

# CRITICAL RESEARCH METHODS REGARDING CLIMATE CHANGE-RELATED CONFLICT AND PEACE IN AFRICA

JORAM TARUSARIRA

AFRICAN PEACEBUILDING NETWORK APN LECTURE SERIES: NO. 12



### **ABOUT THE PROGRAM**

Launched in March 2012, the African Peacebuilding Network (APN) supports independent African research on conflict-affected countries and neighboring regions of the continent, as well as the integration of high-quality African research-based knowledge into global policy communities. In order to advance African debates on peacebuilding and promote African perspectives, the APN offers competitive research grants and fellowships, and it funds other forms of targeted support, including strategy meetings, seminars, grantee workshops, commissioned studies, and the publication and dissemination of research findings. In doing so, the APN also promotes the visibility of African peacebuilding knowledge among global and regional centers of scholarly analysis and practical action and makes it accessible to key policymakers at the United Nations and other multilateral, regional, and national policymaking institutions.

### **ABOUT THE SERIES**

"African solutions to African problems" is a favorite mantra of the African Union, but since the 2002 establishment of the African Peace and Security Architecture, the continent has continued to face political, material, and knowledge-related challenges to building sustainable peace. Peacebuilding in Africa has sometimes been characterized by interventions by international actors who lack the local knowledge and lived experience needed to fully address complex conflict-related issues on the continent. And researchers living and working in Africa need additional resources and platforms to shape global debates on peacebuilding as well as influence regional and international policy and practitioner audiences. The APN Working Papers series seeks to address these knowledge gaps and needs by publishing independent research that provides critical overviews and reflections on the state of the field, stimulates new thinking on overlooked or emerging areas of African peacebuilding, and engages scholarly and policy communities with a vested interest in building peace on the continent.

## CRITICAL RESEARCH METHODS REGARDING CLIMATE CHANGE-RELATED CONFLICT AND PEACE IN AFRICA

KEYNOTE ADDRESS AT THE JULY 2023 APN AND NEXT GEN RESEARCH METHODS WORKSHOP

### **JORAM TARUSARIRA**

UNIVERSITY OF GRONINGEN, NETHERLANDS FEBRUARY 2024

### Introduction

This lecture begins by explaining the genealogy of climate security discourse within which climate change-related security risks, such as climate-induced conflict, are discussed. It then identifies a knowledge gap, namely the marginalization of non-economic and non-physical variables such as religion and spirituality in climate security debates. This is followed by an exposition of the epistemological and methodological foundations that dominate climate research, which partly explain the dominance of positivist and quantitative approaches in climate research. Next, the concept of sacred worldviews is used to discuss the centrality, relevance, and significance of non-economic and non-physical aspects. This is followed by an analysis focusing on the implications of the knowledge gap and the methodological and epistemological frameworks for climate policy and practice in the field of peace and security in Africa.

### A Genealogy of Climate Security Discourse

There are multiple origins of climate security discourse and historical trajectories to trace its development. Some scholars trace the modern origins of the discourse back to the 1960s and the nuclear winter debates¹ and to the 1970s when discussions arose about the "limits to growth" and the consequences of overpopulation.² The debate gained momentum in the 1980s and 1990s when concerns about the link between environmental degradation and conflict prevailed in academic circles, reaching the highest political levels.³ Others trace the genealogy to Lester Brown's 1977 article, "Redefining National Security," and Jessica Tuchman Matthews' 1989 article, "Redefining Security," in Foreign Affairs, which called for "broadening the definition of national security to include other variables, such as natural resources, the environment and demographic

issues."<sup>5</sup> Contemporary studies of climate security are traced to the environment and security scholarship, particularly Thomas Homer Dixon's seminal articles and books in the 1990s that examined the link between natural resources and violent conflict. Another important reference point is the Environment and Conflicts Project (ENCOP) at ETH Zurich, led by Kurt Spillmann and Kurt Baechler (1995). These two schools popularized the resource scarcity theory, which argues that when resources are depleted, there will be competition and conflict over the little that remains. Burke claims that Jon Barnett's 2003 article "Security and Climate Change", published in Global Environmental Change, specifically laid the groundwork for climate security.<sup>6</sup>

