

# Rethinking the Climate Change– Conflict Nexus: Evidence From South Sudan

Dr. Israel Nyadera

## Introduction

Concerns over the long-term consequences of climate change and inaction to mitigate human-induced impacts on the environment have continued to grow over the last decades.<sup>1</sup> Climate change continues to top the national security strategy documents of many countries and the reports of many non-governmental organisations, as the leading threat in the foreseeable future. With the belief that some aspects of climate change such as global warming, loss of biodiversity and extreme weather are likely to be irreversible, calls for urgent interventions are on the rise.

Existing debates taking place at policy forums such as the 2022 COP27 (officially, the United Nations Climate Change Conference, or Conference of the Parties of the UNFCCC, more commonly referred to as COP) held in Sharm el-Sheikh, Egypt, have brought forth important agenda items. These include issues such as resilience, climate finance, gender, climate technology, and innovation, among others. Other debates also reflect on the place of developing countries and the nature of the support they need to face climate change. Given the seriousness of challenges witnessed in conflict areas, it is encouraging to see that the forthcoming COP28, scheduled for 3 December 2023, outlines discussions on health, relief recovery, and peace. Perhaps countries such as South Sudan should be keen to contribute to this meeting, given their experiences. In academic debates, it is more often the case that attention is drawn to how climate change acts as a threat multiplier in the manifestation of conflict.<sup>2</sup>

In contrast, the role of climate change in exacerbating human insecurity and

suffering during conflicts is only discussed on a muted basis.

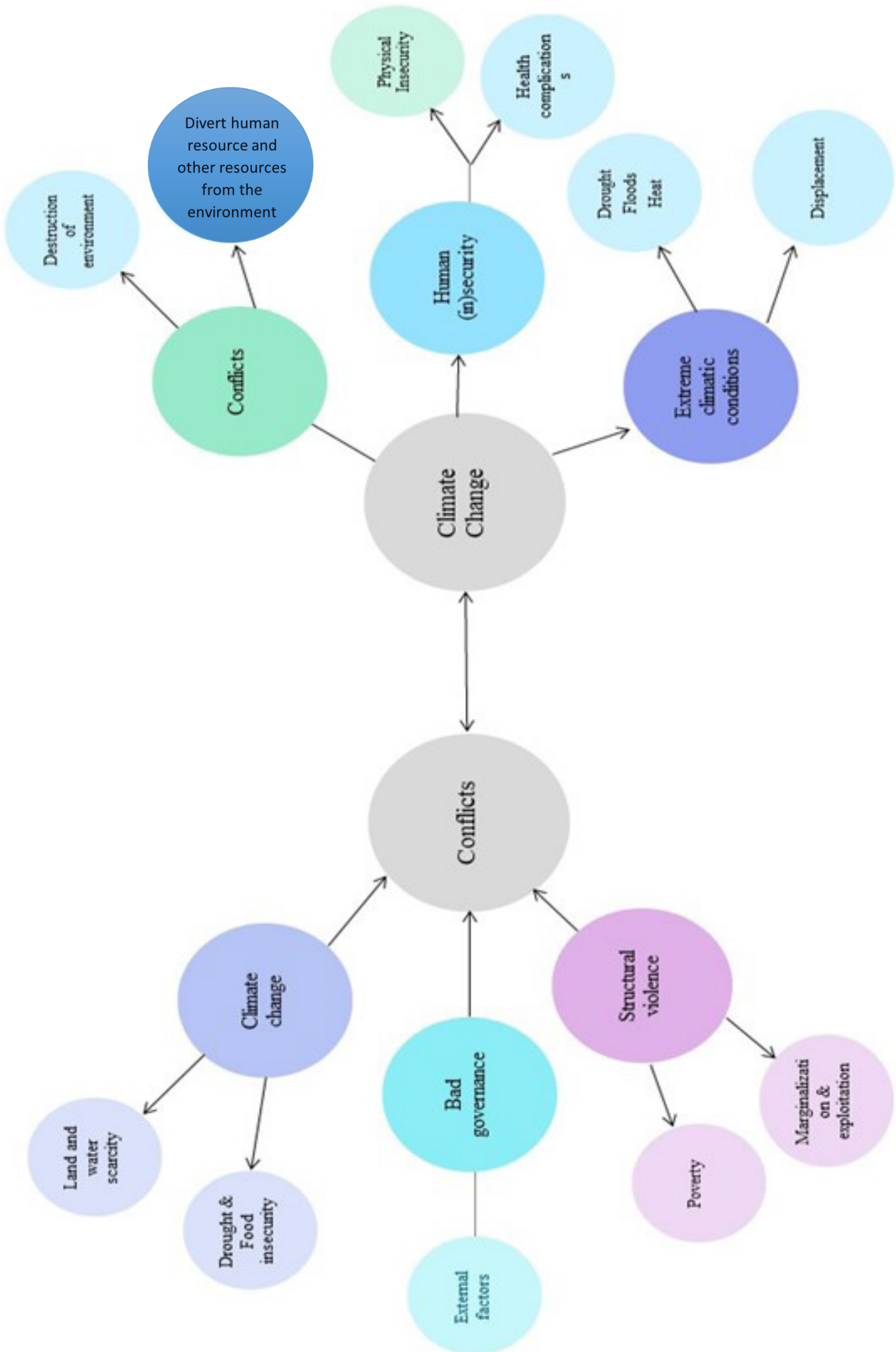
Moreover, for countries that are experiencing conflicts such as South Sudan, the call for urgent environmental intervention may come late. This is because the country is not only already facing a combination of challenges brought about by conflict and climate change, but also faces the difficulty of introducing far-reaching climate change interventions amid a conflict. Among countries that are facing conflict and climate change challenges, South Sudan offers a unique case study, given both the institutional challenges it continues to face as the newest nation in the world and the capacity-building obstacles it has faced historically since the 1950s.

