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From being left behind to becoming agents of change in a global pandemic

The potential of indigenous peoples` knowledge in managing disasters

Christopher Korb, Moritz Reigl, Lara Sander, Sabine Schielmann, Paul Schütze, Silke Stöber, Sabrina Stoffel

In the context of sustainable development, indigenous peoples are perceived as non-modern, vulnerable groups, and beneficiaries of development programs by some and as agents of change and resilient communities by others. This dichotomous perception is related to a general juxtaposition of scientific ("modern") versus indigenous ("traditional") knowledge. This in turn is reflected in a theoretical recognition of indigenous knowledge in international agreements, such as the Agenda 2030 and the Sendai Framework, on one side contradicted by a disbelief in indigenous communities' abilities to sustainably manage natural resources and cope with disasters in practice. The paper discusses the areas of development in which there are tenuous efforts to integrate indigenous knowledge, and the extent to which these efforts are visible. It looks at the potential and shortfalls of valuing indigenous knowledge in relation to 'western science' in sustainable development and disaster risk management and in seeking possible solutions in the current COVID-19 pandemic.
Keywords: indigenous peoples` knowledge, disaster risk management, COVID-19 pandemic, international development cooperation, knowledge systems

Indigenous peoples´ knowledge

The knowledge systems of indigenous peoples are shaped by the different social, historical, political, and environmental contexts in which they live. Indigenous peoples and their communities across the globe are diverse and dynamic. They pursue different livelihoods (e.g. pastoral or forest-based), are organized in social institutions (e.g. councils of elders, intergenerational committees, customary laws), and often depend on natural resource use practices (e.g. rotational farming, rainwater harvesting, terracing). The element that both unites and distinguishes indigenous peoples is the attachment of their cultural identity and spirituality to nature. For centuries, indigenous peoples have adapted to external influences such as resource degradation and encroachment. For that reason, they may be called experts of change . As such, indigenous peoples are often credited as guardians of ecosystems, living carbon-neutral, in harmony with nature. However, due to the climate crisis, their livelihoods are increasingly threatened.

Indigenous peoples and disasters

While indigenous peoples represent 5% of the world population, they comprise 15% of the world's poor (World Bank 2016). Despite the heightened poverty rate, indigenous peoples possess knowledge that plays a crucial role in environment management, particularly when dealing with natural hazards and disasters. Due to the current climate crisis, the magnitude

and frequency of such hazards are increasing. Hazards often transition into serious disasters that affect indigenous peoples' livelihoods, with which they are unable to properly cope (UNDRR 2007, UNISDR 2015). More prevalent in low- and lower-middle-income countries, disasters have severe impacts, including social impacts that reinforce existing inequalities and poverty (ODI and CDKN 2014). The effects of natural disasters are particularly deleterious on already vulnerable groups and those with livelihooods closely linked to nature such as indigenous peoples. Many of them live in fragile agro-ecological environments, exposed to high risks. Indigenous peoples' poverty not only relates to income, additionally stemming from a lack of land access and formal education. Moreover, their well-being is defined by valuing spirituality and living in dignity (IWGIA/ILO 2020).

What is then the connection between indigenous peoples, their knowledge and disasters? What role do vulnerability, and resilience play in indigenous peoples' disaster risk management?

Their experiences with nature, which have encouraged a close relationship, are key elements required for a holistic understanding of the vulnerability and resilience of indigenous peoples. Livelihoods are based on knowledge systems and practices that originate from a historical interaction with the environment. As such, they have dealt with natural and human made hazards for generations and developed strategies to absorb, accommodate, adapt to, and recover from shocks . In short, they have practical experiences to building resilience. However, environmental destruction, the impacts of climate change, colonial expansion, and neoliberal policies have contributed to indigenous peoples' vulnerability: it becomes more and more challenging for indigenous communities to anticipate, mitigate, and adequately cope.

Indigenous peoples' role in disaster risk management

Disaster risk management is of central importance to sustainable development. It aims to reduce a society's vulnerability to hazards by strengthening coping and adaptation measures and accordingly building resilience (BMZ 2015).

While still marginalised, indigenous peoples become increasingly recognized as actors that hold valuable knowledge on resilience building. In the COVID-19 crisis, traditional practices of solidarity mitigated the restrictions brought about by the pandemic. For example, the Jaruna people in Brazil organised home delivery of culturally appropriate meals to vulnerable children of their community after schools had been closed.

Indigenous people also created own practices to cope with climate-related changes. Cultural burning, for example, is a controversial, specific form of controlled fire management, which was invented by indigenous communities, e.g. in Latin America and Australia. It has been condemned for many years as environmentally non-sustainable. Meanwhile national governments, e.g. Botswana, use cultural burning in their regulatory framework to reduce the risk of wildfires (Bilbao et al. 2019).

Also, indigenous shifting cultivation practices have been largely stigmatised as environmentally destructive and labelled "slash-and-burn". More recently, swidden farming has once again emerged as a well-adapted system in fragile tropical ecosystems, provided that fallow periods are long enough to allow for forest successions.