In 2003, the Department of Defense's Office of Net Assessment, an influential internal Pentagon think tank, commissioned two companies to prepare a report on climate change. In 2007, the research and development organization Center for Naval Analyses released the landmark report "National Security and the Threat of Climate Change."8 The report came from an evaluation panel of retired military generals and flag officers. Although it did not use the term "climate security", it described climate change as a "threat multiplier," a phrase that has been widely used since. The year 2007 is also important in the development of climate security discourse because it was the year of the publication of the Intergovernmental Panel on Climate Change's (IPCC) fourth assessment, which referred to possible links between climate change and security, and marked the first UN Security Council debate on climate change. Despite this debate, there is concern that not much has resulted in substantial policy changes, including meaningful statements, pronouncements, or initiatives. The failure has been attributed to a combination of factors, including the closed nature of the UN Security Council (only five permanent and ten non-permanent members) and the veto system. There is also a lack of consensus among member states on what climate security actually means and how international institutions should respond. 10

In 2020, the U.S. Congress defined "climate security" as the effects of climate change on the national security of the United States, including national security infrastructure; subnational, national, and regional political stability; the security of allies and partners of the United States; or ongoing or potential political violence, including unrest, riots, guerrilla warfare, insurgency, terrorism, rebellion, revolution, civil war, and interstate war. This resulted in the dominance of a militaristic conception of climate security. To address these concerns, peacebuilding actors chose the concept of climate fragility to refer to countries exposed to and vulnerable to climate change with an interlocking set of political, social, and economic challenges. This concept appeared in 2015 in "A New

Climate for Peace," commissioned by the G7. The term is used by civil and civil society officials in Western countries to emphasize peacebuilding rather than a military approach.<sup>13</sup>

Another objection to the militarization of climate change or the presentation of climate change as a defense issue came from those who saw it as a securitization of climate change and its resulting consequences, such as migration. Securitization refers to the process of redefining a political, economic, or social issue as a security threat to create a sense of urgency and open the possibility for more extraordinary means of addressing the issue. 14 Securitization confers a war value or status on non-military challenges. 15 This is seen as perpetuating a "repressive security state" with a "bloated military" and unbridled corporate power, and the work of "white supremacists and war profiteers," fueling the right-wing demonization of immigrants. 16 The register of warfare, of struggle and adversaries, does not resonate with the recommended features of climate solutions, such as innovation, international cooperation, and justice, which rely on civil society.<sup>17</sup> Based on the practice of military interference in the activities of civil societies in non-democratic and dictatorial regimes, some argue that the military should be excluded from the practice of climate security except in a worst-case scenario of unstoppable, extreme climate change. Otherwise, climate security is not the military's sole core or primary responsibility. 18 However, the term climate security embedded climate change into foreign and defense policy agendas and generated political pressure to intensify climate action.

### Researching the Relationship between Climate and Security: Some Conceptual and Methodological Issues

Climate security is shorthand for climate-related or climate-induced security risks. It focuses on the significant impacts of climate change on conflict patterns, insecurity, and instability. This means that there is no causal relationship between climate change and security risks, such as conflict and violence. For this reason, the CNA described climate change as a "threat multiplier" to indicate that climate change is perceived as a multiplier of risks and instability. By itself, it does not cause conflict. Nor does it automatically or habitually multiply existing threats, but only with the confluence of a particular set of circumstances—socioeconomic and political. In fact, there is currently little evidence for a direct, causal relationship between climate change and armed conflict. Being aware of the indirect relationship between climate and conflict allows us to address the problem of attribution, in which analytical frameworks attribute security risks exclusively to climate, diverting attention from place-based vulnerabilities and