South Sudan passed the National Adoption Plan for Climate Change South Sudan (NAPCCSS) in 2021 and ratified the Paris Agreement in 2016, marking important steps in finding long-term solutions to the South Sudanese climate change experience. At the centre of this problem, however, is the question of peace and security in the country, which would allow both the implementation of the NAPCCSS and the development of institutional capacity to monitor these efforts. This article examines existing academic studies on conflict and climate change, government reports, and publications by local and international non-governmental organisations and inter-governmental agencies. It begins by assessing the complex relationship between climate change and conflict by looking at thematic areas such as food insecurity, displacement, and humanitarian response. It then looks at how the ten-year existence of South Sudan has been troubled by a combination of violence and climate change before concluding with a set of

1 Sarah Sunn Bush and Amanda Clayton, "Facing change: Gender and climate change attitudes worldwide", *American Political Science Review* 117, no. 2 (2023): 591–608.

2 Kjølv Egeland, "Climate security reversed: the implications of alternative security policies for global warming", *Environmental Politics* 32, no. 5 (2023): 883–902.

Figure 1: Nexus between conflict and climate change



Source: Author design

recommendations. This analysis adopts a qualitative methodology to explore the nexus between climate change and conflict in South Sudan.

### **Climate Change and Conflict: A Complex Nexus**

When conflict and climate change combine, they present a double tragedy for the affected society. This has already caught the attention of securitisation theorists and other scholars who continue to link climate change and (in)security.<sup>3</sup> The multiplier effects of climate change on conflict areas tend to worsen the humanitarian situation.<sup>4</sup> Most conflicts are caused by scarcity, especially of crucial human needs such as food, water, and land, which are also some of the consequences of climate change. Figure 1 illustrates the interconnection between climate change and conflict.

Whenever there is a conflict, we can deduce several impacts that also contribute to climate change. For example, conflict often leads to: the displacement of people; channelling human resources and other resources to war-related activities; unregulated exploitation of resources, including cutting down trees to generate revenue or simply as a strategy of war such as a scorched earth policy. Equally important, the existence of destructive arms, such as nuclear, chemical, and biological weapons, can have far-reaching consequences if deployed during a conflict. Nonetheless, international treaties and agreements such as the 1949 Geneva Conventions, the 1970 Non-Proliferation of Nuclear Treaty, the 1972 Biological Weapons Convention, and

the 1997 Chemical Weapons Convention can help minimise such destruction if well implemented and enforced. What is of greater concern, however, is the disproportionate impact of climate change on already negatively affected members of a conflict-affected society, notably women, children, persons with disabilities, the elderly, and the sick.

