

POLICY BRIEF



Can health investments benefit conservation and sustainable development?

In 2007, Conservation Through Public Health (CTPH) initiated a Village Health and Conservation Team (VHCT) programme, with the aim of protecting the critically endangered population of mountain gorillas at Bwindi Impenetrable National Park (BINP) from infection with human-related diseases. CTPH was established in 2003 after a scabies disease outbreak was transmitted from humans to gorillas in the northern sector of Bwindi and resulted in the death of an infant and disease in the rest of the gorilla group (Kalema-Zikusoka et al. 2002). Given the close genetic relationship between humans and gorillas, the potential for cross-transfer of zoonotic diseases is high and can be a significant cause of disease or death in the gorilla population (Graczyk et al. 2001, Plumpton and Williamson 2001, Woodford et al. 2002).

This policy brief reports on learning from CTPH's model for integrating health and conservation. With funding from the UK Darwin Initiative, CTPH with the support of Oxford University and the International Institute of Environment and Development (IIED) undertook evaluative research to understand the impact of CTPH's model at Bwindi Impenetrable National Park from 2007 to 2017.

Policy pointers

Uganda Ministry of Health

- The provision of integrated health care services and conservation outreach programmes in remote rural areas supports Uganda's devolved health care programme. The Ministry of Health should consider integrating conservation messaging into the activities of all their Village Health Teams (VHTs) to enable efficient, cost-effective delivery of social services that also promote environmental and gender benefits resulting in a greater contribution to the Sustainable Development Goals.

Uganda Wildlife Authority

- Integrating health care into community conservation programs can win greater support for conservation from protected area communities. Wildlife agencies should consider creating strategic partnerships with health programs to bring greater benefits for protected area communities.

Non-Governmental Organisations

- An integrated Village Health and Conservation Team Program can present a sustainable approach to delivering health care services and conservation outreach provided the volunteers are well supported, have robust data collection and monitoring methods and sufficient incentives to carry out their work over the long term. This requires the active engagement and support of NGOs.
- Uganda's devolved community-based health worker networks provide a ready-made opportunity for delivering conservation messages alongside health care. Ugandan conservation organisations are encouraged to build links with the health sector in order to maximise the potential of this outreach opportunity.

Donors

- Poor public health can contribute not just to illness and household poverty but also to conservation threats. Many conservation organisations have good access to remote rural communities and, with appropriate capacity strengthening, are well placed to integrate primary and reproductive health care provisions into their programmes. Development agencies should not overlook the potential of conservation organisations to deliver poverty reduction and health benefits.

CTPH approach

CTPH works with VHCTs to offer a primary healthcare service to improve human health within frontline parishes (parishes that directly border the park) around BINP. The VHCTs address potential transmission routes between people, wildlife and livestock through educating community members in improved sanitation and hygiene practices (Kalema-Zikusoka et al. 2018). The VHCT programme also aims to raise awareness and promote the use of family planning, with the expectation that households that are better able to plan and space births and, if desired, reduce fertility and family size, will experience improved earnings, nutrition and child education (Canning and Schultz 2012). These human development outcomes are increasing contraceptive prevalence rates among beneficiary communities and subsequently expected to reduce household pressure on natural resources inside BINP (Gaffikin and Kalema-Zikusoka 2010). The VHCT programme has also received support from different donors and, over time, evolved to include new interventions aimed at reducing the demand for natural resources, such as the promotion of fuel-efficient stoves and tree planting.

CTPH currently supports at least two VHCT members in each of the 22 villages located in Mukono and Bujengwe parishes in Kanungu district. Volunteers are expected to make monthly visits to their assigned households, paying particular attention to those located directly on the park boundary. The volunteers are not provided with direct financial support. Instead, CTPH initially set up two animal husbandry projects (one in each parish) to generate a sustainable source of income for the VHCTs. Each group was given a number of seed animals, with the expectation that the VHCTs would generate income from selling milk and selling animals as they reproduced. VHCTs were also grouped into two village savings and loans associations (VSLAs) to enable them to save earnings from the group income projects and access credit.

What are health and conservation investments achieving?

Evaluative research of the CTPH approach by Oxford University and IIED with funding from the UK Darwin Initiative shows that CTPH has played an important role in the formation of an integrated network of organisations to address family planning, public health and conservation in and around BINP. CTPH was the first organisation to provide volunteer-administered injections of Depo-Provera (a short-term three-monthly contraceptive injection) as a preferred method for most women, within communities around BINP. This has enabled increased availability and uptake of this family planning method by community members who had not previously had access.

Activities by CTPH and others – such as Bwindi Community Hospital – have led to important improvements in hygiene and sanitation over the last decade. This includes improved household access to a latrine (77% in 2009, and 96% in 2017), household use of designated animal shelters (34% in 2009, and 67% in 2017) and households that have a drying rack (41% in 2009, and 65% in 2017). Gains have also been made in access to and use of family planning, and among women aged 18 to 49 use levels around BINP have increased (22% in 2007 and 67% in 2016) and are currently much higher than the national average for the Kigezi region (where BINP is located), a rural area in Uganda (24% in 2006, and 46.5% in 2016). Attitudes towards conservation are also changing with people, in general, feeling positive about the benefits and potential that BINP provides.

