

Initiating a Dynamic Co-Constructed One Health Project: reflections from Participatory Action Research in the Kahuzi-Biega National Park, Democratic Republic of Congo¹

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Abstract: In an era of interconnected global challenges, the One Health (OH) approach emerges as a beacon of collaborative resilience in the face of emerging pandemics. The implications are particularly profound in the Democratic Republic of Congo (DRC), a known hotspot for infectious diseases. Recognizing this, we employed Participatory Action Research (PAR) as a community-centered approach to implementing the OH framework to address environmental, animal, and human health issues in the Kahuzi-Biega National Park (KBNP) area. Through a structured process of knowledge integration, we enhance our comprehension of underlying issues while establishing a sustained partnership with the community. This approach ensures that solutions are not only contextually relevant but are the product of a collaborative co-construction, thereby reinforcing long-term resilience at the community level.

This article explores the application of this approach, detailing the co-construction process and sharing challenges regarding power dynamics, and lessons learned from the project implementation in a humanitarian context.

Keywords: co-construction, community involvement, cross-sectoral collaboration, One Health, participatory action research, power dynamics

El Inicio de un Proyecto *One Health* Co-construido: Reflexiones desde la Investigación-Acción Participativa en el Parque Nacional Kahuzi-Biega, República Democrática del Congo

Resumen: En una era de desafíos globales interconectados, el enfoque One Health (OH) emerge como un modelo de resiliencia colaborativa frente a las pandemias emergentes. Las implicaciones son particularmente profundas en la República Democrática del Congo (RDC), un conocido punto crítico de enfermedades infecciosas. Reconociendo esto, empleamos la Investigación de Acción Participativa (IAP) como un enfoque centrado en la comunidad para implementar el marco de OH para abordar problemas ambientales, de salud animal y humana en el área del Parque Nacional Kahuzi-Biega. A través de un proceso estructurado de integración de conocimientos, mejoramos nuestra comprensión de los problemas subyacentes y al mismo tiempo establecemos una asociación sostenida con la comunidad. Este enfoque garantiza que las soluciones no sólo sean contextualmente relevantes, sino que sean el producto de una co-construcción colaborativa, reforzando así la resiliencia a largo plazo a nivel comunitario.

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Este artículo explora la aplicación de este enfoque, detallando el proceso de co-construcción y compartiendo desafíos relacionados con la dinámica de poder y las lecciones aprendidas de la implementación del proyecto en un contexto humanitario.

Palabras clave: co-construcción, compromiso comunitario, colaboración intersectorial, One Health, investigación acción participativa, dinámicas de poder

1. Introduction

The COVID-19 pandemic has compelled a reassessment of our healthcare strategies to more effectively manage future crises. Outbreaks are expected to escalate as human populations expand into new geographic regions, with increased interactions between wildlife, domestic animals, and their ecosystems (Costello et al., 2011; Lainé & Morand, 2020; Mpandeli et al., 2018). This heightened contact creates more opportunities for pathogen spillover events, resulting in the emergence of zoonoses (Fontanet, 2007; Deivanayagam et al., 2023; Fasina et al., 2021). Faced with the complexity of the challenges we encounter in terms of health and the environment, it is necessary to act through an integrated approach, such as a One Health (OH) approach: *“OH is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals, and ecosystems. It recognizes that the health of humans, domestic and wild animals, plants, and the wider environment are closely linked and interdependent. The approach mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development”*. (Adisasmito et al., 2022)

This interconnectedness is most keenly felt by the world’s most vulnerable communities who disproportionately bear the consequences of climate change, despite contributing the least to greenhouse gas emissions. These populations are hit hardest by environmental degradation, extreme weather events, and resource depletion, which in turn deepen poverty and exacerbate social inequalities (Hickel & Slamersak, 2022; Oxfam Report, 2022; Kelly-Hope et al., 2023; Tollefson, 2020). Their precarious conditions and limited resources make them particularly susceptible to the health impacts of environmental shifts, including the spread of zoonotic diseases, decline in crop yields, decreased livelihood sources, ... which disproportionately affect regions with limited access to healthcare (Paltriguera et al., 2024) A striking example of this dynamic can be seen in the Kahuzi-Biega National Park (KBNP) in eastern DRC, where deforestation and land use changes have significantly disrupted both human and ecosystem. Since the 1970s, autochthonous populations were displaced from their ancestral lands leading to tensions over land access (Bombwe et al., 2021). This region of South Kivu experiences an annual deforestation rate of 1200 000 Ha/year on average, causing ongoing erosions and landslides that are particularly harmful to natural resources and endogenous species. These events severely affect the socio-economic welfare of the local society (ADMR Bukavu, 2024; C. & T.T., 2023; Kelly et al, 2022). The local populations, already facing high levels of poverty and with 74 % dependent on agriculture for employment, are losing their main source of income (Kasaïs & Kivu, 2023). In response to these economic