

# **CLOSEOUT STAKEHOLDERS MEETING IN BUNDIBUGYO DISTRICT, UGANDA**

A report from STOP Spillover

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Photo credits: Uganda country team

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## ACRONYMS

AFROHUN	Africa One Health University Network
ODK	Open Data Kit
OH-DReaM	One Health Design Research and Mentorship
PA	Participatory Assessment
PS	Participatory Surveillance
SBC	Social Behavioral Change
SOP	Standard Operating Procedure
STOP	Strategies to Prevent Spillover
USAID	U.S. Agency for International Development

## STOP SPILLOVER

Strategies to Prevent (STOP) Spillover, a USAID-funded project led by Tufts University, is a global consortium of experts in human, animal, and environmental health who will take the next step in understanding and addressing the risks posed by known zoonotic viruses that have the potential to spill over and cause pandemic crises.

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## INTRODUCTION

Since 2000, Uganda has documented a total of six Ebola outbreaks involving the districts of Gulu (2000), Bundibugyo (2007), Luwero (2011 & 2012), Kibaale (2012), Luwero (2012), and Mubende and Kasanda (2022). Additionally, three outbreaks of Marburg viral haemorrhagic fever have occurred in the country in recent years in Ibanda district (2007), Kabale district (2012), and Kween district (2017).

The recent Marburg outbreak in Kween district was traced to rock salt mining in a bat cave [1]. While the viral reservoir for Ebola virus disease has not been definitively determined, *Rousettus aegyptiacus* has been identified as the reservoir for Marburg virus.

Zoonotic spillover has been associated with activities that increase human-bat contact [1]. Likely bat-human interface areas include caves and mines with roosting cave-dwelling bats (especially *R. aegyptiacus*); human dwellings for tree-dwelling insectivorous bats [2], and bat hunting, processing, and consumption. Other identified activities that may lead to increased spillover risk include land-use change, development, large-scale agricultural intensification, and deforestation [3-5].

STOP Spillover was launched in Uganda in June 2021. STOP Spillover held a national level outcome mapping participatory planning exercise with stakeholders, and selected the bat-human interface and Bundibugyo as the district of interest for project activities. Bundibugyo is located in Western Uganda approximately 378 kms by road from the capital city, Kampala. It is located along the Rwenzori Mountain ranges and in close proximity to the Democratic Republic of Congo. Predominant ethnicities include the Bamba-

Babwisi and the Bakonjo however, other ethnicities coexist with them, including the Batooro.

The district lies between two conservation areas, the Semiliki National Park, and the Rwenzori National Park, which has led to a high level of human-wildlife-forest ecosystem interactions. The area has plenty of rock shelters and caves that are habitats for wildlife, including bats.

The people of Bundibugyo are largely farmers who depend on cocoa, coffee, and vanilla to earn a living. Farming activities revolve around the two major rainy seasons of March-May and July-November.

### STOP Spillover Activities in Bundibugyo

Activities started with a series of stakeholder engagement meetings to create awareness and enlist support for the project. A one-day stakeholder meeting was held to introduce the project to the district and the political arm so they could gain an understanding of the high risk interface and effectively participate in identifying risk reduction interventions and research activities.

The interface areas were selected as Burondo subcounty because it neighbors Semiliki National Park, Harugale subcounty next to Rwenzori Mountains National Park, and lastly Ntandi town Council where bats were found in homesteads, schools, and churches and bat hunting is known to occur.

In March, 2023, the Uganda STOP Spillover office was requested to close out due to a lack of funding. The team there ceased implementation of work plan activities and informed its stakeholders and

partners of the project status. As a result of this, the Uganda team held a final stakeholder meeting with partners in Bundibugyo on the 10th of May.

This one day meeting was attended by a total of 57 (34 males and 23 females) participants inclusive of the country team members.

