global median	H5N6/Asia HPAI, H7N9/Asia HPAI+LPAI, H9N2 LPAI	human	13 (1 country)	3#	37
Saudi Arabia	MERS-CoV	humans	15	2.0#	53
2018 global median	MERS-CoV	camels	1 (1 country)	15	69
South Africa	H5N8/Asia HPAI	poultry	2	NR	80
2018 global median	MERS-CoV	human	144 (5 countries)	3.5#	82
Nigeria	H5N6 LPAI	poultry	1	155	155

If date of testing not available, days from symptom onset to hospitalization used as a proxy.

* Reports posted on global OIE or WHO websites.

^ H5N1/Asia, H5N2/Asia, H5N2/Eurasia, H5N6/Asia, H5N6/Asia variant, H5N6/Europe variant, H5N8/Asia variant, H7N3, H7N9/Asia.

^^ H5N1, H5N2, H5N3, H5N5, H5N6, H7N1, H7N3, H7N7, H9N2.

à Next update on/about January 13, 2020

Data sources:

http://www.who.int/csr/don/en/
http://www.who.int/influenza/human_animal_interface/en/
http://www.afro.who.int/en/clusters-a-programmes/whe/outbreaks-and-other-emergencies-updates.html
http://www.oie.int/wahis_2/public/wahid.php/Diseaseinformation/Wl
http://empres-i.fao.org/eipws3g/
https://www.cdc.gov/flu/weekly/index.htm
https://www.moh.gov.sa/en/CCC/events/national/Pages/2019.aspx
http://newsletters.afro.who.int/outbreak-dashboards/p36fcklqcoy1qqvybnloqp?email=true
http://www.chp.gov.hk/en/index.html
https://wwwnc.cdc.gov/eid/article/25/12/19-0636_article
https://www.tandfonline.com/doi/full/10.1080/22221751.2019.1679611

About the USAID Emerging Pandemic Threats update: first started in 2005 with a focus on H5N1 avian influenza, this monthly update was expanded in 2012 to include other zoonotic pathogens with pandemic potential. The update brings together information on both human and animal infectious disease outbreaks involving viruses having known or potential ability to infect and spread directly from human to human without vectors such as insects, water, or food. The current mailing list includes readers from USAID (Washington and missions in 22 countries in Africa, Asia, and the Middle East), other US Government Departments/Agencies (including HHS, CDC, NIH, USDA, Department of Defense, Department of Interior, State Department), international organizations (FAO, IFRC, OIE,WHO), universities, and NGOs.

To unsubscribe, please contact aclements@usaid.gov

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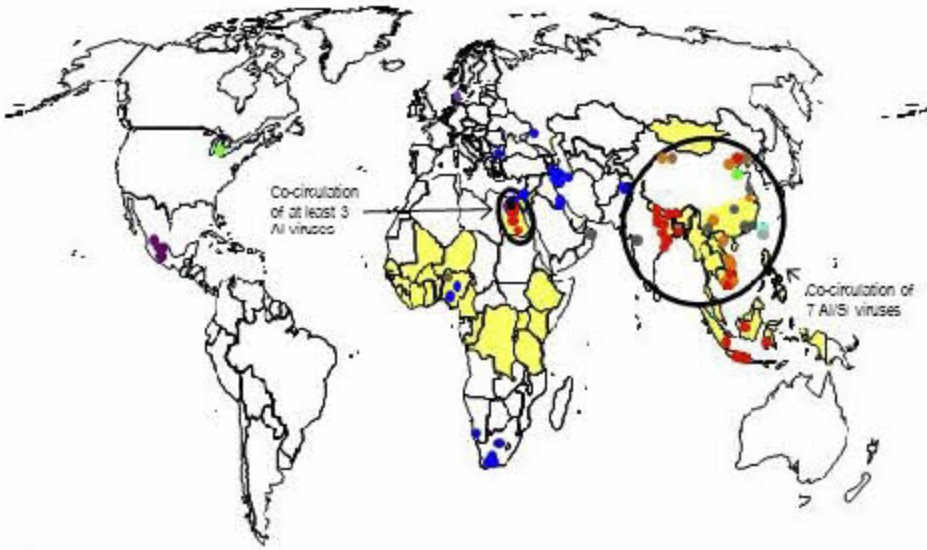
For more information on USAID's Emerging Pandemic Threats program, see: http://www.usaid.gov/ept2

Recent Detection of Avian and Swine Influenza Viruses in Animals and Humans^

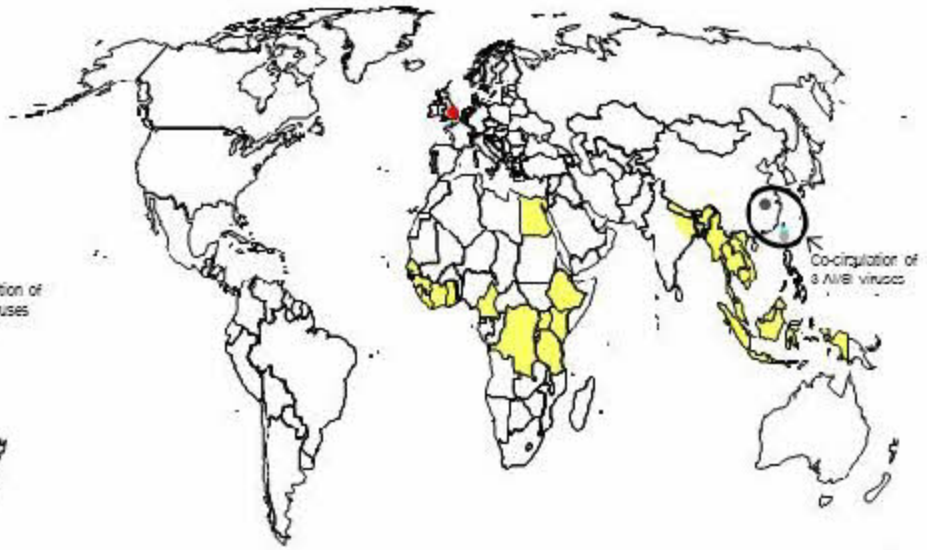
Nov 2018-Oct 2019

→ 266 bird outbreaks and 10 human infections with 11 AI/SI sub-types/variants (5 of which are zoonotic)



Nov 2019-Oct 2020

→ 12 bird outbreaks and 1 human infection with 4 AI/SI sub-types/variants (1 of which is zoonotic)



- = H5N1/Asia HPAI# or H5 LPAI## (P, WB, H)
- = H5N1/Europe HPAI (P, WB, H)
- = H5N2/Asia HPAI (P, WB)
- = H5N2/Eurasia HPAI (P)
- = H5N2/Middle East HPAI (P)
- = H5N5 HPAI (P, WB)
- = H5N6/Asia HPAI (P, WB, H)
- = H5N6/As a HPAI variant (P, WB)
- = H5N6/Europe HPAI (P, WB)
- = H5N6/Europe variant HPAI (P, WB)
- = H5N6 LPAI
- = H7N2 (F, H)
- = H7N3 HPAI (P)
- = H5N8/As a variant HPAI lineage (P, WB)
- = H7N4 LPAI (H)
- = H7N9/Asia HPAI or LPAI (P, WB, H)
- = H7N9/N. America (P)
- = H9N2 LPAI (P, H)
- = H1N1v SI (H)
- = H1N2v SI (H)
- = H3N2v SI (H)

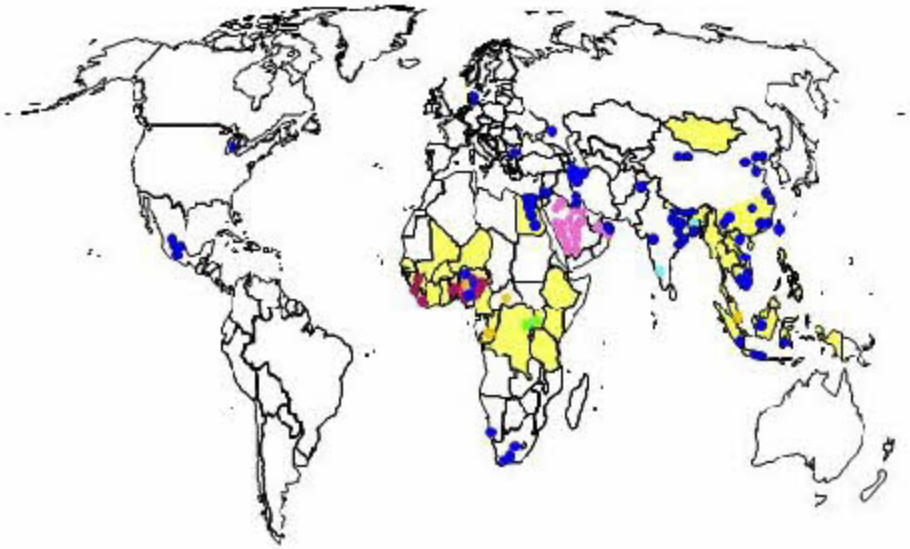
Sources = Laboratory-confirmed cases reported by OIE, WHO, CDC, and Ministry of Agriculture/FAO (Egypt, Indonesia) reports between 11/1/18 and 12/16/19. ^ While these reports reflect known infections with animal influenza viruses, there may be additional viral circulation in these and other countries that is not detected due to limitations in surveillance and/or detection # Highly-pathogenic avian influenza (in chickens). ## Low-pathogenicity avian influenza (in chickens) = countries (including northeastern India and most of Indonesia) using USAID avian influenza, Ebola, or other emerging pandemic threats funding between FY2017 and FY2019 for prevention, detection, and response. P = poultry; WB = wild birds; H = humans; F = feline.

USAID
FROM THE AMERICAN PEOPLE
Global Health/Emerging Threats Division

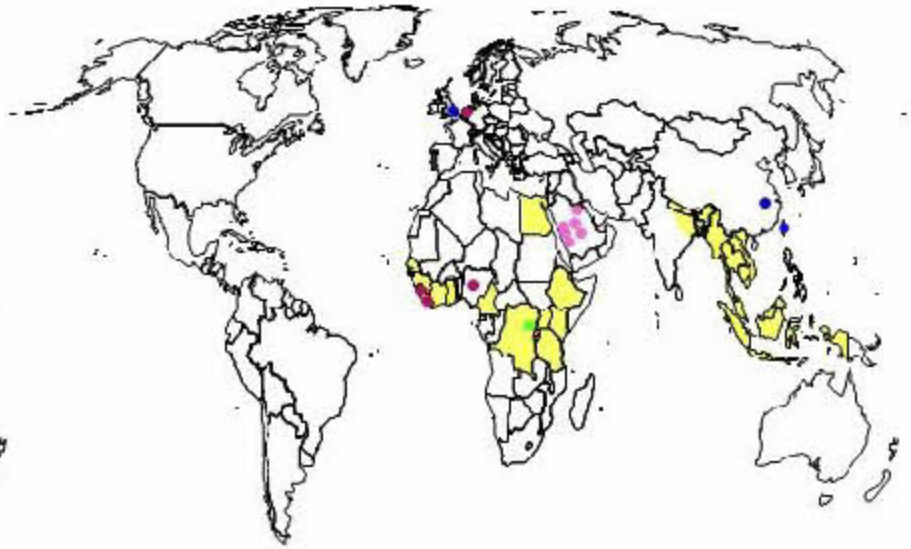
UCDUSR0011444

Detection of Specific Pathogens with Potential to Infect and Directly Spread among Humans^

Nov 2018-Oct 2019



Nov 2019-Oct 2020



- = avian (HPAI#, LPAI##) or swine (variant) influenza (poultry, wild birds, humans)
- = Middle East Respiratory Syndrome-Coronavirus (humans or animals)
- = Ebola (humans)
- = Marburg (humans)
- = Lassa (humans)
- = Nipah (humans)
- = monkexpox (primates, humans)
- = plague (humans)

Sources = Laboratory-confirmed cases reported by OIE, WHO, CDC, Ministry of Agriculture/FAO (Egypt, Indonesia), and IEDCR (Bangladesh) reports between 11/1/18 and 12/16/19. ^While these reports reflect known infections with these viruses, there may be additional viral circulation in these and other countries that is not detected due to limitations in surveillance and/or detection. All of these viruses are from viral families with at least one member that is capable of infecting people and spreading directly from person to person without using food, water or insects as vectors. # High-pathogenicity avian influenza. ## Low-pathogenicity avian influenza. ☐ = countries (including northeastern India and most of Indonesia) using USAID avian influenza, Ebola, or other emerging pandemic threats funding between FY2018 and FY2020 for prevention, detection, and response.

USAID
FROM THE AMERICAN PEOPLE
Global Health/Emerging Threats Division

UCDUSR0011445

From: Andrew Clements <aclements@usaid.gov>
Sent: Fri, 3 Jan 2020 11:45:14 +0100
Subject: Re: PREDICT November 2019 Ebola financial report
To: Elizabeth Leasure <ealeasure@ucdavis.edu>
Cc: Alisa Pereira <apereira@usaid.gov>, Amalhin Shek <ashek@usaid.gov>, Jonna Mazet <jkmazet@ucdavis.edu>, Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, predict Sympa List <predict@ucdavis.edu>, Cara Chrisman <cchrisman@usaid.gov>, Hannah R Chale <hrchale@ucdavis.edu>

Received. Thanks, Liz.

Andrew Clements, Ph.D.
Senior Scientific Advisor
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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 Thu, Jan 2, 2020 at 9:52 PM Elizabeth Leasure <ealeasure@ucdavis.edu> wrote:

Hi Andrew. Please find attached the November 2019 Ebola financial report. If you have any questions, please let me know.

Thanks,

Liz

Elizabeth Leasure

Financial Operations Manager

One Health Institute

REDACTED *(cell)*

530-754-9034 (office)

Skype: ealeasure

From: Dennis Carroll <[redacted]>
Sent: Sat, 11 Jan 2020 14:03:19 -0500
Subject: Re: GVP in today's FT
To: Dean Jamison <[redacted]>
Cc: Nita Madhav <nmadhav@metabiota.com>, "boppenheim@metabiota.com" <boppenheim@metabiota.com>, "nstephenson@metabiota.com" <nstephenson@metabiota.com>, "paola.gadsden@cisidat.org.mx" <paola.gadsden@cisidat.org.mx>, "Dr. Stefano Bertozzi" <sbertozzi@berkeley.edu>, "jguerrero@metabiota.com" <jguerrero@metabiota.com>, "Colin.Boyle@ucsf.edu" <Colin.Boyle@ucsf.edu>, [redacted], "jkmazet@ucdavis.edu" <jkmazet@ucdavis.edu>, "erubin@metabiota.com" <erubin@metabiota.com>

Dean, thanks. Always wondered what one hand clapping sounded like. The $3 billion price tag we initialy tagged GVP with (and subsequently modified) continues to be the unforgiving albatross around our neck. We need to be clearer about the costs - to better value the benefits
d

On Thursday, January 9, 2020, Dean Jamison <[redacted]> wrote:

FT's science writer, Anjana Ahuja, claps for the GVP with one hand.

Dean

--
Dr Dennis Carroll
Global Virome Project, Core Team
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]

GORDON AND BETTY MOORE FOUNDATION

FORESIGHT MEMO

FRONTIER ISSUES

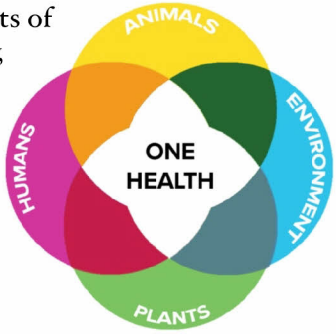
- Emerging & Shifting Patterns of Disease
- Antimicrobial Resistance
- Wildlife Health & Conservation
- Food Safety & Security

THEMES, BENEFITS & IMPACTS

- Vulnerable Populations
- Education & Workforce Development
- Social & Behavioral Change
- Economic Savings
- Improved Patient Care

ONE HEALTH

One Health is the collaborative efforts of multiple disciplines – working locally, nationally, and globally – to achieve the best health for people, animals, plants, and our environment.



One Health can be envisioned from three different perspectives:

Threats (e.g., zoonotic diseases, emerging infections, antimicrobial resistance, extinctions)

Benefits for human prosperity (i.e., economic savings, therapeutic and preventive discoveries, food security)

Shared healthcare benefits (e.g., diagnostics, treatment, disease prevention)

The recent impacts from proliferating antibiotic resistance, devastating disease outbreaks, and catastrophic wildfires demonstrate that we live in an interconnected world – the environment in which we live and the status of the animals & plants we share it with influence our health and wellbeing.

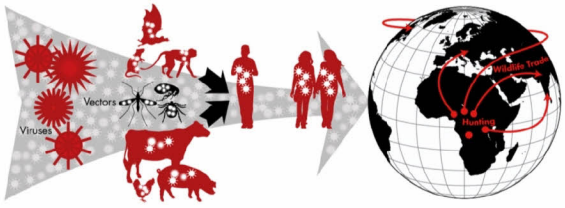
By working in synergy, One Health approaches improve efficiency and increase diagnostic and treatment resources available to health professionals for the benefit of patient care and prevention in both clinical and community settings.

Training of scientists, policy, and healthcare professionals on holistic awareness of environmental influences on patient health and promotion of healthy lifestyles using scientifically informed behavior change strategies will measurably reduce the incidence of disease and economic burden on healthcare systems.

In this memo, we outline four target areas of opportunity that, with further investment using the One Health approach, could result in dramatic and measurable health benefits.

UCDUSR0011448

Emerging & Shifting Patterns of Disease



We do not live in isolation, we share our world with other animals and are exposed to their microbial communities in our daily lives in surprising and sometimes unexpected ways – our favorite dog on the sofa, the food on our table, a wild rodent in our attic. Many microbes are beneficial and even essential to human wellbeing but occasionally zoonotic infections, caused by pathogens shared between animals and people, may result in disease. Zoonotic incidents are hard to predict and can, if left unmonitored, lead to emergence of infectious diseases (EIDs) that can result in epidemics and pandemics.

EIDs are both a local and global problem. With the ability to travel around the world in a time less than that of the incubation period of many pathogens, we are all at risk. The recent outbreak of Polio-like illness in the USA and ongoing Ebola epidemic in central Africa are just two examples of our vulnerability.

Strategies are needed to co-monitor and identify animal and human pathogens and target mitigation of high-risk behaviors and environmental disturbances, with a focus on vulnerable communities at hot spots with intense and frequent human-animal interfaces, high population densities, and drastic ecological change. Rapid disease detection and epidemic prevention is achievable through the development of innovative diagnostic technology and risk assessments to identify and detect emerging animal, plant, and human pathogens in the clinical and community settings. Identification of novel pathogens will inform the development of treatments and preventives.

Known pathogen patterns are also changing. Clearing land, building new roadways, and altering habitat, together with extreme weather events are influencing the distribution, abundance, and behavior of vectors capable of transmitting pathogens to humans and animals, as well as patterns of environmental contaminant exposure. Preventing associated diseases in new areas requires better knowledge on landscape ecology, including vector competency and sources of pollutants, biologic and chemical. When overlaid with human/animal activity and movement, this information will inform clinical diagnosis of emerging illnesses and facilitate public health interventions to mitigate and control disease during a time of climate variability.

Antimicrobial Resistance

Progress on the issue of antimicrobial resistance (AMR) can be achieved only through a One Health approach. Over or incorrect use of antibiotics in human and animal medicine has contributed to AMR, with over 70% of antibiotics produced given to food animals.

Antibiotics continue to be active after excretion from the person or animal to which they were administered. Globally, most human and animal waste is not treated before entering the environment, leading to the development of AMR organisms in our soil, water, air, and food that is shared with wildlife, domestic animals, and people. What was once thought to be a hospital-problem is actually a One Health issue.

AMR affects all populations globally which are now extensively linked through travel, trade, and migration. New technologies allow precise tracking of origin and disposition of AMR and can be used to identify targets for behavioral and clinical intervention. Communication resources to educate healthcare professionals and patients on correct antimicrobial use will measurably reduce contamination of the environment.

UCDUSR0011449

Wildlife Health & Conservation

Rapid environmental and land use change have had dire consequences on wildlife diversity, resulting in losses to ecosystem function. People are coming into contact with wildlife more frequently, particularly in developing countries, and these increased interactions have not only resulted in zoonotic disease but also the reverse. Human diseases, such as measles and influenza, have caused devastating outbreaks and possible extinctions in endangered wildlife.

As more people understand and embrace that their health depends on ecosystems services, ecological integrity, and resilience, the importance of protecting the health and viability of wildlife populations becomes clear, as it is critical for human health and wellbeing.

Measurable wildlife conservation strategies for the benefit of ecosystem function and human wellbeing include improving knowledge and diagnostics for transmissible infections impacting wildlife; forecasting of environmental change impacts on wildlife abundance, range, and human conflict; and educating target communities at high risk disease transmission interfaces to live safely with wildlife.

Food Safety & Security

Food systems are a major determinant of human health and wellbeing and, to be sustainable, require reliable access to sufficient, safe, affordable, and healthy food resources at all times. Pests and diseases pose significant threats to the health and productivity of food crops and animals, with serious consequences on human nutrition and incidence of infectious disease.

Foodborne infections and toxins are a common cause of human illness, especially in developing countries impacted by land use change, such as deforestation and agricultural intensification. Behavioral investigations to understand decisions about food production, choices, and preparation



in communities and clinics at high-risk disease hotspots could provide insights into food safety practices with profound effects on health and environmental protection, as well as food system strengthening.

With an estimated human population of 9 billion people by mid-century, a One Health approach is vitally important to ensure global food security. Actions include health surveillance; development and application of safe and sustainable pest and disease management practices; and an improved understanding of the links between food production systems and human health.

> *We have to think about the food chain...there are many animals that live with and eat bats, and humans consume those animals. If there is something in the bats that can be transferred to other animals, we need to focus on the food chain and how those animals and humans are at risk of disease*
>
> Paramount Chief of Bumbah, Sierra Leone

Contributions to the Memo

The information outlined in this Frontiers Memo represents the collective thoughts of faculty leaders from the University of California One Health Institute and members of the One Health Action Collaborative of the US National Academies of Science, Engineering & Medicine.

UCDUSR0011450

One Health Action Collaborative

Draft Concept Note for Deliverable on Implementing and Operationalizing One Health

Context and Objectives:

There is growing momentum behind One Health as it is being recognized as a valuable framework for health entities at the local, regional, national, and global levels. While a number of notable organizations have developed policies and content on embracing a One Health approach (e.g., World Bank, American Public Health Association, USAID, Network for Evaluation of One Health), little guidance exists for local and state organizations, including non-governmental organizations to operationalize and implement One Health policies. This One Health Action Collaborative (OHAC) under the National Academies' Forum on Microbial Threats deliverable aims to fill this gap by developing proof of concept and ultimately providing an operational framework for these organizations to use when considering, developing, and evaluating their respective One Health policies and strategies.

Content:
We suggest a two-step approach to this deliverable:

Output 1: Proof of concept that will include the following elements:

- **The Business Case**: The deliverable will begin by making the business case for implementing a One Health approach on a domestic level. This will include an explanation of why One Health is important, including the socio-economic impacts and cite evidence to establish the added value of investing in One Health. This could facilitate the financial and political buy-in needed to institutionalize a One Health framework for specific organizations that are exploring this approach, particularly since allocation of resources can be a barrier to implementation.

- **Case Studies**: As proof of concept, the deliverable can include 1-2 examples of a local or state organization or coalition that has implemented a One Health framework with success. This could include processes for implementation, incentives, relevant partnerships, metrics used, and outcomes or benefits attributable to the One Health approach.

- **Resources**: In addition to the case studies, the deliverable will include a component that outlines resources available to organizations for additional guidance and/or examples of operationalizing and implementing a One Health approach.

Output 2: Operational Framework based on proof concept and literature review:

- **One Health Metrics**: The deliverable will include concrete indicators for organizations to measure at baseline and monitor over time to track progress in successfully implementing a One Health policy.

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Target audiences:
This deliverable will be geared toward key stakeholders at the local and state levels. Target groups include:

- Non-governmental organizations
- Public health agencies
- Membership organizations such as American Veterinary Medical Association (AVMA), American Medical Association (AMA), American Public Health Association (APHA), National Association of County and City Health Officials (NACCHO), American Academy of Sanitarians (AAS), National Environmental Health Association (NEHA), National Association of Public Health Veterinarians (NASPHV), and their state-based counterparts , American Association of Public Health Physicians, ASHTO, CSTE, AAVMC, AAMC, IDSA, etc…
    - Note: These could be good dissemination organizations.

<u>Current nominations/recommendations for subcommittee members:</u>

- OHAC Members: Gail Hermsen (chair), Jonathan Rushton, and Jonna Mazet
- External stakeholders: Cheryl Stroud (already in communication with Gail and is on board), Amanda Beaudoin (will need to invite), and Lily Kan (suggested by Forum member Matthew Zahn – will need to invite).

UCDUSR0011452

Ending Pandemics

SALZBURG GLOBAL SEMINAR

The Salzburg Statement on **Metrics for One Health Surveillance**

We live in a complex, interconnected world with increasing risk of emerging infections. It has been estimated that the next pandemic threat could result in 50 million human deaths and the loss of 5% of the world's economy[1].

Looking *everywhere* for a threat *anywhere* is a shared global challenge. Finding outbreaks faster is critical to reduce illness, death, and economic loss from epidemics or pandemics. Speed saves lives in all aspects of disease surveillance, including detection, verification, notification, and intervention. Every day that an outbreak continues to spread unabated or unrecognized, additional infections result.

THE CASE FOR A ONE HEALTH APPROACH

One Health recognizes that the health of humans, animals, and the environment are interconnected.

Three out of four emerging infectious diseases jump from animals to humans, threatening the health of both.

Climate change and other environmental factors exacerbate disease emergence and spread.

Significant delays in outbreak prevention, detection, and response lead to needless morbidity, mortality, and economic loss.

A multisectoral approach to prediction and prevention of disease is essential to monitor risk factors across the spectrum of environment, animals, and human health.

1 *A World At Risk: Annual report on global preparedness for health emergencies*. Global Preparedness Monitoring Board, 2019.

CALL TO ACTION

Preparedness for epidemics of infectious diseases in animals and humans must be recognized as a public good necessary for global health security. A rapid, concerted shift in disease surveillance practices is needed to move from a single sector-based approach to a One Health multi-sectoral approach.

Ending Pandemics and the participants of Salzburg Global Seminar's program on *Finding Outbreaks Faster: Metrics for One Health Surveillance* have developed **Timeliness Metrics** to monitor progress in outbreak prevention, detection, and response to support continuous performance improvement. We hope to inspire action and drive collaboration among One Health sectors through routine implementation of these Timeliness Metrics across the world.

We call on scientists, policy makers, advocates, community leaders, One Health practitioners, the private sector, and governments to:

- Initiate and support the transformation towards One Health surveillance.
- Promote the sharing of real-time surveillance data across sectors.
- Expand the development and utilization of early warning and alert systems for prediction and prevention of outbreaks.
- Use the Timeliness Metrics to monitor local, national, and global progress in outbreak prevention, detection, and response.
- Incorporate the Timeliness Metrics into public health, medical, and veterinary curricula and global workforce development training.
- Use the Timeliness Metrics to monitor the impact of investments in epidemic and pandemic preparedness.

We commit to shaping a future where predicting and preventing disease outbreaks, both human and animal, becomes the norm. Environmental monitoring, satellite imagery, and greater understanding of climate impacts on the emergence and spread of pathogens, can significantly contribute to this goal.

UCDUSR0011453

IMPLEMENTING THE OUTBREAK TIMELINESS METRICS

We appreciate that outbreaks will continue to challenge our best preparedness efforts. These Timeliness Metrics provide a structured framework to push ourselves to detect, verify, report, and respond to outbreaks faster by providing benchmarks to continually improve upon. We urge countries and their partners to use the Ending Pandemics Outbreak Milestones and Timeliness Metrics as standardized measures to consistently monitor progress towards finding outbreaks faster, translating into lives saved and livelihoods preserved. The final milestone – *After Action Reviews* – is included to encourage timely convening of relevant stakeholders to initiate or strengthen One Health coordination, improve detection and response efforts, and enable prediction and prevention of the next outbreak.

Timeliness Metrics

Ending Pandemics

Timeliness metrics are the time intervals measured between two respective outbreak milestones*. Each milestone represents the date of key outbreak activities. Milestones can apply to individual sectors or to a coordinated One Health approach, integrating environmental, animal, and human health.

Outbreak Milestones

Predict	Prevent
Date a reliable and valid predictive alert of a potential outbreak is available [e.g. increased rainfall leading to greater density of mosquitos capable of disease transmission]	Date enhanced surveillance or other intervention is initiated in response to a predictive alert [e.g. mass vaccination in livestock; mosquito abatement]
Detect	**Notify**
Date symptom onset, death, or other evidence of pathogen circulation is observed or suspected in human(s) or animal(s)	Date an outbreak in humans or animals is officially reported to relevant authorities. [e.g. local to national; national to international; cross-sector]
Verify	**Diagnostic Test / Lab Confirmation**
Date outbreak is confirmed by field investigation or other valid method	Date outbreak is confirmed by diagnostic or laboratory test in an epidemiologically-linked human or animal
Respond	**Public Communication**
Date an intervention to control or manage the outbreak is initiated by a responsible authority [e.g. mass vaccination; quarantine]	Date of official release of information to the public by a responsible authority
Outbreak Start	**Outbreak End**
Date symptom onset or death occurs in the earliest epidemiologically-linked human or animal [most often identified retrospectively or estimated based on available evidence]	Date outbreak is declared closed by a responsible authority
After Action Review**	
Date after action review is jointly conducted by relevant One Health authorities.	

*The sequence of the milestones may vary by outbreak. In some cases, a single action may represent more than one milestone. For example, the date of lab confirmation may be the same as the date of verification. Similarly, public communication may be the first intervention in response to an outbreak. The definition of an outbreak may vary by disease, geography, or sector.

**The After Action Review milestone is included to inspire the necessary collaborations among sectors for operationalizing One Health.

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The National Academies of
SCIENCES • ENGINEERING • MEDICINE

FORUM ON MICROBIAL THREATS

ONE HEALTH ACTION COLLABORATIVE ROSTER
NOVEMBER 2019

FORUM MEMBERS (6) ----------

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
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Kevin Anderson, Ph.D.
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Science and Technology Directorate
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State Extension Specialist for Vegetable Pathology,
Ohio Agricultural Research and Development Center
The Ohio State University
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Mary E. Wilson, M.D.
Clinical Professor of Epidemiology & Biostatistics
UCSF School of Medicine
San Francisco, CA

EXTERNAL MEMBERS (8) ----------

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Director, One Health Office in National Center for
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University of California, Davis
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Jonathan Rushton, Ph.D., M.A., M.AgSci.
Professor of Animal Health and Food Systems
Economics
University of Liverpool
Liverpool, United Kingdom

*Views and opinions expressed by Mumford are her own and do not necessarily reflect the view of the World Health Organization.

UCDUSR0011455

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FORUM ON MICROBIAL THREATS

ONE HEALTH ACTION COLLABORATIVE (OHAC) MEETING #20

Tuesday, January 21, 2020
2:00-3:00pm (ET)

PARTICIPANTS

MEMBERS:
Jonna Mazet, Casey Barton Behravesh, Peter Daszak, Gail Hansen, Elizabeth Hermsen, Jim Hughes, Sally Miller, and Liz Mumford
Tentative/Absent: Kevin Anderson, Maureen Lichtveld, Amy Pruden, Dave Rizzo, Jonathan Rushton, and Mary Wilson

STAFF:
Julie Pavlin, Edith Amponsah, and Hannah Goodtree (National Academies);
Eri Togami (UC Davis)

MEETING MATERIALS

1. Current membership roster (*attached*)
2. Draft Food Safety and Security & Plant Health manuscript (*attached*)
3. Local and State Medical Associations concept note (*attached*)
4. Salzburg Statement on One Health Timeliness Metrics for Outbreaks (*attached*)
5. Moore Foundation Foresight Memo (*attached*)

AGENDA ITEMS

1. Welcome (Edith)
    - Introduce Julie and update OHAC members on FMT & UCD staff transitions since last meeting
2. Food safety deliverable (Sally and Dave)
    - Update on progress of draft paper – see draft manuscript
    - Discuss next steps for submission to AJPH
3. One Health and state and local medical associations (Gail)
    - Update on concept note for a deliverable – see draft concept note
    - Present nominated/recommended subcommittee members – see end of draft concept note
    - Discuss next steps for subcommittee
4. Other brief updates
    - World One Health Congress (Jonna)
        - Update on joint side event with the One Health Workforce – Next Generation
        - Abstract submitted (Dave)
    - One Health timeliness metrics for outbreak response (Jonna)
    - Gordon & Betty Moore Foundation Foresight Memo (Jonna)
    - Next Forum workshop: "The Critical Public Health Value of Vaccines in the Age of Pandemics" (Julie)
5. Next steps and action items (Edith)
    - OHAC Meeting #21, March 23 2020

UCDUSR0011456

The Interconnectedness of Public Health and Plant Health:

Implications for Food Safety and Security

ABSTRACT (at 173 words—max is around 180)

The United Nations has declared the year 2020 to be the International Year of Plant Health (IYPH).[1,2] Recognizing the key role of plants in public health, the overarching purpose of the IYPH is to raise awareness of plant health and its effects on society.[1] Maintaining plant health has important consequences for human health as an important driver of food security and safety, as a source of livelihoods in plant-based agriculture, as a source of pharmaceuticals, and as part of healthy environments. [3,4]

To illuminate the complex interrelationships among plants and public health, we illustrate how plant pathogens influence food availability through a case study of banana Xanthomonas wilt in East and Central Africa and delineate the importance of food safety from lessons learned through outbreaks of aflatoxicosis in Kenya and *Escherichia coli (E. coli)* in North America, as well as highlight the importance of responsible pesticide use from a case in Suriname. Through these case studies, we examine challenges and opportunities moving forward for mitigating negative public health consequences and ensuring health equity.

Background (at 3692 words; max 4000)

Plants provide over 80% of the food consumed by humans and are the primary source of nutrition for livestock.[2] Overall, plant health is vital to human and animal health and a critical component of the complex interactions among the environment, humans, and animals.

Food security—the state of having reliable access to sufficient, safe, affordable, and nutritious food at all times—is necessary to have healthy and productive societies.[5] Food security is a major determinant of human health and well-being. It is also a crucial aspect of One Health and is a pillar of the United Nations Sustainable Development Goals.[6] One Health is defined as a "…collaborative, multisectoral, and transdisciplinary approach — working at the local, regional, national, and global levels — with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment."[7] The UN definition of food security identified four key pillars: 1) availability, 2) access (both economic and socio-cultural, 3) utilization, including food preparation and safety, and 4) lastly the stability of these three pillars .[8] Food security thus reflects a complex value chain of production, food processing and distribution, and food access, beginning with plant health in the field. Employing a One Health approach to ensure the safety and continuity of this value chain will result in the protection and advancement of public health.

Plant diseases and pests influence the availability and safety of plants for human and animal consumption, reduce crop yield and detrimentally affect quality. Measures to prevent or treat diseases, including application of pesticides, may adversely impact the health of agricultural workers and consumers, as well as drive the development of antimicrobial and antifungal resistance in pathogens.[9] In addition, food plants may serve as carriers of human pathogens and harmful microbial-based toxins. For example, foodborne illnesses pose a serious global burden on human health, reportedly affecting 600 million people or 33 million Disability Adjusted Life Years (DALYs) in a single year.[10] Although international food standards, such as the Codex Alimentarius, are implemented to protect consumers' health and fair trade, foodborne illnesses continue to affect high-, middle-, and low-income countries

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around the world.[10,11] Plants are important origins of foodborne outbreaks, including fresh vegetables and fruits irrigated with, washed with, or exposed to water and soil contaminated with pathogens of animal origin. More than half (51%) of outbreak-associated illnesses in the US were traced to plant-foods over a ten-year period, higher than any other food commodity, such as meat, fish, and dairy products.[12] Additionally, antibiotic resistant bacteria and resistance genes originating from animal feces can also contaminate fresh produce and pose health risks for humans.[13] Therefore, a key aspect of food security is timely and effective management of plant pathogens and pests and other microbes associated with plants that can cause diseases.

The emergence of new variants of pathogens and pests, as well as the expansion of the geographic range of known ones, can cause significant disruption in food production and pose a burden on the global economy. Global yield losses of important staple crops to pathogens and pests can range up to 40% with estimated costs to the global economy due to lost food production in the hundreds of billions of dollars.[4] Addressing these issues requires integrated management tactics to be introduced and widely adopted for successful prevention and mitigation. It also requires recognition of and action to address the need for quantification of crop losses and their impact on humans, plants, animals, and land use.[5] Traditional surveillance strategies are often expensive and associated with a delay in problem recognition and data dissemination. Associated challenges lead to slow responses to outbreaks and consequent negative financial and public health consequences.

CASE STUDIES

Case Study 1: Plant pathogens and food availability: Banana Xanthomonas wilt in East and Central Africa, 2001-Present (Fig. 1A; Fig. 2-1)

Based on currently available data, up to 40 percent of global staple food crops are lost annually due to plant pests, including diseases, insects, and weeds, but excluding abiotic factors such as drought, excessive water, or poor soils.[4] When diseases severely affect staple crops in low income or under-resourced regions of the world, food availability is threatened, potentially resulting in malnutrition and population-based famine in severe cases. In addition, loss of income from cash crops sold by small commercial farms can have a cascading effect, exacerbating poverty among populations who depend upon farmers to purchase goods and services from the rural non-farm sector.

Bananas (*Musa* spp.), including dessert banana, plantain, and cooking banana, comprise the eighth most important food crop in the world and the fourth most important in low and middle income countries in terms of gross production value.[15] Bananas are a staple crop and important source of protein, starch, vitamins, and minerals in East and Central Africa, ranging from 20% of household food consumption each day in Uganda to 80% in Rwanda.[16] Bananas historically had been among the least expensive of the staple crops to produce.[17] Bananas have multiple uses in crop production systems, such as cycling carbon and soil nutrients, preventing soil erosion, and providing shade for understory crops.[16] Additionally, bananas are a source of food for livestock and used for the production of goods such as baskets, carpets, and shoes.[16]

Banana Xanthomonas wilt (BXW) is an invasive bacterial disease first observed in Uganda in 2001, where it developed into a severe epidemic within four years of emergence and spread to the Democratic Republic of Congo, Rwanda, Kenya, Tanzania, and later to Burundi.[15] BXW is caused by *Xanthomonas campestris* pathovar *musacearum*, a gram-negative rod-shaped bacterium that enters the plant through wounds or natural openings, colonizes the plant's vascular system, and causes wilting, fruit rotting, and plant death.[15] The disease is spread by planting infected banana pseudostems, by various insects that visit the male flowers, by wind-driven rain, and by using contaminated cutting tools.[15]

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During the peak of the 2000-2010 epidemic in heavily affected areas of Tanzania, Burundi, and Rwanda, there were significant harmful effects on food production, availability, and subsequently, household consumption practices.[18] For example, the production of banana beer and juice declined approximately 60%, and the number of banana bunches sold and consumed declined 35% and 25% respectively, compared to pre-BXW levels.[18] Importantly, the BXW epidemic strongly affected the availability of bananas, because the price of banana bunches increased by 46% compared to pre-BXW levels.[18] As a result of reduced banana availability and higher prices, households coped by eating fewer meals than usual, eating smaller meals than needed, or substituting bananas with other available food items, such as maize, cassava, or sweet potatoes.[18] Increased food prices have a disproportionate influence on low income households, often already struggling to meet basic needs.[18] Long-term impacts of BXW epidemics on human nutrition and health, poverty, and cultural practices in East and Central Africa have not yet been determined.

There are no effective antibiotics or other pharmaceutical treatments available for BXW. However, the disease can be managed by adoption of specific farming practices, which have been shown to be labor-intensive and costly.[19] For example, recommended practices include de-budding (i.e., removing the male flower bud), complete removal of diseased banana plant bases, removing or burning affected plant stems, decontaminating farm tools after each use, and using disease-free planting materials.[19] While effective, these disease management practices are time consuming and expensive, which poses barriers for farmers, especially in low and middle income countries. Increased adoption of BXW management practices can be better facilitated through conducting effective training such as through farmer field schools and refining disease management strategies into more feasible and easy-to-implement recommendations. Furthermore, leveraging advances in technology to track transmission patterns by using innovative citizen science strategies as well as collaboration between scientists and farmers to improve training, can accelerate progress toward prevention of BXW.[20] Specifically, citizen science and information communication technologies can accelerate the identification of new outbreaks, information sharing can enable rapid decision making among farmers, and enhanced connectivity among stakeholders can create networks for collective action.[20]

Case Study 2: Food safety and mycotoxins: Aflatoxicosis outbreak in Kenya, 2004-2005 (Fig. 2-2)

Aflatoxin B_1 is a type of mycotoxin produced by *Aspergillus flavus* and *A. parasiticus.*[21] Mycotoxins, which are small molecular-weight fungal metabolites, are produced on a wide array of food plants and are toxic to animals and humans.[22] Aflatoxins can contaminate human foods such as cereals, roots, nuts, and pulses under favorable conditions such as high temperatures, high humidity, and drought stress, which lead to plant colonization by the *A. flavus* and *A. parasiticus* molds.[21] In 2004-2005, aflatoxin contamination of maize—a major staple food in Kenya—was found to be the cause of a severe outbreak of acute liver disease in eastern Kenya, resulting in 317 cases, including 125 deaths.[22] The primary risk factor for aflatoxicosis in this event was the consumption of homegrown maize, followed by storage of wet grain in the home.[22] Aflatoxin B_1 concentrations in stored maize in affected households were up to 50 times the limit prescribed for food in Kenya.[22] Chronic aflatoxin B_1 contamination is a risk factor for acute liver damage, which may lead to chronic illnesses including liver cancer and immune system suppression.[21]

The toxicity, morbidity, and potentially lethal effects of aflatoxin, as observed in the Kenya outbreak, highlight the significance of aflatoxin as an important public health challenge. Humans are exposed to aflatoxins through contaminated food crops or by consuming products from animals that have been exposed to contaminated feed. Aflatoxin contamination threatens the health and wellbeing of already vulnerable populations, such as children and individuals with hepatitis B virus (HBV) and hepatitis C virus (HCV) infections.[21] Children are especially susceptible to aflatoxins and can suffer short-

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and long-term effects such as malnutrition and stunting.[21] Additionally, chronic exposure to aflatoxins disproportionately affects low-resourced populations, with an estimated 5 billion people in low- and middle-income countries (LMICs) at risk of chronic exposure to aflatoxins.[23]

Chronic exposure to aflatoxins has detrimental effects on animal health and can cause growth inhibition and immune suppression.[21] Consequently, health risks to animals and humans alike and compounding impacts on livelihoods result when aflatoxicosis is not prevented.[21] Limited availability of food, lack of regulatory systems for monitoring and controlling aflatoxin, and environmental conditions that favor fungal development in crops are some of the common factors that increase the likelihood of aflatoxin poisoning.[21] Therefore, preventing and mitigating aflatoxin poisoning requires employing a One Health approach to protect human, plant, and animal health.

