**Research Article**

# Toward Resilient and Peaceful Futures: Climate Security and Governance in the Global South

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*Abstract*

This study investigates the pivotal issues between climate change and security in the Global South. These countries, which often contribute the lowest emissions and are the least wealthy, are among those affected by climate change. This study aims to examine how governance challenges influence peacebuilding amid environmental crises by reform the security systems to incorporate climate security dimensions. Existing studies highlight the connection between environmental crises and conflict but often emphasize the Global North. There is a lack of comprehensive analysis exploring how good governance, diplomacy, and multilateral cooperation in the Global South can address climate security risks. The aim of this research is to fill that gap by examining governance approaches that will enhance peace and build more resilience amid environmental pressures. This study utilizes a mixed-methods approach, combining policy reviews, case studies from the Global South, and quantitative analysis of environmental and conflict data. The results were understood using themes and statistics. The research highlights that effective governance is characterized by transparency and diversity can reform climate resilience and reduce prolonged impact. Multilateral efforts that address Global South voices yield more sustainable pathways and peace outcomes. The form of "climate diplomacy" that focuses on local, community-based solutions offer alternatives to conventional securitized approaches. This supports the urgent call to frame climate security as a collaborative governance challenge. Its findings provide empirical evidence and practical policy for climate adaptation with peacebuilding and security strategies and sustainable governance in the Global South amidst ongoing environmental change.

**Keywords:** Climate Security, Governance, Global South, Peacebuilding, Climate Diplomacy.

## I. Introduction

In the past few decades, climate change has become a major menace to the international stability and the wellbeing of human populations and the entire natural environment. Climate change affects almost all aspects of economic and social development (Keohane, 2016). The escalating impacts of climate change pose an unprecedented challenge to global stability, increasingly recognized as a profound driver of conflict, displacement, and socioeconomic disruption (Maertens, 2021), mark a radical turning point defining the international security environment. As a result, a concept of climate

security has arisen, referring to the interplay between changing climatic conditions, namely, the increase in average temperatures, sea-level rise, and the intensification of the frequency and severity of extreme weather events, and the human aspects of water access, food availability, public health, and livelihoods. The Intergovernmental Panel on Climate Change (IPCC, 2023) notes that climatic disruption has significantly impacted physical and mental health in the evaluated areas and has worsened humanitarian crises that occur in places where climate-related hazards meet with increased vulnerability.

The Global South, most of whose member states are still among the poorest, tends to bear a disproportionately high burden of these effects, it produces a relatively low proportion of global greenhouse-gas emissions. In fact, the emission of China exceeds a quarter of the overall emission, and Africa and South America contribute to about 3-4 % of anthropogenic emission. However, the two continents are prone to high levels of exposure to extreme climatic events. This disproportionate impact exacerbates existing socio-economic vulnerabilities, manifesting as heightened food insecurity, water scarcity, and mass displacement, thereby creating complex humanitarian crises and destabilizing political landscapes (Häusermann & Kitschelt, 2024). The United Nations Environment Program (2024) also explains that high-income countries currently consume about six times the amount of material resources per capita compared to the low-income countries. However, the environmental effects that are emitted by middle-income states are still less compared to those that are released by their rich counterparts. Environmental change threatens these conditions for dignified lives, and so constitutes a risk to the security of persons (O'Brien and Barnett 2013)

Researchers have assigned much of this disparity in vulnerability to disjointed governance architectures that do not incorporate the idea of climate security into collective peacebuilding efforts. Conventional security systems often consider the environmental factor as a policy sector in itself, even in situations where climate-related stressors coincide with long standing land, resource distribution, and political voice grievances. This showed the gap between empirical reality on fragmented and reactive governance and normative ideal which cohesive, proactive and resilience oriented toward climate security systems. This disjointed approach limits the ability to build sustainable peace, as climate-related stressors often intersect with existing grievances over land, resources, and political representation (Devi et al., 2024).

A human security lens draws attention to how climate change can lead to negative consequences for people, even if state security is not challenged (Adger et al., 2021). The fact that current governance models fail to incorporate climate security into more comprehensive peacebuilding agendas thus impedes the attempts to prevent the reoccurrence of crises as well as the development of resilient societies. This divergence highlights the need for a paradigm shift from solely state centric security models to a human-centric approach that

prioritizes the well-being and resilience of individuals and communities (Moulds et al., 2021).

Despite the fact that most contemporary research on climate security focuses on the Global North or even solely dwells on militaristic solutions, the importance of effective governance and multilateral climate diplomacy in the Global South is often underestimated. Climatic shocks in areas where governance capacity is in its infancy will undermine administrative systems, destroy the trust of the population, and increase prior resentment related to land, resources, and political representation (Adger et al. 2014: 774). Scarcity of fiscal resources, lack of adaptation mechanisms, and poor institutional arrangements then pose an obstacle to effective implementation of environmental protection. In this analysis, it is assumed that effective climate diplomacy, as well as inclusive and resilient governance systems, forms the necessary backbone of the construction of durability and the establishment of a sustainable peace within such precarious environments. In the case of the Paris Agreement, the agreement provides a multilateral framework against which Global South states can convert general commitments into locally specific approaches. Such diplomacy should be built into developmental pathways, poverty reduction efforts, rural-development programs and the like which incorporate climate security considerations within non-climate priorities of the society in general (Kok et al., 2008).

Action plans based on such governance issues must involve international efforts to build peace building in the environment with joint institutional structures. To prevent continuous negative consequences, the joint participation of local governmental bodies, civil society organizations, and the actors of the private sector in the processes of resource control, mitigation of disasters, and peacebuilding is necessary. The embeddedness of institutions, furthermore, enhances the involvement of citizens and their capacity in the local governance systems, therefore, strengthening resilience (Edelenbos et al., 2010; Edelenbos, 2005). Since local governance is the most immediate institutional level, resilience-based policies at this level not only reduce the direct effects of climate change but also develop a lasting peace by reducing the conflict (Kurkela, 2022; Smith, 2009). International cooperation and comprehensive climate diplomacy are necessary to continue the work of closing the capacity gaps in vulnerable areas. Multilateral systems like the Paris Agreement are only important when states translate international commitments into national plans that respond to local conditions. In light of the fact that development priorities are essential, policymakers should incorporate climate security into national poverty reduction, rural development, and the overall Least Developed Country (LDC) transition agenda, shifting their focus in the process to proactive resilience-centered governance instead of reactive crisis management (Kok et al., 2008). This kind of agenda turns institutional paradigms to proactive resilience building as opposed to reactive crisis response, setting the stage to

more stable and peaceful futures in the Global South.

## II. Methods

Using qualitative descriptive analytical research methodology, this paper examines the governance strategies in addressing climate related security in the Global South. The qualitative method allows deeper into the analysis of concepts and policies and is not only limited to quantitative indicators, making it relevant to complex, multidimensional problems, such as climate security.

The study relies on secondary data that are credible, such as peer reviewed journals, academic books, policy briefs, government reports and international organization publications, including the United Nations, IPCC, African Union, and ASEAN. Current news articles and NGO reports are also considered to the latest trend, developments and field practices.

The data are collected using a systematic literature review and numerous analysis documents. Eligible sources are being referred directly to at least one of the key themes of climate security, governance, or environmental peacebuilding in the Global South and have been published in the past 15 years, with some exceptions to foundational works.

The use of different case study in this paper is intentional as it reflects the multi-dimensional dynamics of climate governance in the Global South. Climate insecurity does not operate on certain states and regions, it emerges through regional conflict systems, national governance structure and local adaptive mechanism. Therefore, the case study design strengthens a comparative analysis rather than undermining the consistency.

Thematic analysis used in data analysis so that the results are categorized according to relevant themes like human security, governance challenges, climate diplomacy and resilience building. The Human Security Approach, Environmental Peacebuilding Theory, a Governance and Resilience Framework identify and interpret patterns and differences.