## Objectives of the final stakeholder meeting

*Objective 1.1. To provide a comprehensive update on project activities at the interface*

*Objective 1.2. To solicit feedback from stakeholders regarding the benefits of project activities.*

*Objective 1.3. To seek recommendations from key stakeholders on the best approach to advance STOP spillover activities*

## Participants

In attendance were Chief Administrative Officer (CAO), District Health officer (DHO), Resident District Commissioner (RDC), LC 5, Sub County Chiefs, Wardens from National Parks, Community Development Officers, Tourism officers, Representatives from Cultural groups, religious groups, women groups, bat monitoring agents, Inspector of Schools, Red cross CP3 project, among others. See full list of participants as Appendix one.

## Opening Remarks

During this session, the district veterinary officer (Dr. Samson Ndyabaisi), who was the contact person for STOP Spillover program in Bundibugyo district welcomed all participants for the closeout stakeholders meeting (see Appendix two for detailed program).

He invited the Chief Administrative Officer who officially opened the meeting. In her remarks, she stated that as a result of STOP Spillover activities, there was more information now available on bat- human interactions in Bundibugyo.

She urged the participants to focus on what the project had achieved and to find strategies to continue the activities. She emphasized that the participants should use the skills that were obtained in the various trainings to reduce the likely effects of human-bat interactions, as well as find ways to transfer the knowledge to other stakeholders.

She urged the stakeholders to actively participate in the meeting and suggest potential sustainability plans for the activities that had been initiated. On behalf of other stakeholders, she thanked the funders (USAID), and government of Uganda for having selected Bundibugyo district for project activities.

# PRESENTATIONS

## Country team lead, STOP Spillover

The country team lead commenced the presentation by providing a concise overview of the project, including its background, goal, objectives, the rationale for selecting Bundibugyo district as the project site, the roadmap, and notable achievements. Sheh also informed the participants that due to a lack of funding, the project activities would end by June 2023.

In her presentation, the country team lead emphasized the significance of STOP Spillover in light of Uganda's experience with an Ebola outbreak that affected five districts in 2022. This outbreak served as a clear indication that spillovers of infectious diseases were occurring, reinforcing the ongoing relevance and importance of the project. She also highlighted the prevailing trends of Ebola and Marburg virus diseases in Uganda, underscoring the need for proactive measures.

The country team lead further outlined the various activities initiated through STOP Spillover, which proved beneficial to both the communities and the district as a whole. Specifically, training programs were conducted on Participatory Epidemiology, Risk Assessment, Ecological Modeling, and Bat Monitoring and Reporting. These training sessions equipped the community and other participants with essential skills in these areas, empowering them to actively contribute to disease surveillance and prevention efforts.

Concluding her presentation, the country team lead highlighted the range of project activities that were implemented to

address spillover risks. This encompassed a comprehensive approach aimed at fostering a safer environment and minimizing the transmission of zoonotic diseases within the community and surrounding areas.

## Project activities specifically implemented in Bundibugyo included:

1. Activity 1.2.6.1: Investigating bat host ecology and human behavioral risk factors associated with human-bat interaction.
2. Activity 1.2.6.2: Behavioral, sociocultural, gender-specific, and economic risk factors.
3. Activity 1.4.6: Wastewater and surface water surveillance
4. Activity 2.2.2.1a : Engaging communities through an SBC intervention strategy to keep bats out of households, identify, and promote safe practices.
5. Activity 2.2.2.1b: Promoting protection of household and communal water resources and food safety.
6. Activity 2.2.2.2: Develop and evaluate a community-based bat-human interface monitoring program for zoonotic spillover early warning and response.

## Update on project activities at the interface

### *Update on activity 2.2.2.2 (Bat monitoring program)*

Dr. Kato Charles gave a brief overview on the establishment of the bat monitoring program (Activity 2.2.2.2), and the Wastewater and surface water surveillance (Activity 1.4.6). The commissioning of the bat monitoring program was done on 21st of February 2023 through a multisectoral stakeholder engagement during which 15 bat monitoring agents were selected with representatives

from each parish.

Monitoring agents and Parish supervisors received mobile devices with KoboCollect tool installed, which is an open-source app for collecting survey data. They were trained on how to collect data, roost identification, basic ecology of bats, and their specific species characteristics.

The monitoring agents were then tasked with monitoring their roosts twice a month, to understand bat patterns of bat populations in the selected areas.