Ultimately, prevention and mitigation of aflatoxin contamination of food and feed, particularly in LMICs that often lack the expertise and infrastructure to effectively prevent and interdict aflatoxin contamination, require multi-pronged, economically-feasible, integrated approaches supported by private and public sector entities. For example, the appropriate and recommended use of irrigation and insecticides during the pre-harvest period and hand sorting of crops and effective rodent control during the post-harvest period could mitigate risks of aflatoxin contamination. Increasing awareness of the burden of aflatoxin exposure on public health is critical to encourage implementation of these strategies. In response to the deadly 2004-2005 outbreak in Kenya, Kenyan government agencies investigated the cause and established the National Food Safety Coordinating Committee in 2006, which is now active at the policy level, coordinating mycotoxin testing in food and feed, inspection, enforcement, education, and program monitoring and evaluation.[24] A holistic, coordinated approach including plant, animal, and public health research and practice is necessary to address the gaps in knowledge and technology to prevent and control aflatoxicosis.

Case Study 3: Human pathogens associated with plants and food safety: *E. coli* O157:H7 outbreak caused by romaine lettuce in the United States and Canada, 2018-2019 (Fig. 2-3)

Between October 2018 and January 2019, a foodborne outbreak of Shiga-toxin producing *E.coli* O157:H7 (STEC) resulted in 91 illnesses and 35 hospitalizations, including four cases of hemolytic uremic syndrome (HUS) but no deaths, in multiple areas of the United States (US) and Canada.[25,26] Fortunately the outbreak was detected in its early stages by US and Canadian surveillance systems, including FoodNet and PulseNet, and, on November 1, 2018, the US Food and Drug Administration (FDA), CDC, Canadian Food Inspection Agency (CFIA), and Public Health Agency of Canada initiated a multi-agency outbreak investigation. On November 20, FDA issued a public health advisory warning to consumers not to eat romaine lettuce until further notice, a bold and atypical advisory against a type of produce without identifying its farm of origin. In Canada, CFIA advised industry not to import, distribute, or sell romaine lettuce during the investigation. Ultimately, trace back of suspected food ingredients, field visits, and laboratory testing, including whole-genome sequencing, determined that the cause of the outbreak was in fact romaine lettuce produced on a farm in Santa Barbara, California, whose irrigation system was implicated as the contamination source for *E. coli* O157:H7. Genetic characterization of the pathogens revealed that the DNA footprints of the *E.coli* strains in this outbreak were genetically closely linked among cases, as well as related to a previous *E. coli* outbreak that affected the US and Canada in December 2017.[25-27] By early January 2019, despite its extensive geographical spread, the outbreak was contained and declared over within 11 to 14 weeks since the recognition of illness in the initial cases in both the US and Canada.

By employing One Health approaches to food surveillance, public health, and animal health, and taking rapid actions as demonstrated during this outbreak, public health officials will be better able to understand the source of foodborne illnesses, rapidly enabling and informing prevention and mitigation

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measures for future outbreaks. It is important to consider that the intestinal tracts of healthy ruminant animals are reservoirs of *E. coli* O157:H7, and cattle feces are believed to be a major source for human illness.[28] Shedding of *E. coli* O157:H7 by cattle is influenced by seasonality, food production strategies, and life stage of cattle. In addition, the pathogen can persist in the environment, such as in water troughs, in animal feces that are not removed expeditiously, and on feedlots.[29] In this outbreak, there was no conclusive evidence that the water was contaminated from domestic ruminant feces. However, the final investigation highlighted that ruminant intestinal tracts are well-established reservoirs for *E.coli* O157:H7. Wildlife and humans can also be sources of bacterial contamination of the food supply, and investigators noted "evidence of extensive wild animal activity, including waterfowl, rodents, coyotes, etc., and animal burrows near the contaminated reservoir sediment," likely warranting intensive exploration in future outbreaks, including water supplies.

The successful rapid containment of this large-scale STEC outbreak can be attributed to early detection of the event through robust surveillance systems, swift multi-agency coordination with an employment of the One Health approach, use of whole genome sequencing for *E. coli* characterization, and timely and appropriate issuance of a broad public health advisory. Plant, environmental, animal, and human health experts will likely continue to be challenged by the burden of foodborne illnesses, which should be addressed by continuing to coordinate multi-agency prevention, detection, response, and containment strategies; incorporating state-of-the art technologies to identify pathogens; and balancing the benefits of protecting the health of populations with the economic cost of issuing prompt public safety advisories.

Case Study 4: Pesticide use in plant-based agriculture and food security and safety in Suriname, 2010-2015 (Fig. 1B; Fig. 2-4)

Suriname, a middle-income country located on the northeastern coast of South America, has one of the highest pesticide use rates per area crop land in the Caribbean (8.8 kg/ha). Agriculture is a developing sector in this country, which contributes approximately 9% to the Gross Domestic Product (GDP) and employs 17% of the population.[30,31] Screening data from the Dutch Food and Consumer Product Safety Authority (NVWA) from 2010 – 2015 consistently showed pesticide residues in crops imported from Suriname.[32] The Caribbean Consortium for Research in Environmental and Occupational Health (CCREOH) is examining the association of pesticide exposure to birth outcomes in 1000 mother/child dyads.[33] CCREOH's preliminary environmental assessment showed pesticide residues in Surinamese produce, including the insecticides endosulfan and lindane in the leafy vegetable *Xanthosoma brasiliense* (tannia). According to an interviewer-assisted dietary survey, which was administered to assess dietary exposure to pesticides in Surinamese women (including 696 pregnant women), women living in non-urban districts and less educated women were more likely to have a higher tannia intake rate compared to those living in urban districts and women who received higher levels of education.[32] This disparity in exposure to tannia illustrates how pesticide use can have inequitable consequences for food safety based on region and education level.

Pesticides play an important role in food security by protecting crops from pests and diseases, leading to improved productivity. However, the misuse of pesticides may lead to residues in produce, potentially compromising food safety.[34] Chronic low-level pesticide exposures, such as through diet, are harmful to human health and have been associated with depression and neurodegenerative disease in adults.[36,37] Furthermore, exposure during gestation and the early postnatal period has been associated with a lower birth weight, decreased gestational age, and neuro-developmental toxicity that can lead to motor- and neurocognitive developmental delays in children.[38,39] In addition, the presence of pesticide residues in plants and the environment has been linked to the emergence of antimicrobial resistant organisms.[9] Recently, the use of triazole fungicides in certain horticultural systems in Europe has been

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linked to the emergence of azole-resistant environmental isolates of *Aspergillus fumigatus* and subsequent fatal human aspergillosis cases.[40]

Appropriate use of pesticides is important for safeguarding food security, food safety, and health equity. While pesticide use is highly regulated in high income countries, there is an urgent need in LMICs to formulate policies on pesticide residues in plants and the environment, such as monitoring and reporting levels of pesticide residues. In Suriname, the development and implementation of national pesticide policies are limited, and the country does not monitor pesticide residues in crops. Although there is currently no policy on the emergence and spread of resistance in plant pathogens associated with pesticides, guidance exists for developing comprehensive action plans to address these potential threats.

Training farmers to use pesticides correctly and screening pesticide residues in crops are pivotal to reducing human risk of pesticide exposure. In addition, approaches to reduce the use of pesticides should be implemented. A well-known strategy is Integrated Pest Management (IPM), which prioritizes the use and integration of multiple cultural, biological, and host resistance strategies, while reducing pesticide use, to manage pests and diseases of plants and animals.[42] IPM is geared toward improving economic benefits of production systems and reducing human health risks and adverse environmental effects of pesticide use. Ultimately, implementation of IPM, development and enforcement of international recommendations and national policies, and equipping of farmers with the knowledge and means to appropriately use pesticides will minimize pesticide residues in food and the environment and enable economically sustainable food production while reducing adverse health effects in people.

CONCLUSION

The cases presented above demonstrate the roles public health and One Health play in addressing food safety and food security. From the provided example, protecting bananas from the harmful effects of banana Xanthomonas wilt and alleviating the shortage of food caused by the disease involves a socio-ecological framework that highlights the interaction and interdependence of physical and sociocultural factors across all levels of a health problem.[43] This involves effective training on individual and organizational levels; collaboration with plant, environmental, and animal health specialists on the interpersonal level; and implementation of feasible policies on the community and society levels. Similar approaches can be utilized in tackling food safety, as evidenced in the cases of aflatoxicosis, *E.coli*, and pesticide use. The 2004 case of aflatoxicosis in Kenya resulted in an intervention on the societal and policy levels with positive effects observed at the individual, interpersonal, and organizational levels of the socio-ecological model. Suriname's case of pesticide use and safety concerns exhibit a need for societal policy level interventions that lead to positive cascading effects on the other levels of the socio-ecological framework.

Additionally, management practices aimed at reducing crop losses and ensuring food safety would benefit from employment of a One Health approach. Outbreaks of emerging pathogens can be mitigated by mobilizing experts and resources from all arms of One Health to elevate integrated research and development in human, animal, and plant health. The relationship between plant health and human health is especially important in public health and illustrates a need for research specifically focused on the direct and indirect effects of compromised plant health to human populations. Furthermore, increased funding for research and development, which allow for inclusion of multiple potential causes for public health concern, including plant diseases and pests that endanger human and animal health and wellbeing, are vital for holistically preventing and mitigating the effects of public health threats. Advances in surveillance technology and functional and streamlined workflow, from data collection,

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analyses, reporting, and data sharing are needed to improve the response to emergence and spread of plant-related pathogens and pests.

Threats to plant health pose challenges to population health, productivity, and prosperity across the globe. In a broader context, efforts to protect plants from emerging and endemic pathogens and pests help to not only increase food security and safety to ensure healthy lives, but also to alleviate poverty, promote equity, confront the impact of climate change, protect the environment, boost economic development, and strengthen global partnerships. Integrating plant health as part of assuring public health will accelerate our ability to achieve the United Nations Sustainable Development Goals (SDGs) (Table 1). Moreover, promoting a safe, sustainable, and nutritious diet for families worldwide will require a much closer partnership among advocates for sustainable agriculture and public health practitioners. The International Year of Plant Health provides the ideal opportunity to synergize through concerted efforts to apply the One Health approach to public health problems.

To successfully and effectively protect plant health and address food security, there needs to be stronger regulatory frameworks, effective surveillance and monitoring systems, feasible disease management practices, and effective training of food production professionals in protecting plant, animal, environmental, and human health. They also provide lessons on the importance of interagency coordination in facilitating rapid responses to public health emergencies, benefits of technological advances that facilitate data sharing, and the value of the One Health approach in ensuring food safety and food security for the global population.

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Figure 1. Xanthomonas wilt of banana in Uganda.



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Figure 2. Case studies and linkages to public health as discussed in the text.

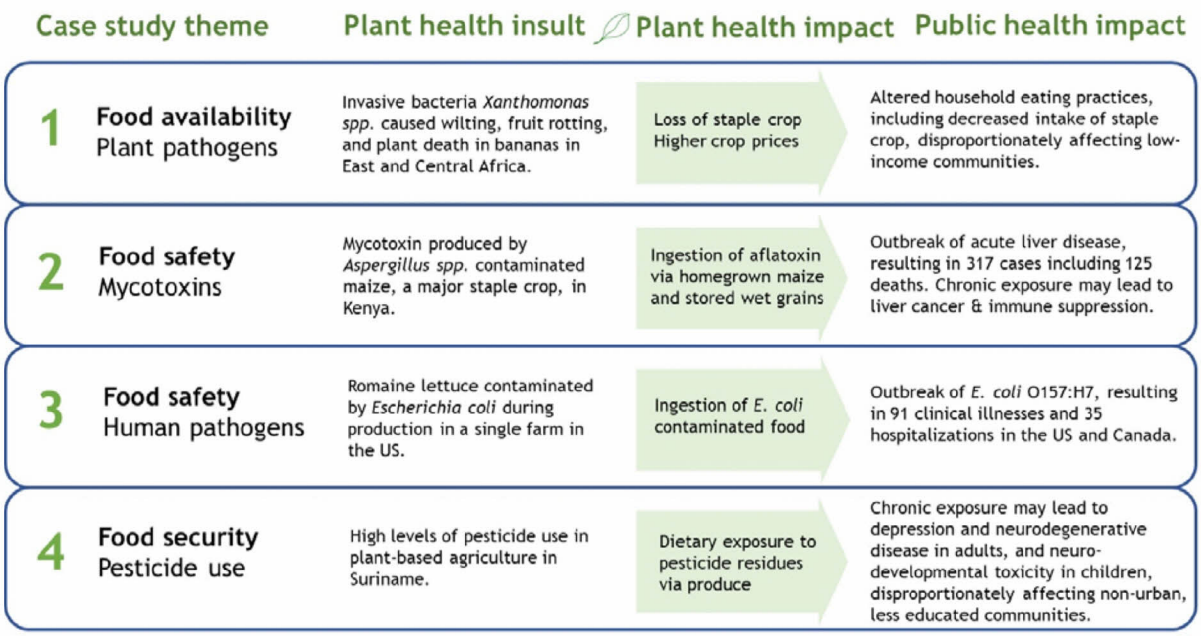

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Figure 3: Improper application of pesticides in the Philippines.



SOURCE:

UCDUSR0011470

Table 1. Examples of Sustainable Development Goals and indicators that are directly or indirectly linked to plant health[6]

SDG	SDG Indicator	Relevance to plant health
Goal 1. End poverty in all its forms everywhere	1.1. eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day	Plant health is important in the protection of wild plant diversity and the sustainable use of plants everywhere. Wild plants are important in supporting livelihoods.
Goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	2.1. end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round 2.3. double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment 2.4. ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality 2.5. maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed	Protecting plants from plant diseases, pests, and microbial contamination is vital in ensuring food availability and food security, food safety, and quality food for all people.
Goal 3. Ensure healthy lives and promote well-being for all at all ages	3.9. substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Pesticides are commonly used in plant production, storage and processing. This relates to food safety, ensuring that food sources and food production, soil, water and air are free from hazardous chemicals and pathogens
Goal 8. Promote sustained, inclusive and sustainable	Protect labor rights and promote safe and secure working environments for all workers, including migrant workers,	Pesticides are commonly used in plant production, storage and processing

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economic growth, full and productive employment and decent work for all	in particular women migrants, and those in precarious employment	and workers (especially women) may be exposed to unsafe working conditions. Link between food production and decent work for all- including avoidance of pathogens or chemicals in food during production and processing.
Goal 12. Ensure sustainable consumption and production patterns	12.2. achieve the sustainable management and efficient use of natural resources 12.3. halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses 12.4. achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment	Relevant to food safety issues, and how food is unequally distributed.
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	15.1. ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements 15.3. combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world 15.6. Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed 15.8. introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species 15.9. integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	Sustainable terrestrial food production. Plant health in ecosystems is also a key component of environmental health.

UCDUSR0011472

From: Andrew Clements <aclements@usaid.gov>
Sent: Tue, 4 Feb 2020 15:56:12 -0500
Subject: Re: Feinstein to USAID: Reinstate Pandemic Prevention Program
To: Jonna Mazet <jkmazet@ucdavis.edu>
Cc: Cara Chrisman <cchrisman@usaid.gov>, Alisa Pereira <apereira@usaid.gov>

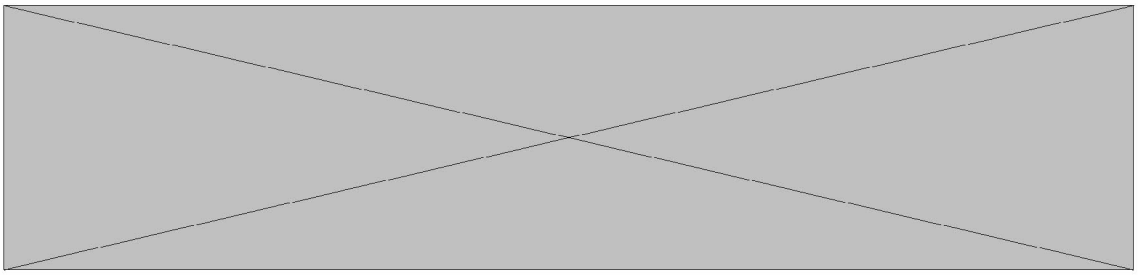
Thanks for passing it along, Jonna.

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 Feb 4, 2020, at 9:13 PM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:

> Hi,
> Just received this from my Senator!
> Sorry that everybody still uses that incorrect NYT reference to canceling the program. Good news is that folks are working to get your team more money, I guess.
> Let me know if you want to coordinate on any of it,
> Jonna

From: Feinstein Press <Feinstein_press@feinstein.senate.gov>
Sent: Tuesday, February 4, 2020 1:11 PM
Subject: Feinstein to USAID: Reinstate Pandemic Prevention Program



For Immediate Release — Contact: Anthony Rivera-Rodriguez

February 4, 2020 — (202) 224-9629

Feinstein to USAID: Reinstate Pandemic Prevention Program

Washington—Senator Dianne Feinstein (D-Calif.) today called on the U.S. Agency for International Development (USAID) to reinstate the PREDICT zoonotic disease surveillance and forecasting program. PREDICT is a program that proactively searches for pathogens with the potential to cause pandemics in order to prevent their spread from animals to humans. USAID canceled the program last year.

"Since 2009, PREDICT has led to the discovery of nearly 1,000 new viruses, including coronaviruses similar to what has caused the outbreak in Wuhan, China. For example, in 2018, a new Ebola strain found in healthy bats was discovered in Sierra Leone and was the first Ebola strain to be discovered before an outbreak in humans occurred," Senator Feinstein wrote.

Feinstein continued: **"The current deadly viral outbreak and its quick appearance in the United States make clear that PREDICT's contributions to zoonotic disease surveillance and forecasting must continue. We simply cannot afford to go backwards and jeopardize the success we've seen over the last ten years."**

Full text the letter follows:

February 4, 2020

Mr. Mark Green

Administrator

United States Agency for International Development

2231 Crystal Drive

Arlington, VA 22202

Dear Administrator Green:

In light of the deeply concerning coronavirus outbreak in China, which has now led to several cases in California, I write to ask that you reverse your decision last year to shut down the U.S. Agency for International Development's (USAID) PREDICT zoonotic disease surveillance and forecasting program.

Since 2009, PREDICT has led to the discovery of nearly 1,000 new viruses, including coronaviruses similar to what has caused the outbreak in Wuhan, China. For example, in 2018, a new Ebola strain found in healthy bats was discovered in Sierra Leone and was the first Ebola strain to be discovered before an outbreak in humans occurred. Its discovery will help Sierra Leone and neighboring countries update their diagnostics to ensure they can detect all known Ebola viruses and reduce the risk of exposure.

PREDICT has even helped inform preparedness and response efforts being used to combat the current coronavirus outbreak. Specifically, research supported by PREDICT led to the discovery of several SARS-like coronaviruses related to the new virus in Wuhan, including viruses in bats that could be transmitted directly to people. This research has helped inform the scientific community about the possibility of animal-to-human interaction being a risk factor in the current outbreak. Even more, PREDICT trained and equipped public health professionals in several countries that are now supporting the diagnosis of the virus and other efforts to control outbreak.

The current deadly viral outbreak and its quick appearance in the United States make clear that PREDICT's contributions to zoonotic disease surveillance and forecasting must continue. We simply cannot afford to go backwards and jeopardize the success we've seen over the last ten years. I urge you to reinstate the PREDICT program, and I look forward to working with you on this critical issue.

Sincerely,

Dianne Feinstein

United States Senator

###

To: alexandra zuber <alexandrazuber@atahealthstrategies.com>, Omar Romero-hernandez <oromero@haas.berkeley.edu>, Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>, Elizabeth Leasure <ealeasure@UCDAVIS.EDU>, Karesh@ecohealthalliance.org, daszak@ecohealthalliance.org, Sam Halabi <sfh9@georgetown.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, Matthew Blake <mblake@ucdavis.edu>, Woutrina A Smith <wasmith@ucdavis.edu>
From: "Federico Castillo, PhD" <f.castillo@berkeley.edu>
Subject: Agenda, remote access information and auxiliary material for 2/12/2020 meeting
Sent: Tue, 11 Feb 2020 14:53:39 -0800

OHCEA-Strategic-Plan--Summarized.pdf
SEAOHUN Strategic Plan (at a glance).pdf
Transition Plan Revised 1.21.2020.docx
Revised business plan 01.30.2020-1.docx
0=Concept
Objective 3 Gantt Chart.xlsx

Hello all,

Enclosed is reading material for tomorrow's meeting. The documents have been shared at different meetings but we thought it would be good to have them in one place/email.

Remote access information:

Join Zoom Meeting: REDACTED

If you have any questions let me know. Looking forward to the meeting tomorrow!

Federico

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Federico Castillo
University of California
Department of Environmental Science, Policy and Management
Berkeley, CA 94720
+(510)643-2748
f.castillo@berkeley.edu
http://nature.berkeley.edu/~fcfallas
Deputy Director, Planetary Health Center of Expertise
http://www.ucghi.universityofcalifornia.edu/centers-of-expertise/planetary-health

OHW-NG Transition Plan

Introduction

The sustainability, resiliency, and organizational performance of AFROHUN and SEAOHUN will determine their trajectory in the journey to self-reliance. Our goals for the transition plan are two-fold. First, we aim to empower these two organizations to shift from being a sub-recipient of USAID funding to receiving direct USAID funding, and to effectively subawarding to their member networks (i.e. Asian OHUNs and AFROHUN chapters, herein referred to as "countries" collectively). Second, we aim to support these organizations to scale-up their implementation of OHW-NG activities to effectively manage an increase in the organizations' proportion of OHW-NG funding, from approximately 50% in Year 1 to 70% in Year 5.

Our vision is that by Year 5, each network has achieved demonstrable improvements to organizational capacity and sustainability, and has a clear vision and business model for advancing their leadership of One Health workforce development in their regions independent of USAID funding. This transition plan outlines the four major stages of transition that we will facilitate, identifies the major benchmarks of progress, and also outlines our strategy for routine monitoring that includes an 'early warning system' meant to ensure early detection of risks and challenges and active trouble-shooting and remediation.

Stage 1: Subawards; Benchmarking and Planning

Transferring Successful Practices in Subaward Procedures

As recipients of subawards from UC Davis, each Secretariat will, in Quarter 1, complete mandatory subaward procedures that parallel USAID's own award recipient vetting process. For example, UC Davis requires, at a minimum, a subrecipient commitment form and a mini-audit questionnaire (to gauge fiscal responsibility), both completed and signed by the subrecipient; a statement of work; and a budget with budget justification. In the event that an intended subrecipient does not or cannot qualify for a subaward from UC Davis, the subrecipient receives a statement of needed corrective action that must take place before the subaward can be made, and, as long as the deficit is not fundamental, achieves provisional subrecipient status. Our OHW-NG team will provide virtual capacity-building assistance to help each Secretariat to accomplish any corrective actions. We anticipate that achieving subrecipient status at UC Davis is a first organizational hurdle, to be completed early in Year 1 for both networks. This is the first milestone we will monitor in the transition plan.

A second major step in the transition plan is to facilitate each Secretariat office to manage subawards to member countries in their region. This process has not occurred previously in either region, except for a subaward made by SEAOHUN to THOHUN. Therefore establishing the expectations, procedures, and capacity to manage these subawards is a critical second step to supporting the organizational functioning and sustainability of the entire network. Strong subaward procedures will be critical for the networks to properly manage direct USAID funding starting in Year 3. The milestone for this activity is for the Secretariats to have documented

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subaward procedures that each has established as organizational policy; we expect to accomplish this milestone by end of Year 1.

Baseline Benchmarking

Starting in Quarter 2 of Year 1, OHW-NG will conduct a baseline organizational capacity assessment of each of the two Secretariat organizations to identify the major organizational capacity areas that need to be strengthened for a successful transition to occur. From January-April, 2020, the OHW-NG consortium will use the USAID Non-U.S. Organization Pre-Award Survey (NUPAS) survey to conduct a benchmarking of AFROHUN and SEAOHUN Secretariats on critical organizational competency areas, such as, but not exclusive to, internal controls, personnel management, project management, and organizational governance. The NUPAS is comprised of 29 evaluative elements that represent the competencies deemed most critical in USAID's formulation of a responsibility determination before a grant is awarded to a non-U.S. organization.

Per USAID guidance on NUPAS, the OHW-NG team will first conduct a comprehensive desk review of organizational documents (e.g. charter and bylaws, descriptions of accounting procedures, and examples of invoices or vouchers that would substantiate that a process or procedure is underway). A follow-up site visit of two days to each Secretariat organization will be conducted by OHW-NG consortium members, where team members can observe processes and procedures first-hand and clarify any questions or gaps left by the documentation. The on-site visit team will then consolidate findings into a short report and PowerPoint presentation. This site visit will take place in the days immediately leading up to the Strategic Business Planning Retreats, described in the next section. The milestone that will be tracked is the successful completion of the NUPAS tool for each Secretariat.

Strategic Business Planning

During the same site visit, the OHW-NG team will present the benchmarking to the Secretariats for discussion at respective strategic business planning retreats, each to be scheduled in late March and April 2020. The purpose of the multi-day retreats is to help each Secretariat to establish the mission and vision that will inform the five year plans that their organizations will utilize to accomplish their programmatic and sustainability goals during the OHW-NG – all with a focus on the direct transition to USAID funding on or near Year 3.

The deliverables resulting from these retreats will be a *business plan* to inform each Secretariat's business operations and a *five-year strategic plan* for each Secretariat which will prioritize tactics and metrics that will build capabilities in any organizational capacity area that is found weak or inadequate in the NUPAS assessment in time for the direct transition to USAID funding on or near Year 3. As part of the retreat sessions, we will also work with the Secretariat staff to self-assign scores using the USAID Organizational Capacity Assessment (OCA) tool, which boasts a larger set of organizational competencies that are important to organizational sustainability, such as fundraising and business development, external communications, and change management. The OCA tool has a full section entitled Organizational Sustainability that we feel is important to include in this earliest stage of establishing a vision and plans for organizational sustainability. Given concerns by USAID that this tool may be overly broad,

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OHW-NG will endeavor to customize this tool to the Secretariats and the specific needs of OHW-NG.

If the Secretariats do not already have recent financial audits from a recognizably reputable firm, the OHW-NG consortium will supplement its benchmarking by hiring a financial auditing firm to conduct a baseline financial audit to further identify any deficiencies that need to be addressed before USAID conducts a similar audit on or near Year 3 to determine the Secretariats' eligibilities for direct funding. Any deficiencies will also be presented and discussed in the planning retreats. Milestones for this stage thus include: completion of independent audits, completion of business and strategic plans, and completion of benchmarking NUPAS and OCA tools for each Secretariat.

Stage 2: Capacity-building for organizational performance and sustainability

After these retreats, as described in our Year 1 Objective 3 workplan, we will support multi-modal capacity-building to help the networks strengthen any NUPAS-related capabilities that are scored as "inadequate" or "weak" to achieve "adequate" and "strong" benchmarks over the first two years. We will look for opportunities to strengthen broader OCA-related competencies starting in Year 1, but will focus on these more intensively in Years 3-5 after NUPAS-related competencies have been achieved in Year 2. This capacity-building includes virtual and on-site technical assistance; peer-to-peer learning using ECHO; investments in physical infrastructure for managing data, accounting, and country-level support for work planning and reporting; and compliance monitoring. Milestones we will monitor for this stage include progress against planned activities designed to build competencies related to the NUPAS and OCA tool.

Stage 3: Direct funding from USAID

Passing the NUPAS

The third major milestone in transition is for each Secretariat to successfully pass a USAID-conducted NUPAS. While the exact timeline for this milestone may differ between the two networks, and will be guided by USAID, we propose that this milestone be achieved by early Year 3. This milestone will be measured by the requisite number of domains scored as "adequate" (with compensating controls for any risks) or "strong" by the USAID NUPAS team. If any deficiencies are detected at this stage, the consortium consultants will accelerate work with the networks to remediate these deficiencies by Quarter 3 of Year 3.

Passing the Independent Audit

Another key milestone required of each network is to pass an independent audit by Year 3. Using a USAID-approved international accounting firm in each location, we will support an independent audit of each Secretariat in approximately Quarter 1 of Year 3. This activity could be implemented earlier in Year 2 if it is determined that the networks are organizationally ready. If any deficiencies are detected, the consortium will leverage its skilled subject matter experts to prioritize capacity strengthening to ensure passage by Quarter 3 of Year 3. Once the NUPAS and independent audit are passed, the consortium proposes that USAID develop their notice of transition awards to be released, and the consortium will work closely with the networks to fulfill

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all requirements to submit their application for these awards and be ready to receive funding by Quarter 4 of Year 3.

Stage 4: Transition to Independence

Increasing network financial scope

Overall, it is anticipated that USAID OHW-NG funding will increase to the networks starting in Year 3 and continue progressively to Year 5. The exact proportion will depend on network performance on the subawards and/or transition awards, as well as programmatic needs determined in consultation with USAID; however, it is anticipated that the overall network proportion of funding will increase from approximately 50% in Years 1 and 2 to 55.5% in Year 3, 65% in Year 4, and 70% in Year 5. The consortium will include this transition plan in the 5-year strategic plans of each network that are established early in Year 1, and we will reinforce the goals in annual work and business planning processes. The milestone that will be tracked annually is percentage of funding going to Secretariats over total funding.

As soon as Year 3, all funding designated for the networks will be provided directly from USAID to each Secretariat through transition awards. While the exact timing of this direct award will be individualized to each Secretariat (based on their progress and capacity), the consortium will plan for direct funding to be executed to each Secretariat by the end of Year 3. The milestones that will be monitored include the issuance of USAID transition awards, the submission of applications, the signature of the final cooperative agreements between USAID and the Secretariats, and the issuance of approved subawards to network members. The OHW-NG team will provide close support from the global team to assist in these applications and in the execution of the final agreements. Monitoring of performance and technical support to the Secretariat offices will help guide this support, with the aim of diminishing need for support over time, so that the Secretariats are prepared to manage these awards independently after the conclusion of OHW-NG. Burn rate and pipeline of Secretariat budgets as well as member subawards will be monitored quarterly to track progress of financial management, and mentorship will be provided to the Secretariats to perform this monitoring independently over time.

Increasing network programmatic scope

As direct funding to the Secretariats increases over time, the Secretariats will increasingly take over activities that were previously managed or implemented by the OHW-NG global consortium. Our global team will help the Secretariats plan for this transition/expansion in programmatic scope by strategy area under each of the three OHW-NG objectives, as part of the 5-year business and strategic planning process with each network. Generally-speaking, this change in scope can be described as a shift in the locus of responsibility for implementation of activities, from the consortium partners to the networks, with the Secretariats increasing their implementation of activities and the global consortium diminishing their implementation support. The global consortium's role will shift to provision of strategic and technical assistance in a 'shadow' capacity in Years 4 and 5 to support the Secretariats to manage new activities. On the next page are illustrative examples for each OHW-NG Objective.

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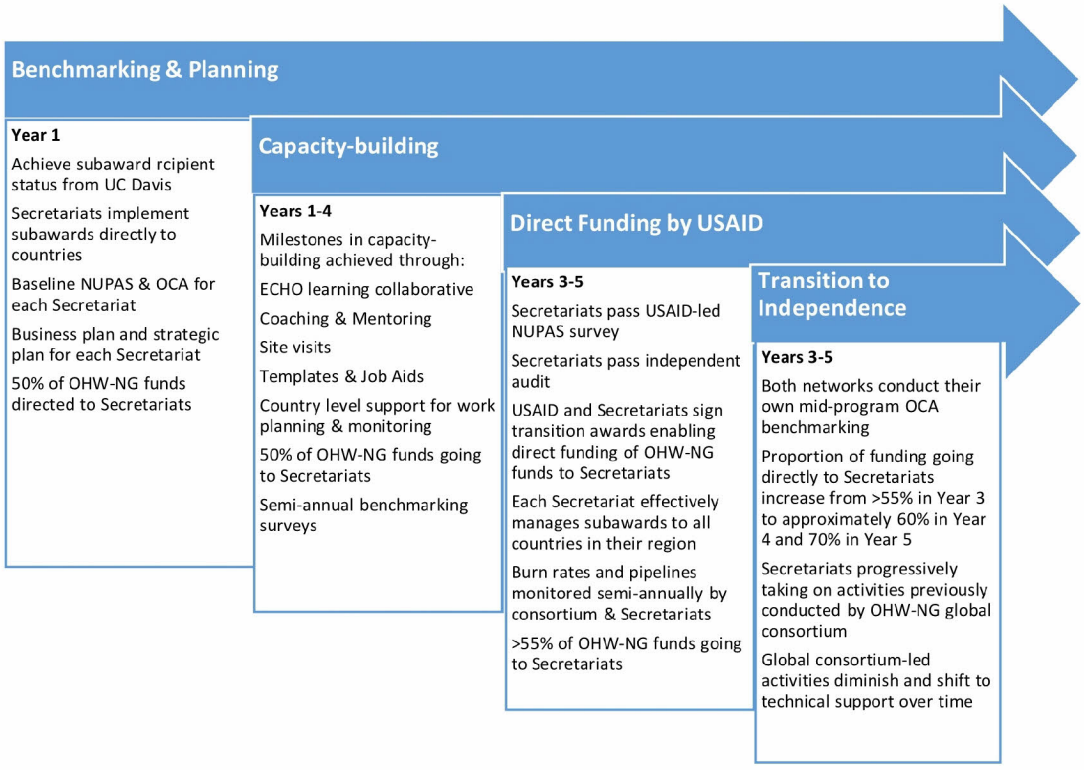
- **Objective 1:**
  Years 1-2: Global consortium primarily responsible for orchestrating the design and implementation of the One Health Academy.
  Years 3-5: Secretariats take on specific responsibilities for hosting, implementing, and reporting on the One Health Academy.

- **Objective 2:**
  Years 1-3: Global consortium primarily responsible for financing and implementing the knowledge management system.
  Years 4-5: Secretariats take on specific responsibilities for financing and implementing the knowledge management system, including writing contracts for vendors, assigning staff, conducting monitoring and evaluation on activities, etc.

- **Objective 3:**
  Years 1-2: Global consortium leads the organizational capacity assessment and strategic planning process with concerted technical assistance to build capacity.
  Years 3-5: Secretariats lead their own mid-program OCA tool review and lead the revision of their business and strategic plans and the solicitation of technical assistance for any capacity needs.

Figure 1. Stages of Transition Plan & Key Milestones



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Early Warning System
Achieving these major milestones likely will require that many small mitigations are accomplished successfully and in a scheduled and planned manner. To this end, the consortium has designed an 'early warning system' that will track progress towards major milestones, provide for close and routine monitoring, and prompt immediate troubleshooting and remediation for problems detected.

Starting after completion of the secretariat business plans, a 'transition plan team (TPT)' will be developed for each network secretariat from within the OHW-NG Objective 3 work group. These two teams (TPT- AFROHUN and TPT- SEAOHUN) will comprise key global consortium staff representing subject matter experts, the Director of Monitoring, Evaluation and Learning, the OHW-NG regional liaison to the respective Secretariat, and key staff from the respective Secretariat.

Quarterly Reviews
The team will meet quarterly via ECHO videoconference to review project indicators for that quarter, expected transition milestones and progress made. This review process will aim to occur in the same time period as quarterly MEL review meetings. Through discussion, the team will identify any challenges to reaching achieved milestones and come to agreement on mitigation steps to address those challenges. The team will complete a short 1 page summary document, called the "TPT quarterly summary', which documents the progress and agreements for the next quarter. This summary will be reviewed by the Objective 3 working group and OHW-NG leadership. The summary will document for each Secretariat for each quarter: who participated in the review, the milestones expected and a short description of what was achieved, burn rate/ pipeline, challenges faced (e.g. delays, change in activities), and the mitigation steps and expected milestones agreed to for the next quarter. See Textbox 1 for an illustrative review summary.

Ad-hoc Issues Management
Issues that emerge in between meetings can be referred to the TPT teams for review, discussion, resolution, and documentation on an ad-hoc basis.

Annual benchmarking
The TPT teams also will conduct an annual benchmarking of each of the Secretariat on the NUPAS and OCA tools at the end of each implementation work plan year, in order to track progress and identify any new gaps in anticipated and desired capabilities. This benchmarking will be shared in the corresponding quarterly meetings for timely review and decision-making on remediation or corrective actions. This annual procedure will alert the regional networks and USAID if progress is not sufficient for transitions to occur. Remaining OCA measures will be included in surveys for Years 3-5.

Reporting to USAID
Reporting on the progress and challenges of the transition for each Secretariat to USAID will occur in several methods. First, as requested by the AOR, the Objective 3 lead will work closely

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with USAID staff to plan and monitor the transition, such as to determine the specific USAID requirements and timelines for transition steps. Second, in routine Management Team meetings, the Objective 3 lead will also apprise USAID leadership of any key issues facing the transition for either Secretariat. Third, the consortium will report in writing on progress and challenges related to the transition as part of its routine semi-annual programmatic progress reporting.

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Textbox 1. Draft Transition Plan Summary

Secretariat: (AFROHUN/ SEAOHUN)

Quarter under review: Year 1, Quarter 2 (January-March, 2020)

Review team participants: List names

Date of Review: April 3, 2020

Progress against expected milestones for quarter

- Achieve subrecipient status from UC Davis- Y/N
  - AFROHUN: Y
  - SEAOHUN: Y
  - Describe: _____
- Progress toward milestone of establishing documented sub-award procedures in organizational policy (milestone target date: end of Year 1)
  - AFROHUN: Short description of progress
  - SEAOHUN: Short description of progress (how many subawards executed, how many are in development, any rationale for delays)
- NUPAS assessment completed for each Secretariat- Y/N
  - AFROHUN: Y
  - SEAOHUN: N
  - Describe: (to be completed end of April with business planning retreat)
- OCA baseline completed for each Secretariat
  - AFROHUN: Y
  - SEAOHUN: N (to be completed end of April during business planning retreat)
- Progress toward milestone of business plans developed for each Secretariat
  - AFROHUN: Short description of progress
  - SEAOHUN: Short description of progress

Secretariat pipeline: Burn rate:

Challenges to progress: Short description to any challenges that prevent achievement of milestones or delayed progress toward milestones for that quarter.

Mitigation steps: Specific steps agreed to by the team to address challenges above.

Expected milestones for next Quarter: (List)

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OHW-NG Business Planning Retreat for Organizational Sustainability- AFROHUN
March 29- April 1, 2020
Entebbe, Uganda
Concept Note for Discussion with AFROHUN

Background & Rationale

A key USAID requirement in the *OneHealth Workforce- Next Generation* Initiative is for the global consortium to support each network secretariat to produce a "business plan", which identifies "resource mobilization strategies" for diverse funding streams, and "specific interventions that are expected to be sustained after the agreement ends". This plan is to be updated annually (see the USAID description in this document Appendix). USAID also has expressed the priority for each network secretariat to create a clear vision of its long-term business model and pathway toward financial and organizational sustainability for the era after OHW-NG ends, when USAID financial support is uncertain and may diminish.

The global consortium led by UC-Davis envisions the business plan as a strategic document that summarizes AFROHUN's long-term vision, its business model for organizational sustainability, and its strategic goals and tactics to achieve its vision and desired model, and more specifically, the transition to direct USAID funding in Year 3, and the goal of enhanced organizational sustainability by Year 5.

The global consortium aims to support AFROHUN to develop this document by facilitating a 3 day "Business Planning for Organizational Sustainability Retreat", with AFROHUN Secretariat staff, global consortium staff, USAID representative(s), and AFROHUN chapter representatives. This retreat is proposed to take place in Entebbe, Uganda, from Mach 29- April 1. The business plan will be written after the retreat, by a small team of AFROHUN and global consortium staff, based on the retreat discussions.

Retreat Goal

The Strategic Business Planning Retreat- AFROHUN will provide 3 days of analysis and dialogue between AFROHUN Secretariat, the global consortium, and AFROHUN chapters, for the purpose to assist in the formulation of: a long-term vision of AFROHUN for after OHW-NG initiative (i.e. 2025 and beyond), the desired AFROHUN business model that will ensure sustainability, and the five-year goals and tactics to achieve this vision. These concepts will be consolidated in a written business plan, to be submitted to USAID.

Retreat Objectives

- Share findings from pre-retreat assessments (e.g. NUPAS)
- Conduct a baseline benchmarking on the Organizational Capacity Assessment Tool – *this could also be conducted in advance—TBD in discussion with AFROHUN*
- AFROHUN establishes its long-term vision and business model for organizational sustainability in 2025 and beyond
- AFROHUN identifies strategic goals and high level tactics for achieving this organizational sustainability vision, including key focus areas for organizational development for Years 1-3 of the OHW-NG (until USAID direct funding) and Years 4-5 (after USAID direct funding)

DRAFT

Outputs

The major outputs expected from these retreats include:

- Shared vision for AFROHUN and its business model for sustainability
- Identification of strategic goals and major strategies for Years 3 and 5
- Agreed upon approach and timeline for writing up the business plan after the retreat
- Stakeholder consultation with AFROHUN chapter representatives

Deliverable

The output of the retreat will be a short written retreat summary that captures the major discussion highlights of each day, as well as the retreat outputs. This content will form the basis of the formal written business plan, to be delivered 6-8 weeks following the retreat.

