# DECONSTRUCTING SUSTAINABILITY: EXAMINING THE DISCONNECT BETWEEN GLOBAL FRAMEWORKS AND LOCAL REALITIES IN CLIMATE CHANGE MITIGATION, AFRICA IN FOCUS

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**Abstract**
Sustainability has emerged as a dominant framework for addressing climate change, yet its globalized discourse often fails to account for the socio-political, economic, and cultural complexities of African communities. This paper critically examines the disconnect between international climate policies and the lived realities of vulnerable populations across the continent. By deconstructing sustainability as a concept shaped by Western institutional paradigms, the study highlights how global frameworks such as the Paris Agreement, the UN Sustainable Development Goals (SDGs), and corporate-led green initiatives, frequently impose rigid mitigation strategies that are misaligned with indigenous knowledge systems, local governance structures, and economic constraints in Africa. Using case studies from across the region, this research explores the failures of top-down climate action, illustrating how externally imposed sustainability models often exacerbate environmental injustices rather than resolve them. The paper argues for a reimagined, decolonized approach to climate governance, one that prioritizes localized, context-driven solutions over universalized sustainability standards. By bridging the gap between global frameworks and local realities, this study advocates for climate justice frameworks that empower African communities as key stakeholders in shaping sustainable futures. The work adopts the orthodox historical method of narrative and analyses while the qualitative methodology was applied in the presentation of facts.
**Keywords:** Deconstructing Sustainability, Global Frameworks, Climate Governance, Indigenous Knowledge Systems, Environmental Justice

## Background to the Study

Sustainability has come to become the most reoccurring and dominant paradigm in global climate governance, embodying what may be called the "collective aspirations" of nations, institutions, and civil society actors toward a more ecologically balanced and economically viable future. At its core, sustainability represents an attempt to reconcile human development with environmental stewardship, ensuring that present needs are met without compromising the ability of future generations to meet their own (Laumann et al., 2022). This concept is codified within numerous international agreements, most notably the Sustainable Development Goals (SDGs) (2015) and the Paris Agreement (2015), which provide a structured yet somewhat flexible framework for countries to implement climate action in ways that align with their unique socio-economic and ecological realities (Das &Saikia, 2025). Despite these ambitious initiatives, the persistence of environmental degradation and climate injustices across the Global South, particularly in Africa, raises urgent questions about the efficacy and inclusivity of these global sustainability frameworks.

The rise of international agreements such as the Paris Agreement (2015) and the UN Sustainable Development Goals (2015) signifies a global consensus on the urgent need to address climate change. These frameworks incorporate both mitigation and adaptation strategies, urging nations to commit to Nationally Determined Contributions (NDCs) and long-term sustainability objectives (Hickmann et al., 2022). The SDGs, especially Goal 13 (climate action), highlights the necessity of integrating climate considerations into national policies while maintaining coherence with economic growth, poverty alleviation, and social equity (Kanie et al., 2019). However, the effectiveness of these frameworks is contingent upon their successful translation into local contexts, a process fraught with systemic and structural impediments. Africa, as a region with elaborate and extensive vulnerabilities to climate change, serves as a critical case study in understanding the disconnect and disjuncture between global sustainability paradigms and localized climate realities.

The paradox of contemporary sustainability efforts lies in their simultaneous proliferation and persistent shortcomings. While global frameworks purport to address climate vulnerabilities comprehensively, the increasing frequency of climate-induced disasters, loss of biodiversity, and socio-economic disruptions indicate fundamental flaws in their design and implementation (Shah, 2024). Green finance mechanisms, such as the Green New Deal and carbon pricing policies, have introduced innovative avenues for climate action, yet they remain inaccessible to many developing nations due to financial constraints and geopolitical dynamics (Bhatnagar& Sharma, 2022). Additionally, the structural dependency of African economies on extractive industries and the inadequacy of adaptive infrastructure perpetuate an imbalance where sustainability remains largely an aspirational rather than an operationalized reality (Hasan et al., 2020).

