

Co-managing the Agriculture-Biodiversity-Health nexus in LMI countries: can a (renewed) One Health approach help?



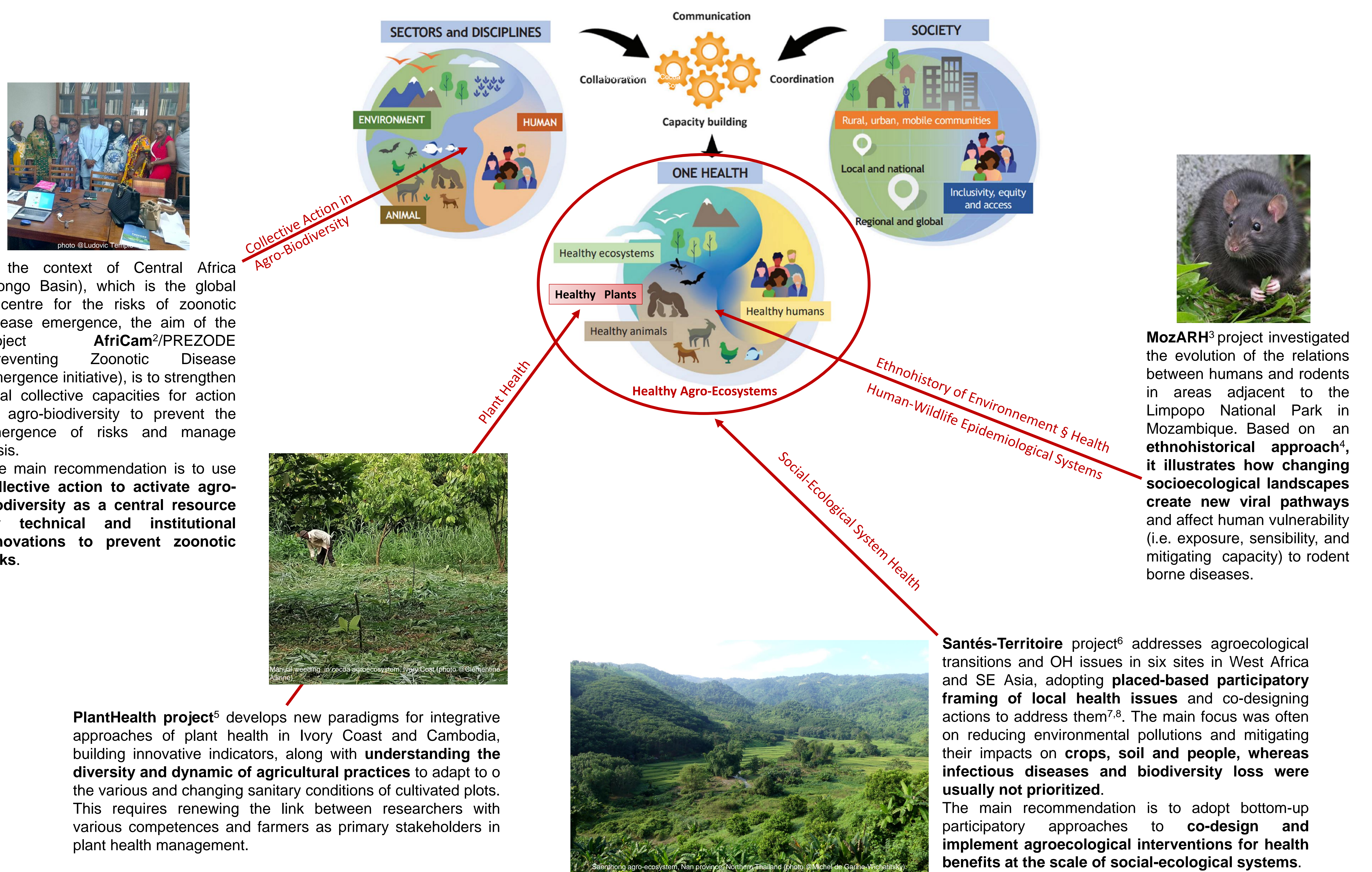
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Operational application of the updated OH approach to address health and agricultural issues in tropical low-income countries:

feed-back and lessons learned from the field

Modified figure based on "One Health toward a sustainable healthy future" as developed by the One Health High-Level Expert Panel¹
(Adapted from <https://doi.org/10.1371/journal.ppat.1010537.g001>; added text/items in red)



In the context of Central Africa (Congo Basin), which is the global epicentre for the risks of zoonotic disease emergence, the aim of the project **AfriCam²/PREZODE** (Preventing Zoonotic Disease Emergence initiative), is to strengthen local collective capacities for action on agro-biodiversity to prevent the emergence of risks and manage crisis. The main recommendation is to use **collective action to activate agro-biodiversity as a central resource for technical and institutional innovations to prevent zoonotic risks.**

PlantHealth project⁵ develops new paradigms for integrative approaches of plant health in Ivory Coast and Cambodia, building innovative indicators, along with **understanding the diversity and dynamic of agricultural practices** to adapt to the various and changing sanitary conditions of cultivated plots. This requires renewing the link between researchers with various competences and farmers as primary stakeholders in plant health management.

MozARH³ project investigated the evolution of the relations between humans and rodents in areas adjacent to the Limpopo National Park in Mozambique. Based on an **ethnohistorical approach⁴**, it **illustrates how changing socioecological landscapes create new viral pathways** and affect human vulnerability (i.e. exposure, sensibility, and mitigating capacity) to rodent borne diseases.

Santés-Territoire project⁶ addresses agroecological transitions and OH issues in six sites in West Africa and SE Asia, adopting **placed-based participatory framing of local health issues** and co-designing actions to address them^{7,8}. The main focus was often on reducing environmental pollutions and mitigating their impacts on **crops, soil and people, whereas infectious diseases and biodiversity loss were usually not prioritized.** The main recommendation is to adopt bottom-up participatory approaches to **co-design and implement agroecological interventions for health benefits at the scale of social-ecological systems.**

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