Pre Retreat Assessments

To help provide AFROHUN Secretariat staff with useful information for their analysis, the global consortium will work to conduct key assessments in advance of the retreats, namely: interviews with AFROHUN Secretariat staff and focus group discussions to identify strengths, weaknesses, opportunities and threats ("SWOT analysis"), and a high level stakeholder mapping/ analysis for use in discussion.

Possible Three Day Agenda Outline (to be co-created with AFROHUN)

Day 1: Establishing the Long-term Vision for Organizational Sustainability

- What are we here to do? Mission, goals, values
- Who do we serve? Who is our target audience?
- How do we do it? Channels/ distributions
- How well do we do it? Strengths, weaknesses, opportunities, threats
- What is our value proposition moving forward?
- What are our differentiators?
- Where do we want to be in 3 years? In 5 years? In 10 years?
- What is our bold, audacious goal?

Day 2: Planning the Business Model for Organizational Sustainability

- What key activities are needed to accomplish our vision/ goal?
- What resources do we need to meet our vision/ goal?
- What business model (i.e. our model of securing ongoing revenue) do we need moving forward to be organizationally sustainable? Review potential business models.
- What are our resource mobilization strategies? ("Channels")
- Stakeholder mapping: who are our partners? What partnerships and buy-in do we need?
- What areas of our organizational capacity do we need to improve? Review of NUPAS.
- OCA benchmarking or review of completed OCA tool.

DRAFT

Day 3: Consultation & Action Planning

- Morning:
  - Present summary of Days 1 and 2 to country representatives for high level feedback.
  - Joint discussion: What are our strategic goals? Review strategic goals from OHCEA strategic plan, 2011-2021.
- Afternoon:
  - What are our strategies to achieve these goals? (small group break-out exercises)
  - What are our priority areas for organizational development for Years 1-3?
  - What additional analyses and/or consultation are required to complete our plan?

Appendix 1. USAID language in the cooperative agreement with UC-Davis regarding the Business Plan.

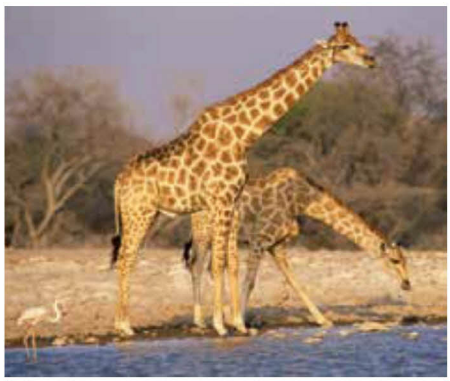
"The recipient will submit a business plan for the regional university networks and their key activities within the first year of execution of the Agreement. The business plan should include resource mobilization strategies unique to each regional university networks to help them acquire diverse funding streams and describe specific interventions and activities that are expected to be sustained after the Agreement ends. The business plan will be revised in concert with the regional networks on an annual basis and submitted with the annual implementation plan. Updates on implementation of the business plan will be reported semi-annually and annually as part of regular performance reporting." P. 13.

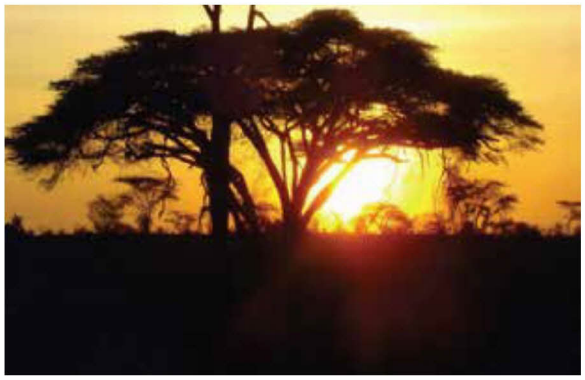
DRAFT

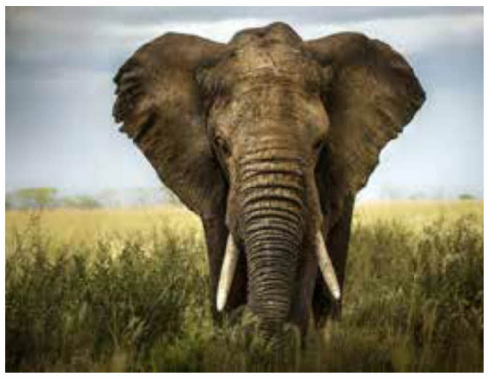
OHCEA

EMPOWERING GENERATIONS









One Health Central and Eastern Africa

Ten-Year Strategic Plan

March 2011-2021

UCDUSR0011489

Foreword

It gives me great pleasure to share with you the One Health Central and Eastern Africa (OHCEA) ten year strategic plan. OHCEA is a network of seven Public Health and Seven Veterinary higher education institutions that are located in six countries in the Eastern and Central region in Africa. These are: Democratic Republic of Congo, Ethiopia, Kenya, Rwanda, Tanzania and Uganda. The institutions came together to promote trans-disciplinary collaboration in implementing One Health approaches to address complex health challenges in addressing emerging pandemics with a human-animal-ecosystem interface. The implementation of this strategic plan is in the third year. We look forward with optimism to the implementation of the strategic plan in full over the coming years.

Dr. Geoffrey Kabagambe
Uganda, November, 2013
Dr. Geoffrey Kabagambe
Project Manager- OHCEA

UCDUSR0011490

Vision

A global leader in One Health approaches to sustainable health for healthy productive animals, prosperous communities and productive ecosystems.

Mission

To drive transformational change for continuous improvement of health and well-being of humans, animals, and ecosystems through multidisciplinary research, training and community service.

Core Values/Guiding Principles

- Multi-disciplinary teamwork
- Mutuality and respect
- Strategic partnerships
- Participatory and inclusiveness
- Collective decision making
- Accountability and transparency
- Innovativeness

In March 2011, OHCEA governing body endorsed the ten year strategic plan that was developed through a consultative process involving OHCEA stakeholders in 14 member institutions from six countries. These are: Democratic Republic of Congo, Ethiopia, Kenya, Rwanda, Tanzania and Uganda.

The plan outlines the network's medium to long term strategic direction for the attainment of its mission. These will effect positive and sustained change to address complex global and regional health challenges through trans-disciplinary, collaborative One Health (OH) approaches. This abridged version of the 10-year strategic plan outlines the Strategic Objectives (SO) and measures of success.



Eco-System in Ngorongoro Conservation Crater, Tanzania

SO1. Strengthen OHCEA institution as a growing regional network to deliver One Health for health system transformation.

A strong institution with clearly articulated regional and country goals and means to achieve them, have right leadership and functional governance structures, with technical capabilities, and knowledge management systems that foster cross-disciplinary and cross country learning is important to position the network in the next ten years to deliver on its intent-improvement of health, and well-being of humans, animals and ecosystems. OHCEA will utilize technical and financial resources within its member institutions and other partners to deliver on this goal.



Country Coordinating Committee meeting in session.

UCDUSR0011491

The following benchmarks will be used to measure success:

- Approved regional and country plans, funded and efficiently delivered.
- OHCEA with legal status (at regional and country) with proper management and administrative systems that are functional.
- OHCEA members with requisite knowledge, skills and attitudes and demonstrating this in driving One Health approaches within and outside the institution.
- A network fully represented with institutions in the three sub-sectors: human, animal and eco-system health.

SO2. Support national agencies to build capacity and efficiency for zoonotic disease surveillance, reporting and outbreak response in country and across borders.

Capacity- knowledge, skills and right attitude is needed to deliver true trans-disciplinary approaches and to effectively address zoonosis holistically. OHCEA shall utilize its rich human resource base, and evidence generated from its One Health intervention to contribute options for the strengthening of national and regional surveillance, reporting and response mechanisms.

The following benchmarks will be used to measure success:

- Value adding partnerships created with select national/regional health policy institutions to support integration of human-animal-environmental health in disease surveillance and response.
- Guidelines, protocols developed for strengthening zoonotic disease outbreak surveillance, reporting and response and used to integrate One Health in existing health systems.
- One Health approach benchmarked against conventional approaches and its cost benefit analysis articulated and used to present a strong case for its implementation.
- OHCEA providing technical expertise to national and regional health systems and supporting evolution of efficient systems using a One Health approach.

SO3. Provide education and outreach services to expand the size and capabilities of the One Health workforce.



Deer farm visit in Minnesota during an Eco-health study tour

Training and mentorship programmes for young and in-service professionals is needed to facilitate appreciation and uptake of proven approaches. OHCEA member institutions as schools within centers of excellence are well placed to design tailored innovative training programmes both pre and in-service to facilitate learning and transfer of knowledge and skill.

UCDUSR0011492



One Health Sensitization meeting in action

The following benchmarks will be used to measure our success:

- Learning needs for the different categories of groups and institutions well documented and used to develop and deliver new training programmes.
- Innovative training programmes/courses/modules (country and regional) developed in order to provide opportunity for future leaders, faculty and government workforce to acquire skills in OH approaches involving cross-sectoral and trans-disciplinary fields that meet government needs.
- Curricular in OHCEA schools for pre-service, in-service and community training are strengthened.
- Human resources within government agencies responsible for surveillance and response programmes including community para-professionals strengthened through new designed educational programmes in order to deliver better services to the people in the countries/region.
- A growing society of young people advancing One Health principles and approaches contributing to mass awareness.
- Innovative field-based training programs developed and provide opportunities for faculty/ students to work together in multi-disciplinary teams on community based problems at the animal-human-ecosystem interface.

SO 4. Build and leverage strategic partnerships with other organizations and networks for mutual benefit.

In advancing One Health goals, OHCEA will need to work with strategic: government, inter-governmental, private sector, not for profit. This will be particularly important to leverage financial and human resources.

The following benchmarks will be used to measure success:

- Strategies and guidelines for managing and delivering highly beneficial partnerships.
- Strategic and successful partnerships developed to deliver to OH goals.

SO 5. Strengthen infrastructure capacity and facilitate learning and resource sharing to support OH work.



Core Competency & Short course workshop in Dar-es-salaam

UCDUSR0011493

Trans-disciplinary and collaborative approaches demand a minimum infrastructure base. OHCEA shall set up such infrastructure as labs, IT, communication equipment to facilitate e-learning, strengthen surveillance and reporting systems and enable sharing of knowledge and lessons across institutions and countries.

The following benchmarks will be used to measure success:

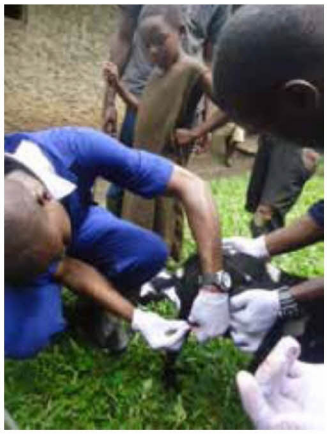
- OHCEA secretariats and institutions equipped with machinery and technical expertise to make them operational
- Select government institutions supported with infrastructure strategic in enabling application of One Health approaches.
- Technical expertise for IT is developed and shared within OHCEA institutions and collaborating government agencies.

SO 6. Generate evidence based data and share information to advance training, science and practice, and to inform policy.

Evidence based data supports replication and policy uptake. OHCEA will create and utilize platforms and diverse appropriate communication channels to share evidence generated and policy options emerging.

The following benchmarks will be used to measure success:

- Evidence based research packages, shared with targeted users (scholars, policy makers, policy implementers) and impacting training and policy guidelines.
- Information and data sharing platforms effectively used to share evidence.
- Peer reviewed research papers/articles based on OHCEA's One Health experiences.
- One health field sites involving faculty, students, community in cross-disciplinary applied research and outreach activities.
- OHCEA and member institutions recognized as center/s of excellence in the region for creation and promotion of new ideas and research in OH.



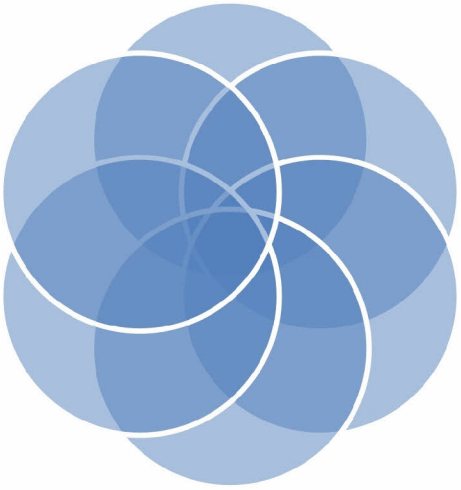
Vaccination in action during One Health Field Visit.

UCDUSR0011494

What We Want to Achieve

6. Generate evidence based data and share information to advance training, science and practice, and to inform policy.

1. Strengthen OHCEA institution as a growing regional network to deliver One Health for health system transformation.



5. Strengthen infrastructure capacity and facilitate learning and resource sharing to support OH work.

2. Support national agencies to build capacity and efficiency for zoonotic disease surveillance, reporting and outbreak response in country and cross borders.

4. Build and leverage strategic partnerships with other organizations and networks for mutual benefit.

3. Provide education and outreach services to expand the size and capabilities of the One Health workforce.



CONTACT INFORMATION

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Website: www.ohcea.org
Facebook: www.facebook.com/OHCEA
Twitter: @OHCEA_

OHCEA

Emerging Pandemic Threats Program
PREDICT • RESPOND • PREVENT • IDENTIFY

USAID
FROM THE AMERICAN PEOPLE

OHW-NG business plan for each regional Network

The Global team will assist each Secretariat in its development of a business plan by the end of Year 1, starting with an organizational review by the global members of the Consortium geared toward evaluation of the regional Network against the USAID Non-US Pre-Award Survey (NUPAS) and our business planning framework of the Mission Model Canvas (MMC), explained in detail below, where we further articulate the major evidence-based principles and frameworks we will use to facilitate the development of the Secretariats' business plans.

Principles:

We are proposing the development of a multi-step business model based on:

1. A strong orientation on the **mission** and the expected impact of each organization (as opposed to a profit-based model);

2. A focused emphasis on **stakeholder needs** – the model takes into consideration the needs of multiple groups of stakeholders, including (but not limited to) USAID, SEAOHUN, AFROHUN, network member institutions, and the needs of those who will benefit from each Network;

3. The need to fulfill a set of organizational **goals,** such as being approved to receive funding and having a path for financial sustainability; and

4. A **well-aligned** business model that provides a clear vision of how SEAOHUN and AFROHUN will sustainably thrive beyond USAID OHW-NG support and that can inspire the business models of member country participants.

Our Framework

As one of the guiding principles related to business modeling and planning, terminology is important. In our process, as with all current evidence-based planning, the stated mission of each regional Network informs its business goals. Those goals are clearly articulated in a strategic plan, which further elucidates the strategies, tactics, and metrics that align to achieve the goals. The business plan, in turn, provides the details of how each regional Network will attain and mobilize the resources required to implement its strategic plan. The term "business model" is used to denote the mechanism(s) through which the organization generates the operating capital necessary to fulfil its mission.

To facilitate each Secretariat organization in its design of a business model and development of a business plan, we intend to use an adapted form of the MMC framework. This framework builds upon a business planning tool first developed by Osterwalder, Pigneur & al. 2010, which was modified by Dr. Steve Blank of the Berkeley Haas School of Business to apply more specifically to non-profit organizations like SEAOHUN and AFROHUN.

A brief description of each component of the MMC framework follows:

a. Beneficiaries and stakeholders: This component of the MMC describes those who are part of the institutions that operate them. Stakeholders are not only those at the top, but those in all layers of the institutions, from top to bottom. This category includes those who may have a vested interest in the institution functioning properly, either explicitly or implicitly.

b. Value proposition: This component of the MMC identifies the products, services, and activities that satisfy, or provide value to, beneficiaries. We will help identify the advantages and disadvantages that each product, service, and activity provides to each beneficiary in order to make sure the product, service, or activity is maximizing the totality of well-being of beneficiaries and stakeholders.

c. Buy-in support: This component serves to identify those organizational stakeholders at all levels that support the concepts or capabilities that result in a beneficial implementation of programs and business ideas. A component of this "buy in support" is an identification of who is going to continually support the institution under the proposed operational paradigm (if any).

d. Channels: This component refers to how the organization mobilizes its resources to make its products, services, and activities available to its proposed beneficiaries. For this area, we will map out all possible steps required to have the products, services, or activities adopted by beneficiaries. Activities could include envisioning how to expand services to new members and countries utilizing cost-effective deployment approaches (e.g. virtual training or learning models, new pedagogical methods).

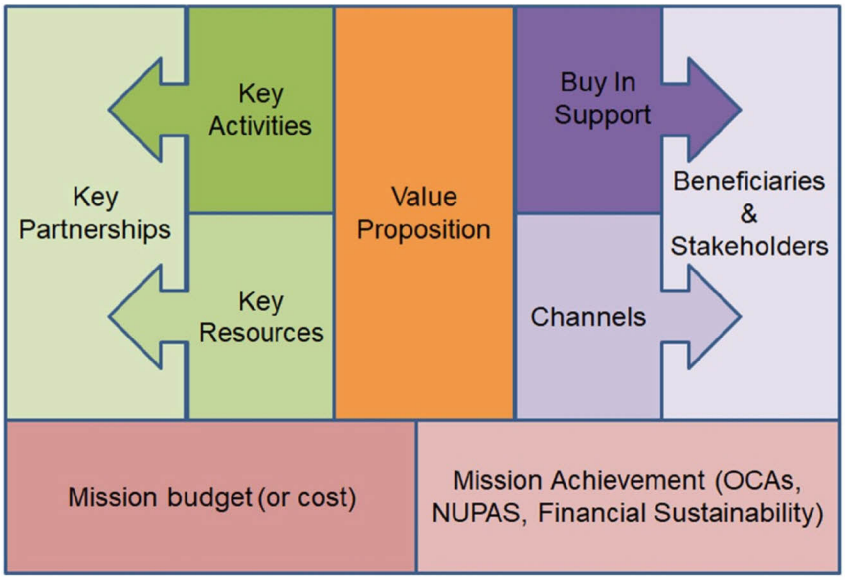
e. Mission achievement: This component considers the ways in which the Networks will measure success. What are the metrics that indicate whether or not each of the beneficiaries are achieving maximum success? Not all beneficiaries are equal, so heterogeneity of stakeholders is important to take into account.

f. Key tasks: This component refers to the steps required of the organization/institution to make sure the products, services, or activities reach the intended beneficiaries. Tasks will be categorized to make sure all possible needs required to deploy a product or implement an idea are met.

g. Key resources: Includes human capital, equipment, infrastructure, and the other resources required to implement the MMC. It refers to the resources inside the institution but will also identify the resources that need to be acquired or developed by the institution in order to meet the goals of the MMC.

h. Key partners: A partner is an outside resource (human capital, funding, etc.) needed to implement the goals of the MMC.

i. Mission budget: Refers to the financial resources needed to achieve the goals of the MMC. In addition to identifying the amount of financial resources, the mission budget needs to identify the source of the funds. Finally, fungibility of funding needs to be identified.



Business Plan Development Phases:

The global team will facilitate development of an individualized business plan for each Secretariat in three major phases:

1) **Assessment**: The Consortium will first conduct a desk review and analysis of current organizational development assessments and strategies developed by the Secretariats. Second, we will conduct a small number of data collection activities, including key informant interviews of Secretariat and member country staff to understand the strengths, weaknesses, opportunities, and threats of the Secretariat organizations; a stakeholder analysis to calibrate our model and material; and a review of board and governance materials for each Secretariat. Third, we will develop specific templates for each Secretariat organization to use to guide the development of its individualized MMC. We will also conduct the initial Non-U.S. foreign organizations pre-award survey (NUPAS) and a modified Organizational Capacity Assessment Tool for each Secretariat (as described in our Y1 workplan).

2) **Strategic planning retreat**: Global team members will travel to each Secretariat, where subject matter experts will facilitate strategic reflection, including a review of assessment

phase findings, to develop and codify the goals, strategies, tactics, and metrics each Secretariat will use to guide business operations for the next five years. Business models and business plans will be formalized (if not finalized) at these retreats, with priorities for the completion of the strategic plan.

3) **Plan finalization**: This phase will comprise approximately 6 weeks of virtual collaboration between the global team and Secretariat staff to finalize the narrative of each Secretariat's business plan and strategic plan, as well as to reach agreement as to named staff and stakeholders responsible for reporting on metrics related to the deployed tactics. The writing of the plan will be led by a team comprised of global consortium experts and key Secretariat staff, led by two Haas School of Business faculty who will ensure execution. If successful, in Year 2, this capacity-building could be extended to Asia OHUNs and AFROHUN chapters by the Secretariats working with Haas, so that all country Networks develop expertise and adopt a commitment to generate a business model for each country.

Format of the final Business Plan

As noted above, the template or format for each Secretariat Business Plan will be designed as part of the assessment phase. However, we expect the final deliverable to include the following components:

- Title page
- Table of Contents
- Preamble [i.e. background of the Secretariat (history, basic org details), evolution, and purpose of the plan]
- Mission model canvas (one page summary with an approximate 10-15 page narrative detailing analyses under each component)
- Appendix: Strategic plan containing specific goals, strategies, tactics, and metrics
- Appendix: Strategic plan task forces
- Appendix: Global team support plan

USAID FROM THE AMERICAN PEOPLE

One Health WORKFORCE

SEAOHUN Southeast Asia One Health University Network

SEAOHUN

Five year (2019-2024)

Strategic Plan

SEAOHUN Secretariat

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UCDUSR0011501

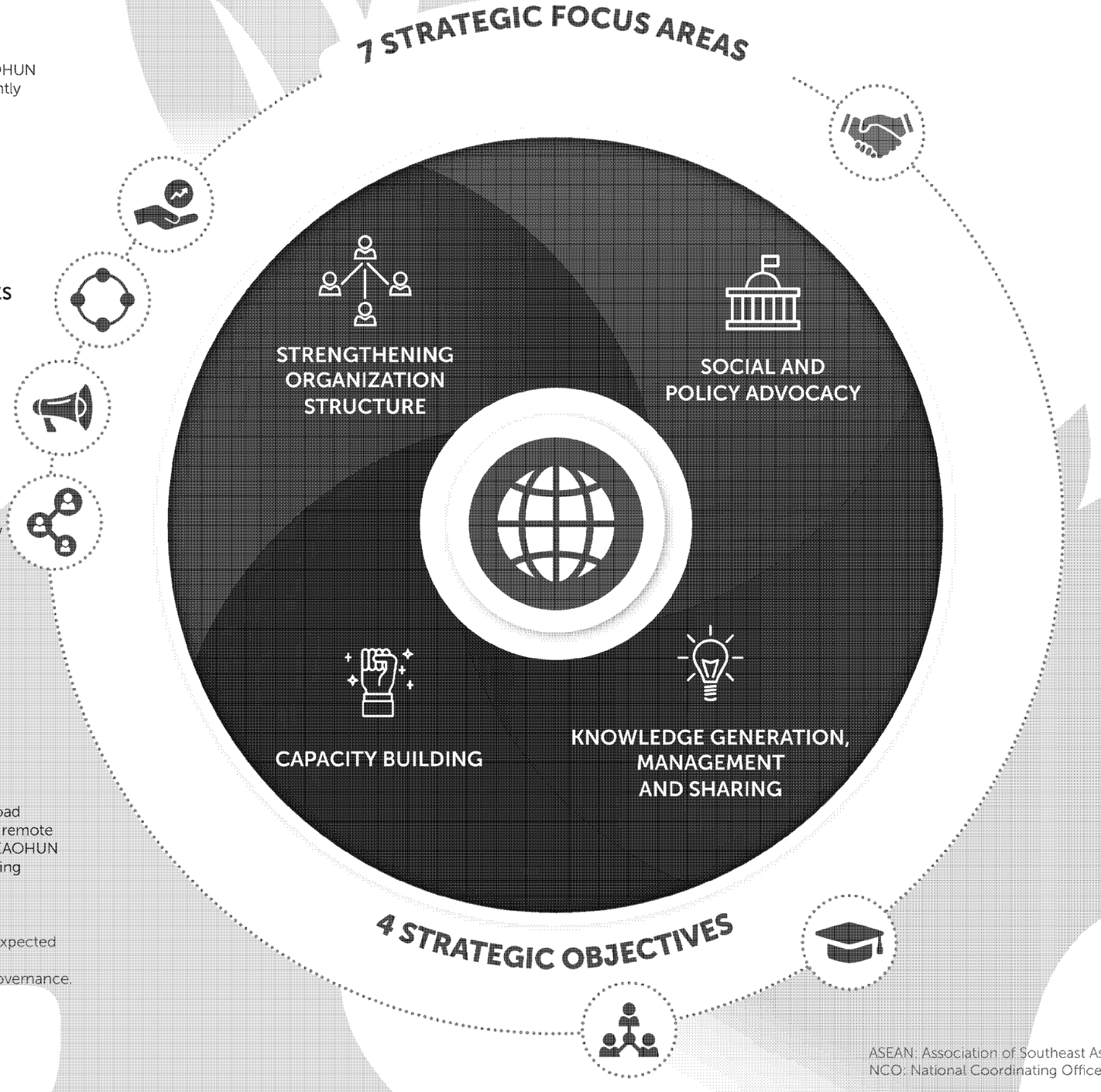
SEAOHUN
Five year (2019-2024) Strategic Plan

MISSION

To develop a resilient and competent One Health workforce by leveraging education, research, and training provided by university networks in Southeast Asia.

VISION

A regional network of universities in Southeast Asia generating social and intellectual excellence on One Health.



IMPROVED COLLABORATION ON RESOURCE MOBILIZATION

Resource mobilization units at NCOs and the SEAOHUN Secretariat, funded by contributions from all, to jointly develop regional proposals.

Key elements

- Establish resource mobilization units.
- Contribute funds by all (SEAOHUN/OHUNs).
- Coordinate proposal development.

IMPROVED COLLABORATION BETWEEN THE SECRETARIAT, OHUNS, AND MEMBER UNIVERSITIES

Collaboration on regional activity planning and development, taking into consideration both top-down regional strategy and bottom-up country interests and activity ideas.

Key element

- Work together on regional activity planning and development.

IMPROVED PUBLIC RELATIONS (PR)

Targeted public relations led by SEAOHUN/ OHUNs with the articulation of benefits of participation and with measurement of the impacts at all activity stages.

Key elements

- Improve PR at all stages of activities.
- Involve Board members and key stakeholders in PR activities.
- Measure PR impact.

ORGANIZATIONAL DEVELOPMENT FOR THE SEAOHUN SECRETARIAT

Base secretariat staffing on expected workload when dealing directly with various donors, utilizing remote work as appropriate. Continue to strengthen the SEAOHUN Executive Board's governance mechanisms, operating structures, and management.

Key elements

- Develop the Secretariat staffing plan based on expected future needs.
- Support future Executive Board structure and governance.

ENGAGEMENT WITH INTERNATIONAL, REGIONAL, AND NATIONAL PARTNERS, THE PRIVATE SECTOR, AND THE COMMUNITY

Increase SEAOHUN's visibility as a recognized organization in Southeast Asia for One Health capacity building by fostering partnerships with GHSA, ASEAN, national governments, the private sector, and the community.

Key elements

- Foster partnership.
- Improve visibility.

IMPROVED SHARING OF CURRICULA AND TEACHING BEST PRACTICES

Standardize One Health curricula, teaching methodologies, educator guides, career guides, and accreditation program, including shared online courses and learning resources.

Key elements

- Standardize One Health curricula.
- Standardize One Health teaching, training and assessment methodologies and protocols.
- Develop career guides.
- Apply for accreditation for One Health courses.
- Develop online courses.

IMPROVED NETWORKING AMONG FACULTY MEMBERS/NATIONAL TRAINERS, IN-SERVICE AND PRE-SERVICE HEALTH PROFESSIONALS

Centralize databases of One Health professionals and activities, events that bring One Health professionals together, and programs to facilitate mobility of faculty members, national trainers, and in-service and pre-service health professionals.

Key elements

- Establish centralized databases of One Health professionals and activities.
- Organize events bringing health professionals from various countries and disciplines together.
- Facilitate mobility across disciplines as well as across countries.

SEAOHUN
Southeast Asia One Health University Network

ASEAN: Association of Southeast Asian Nations / GHSA: Global Health Security Agenda / NCO: National Coordinating Office / OHUN: One Health University Network

UCDUSR0011502

From:	Peter Daszak <daszak@ecohealthalliance.org>
To:	alexandra zuber <alexandrazuber@atahealthstrategies.com>
CC:	Federico Castillo, PhD <f.castillo@berkeley.edu>;Omar Romero-hernandez <oromero@haas.berkeley.edu>;Corina Grigorescu Monagin <cgmonagin@ucdavis.edu>;Elizabeth Leasure <ealeasure@ucdavis.edu>;William B. Karesh <karesh@ecohealthalliance.org>;Sam Halabi <sfh9@georgetown.edu>;Jonna Mazet <jkmazet@ucdavis.edu>;Matthew Blake <mblake@ucdavis.edu>;Woutrina A Smith <wasmith@ucdavis.edu>;David John Wolking <djwolking@ucdavis.edu>;Tracey Goldstein <tgoldstein@ucdavis.edu>;Terra Kelly <trkelly@ucdavis.edu>;Jon Epstein <epstein@ecohealthalliance.org>
Sent:	2/18/2020 12:36:21 PM
Subject:	Re: Agenda and Reading for Tuesday's Retreat Planning Session

Looking forward to the call but I will have to join one hour late because the Future Earth steering committee is meeting then.

Cheers,

Peter

Peter Daszak
(Sent from my iPhone)

President
EcoHealth Alliance

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

www.EcoHealthAlliance.org

On Feb 14, 2020, at 4:47 PM, alexandra zuber wrote:

Hi all,
We are looking very forward to our planning session next week, Feb 18th, on the Business Planning Retreats for Organizational Sustainability.

Please find our proposed agenda, our concept note for the retreats, as well as minutes and a PPT from our last meeting for those that couldn't make it. I've also attached the transition plan and business plan appendices, as well as the strategic plans for AFROHUN and SEAOHUN for background reading.

Please feel free to reach out with any questions in advance.

Have a great weekend,
Alexandra, Federico, and Omar

Alexandra Zuber, MPP, DrPH
Founder and CEO, Ata Health Strategies, LLC
Email: alexandrazuber@atahealthstrategies.com
Phone: +1 (617) 680-3950
LinkedIn: alexandrazuber/
Website: www.atahealthstrategies.com
Twitter: @alexandrazuber

From: alexandra zuber
Sent: Wednesday, February 12, 2020 8:47 PM
To: Federico Castillo, PhD ; Omar Romero-hernandez ; Corina Grigorescu Monagin ; Elizabeth Leasure ; Karesh@ecohealthalliance.org ; daszak@ecohealthalliance.org ; Sam Halabi ; Jonna Mazet ; Matthew Blake ; Woutrina A Smith
Subject: Re: Agenda, remote access information and auxiliary material for 2/12/2020 meeting

Hello Benchmarking and Planning Group,
Thanks for a productive first formal planning session for the Business Retreats for Organizational Sustainability. I have captured high level highlights attached (please edit as needed), as well as the overview slides I assembled for the discussion. Next week, Feb 18, we will have a long planning block for the purposes of developing a detailed strawman agenda with designated roles, and planning all the remaining action steps. This will guide the proposed list of attendees that we will submit to Woutrina and Jonna on Feb 19.

For those that can meet in person, our UC Davis folks have arranged a room for us for Feb 18. We will also have a Zoom line for those who are dialing in. I will be there in person.

Also, as a heads-up, we are working with this project timeline:

- March 15: Final retreat agenda circulated
- February 25: Combined ITR submitted to USAID for retreat travel
- Feb 23: We alert participants they have greenlight to submit ITR
- Feb 19: We submit joint list with Obj 1 and 2 on proposed participants to Woutrina & Jonna
- Feb 19: Draft agenda available for review by Obj 3 work group & AFROHUN via Zoom discussions/ virtual communication. Next Obj 3 work group is Feb 24.

Thanks all- feel free to email the group with any follow-up questions/ comments, or you can reach out to Federico, Omar, and myself.

Alexandra

Alexandra Zuber, MPP, DrPH
Founder and CEO, Ata Health Strategies, LLC
Email: alexandrazuber@atahealthstrategies.com
Phone: +1 (617) 680-3950
LinkedIn: alexandrazuber/
Website: www.atahealthstrategies.com
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From: Federico Castillo, PhD
Sent: Tuesday, February 11, 2020 5:53 PM
To: alexandra zuber ; Omar Romero-hernandez ; Corina Grigorescu Monagin ; Elizabeth Leasure ; Karesh@ecohealthalliance.org ; daszak@ecohealthalliance.org ; Sam Halabi ; Jonna Mazet ; Matthew Blake ; Woutrina A Smith
Subject: Agenda, remote access information and auxiliary material for 2/12/2020 meeting

Hello all,
Enclosed is reading material for tomorrow's meeting. The documents have been shared at different meetings but we thought it would be good to have them in one place/email.
Remote access information:
Join Zoom Meeting: REDACTED
If you have any questions let me know. Looking forward to the meeting tomorrow!

Federico

--
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http://nature.berkeley.edu/~fcfallas
Deputy Director, Planetary Health Center of Expertise
http://www.ucghi.universityofcalifornia.edu/centers-of-expertise/planetary-health

From:	Peter Daszak <daszak@ecohealthalliance.org>
To:	alexandra zuber <alexandrazuber@atahealthstrategies.com>
CC:	Federico Castillo, PhD <f.castillo@berkeley.edu>;Omar Romero-hernandez <oromero@haas.berkeley.edu>;Corina Grigorescu Monagin <cgmonagin@ucdavis.edu>;Elizabeth Leasure <ealeasure@ucdavis.edu>;William B. Karesh <karesh@ecohealthalliance.org>;Sam Halabi <sfh9@georgetown.edu>;Jonna Mazet <jkmazet@ucdavis.edu>;Matthew Blake <mblake@ucdavis.edu>;Woutrina A Smith <wasmith@ucdavis.edu>;David John Wolking <djwolking@ucdavis.edu>;Tracey Goldstein <tgoldstein@ucdavis.edu>;Terra Kelly <trkelly@ucdavis.edu>;Jon Epstein <epstein@ecohealthalliance.org>
Sent:	2/20/2020 1:26:32 PM
Subject:	Re: Agenda and Reading for Tuesday's Retreat Planning Session

Apologies to all - my reception failed after about 1 hour yesterday so I missed the last part of the meeting. I'll read the notes and catch up. Great to hear your voices and sorry I couldn't be there in person.

Cheers,

Peter

Peter Daszak
(Sent from my iPhone)

President
EcoHealth Alliance

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

www.EcoHealthAlliance.org

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Have a great weekend,
Alexandra, Federico, and Omar

Alexandra Zuber, MPP, DrPH
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Email: alexandrazuber@atahealthstrategies.com
Phone: +1 (617) 680-3950
LinkedIn: alexandrazuber/
Website: www.atahealthstrategies.com
Twitter: @alexandrazuber

From: alexandra zuber
Sent: Wednesday, February 12, 2020 8:47 PM
To: Federico Castillo, PhD ; Omar Romero-hernandez ; Corina Grigorescu Monagin ; Elizabeth Leasure ; Karesh@ecohealthalliance.org ; daszak@ecohealthalliance.org ; Sam Halabi ; Jonna Mazet ; Matthew Blake ; Woutrina A Smith
Subject: Re: Agenda, remote access information and auxiliary material for 2/12/2020 meeting

Hello Benchmarking and Planning Group,
Thanks for a productive first formal planning session for the Business Retreats for Organizational Sustainability. I have captured high level highlights attached (please edit as needed), as well as the overview slides I assembled for the discussion. Next week, Feb 18, we will have a long planning block for the purposes of developing a detailed strawman agenda with designated roles, and planning all the remaining action steps. This will guide the proposed list of attendees that we will submit to Woutrina and Jonna on Feb 19.

For those that can meet in person, our UC Davis folks have arranged a room for us for Feb 18. We will also have a Zoom line for those who are dialing in. I will be there in person.

Also, as a heads-up, we are working with this project timeline:

- March 15: Final retreat agenda circulated
- February 25: Combined ITR submitted to USAID for retreat travel
- Feb 23: We alert participants they have greenlight to submit ITR
- Feb 19: We submit joint list with Obj 1 and 2 on proposed participants to Woutrina & Jonna
- Feb 19: Draft agenda available for review by Obj 3 work group & AFROHUN via Zoom discussions/ virtual communication. Next Obj 3 work group is Feb 24.

Thanks all- feel free to email the group with any follow-up questions/ comments, or you can reach out to Federico, Omar, and myself.

Alexandra

Alexandra Zuber, MPP, DrPH
Founder and CEO, Ata Health Strategies, LLC
Email: alexandrazuber@atahealthstrategies.com
Phone: +1 (617) 680-3950
LinkedIn: alexandrazuber/
Website: www.atahealthstrategies.com
Twitter: @alexandrazuber

From: Federico Castillo, PhD
Sent: Tuesday, February 11, 2020 5:53 PM
To: alexandra zuber ; Omar Romero-hernandez ; Corina Grigorescu Monagin ; Elizabeth Leasure ; Karesh@ecohealthalliance.org ; daszak@ecohealthalliance.org ; Sam Halabi ; Jonna Mazet ; Matthew Blake ; Woutrina A Smith
Subject: Agenda, remote access information and auxiliary material for 2/12/2020 meeting

Hello all,
Enclosed is reading material for tomorrow's meeting. The documents have been shared at different meetings but we thought it would be good to have them in one place/email.
Remote access information:
Join Zoom Meeting: REDACTED
If you have any questions let me know. Looking forward to the meeting tomorrow!

Federico

--
Federico Castillo
University of California
Department of Environmental Science, Policy and Management
Berkeley, CA 94720
+(510)643-2748
f.castillo@berkeley.edu
http://nature.berkeley.edu/~fcfallas
Deputy Director, Planetary Health Center of Expertise
http://www.ucghi.universityofcalifornia.edu/centers-of-expertise/planetary-health

From:	Andrew Clements <aclements@usaid.gov>
To:	Peter Daszak <daszak@ecohealthalliance.org>
CC:	Jonna Mazet (jkmazet@ucdavis.edu) <jkmazet@ucdavis.edu>;Johnson Christine Kreuder (ckjohnson@ucdavis.edu) <ckjohnson@ucdavis.edu>;Aleksei Chmura <chmura@ecohealthalliance.org>
Sent:	9/26/2020 12:04:48 AM
Subject:	Re: Time for a call next week?

I'm available between 10-11 on Monday and Tuesday and between 10-1 on Wednesday through Friday. All times EDT.

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 26, 2020, at 1:30 AM, Peter Daszak <daszak@ecohealthalliance.org> wrote:

Apologies for not setting it up this week, but I've had 3 big deadlines and didn't manage to find the time.

Aleksei – could you find a time that works for Andrew Clements, Jonna, CKJ and myself to have a phone call next week to go over PREDICT related data?

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

From: David J Wolking <djwolking@ucdavis.edu>
Sent: Thu, 5 Jan 2017 15:11:03 -0800
Subject: Re: One small chnge to the PREDICT Management Team Agenda - Monday January 9, 2017 @ 10AM PST
To: Peter Daszak <daszak@ecohealthalliance.org>
Cc: David J Wolking <djwolking@ucdavis.edu>, Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, Elizabeth Leasure <ealeasure@ucdavis.edu>, "Prof. Jonna Mazet" <jkmazet@ucdavis.edu>

Thanks Peter, noted. I'll talk it over with Jonna and Chris.
Travel safe and see you soon!

D

On Thu, Jan 5, 2017 at 12:49 PM, Peter Daszak <daszak@ecohealthalliance.org> wrote:

Hi David,

The only change I'd like to make is to put the Pathway analysis as a separate agenda item, between M&A and Surveillance. If you just allocate 20 minutes, you can take some of the time from the M&A for this. The reason for this is that it's really separate to both sections, with implications for each…i.e. it's something that will involve a lot of analysis, and potential shifts to the surveillance plans for some (a few) sites.

Hope that makes sense and look forward to the meeting…

Cheers,

Peter

Peter Daszak

President

EcoHealth Alliance

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New York, NY 10001

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+1.212.380.4465 (fax)

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.

From: David J Wolking [mailto:djwolking@ucdavis.edu]
Sent: Thursday, January 5, 2017 2:15 AM
To: David J Wolking
Cc: Alisa Pereira Emerging Threats Division; Cassandra Louis Duthil; Christine Kreuder Johnson; Clements, Andrew (GH/HIDN); Eddy Rubin; Elizabeth Leasure; Lindsay Parish; Peter Daszak; Prof. Jonna Mazet; Shana Gillette; William B. Karesh; PREDICTMGT; Cara J. Chrisman; Ava Sullivan; Alison Andre; Amanda Fuchs; Catherine Machalaba; Evelyn Luciano; Molly Turner; Taylor Elnicki
Subject: Re: PREDICT Management Team Agenda - Monday January 9, 2017 @ 10AM PST

Hi again,

Just sharing the latest version of our semi-annual consortium meeting agenda for discussion on the call.

Cheers,

David

On Wed, Jan 4, 2017 at 4:56 PM, David J Wolking <djwolking@ucdavis.edu> wrote:

Hi there,

Attached and below is the call-in information and agenda for PREDICT's Management Team call next Monday January 9, 2017 at 10AM PST/1PM EST.

I'll follow-up with the calendar reminder next.

