



## ***Population, Health, and Environment: Lessons From East Africa***

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***Edited Transcript – Gladys Kalema-Zikusoka***

Good afternoon everyone. I'm very happy to be giving a presentation on the population, health and environment programs that we're doing around Bwindi in Uganda. I would like to start by acknowledging USAID, which has funded our PHE initiative in Uganda, and Johnson International, which has supported Dr. Lynne Gaffikin, and Kanungu District and Bwindi Community Health Center, who have been instrumental in getting everything going, and Family Health International, who have started to support us through a CB Dephoek.

We'll talk a little bit about the background of how CTPH began. We started off focusing on health and environment, and later on we introduced family planning to have the PHE program. I'll focus on the results of our activities one year after implementation, a few lessons learned, and the way forward.

We started CTPH because we realized that people living around protected areas in Africa are among the poorest. They have very little healthcare and information on diseases that can spread between people and animals. This has led to a lot of diseases spreading at the human-wildlife-livestock interface, especially between closely related animals. And these people have very little healthcare because they're the last people the government thinks about. They start off with the big cities, and then the rural areas, and then eventually they get to the national parks if at all. In this area, for example, this is Bwindi Impenetrable National Park. From here you can see the Galungas volcanoes, and this is typical of how people live, in fact, this is a more wealthy family because they have an iron sheet roofs, but normally they have grass thatched roofs. Here you find that the gorillas are here, and the people are here, and they live very closely with each other. They also find it very difficult to get to the doctor because they live in such a terrain, and they tend to have preventable infectious diseases, which can spread to and from animals.

Our PHE program began in Bwindi Impenetrable National Park, home to half of the world's mountain gorillas, which now number about 760. In Bwindi, when I worked as a vet for Uganda Wildlife Authority, we had the first scabies skin disease outbreak in gorillas, which



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was traced to people living around the park who have very little healthcare. This was a very big shock for us because we wondered, ‘how did the gorillas get scabies’. This infant died, and the rest of the group only got better after treatment with ivermectin. And suddenly we realized that scabies is a very common disease in people living around Bwindi because they have poor hygiene; they bathe typically once a week when, they go to church on Sunday. If they miss church this Sunday, then they bathe after two weeks. And they have to walk very far to collect water. That’s part of the reason, but also they don’t realize that it’s important. This is Bwindi Forest. There’s a gorilla group in here; we tracked it to Guringo. This is someone’s house, and this is a banana plantation. They love to eat the banana plant, not the fruit, which is worse, because they destroy the whole plant and people get very upset.

In 2000, when I was still in UWA (Uganda Wildlife Authority), I was asked to start a health education campaign for the communities around the park on human and gorilla disease transmission. When we started this campaign some people were worried that the community would think we care more about animals than people, but actually they were very willing to listen to what we had to say, especially the ones that benefited from tourism in Buhoma. When we went to the other parts in Guringo and Congo -- we even went into DRC because this group that got scabies was always going into DRC, they lied to us that they’d never seen gorillas because they had never got any benefits from tourism, and they thought we had come to arrest them.

These are the kind of brochures we gave out, obviously in the local language mainly, but they talked about all these diseases. The ones on the left have been suspected to spread between people and animals or animals and people, and the ones on the right were common in the community but could also spread to people and gorillas. And they were very simple; if you want to go to the toilet, dig a hole 30 centimeters deep. Many of these people, not only didn’t they wash their clothes often or bathe, the kids would shit in the garden, they wouldn’t cover their rubbish heaps, so there were many things that they used to do that were totally unhygienic and were a great risk when the gorillas came into their gardens. We were supposed to have pit latrines, but many of them didn’t.

We worked closely with the district health assistants and the community conservation rangers, funded by IGCP. And they came up with these recommendations. They wanted health and diagnostic services closer, which was the responsibility of the Ministry of Health, and they wanted the Wildlife Authority to strengthen the human-gorilla conflict team made up of community members trained by UWA to chase gorillas back to the park. Some of them





wanted compensation for crop damage, but the Ugandan law doesn't allow it yet. And personal hygiene, we thought, was their responsibility.

Gorilla tourism has done a lot for the communities in Bwindi. Before gorilla tourism there was nothing else other than a tea factory close by. These are kids from Bwindi Orphan School, which was started because of tourism; tourists sponsor kids to go to school.

This photograph I just took a few months ago. This is another gorilla group that likes to range very close to the park and there were just Ushegura [spelled phonetically] group, that's a silverback because it's quite far off, but this was a gravity water scheme, which IGCP helped to build. And these gorillas were ranging in this area. They were also ranging close to where the army is camped inside the park, and they're very unhygienic. There are so many areas where the gorillas can pick up diseases from people.