The ecoknowledge of the Dayaks' shifting agroforestry systems in Kalimantan has even become a model for managing rich biodiversity in Indonesia (Siahaya et al. 2016). A recent study in Ethiopia reveals that swidden farming has mitigation potential vis-a-vis mono-cropping. As an extensive farming system, swidden farming requires mainly labour inputs and harvests

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often low yields. Due to population growth and increasing land scarcity, the system can no longer be sustained everywhere. However, the abstention from chemical fertilizers, the higher soil organic carbon and nitrogen storage, and the control of the soil acidity through ashes are benefits of this indigenous land use practice (Terefe and Kim 2020). These cases exemplify the potential of equally valuing indigenous peoples and their knowledge in development practice. Still, these examples are rare.

The inclusion in the international development of disaster risk management frameworks has continuously advanced in the public consciousness. In 1994, during the First World Conference on Natural Disasters in Yokohama, indigenous participation in disaster risk minimisation was first recognised. Later, the Hyogo Framework included empowerment to advocate for active participation of indigenous peoples in disaster risk mitigation. Currently, the Sendai Framework explicitly emphasises the need to "ensure the use of traditional, indigenous and local knowledge and practices, as appropriate, to complement scientific knowledge in disaster risk assessment and the development and implementation of policies, strategies, plans and programs of specific sectors, with a cross-sectoral approach, which should be tailored to localities and to the context" (UNISDR 2015:15). This indicates a paradigm shift towards a greater perception of indigenous peoples as agents of change who should be actively involved in disaster risk management.

Indigenous peoples and the COVID-19 pandemic
Crisis response measures such as lockdowns and quarantine zones are nothing new to indigenous peoples. There are many examples of self-imposed isolation measures as the only preventive response to disease outbreaks, given their lack of access to medical services, information, hygiene facilities, and vaccinations.

Due to their geographical remoteness, the systemic pre-pandemic inequalities in health, security, and education disproportionally affect indigenous peoples, also in the current pandemic.

COVID-19 presents new challenges for the poor, in general, and for indigenous peoples, in particular. Containment measures, implemented as externally imposed interventions, affect indigenous communities' livelihood strategies and their ability to keep their level of self-determination and self-reliance.

Social distancing, for example, is not feasible for most indigenous people and undermines life-sustaining institutions such as visiting markets, gatherings for communal arbitration, or family self-help support systems. Non-compliance with social distancing measures has led to the criminalisation of indigenous community members, whether it be for the necessity of getting together to jointly till the fields or to practice traditional healing ceremonies as e.g. in the case of the Mapuche communities in Chile and Argentina.

In the same vein, a ban on movement is not compatible with indigenous livelihood systems, for example nomadic ways of life as practiced by the Karamojong in Uganda. Moreover, the ability of indigenous peoples to deal with the global pandemic is strongly linked to the granting of their rights as established in the UN frameworks. The right to land is indispensable to maintain indigenous peoples' self-sufficiency during isolation periods. It is also crucial to look at the cause of the virus outbreak, namely the destruction of wildlife habitats. Therefore, the right to maintain a life in undisrupted ecosystems is essential to mitigate or even prevent a pandemic.
At the same time, voices from indigenous communities raise concern as to whether COVID-19 should be prioritized over other pressing issues such as armed conflicts or food insecurity at all costs.

"People here [in Uganda] will die of either hunger or conflict before COVID-19 even reaches our community."

- Simon Peter Longoli

"The strength to resist always goes with being able to get organized [...]now all these strategies of coming together and getting organized are being restricted."

- Pedro Cona Caniullan

„The pandemic taught us a lesson about how important it is to be down to earth - living on the lands and in the communities and not in artificial spaces where you just go and buy and eat, but that you can grow something on your own."

- Pasang D. Sherpa

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Indigenous peoples' role in development cooperation

The rights of indigenous peoples have been recognised at higher levels (Gondecki 2016) (see timeline p.2). In 2007, the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) was adopted. The Indigenous Peoples Major Group for Sustainable Development (IPMG) in the Agenda 2030 process was established, and also the Local Communities and Indigenous Peoples' (LCIP) Platform under the UN Framework Convention on Climate Change (UNFCCC).

The question remains: to what extent does the development discourse (and its "product", the Agenda 2030) really engage with and integrate indigenous knowledge in practice? Often, development projects are based on quantifiable "facts", while non-measurable "traditional" knowledge (including spiritual beliefs) are not well integrated. Rather, indigenous knowledge is associated with a romanticising perception of life, living "detached" from "civilization", and in "harmony with nature". The patronisation of indigenous peoples is still rather common: people speak about them, rather than with them, and their age-old practices are commoditized (i.e. Yoga or traditional medicine), ridiculed, or sometimes ignored.

The COVID-19 crisis again raises the role of indigenous knowledge in managing the disaster risks. Indigenous peoples feel excluded, and their solutions do not receive much attention. Demands for respecting self-isolation or ceasing intrusion into indigenous peoples' lands for resource extraction are not yet heard. COVID-19 information campaigns and prevention measures should be conducted only after consultation and cooperation with indigenous peoples.

It might be difficult to break away from a culture of development cooperation that frames indigenous peoples as "vulnerable" beneficiaries who "lag behind", instead engaging with them as partners at eye level, as local experts and rightsholders.

However, building bridges between different knowledge systems and allowing diverse perspectives and experiences to inform and translate into practice is key to effectively addressing the multiple crises we face.

An indigenous woman, a seller of broom grass in Phongsaly, Lao PDR, brings her non-timber-forest product to the market.

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