#### *Update on activity 1.4.6 (wastewater and surface water surveillance)*

Waste and surface water surveillance activity started in February 2023. For this specific activity, the focus was to test water for presence of priority pathogens of interest. A team from UVRI conducted the dry run by collecting an initial set of samples from selected sites.

#### *Update on activity 2.2.2.1.a and b (SBC strategy)*

During her presentation, Dr. Shamilah Namusisi, the RAC Hub lead, focused on the activities that had been initiated.. Specifically, she discussed the Social and Behavioral Change (SBC) activity, which aimed to engage the community through a strategy that promotes safe coexistence with bats by keeping them out of houses.

Dr. Namusisi emphasized the importance of working closely with the communities to gain a comprehensive understanding of the risks associated with bat-human interactions.

STOP Spillover recognized the need to first understand community practices and perspectives regarding bats before designing strategies to reduce such interactions. The objective

of the SBC strategy was to identify risks, improve community knowledge, and develop tools to help people live safely alongside bats.

In conclusion, the country team lead officially handed over two copies of updated maps of Bundibugyo with detailed locations and sites of the three sub counties, Burondo, Ntandi and Harugale to the Deputy Chief Administrative Officer who in turn handed over a copy to each sub-county representative.

## FEEDBACK FROM PARTICIPANTS

The following were highlighted as project benefits to the communities.

- ▶ The community reported gaining knowledge regarding the dangers and benefits of bats through the various trainings conducted. With support from the global team, the country team organized workshops and trainings, including ecological training and participatory surveillance. These initiatives have significantly enhanced the capacity of different community groups. Participation in groups like the the One Health Design, Research and Mentoring working groups has been particularly beneficial.
- ▶ As a result of the trainings, community members are more aware of the presence of bats within their localities. They shared their indigenous knowledge about bats, including their uses, and have developed a heightened awareness of bat populations in their areas.
- ▶ There has been an improvement in hygiene practices within the communities. Participants learned about potential contamination risks, particularly with regard to water flow downstream. Consequently, they have adopted practices such as boiling water and covering food to mitigate these risks.
- ▶ Technologies have been employed to map bat roosts within the communities. Monitoring agents were trained in participatory surveillance and the use of the Open Data Kit (ODK) tool for data collection. This data collection method has proven to be timely and efficient, facilitating effective monitoring and evaluation of project activities.
- ▶ Women's groups received training on planting and caring for bat repellent plants. Even though they had not yet received the plants, with the knowledge and skills they can on their own acquire and grow the plants if they wanted to.
- ▶ Overall, these activities contributed to the community's increased knowledge, awareness of bats, improved hygiene practices, utilization of technology for data collection, and provision of skills and knowledge on growing bat repellent plants to women.

## RECOMMENDATIONS FROM THE PARTICIPANTS

During an interactive discussion led by Dr. Kato Charles Drago, participants suggested several ways to sustain project activities for the district and implementing partners:

1. The participants acknowledged that project closure is a standard process, but emphasized the importance of it being planned and not abrupt. They recognized that planned closure allows stakeholders, particularly the immediate beneficiaries, to have sufficient time to adjust and reorganize their activities accordingly.

2. **Sharing Activity Reports:** It was requested that all activity reports be shared with the district to provide a comprehensive understanding of the activities' successes and challenges. This information would enable the district to prioritize activities and seek funding accordingly.

3. **District Workplan Prioritization:** The district local government is in the process of drafting budgets for their prioritized workplan activities. District officials urged subcounty chiefs to consider the activities initiated by the project when setting priorities for the annual work plans.

4. **Uganda Wildlife Authority Support:** The Uganda Wildlife Authority has a monthly program for distributing seedlings to communities. Now that they are aware of bat repellent plants, they suggested a possibility to acquire and distribute them to communities.

5. **School Headteacher Training:** The District Education Office committed to budgeting for training school headteachers on reducing bat-human interactions within schools. They recognized the need to develop mechanisms to prevent bats from accessing school structures and to raise awareness among headteachers about the

dangers posed by bats.

