

Human Security: A Study of Environmental Threats and Their Impact on Communities

الأمن الإنساني: دراسة التهديدات البيئية وأثرها على المجتمعات

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The date of Submission: 02-12-2024

The date of acceptance 10-01-2025

date of publication: 25-01-2025

Abstract:

The paper "Human Security: A Study of Environmental Threats and Their Impact on Communities" gives an extensive examination of the linkages relating to environmental degradation and human security. It postulates that the impacts of the environmental threat in forms of climatic changes, deforestation, and depletion of resources have begun to attain a high rate onto the level of individual and communal existence to other aspects like food and health other than military-based security matters.

The study categorizes three types of environmental hazards: ecosystem destruction, new catastrophic risks associated with new technologies, and changes at various levels in the environment. The concept of human security will thus be multidimensional with its bottom line integration of economic, social, and environmental issues. The paper recognizes that these are reinforcing threats and calls for an integrated international response to the vulnerabilities of affected populations.

Keywords : Human Security, Environmental Threats, Environmental hazards

الملخص:

تقدم الورقة البحثية "الأمن الإنساني: دراسة التهديدات البيئية وأثرها على المجتمعات" فحصاً شاملاً للعلاقات بين تدهور البيئة والأمن الإنساني. وتفترض أن تأثيرات التهديدات البيئية، مثل التغيرات المناخية، وإزالة الغابات، واستنفاد الموارد، قد بدأت تؤثر بشكل ملحوظ على مستوى الوجود الفردي والجماعي، إضافة إلى مجالات أخرى مثل الأمن الغذائي والصحة، إلى جانب القضايا الأمنية العسكرية التقليدية.

يصنف البحث ثلاثة أنواع من المخاطر البيئية: تدمير النظم البيئية، المخاطر الكارثية الجديدة المرتبطة بالتقنيات الحديثة، والتغيرات البيئية على مختلف المستويات. وبالتالي، فإن مفهوم الأمن الإنساني سيكون متعدد الأبعاد، مع تكامل بين القضايا الاقتصادية والاجتماعية والبيئية، إن هذه التهديدات تعزز بعضها البعض، وتدعو إلى استجابة دولية منسقة لمعالجة نقاط الضعف التي تواجهها المجتمعات المتضررة..

الكلمات المفتاحية: الأمن البشري، التهديدات البيئية، المخاطر البيئية

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Introduction

Human security and the threats that affect it are becoming increasingly important. Here at the beginning of the twenty-first century, we see a range of global environmental issues that are causing unprecedented threats to human security. Threats to human security from environmental risks are many and differ in kind. Ranging from those associated with the delivery of a certain physical order to those associated with the behavior and expectations of human beings, these threats are ultimately all related to the maintenance, protection, and promotion of environments required for maintaining the non-impoverishment of communities and individuals that is necessary for human security.

This work will draw upon several specific environmental threats in building a picture of why and how the imperatives of environmental security relate to the broad discourse on human security. This paper recognizes that a complete justification for some environmental threats as part of a human security challenge is rooted in multiple bases for action, in multiple fronts that need protection, and in the need for multilateral cooperation that is essential for the protection of a single people faced with multiple threats and for programs of global environmental reform. In other words, understanding an environmental issue as part of a human security affair brings into focus the fact that the issue is cross-cutting, transsector, and interdependent.

Primary objectives for this study are to:

- 1) Identify in some theoretical degree the environmental threats to human security that have been or will be most significant in recent, current, and near-future settings.
- 2) Collect material to suggest the nature and magnitude of any such predominantly significant threats and the populations that may have experienced and/or be vulnerable to them.
- 3) Set some of this material against the conceptual basis for the argument, demonstrate the theoretical relevance of conceptualization as human security, and discuss the significance of finding environmental threats impacting on a people in more than one of the human security areas.