Best,

David

PREDICT Management Team Agenda

Monday, January 9, 2017

10:00am PST/1:00pm EST

REDACTED

International Dial-in number: REDACTED **toll charges apply)**

Standing items

USAID Updates

1. **Administrative items**
    a. Annual report feedback
    b. CIPs for GHSA Phase 2 countries (DRC and Rwanda request)
    c. Senior behavioral surveillance coordinator update
    d. Metabiota travel situation and ITA for DRC
    e. Yellow fever plans and carry-over in DRC
    f. GHSA M&E
2. **Mission communication round-up**
    a. Indonesia
    b. Ethiopia
    c. Uganda
    d. CIV
    e. Sierra Leone
    f. Guinea
    g. Liberia
3. **Semi-annual Consortium meeting, January 10-11 in Pacifica, CA:** last call for agenda comments, feedback, or questions (agenda will be shared before the call)
4. **FAO collaboration/coordination updates (Billy)**
5. **Other coordination and engagement priorities (Billy)**

From: Lisa Kramer <lkramer@usaid.gov>
Sent: Wed, 18 Jan 2017 15:25:40 +0300
Subject: Re: PRO/AH/EDR> Avian influenza (19): Uganda, HPAI H5, 1st rep, comment
To: Andrew Clements <aclements@usaid.gov>
Cc: "Carroll, Dennis(GH/HIDN)" <DCarroll@usaid.gov>, Lindsay Parish <lparish@usaid.gov>, "Long-Wagar, Andrea (AFR/SD)" <alongwagar@usaid.gov>, Sarah Paige <spaige@usaid.gov>, Jonna Mazet <jkmazet@ucdavis.edu>, David J Wolking <djwolking@ucdavis.edu>, "Makonnen, Yilma (FAORNE)" <Yilma.Makonnen@fao.org>, "Subhash (FAORAP) Morzaria" <Subhash.Morzaria@fao.org>

Thanks.

Lisa Kramer
Regional Emerging Pandemic Threats Advisor
USAID/Kenya and East Africa
+254-20-862-2107 (O)
REDACTED (C)

On Wed, Jan 18, 2017 at 3:19 PM, Andrew Clements <aclements@usaid.gov> wrote:

FYI

---------- Forwarded message ----------
From: <promed-edr@promedmail.org>
Date: Wed, Jan 18, 2017 at 11:20 AM
Subject: PRO/AH/EDR> Avian influenza (19): Uganda, HPAI H5, 1st rep, comment
To: promed-post@promedmail.org, promed-edr-post@promedmail.org, promed-ahead-post@promedmail.org

AVIAN INFLUENZA (19): UGANDA, HPAI H5, FIRST REPORT, COMMENT
****
A ProMED-mail post
<http://www.promedmail.org>
ProMED-mail is a program of the
International Society for Infectious Diseases
<http://www.isid.org>

[The following information is quoted from the responses received from members of the EpiCore Surveillance Project in response to our request for information related to HPAI H5 in Uganda. - Mod.CRD]:

[1]
Date: 17 Jan 2017
Source: EpiCore Global Surveillance Project Responses [edited]

"Except for the H5 confirmation, the N subtype has not yet been determined.

"The National Task Force for Outbreaks sitting today [17 Jan 2017] in Kampala and chaired by the acting director general of health services has activated the Public Health Emergency Operations Center (PHEOC). It has been agreed to maintain [a designation of the virus] as HPAI at this moment, [although] the N classification has not been determined.

"So far, no human transmission has been reported up to today [17 Jan

2017]. Epidemiological teams have been sent to the 3 localities with reported deaths of birds. Today [17 Jan 2017] has been their 1st day in the field. District emergency response [activities have] been activated in the 3 districts."

--
EpiCore Surveillance Project member
Dr Henry Kyobe Bosa
Epidemiology Fellow
Uganda Public Health Fellowship Program
Makerere University

******
[2]
Date: 17 Jan 2017
Source: EpiCore Global Surveillance Project Responses [edited]

"Kenya is on high alert, being an immediate neighbor [of and sharing] natural resources with Uganda. Passive and active surveillance have been intensified in both Uganda and Kenya. Control measures have been initiated in Uganda. Veterinary, Public Health, and environmentalists have been put on high alert."

--
EpiCore Surveillance Project member
Dr Ondieki G K
Veterinary Epidemiologist
Kenya

[ProMED-mail thanks Drs Kyobe Bosa and G K Ondieki for their quick replies and for this very much appreciated information from the EpiCore Surveillance Project. - Mod.CRD

A HealthMap/ProMED-mail map can be accessed at: <http://healthmap.org/promed/p/97>.]

[See Also:
Avian influenza (18): China (Shanxi) swan, HPAI H5N8 http://promedmail.org/post/20170118.4772587
Avian influenza (17): Uganda, poultry, wild birds, HPAI H5, 1st report, OIE, RFI http://promedmail.org/post/20170117.4771686
Avian influenza (16): Europe, HPAI H5, H5N8, wildfowl http://promedmail.org/post/20170117.4771394
Avian influenza (15): Russia (KD) swan, HPAI H5, OIE http://promedmail.org/post/20170117.4770239
Avian influenza (14): Ukraine, Slovakia, poultry, captive/wild bird HPAI H5N8, OIE http://promedmail.org/post/20170113.4764108
Avian influenza (13): Europe, wild bird, HPAI H5N8, new strain, OIE http://promedmail.org/post/20170112.4760583
Avian influenza (11): Ireland (WX) wild bird, HPAI H5N8, new strain, OIE http://promedmail.org/post/20170111.4759033
Avian influenza (10): global, H5N8 clade 2.3.4.4, FAO update & recommendations http://promedmail.org/post/20170111.4758712
Avian influenza (09): UK (England) HPAI H5N8, swan http://promedmail.org/post/20170111.4757028

Avian influenza (05): Europe, Asia, H5N8, poultry, wild, spread
http://promedmail.org/post/20170109.4752395
Avian influenza (08): Slovenia, HPAI H5N8, swan
http://promedmail.org/post/20170111.4757155
Avian influenza (05): Europe, Asia, H5N8, poultry, wild, spread
http://promedmail.org/post/20170109.4752395
Avian influenza (04): Slovakia (NI) HPAI H5, wild bird, 1st rep
http://promedmail.org/post/20170109.4751637
Avian influenza (03): Europe, Asia, H5N8, poultry, wild, spread
http://promedmail.org/post/20170106.4745034
Avian influenza (01): Croatia (VP) HPAI H5N8, 1st report
http://promedmail.org/post/20170101.4736233
2016

Avian influenza (153): Europe, Asia, Africa, H5N8, poultry, wild, spread, RFI http://promedmail.org/post/20161229.4731583
Avian influenza (142): Europe, Middle East, 1st cases Montenegro & Bulgaria, poultry, wild, HPAI H5N8
http://promedmail.org/post/20161221.4712786
Avian influenza (153): Europe, Asia, Africa, H5N8, poultry, wild, spread, RFI http://promedmail.org/post/20161229.4731583
Avian influenza (138): Nigeria (KN) poultry, birds, H5N8, 1st case, OIE http://promedmail.org/post/20161219.4709905
Avian influenza (123): Tunisia (BZ) wild birds, HPAI H5, OIE
http://promedmail.org/post/20161201.4670227
Avian influenza (121): Egypt (DT) coot, HPAI H5N8, OIE
http://promedmail.org/post/20161130.4666168
Avian influenza (120): Romania, HPAI H5N8, swan
http://promedmail.org/post/20161130.4665157
Avian influenza (119): Romania (CT) wildfowl, HPAI H5N8, OIE
http://promedmail.org/post/20161130.4664106
Avian influenza (117): Netherlands, poultry; France, wildfowl, HPAI H5N8, OIE http://promedmail.org/post/20161129.4660667
Avian influenza (107): Iran (TE) HPAI H5N8, poultry, new strain, OIE
http://promedmail.org/post/20161121.4644671
Avian influenza (101): Europe, wild birds, poultry, HPAI H5N8, OIE
http://promedmail.org/post/20161114.4628999
Avian influenza (100): Israel (HZ) poultry HPAI H5N8, new strain, OIE
http://promedmail.org/post/20161114.4628359
Avian influenza (99): Switzerland (VD) wild, India (KA) poultry, H5N8
http://promedmail.org/post/20161113.4626408
Avian influenza (98): Israel (HZ) poultry, H5N8, RFI
http://promedmail.org/post/20161113.4626107
Avian influenza (97): India (Punjab) poultry, H5N8, spread, OIE
http://promedmail.org/post/20161111.462135
Avian influenza (96): Europe, wild birds, HPAI H5N8, OIE
http://promedmail.org/post/20161110.4620229
Avian influenza (94): India (HR) poultry, H5N8, spread, OIE
http://promedmail.org/post/20161110.4617396
Avian influenza (93): Switzerland, Austria, wildfowl, H5N8, Croatia, susp, RFI http://promedmail.org/post/20161110.4618279
Avian influenza (92): Germany (SH) wild birds, H5N8, 1st cases
http://promedmail.org/post/20161109.4617139
Avian influenza (91): Poland (ZP) wild, H5N8, OIE
http://promedmail.org/post/20161108.4614616
Avian influenza (90): India (KL) poultry, H5N8, OIE, (HR) poultry,

susp, RFI http://promedmail.org/post/20161105.4609424
Avian influenza (89): Hungary (BE,CS) poultry, wild bird, HPAI H5N8, OIE http://promedmail.org/post/20161104.4608240
Avian influenza (86): India (KL) poultry, H5N8, 1st outbreak, RFI http://promedmail.org/post/20161028.4591328
Avian influenza (82): India, Delhi zoo, H5N8, NOT H5N1 http://promedmail.org/post/20161021.4576300
Avian influenza (81): H5N1, India, Delhi zoo http://promedmail.org/post/20161020.4573601
Avian influenza (79): Russia (TU) HPAI H5N8, migratory birds http://promedmail.org/post/20161011.4551755
Avian influenza (77): United Arab Emirates (Abu Dhabi) poultry (quail) 1st case, susp http://promedmail.org/post/20161005.4537271
Avian influenza (74): Russia (TU) HPAI H5N8 2.3.4.4., wild bird, intl alert, FAO http://promedmail.org/post/20160920.4501532
Avian influenza (65): Taiwan, poultry, HPAI H5N8, spread http://promedmail.org/post/20160725.4368474
Avian influenza (29): South Korea (KG) poultry, HPAI H5N8, OIE http://promedmail.org/post/20160331.4130267
Avian influenza (28): South Korea (KG) poultry, HPAI H5N8 http://promedmail.org/post/20160329.4124502
Avian influenza (20): Nigeria, poultry, HPAI H5N1, spread http://promedmail.org/post/20160216.4026033
Avian influenza (03): Nigeria (KN, DE), poultry, HPAI H5N1, spread http://promedmail.org/post/20160108.3921222
2015

Avian influenza (190): Nigeria, poultry, HPAI H5N1, spread http://promedmail.org/post/20151002.368478
Avian influenza (183): Nigeria (DE) poultry, HPAI H5N1, spread http://promedmail.org/post/20150826.3602516
Avian influenza (178): Nigeria (SW) poultry, HPAI H5N1, spread http://promedmail.org/post/20150813.3575741
Avian influenza (172): Nigeria, poultry, HPAI H5N1, update http://promedmail.org/post/20150715.3512861
Avian influenza (168): global, H5 HPAI evolution, control, RFI http://promedmail.org/post/20150704.3483531
Avian influenza (117): Nigeria (Plateau) poultry, HPAI H5N1, update http://promedmail.org/post/20150509.3351552
Avian influenza (91): Nigeria, poultry, HPAI H5N1, risk of spread, FAO http://promedmail.org/post/20150421.3310679
Avian influenza (06): global, H5 evolution, new clade 2.3.4.4, WHO / OIE / FAO http://promedmail.org/post/20150114.3090250
Avian influenza (07): global, interaction with human viruses http://promedmail.org/post/20150317.3237174]
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Andrew 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
E-mail: aclements@usaid.gov

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

From: Elizabeth Leasure <ealeasure@ucdavis.edu>
To: "William B. Karesh" <karesh@ecohealthalliance.org>
Cc: David John Wolking <djwolking@ucdavis.edu>, "Alisa Pereira Emerging Threats Division" <apereira@usaid.gov>, Cassandra Louis Duthil <clouisduthil@usaid.gov>, Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, "Clements, Andrew (GH/HIDN)" <AClements@usaid.gov>, Eddy Rubin <erubin@metabiota.com>, Lindsay Parish <lparish@usaid.gov>, Peter Daszak <daszak@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>, "Shana Gillette" <sgillette@usaid.gov>, PREDICTMGT <predictmgt@usaid.gov>, "Cara J. Chrisman" <cchrisman@usaid.gov>, Ava Sullivan <sullivan@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>, Amanda Fuchs <fuchs@ecohealthalliance.org>, Catherine Machalaba <machalaba@ecohealthalliance.org>, Evelyn Luciano <luciano@ecohealthalliance.org>, Molly Turner <turner@ecohealthalliance.org>, Taylor Elnicki <telnicki@metabiota.com>
Subject: RE: No PREDICT Management Team call on 2/6 (will be rescheduled)
Sent: Mon, 6 Feb 2017 15:55:11 +0000

Thanks, Billy. I thought we could discuss on our 2/13 call and go from there.

Elizabeth Leasure
One Health Institute
University of California, Davis
530-754-9034 (office)
REDACTED (cell)

From: William B. Karesh [mailto:karesh@ecohealthalliance.org]
Sent: Friday, February 03, 2017 3:55 PM
To: Elizabeth Leasure
Cc: David John Wolking; Alisa Pereira Emerging Threats Division; Cassandra Louis Duthil; Christine Kreuder Johnson; Clements, Andrew (GH/HIDN); Eddy Rubin; Lindsay Parish; Peter Daszak; Jonna Mazet; Shana Gillette; PREDICTMGT; Cara J. Chrisman; Ava Sullivan; Alison Andre; Amanda Fuchs; Catherine Machalaba; Evelyn Luciano; Molly Turner; Taylor Elnicki
Subject: Re: No PREDICT Management Team call on 2/6 (will be rescheduled)

Thanks Liz,

I'm traveling for the entire month, but will be able to call in.

If we do move to the 13th, will we reset the biweekly schedule?

BK

Sent from my iPhone

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

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New York, NY 10001 USA

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President, OIE Working Group on Wildlife

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

EPT 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 Feb 3, 2017, at 5:53 PM, Elizabeth Leasure <ealeasure@ucdavis.edu> wrote:

Hi all. To clarify, there will be no SMT call on Monday, 2/6. We are still confirming availability for 2/13, so please stay tuned. If you have not responded to my previous email with your availability, please do so as soon as possible.

For all of you on your way to Beijing, safe travels!

Thanks!
Liz

Elizabeth Leasure
One Health Institute
University of California, Davis
530-754-9034 (office)
REDACTED (cell)

From: Elizabeth Leasure
Sent: Thursday, February 02, 2017 12:25 PM
To: David John Wolking; Alisa Pereira Emerging Threats Division; Cassandra Louis Duthil; Christine Kreuder Johnson; Clements, Andrew (GH/HIDN); Eddy Rubin; Lindsay Parish; Peter Daszak; Jonna Mazet; Shana Gillette; William Karesh; PREDICTMGT; Cara J. Chrisman
Cc: Ava Sullivan; Alison Andre; Amanda Fuchs; Catherine Machalaba; Evelyn Luciano; Molly Turner; Taylor Elnicki
Subject: Need to reschedule PREDICT Management Team calls on 2/6 and 2/20

Hi everyone. Since most of you will be in Beijing for the GVP meeting next Monday (2/6) and 2/20 is a holiday (President's Day), can we combine the two calls into one and schedule it for **February 13th at the regular time (10 am PST/1 pm EST)**?

Thanks,
Liz

Elizabeth Leasure
One Health Institute
University of California, Davis
530-754-9034 (office)
REDACTED (cell)

From:	Andrew Clements <aclements@usaid.gov>
To:	Katherine Leasure <kaleasure@ucdavis.edu>
CC:	PREDICTMGT <predictmgt@usaid.gov>;Jonna Mazet <jkmazet@ucdavis.edu>;predict@ucdavis.edu <predict@ucdavis.edu>
Sent:	4/18/2017 1:23:15 AM
Subject:	Re: Time Sensitive PREDICT International Travel Request - Jason Euren to Sierra Leone May 1-12

Approved subject to mission concurrence.

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 18, 2017, at 1:51 AM, Katherine Leasure <kaleasure@ucdavis.edu> wrote:

Hi Andrew. Please find below an international travel request for your review and approval. Our apologies for the urgent nature of this request. Jason Euren will be preparing data in order to ship samples from Sierra Leone to UC Davis, and we are trying to initiate the shipping process as soon as possible. Please let me know if you have any questions. Thanks!

1. Euren (Sierra Leone): $2,143 airfare/$319 (Freetown) max daily per diem

Travel Requests:

1. Metabiota would like to request travel approval for Jason Euren, Research and Implementation Manager, to travel from New York City, NY, USA to Freetown, Sierra Leone from May 1-12, 2017 to review the Sierra Leone team's data cleaning activities and progress.

Trip purpose: Jason Euren will be reviewing the Sierra Leone team's data cleaning activities and progress, putting in corrective action procedures for data review and standardizing data checks. Mr. Euren will conduct a thorough audit of current data processes and systems and conduct corrective actions, including the implementation of new IM procedures and as-needed IM re-trainings.

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

--
You received this message because you are subscribed to the Google Groups "PREDICTMGT" group.
To unsubscribe from this group and stop receiving emails from it, send an email to predictmgt+unsubscribe@usaid.gov.
To post to this group, send email to predictmgt@usaid.gov.
To view this discussion on the web visit https://groups.google.com/a/usaid.gov/d/msgid/predictmgt/05f201d2b7d5%2491cddaf0%24b56990d0%24%40ucdavis.edu.

From: David J Wolking <djwolking@ucdavis.edu>
Sent: Tue, 30 May 2017 16:08:50 -0700
Subject: Re: REMINDER: PREDICT EB Call: Wednesday May 31, 2017 (9-11AM PDT/12-2PM EDT)
To: Elizabeth Leasure <ealeasure@ucdavis.edu>
Cc: Amanda Fine [redacted] Brian Bird [redacted], Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, Damien Joly <djoly@metabiota.com>, Eddy Rubin <erubin@metabiota.com>, Jon Epstein <epstein@ecohealthalliance.org>, Karen Saylors <ksaylors@metabiota.com>, Leilani Francisco <francisco@ecohealthalliance.org>, "Murray, Suzan" <MurrayS@si.edu>, Peter Daszak <daszak@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>, Woutrina A Smith <wasmith@ucdavis.edu>, Sarah Olson <[redacted] Simon Anthony <sja2127@columbia.edu>, Tracey Goldstein <tgoldstein@ucdavis.edu>, William Karesh <karesh@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>, Amanda Fuchs <fuchs@ecohealthalliance.org>, Evelyn Luciano <luciano@ecohealthalliance.org>, Megan M Doyle <mmdoyle@ucdavis.edu>, Emma Lane <lane@ecohealthalliance.org>, Ava Sullivan <sullivan@ecohealthalliance.org>, Taylor Elnicki <telnicki@metabiota.com>, Molly Turner <turner@ecohealthalliance.org>, Dawn Zimmerman <Zimmermand@si.edu>, "Churchill, Carolina" [redacted] Vodzak, Megan E." <VodzakME@si.edu>
PREDICT EB Agenda (5.31.17).docx

Hi there,
Below (and attached) is an agenda for tomorrow's call.

Talk to you soon,

David

Executive Board Meeting

Wednesday, May 31, 2017

9:00-11:00am PDT/12:00-2:00pm EDT

[redacted]

International Dial-in number: [redacted] toll charges apply)

Agenda

1. **Management team and admin updates**

   USAID team news

   Budget planning, country caps, and project ceiling
   BAH/Epidemico subaward renewal
   Semi-annual report feedback and distribution
   M&E/reporting update from Indonesia and Cambodia
   Harvard & National Academy of Medicine GHSA success measurement
2. **Ebola Host Project updates**
   a. USAID/W mid-June trip to SL
   b. SL communication campaign strategy and timeline
3. **Outbreak updates** (Ebola and poultry die-off in DRC, bat testing in Cameroon)
4. **Mission communications round-up (All)**
5. **Operations Team updates:**

   Surveillance (Chris)

   Lab (Tracey & Simon)

Behavior (Leilani)

M&A (Peter)

Capacity (Woutrina)

IM (Damien)

6. **Global Virome Project update (Jonna/Peter/Eddy)**
7. **Other recent meeting updates**

Standing Items: Related grant proposals or conferences, publications updates

On Fri, May 26, 2017 at 3:34 PM, Elizabeth Leasure <ealeasure@ucdavis.edu> wrote:

Hi everyone! Just a quick reminder that we have an EB call scheduled for next Wednesday (5/31) from 9-11 am PDT (12-2 pm EDT). If you have any agenda items, please send them my way by noon on 5/30. Have a great weekend!

Thanks,

Liz

Elizabeth Leasure

One Health Institute

University of California, Davis

530-754-9034 (office)

REDACTED (cell)

Executive Board Meeting
Wednesday, May 31, 2017
9:00-11:00am PDT/12:00-2:00pm EDT
REDACTED, Access code REDACTED
International Dial-in number: REDACTED (toll charges apply)

Agenda

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   Capacity (Woutrina)
   IM (Damien)

6. **Global Virome Project update (Jonna/Peter/Eddy)**

7. **Other recent meeting updates**

Standing Items: Related grant proposals or conferences, publications updates

From: Andrew Clements <aclements@usaid.gov>
Sent: Mon, 3 Jul 2017 16:42:17 +0200
Subject: Safety and immunogenicity of an inactivated cell culture-derived H7N9 influenza vaccine in healthy adults: A phase I/II, prospective, randomized, open-label trial — ScienceDirect
To: Dennis Carroll <dcarroll@usaid.gov>, "Daniel Schar (RDMA/OPH)" <dSchar@usaid.gov>, "Sudarat Damrongwatanapokin (RDMA/OPH)" <sDamrongwatanapokin@usaid.gov>, lparish@usaid.gov, "Subhash Morzaria (FAORAP)" [redacted] "Wantanee (FAORAP) Kalpravidh" [redacted] William Karesh <Karesh@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>

FYI.

http://www.sciencedirect.com/science/article/pii/S0264410X17308319

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: Andrew Clements <aclements@usaid.gov>
Sent: Tue, 1 Aug 2017 16:22:08 +0200
Subject: Urgent: additional information request on AID-OAA-A-14-00102 revision
To: Elizabeth Leasure <ealeasure@ucdavis.edu>, David J Wolking <djwolking@ucdavis.edu>, Jonna Mazet <jkmazet@ucdavis.edu>
Cc: Amalhin Shek <ashek@usaid.gov>, "Pereira, Alisa (GH/HIDN)" <apereira@usaid.gov>, Shana Gillette <sgillette@usaid.gov>
PREDICT-2 Budget_ceiling increase_7-24-17_corrected.xlsx

Hi,

Was just looking through the revised budget and your total is 142,813,810 in the spreadsheet (first tab) which doesn't match the 139,116,000 in the letter from Patricia Bradley. The Ebola total appears correct, so it must be the core budget that's wonky.

We have a meeting at 12:00 EDT today to discuss the JRE and country caps. Any chance you can send me a quick response before then?

Thanks!

Andrew

---------- Forwarded message ----------
From: **Elizabeth Leasure** <ealeasure@ucdavis.edu>
Date: Fri, Jul 28, 2017 at 11:46 PM
Subject: RE: AID-OAA-A-14-00102
To: Ryland Marbray <rmarbray@usaid.gov>
Cc: Patricia Bradley <pbradley@usaid.gov>, Jonna Mazet <jkmazet@ucdavis.edu>, "predict@ucdavis.edu" <predict@ucdavis.edu>, Andrew Clements <aclements@usaid.gov>, Alisa Pereira <apereira@usaid.gov>

Hi Ryland. As discussed earlier today, please find attached a corrected version of the spreadsheet. There were a couple errors on the summary pages that have now been corrected, but none of the detailed budget information has changed from the version sent 7/24. Please let me know if you have any questions.

I'll follow up with you on Tuesday morning next week to touch base about my question regarding subaward and subcontract approvals through this process.

Thanks! Have a great weekend!

Liz

Elizabeth Leasure

One Health Institute

University of California, Davis

530-754-9034 (office)

REDACTED (cell)

From: Elizabeth Leasure
Sent: Monday, July 24, 2017 1:08 PM
To: 'Ryland Marbray'
Cc: Patricia Bradley; Jonna Mazet; predict@ucdavis.edu; 'Andrew Clements'; 'Alisa Pereira'

Subject: RE: AID-OAA-A-14-00102

Hi Ryland. Please find attached the requested budget and accompanying narrative for the ceiling increase for the PREDICT-2 cooperative agreement. My apologies for the tardy submission. In an effort to make your review as simple as possible, please find below an explanation of how the budget workbook is setup. Please also note that the indirect cost rate documents you requested are included in the narrative document at the very end. As you work through these materials, please feel free to call or email any time if you need assistance or clarification. Thank you!

In the Excel workbook, you will find the following tabs (or worksheets):

1. Overall P2 CoAg Summary: This worksheet includes a comprehensive, detailed cost breakdown by fund type (Ebola/non-Ebola) and cost element, including actual costs for the period October 2014 through April 2017 and budgeted costs for May 2017 through September 2019.

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Each budget worksheet includes a UC Davis section at the top. Partner subaward totals are reflected in the contractual section of the UC Davis budget, and the detailed breakdown of these costs can be found below the UC Davis budget on the country worksheet itself and on the Global tab (for the distributed Global costs). The detailed budget for the organization acting as "Global Lead" for a given country will include a line item just under indirect costs where the Global costs for that organization are distributed to the country budget (see the screen shot below).

84	**Total Supplies**		
85	**Total Direct Costs**		
86	***Indirect Costs***		***35.4***
87	***Indirect Costs on Contracts & Subagreements***		***35.4***
88	***EHA Global - see tab for details***		
89	**Total Costs**		

Elizabeth Leasure

One Health Institute

University of California, Davis

REDACTED

From: Ryland Marbray [mailto:rmarbray@usaid.gov]
Sent: Thursday, May 18, 2017 2:10 PM
To: Jmarzet@ucdavis.edu
Cc: Elizabeth Leasure; Patricia Bradley
Subject: AID-OAA-A-14-00102

Good Evening,

Attached below is a request letter proposing an increase in ceiling for the above subject line. Please review and provide the appropriate information by May 31, 2017.

Best Regards,

--

Ryland Marbray
Agreements/Contracting Officer

USAID Office of Acquisition & Assistance
M/OAA/E3
1300 Pennsylvania Ave., NW,
Rm. 567-B, SA-44
Washington, DC 20523

Email |rmarbray@usaid.gov

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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

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To: Andrew Clements <aclements@usaid.gov>
Cc: David John Wolking <djwolking@ucdavis.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, Amalhin Shek <ashek@usaid.gov>, "Pereira, Alisa (GH/HIDN)" <apereira@usaid.gov>, Shana Gillette <sgillette@usaid.gov>
Subject: RE: Urgent: additional information request on AID-OAA-A-14-00102 revision
Sent: Tue, 1 Aug 2017 14:37:49 +0000

No problem. Thanks!

Elizabeth Leasure
One Health Institute
University of California, Davis
530-754-9034 (office)
REDACTED (cell)

From: Andrew Clements [mailto:aclements@usaid.gov]
Sent: Tuesday, August 01, 2017 7:36 AM
To: Elizabeth Leasure
Cc: David John Wolking; Jonna Mazet; Amalhin Shek; Pereira, Alisa (GH/HIDN); Shana Gillette
Subject: Re: Urgent: additional information request on AID-OAA-A-14-00102 revision

Thanks. Just figured that out. Sorry for bugging you!

Have a good trip to Ghana.

On Tue, Aug 1, 2017 at 4:34 PM, Elizabeth Leasure <ealeasure@ucdavis.edu> wrote:
Hi Andrew. The figure you're looking at includes cost share. If you look at L16 for the "USAID total," you will see the $139,116,000 figure you're looking for.

Elizabeth Leasure
One Health Institute
University of California, Davis
530-754-9034 (office)
REDACTED (cell)

From: Andrew Clements [mailto:aclements@usaid.gov]
Sent: Tuesday, August 01, 2017 7:22 AM
To: Elizabeth Leasure; David John Wolking; Jonna Mazet
Cc: Amalhin Shek; Pereira, Alisa (GH/HIDN); Shana Gillette
Subject: Urgent: additional information request on AID-OAA-A-14-00102 revision

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We have a meeting at 12:00 EDT today to discuss the JRE and country caps. Any chance you can send me a quick response before then?

Thanks!

Andrew

---------- Forwarded message ----------
From: **Elizabeth Leasure** <ealeasure@ucdavis.edu>
Date: Fri, Jul 28, 2017 at 11:46 PM
Subject: RE: AID-OAA-A-14-00102
To: Ryland Marbray <rmarbray@usaid.gov>

Cc: Patricia Bradley <pbradley@usaid.gov>, Jonna Mazet <jkmazet@ucdavis.edu>, "predict@ucdavis.edu" <predict@ucdavis.edu>, Andrew Clements <aclements@usaid.gov>, Alisa Pereira <apereira@usaid.gov>

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One Health Institute
University of California, Davis
530-754-9034 (office)
REDACTED (cell)

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Elizabeth Leasure
One Health Institute
University of California, Davis
530-754-9034 (office)
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To: Jmarzet@ucdavis.edu
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Best Regards,

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Ryland Marbray
Agreements/Contracting Officer

USAID Office of Acquisition & Assistance
M/OAA/E3
1300 Pennsylvania Ave., NW,
Rm. 567-B, SA-44
Washington, DC 20523

Email |rmarbray@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

--

Andrew Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
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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: Monica Dea <mdea@usaid.gov>
Sent: Tue, 8 Aug 2017 14:10:07 +0000
To: James Desmond [redacted]
Cc: Tara Milani <tmilani@usaid.gov>, Mildred Howard <mphoward@usaid.gov>, Jon Epstein <epstein@ecohealthalliance.org>, "predict@ucdavis.edu" <predict@ucdavis.edu>, Andrew Clements <aclements@usaid.gov>, "Alisa (GH/HIDN) Pereira" <apereira@usaid.gov>, Evelyn Luciano <luciano@ecohealthalliance.org>, Emma Lane <lane@ecohealthalliance.org>
Subject: [predict] Re: PREDICT Liberia Workplan

Thank you so much Jim. I will revise it let you know if I have any questions.
Thank you again and see you during the lab meeting.
Monica

On 8 Aug 2017, at 1:42 PM, James Desmond [redacted] wrote:

> Hi Monica,
> Please find a draft of the PREDICT Liberia workplan attached. We have submitted this to UC Davis as a component of the overall PREDICT workplan. Please review and get back to me with any concerns or critical changes as it relates to Liberia. I need to get back to the NY office with any comments or changes no later than August 14th.

Perhaps we could discuss this tomorrow at the One Health meeting or later this week at the lab meeting. Let me know what works best for you.

Regards,

Jim

James S. Desmond, DVM, MS
Email: [redacted]
Phone: +254701859361(Kenya)
Phone: + 231776147565(Liberia)
Phone: +16172752626 (USA)
Skype: jim.desmond

<Y4 WP Country Brief Liberia Draft.docx>

From: Emmanuel Couacy-Hymann [redacted]
To: Peter Daszak <daszak@ecohealthalliance.org>, M'bétiégué Coulibaly [redacted] Aminata Ouattara [redacted] Wilfried Assémien [redacted] "Koffi Kouassi Eugene" [redacted]
Cc: [redacted] "William B. Karesh" <karesh@ecohealthalliance.org>, Leticia Gutierrez-Jimenez <gutierrez@ecohealthalliance.org>, Leilani Francisco <francisco@ecohealthalliance.org>, "ksaylors@metabiota.com" <ksaylors@metabiota.com>, Evelyn Luciano <luciano@ecohealthalliance.org>, Molly Turner <turner@ecohealthalliance.org>, Alice Latinne <latinne@ecohealthalliance.org>, "zandre@usaid.gov" <zandre@usaid.gov>, "predict@ucdavis.edu" <predict@ucdavis.edu>, Ava Sullivan <sullivan@ecohealthalliance.org>
Sent: Wed, 16 Aug 2017 19:59:21 +0000
Subject: [predict] Re: Update on PREDICT activities for LANADA

Dear Peter,

please find here below in my comments on your queries.

kind ragrds

emmanuel

From: Peter Daszak <daszak@ecohealthalliance.org>
Sent: Wednesday, August 16, 2017 12:56 PM
To: Emmanuel Couacy-Hymann; M'bétiégué Coulibaly; [redacted] Aminata Ouattara; Wilfried Assémien; Koffi Kouassi Eugene
Cc: [redacted] William B. Karesh; Leticia Gutierrez-Jimenez; Leilani Francisco; ksaylors@metabiota.com; Evelyn Luciano; Molly Turner; Alice Latinne; zandre@usaid.gov; predict@ucdavis.edu; Ava Sullivan
Subject: Update on PREDICT activities for LANADA

NOTE – email in French (above) and English (below):

Cher Emmanuel et toute l'équipe LANADA,

Je voulais vous faire savoir que je serai indisponible pour les 3 prochaines semaines mais j'ai travaillé avec l'équipe PREDICT pour identifier les différents points à régler afin que nous puissions avancer rapidement dans la transition de Metabiota à EcoHealth pour la gestion de PREDICT.

Voici les principaux points que nous avons identifiés nécessitant une action de notre part afin d'être réglés au plus vite

Après chacun d'entre eux, j'ai listé les personnes qui seront en contact avec vous afin de vous aider.

- ❖ Nous sommes actuellement en train de travailler à transférer les contrats de Metabiota à EcoHealth. Cela risque de prendre un peu de temps car cela doit être approuvé l'USAID à Washington. Cependant, nous voulons vous faire savoir que nous voudrions mettre en place un sous-contrat directement avec LANADA pour le projet PREDICT. Pourriez-vous svp collaborer avec Evelyn, Molly and Ava pour identifier un mécanisme qui nous permettrait de signer un contrat directement

avec LANADA et envoyer les payements pour PREDICT directement à LANADA?

❖ Dr Kalpy est d'accord de continuer de travailler en tant que country Coordinateur en Côte d'Ivoire pour 20-30% de son temps. Nous allons également collaborer avec lui pour identifier une personne qui pourrait travailler avec lui. Nous savons que vous vous entendez bien avec Dr Kalpy et nous espérons que vous continuerez à travailler avec lui lorsqu'il assurera la gestion du projet en Côte d'Ivoire. Nous aurons aussi notre propre Country Liaison basé à EHA qui voyagera régulièrement en Côte d'Ivoire. Il s'agit actuellement d'Alice mais nous allons faire passer des entretiens à d'autres personnes pour ce poste dans les semaines qui viennent. Cette personne parlera français et anglais.

❖ Nous espérons continuer le travail à la clinique de Bouaflé afin de collecter des échantillons et interviewer les patients mais également collecter des échantillons de faune sauvage (et aussi provenant du commerce de la faune sauvage) dans le parc de Marahoué qui est proche. Nous espérons que vous organiserez la collecte et les tests des échantillons animaux comme suggéré initialement. Il pourrait y avoir des sites additionnels dans le futur, incluant notamment une collaboration avec Fabien Leendertz. Nous discuterons de cela avec vous dans les prochaines semaines (et mois).

❖ Alice Latinne va travailler avec le personnel LANADA afin de s'assurer que les problèmes rencontrés avec EIDITH soient résolus. Elle pourra contacter l'équipe qui a créé EIDITH pour avoir de l'aide et si nécessaire, un membre de l'équipe pourrait venir à LANADA pour résoudre les problèmes.

❖ Comme promis durant nos réunions, nous allons travailler avec la FAO, Metabiota et Dr Kalpy pour identifier tous les équipements et consommables (incluant la machine PCR) qui ont été promis à votre laboratoire. Alice, Leticia, Molly et d'autres personnes seront en contact avec vous d'ici peu à ce sujet.

❖ Je ne sais pas exactement comment progresse le travail mais j'apprécie votre engagement pour remplir les objectifs du contrat de l'année 3 de PREDICT, incluant l'analyse des échantillons et l'entrée des données dans EIDITH. Nous travaillerons avec vous pour régler les problèmes administratifs qui pourraient gêner ces progrès.

❖ Lors de nos réunions, j'ai promis que Alice vous appellerait d'ici fin juillet. Cependant j'ai vu beaucoup de mails en français donc je pense que la communication est bonne.

❖ J'apprécie votre volonté de continuer à travailler avec Dr Koffi (le vétérinaire de l'IPCI).

❖ Leticia va travailler avec Dr Koffi et l'équipe vétérinaire de LANADA pour être sûr que tout le personnel soit complètement formé comme requis par PREDICT et que les modules de formation aient été complétés. Cela signifie que certaines personnes devront compléter une formation en ligne, Leticia et Alice aideront à organiser cela.

❖ Nous devons aussi nous assurer que le personnel de laboratoire ait complété les formations requises par PREDICT.

Une fois de plus, je voulais vous remercier pour votre hospitalité durant notre visite en Côte d'Ivoire et pour votre volonté à poursuivre le travail que vous avez commencé. Nous allons travailler dur afin de minimiser les retards possibles et je me réjouis de continuer à travailler avec vous tous !

Cordialement,

Peter

Dear Emmanuel and the LANADA team.

I just wanted to let you all know that I'll be out of the office for 3 weeks, but have worked with the rest of the PREDICT team to identify some issues that they will be contacting you about so that we can move rapidly with the transition from management by Metabiota to EHA.

Here are the main items we have identified that we need to check on and fix. After each one, I've listed the person who will be in contact with you to help work through them:

- We are working on transferring contracts from Metabiota to EHA. This may take a bit of time because these need to be approved by USAID HQ. However, we want you to know that we would like to set up a direct subcontract to LANADA for the PREDICT work. Can you please work with Evelyn, Molly and Ava to identify a mechanism for us to do this – i.e. have a contract signed by LANADA, and for payment to go directly to LANADA for the PREDICT work.

Response : it is already the case with previous subcontract which was signed by Lanada. fund should be available and release on time for activities implementation adequately

- Dr Kalpy has agreed to continue working as the PREDICT country coordinator in CIV for 20-30% of his time. We will be working with him to identify support staff also. We know that you get on well with Dr. Kalpy and hope that you will continue to work with him as he manages the project for PREDICT in-country. We will also have our own Country Liaison based at EHA who will travel to CIV regularly. This is currently Alice, but we are interviewing others for this position in the next few weeks. They will speak fluent French and English.

Response : I have congratulated Dr Kalpy for playing this role as part time job. thank you for sharing information with us for a better coordination of the project

- So that you are aware, we hope to continue work at the Bouaflé clinic, so that we will sample and interview people, and collect samples from wildlife (free-ranging, and from the wildlife trade if possible) at the Marahoué Park nearby. We hope that you will organize the animal sampling and testing, as originally proposed. There may be additional sites in the future, including possibly in collaboration with Fabian Leendertz. We will discuss these with you in the coming weeks/months.

Response : it has been defined that Bouafle is the first site to start and we have already selected sites to be included in the future. This will rely on the right implementation the project at both sides (you and IVC side). We are ready to do so. With Fabian, we discuss about this approach to avoid duplication in the same area or topics. I'm waiting for your comment at appropriate time as per your message.

- Alice Latinne will work with LANADA staff to ensure that the EIDITH issues are dealt with. She will be able to leverage access to Damien Joly who designed EIDITH, and if there are still issues, we might be able to have one of our staff come to LANADA to help fix them.

Response : ok for this training. The software is every time upgraded! We try to catch up those updating improvements

- As promised in our meeting, we will work with FAO, Metabiota, and Dr. Kalpy to trace all the equipment and consumables (including a PCR machine) that were promised to your lab. Alice, Leticia, Molly and others will be in touch with you very soon re. this.

Response : We need to have appropriate equipments in the lab for analysis as per our discussion at the starting point. My concern is to be supplied for the job I have committed to deal with. From whom it will be coming is not my real concern. I planned this with Metabiota at the beginning.

- I'm not sure how the work is going, but I appreciate your commitment to fulfilling the PREDICT Yr3 contract terms, including testing of samples and uploading data into EIDITH. When administrative issues get in the way of this progress, we will work rapidly with you to fix them.

Response : My team is fully committed for lab analysis and data entry using EIDITH as well as field activities. With Prdict protocols it is not an easy task in the lab.

- In our meeting I promised that Alice would call you to follow up by the end of July. However, I've seen many emails en Français, so I can see that the communication is good.

Response : i communicated with her after our first conference call.

- We appreciate your willingness to continue working with Dr. Koffi (the veterinarian at IPCI). : of course, We use to work together on other topics and we have to develop such collaboration between Lanada and IPCI.

- Leticia will work with Dr. Koffi and the LANADA veterinary team and field team to make sure that all staff are fully trained as required by PREDICT and that the required training modules have been signed off. This might mean that some staff need to take online training courses, but these are straightforward and Leticia and Alice will help organize this.: you're welcome

- We will also need to check that the laboratory staff have undertaken the required PREDICT training courses.: now very busy with the sample analysis. it will done afterward

Again, I want to thank you for your hospitality during our visit to CIV, and for your willingness to continue the work you've begun. We will work hard to ensure that any delays are as short as possible and I look forward very much to working with you all!

thank you for your prompt visit to IVC and to handle the project after Metabiota.

Kind regards

Emmanuel

Cheers,

Peter

Peter Daszak

President

EcoHealth Alliance

460 West 34th Street – 17th Floor

New York, NY 10001

Tel. +1 212-380-4473

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 prevent pandemics and promote conservation.