The challenges of implementing global sustainability frameworks at the local level are complex, spanning governance, economic, and socio-cultural dimensions. A key issue is the inadequacy of multi-level governance structures capable of effectively integrating top-down global policies with bottom-up, community-driven solutions (Croese et al., 2021; Silva et al., 2023). The fragmentation of responsibilities across international, national, and local levels often leads to inefficiencies, resource misallocations, and policy misalignments. In many African nations, these challenges are further compounded by weak institutional capacities, bureaucratic inertia, and corruption, all of which hinder sustainability efforts (Herrera, 2019 Ningrum et al., 2022). This disconnect between global frameworks and local realities is particularly evident in urban sustainability strategies, as cities—both major contributors to carbon emissions and hubs for climate innovation—struggle to integrate climate mitigation and adaptation into their development plans (Grafakos et al., 2019). However, the success of these strategies largely depends on institutional capacity and financial resources, which remain limited in many cities across the Global South (Silva et al., 2023). The contradictions between global sustainability discourse and urban realities underscore the urgent need for a multi-level governance approach that effectively bridges top-down directives with grassroots-driven solutions (Croese et al., 2021).

Furthermore, conflicting priorities and trade-offs in sustainability implementation complicate policy coherence. Economic growth imperatives often overshadow environmental concerns, leading to continued investments in fossil fuels and deforestation despite commitments to sustainability goals (Adloff&Neckel, 2019). The debate between economic expansion and ecological preservation is particularly pronounced in Africa, where development imperatives necessitate industrialization, yet the environmental costs remain disproportionately high (Santos et al., 2023). This dynamic underscores a fundamental contradiction in sustainability discourse: while international frameworks advocate for holistic development, their prescribed pathways may not align with the economic realities of emerging economies (Herrera, 2019).

A significant challenge in bridging the global-local sustainability gap lies in the conceptual ambiguity surrounding sustainability itself, as terms like sustainability, resilience, and climate justice are often conflated, leading to inconsistencies in policy formulation and implementation (Elmqvist et al., 2019). In many African contexts, sustainability is deeply rooted in indigenous knowledge systems and traditional ecological practices, yet these perspectives are frequently marginalized in mainstream climate governance (Nderi& Singh, 2020). The exclusion of local epistemologies from global sustainability frameworks not only weakens their legitimacy but also alienates grassroots communities from climate decision-making (Cascioli et al., 2024). In response, sustainalism—a socio-economic model that integrates social equity, cultural cohesion, and environmental well-being—offers a more inclusive paradigm that challenges the rigid, top-down approaches dominating international policy (D'Adamo et al., 2023). This ongoing contestation over the meaning of sustainability underscores the need for continuous reassessment and recalibration of climate policies to reflect the lived realities of those most vulnerable to environmental change.

Further complicating the sustainability discourse are the socio-political, economic, and cultural factors that shape environmental policies in different regions. Legal and political frameworks play a crucial role in determining the success of sustainability efforts. For example, in Kenya, the integration of community-based governance models with national climate policies has facilitated more effective environmental management (Nderi& Singh, 2020). Conversely, weak regulatory frameworks in parts of Southeast Nigeria have impeded compliance with sustainability mandates, illustrating how governance structures mediate the efficacy of global sustainability goals at the local level (Nnaji et al., 2024). Economic disparities also play a decisive role: in regions where financial insecurity is widespread, sustainability initiatives often take a backseat to immediate developmental priorities, reinforcing the trade-offs between economic growth and environmental stewardship (Adloff&Neckel, 2019). Moreover, cultural contexts further shape the adoption and success of sustainability policies. In some societies, traditional environmental stewardship practices have aligned with modern sustainability principles, creating synergies that enhance policy effectiveness (Soini&Dessein, 2016). However, in other cases, sustainability has been framed as an externally imposed agenda, leading to resistance from local communities who perceive global climate policies as disconnected from their lived realities (Cascioli et al., 2024). Recognizing these cultural dimensions is critical in designing sustainability interventions that are both locally resonant and globally coherent. From the foregoing, this paper seeks to critically analyze the limitations of prevailing global sustainability frameworks and advocate for a more contextually grounded approach. Its primary objective is to interrogate the underlying assumptions, power structures, and institutional biases that shape international climate governance, highlighting their disconnect from local socio-economic, political, and cultural realities. The purpose is to emphasize the need for bottom-up strategies, inclusive governance mechanisms, and the integration of indigenous knowledge systems in crafting sustainability models that are equitable, effective, and responsive to Africa's unique environmental and developmental challenges. Ultimately, this paper seeks to contribute to a paradigm shift

in sustainability discourse, one that prioritizes localized solutions, decolonial perspectives, and grassroots-driven climate action to bridge the gap between global policy frameworks and practical on-the-ground realities.