## III. Climate Security Risks in the Global South

The Global South has the highest risks relative to the development of climate related hazards in the region despite contributing lowest greenhouse gases to the global. The Global South encompasses Africa, Latin America, Asia and sections of the Middle East, and those regions individually contribute a minimal percentage of overall emissions yet they mostly effected and suffer from climate shocks. The vulnerability of these countries from climate shocks because of the lack of economic and institutional capability to adapt efficiently. Environmental insecurity is the double vulnerability of people that arise when underdevelopment and impoverishment are compounded by human induced environmental change (Barnett 2001b).

Erratic rainfall, droughts and floods are other major climate security risks associated with food insecurity that affects agricultural production. Vulnerabilities to climate change are

strongly influenced by wealth, gender, and age, affecting population in dissimilar ways (FAO, 2024), with disproportionate impacts in developing countries and among the most vulnerable groups, including women, fisherfolks, small-scale farmers, youth, and Indigenous Peoples (IPCC, 2022a). Food and agriculture have to produce 49 percent and the food system already contributes a large proportion of climate change, and is extremely vulnerable to it, in spite of the fact that it is expected to increase food production by 2050 (FAO,2021). The effects of climate change like extreme weather, spreading pests and diseases, loss of biodiversity, degrading ecosystems, and water shortage, will increase with rising global temperatures. These effects will hurt food security and the livelihood and cause forced migrations.

Water scarcity is one of the major climate security threats in the Global South. Several regions like North Africa and the Middle East are already experiencing chronic water scarcity which is expected to increase with ongoing climatic conditions. While water management systems already have strategies to deal with a certain level of variability and uncertainty, it is questionable whether these will be sufficient to cope with the projected rate of water resources under climate change. The variations in the water vulnerability in the countries in the region are strongly related to the degree of access each country enjoys a variety of water resources both from fresh water and the non-conventional sources of water. During El Niño drought periods, collecting water can take up to 12 hours a day and then often requires entire families to help (MacDonald et al 2019). The uncertainty about ongoing climatic conditions needs more practical approaches rather than just rely on theories. The impact of facing water scarcity on livelihoods is a decline in access to nutrition and sanitation, and water scarcity exacerbates the farming and other labor sectors that are dependent on water sources.

Another critical risk on climate shocks is induced displacement and migration. Severe weather disasters and slow environmental destruction influenced people to migrate to other places, causing both internal displacement and cross border migration. According to the Internal Displacement Monitoring Centre (IDMC,2023), disasters caused 26,4 million internal displacements, which represent 56 percent of all internal displacements, most of them belonging to the countries of the Global South and the displacements caused by disasters were still caused by floods and storms. Other major disasters like floods in Pakistan displaced millions of people in 2022. In fragile states, such movements put further pressure on limited resources and governance capacity, which can lead to competition over land, jobs and social services.

Moreover, the problem of climate risks in the Global South is intertwined with the issue of political stability and weak governance system contributing to the vulnerability. Conflict and fragile states are less likely to manage or mitigate the social, economic, political, security, or environmental risks exacerbated by climate change, thereby creating a negative feedback loop that further intensifies conflict and reduces state capacity for recovery (Lee & Kwon, 2022). A clear demonstration of this can be seen in

Yemen, which is experiencing a long-standing civil conflict as well as a harsh climatic burden. In the absence of effective governance responses, climate change are threat multipliers that exacerbate pre-existing insecurities and generate a loop of violence, displacement and underdevelopment.

The International nature of the risk of climate security is impossible to ignore. The unstable conditions of some countries in the Global South due to climate shocks can overflow into the international system in terms of refugee flows, broken supply chains, and greater pressures to intervene in humanitarian crises. This interconnectedness highlights the necessity for robust international cooperation and governance frameworks to address climate-induced security challenges effectively (Jolly & Mahajana, 2014). To build more resilience on the effects of climate change, local adaptation, governance system re-structure are important to measure the upcoming impacts on these climate shocks.

## IV. Case Studies and Findings

This paper examines the linkage between climate change, governance, and security in the Global South through a comparative analysis of three case studies which is Sudan, Bangladesh, and South Africa. Rather than treating climate change as a purely environmental or technical problem, the paper emphasizes on climate impacts as deeply mediated by political institutions, governance capacity, and social structures. The central argument is that governance quality determines whether climate stress functions as a catalyst for fragility or a driver of resilience. Sudan, Bangladesh, and South Africa. They describe how environmental stressors are interwoven with political institutions, social relations, and multi-tiered policy responses and thereby illustrate the interplay of climate change, governance, and security in the Global South. These cases highlight some of the pathways toward fragility and resilience with particular reference to governance quality, institutional innovation, and harmonized adaptation actions.

In Sudan, decades of worsening environmental stress, including severe droughts, desertification, and changing rainfall patterns, have made food security and rural livelihoods very weak, especially in North Darfur, where traditional systems for sharing resources broke down under the pressure. Community-centered adaptation strategies such as the Wadi El Ku Catchment Management projects aimed to improve agricultural productivity and natural resource governance, these promised reforms yield of key crops triple in the early days alongside developing local cohesion. Yet, these gains were irretrievably disintegrated in civil war engulfed the whole of the region in fragmentation and violence instigated by the Sudanese Armed Forces and the Rapid Support Forces (RSF) since April 2023. The war has caused mass displacement impacting millions and has unleashed one of the largest humanitarian crises in recent memory, with famine and catastrophic hunger overtaking Zamzam, Abu Shouk, Al Salam, and other camps, as confirmed by the Infection Prevention and Control (IPC) Famine Review Committee, Food and Agriculture Organization (FAO), World Food Program (WFP)

and United Nations Children Fund (UNICEF) famine has been projected in other areas as well, including Al Fasher, and the Western Nuba Mountains. Zamzam camp in particular has over 500,000 persons mostly women and children, is under terrible conditions, one child now dies roughly every two hours, rates of mortality and malnutrition have spiked and attempts to deliver lifesaving assistance that included food, medical treatment, and therapeutic nutrition have been thwarted time and again through RSF-imposed sieges, broken infrastructure, and ongoing violence. The RSF attacks on the Zamzam and Abu Shouk camps, which involve live artillery bombardments, massacres, executions of humanitarian workers, looting of clinics and markets, and the transformation of displacement camps into military bases. They have brutalized the already catastrophic crisis and put a lot of fuel to the fire of accusations of war crimes and ethnic cleansing while choking off humanitarian corridor access. As per the latest warning by the UN, about 24,6 million people nationwide are now experiencing high levels of acute food insecurity, with some even in "catastrophic" conditions, when humanitarian access is severely restricted and famine spreads rapidly. It is the ruinous coincidence of climate vulnerability, governance failure, violent conflict, and impeded humanitarian response that epitomizes how environmental shocks without resilient institutions and coordinated governance can act as force multipliers of insecurity instead of opportunities for adaptation or recovery.