Climate change, in contrast, has long been associated with conflict because of its impact on human and environment. At the same time, climate change is also seen as a threat multiplier in the sense that it exacerbates existing problems, thus making the chances of conflict breaking out or deteriorating conditions in an existing conflict more likely. Debates over climate change have led to policies on adaptation and resilience to climate threats, but such policies do not feature among the priority areas for most countries.<sup>5</sup> This can be attributed to the national interests of a country, growing nationalist or populist political movements that reject the idea of climate change, controversies over climate financing, and questions over responsibility. Despite such drawbacks, forums such as the recently concluded Africa Climate Summit in Nairobi (4–6 September 2023) and the African Union Climate Strategy offer African countries a common position and reference on climate change. This can then contribute to other international efforts such as those spearheaded by the United Nations and national strategies that can be adopted by countries such as South Sudan. As such, it is important to look at how developed countries respond to climate change, on the one hand, and the contribution of emerging

3 Jeroen Warner and Ingrid Boas, "Securitization of climate change: How invoking global dangers for instrumental ends can backfire", *Environment and Planning C: Politics and Space* 37, no. 8 (2019): 1471–88. Maria Julia Trombetta, "Securitization of climate change in China: Implications for global climate governance", *China quarterly of international strategic studies* 5, no. 01 (2019): 97–116.

4 Takato Nagano and Takashi Sekiyama, "Review of Vulnerability Factors Linking Climate Change and Conflict", *Climate* 11, no. 5 (2023): 104.

5 Vally Koubi, "Climate change and conflict", *Annual Review of Political Science* 22 (2019): 343–60; Idean Salehyan, "From climate change to conflict? No consensus yet", *Journal of Peace Research* 45, no. 3 (2008): 315–26.

countries, on the other, without hindering their development goals. In doing so, three issues emerge that are worth examining: sustainability, vulnerability, and resilience.

First, sustainability is an idea that goes beyond questions about whether there are sufficient resources to support the survival of a given group, but also touches on equity. Access to these resources thus becomes a central issue. It is evident that both climate change and conflict can disrupt sustainability, which is even worse for those who experience both conflict and climate change at the same time. Second, climate change and conflict also expose people and populations to various forms of vulnerability. This means that those experiencing conflict and climate change are unable to cope with the pace and scope of the unexpected changes to which they are exposed. Third, it is essential to understand how climate change and conflict affect both the ability and level of resilience for the affected group. Resilience allows for better response to vulnerabilities and can lead to sustainability. In the absence of resilience, levels of vulnerability increase, making it difficult for a group to absorb the socio-economic and political shocks that are caused by both climate change and conflict. In this case, the weakest in the society are affected the most. When discussions around climate change and conflict resolution do not take into account the experiences of those who have had to endure the negative impacts of the two, this means that a lot is left to be desired. One conflict that continues to show visible signs of climate–conflict nexus is the South Sudanese civil war, which began in December 2013, a mere three years after independence.

## **South Sudan, Climate Change, and Conflict: A Troubled Decade**

When examining the nexus between climate and conflict, South Sudan offers important insights on the devastating consequences of this nexus. Although the country has been experiencing civil war since 2013, it is important to recall the long-term impacts of the First Sudanese Civil War, which began as early as 1956 and then briefly halted as a result of the 1972 Addis Ababa Agreement, only to fully resume again in 1983, as the Second Sudanese Civil War, which was halted with the Comprehensive Peace Agreement in 2005. The experience of conflict in the South Sudan region has attracted the attention of international, continental, and sub-continental actors, who have tried to offer solutions during the two civil wars and again during the post-independence civil war in South Sudan.<sup>6</sup> Scholars have also been attracted to the conflict situation in Sudan for years, but mainly with a focus on the root causes, actors, and impact of the conflict,<sup>7</sup> and with less interest in climate-related impacts.

It is noteworthy, however, that the European Commission Risk Index database (INFORM) ranks South Sudan as the second most vulnerable country in the world to natural hazards such as flooding and drought.<sup>8</sup> INFORM uses natural and human variables such as geographical location as well as current and projected conflict risk to determine the vulnerability score of a given country. Climate and conflict have exposed the people of South Sudan to a double tragedy, yet only the violent aspect of the conflict seems to be at the centre of efforts to stabilise the country. By simultaneously addressing both conflict

6 Israel Nyaburi Nyadera, “South Sudan conflict from 2013 to 2018: Rethinking the causes, situation and solutions”, *African Journal on Conflict Resolution* 18, no. 2 (2018): 59–86; Israel Nyaburi Nyadera and Yilmaz Bingol, “Human Security: The 2020 Peace Agreement and the Path to Sustainable Peace in South Sudan”, *African Conflict & Peacebuilding Review* 11, no. 2 (2021): 17–38.