their socio-political causes. While politicians may want to blame climate change for crises, citizens may prefer to hold the government responsible for inadequate investments in flood or drought prevention and precarious living conditions. Rather than attributing violence and conflict to climate change, this perspective helps to show that governments have agency when it comes to dealing with the consequences of climate change. because, for example, drought does not automatically mean civil war, nor is bad economic policy an adversary that can be defeated by force of arms. Therefore, to be both strategic and moral, framing choices must be sensitive to context-dependent political meanings and particularities and to how the values implicit in analytical frames about the causes of disasters shape policy responses. Such sensitivity requires a multi-causal analysis of weather-related risks to illuminate a broader range of means of mitigating the harms associated with climate change and weather extremes. Thus, climate change contributes to conflict in combination with other factors such as poverty, poor governance, or other socioeconomic and political variables.

Examining context-depended meanings, particularities, and values implicit in how communities affected by climate change and related insecurity perceive, interpret, and respond to climate change challenges requires a different set of epistemological underpinnings and methodological skills. During my fieldwork among pastoral communities, it was apparent that positivist frames to explain climate crises were the starting points for communities to talk about climate change impacts. They would not immediately articulate them even though their cultural and religious identities and frameworks were evident in their daily lives. Their responses were consciously or unconsciously filtered through larger countervailing cultural narratives and habits of talk that led them to "mute" strong moral and religious claims.23 This moral and religious muting is influenced by the dominance of the liberal and secular culture, as well as immersion in particular discourses that foster suspicion of religion and universal moral claims. These include the presence of secular humanitarian aid and development projects, which emphasize interventions such as climate-smart agriculture and technology rather than symbolic variables. In such contexts, religion and spirituality have acquired negative connotations as a basis to explain reality.

Communities would first articulate their experiences of climate change and insecurities through vulnerability assessments and adaptation actions that prioritize socioeconomic and technical approaches, such as the costs of goods, services, and technologies to reduce future impacts. To overcome this barrier, I took a careful and critical engagement with the communities to uncover what might not be said or is taken for granted as inconsequential yet determinative in their lives. I paid attention to the communities' daily lives rather than looking at what

immediately presented itself. I always searched for what lay behind the stories they told me. This was not to suspect that they were not telling the truth but an acknowledgment that they are located within intersecting and sometimes competing discourses, which influence their speeches, thoughts, and actions. Community knowledge is sometimes esoteric and jealously guarded. I also spent time with the communities in their daily activities to be able to detect underlying frameworks and societal organizing principles. Research, thus, should not be rushed. Evidence should be uncovered through deep engagement and immersion with the communities in contexts of trust, and discourse analysis is crucial to understand the factors (including power dynamics) at play in how communities perceive and understand climate change impacts and how evidence about climate change and security is generated, authenticated, and disseminated.

### Climate Security Pathways and the Research Gap

Because we cannot speak of direct links between climate and security risks, we use the language of pathways. Climate change contributes to security risks through some of the following pathways. First, it can worsen living conditions and contribute to escalating grievances or competition and conflict over dwindling resources. In response to the deterioration of living conditions, adaptation strategies can sometimes backfire, exacerbating pre-existing security risks or creating new risks (which is called *maladaptation*).<sup>24</sup> Second, climate change impacts, including deteriorating livelihoods, can lead to mobility and displacement, increasing the risk of community-level violence and conflict when migrants come into confrontation with other groups. Third, armed groups may use climate impacts to boost their recruitment. Finally, local elites are known to use instability to increase their control over resources, advance their strategic goals, and strengthen their position in local conflicts.<sup>25</sup>