## Conceptual Clarifications

### Concept of Sustainability

Sustainability, as a concept, is a dynamic and multifaceted discourse that has evolved over time, to include environmental, economic, social, and cultural dimensions. Despite its widespread application in policy and academic discussions, its definition remains contested, reflecting varying epistemological traditions and disciplinary orientations. From an ecological perspective, sustainability is frequently understood as the ability of natural systems to maintain their functions and processes over time, ensuring intergenerational equity (Moore et al., 2017). Conversely, economic and corporate interpretations emphasize sustainability as a means of maintaining financial stability while minimizing environmental impact (Ashrafi et al., 2020). This divergence in definitions highlights the inherent tension between technocentric, market-driven approaches and holistic, community-centered frameworks, particularly within the context of Africa's socio-environmental realities (Tchombe, 2024).
The conceptual complexity of sustainability is further amplified by the contestation between Western-centric and Indigenous African perspectives. Western definitions, rooted in economic growth models, often prioritize technological innovation, regulatory frameworks, and resource commodification (Chowdhooree, 2019). This approach, while effective in certain contexts, has been criticized for overlooking the spiritual, communal, and long-term stewardship dimensions central to Indigenous sustainability paradigms (Kealiikanakaoleohaililani&Giardina, 2015). African scholars, by contrast, advance a more integrative conceptualization that highlights communal ownership, cultural heritage, and ecological balance. Philosophies such as Ubuntu and Ujamaa encapsulate sustainability as an interdependent relationship between humans and nature, reinforcing the notion that environmental conservation must align with social equity and local knowledge systems (Tchombe, 2024). These contrasting viewpoints reveal an epistemological divide that influences global sustainability governance and policy implementation.

Within sustainability scholarship, theoretical frameworks further delineate the concept's diverse interpretations. The ecological modernization school posits that economic growth and environmental preservation can coexist through technological advancement and institutional adaptation (Adloff&Neckel, 2019). However, critics argue that such an approach perpetuates capitalist exploitation and deepens ecological degradation, necessitating a more transformative, systemic overhaul of socio-economic structures (Mebratu, 1998). Social sustainability theorists advocate for a justice-oriented perspective, where equity, participatory governance, and resilience are foregrounded as fundamental principles (Eizenberg&Jabareen, 2017). Similarly, African sustainability theorists challenge the imposition of universalized, Western-derived sustainability models, arguing for context-specific strategies that reflect indigenous ecological knowledge and communal resource management (Obiero et al., 2022). The ongoing debate between these perspectives underscores the necessity of adopting a pluralistic, decolonized sustainability discourse that bridges traditional ecological knowledge with contemporary environmental governance.

In the context of this paper, sustainability is conceptualized through an African-centered lens, which acknowledges the limitations of technocratic and market-driven sustainability paradigms while advocating for a holistic, community-based approach. This perspective aligns with the notion that sustainability must transcend economic and regulatory dimensions to incorporate cultural, spiritual, and social factors that are vital for long-term resilience (Tchombe, 2024). By centering indigenous African epistemologies, the paper challenges the dominance of Eurocentric sustainability models and emphasizes the integration of traditional ecological knowledge into global environmental policies. Thus, sustainability, as defined in this study, represents a dynamic, culturally embedded process that prioritizes ecological harmony, social equity, and intergenerational responsibility as foundational pillars for sustainable development in Africa and beyond.