In summary, the subject of human security holds the potential to leverage attention and concern on the part of intergovernmental and private global partnerships. These may then be alert to the possible interconnectedness of many diffuse or less publicly acknowledged environmental health issues, aware that some localized instances of environmental degradation might exacerbate another, quite different type of threat to a society, and perhaps able to institute actions that head off other problems materializing. We conclude that an environmental threat associated with the fulfillment of one of the human security bases makes the threat, in the broad scheme of environmental change, a concern for all of the other foundations of human security. In other words, life, livelihood, and dignity are integrally related; this much indeed has been central to developing the idea of human security.

Research Problem :

How do environmental threats, such as climate change and deforestation, impact the food and health security of vulnerable communities, and what strategies can be implemented to enhance resilience and adaptability in these communities?

1. Definition and Scope of Human Security

The definition of human security has always been a contentious issue. It is agreed that the term has evolved and has been understood differently. Some see human security as an evolved concept of traditional security; as warfare changes, so do insecurities and threats. Others have seen it as an issue related to security that focuses its analysis on individuals and communities rather than on total nations. In this study, human security has been viewed in terms of its impact on communities and individuals. Especially, we are interested to see how environmental threats impact the security of individuals and communities. Rather than restricting security to military freedom, we are focusing on multidimensional threats such as food, health, and the environment¹.

The human security concept is multidimensional and premises that maintain peace with a quality of life, with freedom from fear and deprivation. Our analysis helps us differentiate between human security and hard-core traditional security. In the realm of peace, the origin of distinction is based on the scope of peace. Hard-core traditional security is for state security, which aims at promoting external threats of national interest from declaring war. Human security, in contrast, is the interest of the people. It promotes the security of individuals and communities rather than countries.

Traditionally, security measures are state-based studies. But human security advocates a probable condition necessary for all people irrespective of any country they belong to². The concept has broader implications in the wider fields of economics, social issues, environment, and human behavior. Researching in the environmental field—especially where we are interested in environmental threats—human security is a combination of human and environmental security. Environmental resources are major sources of livelihood for the people. Any kind of deterioration to these would definitely hamper the entire lifestyle of the people. Thus, all the issues related to the environment and human poverty make the sense clear to qualify people's security in these workings in the intersection of environment, poverty, rights, justice, and security.

This paradigm assists us in placing the important issues. Apart from multiple ideas employed to interpret human security, environmental threats also constitute a broad base of various frameworks. These frameworks highlight changes and impacts of multidimensional threats to the security of people. They further focus their studies in the fields of water, food,

¹ Jennifer Clapp and others, Viewpoint: The case for a six-dimensional food security framework, Food Policy, vol 106, January 2022, in : <https://www.sciencedirect.com/science/article/pii/S0306919221001445>

² Abdullah Al Mamun and others, Livelihood vulnerability of char land communities to climate change and natural hazards in Bangladesh: an application of livelihood vulnerability index, Natural Hazards, vol 115, no 05, August 2022, in:

https://www.researchgate.net/publication/363451556_Livelihood_vulnerability_of_char_land_communities_to_climate_change_and_natural_hazards_in_Bangladesh_an_application_of_livelihood_vulnerability_index

and alternative visions on security. Their approach has combined that the environmental threats are increasing day by day, putting the livelihood securities of the people at risk. Emerging issues like climate change are increasing the displacement of people and making them vulnerable not only to good agriculture but also complementing human security threats¹.

Human security is the essence of human beings' freedom from fear, which is a combination of physical insecurity and freedom from want. These two basic freedoms constitute human security. In spite of these, there are seven essential shortcomings ranging from man-made problems to natural disasters, which include environmental health, information about the truth, human rights, governance, crime, and access to farm products, which endanger people's security. Therefore, human insecurity is a function of the successful analysis of those items. This analysis will guide us in this study to investigate the people².

2. Theoretical Framework

The above discussion indicates the myriad of ways in which human security can be conceptualized. It becomes clear that human security is inherently multi-faceted and that the way in which threats, such as environmental ones, are manifested and alleviated is both context-specific and a result of multi-disciplinary processes.

That is, the relationships between human security and the environment cannot be understood without drawing on not just international relations literature but also on development studies, gender studies, political economy, and sociology³.