Climate security discourse and practice are currently dominated by Global North scientists, policymakers, and practitioners who prioritize economic and physical/material variables to understand climate-related uncertainties in Africa. Non-economic and non-physical factors, such as religion, values, and worldviews, are marginalized. Scholars from the Global South are also absent from the discourse; hence, science and research on climate change and its security impacts are highly geographically imbalanced. Global North institutions and scientists receive more support, work in enabling research environments, and, consequently, publish notably more peer-reviewed research. We still have limited scholarship from the Global South engaged in climate security research, especially on the intersection of religion, local values, traditional knowledge sys-

tems, and climate security. These factors are relegated to matters of secondary importance or considered sensitive and not fitting into dominant positivist approaches to peacebuilding.<sup>26</sup> As I hinted above, priority is given to socioeconomic, political, and technical approaches, such as assessments and measurements of the costs of goods, services, and technologies to reduce future impacts.<sup>27</sup> Positivist epistemology, quantitative methods and techno-scientific approaches, big data, and statistical analyses of big N-studies dominate the discourse on climate change and climate security. The goal is to test statistical correlations between certain historical environmental and conflict variables and, on that basis, draw conclusions about the conflict implications of global climate change in particular.<sup>28</sup> Most recommendations for interventions are also technical in nature, for example, improvements in technology and implementation of smart technology at the expense of non-economic and non-material factors based on a constructivist epistemology. The resultant challenge is that many of the historical correlations it identifies are highly questionable, being shaped as much by unreliable and often contradictory data sets and by arbitrary or untenable assumptions about models and data boundaries more so than anything else.<sup>29</sup> The foundation on which it is built is itself the subject of research. This does not mean that it does not consider qualitative studies that have been conducted. However, these qualitative studies focused on vulnerability assessments that lend themselves to material, physical, social, and economic factors. We, thus, face an epistemological and methodological challenge to generate comprehensive climate security data from the Global South, particularly Africa.

### Towards an Integrated Approach to Climate Security

As we have already seen, climate security scholars have used resource scarcity theory to try to explain the relationship between climate and security risks, particularly climate and conflict. Environmental security scientists have done pioneering work in studying the relationship between environmental stress and violent conflict.<sup>30</sup> These groups conducted large empirical studies that demonstrated the multi-faceted and indirect links between resource scarcity and conflict. The projects already studied the link between environmental degradation and conflict. Thus, climate change was a logical link as yet another environmental force.<sup>31</sup> This study was accused of instrumentalizing the concept of security to draw political attention to environmental problems <sup>32</sup> and being neo-Malthusian, i.e., seeing population growth as a cause of ecological scarcity, which would lead to migration and poverty, and then violent conflict. <sup>33</sup>

However, resource scarcity can contribute as much to conflict as it does to

peace and cooperation. In fact, resource scarcity can also lead to cooperation and peacebuilding if people facing scarce resources learn to share the few resources they have. On the other hand, resource abundance, which is simplistically assumed to contribute to peace because there is plenty, can contribute to conflict because there is something to fight over, which is known as the resource curse.34 Thus, the dominant theories are insufficient to explain why the impacts of climate change can lead to conflict or peace. This means that a transformational approach to climate security risks requires a focus on other mediating variables. The argument of this lecture is that a holistic and effective approach to climate security risks requires knowledge about the norms, values, beliefs, worldviews, perspectives, and preferences of affected people. It builds on the need to study the indirect pathways between climate change and violence and the epistemological problematization of what counts as a security issue-i.e., how it should be conceptualized and measured-and represents a movement away from the assumption that security threats are objectively given and taken for granted, but socially and discursively constructed.<sup>35</sup> This means that the question of how climate translates to security threats must be contextualized, i.e., historical situations, social locations, and worldviews related to climate-related security threat situations. To do this, I examine religion and spirituality, which play a major role in these aspects and about which current climate security discourse is silent.

By focusing on how non-economic and non-material factors, especially religion, spirituality, or sacred worldviews, shape climate-induced conflicts, alternative strategies against climate-related security risks can be developed, and we can move away from traditional theories of security, such as resource scarcity theory and political, economic, physical, technological, and secular variables. Hyper-technical scientific methods and purely positivistic epistemology and quantitative methods may oversimplify the complexity of the problem. Climate change challenges are local and too complex to be analyzed by general scientific and technological approaches alone. The full power of natural science and smart technologies is vital for the most up-to-date understanding of the climate system and for capturing patterns in security risks. But they must be complemented by approaches that can explain the texture of these conflicts and explain or answer questions, such as why some climate and environmental conflicts are so intense and intractable and how and why resource scarcity contributes to conflict in some places and not others. Currently, policymakers and scientists have not considered context-specific variables, such as cultural conditions, and the social construction of resource values, including religion and sacred worldviews, which are strategically positioned to answer these questions.