We also did some TB surveys in Bwindi and Queen Elizabeth National Park. Between completing at Wildlife Authority and starting the NGO when I was at NC State through a AFF fellowship, we were able to find 25 percent of chronic coughers have TB around the park and five percent of the park staff, who were not showing clinical signs. Two people died during the research because of not completing treatment. These are some of the areas where the positive cases were in all the major villages close by, and so there was a great risk of the gorillas getting TB.

This led us to start CTPH, and we're registered also in the U.S. because we started here and in Uganda. We have the patron -- the queen of Uganda is our patron, and we are growing every day. Currently we have 18 staff, and we've had volunteers from various places. We integrate wildlife conservation and public health, which is interdependent in and around protected areas in Africa. We feel that this is more of a cost-effective way to prevent uncontrolled disease transmission between people, wildlife and livestock, and disease not only affects conservation and public health but also eco-tourism, livelihoods, agriculture and culture. Our mission is to promote conservation and public health by improving primary healthcare to people and animals in and around protected areas in Africa, and our vision is to prevent and control disease transmission where people, wildlife and their animals meet while cultivating a winning attitude to conservation and public health in local communities.

We have three integrated programs: human public health, wildlife health monitoring and information, education and communication. Today I'm going to mainly talk about the human





public health program, which consists of education campaigns similar to what we did when I was still in UWA, but we built on those quite a lot and we focused on good hygiene, **zynosia** and links to gorilla health, eco-tourism and livelihoods. We are also strengthening community-based healthcare, which actually when I did the TB research I realized was really the way forward for rural communities in places like Africa because people live so far away from health centers, so the only sustainable way of making sure that they get proper treatment for the most basic diseases was by establishing community-based healthcare, and it's now a Ministry of Health strategy in Uganda. And we're also building on these existing structures to promote community-focused family planning in villages around Bwindi.

In our campaigns, we started off with drama workshops where we basically strengthened existing drama groups, we don't try and set up any new ones, and we give them the brochures which I showed you, and we told them what we we're trying to portray, and they come out with a very, very good message. And in the local language, they each have very good stories, and everybody's highly entertained and amused and educated at the same time. We also get children coming to these drama shows, which is really good because they're the leaders of tomorrow – we've reached over 7,000 people working with two drama groups.

We've also erected health message sign posts around the park talking about these risks of human and gorilla disease transmission, and we had to form an MOU with the district local government and the ministry of health in order to start the public health programs. We met with local leaders and traditional healers and what our staff do is that they identify TB suspect patients and get their samples to the government health center and the Bwindi Community Health Center. The NGO Missionary Hospital doesn't actually like to get samples; they want to actually see the patients, but some of the patients don't want to go all the way there. So, if they don't want to go all the way there then our staff collect their sputum samples and carry them to the government health center. The government doesn't really want to see patients, so it's quite an arrangement. They just want to get the sputum samples. They closed their TB ward. So, we tend to work with both of them, and we're learning a lot about how to work with different partners with different philosophies, but it's going really well.

The traditional healers were a group of people who, when we started CTPH, we never thought about working with, but when we held a workshop to launch the programs before we began everyone felt that we should start to work with them. And when we work with them it's been very rewarding, and we're getting them to admit that they can't treat TB and HIV.





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But the thing is, the reason why it's so important to include them is that most people, 90 percent of people around Bwindi and in rural areas in Uganda first go to the traditional healer when they're sick before they go to the modern healer. And if they're not getting better then they eventually get to the hospital. So, if you don't include the traditional healers, you miss a lot of patients, and it would be very hard to control diseases like TB. We've had workshops with them. They've actually admitted that they can't treat TB and HIV. They are dying of TB and HIV, and they're willing to refer patients, and we also want them to become their community volunteers.

In the CBDOT program, what makes it really effective is that if you're diagnosed with TB you choose your volunteer, someone who will watch you take your medicine every day for eight months, and after that -- and that person should be able to read and write because they have to tick off a form on the National TB-Leprosy Register. So, we told the traditional healers that if they become the volunteers, they won't lose their patients. They'll still continue to have their patients, and when the patient gets better they will give all the credit to the traditional healer. And it seems to be working. It's worked in other parts of Uganda where this whole program began. It actually started in Kiboga District as a pilot by the head of the TB program in Uganda. It's a place where my mom also used to be a Member of Parliament, and it's worked really well. The WHO adopted it as a strategy for the whole of the 22 worst-affected countries with TB around the world.

One thing that the traditional healers keep on saying, and when we have meetings with them we always invite people from Wildlife Authority and people from the Ministry of Health, they always say that, "Well, we have the medicinal plant which treats TB, but it's in the forest, and you can't allow us to go there." And so, of course we try and tell them it's probably not in the forest, but they do want to go in and collect plants for other reasons. So, Wildlife Authority responds -- has a chance to interact with them and say there are certain zones in the forest where they're allowed to go and other zones where they're not allowed to go, so it tends to be working really well. One of the healers said he had the treatment for TB, which was marijuana and honey. And everybody laughed at him, his fellow traditional healers, and we kind of said, yeah, it could probably treat a cough, but not TB.