Other than that, the case of Bangladesh demonstrates the potential of inclusive governance, collective resilience, and multi-scale adaptation options to turn extreme environmental vulnerability into robust institutional capacity in the case of Bangladesh, the Cyclone Preparedness Program (CPP), established in 1973, is a collaborative program of the Government of Bangladesh, and the Bangladesh Red Crescent Society. The CPP mobilizes over 55,000 trained volunteers in coastal unions to provide early warning, conduct evacuations, provide first aid, and support shelter operations. It is cited as the model program that has saved multiple lives in a series of impactful tropical cyclone evacuations. For instance, during cyclone Roanu, more than half-a-million people were safely evacuated, and many structures were reinforced against the storm. The shift of Bangladesh from reactive response to proactive disaster risk reduction with early warning systems, strong cyclone shelters, coastal embankments, and increased awareness has resulted in a dramatic reduction in cyclone-related deaths. For example, Bangladesh went from an estimate of 147,000 deaths during the cyclone of 1991 to approximately 4,500 deaths from Sidr in 2007 and just six deaths from the much weaker cyclone of Mora in 2017. The resilience provided by decentralized governance is enhanced through Union Disaster Management Committees (UDMCs), which are chaired by Union Parishad personnel and coordinate local mapping, preparedness, and awareness activities, even if their contributions are sometimes hindered by resource limits, partially offset by collaboration with NGOs and coordination with other levels of government at

the district and national levels. It is also derived from community characteristics including traditional ecological knowledge, social capital, self-organization, and place-based values that strengthen adaptive recovery and institutional legitimacy. For example, Innovative grassroots initiatives, such as community-led repair and maintenance of embankments with local materials like mud, bamboo, and sandbags through participatory methods in Khulna and Satkhira that illustrate the potential impact of great connections between fresh civil engineering and indigenous practice on future resilient flood embankments. In addition, this structural and organizational work, adaptive agricultural innovations like floating gardens referred to locally as baira to support food security and livelihoods by enabling farming activities post-monsoon flooding and were recognized as a Globally Important Agricultural Heritage System by the FAO in 2015. The United Nations and disaster resilience specialists affirm that better early warning systems and planning have considerably reduced deaths from natural hazards, including in cyclone-prone countries such as Bangladesh, even in the context of worsening climate threats collectively, Bangladesh's example illustrates how hybrid governance bringing together a volunteer-based early warning network, decentralized institutions, community knowledge, infrastructure innovation, and adaptive agriculture can change environmental exposure into social cohesion, adaptive capacity, and a model of climate resilience for the Global South.

Furthermore, The Climate Change Act (Act 22 of 2024) of South Africa was a historic first step in legislating a national climate response that includes mitigation and adaptation measures alongside a just transition to a low carbon resilient economy, and it requires national, provincial and municipal governments to embed climate considerations into all decision-making processes, including carbon budgeting, development of greenhouse gas (GHG) mitigation plans and aligning Integrated Development Plans (IDPs) and related sectoral policies. The Act also enshrined the Presidential Climate Commission (PCC) as a statutory body with oversight and advisory responsibilities, but the actual effect of this initiative is now clouded by the delaying of regulations, absence and/or weak operational legal enforcement mechanisms, and capacity limitations, especially related to local government responsibilities. Critics suggest that while the law introduces stiff penalties for only failing to submit mitigation plans, there are no explicit penalties for exceeding carbon budgets or failing to meet environmental targets and it ignores provisions on liability for climate-induced loss and damage, such as floods, really cutting into its compliance strength, direction. Critics suggest that while the law introduces stiff penalties for only failing to submit mitigation plans, there are no explicit penalties for exceeding carbon budgets or failing to meet environmental targets and it ignores provisions on liability for climate-induced loss and damage, such as floods, undermining its directive strength. Institutional fragmentation compounds these shortcomings, the heavy reliance on coordination by the Department of Forestry, Fisheries and the Environment (DFFE)

risks overburdening a single ministry, while the PCC's broad stakeholder representation, though laudable for inclusivity, may dilute its capacity to resolve interdepartmental deadlocks, particularly when community-level capacity is precarious. Governance weaknesses are present at the subnational level that over 60% of municipalities are deemed dysfunctional due to weak systems, poor administration and finances, inadequate planning, and corruption, all of which hampers the implementation of the policies established by the Act. For instance, the 2022 and 2024 KwaZulu-Natal floods showcased failures in municipal disaster risk management and the ineffectiveness of disaster management structures, which does not enable effective climate resilience actions on the ground. Therefore, While the Climate Change Act of South Africa marks a highpoint in South Africa's climate governance framework due to its legal mainstreaming of climate governance, its potential to effectuate the transformative change South Africa requires is generally undermined by the absence of regulatory emission pathways, lagging implementation, gaps in enforcement and intergovernmental coordination, incapacitation of local-government, policy and regulatory incoherence, and socio-economic dependencies, underscoring the urgency for effective implementation mechanisms, transparent regulatory frameworks, coherent policy choices, and inclusive capacity-building at all levels of governance.

Table 1: Comparative Case Studies of Climate Governance

| **Country** | **Governance and Institutional Context** | **Climate Security and Challenges** | **Adaptive or Response Mechanisms** |
|---|---|---|---|
| Sudan (Darfur, civil war) (Kevane, 2008) | Fragile, militarized governance, entrenched corruption, regional marginalization, breakdown of customary institutions. | Desertification and recurrent droughts intensify resource competition; violent conflict, famine, displacement | Limited adaptation (Wadi El-Ku project) overshadowed by conflict, aid blocked or weaponized by RSF. (Gray, 2008) |
| Bangladesh (Cyclone-prone delta) (Gadu,2025) | Stronger central governance, decentralized emergency | Highly exposed to cyclones, floods, sea-level rise, limits to | Cyclone Preparedness Program (55,000 volunteers, early warning), |

| | | | |
|---|---|---|---|
| | structures (CPP, UDMCs), robust volunteer networks. | adaptation approaching. | shelters, embankments, floating gardens, local NGO partnerships. |
| South Africa (Climate Change Act 2024) (Weyer, 2024) | Middle-income democracy with formal institutions; enactment of Climate Change Act and Presidential Climate Commission (PCC) | Need for mitigation across emissions-intensive sectors, just transition imperative amid energy crises and flooding | Legal mandates for sectoral emissions targets (SETs), carbon budgets, climate assessments by municipalities, adaptation strategy development, PCC advisory role. |

Throughout these multiform Global South contexts, the study demonstrates the critical importance of governance quality in determining climate outcomes in Sudan, Bangladesh, and South Africa. In Sudan, institutional collapse morphed climate stress into food insecurity, conflict, and forcible displacement, while in Bangladesh, the manner of governance decentralized, community based mechanisms like the Cyclone Preparedness Program and Disaster Management Bureau transformed extreme weather events into sites of agency, feasibility and resilience. However, without capacity and coherence, policy ambitions are ineffective, South Africa's Climate Change Act of 2024 has clear policy intentions, but suffers from delays to come into force, patchwork intergovernmental coordination, and ineffectiveness at local capacity. At last, the long-term resilience is premised on secure foundations of finance, inclusion and enforceable mechanisms. Bangladesh's successes depend on sustained financing and social inclusion, while Sudan's disaster reveals the catastrophic consequences when climate shocks intersect with governance failure and humanitarian blockade.

To sum up, these findings support the conclusion that climate governance is a more expansive concept in the Global South than merely adopting technical measures for adaptation. Sustainability and resilience relate to legitimacy, participation, coherence and coordination as well as infrastructure and finance. The narratives from Sudan, Bangladesh, and South Africa illustrate that these are not mutually exclusive states from fragility and conflict through to innovation and resilience, and that durable peace and environmental security depend on interlinked governance changes that simultaneously address

environmental, political, and socio-economic aspects of vulnerability.

In order for climate governance in the Global South to function effectively, models that are context-specific, nuanced, and empirical are necessary to alleviate power asymmetries, promote inclusivity and coordination across multiple levels. This essay investigates a number of country-specific cases where participatory, multi-level and regional governance experiences have produced climate resilience impacts. The cases, presenting South Africa, Colombia and Thailand contribute to our understanding of how different governance configurations operate to build adaptive capacity, legitimacy and sustainability. By placing each of the cases in the context of relevant academic and non-academic literature, we not only highlight systemic effectiveness in governance models but also, limitations and pathways to improve governance.

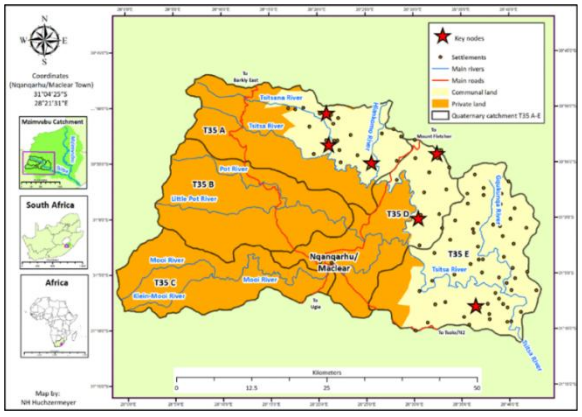


Fig. 2. The Tsitsa River catchment, Eastern Cape, South Africa.