It is also surprising that within the climate security discourse, there has been no focused study of the influence of religion or sacred worldviews, even though most affected areas, such as the African context, are highly religious. Moreover, most climate security research has been done in Africa, where people understand their reality through local worldviews, religion, and spirituality. Some communities facing climate-induced conflicts survive on natural resources such as land, livestock, or water, which they regard and value as sacred. In conflicts that may involve such resources, religious differences can harden the boundaries between warring parties, and alliances can be built along religious divides, presenting the conflict in zero-sum terms and demonizing the opponent as morally inferior, militarily dangerous, and thus harsh. <sup>36</sup>

#### The Idea of the Sacred and Sacred Worldviews

Sacred worldviews are understood as the absolute, normative, life-defining social representations, beliefs, symbols, and practices that, for the most part, exert non-negotiable claims on the behavior of social life. People use them to give meaning to their lives and structure their moral boundaries. Concerning the environment, sacred worldviews shape how the environment is respected, revered, or regarded as dispensable or indispensable, divisible, or indivisible, delineating sacred boundaries that must be protected.<sup>37</sup> When boundaries are breached or threatened, such as during competition for scarce resources, this leads to an unquestionable ramping up of sacred moral obligations in defense of the resource. For example, herders and cattle rustlers will sacrifice their lives to protect and increase the number of their sacred cattle. Thus, understanding and addressing conflicts in which natural resources are considered sacred requires an understanding of how sacred worldviews function in society.

We have seen that the current literature does not address religious dimensions, which play a key role in motivating communities to make certain responses and not others. We have also seen that current theories and explanations have limitations; therefore, we must look elsewhere for possible explanations. While so-cioeconomic and technical approaches can offer partial explanations for the link between climate and security risks, most climate security risks are also embedded in communities' ontological worldviews and cultural beliefs, which thus offer possible explanations for the link between climate change and security risks.

Women are most affected by climate-related risks and climate-related insecurities because they need to fetch fuel to feed their families and may not be able to

move as an adaptation strategy if they need to care for the vulnerable members of the community, such as children and the elderly. This is likely to complicate technical interventions for energy transition. It might be useful to analyze the role of religion, culture, beliefs, values, and norms in assigning caregiving tasks to women. These may get in the way of addressing security risks for women.

Some indigenous religions and spiritualities imbue land, rivers, water, and live-stock with social, cultural, spiritual, or religious value, structuring communities' social identity and lives around them and thus defining actions and responsiveness to what is considered sacred.<sup>38</sup> For indigenous groups, whose identity rests on collective access to the land traditionally inhabited by their ancestors, migration as a climate adaptation strategy is a very last resort.

An underlying force in the pastoral conflicts in Kenya among the Turkana is the traditional prayer of blessing and protection for the rustlers and a strong bond between the traditional religious leaders and the rustlers. As a result, the raiders fight with strength and confidence under the pretext of defending their sacred natural resources. The dynamics between farmers and pastoralists in the Sahel region and East Africa cannot be separated from religious divisions, as alliances are built during conflicts based on religious differences.

Cultural and religious beliefs such as attachment to cattle, heroism, payment of dowries, initiation rituals, and attachment to land shape cattle theft and ethnic killings in their region.<sup>39</sup> The sacredness of cows also stems from the practical rituals involving cattle that have been acquired over the years through generational expertise. This means that they are more than food and economic security. They have supreme spiritual significance. Ultimately, they define the ethnic identity of the Maasai. Understanding this illuminates our comprehension of why communities go to extremes to defend their livestock. Conflicts over livestock have become more acute because of climate change. Droughts due to climate change cause a lack of grazing land and water, causing cattle to die and fueling conflicts over the few animals that remain. Without livestock, the cultural and religious life of the Maasai would be almost impossible. This is why the tribal elders and traditional religious leaders bless the cattle raiders and ensure that they carry out their raids with vigor and confidence on the pretext that they are participating in sacred raids, which we call transcendent morality.