7 Naomi Pendle, “Competing authorities and norms of restraint: governing community-embedded armed groups in South Sudan”, *International Interactions* 47, no. 5 (2021): 873–97; Israel Nyaburi Nyadera, Md Nazmul Islam, and Felix Shihundu, “Rebel fragmentation and protracted conflicts: Lessons from SPLM/A in South Sudan”, *Journal of Asian and African Studies* (2023): 00219096231154815; Clémence Pinaud, *War and genocide in South Sudan* (Ithaca: Cornell University Press, 2022).

8 INFORM GRI 2022: Index for Risk Management. European Commission 2022. <https://drmkc.jrc.ec.europa.eu/inform-index>.

and climate change, it becomes more possible to contribute to ameliorating the double suffering of South Sudanese people.

### **Food (in)security**

According to a 2022 UNICEF (United Nations Children's Fund) report on South Sudan, nearly two-thirds of the population is at risk of facing acute hunger and starvation by the end of July 2023.<sup>9</sup> If serious efforts are not made to alleviate the negative impacts of flooding and drought experienced in conflict zones, then even more lives will be at risk. UNICEF puts the number of people at risk of starvation at 7.7 million out of a total population of 11 million. Of these, 1.4 million children are at risk of starvation and malnutrition. The country finds itself in this situation due to a combination of extreme climatic conditions, poor governance, and ongoing conflict—at a time when international funding for humanitarian activities is also on the decline, which only exacerbates the problems. Food insecurity is also worsened by displacement, loss of assets (especially land), and dangers associated with working on farms such as attacks.

### **Displacement of persons**

The two main drivers of displacement in South Sudan are conflict and climate, which combine to create a sense of hopelessness among the many citizens who had great expectations of independence in 2011. According to the International Organisation on Migration (2023), approximately 2.3 million South Sudan refugees have fled the country and

about 2.2 million people are internally displaced.<sup>10</sup> Of these, more than 300,000 are considered climate refugees, as record flooding has begun to affect the country since 2021. At that time, UNHCR records show 2.2 million people were displaced in 2023.<sup>11</sup> The displacement of persons has severe consequences on people's lives—families are separated, careers lost, living conditions can become inhumane and there is increased exposure to human security threats.<sup>12</sup> The complexity of displacement in South Sudan is further overshadowed by the relatively new conflict emerging in Sudan, which has not only captured the headlines of mainstream media, but has shifted the attention of donor countries and humanitarian agencies. This creates further challenges for the already stretched resources and personnel of these key actors.

### **Humanitarian response**

Urgent humanitarian support and intervention are needed to reinforce the humanitarian efforts that have been disrupted by the impact of violence and extreme flooding. In 2022, more than 70% of the South Sudan was flooded for months, especially areas such as Abyei Administrative Area and in the states of Jonglei, Upper Nile, Unity, Warrap, Northern Bahr el-Ghazal, Lakes, and Western Equatoria<sup>13</sup>. Not only did such flooding make accessing these regions very difficult, it also increased the number of people in need of humanitarian assistance as homes, farms, hospitals, roads, schools, and camps for displaced persons were destroyed. Lack of access to remote areas means that not only food, but also medical

9 UNICEF, South Sudan Food Security & Livelihoods Cluster & Child Protection AoR. 2023 <https://www.unicef.org/southsudan/reports/protecting-children-south-sudans-food-security-crisis>.

10 IOM Response Overview - Sudan Crisis and Neighbouring Countries 2023 IOM Revised Response Overview - Sudan Crisis and Neighbouring Countries, May 2023 - December 2023 (Published: 5 September 2023) - Sudan | ReliefWeb.

11 UNHCR 2023, Regional overview of the South Sudanese refugee population. 2023 <https://data.unhcr.org/en/situations/south-sudan>.