Lessons learnt

The VHCT model is highly replicable because community health workers are a recognised structure in the Ministry of Health in all districts of Uganda. Integrating conservation messaging in health service delivery is a potentially cost-effective way of reaching marginalized communities bordering protected areas. Community conservation departments can utilise community health workers or Village Health Teams in neighbouring protected areas to disseminate relevant conservation messages more intensively and strategically at the household level.

What can government, NGOs and donors do to improve and implement an integrated approach to health and conservation?

1. Rewarding volunteers for their hard work

CTPH's VHCT programme, and the programmes of many other conservation and development organisations, rely on volunteers' goodwill and motivation. It is important to understand whether interventions such as the provision of livestock and VSLAs are having the intended impact over time. These should not be viewed as one-off interventions but require continued support and contact in terms of providing training and advice to volunteers to ensure success and to understand whether such interventions are meeting volunteer expectations.

Volunteer retention and motivation can also be encouraged through greater active engagement. Regular meetings, for example, can provide an opportunity for collective learning and adaptive management of a volunteer programme. It is also an important step for making volunteers feel valued and part of a team.

2. Ensuring quality data collection by volunteers

One of the [challenges](#) to understanding the impact of CTPH's and others' approaches to integrating health and conservation is a lack of credible baseline data – especially when relying on volunteer-collected information (Kalema-Zikusoka 2019). CTPH and partners have worked on revised data collection, entry and analysis protocols and produced a [guide on monitoring and evaluation for non-professionals](#) (Travers et al. 2019) for others to learn from their experience.

3. Evolving approaches to integrating health and conservation

By improving monitoring and evaluation practices, conservation organisations can learn from and evolve their approaches to integrating health and conservation initiatives. For example, research led by Oxford University and IIED found gaps in the adoption of hand-washing stations and in outreach efforts to communicate the importance of handwashing. Such information will be used to refine and guide CTPH's future VHCT outreach efforts.

Additionally, the research also found that firewood is one of the most commonly collected resources inside or along the boundary of BINP. While the direct impact of firewood collection on conservation is likely to be low, any entry into the park might increase the risk of zoonotic disease transmission to gorillas. As such, investment in the promotion, distribution and support of energy-saving stoves may be a particularly effective avenue for future CTPH activities (although community acceptance of such stoves should be tested first).

4. Standardise an integrated approach to health and conservation outreach at the community level

Given the proven successes and potential cost-effectiveness of the integrated VHCT approach, we call upon the Uganda Ministry of Health to embrace this integrated approach as a national strategy. The VHCT approach can improve decentralised health care as well as contribute to national environmental and conservation targets, in line with commitments to the sustainable development goals.

Next Steps

As CTPH looks to scale up and expand their model in Uganda, the Democratic Republic of Congo and other countries in Africa, they will be applying these lessons. U-PCLG strongly encourages other conservation and development organisations, government departments and NGOs, to recognise the potential links between conservation and population and health goals, and to contribute to improving baseline data on these links by refining data collection, entry and analysis protocols. Actions like these will ensure that we are in a better position to evolve our approaches to integrating health and conservation in the future.

U-PCLG and CTPH

CTPH is a member of the Uganda Poverty and Conservation Learning Group. The group is a network of 40 conservation and development organisations in Uganda that work together to use research to inform national policy in Uganda.

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References

- Canning D and Schultz T P (2012) The economic consequences of reproductive health and family planning. *Lancet* 380:165–171
- Gaffikin L and Kalema-Zikusoka G (2010) Integrating Human and Animal Health for Conservation and Development: Findings from a Program Evaluation in Southwest Uganda. *Conservation through Public Health, Evaluation and Research Technologies for Health, and John Snow, Inc*
- Graczyk T K, Mudakikwa A B, Cranfield M R and Eilenberger U (2001) Hyperkeratotic mange caused by *Sarcoptes scabiei* (Acariformes; Sarcoptidae) in juvenile human-habituated mountain gorillas (*Gorilla gorilla beringei*). *Parasitology Research* 87:1024–1028
- Kalema-Zikusoka G (2019) Evaluating change can be challenging; it starts with quality data collection. IIED Blog - www.iied.org/evaluating-change-can-be-challenging-it-starts-quality-data-collection
- Kalema-Zikusoka G, Rubanga S, Mutahunga B and Sadler R (2018) Prevention of *Cryptosporidium* and *GIARDIA* at the Human/Gorilla/Livestock Interface. *Frontiers in Public Health*. DOI: 10.3389/fpubh.2018.00364
- Kalema-Zikusoka G, Kock R A and Macfie E J (2002) Scabies in free-ranging mountain gorillas (*Gorilla beringei beringei*) in Bwindi Impenetrable National Park, Uganda. *Veterinary Record* 150:12-5
- Plumptre A J and Williamson E A (2001) Conservation-oriented research in the Virunga region. In: *Mountain Gorilla: Three Decades of Research at Karisoke* (Eds M M Robbins, P Sicotte and K J Stewart). Cambridge University Press, Cambridge
- Travers H, Roe D, Milner-Gulland E J, Kalema-Zikusoka G and Ngabirano A (2019) Monitoring and evaluation for non-professionals – How to ensure quality in data collection processes. IIED, London
- Woodford M H, Butynski T M and Karesh W B (2002) Habituating the great apes: the disease risks. *Oryx* 36(2):153–160
- UBOS (2017) Demographic and Household Survey 2016. UBOS, Kampala
- UBOS (2007) Demographic and Household Survey 2006. UBOS, Kampala

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