The foregoing confirms the enchanted relationship, conscious agency, and sacred relationship some communities have with nature, which creates a sacred moral identity.<sup>40</sup> When sacred identity is threatened or disrupted, invoking sa-

cred moral commitments to defend the resource becomes the "right thing to do." The sacred value and worldview of livestock form the basis of cognitive, emotional, and moral meanings for these communities. The meanings guide communities' thoughts, attitudes, and behaviors in conflicts over livestock. They structure the different types of relationships between groups. <sup>41</sup> Ultimately, they represent a powerful force that provides a framework in which worldviews and cultural representations construct and frame practical actions, understandings, and relationships. <sup>42</sup>

A study in the community of Lamu in Kenya showed how the great divide and tensions between the Christian community and the Muslim majority are linked to the growing water shortage. The study found that water plays an important role in cleansing and purification rituals associated with Islamic prayers. Islamic elders play an important role in water management in this region. This is a potential trigger for water-related conflicts because although Lamu is a predominantly Muslim region, it is also made up of other religious groups and cultures. This means that earmarking local water for religious purposes would be at the expense of other cultures and religions that do not follow the same practices. And by preferentially providing water to one group, it makes it harder for the other smaller groups in the region to find water. So, if water scarcity persists, unequal distribution and access between Christians and Muslims in the region could potentially be a cause of conflict. This study concludes that religion is a factor that can increase the likelihood of water-related conflicts in the region. Therefore, this factor should be urgently addressed and integrated into the water management mechanism to prevent water-related conflicts. 43

### What are the Implications for Climate-Resilient Peace and Security?

Current approaches to climate peace, climate security, and environmental peacebuilding advocate for a techno-rational, inclusive, and equal distribution of available resources. They also explore how communities can best manage common natural resources. Conflicts involving sacred claims, however, cannot always be resolved by splitting the resource in question or by equal division and sharing. In conflicts over "sacred" resources, the resources cannot always be divided, replaced, violated, or monetized. Thus, the usual conflict resolution strategies will not work.

Understanding cultural perceptions and rationales, such as sacred beliefs and practices of communities, could thus help policymakers understand why some communities plunder and defend livestock intensively. It will provide more in-

sights into why and how they act the way they do. More understanding is needed than just technical knowledge and reports.

In situations where individuals and communities have sacred relationships with the natural environment, conflicts over resources become moral conflicts that go beyond the resources in question. They are no longer about truths or falsehoods, which can be technically resolved, but about right or wrong, which is the realm of morality and, subsequently, spirituality. The call for the deployment of sacred worldviews to interrogate climate-induced conflicts is not meant to displace scientific and technical perspectives. Rather, it is a call to integrate different perspectives for a holistic and effective understanding and approach to climate-related conflicts.