The Tsitsa Project in the Eastern Cape of South Africa serves as an inspiring example of adaptive, participatory governance in landscape restoration which leverages transdisciplinary collaboration, epistemic justice and relational stewardship to rehabilitate a rural catchment that is highly degraded. Started in 2015 and based on the reflexive Capability Pathway, the project seeks to harness the knowledge of community members, policymakers, traditional leaders and researchers to co-develop restoration plans, which they refer to as "Co-Knowing", therefore developing a collective language and equitable participation in governance. Instead of chiefly focusing on technical fixes only, the project uses a social–ecological systems (SES) approach and makes connections between restoration activities. For example, erosion control, grazing management, and vetiver planting for income generation, also local livelihoods and biophysical realities by participatory mapping and capacity building. Eventually, relational expertise became developed from informal activities, building trust, and cultured legitimacy, facilitated through isiXhosa, in local places, and adhering to local conventions that enabled the co-production of knowledge, and the level of collaborative decision making despite repeated structural inequalities bound to legacies of apartheid. The narratives provided by stakeholders suggest that participants are cultivating governance agencies, becoming active custodians of their environment and stewards of sustainable resource practices. However, the project recognizes that intermittent setbacks, such as equipment loss and the inability to ensure funding sustainability

are major obstacles to broader scalability and institutional embedding.

In addition, The Low Emission Development Strategies Global Partnership (LEDS-GP) is now a part of the Global Climate Action Partnership, promotes multilevel governance through the Subnational Integration Working Group (SNI-WG) which supports vertical integration of climate action through peer learning, technical exchanges, sharing best practices and regional workshops that not only helps to increase the likelihood of more ambitious Intended Nationally Determined Contributions (INDCs) but also serves to align with national development, enhancing MRV (Measurement, Reporting and Verification) systems and making local climate investments bankable to unlock public and private climate finance. In Colombia, these institutional levers have been established through mechanisms like Sistema Nacional de Cambio Climático (SISCLIMA) , the National Climate Change System, created in 2016 that contains the Intersectoral Climate Change Commission and a series of Regional Nodes for Climate Change meant to assist subnational authorities, civil society, Indigenous Peoples and academia to develop local climate plans and incorporate climate objectives into planning processes at the territory level. The efficacy of these multilevel collaborations is further validated by Colombia's engagement with the Low Carbon Cities forumin Medellín in 2016, where the SNI-WG highlighted the importance of intersectoral coordination, with Medellín cited as a national exemplar in reducing $CO_2$ emissions while producing a compact urban environment. More recently, in Colombia, climate finance and engagement with stakeholders in climate funding has become more coherent, underscored with technical cooperation such as that of the Inter-American Development Bank with its USD 400,000 support in 2024 to strengthen the capacities of subnational entities for action in climate change within a NDC and Long-Term Strategy (E2050) context, demonstrating the progress of a multi-level cooperation to foster both institutional capacity and resource mobilization. Yet, there are ongoing challenges with consistent integration as subnational capacities and commitments differ substantially across regions, as effective coordination is often determined by clearer mandates, broader institutional structures, and sustained investment in both human and technical capacity.

Furthermore, Thailand's climate governance has demonstrated a greater articulation with a polycentric and multilevel governance mode that has exploited digital transformation, institutional coordination, and pro-poor and multistakeholder inclusivity to improve transparency, responsiveness, and policy coherence. In the past two decades, the country has transitioned underway to a polycentric mode developing cross-scale institutional arrangements, involving multiple actors from the public and private sectors, and diversifying policy instruments to drive effective climate action at a practical, day-to-day level to drive a zero-emissions society. The Bangkok Metropolitan Administration (BMA), possessing institutional autonomy under the 1985 BMA Act, began the local climate policymaking agenda with the 2007–2012 Action Plan on Global

Warming Mitigation and the Master Plan on Climate Change (2013–2023). The Action Plan and Master Plan, which included policy areas such as energy, renewables, green infrastructure and public transport, were developed in collaboration with national ministries, international development partners, including JICA, the private sector and civil society. Digitization at the national level has stemmed from centralized agencies such as the Digital Government Development Agency (DGA), which was established under e-Government 4.0 initiatives to offer digital services in a more straightforward manner and promote interoperability between ministries along with building the government's digital capability. Digital platforms like Traffy Fondue, created by the National Electronics and Computer Technology Center (NECTEC), also enhanced civic engagement. The web-and LINE-based civic feedback mechanism boasts over 1.37 million issue reports and 77% resolution rates as of mid-2025; urban residents can report infrastructure issues directly to their local administrators, which fosters transparency, responsiveness, and evidence-based local governance. Moreover, the AEDP 2015-2036 and EEP 2015 outline ambitious targets to achieve 30 percent renewable energy and reduce energy intensity by 30 percent by 2036; both plans include investment in energy storage, smart microgrids, battery systems, hybrid renewables and grid modernization through the opportunity to install smart meters and use analytics to approach the integration of decentralized energy sources. All of them represent governance models that combine digital innovation, policy leadership at the subnational level, and collaboration across sectors to improve Thailand's climate response by promoting institutional integration, local adaptation and public involvement and they still face challenges in infrastructure readiness, regulatory fragmentation and full institutionalization of polycentric coordination.

Table 3: Country Examples of Governance Model and Effectiveness

| Country | Strengths | Limitations |
|---|---|---|
| South Africa - Tsitsa (Participatory) (Baker,2018) | Trust, local leadership, relational stewardship, epistemic equity. | Scalability, institutional sustainability, funding uncertainty |
| Colombia (LEDS-GP) (Multilevel) (Philips,2018) | Vertical policy integration, financing, MRV improvement | Uneven subnational capacities, variable political will. |
| Thailand (Digital Vertical Integration) (Brennan, 2020) | Tech-enabled coherence, urban-national policy alignment. | Infrastructure gaps, complex stakeholder dynamics. |

The effectiveness of climate governance in the Global South relies on a combination of relational trust, diagnostic tools for evaluation of governance, vertical coordination, and clear

institutional roles as evidenced across multiple contexts liked the Tsitsa Project in South Africa recognized the advantages of polycentric, trans-disciplinary engagement rooted in local trust and shared learning. The effects of multilevel coordination critical to both the LEDS-GP-supported Subnational Integration Working Group in Colombia and in conceptualizing multilevel governance facilitates policy coherence between local and national actions, improves MRV systems, while also supporting finance mobilization and scaling mitigation activities. Altogether, these cases emphasize that sustainable climate security in the Global South does not depend only on technical interventions, but on intentional governance systems designed to build trust, embed evaluative clarity, align action, and clarify accountability.

These insights provide the foundation for the governance models which are able to support resilient and peaceful futures in the Global South exist at the intersection of relational integrity, participatory legitimacy, multilevel coherence, and institutional effectiveness. The Tsitsa Project demonstrated an effective relational governance approach,and multilevel approaches as demonstrated in LEDS-GP have illustrated how governance systems can be characterized and scaled. Digital platforms have also opened new worlds of possibilities for integration. Going forward, we have to leverage the strengths of both: to situate respectful inclusion, facilitate vertical coordination, and entrench accountability, all while equitably allocating resources and building capacities.

Collective action in multilateral action would help mitigate climate shifts. Multilateral diplomacy has become a key platform where global, regional, and local players are trying to coordinate with one another in order to achieve climate justice. Despite efforts of some corporations, industries, and politicians to frame climate change as an individual problem (thereby dodging responsibility), scholars and communities increasingly recognize climate change as a collective issue (Masson, 2021). Collective climate action can take many forms and involve various actors across scales and this collaborative effort encourages more states to participants in order to achieve sustainability justice despite ongoing climate disruption among Global South states. This practice drives the state's governance system to enforce and adapt a new policy to decrease greenhouse emissions in government or private sectors.

