

INTEGRATING WILDLIFE HEALTH AND COMMUNITY PUBLIC HEALTH TO PROMOTE CONSERVATION AND SUSTAINABLE LIVELIHOODS

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Bwindi Impenetrable National Park is home to approximately half of the world's estimated population of 780 critically endangered mountain gorillas. Bwindi is also surrounded by very high population densities of 200 to 300 people per square kilometer of some of the poorest people in Africa, who are stakeholders in gorilla ecotourism and yet have limited access to modern health services. Two scabies skin disease outbreaks in two Bwindi mountain gorilla groups in 1996 and 2000/1, resulting in the death of an infant and sickness in the rest of the group, were eventually traced to surrounding communities, possibly through contact with scabies mite infested clothing when gorillas left the park to forage on community land. Subsequent community health education workshops revealed that communities benefiting from tourism saw the advantages of improving their health and hygiene to protect a sustainable source of income from gorilla ecotourism. Research on the risks of TB disease transmission at the human/wildlife/livestock interface further emphasized the need. These findings resulted in the formation of **Conservation Through Public Health (CTPH)** in 2003, a registered Ugandan NGO and US non-profit, whose focus is the interdependence of wildlife health and human health in and around Africa's protected areas.

The public's health status has been recognized as one of the most important indicators of poverty in Africa. The goals and objectives of CTPH are centered around an innovative integrated conservation and development (ICD) approach that focuses on improving the public's health to support wildlife conservation through preventing and controlling disease transmission between closely genetically related species at the human/wildlife/livestock interface. CTPH uses three integrated strategies to address these issues: wildlife health monitoring, community public health and information, communication and technology, and works closely with central and local governments and local communities to implement the programs.

Wildlife Health Monitoring

Monthly and abnormal mountain gorilla faecal samples are collected by park trackers and rangers and community volunteers from the Human and Gorilla Conflict Resolution (HUGO) team when gorillas forage in community land, and analyzed for pathogens at a Gorilla Research Clinic in Bwindi, to establish an early warning system for disease outbreaks, where results are shared with local health and veterinary clinics. CTPH also conducts comparative disease surveillance of livestock and wildlife around protected areas to assess the level of cross species disease transmission, and focuses on diseases of zoonotic and economic importance affecting both the ecotourism and agriculture industries.

Community Public Health

A Population, Health and Environment (PHE) approach is being used to reduce threats to mountain gorillas and other wildlife, by consolidating community based health care around protected areas to promote family planning, and prevent and control TB, scabies, HIV/AIDS, dysentery, anthrax and other zoonotic diseases. Community volunteer networks educate and provide services thus building strong links between the community, local health centres (hospitals) and Uganda Wildlife Authority. Community education focuses on the linkages between good health and hygiene habits, gorilla health, ecotourism and sustainable livelihoods and environments. CTPH is also leading a Uganda PHE Working Group to advocate for these integrated approaches in the Africa region.

Information, Communication and Technology

Community Telecentres address poverty, isolation, poor health practices, lack of knowledge on sustainable environments, and limited access to education and job training in and around the national parks including computer training, and access to the internet and community websites in local languages. CTPH also works with national disease task forces to set up disease communication

platforms as part of outbreak response to anthrax and other zoonotic diseases, as well as, other mobile health (m-health) programs.

A similar model is being replicated in Queen Elizabeth National Park, a savannah habitat, and neighbouring Democratic Republic of Congo (DRC) in Virunga National Park through a partnership with Institute Congolais de Conservation de Nature (ICCN) and the Gorilla Organization. To date, CTPH has 206 Community Conservation Health Volunteers working in Uganda and DRC protected area communities.

CTPH aims to better measure and link improvement in people's health status with improvement in gorilla health status through strengthening monitoring and evaluation systems and building a permanent regional centre of excellence with a **Gorilla Health Centre** for integrated analysis of gorilla, livestock and human samples to prevent and control cross species disease transmission using a "One Health" approach; and a **Community Conservation Education and Technology** Centre to build on the telecentre concept, as a resource for schools and other community groups.