



# A call to strengthen local governance for preventing and mitigating global crises

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## ABSTRACT

Deforestation and land conversion have dramatic consequences to biodiversity and disease emergence, but they are also deep-rooted in historical forces involved in environmental injustice. Global guidelines tackling global crises approach the problem using top-down formulas that often fail to match local needs and priorities, and are rarely evaluated for local suitability, implications, and impacts. Motivated by the report of the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) workshop, published in 2020, we reflect on how drivers of zoonotic disease emergence are linked to historical injustices and how global initiatives tackling global crises are prone to reproducing colonial structures. We provide examples of local governance strengthening through horizontal and interdisciplinary collaborations, and how the support of local solutions can build resilience against global crises.

In July 2020, a group of experts from the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) met virtually to review the scientific evidence on the relationship between biodiversity loss and the origin, emergence, and impact of the COVID-19 pandemic. This meeting resulted in a set of global guidelines to prevent future pandemics [1], a document that follows a top-down formula consistent with other inter-governmental guidelines, such as the Kyoto Protocol and the Paris Agreement, both designed to tackle climate change. The workshop report provides a thorough discussion on the proximal determinants of pandemic emergence, all of them linked to the over-exploitation of natural resources. However, while factors like deforestation and land conversion have dramatic consequences for biodiversity and disease emergence, these factors are also deep-rooted in historical forces involved in environmental injustice, including extractive colonialism, unsustainable resource exploitation and social inequity. These distal determinants receive little to no attention in the workshop report, and yet are fundamental to understanding how proximal determinants have unfolded, and creating effective policies for preventing and mitigating crises, including climate change, biodiversity loss and emerging infectious diseases. Here, we reflect on how drivers of zoonotic disease emergence linked to global change are also linked to environmental injustices, and the ways global initiatives tackling the

emergence of zoonotic diseases are prone to reproducing colonial structures. Our aim is to highlight the importance of having inter-sectorial discussions that acknowledge and address the roots of problems, and prioritizing local governance as a way of creating sustainable solutions aimed at tackling global crises.

The increased number of outbreaks of zoonotic and vector-borne diseases from 1990 to 2016 has been primarily associated with unregulated farming, trade and consumption of wildlife and wildlife-derived products [2], which are strongly associated with deforestation, especially in tropical countries. These extensive land transformations and extractions of natural resources with unilateral advantages for transnational companies have been reported as one of the major contributors to poverty in countries throughout the Global South [3]. Meanwhile, forest restoration along with wildlife trade bans have become a global conservation priority by the Global North, with millions of dollars concentrated in a few countries leading these actions by often continuing a colonialist tradition [4,5]. So far, multilateral agreements and intergovernmental platforms have not adequately addressed the fact that biodiversity conservation, as conceived by international agencies, often conflicts with the needs and interests of lower-income countries, which seek economic development via industrialization and resource extraction previously adopted by higher income countries [6]. More

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importantly, they fail to acknowledge, either by choice or habit, that most of the intensive resource extraction is a consequence of globalization and extractive colonialism, led by higher income countries, which has shaped, and continues to shape, unequal power relations [7]. For example, demands for cheap rubber during the industrial revolution transformed the Malay Peninsula into a plantation economy. Even after the colonial period, resource extraction continued in the form of industrial plantation, logging, and mining expansion for export to higher income countries, driving deforestation and jeopardizing unique tropical biodiversity [8], as well as the wellbeing of local communities.

One of the key measures recommended by the IPBES report to enhance coordination among national and international sectors and agencies, is the creation of a high-level intergovernmental council on pandemic prevention. This strategy, however, fails to consider the likely centralization of resources, and top-down relationship between the council and the countries involved [9]. Furthermore, it does not acknowledge the social, economic, and political circumstances of each country tasked with implementing the actions proposed by said council. Like the carbon stocks market defined by the Kyoto and Paris protocols, the strong link between overconsumption in any of its forms and disease emergence, has led experts from IPBES to propose “green” taxations or payment for ecosystem services, as incentives to reduce consumption. Yet, similar to the carbon market initiative, the proposed green taxations do not address the fact that most of the intensive extraction is part of a globalization effect and extractive colonialism, with little or no benefits for the affected country. Indeed, wealthy countries find in these agreements either a “green voucher” that allows them to aggravate the problem, as long as they pay for it (e.g., carbon stocks), or an entitlement to sign out, using these schemes as a strategic tool in geopolitical negotiations. Meanwhile, more vulnerable countries are forced to risk their gross domestic product (GDP) by reducing their rate of development in order to follow international regulations that demand the preservation of the ecosystem, but neglect the socioeconomical needs of the local people [9,10].