The United Nations Framework Convention on Climate Change (UNFCC) remains the central institutional mechanism in multilateral governance. According to this scheme, the Paris Agreement was a game changer as it established the nationally determined contributions on the premises of varying responsibility and explicitly recognized the importance of adaptation and resilience as a fundamental aspect of climate action (Kuyper et al., 2018). The Paris Agreement (2015) was a game changer as it established the nationally determined contribution (NDCs) on the premises of varying responsibility and explicitly recognized the importance of adaptation and resilience as a fundamental aspect of climate action. To the Global South, the Paris framework provides

climate finance to help the vulnerable adapt to climate change and also enforce technology transfer and justice in reduced emission in industrialized states. Nonetheless, the failure to deliver climate finance as promised (e.g., the unfulfilled pledge of USD 100 billion annually by 2020) demonstrates the inherent weakness of multilateral pledges in securing tangible outcomes for climate-vulnerable nations.

Regional platforms have emerged as critical supplements to global negotiations. As an example, The Climate Change Development Strategy and Action Plan (2022-2032 adopted by the African Union. This Strategy provides a broad outline for harmonized and coordinated actions to respond to the impacts of climate change, as well as to plan for the continent's low-emission, climate-resilient future. The strategy provides a guideline on harmonized and coordinated response to working of climate change as well as planning on the low emission to build climate resilient future of the continent, although Africa generated less than 4 percent of the total global greenhouse gas (GHG) emissions. The strategy provides a robust framework through inclusive and equitable participation in climate action. The African Development Bank (AfDB) estimates that Africa will need investment of over US$3 trillion in mitigation and adaptation by 2030 to effectively implement its NDCs (African Union, 2022). NDCs (Nationally Determined Contributions) are nationally specific climate action plans under the Paris agreement that detail the commitments on how to reduce emissions and adapt to climate change. Climate change may affect human security and be one of the sources of conflict in Africa not because there is causal connection, but because it interacts with other sources of conflict including social, political, and economic marginalization such as water scarcity, resource competition, food insecurity, low economic development and population displacement. In a similar way the Association of Southeast Asian Nations (ASEAN) has established mechanisms of disaster risk disaster risk reduction and humanitarian coordination such as the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre). The AHA Centre is to encourage collaboration and coordination among the ASEAN Member States. In the period of 2015-2020, ASEAN region contributed to 7.68 percent of global disaster-related deaths, i.e., 6,135 out of 79,834 deaths worldwide, US$11.1billion in economic losses, the temporary displacement of 10.8 million people and the impact on a total of 104.5 million (AHA Centre, 2025). This highlights the urgent needfor enhanced regional resilience-building initiatives and integrated governance structures to mitigate the profound socio-economic disruptions wrought by climate-induced hazards in the region (Tahalele et al., 2023). These efforts show that climate diplomacy on a regional basis is not merely confined to efforts on emission negotiation but also encompasses cross border collaboration in disaster response. This multilevel diplomacy allowed Global South states to combine resources and expertise, and acquire bargaining power in international forums.

Moreover, the increased South-South cooperation emerged as an alternative multilateralism. Cooperation structures such as

the Brazil-India-South Africa (IBSA) Dialogue Forum and the Green Development initiative of the Belt and Road Initiative (BRI) have shown how Global South states can collaborate to share technologies, financial resources and develop shared positions in climate negotiations. As an illustration, more than 120 countries (with many of them being in the Global South) have joined the International Solar Alliance (ISA) initiative established by India, which will encourage states to share technologies, mobilize financial resources, and develop shared positions in climate negotiations. These activities help subvert the notion that the Global South is a mere recipient of aid, a passive participant in climate governance, and instead, they are innovators in climate governance. The effectiveness of multilateral activities however, depends on the inclusion of climate security into the agendas of diplomacy. Climate negotiations tend to separate climate adaptation and mitigation issues with peacebuilding issues, even though it is well proven that the impacts of climate shocks fuel the conflict, displacement, and governance fragility. Efforts such as those of the UN Security Council to discuss the risks of climate security, especially in the Sahel and the Horn of Africa, can be seen as efforts to close this gap, but they are politically controversial. According to Busby (2022), climate-induced negative security outcomes are more likely to occur when states have limited capacity, exclusive political institutions, and where international assistance is insufficient or unequally distributed.

The ability to implement performative multilateral action should be shifted to pragmatic channels that connect directly to the local need and realities. In the Global South, the objectives of climate diplomacy need to be incorporated within broader developmental agendas such as poverty issues, rural development and sustainable livelihoods, rather than being treated as standalone issues. The inclusion of adaptation measures in the Development Goals (SDGs) framework and in particular, SDG 13 on climate action provides a clear platform in establishing links between multilateral diplomacy and domestic policy reforms. In this regard, climate diplomacy can be the personification of peacebuilding and sustainable security as it can connect international agreements with local government and community-based resilience. To achieve this, the initiatives must take place where the implementation of these conditions which are equitable funding, authentic representation of vulnerable states, and incorporation of climate security tie into broader systems of governance. The full participation of the Global South must not only act as negotiators but also as a climate solution is an indication that a rethinking of the paradigm of climate diplomacy is in dire need of a shift toward resilience, inclusivity and peace. Multilateralism however must not be used as a mere negotiation arena but should transform into a platform that guarantees peaceful and resilient futures.

In terms of talking of peacebuilding, Lederach (2007) defines peacebuilding "as a comprehensive concept that encompasses, generates and sustains the full array of processes, approaches and stages needed to transform conflict toward more sustainable,

peaceful relationships". Peacebuilding can be built together through bridges or connections that link groups of people who are fighting in seeking justice. This required much involvement, process and planning, not only just one step such as taking things out, understanding each other's issues, cooperating to achieve mutual solutions. Lederach highlights the means of peacebuilding by the wise concept that include the process, approach and step to resolve the conflict. The aim of peacebuilding is to live together with safety in harmonious communities through mutual respect. However, the main goal of peacebuilding is to enhance people's quality lives. Johan Galtung (1975) a scholar in peace studies said that peacebuilding is the abolition of structural violence and the root causes of war, such as oppression and domination, rather than being solely focused on eliminating direct violence or warfare. The root of conflict is structural violence like oppression, discrimination, poverty and unfairness in the social structure. Climate security is closely linked to peacebuilding in the Global South countries like food and water shortages, which can increase tensions and conflicts over resources. These two scholars, peacebuilding means effort to live together in peace, fairness, mutual respect and cooperation for long lasting. In the Global South, it goes beyond silencing the guns. It is about quenching the thirst of those without water, feeding the hungry where crops have failed, and guarding communities against the storms of climate change. True peace is not merely the absence of conflict, but the presence of justice, resilience, and the quiet dignity of people living safely together.

The Liptako-Gourma region is an area in West Africa that lies between three countries Mali, Burkina Faso, and Niger. European Institute of Peace (2023) shows The Liptako Gourma region is experiencing an extended period of violent conflict. It is the result of a complex political, economic and security governance crisis, which is compounded by climatic variability, competition over scarce resources, and demographic pressures. Since around 2015, this region has faced many problems such as politics, economy, environment, and also security. This conflict has caused a lot of violent conflict which causes environmental damage. This area is facing desertification, which means more land is becoming dry like a desert. This happens because of climate change, cutting too many trees, and farming that is not sustainable. Scientists also found that the temperature here is rising much faster compared to the world average. Studies show that temperatures in most parts of the subtropics and tropical Africa have been increasing at more than twice the global average rate (Engelbrecht et al., 2015; Trisos et al., 2022), with temperatures frequently exceeding the upper limit of human comfort (Sherwood & Huber, 2010; Iyakaremye et al., 2021), because of this, the people there have to struggle with less land and water. This is very serious because most of the communities in the region are pastoralists (people who depend on moving their livestock from place to place, called transhumance). When natural resources become scarce, it creates more competition between groups, which then makes conflict worse. From starting to identify and solve the root of problems in society like unfair treatment,

oppression and domination, peacebuilding comes to keep people from getting along and living safe and equal lives. Before discussing the challenges and opportunities for peacebuilding, it is important to remember that peace requires removing the causes and lead to create a society built on fairness, justice and respect.