According to scholars, development and economic growth take precedence over conflict and environmental degradation when theorizing the causes of violent conflict and associated humanitarian disasters. Contrarily, other scholars argue that it is the appropriation and use of resource rents to finance predatory, interventionist states that should receive priority in the policy process.

Collectively, it is these mechanisms of pathogenic environmental change that will be assessed through the use of empirical case studies within this paper. However, although attention is shifted away from bottom-up, localized interpretations of human security in this paper, I accept that these frameworks have substantial political influence and an important role to play in discussions of government and security governance. Instead, it is suggested that these theories can and should be integrated within the theoretical frameworks provided by different scholarly camps, adding significant value to their methodologies⁴.

¹ Rod Schoonover, Christine Cavallo, Isabella Caltabiano, The Security Threat That Binds Us: The Unraveling of Ecological and Natural Security and What the United States Can Do About It, edited by Francesco Femia, Andrea Rezzonico, The Converging Risks Lab, an institute of The Council on Strategic Risks. Washington, DC. February 2021.

² Huo Jie and others, Sustainable energy policy, socio-economic development, and ecological footprint: The economic significance of natural resources, population growth, and industrial development, Utilities Policy, vol 81, April 2023, in: <https://www.sciencedirect.com/science/article/abs/pii/S0957178723000024>

³ Rod Schoonover, Christine Cavallo, Isabella Caltabiano, op.cit.

⁴ Emily Boyd and others, Poverty, Livelihoods and Sustainable Development, In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (eds.]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 1177- 1179.

2.1. Conceptualizing Human Security

Drawing on responses to a question in practical and academic contexts, the concept of human security can be conceptualized in two major ways. The first understanding is that human security is "freedom from fear." Developed within an academic framework that concentrates on the role of the individual, human security policies will be targeted at interventions aimed at bolstering capacities to secure individuals in risky or threatening contexts.

In this sense, anything that limits individual capabilities towards security can be considered a threat. A more circumstantially influenced way of thinking about human security is in terms of "freedom from want." This school of thought believes that such capacities that guarantee security are not necessarily available for all, and that structural factors—state institutions and prevailing socio-political situations—will often determine individual freedom. Hence, interventions should aim at modifying these factors and changing the distribution of political and social power. In this perspective, only impacts may be experienced at the local majority level¹.

These two very different models of security have different implications for policy and intervention strategies. This distinction is a product of the location and date of the formulations that introduced it, both of which were at the policy level. However, real experiences unveil that these assumptions can merely apply to the individual or to the community.

At the individual level, an average of fears and wants is experienced. Scenarios where many communities may experience average fears but dramatically different scenarios of wants, or vice versa, may exist. By using these conceptualizations, many environmental threats associated with the accumulation of waste can be considered a security problem as, in the event of exposure, the environment becomes contaminated with toxic pollution or an electric mat could shock a person².

In these scenarios, individual experiences are of primary importance. The paper explores the existing global knowledge on environmental threats in the general community. An understanding of the conceptual method of human security is essential to comprehend the concept of communities as described in the paper. In human security program planning, contextual understanding and the appropriate mix of these conceptualizations is pivotal. It can lead to completely different program outcomes. Environmental management, too, varies the significance imputed to problems, as we will discuss, and recognizes the importance of local involvement in a crisis. Importantly, communities represent the human face, the diversity of

¹ Andualem Kassegn, Ebrahim Endris, Review on socio-economic impacts of 'Triple Threats' of COVID-19, desert locusts, and floods in East Africa: Evidence from Ethiopia, Cogent Social Sciences, vol 7, no 01, 2021, pp. 7-9.

² Emily Boyd and others, op.cit, p. 1181.

livelihoods, and the averages that are experienced as instances of unequal liberty that take place between classes, genders, ages, ethnicities, and cultures¹.

