

Risk Associated with Climate Change

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Abstract

This article situates the Vulnerability Synthesis within emerging understandings of complex climate change risk, intersectionality, and multi-dimensional vulnerability. It explains the assessment and conceptual framing of the Vulnerability Synthesis in the Africa chapter of the IPCC's 6th Assessment Report (AR6). It demonstrates that reducing vulnerability has the greatest potential benefits for reducing climate risk in Africa in the near future. It explains how important aspects of vulnerability, like gender disparities, migrant status, or income level, combine to affect risk. A lack of attention to interacting social drivers and their effects on risk, as well as an orientation toward vulnerability analyses at coarse social and spatial levels, highlight severe limitations for climate risk management in current vulnerability scholarship.

Keywords: Climate change; Global health

Introduction

The localized nature of vulnerability and the effects of climate change do not quite fit these scales. Additionally, there is a dearth of research on intersectional differentiation of vulnerabilities, which is crucial to comprehending the diverse agency of vulnerable groups, particularly when it comes to navigating or contesting unequal power relationships. In the Vulnerability Synthesis, we consider these dimensions to determine how research can provide a deeper comprehension of the interactions among numerous vulnerability drivers and the significance of this for African adaptation. Demonstrating how responses to climate change affect important vulnerability dimensions and the overall risk outcomes will be crucial to this understanding. By doing so, intersectional analysis will become more prevalent in Africa's place-based vulnerability assessments and aid in the creation of interventions that target the dimensions and scales of vulnerability with the greatest proportional effect on risk reduction. These will contribute informed safeguards against maladaptation and provide concrete plans for climate-resilient development that is more inclusive.

Weakness is the penchant or inclination to be unfavorably impacted (IPCC 2022). In the context of climate change, vulnerability includes a wide range of concepts and characteristics, such as vulnerability to harm or vulnerability to it, as well as an inability to cope with and adapt. Dimensions of exposure, such as the presence of people, livelihoods, species or ecosystems, infrastructure, or economic, social, and cultural assets in potentially adverse settings, are examples of such factors. The capacity to mitigate harm from climate change and its effects is another factor in vulnerability to variations in sensitivity to the effects of climate change, vulnerability is unevenly distributed across all scales. Understanding vulnerability is a crucial aspect of climate risk management because of its interconnectedness and contribution to climate change risk.

The vulnerability synthesis of the Africa chapter of the Intergovernmental Panel on Climate Change's (IPCC) 6th Assessment Report (AR6) is elaborated and critically analyzed in this Perspective. During AR6, a team of close to 100 authors evaluated the literature on climate impacts, vulnerability, and adaptation to climate change produced between 2014 and 2021. The insights on vulnerability from the sectoral chapters on ecosystems, water, food systems, human settlements and infrastructure, health, economy, poverty and livelihoods, heritage, and indigenous and local knowledge systems were used in a synthesis of the final draft of the climate change assessment. The evidence on

vulnerability was then evaluated by using categories of socioeconomic processes, resource access and livelihoods, intersectional and compounding dimensions of vulnerability to consider the factors that advance vulnerability to climate change across African contexts. The assessment discovered disparities in research resources and knowledge gaps in Africa [1-5].

Discussion

The Africa chapter discusses how social patterns of vulnerability and, ultimately, climate change risk are produced in Africa by intersecting socioeconomic, political, and environmental processes that are multidimensional. According to the report, 95% of African cropland is rainfed, and 55–62% of the sub-Saharan workforce is employed in agriculture, making agriculture a disproportionately important sector for African economies and a high level of sensitivity to extreme events, as evidenced by decreases in crop yield qualities and quantities and larger effects on the livelihoods of smallholders. Additionally, climate hazards pose a greater threat to the livelihoods of poor and female-headed households in rural Africa, whereas in urban areas, a growing number of informal settlements without basic services make a larger number of people, particularly women, children, and the elderly, more susceptible to climate hazards. As a result, vulnerability is both a major contributor to the risk of climate change in Africa and one of the most urgent and effective ways to reduce risk in Africa.

The IPCC says that Africa is the most vulnerable region in the world to climate change because of its high levels of poverty, large numbers of people without access to basic services like water and sanitation, wealth and gender inequality, and governance problems. When ranking climate regions according to their vulnerability, the two global vulnerability indices in agree. Greater transboundary regional clusters and factors like access to healthcare and basic infrastructure,

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as well as extreme poverty and inequality, characterize areas of high human vulnerability.

However, assessing vulnerability is extremely difficult in Africa. According to Berrang-Ford et al., despite the fact that Africa is covered by the second highest number of studies on adaptation and vulnerability out of all the regions in the world, the geographic distribution of these studies within the region is highly uneven. With the majority of studies conducted in Western and Southern Africa (Williams et al.), uneven geographic coverage of vulnerability assessments may reflect economic characteristics such as countries' contribution of agricultural output rather than the distribution of potentially vulnerable groups. (2018). There is still a lack of engagement with local perspectives and knowledge, despite the tendency to focus more on vulnerable groups like smallholder farmers. Furthermore, frameworks have become less concerned with hazards and more concerned with social factors, the conceptualization of vulnerability remains incomplete, particularly in terms of its empirical operationalization and application in vulnerability assessments [6-10].

Conclusion

There are particular advantages to our newspaper content analysis projects. A science journalist (BA) and specialists in medicinal plants (IKA and MLKM) were part of our Trans disciplinary team. We also concentrated on regions with a high rate of medicinal plant use and an assumed lack of adequate climate change-related research. Our work additionally has a few noted impediments. We only looked at newspapers, so we might have missed important coverage in other media, like radio and television. Additionally, we excluded articles written in languages other than English, such as French, from our focus. Last but not least, even though LexisNexis is a comprehensive

database of newspapers, it does not index every English newspaper in Africa, Asia, and the Middle East. As a result, some articles might not have been included. However, the findings suggest that more specific trans disciplinary strategies are required to support media advocacy on the impact of the climate crisis on medicinal plants in Africa, Asia, and the Middle East.

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