### **NOTES**

- 1. Dalby, Simon, 2009: Security and Environmental Change (Cambridge: Polity); Gray, Colin S., 1985: "The Nuclear Winter Thesis and U.S. Strategic Policy", in The Washington Quarterly, 8.3: 85–96.
- Meadows, D.L.; Meadows, D.H., 1972: Die Grenzen des Wachstums. Bericht des Club of Rome Zur Lage Der Menschheit (Stuttgart: Deutsche Verlags-Anstalt); Ehrlich, Paul, 1968: The Population Bomb (New York: Ballantine); Hardt, J.N., Harrington, C., von Lucke, F., Estève, A., Simpson, N.P. (2023). Introduction: A Framework for Assessing Climate Security. In: Hardt, J.N., Harrington, C., von Lucke, F., Estève, A., Simpson, N.P. (eds) Climate Security in the Anthropocene. The Anthropocene: Politik—Economics—Society—Science, vol 33. Springer, Cham. https://doi.org/10.1007/978-3-031-26014-8\_1
- 3. Deudney, Daniel, 1990: "The Case against Linking Environmental Degradation and National Security", in: Millennium, 19,3: 461–476.; Ullman, Richard H., 1983: "Redefining Security", in: International Security, 8,1: 129–153; Homer-Dixon, T. F. (1994). Environmental Scarcity and Violent Conflict: Evidence from Cases. International Security, 19(1), 5-40.
- 4. Brown, Lester R. 1977. "Redefining National Security," Worldwatch Paper 14, Worldwatch Institute, October 1977, https://files.eric.ed.gov/fulltext/ED147229.pdf.
- 5. Burke, Sharon. 2023. Achieving Security, https://www.usip.org/publications/2023/08/achieving-climate-security; Matthews, Jessica Tuchman. 1989. "Redefining National Security," Foreign Affairs, Spring 1989, www.foreignaffairs.com/united-states/redefining-security.
- 6. Ibid.
- 7. Ibid.
- 8. Campbell, Kurt M.; et al., The Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change (Washington, D.C. 2007); at: https://csis-website-prod.s3.ama zonaws.com/s3fs-public/legacy\_files/files/media/csis/pubs/071105\_ageof-

consequences.pdf; von Lucke, Franziskus. The Securitisation of Climate Change and the Governmentalisation of Security (Houndmills Basingstoke: Palgrave Macmillan, 2020); Center for Naval Analyses. National Security and the Threat of Climate Change (Washington, D.C., CAN, 2007); at: https://www.cna.org/cna\_files/pdf/national%20security%20and% 20the%20threat%20of%20climate%20change.pdf.

- 9. Brauch, Hans Günter; et al. (Eds,). Facing Global Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts (Berlin–Heidelberg: Springer, 2009).
- 10. Maertens, Lucile. "Climatizing the Un Security Council", in: International Politics, Volume 58, Issue 4, February 2021, Pages 640–660, https://link.springer.com/article/10.1057/s41311-021-00281-9
- 11. Op.cit. Burke.
- 12. Ibid.
- 13. Ibid.
- 14. Buxton, Nick "Primer on Climate Security," Transnational Institute, Oct. 12, 2021, www.tni. org/en/publication/primer-on-climate-security.
- 15. Op. Cit. Burke.
- 16. Ibid
- 17. Ibid.
- 18. Ibid.
- 19. Ibid.
- Lahsen, M.; Ribot, J. Politics of attributing extreme events and disasters to climate change.
   Wiley Interdiscip. Rev. Clim. Chang. 2022, Volume 13, Issue 1, e750, https://doi.org/10.1002/wcc.750
- 21. Ibid.
- 22. Ibid.
- 23. Farrell, Justin. The Battle for Yellowstone: Morality and the Sacred Roots of Environmental Conflict. (Princeton and Oxford: Princeton University Press, 2015).
- 24. Schipper, E. F. Lisa. Maladaptation: when adaptation to climate change goes very wrong. One Earth, Volume 3, Issue 4, October 2020, Pages 409–414.
- 25. Mobjörk, Malin, Florian Krampe, and Kheira Tarif. 'Pathways of Climate Insecurity: Guidance for Policymakers'. SIPRI, November 2020., https://www.sipri.org/sites/default/files/2020-11/pb\_2011\_pathways\_2.pdf
- 26. Tarusarira, J. Religious Environmental Sensemaking in Climate-Induced Conflicts. Religions 2022, Volume 13, Issue 3, February 2022, pages 204ff. https://doi.org/10.3390/rel13030204
- 27. Cameron, Emilie. S., 2012. Securing Indigenous politics: a critique of the vulnerability and adaptation approach to the human dimensions of climate change in the Canadian Arctic. Global Environmental Change, Volume 22, Issue 1, February 2012, Pages 103-114.
- 28. Selby, Jan, Gabrielle Daoust, and Clemens Hoffmann, "Divided Environments: An International Political Ecology of Climate Change, Water and Security" (Cambridge: Cambridge UP,