3. Environmental Threats and Human Security

This article examines the challenges posed by environmental degradation to human security. It suggests that threats to human security should not be narrowly defined as military, but also in terms of access to food, shelter, clothing, and work. In a situation of accelerating environmental degradation, people are increasingly susceptible to natural disasters, food shortages, and epidemics. Environmental risks can be divided into three groups: risks associated with the destruction of vital ecosystem functions and natural processes, risks associated with new knowledge and technologies that represent potentially catastrophic threats, and risks associated with changes in the environment at different levels: local, regional, or global. Ignoring the importance of these environmental risks compromises the chances of developing effective strategies. If ignored, these risks pose a threat that can lead to a humanitarian crisis².

Many environmental and health hazards are due to weak and poor management systems. In response to these risks, there must be a balance between the economic and the environmental. For the most affected communities, the quarantine area represents an affront to their basic human dignity. They could cooperate in eradicating the spread of any infectious diseases while developing the natural resources within the affected area, building social assets, and developing a sustainable economic strategy.

As it shows, insufficient governance of the environment and people can add to the intrinsic risks, making them much more pressing. Environmental risks are also increasing social vulnerability. Biodiversity represents a source of poverty reduction and income generation for such poor people, who are at the heart of human security³.

3.1. Types of Environmental Threats

This section categorizes the variety of environmental threats that can influence vulnerabilities around human security. The extent and urgency of a threat do not just rely on the physical danger tied to environmental alterations but rather on the capabilities of populations to anticipate, adapt, resist, or recover from such changes. The effectiveness of an intervention or response also depends on the identification of the specific threat within a particular context. This section identifies and elaborates on the physical and dangerous environmental conditions at a typical level of vulnerability⁴.

The first set of threats relates to gradual and sustained environmental modifications experienced rather than episodic and extreme environmental shocks. Included here are threats

¹ Trung Thanh Nguyen and others, Security risks from climate change and environmental degradation: implications for sustainable land use transformation in the Global South, *Current Opinion in Environmental Sustainability*, vol 63, August 2023, in: <https://www.sciencedirect.com/science/article/pii/S1877343523000696>

² Md Ashikur Rahman and others, Nexus between heat wave, food security and human health (HFH): Developing a framework for livelihood resilience in Bangladesh, *Environmental Challenges*, vol 14, January 2024, In: <https://www.sciencedirect.com/science/article/pii/S2667010023001257>

³ Andualem Kassegn, Ebrahim Endris, op.cit, p. 8.

⁴ Trung Thanh Nguyen and others, op.cit

such as climate change, soil depletion and contamination, deforestation, and water scarcity. The impacts on livelihood are not just long-term but can also fluctuate and change subsequently. Enhanced heat waves, contracting agricultural land, unpredictable weather, changes in flowering, spawning, and germination are some broad examples¹.

Natural disasters and extreme weather conditions pose a direct threat to human security. Such hazards as intense wildfires and floods, storms, and dust storms all affect different communities across the world. On top of all these gradual changes and episodic extremes, there is also the amplified threat from environmental deteriorations that come from the increasing demand for natural resources of burgeoning populations. Parsing the potential impacts of such aspects necessitates scouring the range of possible outcomes, from fishing industries collapsing for a season to more chronic shortages of freshwater.

The effects may also be temporal, such as years of no rain or a longer-term drop in river flows. These five categories of environmental threats, while incredibly diverse, possess the potential to affect human security. Coastal communities are increasingly subject to mounting sea levels, while families of farmers or herders in Africa working in low production systems, for the most part, are already vulnerable to irregular rainfall and other forms of environmental excesses that limit their capacity to generate resources to support day-to-day needs².

The erratic and inconsistent nature of such threats underpins the vulnerabilities of individuals and communities embedded within such networks and systems. This differential vulnerability to environmental change works in conjunction with other forms of deprivation. For example, in the drought-affected regions of Angola, chronic malnutrition rates have risen significantly, as a result, women and children remain the most affected by malnutrition. For a single factor affecting multiple sources of human security, technical and robust interventions should perhaps tackle economic and political dislocation just as much as they do environmental degradation³.