From: Peter Daszak
Sent: Sunday, July 23, 2017 11:58 PM
To: 'Emmanuel Couacy-Hymann'; M'bétiégué Coulibaly; [REDACTED] 'Aminata Ouattara'; 'Wilfried Assémien'; 'Koffi Kouassi Eugene'
Cc: [REDACTED] William B. Karesh; Leticia Gutierrez-Jimenez (gutierrez@ecohealthalliance.org); Leilani Francisco (francisco@ecohealthalliance.org); 'ksaylors@metabiota.com'; Evelyn Luciano; Molly Turner; Alice Latinne (latinne@ecohealthalliance.org); zandre@usaid.gov
Subject: Thank you for your hospitality in Bingerville!
Importance: High

Dear Dr Couacy-Hymann, Dr Coulibaly, and the LANADA team,

I just wanted to briefly say thank you for your hospitality in hosting us at the meeting in Bingerville, and showing us round the labs. It was a pleasure to finally meet with you all, and I appreciate the work you've done to get things moving in this project to the point we're now at.

As I mentioned in our meeting, I continued my journey after leaving Abidjan for meetings in South Korea. I'm now back in the USA and will be meeting with the rest of the team, and talking with the rest of the PREDICT leadership. We'll go over all of the issues you raised and start working on solutions so that we can rapidly move the project forward in the way you had planned with Karen. I look forward to getting back in touch with you very soon and in the meantime, please email the people cc'd above at EHA with any issues that need to be worked on straight away.

Thank you again!

Cheers,

Peter

Peter Daszak

President

EcoHealth Alliance

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New York, NY 10001

Tel. +1 212-380-4473

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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 prevent pandemics and promote conservation.

From: "William B. Karesh" <karesh@ecohealthalliance.org>
To: "Jnumbi@usaid.gov" <Jnumbi@usaid.gov>, "Satwood@usaid.gov" <Satwood@usaid.gov>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, David Wolking <djwolking@ucdavis.edu>, Alisa Pereira <apereira@usaid.gov>, Cara Chrisman <cchrisman@usaid.gov>, Shana Gillette <sgillette@usaid.gov>, Sarah Paige <spaige@usaid.gov>, "Andrew Clements" <AClements@usaid.gov>, Mario Freddy Mondele <mmondele@usaid.gov>, Laudisoit Anne [REDACTED] Ava Sullivan <sullivan@ecohealthalliance.org>, Amanda Andre <amanda.andre@ecohealthalliance.org>, Leilani Francisco <francisco@ecohealthalliance.org>
Subject: EHA interactions with ROC
Sent: Thu, 7 Sep 2017 14:37:46 +0000

Dear Sarah and Jean-Felly,
Andrew Clements kindly referred me to you regarding any suggestions or guidance regarding our engagement with potential project partners in ROC for the EPT-2 PREDICT-2 project. We have been in communications with Mario, but we are always open to additional input. As you know, the guidance varies among different USG agencies and countries and we would appreciate your suggestions and thoughts.

Would you be available in the near future for a short telephone call to discuss further?

Looking forward to hearing from you,

Billy

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

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

On Sep 7, 2017, at 5:41 AM, Andrew Clements <AClements@usaid.gov> wrote:

Jnumbi@usaid.gov
Satwood@usaid.gov

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 6, 2017, at 8:07 PM, William B. Karesh <karesh@ecohealthalliance.org> wrote:

Yes, indeed. I would appreciate being connected with them as soon as convenient for you.

Thanks!!

BK

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

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On Sep 6, 2017, at 11:36 AM, Andrew Clements <aclements@usaid.gov> wrote:

Hi Billy,

In case you need any help navigating engagement with the government in RoC (beyond clearances and coordination provided by Mario Mondele, the USAID POC in ROC), there is also an office in the DRC Mission that covers RoC. The POCs there are Jean-Felly (our GHSA contact) and Sarah Atwood Barma in the Program Office.

Please let me know if you'd like me to connect you with Jean-Felly and Sarah.

Andrew

--

Andrew Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
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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: Thu, 28 Sep 2017 09:00:14 -0700
Subject: Re: USAID MERS investments
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: "William B. Karesh" <karesh@ecohealthalliance.org>
Cc: Patrick Dawson <dawson@ecohealthalliance.org>

Oh boy -- well we're not changing workplans again -- I just changed them for the last time last night. The process with them this year was four months (almost as long as the work we're proposing to do).
Andrew did come back from the meeting asking us to consider testing camel urine, as I guess there was discussion there about people putting it on themselves.
Thanks for supporting the message of getting through this current phase with what we've finally been able to put in place.
Oy,
J

On Thu, Sep 28, 2017 at 8:43 AM, William B. Karesh <karesh@ecohealthalliance.org> wrote:

> Dennis wants to pivot again. His takeaway from the meeting was that bats are not important for MERS human cases right now.
> I tried to explain that we just have the work really up and running this year and given the short time remaining it might be best to demonstrate success rather than starting something new, as well as strengthen One Health approaches in the countries.
> BK

Begin forwarded message:

From: Andrew Clements <aclements@usaid.gov>
Subject: USAID MERS investments
Date: September 28, 2017 at 10:30:52 AM EDT
To: "Dr Maria Van Kerkhove," <[redacted]>, William Karesh <Karesh@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>, "David J Wolking" <djwolking@ucdavis.edu>, "Subhash Morzaria (FAORAP)" <[redacted]>, Sophie VonDobschuetz <[redacted]>, "Ahmed Elldrissi (AGAH)" <[redacted]>
Cc: Lindsay Parish <lparish@usaid.gov>, Cara Chrisman <cchrisman@usaid.gov>, Dennis Carroll <dcarroll@usaid.gov>, Alisa Pereira <apereira@usaid.gov>, "Lisa Kramer (Nairobi/EA/RHH)" <lkramer@usaid.gov>, "Mirela (TCE) Hasibra" <[redacted]>

Hi all,

Following the MERS meeting in Geneva this week, it's clear that there is a lot more information available now than there was when we started our investments to address MERS back in 2014.

As a result, we like to have a small technical huddle of FAO, Predict, and WHO in the near future to see if there are any adjustments that are needed in our overall MERS strategy to better focus activities. The timing of this discussion would allow the new work plans (Oct 17-Sep 18) of the 3 partners to be tweaked if necessary.

We'll be in touch soon to set up a phone discussion.

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: Andrew Clements <aclements@usaid.gov>
Sent: Thu, 28 Sep 2017 22:00:02 +0200
Subject: GHSA work plans: update from me
To: Jonna Mazet <jkmazet@ucdavis.edu>, David J Wolking <djwolking@ucdavis.edu>

We reviewed these last week. A couple of "would have been nice to include" things from others, but I don't think we need to worry about those for now. Will be sending the work plans to the Africa Missions today or tomorrow. Will let you know if any issues arise.

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: Tue, 3 Oct 2017 21:00:18 +0200
Subject: Re: USAID MERS investments
To: "Dr VAN KERKHOVE, Maria" <vankerkhovem@who.int>
Cc: William Karesh <Karesh@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>, David J Wolking <djwolking@ucdavis.edu>, "Subhash Morzaria (FAORAP)" <[REDACTED]>, Sophie VonDobschuetz <[REDACTED]>, "Ahmed Elldrissi (AGAH)" <[REDACTED]>, Lindsay Parish <lparish@usaid.gov>, Cara Chrisman <cchrisman@usaid.gov>, Dennis Carroll <dcarroll@usaid.gov>, Alisa Pereira <apereira@usaid.gov>, "Lisa Kramer (Nairobi/EA/RHH)" <lkramer@usaid.gov>, "Mirela (TCE) Hasibra" <[REDACTED]>

Not yet. Please let me know if there is a time that is particularly good (or to be avoided) during the next few weeks. 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 Oct 3, 2017, at 6:53 PM, Dr VAN KERKHOVE, Maria <[REDACTED]> wrote:

> Hi everyone – has this been scheduled?
>
> Thanks,
> Maria
>
> ---
>
> **From:** Andrew Clements [mailto:aclements@usaid.gov]
> **Sent:** 28 September 2017 16:31
> **To:** Dr VAN KERKHOVE, Maria; William Karesh; Jonna Mazet; David J Wolking; Subhash Morzaria (FAORAP); Sophie VonDobschuetz; Ahmed Elldrissi (AGAH)
> **Cc:** Lindsay Parish; Cara Chrisman; Dennis Carroll; Alisa Pereira; Lisa Kramer (Nairobi/EA/RHH); Mirela (TCE) Hasibra
> **Subject:** USAID MERS investments
>
> Hi all,
>
> Following the MERS meeting in Geneva this week, it's clear that there is a lot more information available now than there was when we started our investments to address MERS back in 2014.
>
> As a result, we like to have a small technical huddle of FAO, Predict, and WHO in the near future to see if there are any adjustments that are needed in our overall MERS strategy to better focus activities. The timing of this discussion would allow the new work plans (Oct 17-Sep 18) of the 3 partners to be tweaked if necessary.
>
> We'll be in touch soon to set up a phone discussion.
>
> 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: "William B. Karesh" <karesh@ecohealthalliance.org>
To: Andrew Clements <aclements@usaid.gov>
Cc: "Morzaria, Subhash (TCE)" <[REDACTED]>, "Dr VAN KERKHOVE, Maria" <[REDACTED]>, Jonna Mazet <jkmazet@ucdavis.edu>, "David Wolking" <djwolking@ucdavis.edu>, Sophie Von dobschuetz <[REDACTED]>, Ahmed Elldrissi <[REDACTED] Lindsay Parish <lparish@usaid.gov>, Cara Chrisman <cchrisman@usaid.gov>, Dennis Carroll <dcarroll@usaid.gov>, Alisa Pereira <apereira@usaid.gov>, "Lisa Kramer" <lkramer@usaid.gov>, "Hasibra, Mirela (TCE)" <[REDACTED]>
Subject: Re: USAID MERS investments
Sent: Wed, 4 Oct 2017 13:28:22 +0000

The 16th and the 19th are the most open for me.
BK

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> On Oct 4, 2017, at 4:50 AM, Andrew Clements <aclements@usaid.gov> wrote:
>
> Thanks, Subhash.
> Can we tentatively plan for sometime between Oct 16 and 19? Does that work for Predict?

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 Oct 4, 2017, at 10:29 AM, Morzaria, Subhash (TCE) <[REDACTED]> wrote:

> Dear Andrew/Maria,
> Thanks for following up on this. I am available most of the time in the coming weeks except next week as I will be travelling to Liberia.
> Best regards,
> Subhash
>
> ---
> **From:** Andrew Clements [mailto:aclements@usaid.gov]
> **Sent:** Tuesday, October 03, 2017 9:00 PM
> **To:** Dr VAN KERKHOVE, Maria <[REDACTED]>

Cc: William Karesh <Karesh@ecohealthalliance.org>; Jonna Mazet <jkmazet@ucdavis.edu>; David J Wolking <djwolking@ucdavis.edu>; Morzaria, Subhash (TCE) <[redacted]>; VonDobschuetz, Sophie (AGAH) <[redacted]>; Elldrissi, Ahmed (SP5) <[redacted]>; Lindsay Parish <lparish@usaid.gov>; Cara Chrisman <cchrisman@usaid.gov>; Dennis Carroll <dcarroll@usaid.gov>; Alisa Pereira <apereira@usaid.gov>; Lisa Kramer (Nairobi/EA/RHH) <lkramer@usaid.gov>; Hasibra, Mirela (TCE) <[redacted]>
Subject: Re: USAID MERS investments

Not yet. Please let me know if there is a time that is particularly good (or to be avoided) during the next few weeks.

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 Oct 3, 2017, at 6:53 PM, Dr VAN KERKHOVE, Maria <[redacted]> wrote:

Hi everyone – has this been scheduled?

Thanks,
Maria

From: Andrew Clements [mailto:aclements@usaid.gov]
Sent: 28 September 2017 16:31
To: Dr VAN KERKHOVE, Maria; William Karesh; Jonna Mazet; David J Wolking; Subhash Morzaria (FAORAP); Sophie VonDobschuetz; Ahmed ElIdrissi (AGAH)
Cc: Lindsay Parish; Cara Chrisman; Dennis Carroll; Alisa Pereira; Lisa Kramer (Nairobi/EA/RHH); Mirela (TCE) Hasibra
Subject: USAID MERS investments

Hi all,

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We'll be in touch soon to set up a phone discussion.

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: Jonna Mazet <jkmazet@ucdavis.edu>, "erubin@metabiota.com" <erubin@metabiota.com>, Kirsten Gilardi <kvgilardi@ucdavis.edu>, "Christine Kreuder Johnson" <ckjohnson@UCDAVIS.EDU>, "daszak@ecohealthalliance.org" <daszak@ecohealthalliance.org>, [redacted], "dcarroll@usaid.gov" <dcarroll@usaid.gov>, "epstein@ecohealthalliance.org" <epstein@ecohealthalliance.org>, "francisco@ecohealthalliance.org" <francisco@ecohealthalliance.org>, "zambrana@ecohealthalliance.org" <zambrana@ecohealthalliance.org>, "olival@ecohealthalliance.org" <olival@ecohealthalliance.org>, "watson@ecohealthalliance.org" <watson@ecohealthalliance.org>, "li@ecohealthalliance.org" <li@ecohealthalliance.org>, "peter@gisaid.org" <peter@gisaid.org>, [redacted] Keiji Fukuda <kfukuda@hku.hk>, "vankerkhovem@who.int" [redacted] "prasert.aue@mahidol.ac.th" <prasert.aue@mahidol.ac.th>, "gian-luca.burci@graduateinstitute.ch" <gian-luca.burci@graduateinstitute.ch>, "sfh9@georgetown.edu" <sfh9@georgetown.edu>, [redacted] "Cohn, Emily" <Emily.Cohn@childrens.harvard.edu>, [redacted], Danielle Anderson' <danielle.anderson@duke-nus.edu.sg>, '[redacted], 魏强' <weiqiang@chinacdc.cn>, Wu Lin Huan' [redacted], "emily.penrose@fondation-merieuxusa.org" <emily.penrose@fondation-merieuxusa.org>, Tracey Goldstein <tgoldstein@ucdavis.edu>, "Sacchetti.Ben@bcg.com" <Sacchetti.Ben@bcg.com>, "Stroman.Trish@bcg.com" <Stroman.Trish@bcg.com>, "jfluder@usaid.gov" <jfluder@usaid.gov>, "gabrielle.fitzgerald@panoramaglobal.org" <gabrielle.fitzgerald@panoramaglobal.org>, "thanat.cho@mahidol.edu" <thanat.cho@mahidol.edu>, "arunee.thi@mahidol.ac.th" <arunee.thi@mahidol.ac.th>, "pravech.aja@mahidol.ac.th" <pravech.aja@mahidol.ac.th>, "pratap.sin@mahidol.ac.th" <pratap.sin@mahidol.ac.th>, "charin.mod@mahidol.edu" <charin.mod@mahidol.edu>, "feferholtz@ecohealthalliance.org" <feferholtz@ecohealthalliance.org>, "parntep.rat@mahidol.ac.th" <parntep.rat@mahidol.ac.th>, David McIver <dmciver@metabiota.com>, "Ashley Marcus'" <amarcus@usaid.gov>, "kathleen.victoir@pasteur.fr" <kathleen.victoir@pasteur.fr>, Supaporn Wacharapluesadee [redacted] "guy.vernet@fondation-merieuxusa.org" <guy.vernet@fondation-merieuxusa.org>, "sja2127@columbia.edu" <sja2127@columbia.edu>, "cchrisman@usaid.gov" <cchrisman@usaid.gov>, "mkurilla@niaid.nih.gov" <mkurilla@niaid.nih.gov>, "linfa.wang@duke-nus.edu.sg" <linfa.wang@duke-nus.edu.sg>, "wil2001@cumc.columbia.edu" <wil2001@cumc.columbia.edu>, '[redacted] "nwolfe@metabiota.com" <nwolfe@metabiota.com>, "karesh@ecohealthalliance.org" <karesh@ecohealthalliance.org>, "Richard.Feachem@ucsf.edu" <Richard.Feachem@ucsf.edu>, "morel@cdts.fiocruz.br" <morel@cdts.fiocruz.br>, Carlos Morel [redacted] [redacted] "icapua@ufl.edu" <icapua@ufl.edu>, "John.Brownstein@childrens.harvard.edu" <John.Brownstein@childrens.harvard.edu>, David John Wolking <djwolking@ucdavis.edu>, "manish.kakkar@phfi.org" <manish.kakkar@phfi.org>, [redacted], "richard.hatchett@cepi.net" <richard.hatchett@cepi.net>, "k.littler@wellcome.ac.uk" <k.littler@wellcome.ac.uk>, [redacted] [redacted] "amy_espeseth@merck.com" <amy_espeseth@merck.com>, "SolomonS@who.int" <SolomonS@who.int>, [redacted]
Cc: "Sacchetti.Ben@bcg.com" <Sacchetti.Ben@bcg.com>, "Harris, Samuel" <Harris.Samuel@bcg.com>
Subject: GVP PMAC side meeting - presentation slides
Sent: Wed, 7 Feb 2018 00:47:02 +0000

Dear Global Virome Project (GVP) colleagues,

I hope you had a safe and smooth travel home from Bangkok. Thank you very much for being a part of the GVP side meeting at the Prince Mahidol Award Conference last week. We were able to have a successful meeting due to your valuable input and contributions.

As a follow up, I would like to share presentation slides from our meetings on Monday January 29. Please visit the Google drive folder for PMAC 2018 (click on hyperlink) to access the following files:

- **Meeting agenda**: Morning and afternoon sessions
- **Closed session presentations**: Three PowerPoint files in total - (1)Science and Technology, (2) Implementation and (3)Governance
- **Open session presentations**

We are excited to continue working with you.

Best wishes,

[redacted]
Fellow
One Health Institute
School of Veterinary Medicine
University of California, Davis

From: Dennis Carroll <dcarroll@usaid.gov>
Sent: Wed, 21 Feb 2018 14:41:51 -0500
Subject: Re: [Urgent request] Science Press release quote
To: REDACTED
Cc: Cassandra Louis Duthil <clouisduthil@usaid.gov>, Jonna Mazet <jkmazet@ucdavis.edu>, "Thomas, Chris(GH/HIDN)" <ChThomas@usaid.gov>

REDACTED I am connecting you to Chris Thomas from our public affairs office who can coordinate any press outreach with you. I have separately linked him up with Brooke, as well. I will shoot you a quote shortly. Chris, REDACTED is with the UC Davis team

d

On Wed, Feb 21, 2018 at 2:26 PM, REDACTED wrote:

Hi Cassandra and Dennis,

Have you given a quote for the *Science* press release already? If so, would you be able to share it with us? If not, can we get a quote from you for the UC Davis press release? Just a sentence or two about how GVP will transform science would be great.

Our deadline is unfortunately at **5pm ET today.**

Apologies for the last minute request. We'd really appreciate your help.

Thank you,

REDACTED

REDACTED

Fellow

One Health Institute

School of Veterinary Medicine

University of California, Davis

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

Office: 202-712-5009
Mobile: REDACTED

From: Julie Southfield <jsouthfield@usaid.gov>
Sent: Thu, 8 Mar 2018 17:19:39 +0630
Subject: Re: Note of meeting on testing animal samples
To: Jonna Mazet <jkmazet@ucdavis.edu>
Cc: Htoo Aung Cho <hacho@usaid.gov>, Karen Cavanaugh <kcavanaugh@usaid.gov>, Andrew Clements <AClements@usaid.gov>, Ohnmar Aung [redacted], Nu Nu Khin <nnkhin@usaid.gov>, David Hadrill [redacted] "Damrongwatanapokin, Sudarat" <sdamrongwatanapokin@usaid.gov>, Ben Zinner <bzinner@usaid.gov>, "predict@ucdavis.edu" <predict@ucdavis.edu>, "Murray, Suzan" <MurrayS@si.edu>, Tracey Goldstein <tgoldstein@ucdavis.edu> "Zimmerman, Dawn" <ZimmermanD@si.edu>, "Valitutto, Marc" <ValituttoM@si.edu>, "Claes, Filip (AGAH)" [redacted]

Dear All:
The Mission is in communications with Washington about these issues. We will communicate our input to the AOR, who will be back in touch with UC Davis, in order to ensure a clear line of communications.

Thank you,
Julie

Julie A. Southfield
USAID/Burma
Resident Legal Officer
Office: (95-1) 536-509 ext. 4996
Mobile: [redacted]
Email: jsouthfield@usaid.gov

On Thu, Mar 8, 2018 at 11:21 AM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:

> Dear Htoo & Karen,
> Thank you very much for your efforts.
> I, too, am interested in your answer to Marc's question to evaluate our way forward. If you have more information, we would appreciate it.
> We here at PREDICT HQ (UCD as Prime) have conferred with Andrew, our AOR, and believe that operating without a contract and paying LBVD without a legal agreement puts us at audit risk and potentially subverts the intention of language in our cooperative agreement which restricts us from entering into certain types of agreements without explicit approvals and consent from our AOR and AO. The process for said review and approvals of agreements is triggered by actually drafting and entering into a subcontract or subaward. Depending on scope and content, those reviews and approvals have been taking many months. Without review and approval of one of those (we understand approval would likely not to be given, considering restrictions on contracting with the Myanmar government), we believe that all risk will likely sit with us as the prime, as we could be perceived as trying to work around required reviews and approvals.
> Again, if you have a different understanding or legal opinion, we would appreciate receiving that.
> If not, we would like to rapidly move to resolution and begin testing based on the plan previously suggested to us by other Mission representatives, which we have already reviewed, investigated, and pursued. We realize that you have had concerns about that mechanism and have taken additional steps to address and hopefully alleviate those concerns. To that end, please find a letter of assurance signed by LBVD attached.
> Looking forward to your reply,
> 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:
Ms. Brooke Genovese
bgenovese@ucdavis.edu
+1-530-752-3630

On Wed, Mar 7, 2018 at 3:24 AM, Valitutto, Marc <ValituttoM@si.edu> wrote:

Dear Htoo,

Thank you for your note. Does this mean that legal counsel has reviewed the option of paying LBVD directly as a service provider without the need for a formal contract/ LoA/ MoU for payment?

Thank you,

Marc

From: Htoo Aung Cho <hacho@usaid.gov>
Date: Wednesday, March 7, 2018 at 12:39 PM
To: "Valitutto, Marc" <ValituttoM@si.edu>, Andrew Clements <AClements@usaid.gov>
Cc: Ohnmar Aung <ohnmara@gmail.com>, Karen Cavanaugh <kcavanaugh@usaid.gov>, Nu Nu Khin <nnkhin@usaid.gov>, David Hadrill <[redacted]>, "Damrongwatanapokin, Sudarat" <sdamrongwatanapokin@usaid.gov>, Ben Zinner <bzinner@usaid.gov>, "jsouthfield@usaid.gov" <jsouthfield@usaid.gov>, "predict@ucdavis.edu" <predict@ucdavis.edu>, "Murray, Suzan" <MurrayS@si.edu>

Subject: Re: Note of meeting on testing animal samples

Dear Marc,

Thanks for your email. We, country office fine with that option if AOR, AO, prime and PREDICT is agreed upon that.

Andrew, any comment?

Dr. Htoo Aung Cho

Project Management Specialist (Health)

Office of Public Health

USAID/Burma

Tel: (95-1) 536 509 Ext 4878

Cell: REDACTED

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On Wed, Feb 28, 2018 at 6:13 PM, Valitutto, Marc <ValituttoM@si.edu> wrote:

> Dear Karen,
>
> Thank you for summarizing and sharing these meeting minutes. I wanted to offer a bit more clarification beyond Dr. Ohnmar's helpful statements.
>
> For wildlife, a total of about 4850 PCR tests will need to be analyzed/tested by MARCH 2019, whereas all physical sample collection in the field will need to be completed no later than SEPT2018. As Dr. Ohnmar has mentioned, LBVD has committed to run about 2400 to 3600 PCR tests based on their current staff (originally a contracted individual) and equipment capacity. We have outlined a work-plan with LBVD input for how they may achieve this goal with our original intent to get started with analysis/testing no later than MARCH 2018.
>
> We are highly encouraged by your consideration for exploring a method of payment directly to LBVD and appreciate your acknowledgement of both our contracting restrictions and tight deadlines. Should there be a way for the Smithsonian to directly contract with LBVD as a supplier, in a sense, that would be our best option for moving forward. Of course, all contracting and payment methods will be evaluated first with our counterparts at PREDICT Global/ UC Davis.
>
> Regards,
>
> Marc Valitutto

From: Ohnmar Aung <REDACTED
Date: Wednesday, February 28, 2018 at 1:26 PM
To: Karen Cavanaugh <kcavanaugh@usaid.gov>
Cc: Nu Nu Khin <nnkhin@usaid.gov>, Htoo Aung Cho <hacho@usaid.gov>, David Hadrill <REDACTED
"Damrongwatanapokin, Sudarat" <sdamrongwatanapokin@usaid.gov>, Ben Zinner <bzinner@usaid.gov>,

"jsouthfield@usaid.gov" <jsouthfield@usaid.gov>, Andrew Clements <AClements@usaid.gov>, "Valitutto, Marc" <ValituttoM@si.edu>
Subject: Re: Note of meeting on testing animal samples

Dear Karen,

Thank you so much for your support and summary for this. I want to clarify that LBVD is estimated to absorb 2,400 tests - 3,600 test as maximum target based on their competency and familiarity of PREDICT lab protocol. After 2-3 months of starting lab analysis from now, they may speed up to 400 test per month targeting to achieve 3,600 tests.

As I already mentioned in the meeting, Dr Min Thein Maw agreed the unit price and payment mechanism of using sample receipt.

We will inform PREDICT global about our discussion and seek recommendations.

Thank you again to all for your help.

Ohnmar

Dr Ohnmar Aung

Project Coordinator | PREDICT | Myanmar | **Global Health Program**

REDACTED

Smithsonian Conservation Biology Institute

National Zoological Park | 3001 Connecticut Avenue NW | Washington DC 20008

On Wed, Feb 28, 2018 at 1:40 PM, Karen Cavanaugh <kcavanaugh@usaid.gov> wrote:

> Hi All,
>
> Thank you for participating in our meeting today to discuss how to have PREDICT Smithsonian wildlife samples (and eventually FAO livestock samples) tested by September 2018.
>
> Background
>
> Smithsonian has drawn about 2400 Wildlife samples, turned them over to LVBD and provided LVBD with reagents, training and TA. LVBD has agreed to test the samples in its Yangon lab. LVBD and Smithsonian agree That the project should support LVBD's additional workload and costs in some way. They have agreed on a unit price that global and regional One Health experts have agreed is reasonable.
>
> Smithsonian understands that they are prohibited from paying LVBD because of Burma special provisions.
>
> USAID Burma will explore whether any impediment prevents this.

Meanwhile Smithsonian will agree with LVBD on a sample bill/receipt and seek agreement from UC Davis, the PREDICT prime.

If by March 15, after fully pursuing this option it is deemed not possible, FAO in Burma has offered to pursue negotiation of a Letter of Agreement with LVBD that would allow FAO to pay LVBD such a service charge.

Participants agree that time is of the essence as all samples must be tested by September 2018, 6 months from now.

Please reply with any clarifications on our discussion or next steps.

Thank you,
Karen

Sent: Tue, 13 Mar 2018 07:36:18 -0700
Subject: Re: Note of meeting on testing animal samples
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Andrew Clements <aclements@usaid.gov>

Thanks,
Jonna

On Tue, Mar 13, 2018 at 2:10 AM, Andrew Clements <aclements@usaid.gov> wrote:

FYI

---------- Forwarded message ----------
From: **Andrew Clements** <aclements@usaid.gov>
Date: Tue, Mar 13, 2018 at 10:09 AM
Subject: Re: Note of meeting on testing animal samples
To: Julie Southfield <jsouthfield@usaid.gov>
Cc: Karen Cavanaugh <kcavanaugh@usaid.gov>, Htoo Aung Cho <hacho@usaid.gov>, Nu Nu Khin <nnkhin@usaid.gov>, "Damrongwatanapokin, Sudarat" <sdamrongwatanapokin@usaid.gov>, Ben Zinner <bzinner@usaid.gov>, Daniel Schar <dschar@usaid.gov>

Hi Julie,

I talked to the PREDICT/HQ COP (Jonna Mazet) yesterday. We discussed the five options (see below) that have been discussed since the beginning of the PREDICT engagement in Burma and the pros and cons of each.

1. testing costs for animal samples covered by FAO through its agreement with LBVD. **FAO has indicated this is not possible.**

2. testing animal samples in the human health lab that PREDICT is working with. **I was told that people in-country (I assume GoB) did not agree with this option.**

3. LBVD tests animal samples and later submits invoices to PREDICT without a agreement. **PREDICT is concerned it would be at risk since it could have costs later disallowed by USAID/W if there is no AO-approved agreement in place.**

4. PREDICT could use its existing sub-contract for a LBVD individual (the "secondment" arrangement you mentioned below) to test the animal samples. According to the letter previously shared (and re-attached here), PREDICT has verified that the salary proposed does not exceed that of other LBVD staff and (because this person's normal salary will be suspended during the contract) sharing of salary with other lab staff is unlikely. **This option can be rapidly executed if the Mission provides concurrence.**

5. PREDICT could enter into a new agreement with LBVD for testing the animal samples. As part of the recent ceiling increase for the PREDICT award, specific government institutions in PREDICT countries (including LBVD in Burma) were pre-approved for sub-awards by the AO, so PREDICT would not need to seek OAA approval (thus avoiding a lengthy review time). **However, PREDICT would need a clear signal from the Mission that a direct agreement with LBVD is legal/permissible.**

Please discuss these options with your colleagues at the Mission and let me know how you want to proceed. I'm available this week for a phone call to discuss further if that would be useful. As mentioned previously, there is some urgency associated with identifying a solution so that testing of the animal samples is not delayed.

Thanks!

Andrew

On Fri, Mar 9, 2018 at 8:06 PM, Andrew Clements <aclements@usaid.gov> wrote:

Thanks, Julie.
I'm going to have a phone call with Predict HQ next week to make sure I'm 100% clear on the situation.

Regarding sub-awards, I don't believe there's an issue getting one approved. The problem is the time it takes to get one approved. For other Predict countries it has been taking 2-3 months which adds a significant delay.

I'll write back next week after talking with Predict HQ.

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 9, 2018, at 9:39 AM, Julie Southfield <jsouthfield@usaid.gov> wrote:

> Hello All:
>
> Another point to add here is that we do not believe that the Burma Special Requirements in and of themselves prevent a sub-contracting relationship between Smithsonian and the Government of Burma. The Requirement says that the AO has to give approval. From a policy point of view, the Embassy's Assistance Working Group has already concurred on the sub-contracting approach. We do not currently provide any direct assistance to the Government as described in ADS 220 (we have not had the assessments conducted to allow us to do that), but ADS 302 sets out a way to perform sub-contracting in a way that isn't considered direct assistance.
>
> That having been said, we remain concerned about how the relationship between the Government and Smithsonian would be arranged. The secondment arrangement that has been proposed (and continues to be an option) suggests paying a GOB employee on leave in excess of what we understand to be normal wages in LVBD to do sample tests. As we conveyed to PREDICT leadership in Bangkok in January, we heard informally from Smithsonian that the person being seconded would "share" her salary with all the other employees who are actually doing the tests. There is in fact some indication that sample testing has already started.
> Thanks,
> Julie

Julie A. Southfield
USAID/Burma
Resident Legal Officer
Office: (95-1) 536-509 ext. 4996
Mobile: REDACTED
Email: jsouthfield@usaid.gov

On Fri, Mar 9, 2018 at 8:42 AM, Karen Cavanaugh <kcavanaugh@usaid.gov> wrote:

> Hi Andrew,
>
> The mission realizes that finding an arrangement that meets the terms of PREDICT and the prime's agreement with its sub is in the hands of the AOR and AO so we defer to you for the solution. One idea that emerged here was to have the project purchase equipment for LVBD that would help them automate procedures they now must do manually if paying labor costs or service fees is not workable. I pass this on for your consideration in case it is helpful. We stand ready to help in any way you request as we are all committed to seeing this work succeed.

Best,
Karen

On Wed, Mar 7, 2018 at 5:31 PM, Andrew Clements <aclements@usaid.gov> wrote:

> Hi Htoo,
> I'm in Rome now and have an all-day meeting with FAO tomorrow and Friday. Next week is good for me.

I heard from Predict HQ yesterday that there was a proposed approach with LBVD in which receipts for testing costs would be reimbursed by Predict without an agreement between the two organizations. If that is what is being proposed below, I advised Predict not to put itself at risk for potentially having costs disallowed later on. All agreements with foreign government organizations have to be approved by the AO. (Note: I believe there is already an AO approved agreement with a lab in Burma.)

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 7, 2018, at 11:13 AM, Htoo Aung Cho <hacho@usaid.gov> wrote:

> Dear Andrew,
> We would like to set up a conference call and discuss with you for PREDICT on coming Friday, March 9, 2018 from 3 to 4 PM (Myanmar Time) if you are OK.
> Please send us the call in information.

Thanks,

Dr. Htoo Aung Cho
Project Management Specialist (Health)
Office of Public Health
USAID/Burma
Tel: (95-1) 536 509 Ext 4878
Cell: REDACTED

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YouTube: http://www.youtube.com/usaidrdma

On Wed, Mar 7, 2018 at 1:22 PM, Htoo Aung Cho <hacho@usaid.gov> wrote:

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Andrew, any comment?

Dr. Htoo Aung Cho
Project Management Specialist (Health)
Office of Public Health
USAID/Burma
Tel: (95-1) 536 509 Ext 4878
Cell: [redacted]

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YouTube: http://www.youtube.com/usaidrdma

On Wed, Feb 28, 2018 at 6:13 PM, Valitutto, Marc <ValituttoM@si.edu> wrote:

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Thank you for summarizing and sharing these meeting minutes. I wanted to offer a bit more clarification beyond Dr. Ohnmar's helpful statements.

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Regards,

Marc Valitutto

From: Ohnmar Aung <[redacted]
Date: Wednesday, February 28, 2018 at 1:26 PM
To: Karen Cavanaugh <kcavanaugh@usaid.gov>
Cc: Nu Nu Khin <nnkhin@usaid.gov>, Htoo Aung Cho <hacho@usaid.gov>, David Hadrill <[redacted], "Damrongwatanapokin, Sudarat"

<sdamrongwatanapokin@usaid.gov>, Ben Zinner <bzinner@usaid.gov>,
"jsouthfield@usaid.gov" <jsouthfield@usaid.gov>, Andrew Clements
<AClements@usaid.gov>, "Valitutto, Marc" <ValituttoM@si.edu>
Subject: Re: Note of meeting on testing animal samples

Dear Karen,

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We will inform PREDICT global about our discussion and seek recommendations.

Thank you again to all for your help.

Ohnmar

Dr Ohnmar Aung

Project Coordinator | PREDICT | Myanmar | **Global Health Program**

REDACTED

Smithsonian Conservation Biology Institute

National Zoological Park | 3001 Connecticut Avenue NW | Washington DC 20008

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Hi All,

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Wildlife samples, turned them over to LVBD and provided LVBD with reagents, training and TA. LVBD has agreed to test the samples in its Yangon lab. LVBD and Smithsonian agree That the project should support LVBD's additional workload and costs in some way. They have agreed on a unit price that global and regional One Health experts have agreed is reasonable.

Smithsonian understands that they are prohibited from paying LVBD because of Burma special provisions.

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Meanwhile Smithsonian will agree with LVBD on a sample bill/receipt and seek agreement from UC Davis, the PREDICT prime.

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Please reply with any clarifications on our discussion or next steps.

Thank you,
Karen

--
Karen Cavanaugh
Director
Office of Public Health
U.S. Agency for International Development
Embassy of the United States of America

2018 - The Year of Hope

--

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

--

Andrew Clements, Ph.D.
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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: Tue, 20 Mar 2018 11:02:15 -0700
Subject: Re: The other letter to Science from Bruno and Garry, and a draft response
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Peter Daszak <daszak@ecohealthalliance.org>
Cc: [redacted], Brooke Watson <watson@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>
Response to Branco and Garry's letter to Science JM.docx

Hi Peter,
Great job!
By the way, I think you should take first author on this response. There aren't authors on this response draft, but if you're adding them, you should definitely be first.
I found a better citation for the DRC outbreak (not Tanzania, so good thing you had me edit ;) from NEJM, which has a PREDICT acknowledgement! Yay! Think MB forgot to submit it to the Predict pub list for some reason -- we'll double check.
We've also added a couple of other references.
Thanks for drafting and allowing me to make suggestions,
Jonna

On Mon, Mar 19, 2018 at 12:40 PM, Peter Daszak <daszak@ecohealthalliance.org> wrote:

> Here is their 'letter', and a draft response. We're allowed 600 words max, and 10 refs (see the email from *Science* below). It's the same as before, that *Science* usually tries not to publish these but this one is important because it might go into the printed journal and will have a wider readership.
>
> Please edit and add refs as soon as you can – hopefully by COB Wednesday so I can get it out to the rest of the group and then can respond to Science before the deadline: Wednesday March 28th
>
> 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.

14-Mar-2018

Manuscript number: aat5918

Dear Dr. Daszak,

We have received a letter on your Science paper and would like to request your written response. To maintain a timely flow of letters, we must receive your response within two weeks (28 March 2018). Please let us know as soon as possible if you will need more time. If your response is received after the deadline, it may not appear in the same issue as the letter.

If the letter is rejected, a copy of your response will be sent to the author, unless you request otherwise. Should you decide a response is not necessary, we would appreciate a message letting us know that you have chosen not to respond.

Your response should be approximately the same length as the letter, and not more than 600 words of text and 10 references. Please be sure to include a list of all response authors.

The letter is attached here and is also available at our manuscript submission and information portal. To upload your response, please login to the portal at https://cts.sciencemag.org. Your solicitation record aat5918 is found here. For your convenience, the letter is uploaded in the auxiliary supplementary material section of the manuscript documents tab.

Thank you!

Jennifer Sills

Letters Editor

Science

JS/bw

Response to Branco and Garry

Like Branco and Garry, we all mourn the tragedy of lost lives from the devastating Ebola virus disease (EVD) outbreak in West Africa. It is because of outbreaks like these that we believe novel approaches to preventing epidemics are required, and why we laid out the rationale for the Global Virome Project (GVP) (*1*). However, Branco and Garry's letter contains many factual inaccuracies about the goals of the GVP, its differentiation from EPT PREDICT, past activities of EPT PREDICT, and the focus of other programs designed to reduce the impact of disease emergence. Firstly, the PREDICT program was not set up to "exert its dominance as a human disease predictive algorithm", nor to "congeal into a predictive algorithm for one of the most studied and better understood viral hemorrhagic fever agents known to infect humans". Rather, its goals are to model and analyze high risk pathways for disease emergence, build capacity to prevent emerging diseases in countries where they are most likely to originate, identify potentially zoonotic viruses in wildlife *before* they infect people, and conduct behavioral risk surveillance and testing in people at high risk disease emergence interfaces (*2*). Secondly, there were not, as the authors assert, "significant technical and human resources on the ground in the heart of the EVD outbreak region, including a conglomerate of EPT PREDICT scientists". Prior to the beginning of the EVD outbreak, EPT PREDICT was not authorized to work in any of the subsequently affected countries. PREDICT's permission and capacity to work in the region only began in 2015 and, even then, not for the purposes of outbreak response, but rather with a specific goal to help identify potential animal reservoirs for later spillover. Thirdly, the goal of PREDICT is not to 'predict outbreaks' of EVD, something which is not currently possible given the paucity of data on which to base rigorous predictive models and hence the need for GVP. PREDICT's modeling program is focused on identifying broad patterns in the risk of novel diseases emerging, though previous work had already pointed to West Africa as an emerging disease 'hotspot' (*3, 4*). Finally, Branco and Garry's criticism that by 2013 EVD was not 'even acknowledged as a Public Health Emergency of International Concern' is misplaced. Identifying outbreaks as public health emergencies is the remit of affected countries and supporting international organizations, not of US-funded development projects, no matter the scale. We note that PREDICT was working in the Democratic republic of Congo when an outbreak of EVD was suspected (*2, 5*). PREDICT scientists were asked to support local ministries in identifying the virus in samples, and this outbreak was rapidly contained (REF). While this is a positive result, this and subsequent successes are the result of empowering countries with the knowledge of what viruses are likely available to infect people in their country so that preparations can be in place to control them (*7*), another core goal of the GVP.

The repeated emergence of Ebola and related viruses, and the increasing frequency by which novel viruses are spilling over from wildlife into people, is exactly why we advocate the need for new approaches that move our strategy to fight disease emergence from one of response to one of prevention. As we stated in our Policy Forum, the goal of GVP is to improve our collaborative efforts to combat emerging viruses "by enhancing (not replacing) current pandemic surveillance, prevention, and control strategies" (*1*). We look forward to the GVP collaborating with agencies and research groups focused on viruses that have already emerged – the central focus of Branco and Garry's thesis. However, we also urge them to recognize that known viruses probably represent less than 0.1% of the viruses

capable of emerging in the future (*1*). Identifying the majority of the remaining >99.9% of unknown potentially zoonotic viral diversity remains the unique, central goal of the GVP.

1. D. Carroll *et al.*, The Global Virome Project. *Science* **359**, 872-874 (2018).
2. PREDICT Consortium, "Reducing pandemic risk. Promoting Global Health," (One Health Institute, University of California Davis, 2014).
3. K. E. Jones *et al.*, Global trends in emerging infectious diseases. *Nature* **451**, 990-993 (2008).
4. T. Allen *et al.*, Global hotspots and correlates of emerging zoonotic diseases. *Nature Communications* **8**, 1124 (2017).
5. G. D. Maganga *et al.*, Ebola virus disease in the Democratic Republic of Congo. *N Engl J Med* **371**, 2083-2091 (2014).
6. World Health Organization, "WHO declares end of Ebola outbreak in the Democratic Republic of Congo" (2014); http://www.who.int/mediacentre/news/statements/2014/drc-ends-ebola/en/.

OR

CDC (This one cites WHO link above, so the WHO is probably better)

U.S. Centers for Disease Control and Prevention, (CDC), "2014 Ebola Outbreak in Democratic Republic of the Congo" (2014); https://www.cdc.gov/vhf/ebola/outbreaks/drc/2014-august.html.