12 Israel Nyaburi Nyadera and Billy Agwanda, "Elusive peace and conflict resolution in South Sudan: A human security alternative approach", in *Human Security and Sustainable Development in East Africa*, eds. Jeremiah O Asaka and Alice A Oluoko-Odingo (Abingdon-on-Thames, UK: Routledge, 2022), 72–88.

13 Mayen, John V., Erik Wood, and Tim Frazier. "Practical flood risk reduction strategies in South Sudan." *Journal of emergency management* 20, no. 8 (2022): 123-136.

supplies can barely reach the stranded people. This raises further concerns over the potential outbreak of communicable diseases caused by flooding and the lack of medical supplies. While seasonal flooding of the Nile can be considered a normal occurrence, flooding of a significant portion of the country is unprecedented and can be associated with effects of climate change<sup>14</sup>. Before the 2021 floods, intense violence had already hindered access to humanitarian support in different parts of the country, leaving millions of people in need of support at the mercy of nature.

### Recommendation

To address these challenges, specific measures need to be taken into account, as follows.

1. Afforestation is a strategy that South Sudan can adopt. This would not only improve forest cover in the country, but would also offer opportunities to explore other socio-economic benefits that forests can offer. For example, tree planting efforts such as the target to plant 100 million trees launched in Juba in 2021 can also include planting indigenous and medicinal trees. In this way, the country can contribute to the fight against climate change, while revitalising some of its social-cultural practices such as alternative medicine.
2. Acquiring climate prediction tools and capacities is another urgent measure that needs to be adopted. This can be done through a dedicated public office on climate monitoring and early warning, or at universities and research institutes, which can be equipped with climate prediction tools. The purpose would be twofold: to monitor general climate conditions and to provide warnings about extreme climate conditions that have worsened the humanitarian situation, which is already in a crisis from the conflict. Alongside this, humanitarian actors should adopt better climate forecast tools in their work and establish sufficient early warning mechanisms that can aid in detecting and averting the negative impacts of climate change, especially in populated areas.
3. International efforts such as the forthcoming COP28 (30 November–12 December 2023, hosted in Dubai) need to consider including conflict regions as part of the climate fund. This would mean that people who have a lower carbon footprint (for example, especially those in low-income countries) could benefit from supplementary funds to help cushion them from the adverse consequences of climate change. The inclusion of issues related to health and peace in the forthcoming COP28 is an important step towards achieving these goals.
4. Beyond the power-sharing proposals that have characterised recent peacebuilding efforts in South Sudan, there is need for all actors involved to commit themselves to upholding climate change measures. For example, the government needs to ensure proper climate policies are adopted. Leaders of the warring parties should ensure their means and methods of warfare not only conform to the Geneva Conventions of 1949 and the additional protocols but also that these means and methods do not have irreversible impact on the environment. Citizens can play a role in environmental conservation practices and nurturing trees. Donors and non-governmental organisations can provide the necessary financial, technical, and civic education support for climate-related projects, backed up

<sup>14</sup> Lukwasa, Andu Zakaria, Tadesse Terefe Zeleke, Kassahun Ture Beketie, and Desalegn Y. Ayal. "Spatio-temporal rainfall variability and its linkage with large scale climate oscillations over the Republic of South Sudan." *Climate Services* 28 (2022): 100322.

by think tanks and consultants working on climate-related issues.

5. Proper sensitisation and awareness raising needs to be undertaken across the country by the central and local government agencies responsible for environment. For example, displaced persons who reside in camps can be involved in environmentally friendly programmes such as tree planting during their stay, which could eventually take place across the country. These government agencies can also call for the establishment of a green army as part of disarming, demobilising, and re-integrating soldiers (especially former child soldiers), should peace be achieved.

### **Author Information & Contact**

Dr Nyadera teaches International Relations at Egerton University, Riara University and the Joint Command and Staff College, National Defense University-Kenya. He holds the Swiss Government Excellence Fellow at the Geneva Graduate Institute, was an InterRussia visiting fellow at the MGIMO University, an India–Africa Security Fellow at the MP-Institute for Defence Studies and Analyses, a Global Africa young researcher fellow at LASDEL and a Charles E Scheidt Fellow at George Mason University. He was also a visiting researcher (University of Milan), teaching assistant (University of Macau), and a Türkiye government scholarship holder.

Email: [israel.nyadera@graduateinstitute.ch](mailto:israel.nyadera@graduateinstitute.ch).