4. Impact on Communities

Environmental threats have profound impacts upon communities. At a negative level, livelihood assets, or capitals, can be eroded through soil degradation, the loss of fisheries resources through pollution, or through the truncation of physical and social infrastructure by disasters. An adverse climate of uncertainty and a reluctance on the part of governments and agencies to invest in resources that may be lost to future natural events also characterizes the plight of many environmentally vulnerable communities. In areas of conflict, environmental impacts are felt in acute ways by those most vulnerable who cannot escape them, while at the national level environmental change can lead to conflict, and in extreme cases can lay the basis for state failure. Although all communities are likely to have some form of the socio-

¹ Rod Schoonover, Christine Cavallo, Isabella Caltabiano, op.cit

² Md Ashikur Rahman and others, op.cit

³ Andualem Kassegn, Ebrahim Endris, op.cit, p. 8-12.

economic structure or coping strategies that might mitigate impacts, some are more vulnerable to environmental threats than others¹.

Vulnerability is a compound rather than a simple function of exposure to physical events or change, sensitivity to such detriments, and the capacity to respond to them. Soils differ in their erosion to exposure, for example, and women differ from men in their sensitivity to floods, in their capacity to escape, and their access to resources to recover after an event.

On the other hand, another concept - resilience - is used to elucidate communities' dynamic ability to absorb disturbances, to engage in processes whereby an injurious impact gives rise to adaptation that allows an equilibrium state to be restored, or to reorganize into a new and different stability landscape. Resilience depends on the prior vulnerability regime, and it again is a function of the horizontal and the vertical power arrangements that define vulnerability. It is, then, when vulnerability levels are either very high, or when the factors that give rise to variations between and within them are very pronounced, that resilience has to be revised. For example, the allegedly 'disappearing' swamps in refugia in Sudan are not caused by destructive environmental change, but in part by stands of resourceful southern Dinka².

The very same environmental condition reflects resilience, rather than hardship, in the Dabaab camps. 'Sitting your share of the ocean' depends on the dominant framework of vulnerability. These elementary examples illustrate the fundamentally normative nature of assessing human security. Both research and community activities directed at securing human needs should start from the indicators of the existing state of insecurity. For this reason, a compiler of human security maps avoids affirming correlated cognitive and moral conclusions³.

4.1. Vulnerability and Resilience

For the purposes of environmental threats, vulnerability has been defined, more narrowly, as the state of being affected by an extreme natural shock such as a drought, flood, or pest infestation. Generally and more broadly, vulnerability can be defined as the state of being exposed and sensitive to a certain kind of harm, here: environmental harm. It reflects the extent to which a population, as exposed to a range of environmental challenges, is likely to be affected by them. Vulnerable communities display an exposure, sensitivity, and capacity to adapt and recover from a shock. In this case, ecological indicators based on population densities and settlement per square mile, agricultural and industrial composition are used.

¹ Laurence L. Delina and others, Living with climate and state fragility in a "chaotic paradise:" securitizing livelihoods in the Philippines' Cotabato River Basin, *Climate Risk Management*, vol 42, 2023, in: <https://www.sciencedirect.com/science/article/pii/S2212096323000840>

² Freedom c. onuoha, Oluwale Ojewale, Chukwunonso Joseph Akogwu, *Climate Change and Natural Resource Conflict in ECOWAS and ECCAS Regions: Implications for State Security Forces*, p. 18, in: <https://www.scielo.org.za/pdf/ajcr/v23n2/02.pdf>

³ Julia van den Berg, Bishawjit Mallick, *Aspirations versus adaptive achievements in the face of climate change in Sri Lanka*, climate action, in: <https://www.nature.com/articles/s44168-024-00137-x.pdf>

Japanese, Vietnamese, Bhutanese, Malvani, and Botswana communities are prone to rising ambient temperatures because of their geographical settlement in the worst affected regions¹.

Resilience is the capacity of these communities to adapt to and recover from disruptions. It is said that if our social structure enables us to cope with a natural catastrophic event or any other kind of supply interruption, we are resilient. In fact, it is recommended to go beyond vulnerability assessment by looking into what can be improved in local systems to strengthen resilience. Climate changes will impact more heavily on systems with more technical fragilities. Natural reserves, when endangered, will lead to a faster impoverishment. A global and consensual intergovernmental strategy is not desirable nor possible. Every ecosystem and population has its own historical dynamic. In order to open political and social dialogue and quicken pragmatic options, every community should be equipped with a development and risk management scenario².