7. The Atlantic, "How the Democratic Republic of the Congo Beat Ebola in 42 Days" (2017); https://www.theatlantic.com/science/archive/2017/07/how-the-democratic-republic-of-congo-beat-ebola-in-42-days/532590/.

From: Andrew Clements <aclements@usaid.gov>
Sent: Fri, 11 May 2018 00:42:35 -0700
Subject: WHO | Ebola virus disease – Democratic Republic of the Congo
To: bhaberer@usaid.gov, ghsdunitmaillistusaid@usaid.gov, "Lisa Kramer (Nairobi/EA/RHH)" <lkramer@usaid.gov>, jnumbi@usaid.gov, "Daniel Schar (RDMA/OPH)" <dSchar@usaid.gov>, Jonna Mazet <jkmazet@ucdavis.edu>, bhbird@ucdavis.edu, ksaylors@metabiota.com, djwolking@ucdavis.edu, Tracey Goldstein <tgoldstein@ucdavis.edu>, mmondele@usaid.gov, ikoek@usaid.gov, cchappell@usaid.gov, lbaldwin@usaid.gov, Linda Mobula <mmobula@usaid.gov>, pmorris@usaid.gov, [redacted], [redacted], Kama Garrison <kgarrison@usaid.gov>

FYI. Initial Disease Outbreak News report posted on WHO global website

http://www.who.int/csr/don/10-may-2018-ebola-drc/en/

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: Elizabeth Leasure <ealeasure@UCDAVIS.EDU>
To: David John Wolking <djwolking@ucdavis.edu>, Peter Daszak <daszak@ecohealthalliance.org>, Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, "William B. Karesh" <karesh@ecohealthalliance.org>, Amanda Andre <amanda.andre@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>, "predict@ucdavis.edu" <predict@ucdavis.edu>
Subject: RE: [predict] Brown bag at USAID end July/early August w Andrew C and USAID
Sent: Thu, 7 Jun 2018 15:16:07 +0000

Hi everyone. I've made a note to ask about this on our SMT call next Tuesday.

Thanks,
Liz

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

From: David J Wolking <djwolking@ucdavis.edu>
Sent: Wednesday, June 6, 2018 12:23 PM
To: Peter Daszak <daszak@ecohealthalliance.org>; Elizabeth Leasure <ealeasure@UCDAVIS.EDU>; Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>; William B. Karesh <karesh@ecohealthalliance.org>; Amanda Andre <amanda.andre@ecohealthalliance.org>; Alison Andre <andre@ecohealthalliance.org>; predict@ucdavis.edu
Subject: Re: [predict] Brown bag at USAID end July/early August w Andrew C and USAID

Thanks Peter,

Jonna and I are both heading out on vacation today so I'm copying Liz Leasure and Chris here as well. We just saw a thread with Alisa, Cara, and Amalhin working to identify times with Chris for a surveillance session likely July 12 or 13th as these dates work for Dennis and Richard. Not sure if another session a few weeks later is optimal as Andrew initially recommend a month between them but maybe we should offer the dates and see how USAID responds?

David

On Tue, Jun 5, 2018 at 11:59 AM, Peter Daszak <daszak@ecohealthalliance.org> wrote:

Hi Jonna

I just realized that Billy and I will be in DC for a Blue Ribbon Panel meeting on Tuesday, July 31st. I don't know what dates we're going to settle on for meetings w/ Andrew Clements, but maybe Monday

July 30th or Wed August 1st would work for a brown bag on EID modeling/mapping?

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 <aclements@usaid.gov>
Sent: Thu, 19 Jul 2018 14:57:55 +0200
To: David J Wolking <djwolking@ucdavis.edu>
Cc: Alisa Pereira Emerging Threats Division <apereira@usaid.gov>, PREDICTMGT <predictmgt@usaid.gov>, "predict@ucdavis.edu" <predict@ucdavis.edu>
Subject: [predict] Re: FW: IMPORTANT: GHSA Workplan and Reporting Timelines

Thanks, David,

My guidance to you last week still stands.

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

On Thu, Jul 19, 2018 at 12:10 AM, David J Wolking <djwolking@ucdavis.edu> wrote:

> Hi Andrew,
> We received this today via USAID/Guinea (Tamar Bah), it's already been circulated to our Guinea country team but also the first we are seeing of it at HQ. Just keeping you in the loop. I've put it on our agenda for next week's Management Team call. Note the deadlines below (October 1, 2018) for both the GHSA workplans and GHSA Annual Reports.

Best,

David

---------- Forwarded message ---------
From: **Corina Grigorescu Monagin** <cgmonagin@ucdavis.edu>
Date: Wed, Jul 18, 2018 at 10:19 AM
Subject: FW: IMPORTANT: GHSA Workplan and Reporting Timelines
To: David John Wolking <djwolking@ucdavis.edu>, Elizabeth Leasure <eleasure@ucdavis.edu>, Jaber Amine Belkhiria <jabelkhiria@ucdavis.edu>, predict@ucdavis.edu <predict@ucdavis.edu>

From: Tamar Bah <tbah@usaid.gov>
Date: Wednesday, July 18, 2018 at 10:05 AM
To: NDiaye Mamadou Racine <[redacted]>, Alpha Oumar Camara <[redacted]>, Pépé Bilivogui <[redacted]>, Djimasbe Ngaradoum <dngaradoum@cnfaguinee.org>
Cc: Serge Agbo <[redacted]>, "Soumare, Baba (RAF)" <[redacted]>, Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>, Mamy Keita <makeita@usaid.gov>, Brioni James <bjames@usaid.gov>, Ibrahim Fofanah <ifofanah@usaid.gov>, Amanda Paust <apaust@usaid.gov>, Harris Ayuk-Takor <htakor@cnfa.org>
Subject: Fwd: IMPORTANT: GHSA Workplan and Reporting Timelines

Dear partners,

Please find below guidelines for GHSA reporting and work planning.

Included in this email is the GHSA New Partner Guide, the workplan template and guidance, and the reporting template.

As usual, we want to capture successes, challenges and how we addressed those challenges.

Let us know if you have questions.

Thanks!

Tamar T. Bah, MPH

Global Health Security Agenda Advisor

Currently in Kinshasa +2430817452962

USAID Guinea

Office: +224 655104564

Cell: REDACTED

---------- Forwarded message ----------
From: **Amanda Paust** <apaust@usaid.gov>

Dear A/CORs of GHSA awards,

GHSA workplanning and reporting season is here. Please see below and attached for timelines and guidance on GHSA FY19 workplans and FY18 annual reports. Please forward to your partners as soon as possible. I am available to meet with A/CORs and/or any partners who this may be their first reporting period or have any questions on templates or timelines. Included in this email is the GHSA New Partner Guide, the workplan template and guidance, and the reporting template.

Reports are due to the A/COR and apaust@usaid.gov by the below deadline.

FY19 Workplan timeline:

No later than COB October 1, 2018*

FY18 Annual Report timeline:

No later than COB October 1, 2018

*Mission colleagues-please note EPT2 (FAO, PREDICT and OHW) partners may have different workplan timelines from other GHSA partners. Additional communication is forthcoming.

Best,

Mandy Paust, M.A.

GHSA Advisor
Emerging Threats Division
Office of Infectious Disease, Bureau for Global Health
Desk phone: (571)551.7127
Mobile: REDACTED

apaust@usaid.gov

From: [redacted]
To: Dennis Carroll <dcarroll@usaid.gov>, Jonna Mazet <jkmazet@ucdavis.edu>, Peter Daszak <daszak@ecohealthalliance.org>, Cara Chrisman <cchrisman@usaid.gov>, Nathan Wolfe <nwolfe@metabiota.com>, Eddy Rubin <erubin@metabiota.com>
Subject: FW: [gvp] Form Submission - New Form - Interview Request
Sent: Wed, 8 Aug 2018 18:14:10 +0000

Another request from the media.
Cara, if there is an agenda tomorrow, please include this request as well.
Thanks!
[redacted]

From: gvp-request@ucdavis.edu [mailto:gvp-request@ucdavis.edu] **On Behalf Of** Squarespace
Sent: Saturday, August 04, 2018 3:54 PM
To: gvp@ucdavis.edu
Subject: [gvp] Form Submission - New Form - Interview Request

Name: Kattenburg David

Email Address: kattenbu@mts.net

Subject: Interview Request

Message: Hello ... Just following up on past notes. Would love to get in touch with you folks. I am a Winnipeg-based web publisher and podcaster, most interested in global environment, development and sci/tech/med issues. I also teach microbiology courses at the University of Manitoba. Wondering if an audio-Skype interview can be arranged with someone from the Global Virome Project, for inclusion in my Green Blues Show podcast. Glad to tell you more by email, if you can get back to me. (this is my third note).

Regards ...

David Kattenburg
www.greenplanetmonitor.net

(Sent via *Global Virome Project*)

From: Andrew Clements <aclements@usaid.gov>
Sent: Mon, 10 Sep 2018 12:10:40 -0700
Subject: Re: PREDICT International Travel Requests
To: Katherine Leasure <kaleasure@ucdavis.edu>
Cc: PREDICTMGT <predictmgt@usaid.gov>, Predict inbox <predict@ucdavis.edu>, jkmazet@ucdavis.edu

San Francisco, Paris, Thessoloniki, and Vienna travel approved.
All other travel approved subject to mission concurrence.

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 10, 2018, at 3:08 AM, Katherine Leasure <kaleasure@ucdavis.edu> wrote:

Please find below international travel requests for your review and approval. Thanks!

1. Edison (USA): $538 airfare/$296 (San Francisco) max daily per diem
2. Machalaba (France): $1400 airfare/$608 (Paris) max daily per diem
3. Rubin (Thailand): $1200 airfare/$241 (Bangkok) max daily per diem
4. Rubin (Greece): $430 airfare/$252 (Thessaloniki) max daily per diem
5. Saylors (DRC): $2300 airfare/$394 (Kinshasa) max daily per diem
6. Young (Austria): $1000 airfare/$360 (Vienna) max daily per diem
7. Anthony (Austria): $950 airfare/$360 (Vienna) max daily per diem

Travel Requests -

1. Metabiota would like to request travel approval for Beth Edison, PREDICT Program Manager to travel from Nanaimo, British Columbia, Canada to San Francisco, California, USA from September 30 – October 4, 2018 to meet with the Metabiota Headquarters team to finalize Year 5 workplans and plan for project close-out.

Trip purpose: To meet with Metabiota PREDICT Senior Management and the Metabiota Finance Team to discuss Year 5 work plans and plan for project-close out activities and requirements.

2. **EcoHealth Alliance** would like to request travel approval for Ms. Catherine Machalaba to travel from Boston, Massachusetts, USA to Paris, France from October 3-6, 2018 to participate in the WHO-OIE Expert Roundtable: Development of a Guide for Multisectoral Partnership Coordination for International Health Regulations (2005) and Health Security.

Trip Purpose: Ms. Machalaba has been invited to speak as a panelist on institutionalizing One Health. The meeting objectives include identification of best practices, case studies and models of functional mechanisms to coordinate multisectoral partnerships for global health security, underpinned by One Health approaches, in both developed and developing countries, and to review the draft guide on Multisectoral Partnership Collaboration for IHR (2005) and Health Security and develop a roadmap for implementation of the guide. This meeting provides an important forum for Ms. Machalaba to disseminate PREDICT's multisectoral approach, including to optimize surveillance for early warning and target drivers of disease emergence for risk reduction.

3. Metabiota would like to request travel approval for Dr. Eddy Rubin, Chief Scientific Officer to travel from Guenthary, France to Bankok, Thailand from October 21-27, 2018 to attend Global Virome Project launch meetings.

Trip purpose: Dr. Rubin will attend launch meetings for the Global Virome project from October 22-26, 2018.

4. Metabiota would like to request travel approval for Dr. Eddy Rubin, Chief Scientific Officer to travel from

Guethary, France to Thessaloniki, Greece from November 14-19, 2018 to present at the Helenic Bioinformatics Conference II.

Trip purpose: While in Thessoloniki, Dr. Rubin will attend the Helenic Bioinformatics Conference and provide a presentation on the Global Virome Project. Accommodations will be provided by the conference, only transportation and per diems are being requested.

5. 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 October 13-22, 2018 to meet with Metabiota PREDICT DRC team.

Trip purpose: Dr. Saylors will be travelling to DRC for another project which will cover the majority of her travel expenses. While in DRC Dr. Saylors will meet with Metabiota PREDICT DRC team to provide supervisory support and oversight of PREDICT operations. **Dr. Saylors will be travelling to DRC for a non USAID funded project. The majority of costs, including flights will be covered by the other project.*

6. UC Davis would like to request travel approval for Ms. Cristin Young to travel to from San Francisco, CA, USA, to Vienna, Austria, from November 8-13, 2018 to attend and present at the International Meeting on Emerging Diseases and Surveillance.

Trip purpose: Cristin Young, as a project scientist for PREDICT, will be presenting the results of a collaboration with the PREDICT Nepal team on the implementation of a project to screen for antimicrobial resistance (AMR) genes in an informal settlement in Kathmandu, Nepal. Sampling for AMR was conducted among animals and humans at this PREDICT site for concurrent surveillance, where the team has also engaged the community for detection viral threats. The title of the talk is: "Sharing of antimicrobial resistance genes in animals, humans, and the environment in Nepal: A One Health case study."

7. Columbia University would like to request travel approval for Dr. Simon Anthony to travel from New York, NY, USA to Vienna, Austria from November 9-12, 2018 for the International Meeting on Emerging Diseases and Surveillance.

Trip purpose: Dr. Anthony would travel to the 2018 IMED meeting to present the findings from our recent publication of the Bombali virus in Nature Microbiology.

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

--

You received this message because you are subscribed to the Google Groups "PREDICTMGT" group.
To unsubscribe from this group and stop receiving emails from it, send an email to predictmgt+unsubscribe@usaid.gov.
To post to this group, send email to predictmgt@usaid.gov.
To view this discussion on the web visit https://groups.google.com/a/usaid.gov/d/msgid/predictmgt/01dc01d448a2%24c47bb350%244d7319f0%24%40ucdavis.edu.

From:	Andrew Clements <aclements@usaid.gov>
To:	Katherine Leasure <kaleasure@ucdavis.edu>
CC:	PREDICTMGT <predictmgt@usaid.gov>;Jonna Mazet <jkmazet@ucdavis.edu>;Predict inbox <predict@ucdavis.edu>
Sent:	11/20/2018 1:05:07 PM
Subject:	Re: Change to Approved ITA - T. Kelly (Ghana Travel Dates)

Thanks, Katie.

Cassandra: please let the Mission know of the change. 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 Nov 20, 2018, at 8:26 PM, Katherine Leasure <kaleasure@ucdavis.edu> wrote:

Hi Andrew. The dates of Dr. Terra Kelly's trip to Ghana have been pushed back one week. The previously approved ITA is below, with the changes highlighted in yellow. Please let me know if you have any questions. Thanks!

UC Davis would like to request travel approval for Dr. Terra Kelly to travel from Flagstaff, Arizona, USA to Accra, Ghana from December 4-11, 2018 ~~November 27 to December 5, 2018~~ to meet with stakeholders and in-country partners and assist with sampling activities.

Trip purpose: Dr. Kelly will be traveling to Accra to meet with USAID and interagency stakeholders to share findings from the project, assist team members with a concurrent disease surveillance event at our Boabeng-Fiema site, and meet with partners to make plans regarding laboratory analyses, PCR product shipping for sequencing, result reporting, and community outreach.

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

--
You received this message because you are subscribed to the Google Groups "PREDICTMGT" group.
To unsubscribe from this group and stop receiving emails from it, send an email to predictmgt+unsubscribe@usaid.gov.
To post to this group, send email to predictmgt@usaid.gov.
To view this discussion on the web visit https://groups.google.com/a/usaid.gov/d/msgid/predictmgt/019301d48106%24eee9e5c0%24ccbdb140%24%40ucdavis.edu.

From: Faith Bartz Tarr <fbartz@usaid.gov>
Sent: Wed, 23 Jan 2019 15:12:27 +0300
Subject: Re: Ethiopia GHSA biweekly update, Jan. 25
To: Darsema Gulima Huluka <dhuluka@hrh2030program.org>
Cc: Lisa Kramer <lkramer@usaid.gov>, Woutrina A Smith <wasmith@ucdavis.edu>, hellen Amuguni <Janetrix.Amuguni@tufts.edu>, Innocent Rwego <rwegovet@yahoo.co.uk>, Diafuka Saila-Ngita <diafuka.saila_ngita@tufts.edu>, David Mutonga <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>, Jamie Mazet <jkmazet@ucdavis.edu>, "Tzipori, Saul" <saul.tzipori@tufts.edu>, "Makonnen, Yilma (FAORNE)" <[redacted]>, Marilyn Crane <mcrane@usaid.gov>, Innocent Rwego <irwego@umn.edu>, Andrew Kitua <Andrew_Kitua@dai.com>, Ricardo Echalar <rechalar@usaid.gov>, Jeff Bender <bende002@umn.edu>, Susan Scribner <Susan_Scribner@dai.com>, Mandy Paust <apaust@usaid.gov>, Yirgalem Gebremeskel <ygebremeskel@usaid.gov>, "Woldtsadique, Feleseta (FAOET)" [redacted], "Awoke, Wondwosen (FAOET)" <[redacted]>, "VantKlooster, Gijs (FAOET)" [redacted] Jennifer K Lane <jklane@ucdavis.edu>, Simon Heliso <Simonh@jhuccpeth.org>, Guda Alemayehu <galemayehu@usaid.gov>, Anton Schneider <aschneider@usaid.gov>, Tegegne Shiferaw <tegegnes@jhuccpeth.org>, Khadijah Alibhai <kalibhai@brynmawr.edu>, Darsema Gulima <[redacted]>, [redacted] "filimonab@crdaethiopia.org" <filimonab@crdaethiopia.org>, Legesse Bezabih [redacted] Muluken Alemu <[redacted]>, "mjoshi@msh.org" <mjoshi@msh.org>, "Mekonnen,Negussu" <nmekonnen@msh.org>, "Denise.Johnson@icf.com" <Denise.Johnson@icf.com>, Benita Izere <Benita.Izere@icf.com>, Asnakew Yeshiwondim <ayeshiwondim@path.org>, Mariam Reda <mreda@chemonics.com>, Oluseyi Segun <osegun@chemonics.com>, hrh one health pmu <hrhonehealthpmu@chemonics.com>

Well received. Thank you!
Regards,
Faith Bartz Tarr, Ph.D.

USAID Ethiopia
Science, Technology, Innovation and Partnerships Advisor
Office of Economic Growth and Transformation

email fbartz@usaid.gov
phone +251(or 0 within Ethiopia) 1-11-30-60-07
mobile +[redacted]
U.S. alternate phone number: 1-301-985-8857 extension 6007

Find us online at:
USAID.gov/ethiopia
Facebook: https://www.facebook.com/usaidethiopia
Twitter: @USAIDEthiopia

On Wed, Jan 23, 2019 at 2:56 PM Darsema Gulima Huluka <dhuluka@hrh2030program.org> wrote:

> Dear Dr Faith,
>
> Kindest greetings.
>
> Please find attached the HRH2030 OH GHSA bi-weekly update.
>
> With best regards,
>
> Darsema Gulima Huluka
>
> Multisectoral Health Security Advisor
>
> Human Resources for Health in 2030 One Health Project
>
> United States Agency for International Development (USAID)
>
> Email: dhuluka@hrh2030program.org

[redacted]

Cellphone: +251921782171

Skype: Darsema Gulima

Addis Ababa, Ethiopia

From: Faith Bartz Tarr <fbartz@usaid.gov>
Sent: Wednesday, January 23, 2019 1:59 PM
To: Lisa Kramer <lkramer@usaid.gov>; Woutrina A Smith <wasmith@ucdavis.edu>; hellen Amuguni <Janetrix.Amuguni@tufts.edu>; Innocent Rwego <rwegovet@yahoo.co.uk>; Diafuka Saila-Ngita <diafuka.saila_ngita@tufts.edu>; David Mutonga <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>; Jonna Mazet <jkmazet@ucdavis.edu>; Tzipori, Saul <saul.tzipori@tufts.edu>; Makonnen, Yilma (FAORNE) <[redacted]>; Marilyn Crane <mcrane@usaid.gov>; Innocent Rwego <irwego@umn.edu>; Andrew Kitua <[redacted]>; Ricardo Echalar <rechalar@usaid.gov>; Jeff Bender <bende002@umn.edu>; Susan Scribner <[redacted]>; Mandy Paust <apaust@usaid.gov>; Yirgalem Gebremeskel <ygebremeskel@usaid.gov>; Woldtsadique, Feleseta (FAOET) <[redacted]>; Awoke, Wondwosen (FAOET) <[redacted]>; VantKlooster, Gijs (FAOET) <[redacted]>; Jennifer K Lane <jklane@ucdavis.edu>; Simon Heliso <Simonh@jhuccpeth.org>; Guda Alemayehu <galemayehu@usaid.gov>; Anton Schneider <aschneider@usaid.gov>; Tegegne Shiferaw <tegegnes@jhuccpeth.org>; Khadijah Alibhai <kalibhai@brynmawr.edu>; Darsema Gulima <[redacted]arsema Gulima Huluka <dhuluka@hrh2030program.org>; f[redacted]ilimonab@crdaethiopia.org; Legesse Bezabih <[redacted]>; Muluken Alemu <[redacted]mjoshi@msh.org; Mekonnen,Negussu <nmekonnen@msh.org>; Denise.Johnson@icf.com; Benita Izere <Benita.Izere@icf.com>; Asnakew Yeshiwondim <ayeshiwondim@path.org>
Subject: Ethiopia GHSA biweekly update, Jan. 25

Dear GHSA Ethiopia colleagues,

I hope everyone enjoyed a happy Timket holiday!

It's time for the biweekly update on GHSA activities in Ethiopia. This update should cover activities from Jan. 12, 2018 - Jan. 25, 2019. Please use the attached template, and send all updates by COB today, Wednesday, Jan. 23. Apologies for the late reminder.

Thank you all as always, and wishing you well.

Regards,

Faith Bartz Tarr, Ph.D.

USAID Ethiopia

Acting Global Health Security Advisor
AAAS Science and Technology Policy Fellow & Agriculture Officer
Office of Economic Growth and Transformation

email fbartz@usaid.gov
phone +251(or 0 within Ethiopia) 1-11-30-60-07
mobile [redacted]

U.S. alternate phone number: 1-301-985-8857 extension 6007

Find us online at:
USAID.gov/ethiopia
Facebook: https://www.facebook.com/usaidethiopia
Twitter: @USAIDEthiopia

From: Andrew Clements <aclements@usaid.gov>
Sent: Fri, 1 Feb 2019 08:21:27 -0800
Subject: Re: BAST for PREDICT
To: David J Wolking <djwolking@ucdavis.edu>
Cc: Jonna Mazet <jkmazet@ucdavis.edu>, Elizabeth Leasure <ealeasure@ucdavis.edu>, PREDICTMGT <predictmgt@usaid.gov>

Thanks, David. Good thing I asked!

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 Feb 1, 2019, at 4:54 PM, David J Wolking <djwolking@ucdavis.edu> wrote:

> Hi Andrew,
> Honestly this is the first time I'm hearing about this, so personally I'm alarmed by the mention of "waiting for UC Davis direction" below. From my perspective we have yet to be approached for any direction whatsoever and since this appears to have started way back in May 2018 it's certainly not due to a lack of opportunity. I'll consult with Liz this morning and in the meantime reach out to Kevin, Alice and the EHA team and see what's going on here.

Stay tuned,

David

On Fri, Feb 1, 2019 at 5:42 AM Andrew Clements <aclements@usaid.gov> wrote:

> Assume you know about this....

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

---------- Forwarded message ---------
From: **culiq culiq** <[REDACTED]>
Date: Fri, Feb 1, 2019 at 9:31 AM
Subject: Re: BAST for PREDICT
To: Sylvia Sihombing <ssihombing@usaid.gov>
Cc: Joko Pamungkas <[REDACTED]>, Joko Pamungkas - Yahoo <[REDACTED]>, Dodi Safari <[REDACTED]>, Suryo Saputro <[REDACTED]>, Tina Kusumaningrum <[REDACTED]>, Dr Joko Pamungkas (Imung) <[REDACTED]>, Meinke, Timothy (HANOI/OH) <tmeinke@usaid.gov>, Angeline, Anak A E (Jakarta/FM) <aangeline@usaid.gov>, PREDICTMGT <PREDICTMGT@usaid.gov>

Hi Mbak Sylvia,

Apologize for the late reply.

We're still waiting for UC Davis direction.
Once we have the result, we will let you know.
Appreciate your kind understanding.

Thank you and best regards,

Julie

On Mon, Jan 28, 2019 at 5:12 PM Sylvia Sihombing <ssihombing@usaid.gov> wrote:

> Dear Predict team,
>
> This is a 3rd reminder for your draft BAST submission.
> Please note that you are 10 days overdue now and we won't be able to meet the GoI dateline for BAST submission.
>
> Also, I just noticed that I put December 2019 in my previous email below, it should have been typed December 2018, apology for the typo. Hope this not causing the late submission.
>
> Thanks,
> Sylvia
>
> On Fri, Jan 4, 2019 at 4:45 PM Sylvia Sihombing <ssihombing@usaid.gov> wrote:
>
> > Dear Predict team,
> > Happy New Year and I wish you all a successful 2019.
> >
> > This is to remind you that PREDICT have to submit BAST (hand over certificate) for the period of beginning of the project up to December 2019. Template for the BAST is attached.
> >
> > USAID has to submit BAST to GoI before end of January, therefor please submit draft of your BAST to us by COB January 18.
> >
> > Please let me or Angel (cc'ed) if you have any question.
> >
> > Thank you,
> > --
> >
> > **SYLVIA M. SIHOMBING**
> >
> > Project Assistant - Health Office
> > USAID Indonesia
> > U.S. Embassy Jakarta, Jl. Medan Merdeka Selatan 3-5
> > Jakarta 10110
> > T +62-(0)21-5083-1019
> > USAID.gov/Indonesia | ssihombing@usaid.gov | @USAIDIndonesia
>
> ---------- Forwarded message ---------
> From: **Sylvia Sihombing** <ssihombing@usaid.gov>
> Date: Fri, May 25, 2018 at 3:20 PM
> Subject: Additional reporting to GOI
> To: Joko Pamungkas <[REDACTED]>, Joko Pamungkas - Yahoo <[REDACTED]>, Diah Iskandriati

[redacted], Dodi Safari <[redacted]>, Suryo Saputro <[redacted]>, Tina Kusumaningrum <[redacted]>, Jusuf Kalengkongan <[redacted]>, Wiku Adisasmito <[redacted]>, Nisa Vidya Yuniarti <[redacted]>, Dr Joko Pamungkas (Imung) <[redacted]>, culiq culiq <[redacted]>, Nurul Maretia Rahmayanti <[redacted]>
Cc: Meinke, Timothy (HANOI/OH) <tmeinke@usaid.gov>, Bambang Heryanto <[redacted]>

Dear PREDICT and OHW team,

Hope this email finds you well.

Thank you for keep sending your monthly report on time.

In addition to that monthly report, GoI recently has added 3 more reports that we should submit:
1. Quarterly narrative
2. Quarterly financial report
3. BAST / hand over certificate - annually

All monthly reports are due to GOI by the 8th of the following month and therefor we are requesting you to submit your reports to us by the 30th of every month. Same for quarterlies but on 30th of March, June, September, and December.

For BAST, GoI requested that we submit 1 for now to cover activities from October 1, 2014 - December 31, 2017. Can you please complete the BAST and we would really appreciate it if you can send us the completed BAST, Quarterly Financial Report, and Quarterly Narrative before Ied holiday (June 14).

For the Quarterly financial report, we need you to submit 2 financial reports: 1 report for January to December 2017 (Q1/2017 to Q4/2017) - please list the financial report by quarter - and 1 report for January to March 2018 (Q1/2018).

For the Quarterly narrative, please submit the January - March 2018 (Q1/2018) report.

Attached are templates for all additional reports and some sample of completed template for your reference.

We apologize for this short coming request, but appreciate and thank you for your understanding on this requirements.
Please let me know if you have any questions.

Thank you,
--
Sylvia M Sihombing
Program Assistant
Health Office
USAID Indonesia
Telp: 6221 34359402
Fax: 6221 3812945

--

SYLVIA M. SIHOMBING

Project Assistant - Health Office
USAID Indonesia
U.S. Embassy Jakarta, Jl. Medan Merdeka Selatan 3-5
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--
You received this message because you are subscribed to the Google Groups "PREDICTMGT" group.
To unsubscribe from this group and stop receiving emails from it, send an email to predictmgt+unsubscribe@usaid.gov.
To post to this group, send email to predictmgt@usaid.gov.
To view this discussion on the web visit https://groups.google.com/a/usaid.gov/d/msgid/predictmgt/CA%2Bi2iygdMDH0-K7xLWPkz1bVtR2efGy_DCbKcwrXO0HaNjLY%3DA%40mail.gmail.com.

From: Andrew Clements <aclements@usaid.gov>
Sent: Mon, 11 Feb 2019 17:45:00 +0100
Subject: Re: BAST for PREDICT
To: Elizabeth Leasure <ealeasure@ucdavis.edu>
Cc: David John Wolking <djwolking@ucdavis.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, PREDICTMGT <predictmgt@usaid.gov>, predict Sympa List <predict@ucdavis.edu>

Thanks, Liz.

Go ahead and share directly with the Mission.

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

On Mon, Feb 11, 2019 at 5:16 PM Elizabeth Leasure <ealeasure@ucdavis.edu> wrote:

> Hi Andrew. We filled out the form as best we could (see attached). Should we share with the Mission and copy you, or would you prefer to send to the Mission yourself? Please advise.
>
> 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:** Friday, February 1, 2019 5:39 AM
> **To:** David John Wolking <djwolking@ucdavis.edu>; Jonna Mazet <jkmazet@ucdavis.edu>; Elizabeth Leasure <ealeasure@UCDAVIS.EDU>
> **Cc:** PREDICTMGT <predictmgt@usaid.gov>
> **Subject:** Fwd: BAST for PREDICT
>
> Assume you know about this....

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

---------- Forwarded message ---------
From: **culiq culiq** <[REDACTED]>
Date: Fri, Feb 1, 2019 at 9:31 AM
Subject: Re: BAST for PREDICT
To: Sylvia Sihombing <ssihombing@usaid.gov>
Cc: Joko Pamungkas <[REDACTED]>, Joko Pamungkas - Yahoo <[REDACTED]>, Dodi Safari <[REDACTED]>, Suryo Saputro <[REDACTED]>, Tina Kusumaningrum <[REDACTED]>, Dr Joko Pamungkas (Imung) <[REDACTED]>, Meinke, Timothy (HANOI/OH) <tmeinke@usaid.gov>, Angeline, Anak A E (Jakarta/FM) <aangeline@usaid.gov>, PREDICTMGT <PREDICTMGT@usaid.gov>

Hi Mbak Sylvia,

Apologize for the late reply.

We're still waiting for UC Davis direction.

Once we have the result, we will let you know.

Appreciate your kind understanding.

Thank you and best regards,

Julie

On Mon, Jan 28, 2019 at 5:12 PM Sylvia Sihombing <ssihombing@usaid.gov> wrote:

> Dear Predict team,
>
> This is a 3rd reminder for your draft BAST submission.
>
> Please note that you are 10 days overdue now and we won't be able to meet the GoI dateline for BAST submission.

Also, I just noticed that I put December 2019 in my previous email below, it should have been typed December 2018, apology for the typo. Hope this not causing the late submission.

Thanks,

Sylvia

On Fri, Jan 4, 2019 at 4:45 PM Sylvia Sihombing <ssihombing@usaid.gov> wrote:

Dear Predict team,

Happy New Year and I wish you all a successful 2019.

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USAID has to submit BAST to GoI before end of January, therefor please submit draft of your BAST to us by COB January 18.

Please let me or Angel (cc'ed) if you have any question.

Thank you,

--

SYLVIA M. SIHOMBING

Project Assistant - Health Office
USAID Indonesia
U.S. Embassy Jakarta, Jl. Medan Merdeka Selatan 3-5
Jakarta 10110
T +62-(0)21-5083-1019
USAID.gov/Indonesia | ssihombing@usaid.gov | @USAIDIndonesia

---------- Forwarded message ---------
From: **Sylvia Sihombing** <ssihombing@usaid.gov>
Date: Fri, May 25, 2018 at 3:20 PM
Subject: Additional reporting to GOI
To: Joko Pamungkas <[redacted]>, Joko Pamungkas - Yahoo <[redacted]>, Diah Iskandriati <[redacted]>, Dodi Safari <[redacted]>, Suryo Saputro <[redacted]>, Tina Kusumaningrum <[redacted]>, Jusuf Kalengkongan <[redacted]>, Wiku Adisasmito <[redacted]>, Nisa Vidya Yuniarti <[redacted]>, Dr Joko Pamungkas (Imung) <[redacted]>, culiq culiq <[redacted]>, Nurul Maretia Rahmayanti <[redacted]>
Cc: Meinke, Timothy (HANOI/OH) <tmeinke@usaid.gov>, Bambang Heryanto <[redacted]>

Dear PREDICT and OHW team,

Hope this email finds you well.

Thank you for keep sending your monthly report on time.

In addition to that monthly report, GoI recently has added 3 more reports that we should submit:

1. Quarterly narrative

2. Quarterly financial report

3. BAST / hand over certificate - annually

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Attached are templates for all additional reports and some sample of completed template for your reference.

We apologize for this short coming request, but

appreciate and thank you for your understanding on this requirements.

P

lease let me know if you have any questions.

Thank you,

--

Sylvia M Sihombing

Program Assistant

Health Office

USAID Indonesia

Telp: 6221 34359402

Fax: 6221 3812945

--

SYLVIA M. SIHOMBING

Project Assistant - Health Office
USAID Indonesia
U.S. Embassy Jakarta, Jl. Medan Merdeka Selatan 3-5
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To post to this group, send email to predictmgt@usaid.gov.
To view this discussion on the web visit https://groups.google.com/a/usaid.gov/d/msgid/predictmgt/CA%2Bi2iygdMDH0-K7xLWPkz1bVtR2efGy_DCbKcwrXO0HaNjLY%3DA%40mail.gmail.com.

--
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To view this discussion on the web visit https://groups.google.com/a/usaid.gov/d/msgid/predictmgt/MWHPR08MB3326615C3CCF02165274B68DA2640%40MWHPR08MB3326.namprd08.prod.outlook.com.

From: "William B. Karesh" <karesh@ecohealthalliance.org>
To: Subhash Morzaria <[redacted]>, John MacKenzie <[redacted]>, "JMHUGHE@emory.edu" <jmhughe@emory.edu>, "Lonnie King" <[redacted]>, Ron Waldman <ronwaldman@email.gwu.edu>
Cc: Amanda Andre <amanda.andre@ecohealthalliance.org>, Predict inbox <predict@ucdavis.edu>
Sent: Tue, 12 Feb 2019 16:18:32 +0000
Subject: [predict] Save the dates: PREDICT Ext. Advisors

Greetings everyone,
We are planning two wrap-up meetings for PREDICT-2 for this year.

The first will be a smaller semi-annual meeting format with the core staff from the US, planned for April 30th - May 2nd in Vancouver, BC. This will be our last chance to meet and plan the last stages of the project.

There is the possibility that we may be granted a one-year extension at a much lower funding level to help a subset of our country partners with risk assessment and surveillance planning for their respective priority zoonotic diseases (from JEE, GHSA, CDC ranking exercises). If that does happen, we will be discussing that at this meeting.

The second meeting would be our all-country partners wrap up meeting to be held in Bali, Indonesia. Exact dates are still TBD, but we are looking at a few days during the first 2 weeks of September.

You are all welcome at either or both, though the semi-annual in Vancouver will be more of a working meeting while there is still time to make some course corrections and the final meeting in Bali will be more focused on the sharing the final results of the project and finishing up the final project report. If the extension does occur, we will use the time for making sure the include countries are on board.

Look forward to hearing from you.

Billy

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.

From: Andrew Clements <aclements@usaid.gov>
Sent: Fri, 10 May 2019 05:34:43 -0400
Subject: Fwd: May I schedule a brown bag for IDEALL?
To: djwolking@ucdavis.edu, Jonna Mazet <jkmazet@ucdavis.edu>, daszak@ecohealthalliance.org
Cc: predictmgt@usaid.gov

FYI

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: Andrew Clements <aclements@usaid.gov>
Date: May 10, 2019 at 11:33:23 AM GMT+2
To: Robert Cohen <rcohen@usaid.gov>
Cc: PREDICTMGT <predictmgt@usaid.gov>, Marilyn Crane <mcrane@usaid.gov>, Dennis Carroll <dcarroll@usaid.gov>
Subject: Re: May I schedule a brown bag for IDEALL?

Hi Rob,
No problem if they are already in town for another purpose.

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 May 10, 2019, at 4:22 AM, Robert Cohen <rcohen@usaid.gov> wrote:

Dear Predict Management Team,

I saw Peter Daszak recently at an event and he suggested that USAID might be interested in a brown bag now that IDEALL is coming to a close. Any objection if I set it up? I'd love to hear more about it.

Thanks!
Rob

Robert Cohen, MD MPH

Senior Advisor for Monitoring and Evaluation for Maternal and Child Health
USAID Contractor
Bureau for Global Health, Office of Maternal and Child Health and Nutrition
Research and Policy Division
2100 Crystal Drive, CP3-10043B, Arlington, VA 22202
Phone: 571-551-7474

Cell: REDACTED
Email: rcohen@usaid.gov

GHSI-III - CAMRIS International, Inc. prime contractor

--
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To unsubscribe from this group and stop receiving emails from it, send an email to
predictmgt+unsubscribe@usaid.gov.
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To view this discussion on the web visit
https://groups.google.com/a/usaid.gov/d/msgid/predictmgt/CANn_2gi82rPziC_n35fN%2BA6s4Q4EsOs5aP7_r_TM6bN1_8WCgQ%40mail.gmail.com.

From: Andrew Clements <aclements@usaid.gov>
Sent: Mon, 13 May 2019 13:25:30 -0700
Subject: Re: PREDICT Cost Share revision request
To: Elizabeth Leasure <ealeasure@ucdavis.edu>
Cc: Alisa Pereira <apereira@usaid.gov>, Amalhin Shek <ashek@usaid.gov>, Cara Chrisman <cchrisman@usaid.gov>, Jonna Mazet <jkmazet@ucdavis.edu>, predict Sympa List <predict@ucdavis.edu>, Hannah R Chale <hrchale@ucdavis.edu>

Working on it...

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 13, 2019, at 6:54 PM, Elizabeth Leasure <ealeasure@ucdavis.edu> wrote:

> Hi Andrew. Just following up on this. If you have any questions or need additional info, please let me know.
>
> Thanks,
> Liz
>
> *Elizabeth Leasure*
> *Financial Operations Manager*
> *One Health Institute*
> *530-304-1403 (cell)*
> *530-754-9034 (office)*
> *Skype: ealeasure*
>
> ---
>
> **From:** Elizabeth Leasure
> **Sent:** Thursday, May 2, 2019 10:27 AM
> **To:** Elizabeth Leasure <ealeasure@ucdavis.edu>; Andrew Clements <aclements@usaid.gov>
> **Cc:** Alisa Pereira <apereira@usaid.gov>; Amalhin Shek <ashek@usaid.gov>; Cara Chrisman <cchrisman@usaid.gov>; Jonna Mazet <jkmazet@ucdavis.edu>; predict Sympa List <predict@ucdavis.edu>; Hannah R Chale <hrchale@ucdavis.edu>
> **Subject:** RE: PREDICT Cost Share revision request
>
> Hi Andrew. Just following up on this to make sure it doesn't get lost in your inbox. If you have any questions, please let me know.
>
> Thanks!
> Liz
>
> *Elizabeth Leasure*
> *Financial Operations Manager*
> *One Health Institute*
> REDACTED *(cell)*
> *530-754-9034 (office)*
> *Skype: ealeasure*
>
> ---
>
> **From:** predict-request@ucdavis.edu <predict-request@ucdavis.edu> **On Behalf Of** Elizabeth Leasure
> **Sent:** Tuesday, April 23, 2019 9:34 AM
> **To:** Andrew Clements <aclements@usaid.gov>
> **Cc:** Alisa Pereira <apereira@usaid.gov>; Amalhin Shek <ashek@usaid.gov>; Cara Chrisman <cchrisman@usaid.gov>; Jonna Mazet <jkmazet@ucdavis.edu>; predict Sympa List <predict@ucdavis.edu>; Hannah R Chale <hrchale@UCDAVIS.EDU>
> **Subject:** [predict] PREDICT Cost Share revision request

Hi Andrew. EcoHealth Alliance and Metabiota have asked to revise their cost share commitments for PREDICT, and we now seek your approval as AOR for these changes in accordance with 2 CFR 200.308(c)(1)(vii). The requested changes will in no way impair PREDICT's ability to meet our overall cost share commitment, which we are on track to complete by the end of the project. The partner-specific changes requested are included below, and a spreadsheet detailing the requested EHA revisions is attached for your reference. If you have any questions or wish to discuss further, please let me know. Thank you!

Metabiota has requested a $10,704 reduction to their Year 5 approved cost share commitment from $43,933 to $33,229. To date, Metabiota has committed $771,453 in cost share for life of project (LOP) per approved annual budgets. This amount is $38,335 over their proposal commitment of $733,118. The details of the requested reduction are as follows:

Original approved cost share for Y5

Eddy Rubin (5%) salary & benefits plus waived IDC	6,508
Nathan Wolfe (2%) salary & benefits plus waived IDC	13,125
INRB Operational Costs plus waived IDC	24,300
	43,933

Requested revised cost share for Y5

Eddy Rubin (0%) salary & benefits plus waived IDC	-
Nathan Wolfe (2%) salary & benefits with no waived IDC	8,929
INRB Operational Costs plus waived IDC	24,300
	33,229

EcoHealth Alliance has requested a revision/rebudget of their LOP cost share commitment, with a net change of $0. The details of and justification for these changes are included in the attached spreadsheet, and a high-level summary is included below.