And we've teamed up with THETA, Traditional and Modern Practitioners Together Against HIV. THETA was created after TASO, which was The AIDS Support Organization founded by a Ugandan lady when the AIDS epidemic was really high, and they realized that



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traditional healers -- a lot of people went to traditional healers for symptomatic infections of HIV, and it was working, so we work closely with them as well.

So far in the CBDOT program we've had 52 people enrolled, 33 completed treatment, nine on treatment, five defaulted and five died. This is better than what you normally get usually, and this is our nurse aide carrying out questionnaires. When you go to the community it also asks them not only if they've been coughing for more than three weeks but how often they see the gorillas, so we try and link everything. The whole program is linked to the environment.

One of the challenges we've had is convincing health partners that community-based healthcare can complement their efforts, not so much the government, but the NGO Missionary Hospital. But once they were convinced they're working really well with us now. And then we've had limited resources to continue the programs in one of the parishes that doesn't border the park because when we started with Irish funding they didn't mind where we were, and we worked in Mukono and Bujeng [spelled phonetically], and Teshero [spelled phonetically] – the reason we went to Teshero is because our first field officer was from there. And then when USAID funding came in, which was due to funding from Threats to Biodiversity, they wanted us to focus on parishes where gorillas come on site, and so then we had to choose another parish.

At the health centers, if any of you take samples to the government health center, a lot of the times the technician is not very motivated. The first one was but the second one isn't who replaced him, so we have a challenge, and we've had to get some of our staff to go out there and actually do the analysis, some of our vet technicians. And also they tend to be alcoholics, and it prevents the daily treatment.

Now, coming back to some of our other programs that link in. We have wildlife health monitoring; we have data from gorilla and livestock health analysis. Parks staff bring in samples every week and we analyze them, and then we have the tele-center where community members come in and learn how to use the e-mail and Internet, and with it we've even worked with some of them in the community health programs. We've had over 150 people graduating in computer studies, and we've had the community and the tourists using the Internet a lot, especially the community, and they're willing to pay for it.





The PHE program came in to strengthen all this, and we feel that PHE is very important, especially in Bwindi, because the average family size is 10 children per family – and this is the live births – and a lot of them say that half my children are to go to school and the other half are to chase gorillas in the garden. So, this is the kind of situation we have in Bwindi. It's a very hard edge, and so with a very high population density people are just going to the forest for firewood, for basic needs to poach and collect firewood. The bigger the families, the worse the pressure on the forest.

Our needs assessment for family planning was done by Mbarara University School of Science and Technology. They have a medical school and also an independent survey. It found that there were many myths and misconceptions about family planning, and men and women did not discuss family planning, so we decided to focus on couples. Remember here they said to us, "You should only focus on couples, teenagers, men or women. Don't mix everything," so we thought we'd focus on couples. And there was a health care model had been around where they had community reproductive health workers, but we built that one further on the advice of the district medical officer and also got couple peer educators, one from each village. And we also hired a nurse/midwife, who's a PHE program coordinator, and she provides expertise to our nurse aide, who is already there. And the objectives are to reduce family size and human-wildlife interactions and to increase capacity to implement family planning health and environment interventions, increase access to information and education in family planning, increase acceptance of family planning among target community members, and reduce the risk of human diseases in mountain gorillas.

In the end, we've ended up training four community reproductive workers and 24 couple peer educators, and they're doing very well. They inform people about the benefits and methods of family planning, primarily through village health talks and targeted home visits and they refer potential clients to health centers. We have monthly meetings with the crews and quarterly meetings with the CPEs. Lynne Gaffikin had come to visit over there. At these meetings they go through all the data sheets. It's taken a while to get the data sheets right because every time you add something it requires a lot of training, because these people are not highly educated. And we go through the data sheets, and they tell us the challenges they're facing.

In the first year of PHE implementation, we've had a very great response. We expected to have 30 new users because there was hardly any family planning, but we've had 147, which is 490 percent. What is most interesting is the PHE volunteers have been taught to recognize





people who are coughing a lot when they visit people's homes and when they go to the villages, and they have been able to refer 480 patients in one year, which is much, much higher than what the nurse/aide was trying to do when he went to the villages or even what the community leaders or traditional healers were doing. So, integrating family planning and TB has really helped the TB work.