5. Examples of Environmental Threats and Community Responses

The examples of environmental threats to communities have been chosen on the basis of their severity, background, and persistence. At the same time, the community responses do not attempt to cover the full spectrum of issues linked to coping and responding to environmental threats.

They do, however, demonstrate some of the broad actions that communities take in order to deal with the acute and chronic problems and can be categorized into a number of thematic areas including, but not exclusively, the following: proactive responses that attempt to anticipate threats, address root causes of vulnerabilities, advocate and lobby at the policy level, etc.; reactive responses that attempt to provide immediate relief, secure access to food, coping mechanisms, draw upon social networks, make use of existing aid systems, charity, etc.; community-based research, adaptation, problem-solving, and innovation ranging from technical adaptation measures to political innovation; working with and gaining the moral and physical support of NGOs and governmental actors; loss of connection to land/post-disaster response; and local knowledge transmission.

The examples are specifically identified and outlined for the purpose of sharing good practice and to help us understand how and where communities may start to respond to an environmental threat. In particular, they serve as an invitation and tool to promote discussion and debate about which responses could work for different threats, communities, and timeframes, to help more effectively project reality in the future³.

Conclusion

The examination of environmental threats and their implications for human security has returned a set of critical points with a number of implications, both for local communities in regions beset by environmental threats and for wider policy discussions. First, it is clear that environmental threats and human security are inextricably linked. Environmental threats can

¹ Rod Schoonover, Christine Cavallo, Isabella Caltabiano, op.cit

² Laurence L. Delina and others, op.cit

³ Md Ashikur Rahman, op.cit.

have widespread implications and can manifest in aggravating many pre-existing conditions that affect individual and community resilience. Second, it has been shown that it is not always straightforward to draw clear and direct empirical linkages between threats and populations.

The centrality of vulnerabilities has been highlighted, pointing to the utility of a bottom-up approach and a set of interventions that address people's circumstances and fears. To do this, it will be necessary to understand the validity of the typology illustrated. It is the case that communities 'at risk' display a different set of characteristics and assets from those being eroded by environmental change and those 'under attack.'

This opens up the possibility for a more detailed stratified approach – one in which external agencies may feel that preventative action can be supported with more confidence by establishing a better understanding of 'at risk' communities and perhaps the methods required to maintain this status in the face of potential shocks. In order to do this, however, a more detailed analysis of local conditions is required if this work is to become a resilient and sustainable resource for local communities.

The next steps to be taken are laid out in an expanded research agenda. Moreover, one does wonder if our 'overview' of environmental threats has obscured important 'threats' to pastoral societies, threats posed from among them, or, indeed, threats that derive from their lifestyles.

Additionally, the research might inform policy, taking account of a bottom-up approach that commences by screening the environment in low human security areas. Issues, indicators, and community triggers such as tankering being in operation, withdrawal of health provision, evidence of food aid, bilateral aid available, additional coping strategies, and intra-community tensions can inform policy in terms of influencing country or donor vulnerability indices. Moreover, for the private sector, especially the not-for-profit sector, it is good practice to be aware of communities with lower than average human security but unaware of the linkages that communities (or relief efforts aimed at those communities) themselves have with their environment.

The findings and insights outlined above lend further weight to the calls for a more integrated approach to disaster reduction, focusing on risk management rather than mere disaster response. However, they must also go further.

The objective should be conflict prevention, which ought to arise if policy moves beyond the simplistic rhetoric that pits man against nature towards a more nuanced appreciation of mutual dependence and sustainable solutions. Moreover, in seeking holistic strategies to address these vulnerabilities, the need for all stakeholders to act and interact must be fully appreciated. Fostering such resilience will require above all the ability of regional nations and the international community to work cooperatively with local relief and development workers who are striving to retain the knowledge and their secrets developed over millennia. Recommendations for initially addressing human security threats and achieving conflict prevention in the context of environmental threats will be outlined further.

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