6. **Community Nursery Beds:** Community members involved in nursery bed preparation expressed their willingness to incorporate bat repellent plants among the trees regularly sold to communities.

7. **Collaboration with Children-Focused Organizations:** The local government sought to engage organizations focused on children's welfare, such as UNICEF, Save the Children, and World Vision, to address interventions protecting children from consuming bat-contaminated fruits and other risky practices. The district also requested support and training from the country team to assist partner organizations working on child health, as children are identified as a vulnerable group.

8. **CP3 Project Inclusion:** The CP3 project expressed interest in the project's progress details through reports to explore possibilities of integrating bat surveillance within their ongoing event-based surveillance efforts.

9. **Continued Sensitization:** Bat monitoring agents and community health workers were encouraged to continue sensitizing communities about bats and the importance of safe interactions.

10. **Proposal Writing and Funding:** The local government, in collaboration with AFROHUN, aimed to write proposals and actively seek funding opportunities to sustain project activities.

These proposed strategies and collaborations aim to ensure the continuation and sustainability of project activities, involving various stakeholders, resources, and partnerships within the district.



## Arising Issues

All phone devices distributed to agents for bat monitoring, computer gadgets among other resources were to be returned to AFROHUN as per the policy, however the plan for continuation of monitoring the bats would then be affected if the gadgets are withdrawn.

The district authorities requested detailed project reports and validated SBC strategy tools for reference and for sensitizing the community on how to live safely with bats.

## CLOSING REMARKS

The district officials thanked the project management for the good work done in Bundibugyo district in terms of capacity strengthening, and increasing communities' knowledge of bats. They proposed that despite the closure of the project, it was crucial to develop an appreciation clip to USAID for funding the project thus far.

The District Health Officer (DHO) appreciated the team and mentioned that this was an awakening call from which they gained knowledge and understanding on bats that pose health risks. He urged the participants that it's everyone's responsibility to reduce the bat-human interactions. The DHO recounted a story of a particular hospital where a ceiling was heavily damaged as result of the accumulated bat guano and that the situation posed a health risk.

The Deputy Chief Administrative Officer (CAO) extended her appreciation to USAID for financial support. She urged the subcounty heads to include STOP Spillover activities and continue to sensitize the community on bat-human interaction and achieve the objectives as had been planned.

The District Chairperson thanked the project management, and stated that it was because of STOP Spillover that he became aware that the community feeds on bats as a source of protein. He would bring this to

the attention of other district officials and an alternative source of protein could be sourced for communities. He concluded by requesting the CAO on behalf of the Bundibugyo district to write an appreciation letter to AFROHUN for the support provided to their people.

The Resident District Commissioner closed the session by encouraging participants to support each other through knowledge and skill sharing, and create innovative ways to move activities forward.

## REFERENCES

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## Annex One: Agenda

Day and time	Activity and Facilitator
Wednesday, 10 May 2023	
9:00- 10:00	Registration of participants
10:00- 10:15	Welcome remarks by district officials (CAO, DVO, DHO)
10:15 – 11:00	Welcome remarks by country lead Presentation of STOP Spillover Program (Doreen)
11:00-11:30	Coffee
11:30-12:30	Presentation of STOP Spillover activities within Bundibugyo (James & Shamila)
12:30 – 14:00	Reactions/ Feedback from Participants James, Shamilah, & DVO
14:00 – 15:00	Lunch
15:00 – 17:00	Plenary session (Discuss best way to hand over activities that had been initiated), Identification of partners that can take on the selected activities. (Kato)
1700 – 17:30	Next steps – Doreen & DVO
17:30-18:00	Tea

## Annex Two: Participants List for Final Stakeholder Meeting

S/N	Name	Role/ Address	Phone Contact
1	Bwambale Robert	District Surveillance Focal Person (Livestock)	0773981298
2	Samson Ndyanabaisi	District Veterinary Officer	0774681995
3	Kabasinguzi Kulusum	Environmental Officer	0772966096
4	Muhindo Samuel	Parish Admin Burondo and Coordinator STOPs programs in burondo sub county	0779557136
5	Kule Joshua	CP3 Red Cross Community Surveillance Program Volunteer	0771973168
6	Kiyita Christopher	District Health Officer	0774728733
7	Tukundane Robert	DISO/ for Resident District Commissioner	0772313066
8	KaJumba Enid	Deputy Chief Administrative Officer	0772870772
9	Bwambale Joel	Local Chirperson 5 (LC 5)	0783499780