We've also had new targeted health visits to homes bordering the park with people who see gorillas, and this is very significant because when they carried out a study to see how successful integrated conservation and development initiatives were, they found that the poorest people still didn't benefit and there was still poaching and still collecting firewood. And so they were trying to say ICDs are not useful, they're not important, but we think that the reason they didn't work is they were targeting the wrong people because obviously when you hold a village meeting it's easier to get the people who are educated or the people who are aware and who are not so close to the forest's edge because they have the time to go there and they have the resources. And you get numbers but you don't get the right people, so by visiting people's homes they're able to get to the right people. And we've also had women opting for new methods such as implants, which are being used at the Bwindi Community Health Center.

In 2007 we had over 1,000 homes visited, and 540 were homes that saw gorillas, which are the hardest to reach. We managed to reach almost 3,000 people in health talks, reported 480 TB suspects, and had very many condoms distributed, 23,000. And so, we've had very good results in the first year. When Dr. Lynne Gaffikin came in December, we tried to see the new homes which are visited, not just the total homes. So, now looking at the new homes that were visited, we're beginning to get data on that; number of new homes visited, number of new homes that saw gorillas and number of new homes followed up. We also right now have 588 family planning clients that we know of, but of these 147 are new, have come on because of the project, and Depo Provera seems to be the most popular method, but the records are mainly at the health center.

So, in order to integrate scabies/HIV into this whole program we alerted local leaders, and we told them from the beginning that at least 25 percent of the homes should be homes that border the park. The scabies focus is on good hygiene and HIV focus is to educate them to go to the health centers.







We've also had more drama shows on these concepts, adding in family planning, HIV and scabies, and we've also started radio programs. In the first month of the pilot radio program we had a very good response, and people came on with testimonies. There was a lady who had had nine children and she was on the implant. We asked her to come on with her husband, and she came on, and everybody was very excited to hear what she had to say. They come on together with the district health people and the Wildlife Authority.

And then we also have flip charts, which I don't know if I have time to show you, but I'll very, very, very quickly go through it. They go around showing these. This is a negative family with a mother who's had eight children and she's expecting another. Only half of her kids go to school, and the father goes to poach because they need food. This is Nigo. She talks about the family planning, and they're not interested. The gorillas come into the garden; the children chase them away. The mother continues digging. The father goes to the bar to drink. Gorillas chase her away, and the children are crying. And then the eldest son has two wives whom he can't support. They stay at home; they're pregnant. He's leaving them, and two children have died. That's the negatives story, and now the positive one. There's a young couple who plan when they're still young how many children will we have. They have four children 10 years later, a nicely spaced out family. Then they're all sitting at home having lunch and doing housework, of course. Then when they gorillas come, they call out **UGOT** () instead of trying to chase them away themselves. So, they're aware of what they should do and the benefits of the park. Then the son graduates, becomes a park ranger. So, then they have a discussion around that and why is family planning important.

And then the last thing that we've done is we've set up community Web sites. One is [bwindicommunity.ctph.org](http://bwindicommunity.ctph.org) and the crews and CPEs have started to get free classes, and they're beginning to be able to analyze their PHE data on the computer.

So, the challenges we've had: clients arriving at health centers and not being attended to because family planning is not considered a priority at the health centers, so a PHE coordinator comes in and helps one day a week in each of the health centers; it's hard to track referrals by the CPEs; it takes a lot of time to train the community volunteers, but there's a lot of research information we could collect, so we're trying to get around that problem; and sometimes they want to ask for a salary, but we're actually helping them out with income-generating projects.





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We've found that the targeted home visits help. It's good to focus on couples, and integration helped. And we're starting a community-based Depo Provera where people will be able to go into people's houses and give them an injection every three months. And FHI has brought in some money for this, and in this month we're going to have a two week training of 12 of the community volunteers.

They also want to form a CBO, a PHE community based organization, which is great, to sustain the efforts, and we're hoping to facilitate that. And they also -- one group wants to have a goat project, another one a cow project to generate income and sustain their activities, so PHE is supporting that. Then we want them to learn how to use GPS, and we want to build in a community radio component.

And I joined a PHE working group, just very quickly. These are some of the people in it. We are working with PRIB to do the Uganda PHE assessment. We are creating awareness of PHE in the Ugandan media. They're giving us some free air-time, but we're just about to begin that, and we have Victoria Selagirke [spelled phonetically], who used to be a member of parliament, so she's hoping to advocate for PHE among politicians. We're trying to see how we can set up trans-boundary PHE programs and look at PHE because we have a big problem with pastoralists in the country, both in national parks and in other areas. Recently there was an eco-agriculture training workshop where we were invited, and our program coordinator went. And I think some of these have already been mentioned, the Ashoka Fellowship, the San Diego Zoo and ODE Magazine.

So, our strategy is to train government health workers and other grassroots practitioners through capacity building, work with multidisciplinary teams, and empowering target communities.

I want to acknowledge all these people who've helped us in various ways to get going and our staff. For more information, please visit our Web site. Thank you.



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