Global South countries have difficulties in implementing the concept of this peacebuilding to climate security. The first highlight of the challenges is environmental challenges that land turning into desert (Desertification) in Sahel. Resource scarcity and competition over land, water, and forests. Resource scarcity can increase competition and conflict over the access and control of resources, especially when conflict management mechanisms are weak and certain groups face political exclusion. In Mali and Niger this conflict currently occurs mostly at the interpersonal level, one example would be between fishers and pastoralists and farmers over water use and cattle entering water bodies. There is some evidence of water-rich resource areas in the Sahel experiencing a higher number of conflict events Herbert, S. (2025, February). By UNDP 2020, the Sahel temperature is rising 1.5 times faster than the global average. This event happened because desertification increasingly reduces soil fertility and makes farming less productive. According to climate researchers, the effects had been crop failures and food insecurity. More than 80% of cultivable land in some parts was lost or damaged, causing hunger and malnutrition in local communities. Violent conflict also forces people to abandon farms and villages, worsening the food crisis. Plus, Increased competition, with fewer resources, farmers and herders compete violently over land and water rights, escalating social tensions and clashes. This because of Unsustainable farming practices, such as excessive land clearing and burning for agriculture, result in soil nutrient loss and degradation of the topsoil layer. Also, rapid population growth increases demand for land for farming and grazing, pushing communities to expand into previously uncultivated areas without proper land management.

The second challenges are dependent on economic issues of the region. As known, the Liptako-Gourma area is one of the poorest regions in the world. Most citizens depend on agriculture but environmental challenges reduce their income. Located in the heart of the Sahelo-Saharan strip, the Liptako-Gourma region is characterised by an economy that is highly dependent on agriculture and livestock breeding. Unemployment and lack of economic opportunities remain the main problem for 60% of respondents in 2020 and 59% in 2021. Men rank these problems in first place at 61% and women at 58%. It decreases with age: 15-24 year olds at 63%, 25-45 year olds at 60% and 46+ year olds at 51%. The second most important problem is the limited access to agricultural land (33% in 2020 and 31% in 2021), in all three countries (Burkina Faso: 27%, Mali: 42% and Niger: 29%). Stockholm International Peace Research Institute (SIPRI, 2022). Agricultural activities are greatly affected by the insecurity: burnt fields, prevented from going to cultivate distant fields. Farming is increasingly difficult, although some agreements with armed jihadist groups in the areas surveyed in Mali allow

farmers to return to cultivate their fields, this mostly only concerns fields close to the villages and not the more distant ones. This creates frustration, especially among youth, who then become more vulnerable to recruitment by armed groups offering money or a sense of belonging. Impact on livelihoods, Conflicts and insecurity disrupt farming and livestock activities, while displacement caused by violence forces many to abandon their homes and land. The COVID-19 pandemic worsened these economic hardships by limiting access to markets and increasing food insecurity. Research points out that this lack undermines trust in authorities and weakens social cohesion, increasing the risk of radicalization and conflict. In sum, economic challenges like poverty, joblessness, and poor infrastructure are deeply intertwined with security issues in Liptako-Gourma. Addressing these challenges requires strengthening both livelihoods and governance to break this cycle of vulnerability and violence.

Others issue that strive into challenges are social challenges of Ethnic and community tensions play a large role. The Liptako-Gourma region, spanning Burkina Faso, Mali and Niger, is the epicentrum of the security crisis gripping the Sahel-Saharan strip. The rise in insecurity is attributed to the growth of three phenomena which are violent extremism, transnational organized crime and local conflicts (Benjaminsen, T. A., & Ba, B. (2019). Historically, Liptako covers the Burkina Faso-Niger border area where a kingdom was installed in the 19th century. Gourma lies on the right bank of the Niger river loop in Mali. In the 1970s and 1980s, this three border zone was in the news because of the severe droughts it experienced, the consequences of which are still felt. These climatic disparities greatly upset the lifestyle of certain communities and exposed the state's failures in terms of governance. This zone is characterized by the presence of various communities and socio-professional groups with relationships that are complementary and sometimes conflictual. Liptako-Gourma has seen an increase in armed violence since 2015. This is linked to violent extremist groups, the intensification of local conflicts and the persistence of transnational organized crime. Attacks attributed to violent extremist groups have increased and spread across Mali, and into Niger and Burkina (Benjaminsen, T. A., & Ba, B. (2019). Since 2015, armed violence in various forms has grown and expanded across the Liptako-Gourma region. This happens because both groups need land and water to survive, but these resources are very limited. Scholars who study this region say that small fights over land and water can turn into much bigger violence when armed groups get involved. These groups sometimes use the problems to cause more conflict and control people. For example, explain that local disputes often become larger communal violence when political or armed groups manipulate them. Many analysts suggest that increased violence linked to local conflicts in Central Mali, Burkina Faso and on the Mali-Niger border results mainly from manipulation by extremist groups (Benjaminsen, T. A., & Ba, B. (2019). The data collected shows that violent extremist groups' positions vary regarding local conflicts. Their attitude seems to be influenced by a number of factors, including their capacity

(strength and resources), their objectives (desire to settle in the area, to expand their recruitment base, etc.), their sociology (their members) and the sociology of the conflict zone. Sometimes, the governments don't solve these problems fairly, so people feel angry and think they are treated unfairly. This makes the tensions between groups worse. Also, many people in the region have very little access to schools and hospitals. Without good education and healthcare, it is harder for people to improve their lives, which adds to the difficulties they face. Scholars who study the Sahel say that small fights over resources can grow into bigger violence, especially when armed groups get involved and use these problems to create more conflict.

At last, Global South Countries like in the African region encounter multichallenges in the quest for peacebuilding as domestic factors in the first counter. Significantly, impact of domestic influences gives fatal challenges from environmental challenges, economic disputes and regional arms groups. Climate change and long periods without rain (drought) are making water and land very scarce. Because of this, people and communities fight over these limited resources. For example, in some areas, farmers and herders argue because there is not enough water or land for farming and grazing animals. This lack of water and land makes life very difficult and causes tensions between groups. Climate shifts make it harder for people to live peacefully together. Economic problems such as unfair income distribution, high unemployment, and widespread poverty make social and political tensions worse. In certain cases, climate disruption forces rural populations to migrate to urban areas, as their hometown or environment are no longer habitable. Not only that, people may face difficulties finding jobs because there are many competitors with higher qualifications than those who live day to day doing rural occupations. Frustration may seed social divisions and wrangles, which can result in instability and conflict and further the socioeconomic gap between the rich and the poor. Also, the presence and influence of armed groups in the region create complicated security problems such as forced displacement and political instability, thereby exacerbating tensions in the region. These groups take advantage of weak government control and political instability to gain more power and control. These are compounded by the fact that he is dealing with more than one actor. To overcome these challenges an integrated and inclusive approach is needed. This includes strengthening community resilience, promoting fair and sustainable development, and improving cooperation between various parties, including regional and international agencies.

## V. CONCLUSION

This paper has explored the existential crossroads between climate change, security and governance in the Global South and presented that multi-level governance as one of the determining factors in the transformation of climate induced security risks into opportunities of resilience and sustainable peace.

Environmental stressors are not only a source of conflict but a driver of conflict, they act as conflict multipliers on the outcomes, whether adaptation and peacebuilding depend on the policy and the quality of governance that is transparent, localized participatory system and demonstrates organizational unity and allocates resources fairly. Using Human Security and Environmental peacebuilding frameworks, the study shifts the focus from state centric or militarized approaches towards human well-being and dignity.