10	Rev. Kamuhanda Thomas	OH DReaM member/ Deputy Prime Minister Bulingiye Kingdom	0772975375
11	Masika Kezia	OH DReaM member / Community Development officer Harugale	0772527823
12	Biira Harriet	Inspector of Schools -Bughendera	0772505263
13	Mate Christopher	Parish admin harugale and Coordinator STOPS programs in harugale sub county	0788248831
14	Masereka Stephen	Village agent (Bat monitoring team representative –Harugale sub county)	0778524652
15	Alipha Asuman	LCIII –Harugale sub county	0773838776
16	Mugisa Bamaga	Community Based Organisation ChairPerson (Bamaga users group)	0787961028 / 0789849819
17	Muhindo Joram Nyahomwa	Village agent (Bat monitoring team representative –Burondo sub county)	0773086545
18	Nkabigumira Alice	Representative Development fm radio	0770573251
19	Asiimwe Juliet	LCIII- Burondo sub county	0777413475
20	Baluku Joackim	Youth representative –Burondo sub county	0778051596
21	Esimundara Yerima	Sub county chief –Burondo sub county	0772266413
22	Isekalombi Moses	Veterinary staff –Burondo sub county	0773265602
23	Bora Deborah	Sub county chief –Harugale sub county	0772542072
24	Karungi Margret	Tourism officer –Bundibugyo District	0781265268
25	Kainta Wilson	Batwa community representative	0789911247
26	Kule Isenderu	Surveillance focal person – Bughendera health subdistrict	0775677566
27	Asaba Timothy Galibura	Mayor- Ntandi town council	0789927003
28	Rusamba Johson Ndyanabo	OH DReaM member	0772528123
29	Kamalabe Costa	Uganda redcross volunteers coordinator	0772236548 / 0785109720
30	Basaliza Alex	UBC-radio representative	0776795192
31	Mahingha Joseph	Community member and veterinary practitioner –Ntandi town council	0782975044 / 0788952091
32	Bwambale Tham Anzire	Coordinator STOPS programs in Ntandi town council	0779784341
33	Sekalombi Alex	Village agent (Bat monitoring team representative –Ntandi town council)	0770863976
34	Karungi Cissy	Community representative –Burondo sub county	0780751769
35	Kagaruki Aranathan	Inspector of Schools –Bwamba county	0774933326

36	Muhindo Mwera Janet	Women group representative –Ntandi town council	0779811543
37	Kabugho Jovia	Women group representative Harugali	0771860632
38	Maliyamungu Joseph	Uganda Wildlife Authority –Rwenzori National park (for warden)	
39	Nora K Mbubi	Uganda Wildlife Authority –Semuliki National park (for warden)	0772996185
40	Olega Caesar Tevin	Town clerk – Ntandi town council	0772874423
41	Masika Nyakihili Adnas	OH DReaM member	0788365116
42	Murungi Paul	Agriculture officer –Harugale sub county	0782398391
43	Masika Annet	Community Development Officer – Ntandi town council	0778504433
44	Sheikh Ramadthan Mwesigye	Uganda Muslim Supreme Council-District representative	0782678771
45	Mavita Christine	Reprentative of research assistants used during activity implementations	0782826308
46	Kabagenyi Alice Favour	Youth rpresentative – Harugale	0785834228
47	Adongo Catherine	Community Development Officer – Burondo sub county	0782747509
48	Candiga Richard	For District health educator	0772301104
49	Tubihemukama Methodius	Research assistant	0750681822
50	Flavia Naluwagga	Research assisitant	0774681995
51	Shamila Namusisi	Risk Analysis and Communication Hub Lead	0772394276
52	Kato Charles Drago	Surveillance Modelling and Mapping Hub Lead	0703320705
53	Birungi Doreen	Country team lead	0777028277