Original Y1	Original Y2	Original Y3	Original Y4	Original Y5	Total originally committed/ approved
141,349	249,212	237,062	323,703	185,521	**1,136,847**

Requested Revision Y1	*Requested Revision Y2*	*Requested Revision Y3*	*Requested Revision Y4*	*Requested Revision Y5*	*Net change resulting from requested revisions*
3,216	*(190,530)*	*50,915*	*(25,332)*	*161,731*	*(0)*
Revised Y1	**Revised Y2**	**Revised Y3**	**Revised Y4**	**Revised Y5**	**Total committed w/ requested revisions**
144,565	58,682	287,977	298,371	347,252	**1,136,847**

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

From:	David J Wolking <djwolking@ucdavis.edu>
To:	Amalhin Shek <ashek@usaid.gov>;Clements, Andrew (GH/HIDN) <AClements@usaid.gov>;Alisa Pereira Emerging Threats Division <apereira@usaid.gov>
CC:	predict@ucdavis.edu <predict@ucdavis.edu>
Sent:	8/13/2019 10:55:28 AM
Subject:	[predict] PREDICT in Lao PDR - US Embassy social media

Hi there,

Just sharing this nice feature on PREDICT from the US Embassy in Vientiane.

David

Sent: Tue, 27 Aug 2019 19:02:08 -0700
Subject: Bali Day 1 opening session
From: Jonna Mazet <jkmazet@ucdavis.edu>
To: Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, Peter Daszak <daszak@ecohealthalliance.org>, Suzan Murray <MurrayS@si.edu>, Billy Karesh <karesh@ecohealthalliance.org>, "Anthony, Simon J." <sja2127@cumc.columbia.edu>, Karen Saylors <ksaylors@metabiota.com>
Cc: David J Wolking <djwolking@ucdavis.edu>, Corina Grigorescu Monagin <cgmonagin@ucdavis.edu>, Ava Sullivan <sullivan@ecohealthalliance.org>, "Kevin J. Olival" <olival@ecohealthalliance.org>

Hello,
As I already told Ava, Andrew will be videotaping his opening remarks for the Bali meeting, as he does not have travel approval to attend. From USAID, we are expecting Cara, Amalhin, Ricardo, Tim, Lisa Kramer, and Zandra (maybe). We're getting a confirmed list now.
Andrew will ask Tim to get us preferred opening people from Mission/Embassy and GoI to invite. If nothing comes, we should invite Tim to speak on behalf of USAID/I and invite our own choice from GoI. Imung should also speak/welcome, I would think.

Then we will have our opening panel, for which I have Chris, Peter, Suzan, Karen, Simon, Billy, and myself slated to speak. If the opening remarks keep to 30 minutes, we will have 1:30 to speak. Breaking it evenly that will be approximately 12 minutes each to give the broad overview of Predict. We are hoping this panel would serve as an introduction to the guests, as well as a celebration of our successes. If you're feeling up for that charge, please respond to this email with your participation confirmation.

I will introduce you and take the final position for give highlights of our successes not otherwise covered by you all.
A straw man for the schedule & session would then be:
Suzan: community & stakeholder engagement, including USG
Chris: surveillance findings & implication for risk
Karen: behavior & motivation for recommendations
Simon: lab strengthening & discovery
Peter: risk modeling & highlights of developing recommendations
Billy: turning from data to improved engagements & policy
myself: additional highlights of successes & potential for long-term impacts with teasers for rest of meeting

Please let me know what you think of the above & make suggestions for improvements.
The rest of the panels are coming together & will, for the most part, be moderated by one global person & one in-country leader. To spread the visibility & leadership of the meeting, most of us on the opening panel won't be moderating those panels, but there are some strategic exceptions. Corina & David will email you if there are additional expectations for you to complete the organization and coordination of a panel.

Let me know what you think,
Jonna

P.S. Once we have settled on our scope & roles, we'll have a Zoom closer to the meeting time to make sure we will be well coordinated and won't overlap in our comments.

From: Andrew Clements <aclements@usaid.gov>
Sent: Mon, 9 Dec 2019 13:08:55 -0800
Subject: Re: PREDICT Management Team Call - Tuesday December 10 @ 8:30AM Pacific
To: David J Wolking <djwolking@ucdavis.edu>, Christine Kreuder Johnson <ckjohnson@ucdavis.edu>, Jonna Mazet <jkmazet@ucdavis.edu>, ealeasure@ucdavis.edu
Cc: predictmgt@usaid.gov

David,
If you have suggested language for the reporting change in the upcoming modification, please let me know. Otherwise, we will craft something.

OAA is prepared to make the change (along with the change in key personnel) once the money is available.

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 Dec 9, 2019, at 7:52 PM, David J Wolking <djwolking@ucdavis.edu> wrote:

> Hi there,
> Below is the agenda and Zoom info for our call this week (Tuesday December 10 @ 8:30AM Pacific).

Talk soon,

David

PREDICT Management Team Meeting Agenda
Tuesday, December 10, 2019
8:30-9:30AM PST/11:30-12:30pm EST
Zoom link: [redacted]
Additional Zoom info below agenda

USAID Updates

1. Administrative items

- *Extension period funding and financial status updates*
- *Key personnel change*
- *Written confirmation for five-year report satisfying 2019 annual report obligation*
- *March 25-27, 2020 meeting updates (save the date, plans and preparation, etc.)*
- *GAO GHSA audit news?*

2. On close-out - standing item

- Review/discussion of USAID close-out tracker & Predict tracking tools
- Feedback on Open Science Framework https://osf.io/ for data storage

3. Final report updates

4. Mission, partner communications & country roundup essentials

5. Publication, media, and conference updates

- 19th International Congress on Infectious Diseases, Kuala Lumpur (February 20-23, 2020)
- PMAC, Bangkok, Thailand (January 28-31, 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: +1[redacted]
Meeting ID: [redacted]

From: alexandra zuber <alexandrazuber@atahealthstrategies.com>
To: Federico Castillo, PhD <f.castillo@berkeley.edu>;Omar Romero-hernandez <oromero@haas.berkeley.edu>;Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>;Elizabeth Leasure <ealeasure@UCDAVIS.EDU>;Karesh@ecohealthalliance.org <Karesh@ecohealthalliance.org>;daszak@ecohealthalliance.org <daszak@ecohealthalliance.org>;Sam Halabi <sfh9@georgetown.edu>;Jonna Mazet <jkmazet@ucdavis.edu>;Matthew Blake <mblake@ucdavis.edu>;Woutrina A Smith <wasmith@ucdavis.edu>
CC: David John Wolking <djwolking@ucdavis.edu>;Tracey Goldstein <tgoldstein@ucdavis.edu>;Terra Kelly <trkelly@ucdavis.edu>;Jon Epstein <epstein@ecohealthalliance.org>
Sent: 2/14/2020 1:47:13 PM
Subject: Agenda and Reading for Tuesday's Retreat Planning Session

Hi all,
We are looking very forward to our planning session next week, Feb 18th, on the Business Planning Retreats for Organizational Sustainability.

Please find our proposed agenda, our concept note for the retreats, as well as minutes and a PPT from our last meeting for those that couldn't make it. I've also attached the transition plan and business plan appendices, as well as the strategic plans for AFROHUN and SEAOHUN for background reading.

Please feel free to reach out with any questions in advance.

Have a great weekend,
Alexandra, Federico, and Omar

Alexandra Zuber, MPP, DrPH
Founder and CEO, Ata Health Strategies, LLC
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From: alexandra zuber
Sent: Wednesday, February 12, 2020 8:47 PM
To: Federico Castillo, PhD ; Omar Romero-hernandez ; Corina Grigorescu Monagin ; Elizabeth Leasure ; Karesh@ecohealthalliance.org ; daszak@ecohealthalliance.org ; Sam Halabi ; Jonna Mazet ; Matthew Blake ; Woutrina A Smith
Subject: Re: Agenda, remote access information and auxiliary material for 2/12/2020 meeting

Hello Benchmarking and Planning Group,
Thanks for a productive first formal planning session for the Business Retreats for Organizational Sustainability. I have captured high level highlights attached (please edit as needed), as well as the overview slides I assembled for the discussion. Next week, Feb 18, we will have a long planning block for the purposes of developing a detailed strawman agenda with designated roles, and planning all the remaining action steps. This will guide the proposed list of attendees that we will submit to Woutrina and Jonna on Feb 19.

For those that can meet in person, our UC Davis folks have arranged a room for us for Feb 18. We will also have a Zoom line for those who are dialing in. I will be there in person.

Also, as a heads-up, we are working with this project timeline:

- March 15: Final retreat agenda circulated
- February 25: Combined ITR submitted to USAID for retreat travel
- Feb 23: We alert participants they have greenlight to submit ITR
- Feb 19: We submit joint list with Obj 1 and 2 on proposed participants to Woutrina & Jonna
- Feb 19: Draft agenda available for review by Obj 3 work group & AFROHUN via Zoom discussions/ virtual communication. Next Obj 3 work group is Feb 24.

Thanks all- feel free to email the group with any follow-up questions/ comments, or you can reach out to Federico, Omar, and myself.

Alexandra

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From: Federico Castillo, PhD
Sent: Tuesday, February 11, 2020 5:53 PM
To: alexandra zuber ; Omar Romero-hernandez ; Corina Grigorescu Monagin ; Elizabeth Leasure ; Karesh@ecohealthalliance.org ; daszak@ecohealthalliance.org ; Sam Halabi ; Jonna Mazet ; Matthew Blake ; Woutrina A Smith
Subject: Agenda, remote access information and auxiliary material for 2/12/2020 meeting

Hello all,
Enclosed is reading material for tomorrow's meeting. The documents have been shared at different meetings but we thought it would be good to have them in one place/email.
Remote access information:
Join Zoom Meeting: REDACTED
If you have any questions let me know. Looking forward to the meeting tomorrow!
Federico

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USAID FROM THE AMERICAN PEOPLE

One Health WORKFORCE

SEAOHUN Southeast Asia One Health University Network

SEAOHUN

Five year (2019-2024)

Strategic Plan

SEAOHUN Secretariat

2nd floor, Faculty of Veterinary Medicine,
Chiang Mai University
Mae Hia, Muang District,
Chiang Mai 50100,
Thailand

(+66) 53 948 105
secretariat@seaohun.org

www.seaohun.org
/seaohun
seaohun

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SEAOHUN
Five year (2019-2024) Strategic Plan

MISSION

To develop a resilient and competent One Health workforce by leveraging education, research, and training provided by university networks in Southeast Asia.

VISION

A regional network of universities in Southeast Asia generating social and intellectual excellence on One Health.



IMPROVED COLLABORATION ON RESOURCE MOBILIZATION

Resource mobilization units at NCOs and the SEAOHUN Secretariat, funded by contributions from all, to jointly develop regional proposals.

Key elements

- Establish resource mobilization units.
- Contribute funds by all (SEAOHUN/OHUNs).
- Coordinate proposal development.

IMPROVED COLLABORATION BETWEEN THE SECRETARIAT, OHUNS, AND MEMBER UNIVERSITIES

Collaboration on regional activity planning and development, taking into consideration both top-down regional strategy and bottom-up country interests and activity ideas.

Key element

- Work together on regional activity planning and development.

IMPROVED PUBLIC RELATIONS (PR)

Targeted public relations led by SEAOHUN/ OHUNs with the articulation of benefits of participation and with measurement of the impacts at all activity stages.

Key elements

- Improve PR at all stages of activities.
- Involve Board members and key stakeholders in PR activities.
- Measure PR impact.

ORGANIZATIONAL DEVELOPMENT FOR THE SEAOHUN SECRETARIAT

Base secretariat staffing on expected workload when dealing directly with various donors, utilizing remote work as appropriate. Continue to strengthen the SEAOHUN Executive Board's governance mechanisms, operating structures, and management.

Key elements

- Develop the Secretariat staffing plan based on expected future needs.
- Support future Executive Board structure and governance.

ENGAGEMENT WITH INTERNATIONAL, REGIONAL, AND NATIONAL PARTNERS, THE PRIVATE SECTOR, AND THE COMMUNITY

Increase SEAOHUN's visibility as a recognized organization in Southeast Asia for One Health capacity building by fostering partnerships with GHSA, ASEAN, national governments, the private sector, and the community.

Key elements

- Foster partnership.
- Improve visibility.

IMPROVED SHARING OF CURRICULA AND TEACHING BEST PRACTICES

Standardize One Health curricula, teaching methodologies, educator guides, career guides, and accreditation program, including shared online courses and learning resources.

Key elements

- Standardize One Health curricula.
- Standardize One Health teaching, training and assessment methodologies and protocols.
- Develop career guides.
- Apply for accreditation for One Health courses.
- Develop online courses.

IMPROVED NETWORKING AMONG FACULTY MEMBERS/NATIONAL TRAINERS, IN-SERVICE AND PRE-SERVICE HEALTH PROFESSIONALS

Centralize databases of One Health professionals and activities, events that bring One Health professionals together, and programs to facilitate mobility of faculty members, national trainers, and in-service and pre-service health professionals.

Key elements

- Establish centralized databases of One Health professionals and activities.
- Organize events bringing health professionals from various countries and disciplines together.
- Facilitate mobility across disciplines as well as across countries.

SEAOHUN
Southeast Asia One Health University Network

ASEAN: Association of Southeast Asian Nations / GHSA: Global Health Security Agenda / NCO: National Coordinating Office / OHUN: One Health University Network

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Planning Session #2: Business Retreat for Organizational Sustainability
OHW-Bench Marking and Planning Group (BPG)
Agenda
Tuesday, Feb 18, 2020 ● 1:00 – 5:00 pm PST/ 4:00-8:00 pm EST
Zoom details below

1:00-1:30 pm PST/ 4:00-4:30 pm EST

I. Opening & Scene-setting- Alex (and Terra if available)
   a. Review agenda
   b. Update from AFROHUN meetings
   c. Review & Achieve Consensus on Vision, Objectives & Outputs

1:30-2:30 pm PST/ 4:30- 5:30 pm EST

II. Day 1 Agenda
   a. Session topics
   b. Facilitators
   c. Methods
   d. Background preparation needed

2:30-3:30 pm PST/ 5:30- 6:30 pm EST

III. Day 2 Agenda
   a. Session topics
   b. Facilitators
   c. Methods
   d. Background preparation needed

3:30-4:30 pm PST/ 5:30-6:30 pm EST

IV. Day 3 Agenda
   a. Session topics
   b. Facilitators
   c. Methods
   d. Background preparation needed

4:30-5:00 pm PST/ 8:00-8:30 PST

V. Post-retreat writing process & timeline-

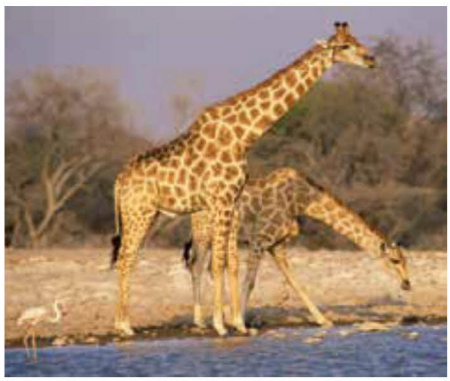
VI. Action steps

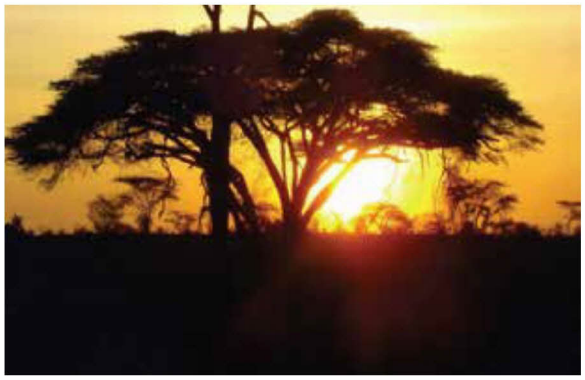
Zoom Meeting: REDACTED; Or dial by your location: + REDACTED

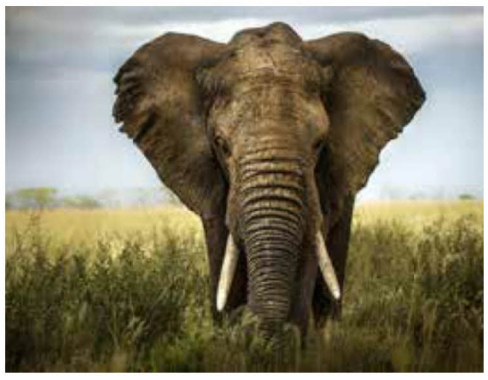
OHCEA

EMPOWERING GENERATIONS









One Health Central and Eastern Africa

Ten-Year Strategic Plan

March 2011-2021

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Foreword

It gives me great pleasure to share with you the One Health Central and Eastern Africa (OHCEA) ten year strategic plan. OHCEA is a network of seven Public Health and Seven Veterinary higher education institutions that are located in six countries in the Eastern and Central region in Africa. These are: Democratic Republic of Congo, Ethiopia, Kenya, Rwanda, Tanzania and Uganda. The institutions came together to promote trans-disciplinary collaboration in implementing One Health approaches to address complex health challenges in addressing emerging pandemics with a human-animal-ecosystem interface. The implementation of this strategic plan is in the third year. We look forward with optimism to the implementation of the strategic plan in full over the coming years.

Dr. Geoffrey Kabagambe
Uganda, November, 2013
Dr. Geoffrey Kabagambe
Project Manager- OHCEA

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Vision

A global leader in One Health approaches to sustainable health for healthy productive animals, prosperous communities and productive ecosystems.

Mission

To drive transformational change for continuous improvement of health and well-being of humans, animals, and ecosystems through multidisciplinary research, training and community service.

Core Values/Guiding Principles

- Multi-disciplinary teamwork
- Mutuality and respect
- Strategic partnerships
- Participatory and inclusiveness
- Collective decision making
- Accountability and transparency
- Innovativeness

In March 2011, OHCEA governing body endorsed the ten year strategic plan that was developed through a consultative process involving OHCEA stakeholders in 14 member institutions from six countries. These are: Democratic Republic of Congo, Ethiopia, Kenya, Rwanda, Tanzania and Uganda.

The plan outlines the network's medium to long term strategic direction for the attainment of its mission. These will effect positive and sustained change to address complex global and regional health challenges through trans-disciplinary, collaborative One Health (OH) approaches. This abridged version of the 10-year strategic plan outlines the Strategic Objectives (SO) and measures of success.



Eco-System in Ngorongoro Conservation Crater, Tanzania

SO1. Strengthen OHCEA institution as a growing regional network to deliver One Health for health system transformation.

A strong institution with clearly articulated regional and country goals and means to achieve them, have right leadership and functional governance structures, with technical capabilities, and knowledge management systems that foster cross-disciplinary and cross country learning is important to position the network in the next ten years to deliver on its intent-improvement of health, and well-being of humans, animals and ecosystems. OHCEA will utilize technical and financial resources within its member institutions and other partners to deliver on this goal.



Country Coordinating Committee meeting in session.

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The following benchmarks will be used to measure success:

- Approved regional and country plans, funded and efficiently delivered.
- OHCEA with legal status (at regional and country) with proper management and administrative systems that are functional.
- OHCEA members with requisite knowledge, skills and attitudes and demonstrating this in driving One Health approaches within and outside the institution.
- A network fully represented with institutions in the three sub-sectors: human, animal and eco-system health.

SO2. Support national agencies to build capacity and efficiency for zoonotic disease surveillance, reporting and outbreak response in country and across borders.

Capacity- knowledge, skills and right attitude is needed to deliver true trans-disciplinary approaches and to effectively address zoonosis holistically. OHCEA shall utilize its rich human resource base, and evidence generated from its One Health intervention to contribute options for the strengthening of national and regional surveillance, reporting and response mechanisms.

The following benchmarks will be used to measure success:

- Value adding partnerships created with select national/regional health policy institutions to support integration of human-animal-environmental health in disease surveillance and response.
- Guidelines, protocols developed for strengthening zoonotic disease outbreak surveillance, reporting and response and used to integrate One Health in existing health systems.
- One Health approach benchmarked against conventional approaches and its cost benefit analysis articulated and used to present a strong case for its implementation.
- OHCEA providing technical expertise to national and regional health systems and supporting evolution of efficient systems using a One Health approach.

SO3. Provide education and outreach services to expand the size and capabilities of the One Health workforce.



Deer farm visit in Minnesota during an Eco-health study tour

Training and mentorship programmes for young and in-service professionals is needed to facilitate appreciation and uptake of proven approaches. OHCEA member institutions as schools within centers of excellence are well placed to design tailored innovative training programmes both pre and in-service to facilitate learning and transfer of knowledge and skill.

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One Health Sensitization meeting in action

The following benchmarks will be used to measure our success:

- Learning needs for the different categories of groups and institutions well documented and used to develop and deliver new training programmes.
- Innovative training programmes/courses/modules (country and regional) developed in order to provide opportunity for future leaders, faculty and government workforce to acquire skills in OH approaches involving cross-sectoral and trans-disciplinary fields that meet government needs.
- Curricular in OHCEA schools for pre-service, in-service and community training are strengthened.
- Human resources within government agencies responsible for surveillance and response programmes including community para-professionals strengthened through new designed educational programmes in order to deliver better services to the people in the countries/region.
- A growing society of young people advancing One Health principles and approaches contributing to mass awareness.
- Innovative field-based training programs developed and provide opportunities for faculty/ students to work together in multi-disciplinary teams on community based problems at the animal-human-ecosystem interface.

SO 4. Build and leverage strategic partnerships with other organizations and networks for mutual benefit.

In advancing One Health goals, OHCEA will need to work with strategic: government, inter-governmental, private sector, not for profit. This will be particularly important to leverage financial and human resources.

The following benchmarks will be used to measure success:

- Strategies and guidelines for managing and delivering highly beneficial partnerships.
- Strategic and successful partnerships developed to deliver to OH goals.

SO 5. Strengthen infrastructure capacity and facilitate learning and resource sharing to support OH work.



Core Competency & Short course workshop in Dar-es-salaam

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Trans-disciplinary and collaborative approaches demand a minimum infrastructure base. OHCEA shall set up such infrastructure as labs, IT, communication equipment to facilitate e-learning, strengthen surveillance and reporting systems and enable sharing of knowledge and lessons across institutions and countries.

The following benchmarks will be used to measure success:

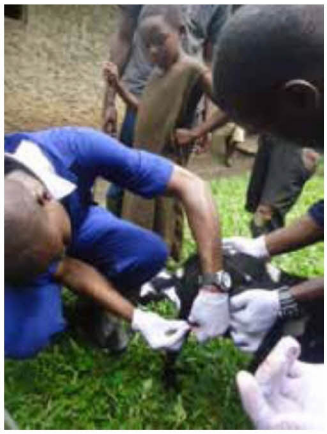
- OHCEA secretariats and institutions equipped with machinery and technical expertise to make them operational
- Select government institutions supported with infrastructure strategic in enabling application of One Health approaches.
- Technical expertise for IT is developed and shared within OHCEA institutions and collaborating government agencies.

SO 6. Generate evidence based data and share information to advance training, science and practice, and to inform policy.

Evidence based data supports replication and policy uptake. OHCEA will create and utilize platforms and diverse appropriate communication channels to share evidence generated and policy options emerging.

The following benchmarks will be used to measure success:

- Evidence based research packages, shared with targeted users (scholars, policy makers, policy implementers) and impacting training and policy guidelines.
- Information and data sharing platforms effectively used to share evidence.
- Peer reviewed research papers/articles based on OHCEA's One Health experiences.
- One health field sites involving faculty, students, community in cross-disciplinary applied research and outreach activities.
- OHCEA and member institutions recognized as center/s of excellence in the region for creation and promotion of new ideas and research in OH.



Vaccination in action during One Health Field Visit.

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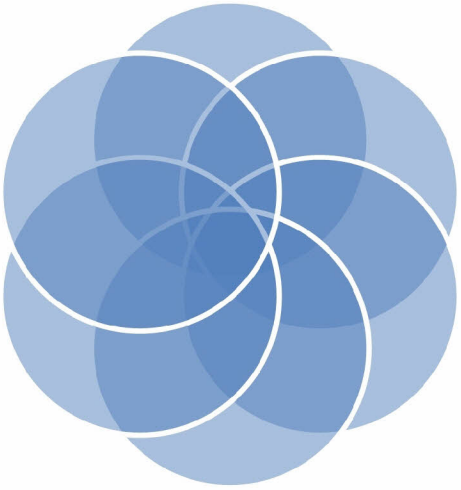
What We Want to Achieve

6. Generate evidence based data and share information to advance training, science and practice, and to inform policy.

1. Strengthen OHCEA institution as a growing regional network to deliver One Health for health system transformation.



5. Strengthen infrastructure capacity and facilitate learning and resource sharing to support OH work.

2. Support national agencies to build capacity and efficiency for zoonotic disease surveillance, reporting and outbreak response in country and cross borders.

4. Build and leverage strategic partnerships with other organizations and networks for mutual benefit.

3. Provide education and outreach services to expand the size and capabilities of the One Health workforce.



CONTACT INFORMATION

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OHCEA

Emerging Pandemic Threats Program
PREDICT • RESPOND • PREVENT • IDENTIFY

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UCDUSR0011614

Business Planning for Organizational Sustainability
Benchmarking and Planning Group
Planning Meeting #1
February 12, 2010
Participants: Jonna Mazet, Federico Castillo, Omar Romero Hernandez, Matthew Blake, Corina Monaghan, Sam Halabi, and Alexandra Zuber

1. Overview:

    1. Reviewed USAID requirements and our own commitments in our Obj 3 work plan, and business plan and transition plan appendices, which guide retreat content

    2. Jonna expressed sense of urgency about informing AFROHUN about participation from chapters, to observe ITA deadline. We advised that we have a working timeline to submit her a list of global consortium names by Feb 19, and that we need to know the final yes/ no so we can alert travellers by Feb 23. I will ask AFROHUN tomorrow about their participants. Alex will also need to familiarize herself with e new ITA process to make sure we put forwards ITA in a harmonized manner.

2. Retreat Objectives: Discussion regarding what the retreat is and what it is not (given some variable use in the terms "business plan" and "strategic plan" across global consortium and Secretariat staff:

    - We agreed the business planning retreat is designed to facilitate AFROHUN and SEAOHUN to specifically meet the OHW-NG goal of organizational and financial sustainability. It is not business planning for general purposes. It is also not a recreation of the 10 year strategic plan. The purpose of the retreat is to facilitate analysis, dialogue and planning on how they will achieve organizational and financial sustainability and specific transition plan milestones (e.g. Y3 direct funding by USAID, increasing funding for activities in Years 3-5, increasing responsibilities).

    - Thus the Business Plan should be written with the overarching goal for the organization to achieve organizational and financial sustainability

    - The strategic plan that is presently proposed as an Appendix to the Business Plan should be designed to be focused on the goals, strategies, tactics, and metrics to accomplish the vision and business model for organizational and financial sustainability articulated in the business plan, and specifically to accomplish transition plan milestones. It isn't an update or repeat of the 10 year strategic plan of the kind they already have.

    - However, we believe by co-designing this document with AFROHUN, we can come up with a meaningful strategic plan that both addresses the granular goals and tactics needed to accomplish transition plan milestones and their larger organizational goals. We will work closely with them to design an Appendix strategic plan format that works for their needs.

3. How pre-retreat assessments will be integrated in to the retreat:
    - We will present results from the SWOT analysis early on Day 1 (i.e. morning) to guide big picture thinking.
    - NUPAS results will already be discussed with Secretariat staff during the NUPAS visit, but we have a placeholder for prioritizing organizational capacity gaps on Day 2 where the scores can be reflected on screen for easy reference, but where the discussion is otherwise focused not on results but on action planning.

- Stakeholder mapping: A rapid stakeholder mapping is planned for before the retreats, so that we can bring a couple of slides to the Day 2 discussion on partnerships and stakeholders needed and they don't start at zero. We will introduce the "interest/ influence" matrix for the discussion. But this session will be short; a more robust stakeholder mapping is planned to be done in partnership with network staff as part of their partnership development strategy.
- OCA tool: We discussed at length and reviewed AFROHUN's work plan language on this. We feel benchmarking this tool at the retreat would be too time-consuming given the other retreat objectives. We decided Alex will probe AFROHUN's interest in conducting this tool either in advance of the retreat or after, and we would help facilitate this. There are some OCA domains that are highly relevant for the retreat (e.g. sustainability, board composition).
- We agreed Alex would see if there are any updates to the dates of the retreat or the needs of Obj 1 and 2 leads as a result of their site visit to AFROHUN this week.

4. Retreat deliverables:
    - Upon conclusion of the retreat (up to a few days after), we circulate a high level summary of the discussions, laying out the high level vision/ model/ goals and tactics we identified. This is needed to guide TA.
    - A NUPAS report is not needed for USAID reporting. However, we agreed a concise summary that documents the scoring (the score itself, why it was selected, what documents were reviewed as part of the score) would be useful for internal purposes. Matthew suggested this could be done within the NUPAS Excel tool itself.
    - We leave the retreat with a clear plan with the Secretariat staff as to how the writing of the actual plan documents will take place for some time period after the retreat (<8 weeks).

5. Planning for the Feb 18th planning meeting:
    - We will revise the concept note based on our planning session today, and based on AFROHUN's feedback tomorrow and circulate to the BPG in advance of the meeting.
    - We will agree to retreat objectives/ outputs
    - We will agree to session topics and rough time frames, with proposed facilitators
    - We will discuss proposed participants from the global consortium and their roles
    - We will do action planning on all analyses & preparation that needs to occur before the retreat, with responsible persons identified.

OHW-NG Transition Plan

Introduction

The sustainability, resiliency, and organizational performance of AFROHUN and SEAOHUN will determine their trajectory in the journey to self-reliance. Our goals for the transition plan are two-fold. First, we aim to empower these two organizations to shift from being a sub-recipient of USAID funding to receiving direct USAID funding, and to effectively subawarding to their member networks (i.e. Asian OHUNs and AFROHUN chapters, herein referred to as "countries" collectively). Second, we aim to support these organizations to scale-up their implementation of OHW-NG activities to effectively manage an increase in the organizations' proportion of OHW-NG funding, from approximately 50% in Year 1 to 70% in Year 5.

Our vision is that by Year 5, each network has achieved demonstrable improvements to organizational capacity and sustainability, and has a clear vision and business model for advancing their leadership of One Health workforce development in their regions independent of USAID funding. This transition plan outlines the four major stages of transition that we will facilitate, identifies the major benchmarks of progress, and also outlines our strategy for routine monitoring that includes an 'early warning system' meant to ensure early detection of risks and challenges and active trouble-shooting and remediation.

Stage 1: Subawards; Benchmarking and Planning

Transferring Successful Practices in Subaward Procedures

As recipients of subawards from UC Davis, each Secretariat will, in Quarter 1, complete mandatory subaward procedures that parallel USAID's own award recipient vetting process. For example, UC Davis requires, at a minimum, a subrecipient commitment form and a mini-audit questionnaire (to gauge fiscal responsibility), both completed and signed by the subrecipient; a statement of work; and a budget with budget justification. In the event that an intended subrecipient does not or cannot qualify for a subaward from UC Davis, the subrecipient receives a statement of needed corrective action that must take place before the subaward can be made, and, as long as the deficit is not fundamental, achieves provisional subrecipient status. Our OHW-NG team will provide virtual capacity-building assistance to help each Secretariat to accomplish any corrective actions. We anticipate that achieving subrecipient status at UC Davis is a first organizational hurdle, to be completed early in Year 1 for both networks. This is the first milestone we will monitor in the transition plan.

A second major step in the transition plan is to facilitate each Secretariat office to manage subawards to member countries in their region. This process has not occurred previously in either region, except for a subaward made by SEAOHUN to THOHUN. Therefore establishing the expectations, procedures, and capacity to manage these subawards is a critical second step to supporting the organizational functioning and sustainability of the entire network. Strong subaward procedures will be critical for the networks to properly manage direct USAID funding starting in Year 3. The milestone for this activity is for the Secretariats to have documented

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subaward procedures that each has established as organizational policy; we expect to accomplish this milestone by end of Year 1.

Baseline Benchmarking

Starting in Quarter 2 of Year 1, OHW-NG will conduct a baseline organizational capacity assessment of each of the two Secretariat organizations to identify the major organizational capacity areas that need to be strengthened for a successful transition to occur. From January-April, 2020, the OHW-NG consortium will use the USAID Non-U.S. Organization Pre-Award Survey (NUPAS) survey to conduct a benchmarking of AFROHUN and SEAOHUN Secretariats on critical organizational competency areas, such as, but not exclusive to, internal controls, personnel management, project management, and organizational governance. The NUPAS is comprised of 29 evaluative elements that represent the competencies deemed most critical in USAID's formulation of a responsibility determination before a grant is awarded to a non-U.S. organization.

Per USAID guidance on NUPAS, the OHW-NG team will first conduct a comprehensive desk review of organizational documents (e.g. charter and bylaws, descriptions of accounting procedures, and examples of invoices or vouchers that would substantiate that a process or procedure is underway). A follow-up site visit of two days to each Secretariat organization will be conducted by OHW-NG consortium members, where team members can observe processes and procedures first-hand and clarify any questions or gaps left by the documentation. The on-site visit team will then consolidate findings into a short report and PowerPoint presentation. This site visit will take place in the days immediately leading up to the Strategic Business Planning Retreats, described in the next section. The milestone that will be tracked is the successful completion of the NUPAS tool for each Secretariat.

Strategic Business Planning

During the same site visit, the OHW-NG team will present the benchmarking to the Secretariats for discussion at respective strategic business planning retreats, each to be scheduled in late March and April 2020. The purpose of the multi-day retreats is to help each Secretariat to establish the mission and vision that will inform the five year plans that their organizations will utilize to accomplish their programmatic and sustainability goals during the OHW-NG – all with a focus on the direct transition to USAID funding on or near Year 3.

The deliverables resulting from these retreats will be a *business plan* to inform each Secretariat's business operations and a *five-year strategic plan* for each Secretariat which will prioritize tactics and metrics that will build capabilities in any organizational capacity area that is found weak or inadequate in the NUPAS assessment in time for the direct transition to USAID funding on or near Year 3. As part of the retreat sessions, we will also work with the Secretariat staff to self-assign scores using the USAID Organizational Capacity Assessment (OCA) tool, which boasts a larger set of organizational competencies that are important to organizational sustainability, such as fundraising and business development, external communications, and change management. The OCA tool has a full section entitled Organizational Sustainability that we feel is important to include in this earliest stage of establishing a vision and plans for organizational sustainability. Given concerns by USAID that this tool may be overly broad,

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OHW-NG will endeavor to customize this tool to the Secretariats and the specific needs of OHW-NG.

If the Secretariats do not already have recent financial audits from a recognizably reputable firm, the OHW-NG consortium will supplement its benchmarking by hiring a financial auditing firm to conduct a baseline financial audit to further identify any deficiencies that need to be addressed before USAID conducts a similar audit on or near Year 3 to determine the Secretariats' eligibilities for direct funding. Any deficiencies will also be presented and discussed in the planning retreats. Milestones for this stage thus include: completion of independent audits, completion of business and strategic plans, and completion of benchmarking NUPAS and OCA tools for each Secretariat.

Stage 2: Capacity-building for organizational performance and sustainability

After these retreats, as described in our Year 1 Objective 3 workplan, we will support multi-modal capacity-building to help the networks strengthen any NUPAS-related capabilities that are scored as "inadequate" or "weak" to achieve "adequate" and "strong" benchmarks over the first two years. We will look for opportunities to strengthen broader OCA-related competencies starting in Year 1, but will focus on these more intensively in Years 3-5 after NUPAS-related competencies have been achieved in Year 2. This capacity-building includes virtual and on-site technical assistance; peer-to-peer learning using ECHO; investments in physical infrastructure for managing data, accounting, and country-level support for work planning and reporting; and compliance monitoring. Milestones we will monitor for this stage include progress against planned activities designed to build competencies related to the NUPAS and OCA tool.

Stage 3: Direct funding from USAID

Passing the NUPAS

The third major milestone in transition is for each Secretariat to successfully pass a USAID-conducted NUPAS. While the exact timeline for this milestone may differ between the two networks, and will be guided by USAID, we propose that this milestone be achieved by early Year 3. This milestone will be measured by the requisite number of domains scored as "adequate" (with compensating controls for any risks) or "strong" by the USAID NUPAS team. If any deficiencies are detected at this stage, the consortium consultants will accelerate work with the networks to remediate these deficiencies by Quarter 3 of Year 3.

Passing the Independent Audit

Another key milestone required of each network is to pass an independent audit by Year 3. Using a USAID-approved international accounting firm in each location, we will support an independent audit of each Secretariat in approximately Quarter 1 of Year 3. This activity could be implemented earlier in Year 2 if it is determined that the networks are organizationally ready. If any deficiencies are detected, the consortium will leverage its skilled subject matter experts to prioritize capacity strengthening to ensure passage by Quarter 3 of Year 3. Once the NUPAS and independent audit are passed, the consortium proposes that USAID develop their notice of transition awards to be released, and the consortium will work closely with the networks to fulfill

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all requirements to submit their application for these awards and be ready to receive funding by Quarter 4 of Year 3.

Stage 4: Transition to Independence

Increasing network financial scope

Overall, it is anticipated that USAID OHW-NG funding will increase to the networks starting in Year 3 and continue progressively to Year 5. The exact proportion will depend on network performance on the subawards and/or transition awards, as well as programmatic needs determined in consultation with USAID; however, it is anticipated that the overall network proportion of funding will increase from approximately 50% in Years 1 and 2 to 55.5% in Year 3, 65% in Year 4, and 70% in Year 5. The consortium will include this transition plan in the 5-year strategic plans of each network that are established early in Year 1, and we will reinforce the goals in annual work and business planning processes. The milestone that will be tracked annually is percentage of funding going to Secretariats over total funding.

As soon as Year 3, all funding designated for the networks will be provided directly from USAID to each Secretariat through transition awards. While the exact timing of this direct award will be individualized to each Secretariat (based on their progress and capacity), the consortium will plan for direct funding to be executed to each Secretariat by the end of Year 3. The milestones that will be monitored include the issuance of USAID transition awards, the submission of applications, the signature of the final cooperative agreements between USAID and the Secretariats, and the issuance of approved subawards to network members. The OHW-NG team will provide close support from the global team to assist in these applications and in the execution of the final agreements. Monitoring of performance and technical support to the Secretariat offices will help guide this support, with the aim of diminishing need for support over time, so that the Secretariats are prepared to manage these awards independently after the conclusion of OHW-NG. Burn rate and pipeline of Secretariat budgets as well as member subawards will be monitored quarterly to track progress of financial management, and mentorship will be provided to the Secretariats to perform this monitoring independently over time.

Increasing network programmatic scope

As direct funding to the Secretariats increases over time, the Secretariats will increasingly take over activities that were previously managed or implemented by the OHW-NG global consortium. Our global team will help the Secretariats plan for this transition/expansion in programmatic scope by strategy area under each of the three OHW-NG objectives, as part of the 5-year business and strategic planning process with each network. Generally-speaking, this change in scope can be described as a shift in the locus of responsibility for implementation of activities, from the consortium partners to the networks, with the Secretariats increasing their implementation of activities and the global consortium diminishing their implementation support. The global consortium's role will shift to provision of strategic and technical assistance in a 'shadow' capacity in Years 4 and 5 to support the Secretariats to manage new activities. On the next page are illustrative examples for each OHW-NG Objective.

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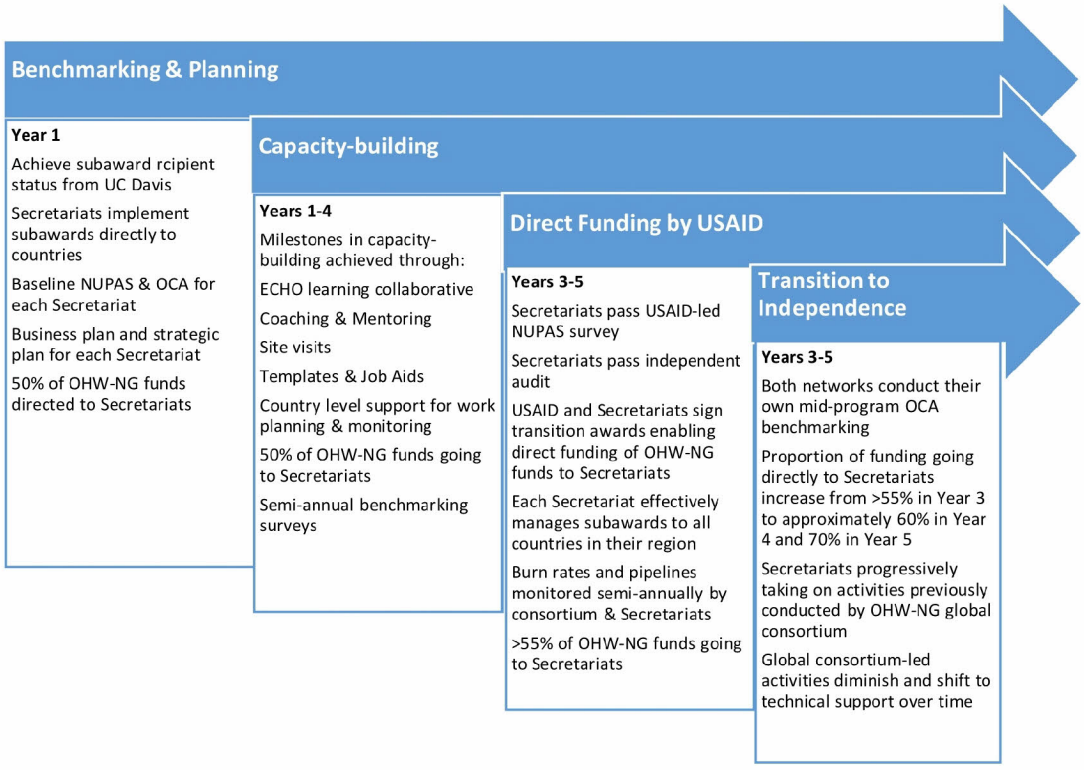
- **Objective 1:**
  Years 1-2: Global consortium primarily responsible for orchestrating the design and implementation of the One Health Academy.
  Years 3-5: Secretariats take on specific responsibilities for hosting, implementing, and reporting on the One Health Academy.