The qualitative examination of a variety of case studies that supports this key argument. Sudan, famine and violence represent the failure of governance and breakdown of institutions to make climate vulnerabilities the active participants in the dehumanizing human security problems. There is a clear distinction in Bangladesh where they developed a system of decentralized disaster risk management that employs early warning systems and community-based adaptation measures, which have proved to save lives and build resilience when disaster occurs. Future studies should be prioritized on empirical work that quantifies causal relationships between certain governance indicators, especially levels of community participation in decision making or transparency in climate finance allocation, and measurable resilience outcomes. Search must also be directed at exploring how new digitalization technologies are instrumental in promoting transparency in governance and citizen participation in the Global South. The way forward to resilient and peaceful futures necessitates a paradigm shift in climate diplomacy and multilateral action, including one that truly gives a hearing to the voices and solutions of the Global South, ties climate security to development and peacebuilding agendas, and upholds the delivery of concrete financing and technology transfer to enact global commitments.

## Works Cited

African Union Commission. (2022). African Union Climate Change and Resilient Development Strategy and Action Plan (2022–2032). https://au.int/sites/default/files/documents/42276-doc CC_Strategy_and_Action_Plan_2022-2032_23_06_22_ENGLISH-compressed.pdf

Alam, E., Collins, A., Abu, R. M., Paul, A., & Islam, M. K. (2023). Change in cyclone disaster vulnerability and response in coastal Bangladesh. *Disasters, 48*(2). https://doi.org/10.1111/disa.12608

Anon. (2003). Civil war in Darfur, Sudan. *Climate Diplomacy*. https://climate-diplomacy.org/case-studies/civil-war-darfur-sudan?utm_source=.com

ASEAN Coordinating Centre for Humanitarian Assistance on disaster management. (2021). *AHA Centre Work Plan 2025*. https://ahacentre.org/wp-content/uploads/publications/AHA-Centre-Work-Plan-2025.pdf

Ban, K. (2022, August 19). Environment, conflict and peacebuilding: Addressing the root causes of conflict in Darfur. *ACCORD*. https://www.accord.org.za/conflict-trends/environment-conflict-and-peacebuilding-addressing-the-root-

causes-of-conflict-in-darfur/?utm_source=.com

Bariyo, N. (2025, August 15). Sudan's famine enters dangerous new phase. *The Wall Street Journal*. https://www.wsj.com/world/africa/sudans-famine-enters-dangerous-new-phase-5752dad4?utm_source=.com

Barnett, J. (2001). *The meaning of environmental security: Ecological politics and policy in the new security era*. Zed Books. https://www.researchgate.net/profile/Jon-Barnett2/publication/254012673_Environmental_Security_and_Peace/links/0deec53c8c1a96cfe8000000/Environmental-Security-and-Peace.pdf

Bega, S. (2024, July 30). SA's progress on climate and just transition hindered by incoherent policies, weak governance and inconsistency. *The Mail & Guardian*. https://mg.co.za/the-green-guardian/2024-07-30-sas-progress-on-climate-and-just-transition-hindered-by-incoherent-policies-weak-governance-and-inconsistency/?utm_source=.com

Benjaminsen, T. A., & Ba, B. (2019). Local disputes and larger communal violence in the Sahel: The role of political and armed groups. [Report]. Environmental Peacebuilding Foundation. https://www.eip.org/wp-content/uploads/2024/02/EIP-TWG-Environmental_Peacemaking-Approach-in-Liptako-Gourma-English-2024.pdf

Bodansky, D. (2016). The art and craft of international environmental law. *Harvard Environmental Law Review, 30*, 50–78.

Busby, J.W., 2022. States and Nature. The Effects of Climate Change on Security. Cambridge University Press,, Cambridge

Borenstein, S. (2024, June 1). UN official highlights how better preparation has

shrunk disaster deaths despite worsening climate. *AP News*. https://apnews.com/article/disasters-deaths-worsening-climate-getting-better-ebe7f7c75d318a2024501b35bec509a1

Call, C. T., & Cousens, E. M. (2007). Ending wars and building peace: International responses to war-torn societies. *International Studies Perspectives, 8*(4), 463–495. https://doi.org/10.1111/j.1528-3585.2007.00299.x

Cockburn, J., Rosenberg, E., Copteros, A., Cornelius, S. F., Libala, N., Metcalfe, L., & van der Waal, B. (2020). A relational approach to landscape stewardship: Towards a new perspective for multi-actor collaboration. *Land, 9*(7), 224. https://doi.org/10.3390/land9070224

Craig, R. K. (2022). Climate adaptation law and policy in the United States. *Frontiers in Marine Science, 9*. https://doi.org/10.3389/fmars.2022.1059734

Edith, M. L. (2025, August 13). UN rejects plans by Sudan's paramilitary group for a rival government. *AP News*. https://apnews.com/article/un-sudan-civil-war-paramilitary-group-ac55ba00059b4d859c6c10f7c6e1cabe

European Institute of Peace. (2023). Environmental peacemaking in Liptako Gourma. Retrieved from https://www.eip.org/publication/environmental-peacemaking-in-liptako-gourma/

Falkner, R. (2016). The Paris Agreement and the new logic of international climate politics. *International Affairs, 92*(5), 1107–1125. https://doi.org/10.1111/1468-2346.12708

FEWS NET. (2023, December 21). Limited food access for poor households in the north and center of Mali (December 2023 - Food Security Outlook Update). https://fews.net/west-africa/mali/food-security-outlook-update/december-2023

Food and Agriculture Organization of the United Nations. (2021, May). *FAO's work on climate change*. United Nations Sustainable Development Goals. https://sdgs.un.org/sites/default/files/2021-05/FAO%E2%80%99s%20Work%20on%20Climate%20Change.pdf

Food and Agriculture Organization of the United Nations. (2024). *The unjust climate: Measuring the impacts of climate change on rural poor, women and youth*. FAO. https://doi.org/10.4060/cc9680en

Ghani, A., & Lockhart, C. (2008). *Fixing failed states: A framework for rebuilding a fractured world*. Oxford University Press.

Gumede, M. (2025, March 6). Trump takes the US out of a climate agreement helping developing nations transition to green energy. *AP News*. https://apnews.com/article/climate-trump-green-energy-us-africa-indonesia-8adac422057e9aaf165f7c6b16dbc315

Hamed Ali, A. (2024, July 29). Sudan's puzzle: Confronting climate change in a war-torn state. *Middle East Council on Global Affairs*. https://mecouncil.org/publication/sudans-puzzle-confronting-climate-change-n-a-war-torn-state/?utm_source=.com

Herbert, S. (2025, February). Climate change, environmental degradation and conflict in the Sahel. GSDRC & K4DD, University of Birmingham. Retrieved from https://k4d.ids.ac.uk/resource/climate-change-environmental-degradation-and-conflict-in-the-sahel/

Hoffmann, M. J. (2011). *Climate governance at the crossroads: Experimenting with a global response after Kyoto*. Oxford University Press.

Hovi, J., Sprinz, D. F., & Underdal, A. (2014). Why the United States did not become a party to the Kyoto Protocol: German, UK, and US perspectives. *Global Environmental Politics, 14*(3), 33–52. https://doi.org/10.1162/GLEP_a_00233

Internal Displacement Monitoring Centre. (2024, July 30). *2024 global report on internal displacement (GRID)*. Platform on Disaster Displacement. https://disasterdisplacement.org/resource/grid-2024/

Intergovernmental Panel on Climate Change. (2022). *Climate change 2022: Impacts, adaptation, and vulnerability*. Cambridge University Press. https://doi.org/10.1017/9781009325844

Itzkin, A., Scholes, M. C., Clifford-Holmes, J. K., Rowntree, K., van der Waal, B., & Coetzer, K. (2021). A social-ecological systems understanding of drivers of degradation in the Tsitsa River catchment to inform sustainable land management. *Sustainability, 13*(2), 516. https://doi.org/10.3390/su13020516

Jarstad, A. K., & Nilsson, D. (2008). From peace agreements to sustainable peace: Challenges of third-party mediation.

