

Transdisciplinary approach to solving conservation challenges: A case of Budongo Conservation Field Station, Uganda

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The conservation of chimpanzees (*Pan troglodytes*) faces complex and dynamic threats, deriving mostly from anthropogenic factors such as high density and poverty in local human populations. One specific threat is poaching, which contributes to both permanent physical disabilities in chimpanzees and cross-species disease transmission. In the Sonso chimpanzee community, Budongo forest, Uganda, over 20% chimpanzees are permanently disabled by indiscriminate poachers' snare-trap. While severe injuries can sometimes result in death, little is known about the long-term health impacts of poaching to chimpanzees or possible effective mitigation measures. To combat and monitor the complexities of conservation threats, a holistic transdisciplinary approach is required and as a result, the Budongo Conservation Field Station (BCFS) has implemented a comprehensive strategy. Instead of focusing solely on chimpanzee health, our multi-faced tit-for-tat approach also incorporates education and action measures for local communities living adjacent to the forest. To reduce poaching, we provide alternative livelihood sources, veterinary services and education while concurrently employing their local indigenous knowledge of poaching practices to more effectively locate snares/traps in the forest. To mitigate disease transmission across species, beneficiaries in incentive programs must have functional sanitation facilities. To consistently monitor threats and conservation impacts, we routinely collect data on snare recovery and infectious disease prevalence in chimpanzees, humans and livestock. Our preliminary results, since the programs' inception, show a reduction in respiratory and gastro-intestinal infections coupled with an increase in snare recovery from the forest. These findings suggest that our holistic approach is effective in mitigating the threats to chimpanzees in Budongo forest.

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