- **Objective 2:**
  Years 1-3: Global consortium primarily responsible for financing and implementing the knowledge management system.
  Years 4-5: Secretariats take on specific responsibilities for financing and implementing the knowledge management system, including writing contracts for vendors, assigning staff, conducting monitoring and evaluation on activities, etc.

- **Objective 3:**
  Years 1-2: Global consortium leads the organizational capacity assessment and strategic planning process with concerted technical assistance to build capacity.
  Years 3-5: Secretariats lead their own mid-program OCA tool review and lead the revision of their business and strategic plans and the solicitation of technical assistance for any capacity needs.

Figure 1. Stages of Transition Plan & Key Milestones



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Early Warning System
Achieving these major milestones likely will require that many small mitigations are accomplished successfully and in a scheduled and planned manner. To this end, the consortium has designed an 'early warning system' that will track progress towards major milestones, provide for close and routine monitoring, and prompt immediate troubleshooting and remediation for problems detected.

Starting after completion of the secretariat business plans, a 'transition plan team (TPT)' will be developed for each network secretariat from within the OHW-NG Objective 3 work group. These two teams (TPT- AFROHUN and TPT- SEAOHUN) will comprise key global consortium staff representing subject matter experts, the Director of Monitoring, Evaluation and Learning, the OHW-NG regional liaison to the respective Secretariat, and key staff from the respective Secretariat.

Quarterly Reviews
The team will meet quarterly via ECHO videoconference to review project indicators for that quarter, expected transition milestones and progress made. This review process will aim to occur in the same time period as quarterly MEL review meetings. Through discussion, the team will identify any challenges to reaching achieved milestones and come to agreement on mitigation steps to address those challenges. The team will complete a short 1 page summary document, called the "TPT quarterly summary', which documents the progress and agreements for the next quarter. This summary will be reviewed by the Objective 3 working group and OHW-NG leadership. The summary will document for each Secretariat for each quarter: who participated in the review, the milestones expected and a short description of what was achieved, burn rate/ pipeline, challenges faced (e.g. delays, change in activities), and the mitigation steps and expected milestones agreed to for the next quarter. See Textbox 1 for an illustrative review summary.

Ad-hoc Issues Management
Issues that emerge in between meetings can be referred to the TPT teams for review, discussion, resolution, and documentation on an ad-hoc basis.

Annual benchmarking
The TPT teams also will conduct an annual benchmarking of each of the Secretariat on the NUPAS and OCA tools at the end of each implementation work plan year, in order to track progress and identify any new gaps in anticipated and desired capabilities. This benchmarking will be shared in the corresponding quarterly meetings for timely review and decision-making on remediation or corrective actions. This annual procedure will alert the regional networks and USAID if progress is not sufficient for transitions to occur. Remaining OCA measures will be included in surveys for Years 3-5.

Reporting to USAID
Reporting on the progress and challenges of the transition for each Secretariat to USAID will occur in several methods. First, as requested by the AOR, the Objective 3 lead will work closely

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with USAID staff to plan and monitor the transition, such as to determine the specific USAID requirements and timelines for transition steps. Second, in routine Management Team meetings, the Objective 3 lead will also apprise USAID leadership of any key issues facing the transition for either Secretariat. Third, the consortium will report in writing on progress and challenges related to the transition as part of its routine semi-annual programmatic progress reporting.

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Textbox 1. Draft Transition Plan Summary

Secretariat: (AFROHUN/ SEAOHUN)

Quarter under review: Year 1, Quarter 2 (January-March, 2020)

Review team participants: List names

Date of Review: April 3, 2020

Progress against expected milestones for quarter

- Achieve subrecipient status from UC Davis- Y/N
  - AFROHUN: Y
  - SEAOHUN: Y
  - Describe: _____
- Progress toward milestone of establishing documented sub-award procedures in organizational policy (milestone target date: end of Year 1)
  - AFROHUN: Short description of progress
  - SEAOHUN: Short description of progress (how many subawards executed, how many are in development, any rationale for delays)
- NUPAS assessment completed for each Secretariat- Y/N
  - AFROHUN: Y
  - SEAOHUN: N
  - Describe: (to be completed end of April with business planning retreat)
- OCA baseline completed for each Secretariat
  - AFROHUN: Y
  - SEAOHUN: N (to be completed end of April during business planning retreat)
- Progress toward milestone of business plans developed for each Secretariat
  - AFROHUN: Short description of progress
  - SEAOHUN: Short description of progress

Secretariat pipeline: Burn rate:

Challenges to progress: Short description to any challenges that prevent achievement of milestones or delayed progress toward milestones for that quarter.

Mitigation steps: Specific steps agreed to by the team to address challenges above.

Expected milestones for next Quarter: (List)

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OHW-NG business plan for each regional Network

The Global team will assist each Secretariat in its development of a business plan by the end of Year 1, starting with an organizational review by the global members of the Consortium geared toward evaluation of the regional Network against the USAID Non-US Pre-Award Survey (NUPAS) and our business planning framework of the Mission Model Canvas (MMC), explained in detail below, where we further articulate the major evidence-based principles and frameworks we will use to facilitate the development of the Secretariats' business plans.

Principles:

We are proposing the development of a multi-step business model based on:

1. A strong orientation on the **mission** and the expected impact of each organization (as opposed to a profit-based model);

2. A focused emphasis on **stakeholder needs** – the model takes into consideration the needs of multiple groups of stakeholders, including (but not limited to) USAID, SEAOHUN, AFROHUN, network member institutions, and the needs of those who will benefit from each Network;

3. The need to fulfill a set of organizational **goals,** such as being approved to receive funding and having a path for financial sustainability; and

4. A **well-aligned** business model that provides a clear vision of how SEAOHUN and AFROHUN will sustainably thrive beyond USAID OHW-NG support and that can inspire the business models of member country participants.

Our Framework

As one of the guiding principles related to business modeling and planning, terminology is important. In our process, as with all current evidence-based planning, the stated mission of each regional Network informs its business goals. Those goals are clearly articulated in a strategic plan, which further elucidates the strategies, tactics, and metrics that align to achieve the goals. The business plan, in turn, provides the details of how each regional Network will attain and mobilize the resources required to implement its strategic plan. The term "business model" is used to denote the mechanism(s) through which the organization generates the operating capital necessary to fulfil its mission.

To facilitate each Secretariat organization in its design of a business model and development of a business plan, we intend to use an adapted form of the MMC framework. This framework builds upon a business planning tool first developed by Osterwalder, Pigneur & al. 2010, which was modified by Dr. Steve Blank of the Berkeley Haas School of Business to apply more specifically to non-profit organizations like SEAOHUN and AFROHUN.

A brief description of each component of the MMC framework follows:

a. Beneficiaries and stakeholders: This component of the MMC describes those who are part of the institutions that operate them. Stakeholders are not only those at the top, but those in all layers of the institutions, from top to bottom. This category includes those who may have a vested interest in the institution functioning properly, either explicitly or implicitly.

b. Value proposition: This component of the MMC identifies the products, services, and activities that satisfy, or provide value to, beneficiaries. We will help identify the advantages and disadvantages that each product, service, and activity provides to each beneficiary in order to make sure the product, service, or activity is maximizing the totality of well-being of beneficiaries and stakeholders.

c. Buy-in support: This component serves to identify those organizational stakeholders at all levels that support the concepts or capabilities that result in a beneficial implementation of programs and business ideas. A component of this "buy in support" is an identification of who is going to continually support the institution under the proposed operational paradigm (if any).

d. Channels: This component refers to how the organization mobilizes its resources to make its products, services, and activities available to its proposed beneficiaries. For this area, we will map out all possible steps required to have the products, services, or activities adopted by beneficiaries. Activities could include envisioning how to expand services to new members and countries utilizing cost-effective deployment approaches (e.g. virtual training or learning models, new pedagogical methods).

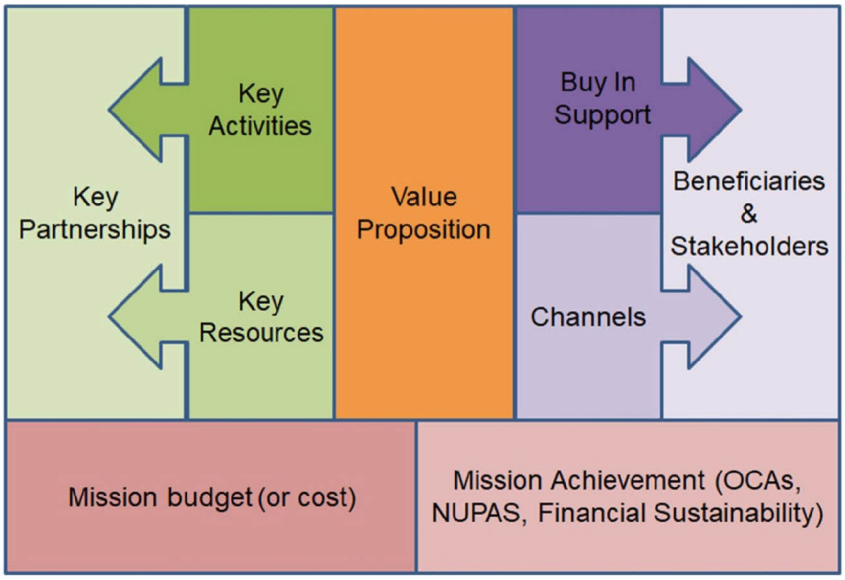
e. Mission achievement: This component considers the ways in which the Networks will measure success. What are the metrics that indicate whether or not each of the beneficiaries are achieving maximum success? Not all beneficiaries are equal, so heterogeneity of stakeholders is important to take into account.

f. Key tasks: This component refers to the steps required of the organization/institution to make sure the products, services, or activities reach the intended beneficiaries. Tasks will be categorized to make sure all possible needs required to deploy a product or implement an idea are met.

g. Key resources: Includes human capital, equipment, infrastructure, and the other resources required to implement the MMC. It refers to the resources inside the institution but will also identify the resources that need to be acquired or developed by the institution in order to meet the goals of the MMC.

h. Key partners: A partner is an outside resource (human capital, funding, etc.) needed to implement the goals of the MMC.

i. Mission budget: Refers to the financial resources needed to achieve the goals of the MMC. In addition to identifying the amount of financial resources, the mission budget needs to identify the source of the funds. Finally, fungibility of funding needs to be identified.



Business Plan Development Phases:

The global team will facilitate development of an individualized business plan for each Secretariat in three major phases:

1) **Assessment**: The Consortium will first conduct a desk review and analysis of current organizational development assessments and strategies developed by the Secretariats. Second, we will conduct a small number of data collection activities, including key informant interviews of Secretariat and member country staff to understand the strengths, weaknesses, opportunities, and threats of the Secretariat organizations; a stakeholder analysis to calibrate our model and material; and a review of board and governance materials for each Secretariat. Third, we will develop specific templates for each Secretariat organization to use to guide the development of its individualized MMC. We will also conduct the initial Non-U.S. foreign organizations pre-award survey (NUPAS) and a modified Organizational Capacity Assessment Tool for each Secretariat (as described in our Y1 workplan).

2) **Strategic planning retreat**: Global team members will travel to each Secretariat, where subject matter experts will facilitate strategic reflection, including a review of assessment

phase findings, to develop and codify the goals, strategies, tactics, and metrics each Secretariat will use to guide business operations for the next five years. Business models and business plans will be formalized (if not finalized) at these retreats, with priorities for the completion of the strategic plan.

3) **Plan finalization**: This phase will comprise approximately 6 weeks of virtual collaboration between the global team and Secretariat staff to finalize the narrative of each Secretariat's business plan and strategic plan, as well as to reach agreement as to named staff and stakeholders responsible for reporting on metrics related to the deployed tactics. The writing of the plan will be led by a team comprised of global consortium experts and key Secretariat staff, led by two Haas School of Business faculty who will ensure execution. If successful, in Year 2, this capacity-building could be extended to Asia OHUNs and AFROHUN chapters by the Secretariats working with Haas, so that all country Networks develop expertise and adopt a commitment to generate a business model for each country.

Format of the final Business Plan

As noted above, the template or format for each Secretariat Business Plan will be designed as part of the assessment phase. However, we expect the final deliverable to include the following components:

- Title page
- Table of Contents
- Preamble [i.e. background of the Secretariat (history, basic org details), evolution, and purpose of the plan]
- Mission model canvas (one page summary with an approximate 10-15 page narrative detailing analyses under each component)
- Appendix: Strategic plan containing specific goals, strategies, tactics, and metrics
- Appendix: Strategic plan task forces
- Appendix: Global team support plan

- Strengthen the functional and organizational capacities of the regional One Health university networks to ensure they are capable of acquiring and managing direct donor funding.

Objective 3



Objective 3 Vision/ Goals

- Both networks demonstrate measurable improvement of key capacities for organizational sustainability, in particular, passing the USAID pre-award survey and an international audit
- Both networks are receiving USAID direct funding, and continue to monitor and improve their grants management / compliance
- New and diverse partnerships are established for both networks, and both networks have new tools and capacities to advance their partnership development strategies
- Models have been identified and piloted to create revenue-generation for both networks (e.g. CPD integrated)

UC DAVIS One Health Institute School of Veterinary Medicine · HCEA · SEAOHUN Southeast Asia One Health University Network · ICAP Global Health Action · EcoHealth Alliance · Ata Health Strategies · Sandia National Laboratories · Berkeley Haas · The University of New Mexico · UCI University of California, Irvine

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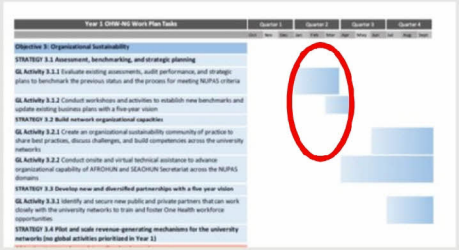
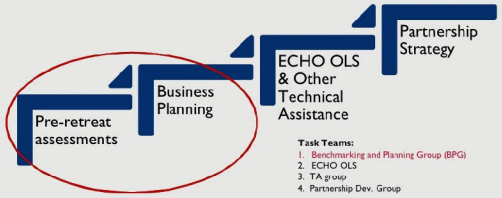
Objective 3 Gantt Chart



Year 1 OHW-NG Work Plan Tasks	Quarter 1			Quarter 2			Quarter 3			Quarter 4		
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
Objective 3: Organizational Sustainability												
STRATEGY 3.1 Assessment, benchmarking, and strategic planning												
GL Activity 3.1.1 Evaluate existing assessments, audit performance, and strategic plans to benchmark the previous status and the process for meeting NUPAS criteria												
GL Activity 3.1.2 Conduct workshops and activities to establish new benchmarks and update existing business plans with a five-year vision												
STRATEGY 3.2 Build network organizational capacities												
GL Activity 3.2.1 Create an organizational sustainability community of practice to share best practices, discuss challenges, and build competencies across the university networks												
GL Activity 3.2.2 Conduct onsite and virtual technical assistance to advance organizational capability of AFROHUN and SEAOHUN Secretariat across the NUPAS domains												
STRATEGY 3.3 Develop new and diversified partnerships with a five year vision												
GL Activity 3.3.1 Identify and secure new public and private partners that can work closely with the university networks to train and foster One Health workforce opportunities												
STRATEGY 3.4 Pilot and scale revenue-generating mechanisms for the university networks (no global activities prioritized in Year 1)												

Year 1 in a nutshell



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USAID Requirements

Transition Plan

- USAID guidance on the transition plan:

"The recipient will develop a transition plan for the regional networks to enter into direct awards with USAID around Year Three in line with the phased approach described under Objective 3 of the Program Description. The **transition plan should clearly identify responsibilities and activities for which the regional networks will be independently responsible, recommend funding levels across the last 3 years of the Activity**, and propose organizational development benchmarks that must be met in order for the transition to occur.

The recipient will submit an initial transition plan to the AOR within 90 calendar days of the start of the Agreement and revise the transition plan at least annually thereafter. The process for creating and revising the transition plan should be participatory and reflect the interests of the regional university networks. Progress on implementation of the transition plan will be reported semi-annually and annually as part of regular performance reporting."

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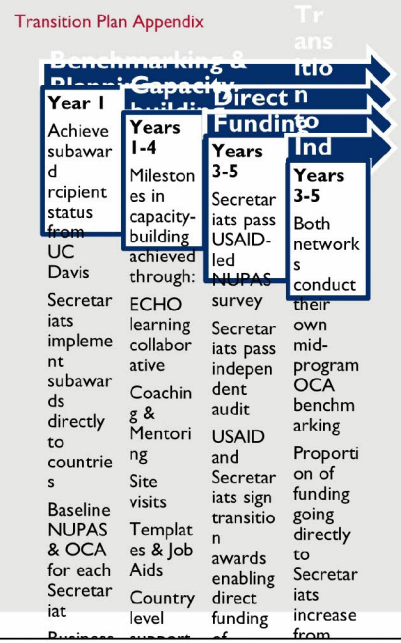
Transition Plan Appendix



USAID Requirements

Business Plan

- USAID guidance on the business plan:
  - "The recipient will submit a business plan for the regional university networks and their key activities within the first year of execution of the Agreement. The business plan should include resource mobilization strategies unique to each regional university networks to help them acquire diverse funding streams and describe specific interventions and activities that are expected to be sustained after the Agreement ends.
  - The business plan will be revised in concert with the regional networks on an annual basis and submitted with the annual implementation plan. Updates on implementation of the business plan will be reported semi-annually and annually as part of regular performance reporting." P. 13. ATTACHMENT A, Cooperative agreement, USAID- UC Davis

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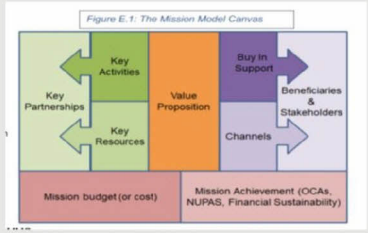
Proposed Model for the Business Plan



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Proposed outline for Business Plan for Organizational Sustainability

- Title page
- Table of Contents
- Preamble [i.e. background of the Secretariat (history, basic org details), evolution, and purpose of the plan]
- Mission model canvas (one page summary with an approximate 10-15 page narrative detailing analyses under each component)
- Appendix: Strategic plan containing specific goals, strategies, tactics, and metrics
- Appendix: Strategic plan task teams
- Appendix: Global team support plan

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Objective 3 Work Plan Language

Assessment, Benchmarking and Planning

Global Consortium Activity 3.1.2 Conduct workshops and activities to establish new benchmarks and update existing business plans with a five-year vision.

- Upon completion of the assessment stage, the Global Team will facilitate two business and strategy planning retreats, one with each Secretariat in Year 1.
- The objective of the retreats is to review the findings from the Organizational Development Baseline Assessment and to create a new SEAOHUN and AFROHUN Business and Strategy Plan for 2020-2025, which will outline the 5 year vision for each Secretariat, its objectives, and key strategies for obtaining the capacities needed for organizational sustainability.
- Early in the 3-day retreats, the findings of the assessments, including the NJPAS scores, will be presented, and both SEAOHUN and AFROHUN will benchmark themselves on the modified OCA tool.
- A priority for the business and strategy plans will be meeting the standard provisions for transition of direct USAID funding on or near Year 3, articulated in the NJPAS.
- An appendix to this plan will be completed after the workshops as the OHW-NG strategy for supporting this business plan for the same time period.
- The first two days of the meetings are proposed to comprise just key Network Secretariat staff and Global Team members, focusing on review of the assessments and assembling priorities and a strawman outline for a business plan. The third day of the meeting may be opened to invite country members, i.e. Asia OHUNS and AFROHUN chapters, to provide wide stakeholder input. Alternatively, these stakeholders could be consulted for input virtually or at a later convening

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Strategic Area 1

Assessment, Benchmarking and Planning

- Pre-retreat Assessments
  - **NUPAS assessment**
    - Desk Review: February 15- March 15
    - NUPAS Site visit to AFROHUN HQ: March 26-27, 2020
  - **Assessing other OCA domains-** TBD, AFROHUN interpretation
  - **Baseline Audit**
  - **Rapid Stakeholder Mapping**
  - **SWOT Analysis**

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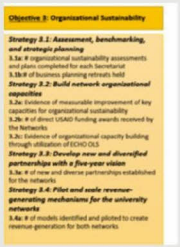
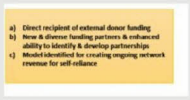
MEL Snapshot for Objective 3





Benchmarking with NUPAS and OCA tools: Baseline, Y3, Y5

Appendix

Stakeholder Mapping

- Objective: Create an initial list and analysis of potential global public and private partners for AFROHUN, which can contribute to the discussion on stakeholders during the retreat.
- Timeframe: March 2-March 25, 2020
- Proposed Methods:
  - 45 min. Key informant interviews with select AFROHUN Secretariat Staff
  - 60 min. Focus Group Discussions with AFROHUN Chapters
  - Qualitative analysis
- Deliverable: Short PowerPoint presentation by global consortium staff at AFROHUN Business Planning Retreat

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SWOT Analysis

- Objective: Gather rapid feedback from AFROHUN Secretariat staff and AFROHUN chapter representatives on the strengths, weaknesses, opportunities and threats to organizational sustainability
- Timeframe: March 2-March 25, 2020
- Proposed Methods:
  - 45 min. Key informant interviews with select AFROHUN Secretariat Staff
  - 60 min. Focus Group Discussions with AFROHUN Chapters
  - Qualitative analysis
- Deliverable: Short presentation in a PowerPoint presentation by global consortium staff at AFROHUN Business Planning Retreat
- Would need from AFROHUN: List of contacts & contact information

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AFROHUN Y1 Work Plan Language

AFR Activity 3.1.3 Evaluate existing assessments, audit performance, and strategic plans to benchmark the current status and the process for meeting NUPAS criteria
Activity Description: A team from the Global team will carry out an Organization Capacity Assessment (OCA) for the AFROHUN Secretariat in the 2nd quarter of Year 1 using the USAID OCA tool. The Secretariat will subsequently undergo Non-US Pre-award Assessment (NUPAS) in Year 3 prior to receiving direct funcing from USAID. The CCA will involve meetings with the Secretariat and network leadership teams to assess the current systems and identify strengths and gaps around the seven core areas in the OCA. A two-day meeting with AFROHUN leadership and the Secretariat will be held in Uganda to discuss results from the CCA and to develop an action plan to address identified priority gaps in the short term (6 months to 1 year) and in the long term (1 -3 years). The NUPAS will be conductec in Year 3 as part of consideration for direct USAID funding. This will be an opportunity to confirm that the identified gaps in OCA have been fully addressed

AFR Activity 3.2.3 Strengthen capacities of AFROHUN in priority areas in the short-term action plan
Activity Description: In Year 1, work with the Global team to have a regional face-to-face meeting to orient teams on the USAID, UC Davis, and AFROHUN rules and regulations, and to train staff in key areas prioritized in the OCA action plan. This activity will ensure that the teams are in conformity with the new grant requirements and aspirations for becoming a USAID prime recipient. Activity Details:Estimated Activity Date: March 2020Lead & Participating Institutions: AFROHUN staff, Global team Location: TBDTotal Number of Participants & Attendees: 30Duration/Number of Days: 3 days

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SEAOHUN Y1 Work Plan Language

GL Activity 3.1.1 Evaluate existing assessments, audit performance, and strategic plans to benchmark the previous status and the process for meeting NUPAS criteria

1. Participate in a desk review of existing organizational development assessments, strategic and/or business plans, gender strategy, and other key program documents.2. Complete an in-person baseline NUPAS survey with the global team to benchmark SEAOHUN against the organizational capacity standards.3. Complete a baseline financial audit.

GL Activity 3.1.2 Conduct workshops and activities to establish new benchmarks and update existing business plans with a five-year vision.

Facilitate a business and strategy planning retreat involving combinations of the global team, SEAOHUN Secretariat, and country teams to review the findings from the Organizational Development: Baseline Assessment and to create a Business and Strategy Plan for 2020-2025.

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OHW-NG Business Planning Retreat for Organizational Sustainability- AFROHUN
March 29- April 1, 2020
Entebbe, Uganda
Concept Note for Discussion with AFROHUN

Background & Rationale

A key USAID requirement in the *OneHealth Workforce- Next Generation* Initiative is for the global consortium to support each network secretariat to produce a "business plan", which identifies "resource mobilization strategies" for diverse funding streams, and "specific interventions that are expected to be sustained after the agreement ends". This plan is to be updated annually (see the USAID description in this document Appendix). USAID also has expressed the priority for each network secretariat to create a clear vision of its long-term business model and pathway toward financial and organizational sustainability for the era after OHW-NG ends, when USAID financial support is uncertain and may diminish.

The global consortium led by UC-Davis envisions the business plan as a strategic document that summarizes AFROHUN's long-term vision, its business model for organizational sustainability, and its strategic goals and tactics to achieve its vision and desired model, and more specifically, the transition to direct USAID funding in Year 3, and the goal of enhanced organizational sustainability by Year 5.

The global consortium aims to support AFROHUN to develop this document by facilitating a 3 day "Business Planning for Organizational Sustainability Retreat", with AFROHUN Secretariat staff, global consortium staff, USAID representative(s), and AFROHUN chapter representatives. This retreat is proposed to take place in Entebbe, Uganda, from Mach 29- April 1. The business plan will be written after the retreat, by a small team of AFROHUN and global consortium staff, based on the retreat discussions.

Retreat Goal

The Strategic Business Planning Retreat- AFROHUN will provide 3 days of analysis and dialogue between AFROHUN Secretariat, the global consortium, and AFROHUN chapters, for the purpose to assist in the formulation of: a long-term vision of AFROHUN for after OHW-NG initiative (i.e. 2025 and beyond), the desired AFROHUN business model that will ensure sustainability, and the five-year goals and tactics to achieve this vision. These concepts will be consolidated in a written business plan, to be submitted to USAID.

Retreat Objectives

- Share findings from pre-retreat assessments (e.g. NUPAS)
- Conduct a baseline benchmarking on the Organizational Capacity Assessment Tool – *this could also be conducted in advance—TBD in discussion with AFROHUN*
- AFROHUN establishes its long-term vision and business model for organizational sustainability in 2025 and beyond
- AFROHUN identifies strategic goals and high level tactics for achieving this organizational sustainability vision, including key focus areas for organizational development for Years 1-3 of the OHW-NG (until USAID direct funding) and Years 4-5 (after USAID direct funding)

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Outputs

The major outputs expected from these retreats include:

- Shared vision for AFROHUN and its business model for sustainability
- Identification of strategic goals and major strategies for Years 3 and 5
- Agreed upon approach and timeline for writing up the business plan after the retreat
- Stakeholder consultation with AFROHUN chapter representatives

Deliverable

The output of the retreat will be a short written retreat summary that captures the major discussion highlights of each day, as well as the retreat outputs. This content will form the basis of the formal written business plan, to be delivered 6-8 weeks following the retreat.

Pre Retreat Assessments

To help provide AFROHUN Secretariat staff with useful information for their analysis, the global consortium will work to conduct key assessments in advance of the retreats, namely: interviews with AFROHUN Secretariat staff and focus group discussions to identify strengths, weaknesses, opportunities and threats ("SWOT analysis"), and a high level stakeholder mapping/ analysis for use in discussion.

Possible Three Day Agenda Outline (to be co-created with AFROHUN)

Day 1: Establishing the Long-term Vision for Organizational Sustainability

- What are we here to do? Mission, goals, values
- Who do we serve? Who is our target audience?
- How do we do it? Channels/ distributions
- How well do we do it? Strengths, weaknesses, opportunities, threats
- What is our value proposition moving forward?
- What are our differentiators?
- Where do we want to be in 3 years? In 5 years? In 10 years?
- What is our bold, audacious goal?

Day 2: Planning the Business Model for Organizational Sustainability

- What key activities are needed to accomplish our vision/ goal?
- What resources do we need to meet our vision/ goal?
- What business model (i.e. our model of securing ongoing revenue) do we need moving forward to be organizationally sustainable? Review potential business models.
- What are our resource mobilization strategies? ("Channels")
- Stakeholder mapping: who are our partners? What partnerships and buy-in do we need?
- What areas of our organizational capacity do we need to improve? Review of NUPAS.
- OCA benchmarking or review of completed OCA tool.

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Day 3: Consultation & Action Planning

- Morning:
  - Present summary of Days 1 and 2 to country representatives for high level feedback.
  - Joint discussion: What are our strategic goals? Review strategic goals from OHCEA strategic plan, 2011-2021.
- Afternoon:
  - What are our strategies to achieve these goals? (small group break-out exercises)
  - What are our priority areas for organizational development for Years 1-3?
  - What additional analyses and/or consultation are required to complete our plan?

Appendix 1. USAID language in the cooperative agreement with UC-Davis regarding the Business Plan.

"The recipient will submit a business plan for the regional university networks and their key activities within the first year of execution of the Agreement. The business plan should include resource mobilization strategies unique to each regional university networks to help them acquire diverse funding streams and describe specific interventions and activities that are expected to be sustained after the Agreement ends.

The business plan will be revised in concert with the regional networks on an annual basis and submitted with the annual implementation plan. Updates on implementation of the business plan will be reported semi-annually and annually as part of regular performance reporting." P. 13.

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From: Claire Standley <Claire.Standley@georgetown.edu>
To: Corina Grigorescu Monagin <cgmonagin@ucdavis.edu>
CC: Erin Sorrell <Erin.Sorrell@georgetown.edu>;Ellen Carlin <ec1223@georgetown.edu>;William B. Karesh <karesh@ecohealthalliance.org>;Jaber Amine Belkhiria <jabelkhiria@ucdavis.edu>;Jonna Mazet <jkmazet@ucdavis.edu>
Sent: 5/27/2020 3:06:49 AM
Subject: Re: Touching base - Guinea proposals

Corina,

Great news that the PREDICT extension included activities in Guinea to support COVID-19! Hope all that is going well, and definitely, I'll keep you posted!

Best,
Claire

On Tue, 26 May 2020, 23:08 Corina Grigorescu Monagin, <cgmonagin@ucdavis.edu> wrote:

Hi Claire,

Great that you were able to submit! We received a small extension for PREDICT activities in Guinea related to the COVID-19 response so our team is back in the mix on a small scale. Please keep us updated and fingers crossed for you.

Regards,

Corina

From: Claire Standley <Claire.Standley@georgetown.edu>
Date: Monday, May 25, 2020 at 10:50 AM
To: Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>
Cc: Erin Sorrell <Erin.Sorrell@georgetown.edu>, Ellen Carlin <ec1223@georgetown.edu>, "'William B. Karesh, D.V.M'" <karesh@ecohealthalliance.org>, Jaber Amine Belkhiria <jabelkhiria@ucdavis.edu>, Jonna Mazet <jkmazet@ucdavis.edu>
Subject: Re: Touching base - Guinea proposals

Hi Corina,

Thanks for the message - indeed, strange times! Here in Germany things are starting to reopen, except still no daycare...

Sorry to hear DTRA did not invite you to submit the full technical proposal. It does indeed seem West Africa is no longer a priority - memories are short in government, it seems. In any case, we did receive an invitation to submit, and managed to get it in just a few hours ahead of the deadline last Thursday. A huge relief, but we have also been warned off-line that there's no guarantee of funding. So who knows...we'll keep our fingers

crossed, but I do also think it would make sense for us to stay in touch about other possible opportunities for working in Guinea, perhaps through non-USG funding sources.

Hope all is well with you and your team, and staying sane and healthy.

Best,

Claire

On Thu, May 21, 2020 at 11:18 PM Corina Grigorescu Monagin <cgmonagin@ucdavis.edu> wrote:

Hi Claire,

I hope this email finds you safe and healthy in these difficult times. I wanted to reach out to let you know that DTRA decided to not invite us to full proposal stage for our Guinea project. Disappointing for sure but I think indicative of the overall reprioritization that is going on. West Africa seems to be on the chopping block for a lot of US agencies. Did you all hear anything? Hopefully positive news.

Stay safe

Corina

Corina Monagin, MPH, DrPH

Project Scientist

One Health Institute

School of Veterinary Medicine

University of California Davis

1089 Veterinary Medicine Drive

Davis, CA 95616, USA

Mobile: +1.415.741.6996

From: Claire Standley <Claire.Standley@georgetown.edu>
Date: Thursday, March 12, 2020 at 7:37 AM
To: Jaber Amine Belkhiria <jabelkhiria@ucdavis.edu>
Cc: Corina Grigorescu Monagin <cgmonagin@UCDAVIS.EDU>, Erin Sorrell <Erin.Sorrell@georgetown.edu>, Ellen Carlin <ec1223@georgetown.edu>, "'William B. Karesh, D.V.M'" <karesh@ecohealthalliance.org>
Subject: Re: Touching base - Guinea proposals

Hi Jaber,

Thanks for the quick response. Fair enough re the timeline - we had submitted our white paper over the summer so it had already been quite a long time under review!

We'll keep our fingers crossed that we both hear positive news from DTRA soon!

Best,

Claire

On Thu, Mar 12, 2020 at 8:20 AM Jaber Belkhiria <jabelkhiria@ucdavis.edu> wrote:

Hello Claire,

Glad to hear that they are planning on moving forward with your project ! We haven't heard from DTRA since the last time we spoke. We actually didn't actively try to reach out to them (formally or informally) but we were hoping to hear back from them around May/June. There is so much to do in Guinea and it is really sad to hear that funding might be an issue. We are definitely open to restructure our scientific hypothesis and work things out together if we face budget limitations.

Thanks for reaching out ! we will keep you posted.

Regards,

Jaber

On Wed, 11 Mar 2020 at 11:52, Claire Standley <Claire.Standley@georgetown.edu> wrote:

Corina and Jaber,

I hope this email finds you well. I just wanted to touch base quickly on the Guinea proposals we'd chatted about a few months ago - have you heard anything from DTRA yet? We have not received any formal communiqués, but did hear informally that they are facing major budget redistributions which may limit their funding for Guinea, though they are hoping to still move forward with our project (at reduced scope, most

likely...). We will certainly keep you posted if we learn anything more concrete, particularly since if funding is limited, there's all the more reason to align objectives and try to maximize scientific coverage and impact between our two efforts!

Best,

Claire
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**** Accepting submissions now! ****

Tropical Medicine & Infectious Disease Special Issue

"One Health and Neglected Tropical Diseases"

Submission deadline: June 30, 2020

More information available here:

https://www.mdpi.com/journal/tropicalmed/special_issues/one_health_ntd

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Timezone: Central European Time (UTC +1)

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Skype: clairestandley1984

Timezone: Central European Time (UTC +1)

From:	Elizabeth Leasure <ealeasure@UCDAVIS.EDU>
To:	Andrew Clements <aclements@usaid.gov>
CC:	Amalhin Shek <ashek@usaid.gov>;Alisa Pereira <apereira@usaid.gov>;Jonna Mazet <jkmazet@ucdavis.edu>;Christine Kreuder Johnson <ckjohnson@UCDAVIS.EDU>;preempt-pandemics Sympa List <preempt-pandemics@ucdavis.edu>
Sent:	7/31/2020 9:31:53 AM
Subject:	FW: USAID #AID-OAA-A-14-00102 / UC Davis #32541

From: Nikki Clark
Sent: Friday, July 31, 2020 8:05 AM
To: Patricia Bradley ; Jose Nunez Grullon
Cc: predict Sympa List ; Elizabeth Leasure
Subject: USAID #AID-OAA-A-14-00102 / UC Davis #32541

Attached is our quarterly report of expenditures for the award referenced above for our PI, Jonna Mazet. If you have any questions or need anything further, please let me know.

Thank you,
Nikki
~*

Nikki Clark, CRA
Research Administration Analyst
Hours: 7:30 am – 4:30 pm
(530) 757-8526
ndclark@ucdavis.edu

UCDAVIS | FINANCE

FEDERAL FINANCIAL REPORT

(Follow form instructions)

1. Federal Agency and Organizational Element to Which Report is Submitted	2. Federal Grant or Other Identifying Number Assigned by Federal Agency (To report multiple grants, use FFR Attachment)	Page	of
U. S. Agency for International Development **GH/HIDN/PIOET** **1300 Pennsylvania Ave., NW** **Washington, DC 20523** **pbradley@usaid.gov; jnunezgrullon@usaid.gov**	**AID-OAA-A-14-00102**	**1**	**1**

3. Recipient Organization (Name and complete address including Zip code)
University of California, Accounting Office
One Shields Avenue, Davis CA 95616

4a. DUNS Number	4b. EIN	5. Recipient Account Number or Identifying Number (To report multiple grants, use FFR Attachment)	6. Report Type	7. Basis of Accounting
04-712-0084	REDACTED	**32541**	■ Quarterly □ Semi-Annual □ Annual □ Final	■ Cash □ Accrual

8. Project/Grant Period From: (Month, Day, Year)	To: (Month, Day, Year)	9. Reporting Period End Date (Month, Day, Year)
10/1/2014	**9/30/2020**	**6/30/2020**

10. Transactions	Cumulative
(Use lines a-c for single or multiple grant reporting)	
Federal Cash (To report multiple grants, also use FFR Attachment):	
a. Cash Receipts	133,877,373.07
b. Cash Disbursements	134,161,123.10
c. Cash on Hand (line a minus b)	-283,750.03
(Use lines d-o for single grant reporting)	
Federal Expenditures and Unobligated Balance:	
d. Total Federal funds authorized	136,319,834.95
e. Federal share of expenditures	134,161,123.10
f. Federal share of unliquidated obligations	415,640.32
g. Total Federal share (sum of lines e and f)	134,576,763.42
h. Unobligated balance of Federal funds (line d minus g)	1,743,071.53
Recipient Share:	
i. Total recipient share required	3,697,810.00
j. Recipient share of expenditures	3,697,810.00
k. Remaining recipient share to be provided (line i minus j)	0.00
Program Income:	
l. Total Federal program income earned	
m. Program income expended in accordance with the deduction alternative	
n. Program income expended in accordance with the addition alternative	
o. Unexpended program income (line l minus line m or line n)	

	a. Type	b. Rate	c. Period From	Period To	d. Base	e. Amount Charged	f. Federal Share
11. Indirect Expense	Predetermined	55.5%	10/1/2014	6/30/2015	1,436,244.55	797,115.90	797,115.90
	Predetermined	56.5%	7/1/2015	6/30/2016	2,386,725.99	1,348,500.81	1,348,500.81
	Predetermined	57.0%	7/1/2016	6/30/2020	19,088,616.32	10,880,511.96	10,880,511.96
				g. Totals:	22,911,586.86	13,026,128.67	13,026,128.67

12. Remarks: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation:

13. Certification: By signing this report, I certify that it is true, complete, and accurate to the best of my knowledge. I am aware that any false, fictitious, or fraudulent information may subject me to criminal, civil, or administrative penalities. (U.S. Code, Title 18, Section 1001)

a. Typed or Printed Name and Title of Authorized Certifying Official	c. Telephone (Area code, number and extension)
James Ringo /nc **Division Manager, Contracts and Grants Accounting**	(530) 757-8526 d. Email address ndclark@ucdavis.edu
b. Signature of Authorized Certifying Official Lenora Bruce Digitally signed by Lenora Bruce Date: 2020.07.22 15:46:09 -07'00'	e. Date Report Submitted (Month, Day, Year) **7/22/2020**
	14. Agency use only:

Standard Form 425
OMB Approval Number: 0348-0061
Expiration Date: 10/31/2011

Paperwork Burden Statement
According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection

PREDICT-2 Expenditures by Country - April-June 2020 (Combined)

United States	3,725
Bangladesh	51,936
Cambodia	132,607
Cameroon	31,166
China	-
Cote d'Ivoire	33,454
Democratic Republic of Congo	23,144
Egypt	124,946
Ethiopia	13,923
Gabon	-
Ghana	21,898
Guinea	42,757
India	62,473
Indonesia	62,473
Jordan	20,753
Kenya	27,434
Lao PDR	49,506
Liberia	59,915
Malaysia	124,946
Mongolia	41,720
Myanmar	126,006
Nepal	103,489
Republic of Congo	10,501
Rwanda	12,767
Senegal	40,722
Sierra Leone	10,155
Sudan	-
South Sudan	-
Tanzania	38,863
Thailand	83,226
Uganda	25,314
Vietnam	50,791
Total Expenditures	**1,430,608**

PREDICT-2 Expenditures by Country - April-June 2020 (Core)

United States	3,725
Bangladesh	51,936
Cambodia	132,607
Cameroon	29,964
China	-
Cote d'Ivoire	29,964
Democratic Republic of Congo	9,868
Egypt	124,946
Ethiopia	9,868
Gabon	-
Ghana	9,868
Guinea	9,868
India	62,473
Indonesia	62,473
Jordan	20,753
Kenya	27,434
Lao PDR	49,506
Liberia	9,868
Malaysia	124,946
Mongolia	41,720
Myanmar	126,006
Nepal	103,489
Republic of Congo	10,501
Rwanda	12,767
Senegal	31,911
Sierra Leone	10,155
Sudan	-
South Sudan	-
Tanzania	30,707
Thailand	83,226
Uganda	20,096
Vietnam	50,791
Total Expenditures	**1,291,433**

PREDICT-2 Expenditures by Country - April-June 2020 (Ebola)

United States	-
Cameroon	1,203
Cote d'Ivoire	3,490
Democratic Republic of Congo	13,276
Ethiopia	4,055
Ghana	12,030
Guinea	32,889
Kenya	(0)
Liberia	50,047
Senegal	8,811
Sierra Leone	(0)
Tanzania	8,156
Uganda	5,219
Total Expenditures	**139,175**