*International Political Science Review, 29*(3), 293–309. https://doi.org/10.1177/0192512108091787

Galtung, J. (1996). Peace by peaceful means: Peace and conflict, development and civilization. Sage Publications. Retrieved from https://sk.sagepub.com/books/download/peace-by-peaceful-means/n19.pdf

Jolly, S., & Mahajana, S. (2014). Climate change and security: Forging a cooperative mechanism in South Asia. *International Journal of Public Policy, 10*(6), 315. https://doi.org/10.1504/ijpp.2014.064959

Keohane, R. O. (2015). After the Paris Agreement: Challenges of global climate governance. *Global Environmental Politics, 16*(3), 1–10. https://doi.org/10.1162/GLEP_a_00339

Keohane, R. O., & Victor, D. G. (2011). The regime complex for climate change. *Perspectives on Politics, 9*(1), 7–23. https://doi.org/10.1017/S1537592710004068

Kew, S., Pinto, I., Philip, S., Kimutai, J., Vahlberg, M., Singh, R., Guigma, K., Izquierdo, K., Thalheimer, L., Vogel, M. M., Baumgart, N., Raju, E., & Otto, F. (2025). *Women and girls continue to bear disproportionate impacts of heatwaves in South Sudan that have become a constant threat* (WWA Scientific Report). World Weather Attribution. https://heathealth.info/wp-content/uploads/WWA-scientific-report-South-Sudan-heatwave.pdf

Kuyper, J. W., Schroeder, H., & Linnér, B. (2018). The Evolution of the UNFCCC. *Annual Review of Environment and Resources, 43*(1), 343. https://doi.org/10.1146/annurev-environ-102017-030119

Lay, K. (2025, August 14). Sudan cholera outbreak kills 40 in a week as health centres overwhelmed. *The Guardian*. https://www.theguardian.com/global-development/2025/aug/14/sudan-cholera-outbreak-water-health-medecins-sans-frontieres-msf-war-refugees?utm_source=.com

Lederach, J. P. (1997). *Building peace: Sustainable reconciliation in divided societies*. United States Institute of Peace Press.

Lederach, J. P. (2005). *The moral imagination: The art and soul of building peace*. Oxford University Press.

Lederach, J.P. (2007). Peacebuilding: Definition and Process. In various peace studies texts and articles. A relevant PDF with detailed explanation can be found here: https://bircu-journal.com/index.php/birle/article/download/490/pdf

Lee, S., & Kwon, H. (2022). Breaking the negative feedback loop of disaster, conflict, and fragility: Analyzing development aid by Japan and South Korea. *Sustainability, 14*(16), 10003. https://doi.org/10.3390/su141610003

Limsakul, A., Paengkaew, W., Srethasirote, B., & Suphaphong, T. (2022). Thailand's climate change governance from the polycentric and zero-emissions society perspective. *Journal of Politics and Governance, 14*(1), 55–78. https://so03.tci-thaijo.org/index.php/jopag/article/view/265429/182143

Mac Ginty, R. (2011). *International peacebuilding and local resistance:*

*Hybrid forms of peace*. Palgrave Macmillan.

MacDonald, A. M., Bell, R. A., Kebede, S., Azagegn, T., Yehualaeshet, T., Pichon, F., Young, M., McKenzie, A. A., Lapworth, D. J., Black, E., & Calow, R. C. (2019). Groundwater and resilience to drought in the Ethiopian highlands. *Environmental Research Letters, 14*(9), 095003. https://doi.org/10.1088/1748-9326/ab3b4d

Masson T, Fritsche I: We need climate change mitigation and climate change mitigation needs the 'We': a state-of-the-art review of social identity effects motivating climate change action. Curr Opin Behav Sci 2021, 42:89-96.

Miriri, D. (2025, February 26). South Africa's G20 presidency to prioritise climate finance. *Reuters*. https://www.reuters.com/world/south-africas-g20-presidency-prioritise-climate-finance-2025-02-26/

Palmer, C. G., Fry, A., Libala, N., Ralekhetla, M., Mtati, N., Weaver, M., Mtintsilana, Z., & Scherman, P.-A. (2022). Engaging society and building participatory governance in a rural landscape restoration context. *Anthropocene, 37*, 100320. https://doi.org/10.1016/j.ancene.2022.100320

Paris, R. (2004). *At war's end: Building peace after civil conflict*. Cambridge University Press.

Paris, R., & Sisk, T. D. (Eds.). (2009). *The dilemmas of statebuilding: Confronting the contradictions f postwar peace operations*. Routledge.

Parvin, G. A., Dasgupta, R., Abedin, M. A., Sakamoto, M., Ingirige, B., Kibria, M. G., Fujita, K., Basu, M., Shaw, R., & Nakagawa, H. (2022). Disaster experiences, associated problems and lessons in southwestern coastal Bangladesh: Exploring through participatory rural appraisal to enhance resilience. *Sustainable and Resilient Infrastructure, 8*(Suppl. 1), 223–236. https://doi.org/10.1080/23789689.2022.2138165

Rankimsson, Y. (2024, July 31). Local government should seize the opportunity presented by Climate Change Act. *IOL*. https://iol.co.za/business-report/economy/2024-07-31-local-government-should-seize-the-opportunity-presented-by-climate-change-act/

Raustiala, K. (2016). The Paris Agreement and environmental law. *Harvard Environmental Law Review, 41*, 365–400.

Richmond, O. P. (2011). *A genealogy of peace and conflict theory*. Cambridge University Press.

Rosenberg, E., Mtati, N., & Cockburn, J. (2024). For environmental monitors, relationships matter in multiple ways: Insights from a research collaboration in South Africa. *Frontiers in Environmental Science, 12*. https://doi.org/10.3389/fenvs.2024.1243653

Sagarik, D., Chansukree, P., Cho, W., & Berman, E. (2018). E-government 4.0 in Thailand: The role of central agencies. *Information Polity, 23*(3), 343–353. https://doi.org/10.3233/ip-180006

Samy, M. (2025, August 16). Paramilitary group in Sudan shells a famine-stricken camp in Darfur, killing 31 people. *AP News*. https://apnews.com/article/sudan-war-military-rsf-b60f084f82ca2a519993a7973b9c64

Sony, M. M. A. A. M., Hasan, M. K., & Roy, T. (2023). Coping with disasters: Changing patterns of disaster risk reduction activities in the southwestern coastal areas of Bangladesh. *SN Social Sciences, 3*(12). https://doi.org/10.1007/s43545-023-00791-8

Stockholm International Peace Research Institute (SIPRI). (2022). Humanitarian protection in the Liptako-Gourma region. https://www.sipri.org/sites/default/files/2023-06/rapport_final_juin_2022_final_eng.pdf

Tahalele, M. P., Dhiaulhaq, A., Putra, R. A., Affandi, R. A., Arnakim, L. Y., & Mursitama, T. N. (2023). The Trajectory and Trend of International Political Economy in Southeast Asia. *JAS (Journal of ASEAN Studies)*, *10*(2). https://doi.org/10.21512/jas.v10i2.9184

THINKTEAM Support. (2024, July 26). South Africa finally gets its Climate Change Act. *African Climate Wire* (O. Rumble, Ed.). https://africanclimatewire.org/2024/07/south-africa-finally-gets-its-climate-change-act/?utm_source=.com

United Nations Framework Convention on Climate Change. (2015). Adoption of the Paris Agreement. https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

Wright, J. (2024). After six years of waiting: The Climate Change Act 22 of 2024. *Dullah Omar Institute*. https://admin.dullahomarinstitute.org.za/multilevel-govt/local-government-bulletin/archives/volume-19-issue-3-september-2024/after-six-years-of-waiting-the-climate-change-act-22-of-2024?utm_source=.com

Yang, C.-H., & Huang, J. (2025). Advancing energy storage technologies and governance in the Asia-Pacific region: A review of international frameworks, research insights, and regional case studies. *Energy Storage and Applications, 2*(3), 8. https://doi.org/10.3390/esa2030008