2022)

- 29. Ibid.
- 30. Op. cit, Homer-Dixon; Sillmann, H & Baechler, G. 1995. Environment and Conflicts Projects., https://css.ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-securities-studies/pdfs/Environmental\_Crisis\_1995.pdf
- 31. Scartozzi, Cesare M. "Reframing Climate-Induced Socio-Environmental Conflicts: A Systematic Review." International Studies Review, Volume 23, Issue 3, January 2021, Pages 696-725.
- 32. Beaumont, Paul and Cedric de Coning, 2022. Coping with Complexity: Toward Epistemological Pluralism in Climate–Conflict Scholarship, International Studies Review, Volume 24, Issue 4, December 2022, https://doi.org/10.1093/isr/viac055
- 33. Gleditsch, Niels. P. et al. 2006 Conflicts over shared rivers: Resource scarcity or fuzzy boundaries? Political Geography, Volume 25, Issue 4, May 2006, Pages, 361-382,
- 34. Op. Cit., Selby et.al.
- 35. Booth, Ken. Critical Explorations, in: Booth, Ken (Ed.), Critical Security Studies and World Politics (Boulder, CO: Lynne Rienner, 2005), Pages 1–18
- 36. Pape, Robert A. Dying to win: The strategic logic of suicide terrorism. (Crown Publishing Group/Random House, 2005).
- 37. Watson, Elizabeth. 'A "Hardening of Lines": Landscape, Religion and Identity in Northern Kenya', Journal of East African Studies, Volume 4, Issue 2, June 2010, Pages 201-20.
- 38. Knowles, J. Gary. Geopiety, the concept of a sacred place: Reflections on an Outdoor Education Experience. Journal of Experiential Education Volume 15, Issue 1, May 1992, Pages 6-12.
- 39. Chebunet, K.Philip, et.al. 2013. Cultural Beliefs as a Source of Ethnic Conflicts: A Study of the Turkana and Pokot Pastoralists of Kenya, Journal of Global Peace and Conflict Volume 1, Issue1, June 2013, Pages 01-14
- 40. Cruikshank, Julie. Do glaciers listen? Local knowledge, colonial encounters, and social imagination. (Vancouver: UBC Press, 2005).
- 41. Op. Cit., Watson
- 42. Watson E. Elizabeth and Hassan Kochore. Religion and Climate Change in Northern Kenya: New Moral Frameworks for New Environmental Challenges? Journal for the Study of Religion, Nature and Culture Volume 6, Issue 3, September 2012, Pages 319–343.
- 43. Yvonne Maingey; Maggie Opondo; Daniel Olago; and Gilbert Ouma. The impacts of increasing water scarcity and the potential for water-related conflict in Lamu, Kenya. Water Supply, Volume 22, Issue 2, 2022, Pages 1983-1994.

### **ABOUT THE AUTHOR**

Joram Tarusarira is an Assistant Professor of Religion, Conflict and Peacebuilding and former Director of the Centre for Religion, Conflict, and Globalization at the University of Groningen, Netherlands. He is a Climate Security Research Associate with the Consultative International Group on Agricultural Research (CGIAR). His areas of expertise are conflict, peacebuilding, reconciliation, climate change, conflict, and religion. His research is connected to Sustainable Development Goals, especially Climate Action (SDGs 13) and 'Peace, Justice, and Strong Institutions (SDG 16). He was the principal investigator of the project 'Invoking the Sacred: Towards Alternative Strategies Against Climate Conflicts.' He is the author of Reconciliation and Religio-political Non-conformism in Zimbabwe (2016) and co-editor of Religion and Human Security in Africa (2019), Religion and Inequality (2022), Themes in Religion and Human Security in Africa (2020) and the forthcoming Palgrave Handbook on Religion, Peacebuilding and Development in Africa (2023).