The unequal distribution of costs and benefits of environmental change that has promoted the development of higher income countries at the expense of that of lower income countries has also created a climate of mistrust, unfavourable for global negotiations [11]. This is emphasized by the fact that countries responsible for over-consumption are located far from areas where tropical deforestation and disease emergence happen, while over-exploited countries become more vulnerable in terms of human health and welfare, due to inadequate access to healthcare services and increase in prevalence of comorbidities [12]. Disease vulnerability, in turn, becomes a function of historical conflicts, political interests and economic investments that determine where disease occurs and who is at risk [13].

As top-down approaches repeatedly fail to match local needs and priorities, efforts might be better allocated to developing regional horizontal alliances able to determine and factor on their own regional contexts when faced with policies and strategies standardized at the global level, which are rarely evaluated for local suitability, implications, and impacts. One such example is the establishment of the Inuit Circumpolar Council (ICC), a multinational indigenous NGO promoting circumpolar regional cooperation among northern people in the Arctic and sub-Arctic and providing tools to deal with similar socio-political problems and environmental threats to Arctic ecosystems, as well as centralized state policies often overlooking local conditions and needs. Initiatives like the ICC can be further expanded to transfer of skills and sharing of experiences with other local communities or indigenous organizations facing similar problems in different parts of the world [14]. The collaborative work between the ICC and Belize’s Maya-Quiche community, for example, has contributed to incorporating the preservation of Belize’s primary forest into the country’s public policies, reinforcing its cultural value for both biodiversity conservation and public health [15]. As the ecoregion contains some of the most important remaining fragments of moist forests in Central America, the

systematic effort to preserve local and native land could eventually have a positive impact for regional conservation as well.

The coordination of COVID-19 responses by some countries from the Global South further exemplify the importance of local governance. Africa’s achievements mitigating the first waves of COVID-19 were rooted in a broader history of limiting the spread of epidemic outbreaks, with community health workers playing a fundamental role spreading information, and searching for active cases and contacts in rural communities [16]. Even within nations, there are many actions that only regional governments have the knowledge and coordinating capacity to carry out [17]. For example, as part of their policy design and implementation, the Indian state of Kerala invited a diverse group of community members for consultation, including religious leaders and civil society organizations, mobilizing over 300,000 volunteers to implement control measures and organize the delivery of food, medicine and other essentials to those under lockdown, while at the same time preventing social stigmatization [18,19]. As examples of horizontal cooperation and local actions, these are not unique to the Global South, but they clearly highlight the common circumstances that these countries face, the importance of sharing local experiences that recognize and prioritize local contexts, and that as much as global problems require multilevel governance, collaborations and actions need to happen at a local level first.

After over 20 years of acknowledging the increasing risk of pandemics, the emergence of SARS-COV-2 not only raises questions about our failure to prevent a virus we knew was coming [20], but also forces us to revisit top-down prevention policies that overlook the historical backgrounds and diverse contexts in which we work and live. While global assessments may continue to advocate for transformative change, it is unlikely to be achieved unless the historical and ongoing colonial structures, which are often concealed behind international (conditional) aid or international (top-down) collaborations, are acknowledged and addressed. Steps that can be considered moving forward include enhancing transparency in data management and reinforcing local repositories of data; engaging in continuous conversations with local actors at different levels to inform and discuss findings in a timely manner; promoting local participation in the assessment of data; providing capacity development with a temporal agreement of collaboration that grants full autonomy afterwards, allowing local organizations to define their own direction and choosing external collaborators based on their needs. Knowing the inevitability of future pandemics, efforts and resources should be better allocated to address the vulnerabilities and priorities of countries as identified by their own people, and to support local communities and NGOs into leading more efficient partnerships. As opposed to short-term crises management, institutional approaches aiming to reduce the impact of environmental and health crises will require the sustainable strengthening of local and regional capacities and horizontal exchange of experiences to promote resistance and resilience. Perhaps it is time to pay more attention to how problems are approached locally, where the observation of ecosystems happens at a more intimate scale, and aim at transferring bottom-up initiatives to other regions to optimize existing structures promoting One Health actions.

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## Authors contributions

Both authors contributed equally to the conception, writing, revising and developing of the manuscript.

## CRedit authorship contribution statement

**Liesbeth Frias:** Conceptualization, Writing – original draft, Writing – review & editing. **Sergio Guerrero-Sanchez:** Conceptualization, Writing – original draft, Writing – review & editing.

## Declaration of Competing Interest

Both authors obtained their PhDs from institutions located in the Global North, but conducted their studies leading up to that in the Global South.

## Data availability

No data was used for the research described in the article.

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