### Global Frameworks vs Local Realities

Global frameworks can be perceived as overarching structures designed to address universal challenges such as climate change, sustainability, and economic development through internationally agreed-upon policies and mechanisms. These frameworks, exemplified by the United Nations Framework Convention on Climate Change (UNFCCC), the Paris Agreement, and the Sustainable Development Goals (SDGs), operate on principles of cooperation, standardization, and scalability. Sands (1992) and O'Neill et al. (2020) emphasize that these frameworks establish legally binding commitments, scenario models, and financial mechanisms to ensure broad compliance and effectiveness. However, these frameworks are often critiqued for their top-down approach, which may overlook the specificity of regional and local contexts. The universalist orientation of global policies, while beneficial for cohesion, frequently results in a one-size-fits-all model that inadequately accounts for the socio-

economic and cultural diversities that shape policy effectiveness at the local level (Carter et al., 2021). This limitation raises critical questions about the applicability and adaptability of global frameworks in heterogeneous local settings.

Local realities, in contrast, encompass the context-dependent experiences, knowledge systems, and governance structures that define how global policies are implemented and perceived in specific regions. Local realities are shaped by ecological conditions, economic constraints, traditional governance structures, and indigenous knowledge systems (Imoh, 2024). For instance, in many African communities, traditional environmental management practices have long informed sustainability efforts, yet these systems often receive minimal recognition within global policy paradigms (Bol& Van Niekerk, 2024). Holbrook and Weinschenk (2020) argue that local governance models, shaped by historical, political, and economic factors, often dictate the success or failure of policy implementation. The divergence between global ambitions and local feasibility is further accentuated by governance inefficiencies, financial constraints, and socio-political dynamics, making the effective localization of global policies a persistent challenge (Haou et al., 2025). Thus, while local realities provide the necessary grounding for sustainable policy action, their integration within global frameworks remains a contested terrain.

The tension between global frameworks and local realities is particularly evident in climate change adaptation and sustainability initiatives. While global policies promote standardized sustainability metrics and funding mechanisms, local implementation often suffers from inadequate institutional capacity, economic barriers, and socio-cultural mismatches (Du et al., 2024). For instance, African nations striving to align their national climate policies with international agreements encounter structural limitations such as dependence on external funding and weak governance structures (Ajulor, 2018). The blue economy, which integrates ecological sustainability with economic growth, exemplifies this dichotomy—while international frameworks champion its principles, successful implementation relies heavily on community participation and localized governance structures (Okafor-Yarwood et al., 2020). Furthermore, climate policies driven by Western scientific paradigms often marginalize indigenous and community-based knowledge systems that have historically offered effective sustainability solutions (David, 2024). These contradictions necessitate a critical re-examination of how global and local frameworks interact and whether true synergy is achievable.

In the context of this paper, the conceptual alignment focuses on the dialectical relationship between global frameworks and local realities, emphasizing the need for a hybridized approach that acknowledges global imperatives while centering local agency. This conceptualization draws from both the structuralist view that global governance mechanisms provide necessary regulatory frameworks and the constructivist perspective that local adaptation and knowledge systems must be integral to policy formulation (Gerlak& Greene, 2019). By situating the discussion within Africa's sustainability and climate governance landscape, the paper argues that the most effective policy frameworks are those that reconcile global objectives with local knowledge, institutional realities, and socio-economic constraints. Rather than viewing global frameworks as monolithic structures imposed on local contexts, this research advocates for a co-evolutionary model where global and local systems engage in mutual reinforcement, fostering context-sensitive and sustainable policy outcomes.

**Climate Change Mitigation**

Climate change mitigation can be understood as a deliberate and systematic efforts aimed at reducing or preventing greenhouse gas (GHG) emissions to curb the extent of global climate change. This process involves an array of strategies spanning technological advancements, policy mechanisms, and socio-economic interventions. Scholars such as Fawzy et al. (2020) and Edenhofer et al. (2014) identify conventional mitigation techniques, including energy efficiency improvements, renewable energy adoption, and industrial decarbonization, as foundational to climate action. Simultaneously, negative emissions technologies such as afforestation, reforestation, and carbon capture and storage (CCS) complement these conventional approaches by actively sequestering carbon from the atmosphere. However, the effectiveness of these methods is contingent upon economic viability, political will, and public acceptance, as noted by Morecroft et al. (2019). While global institutions advocate large-scale mitigation strategies, their application across regions, particularly in the Global South, varies due to socio-economic and infrastructural disparities (Mi et al., 2019). This underscores the necessity of an integrated, context-sensitive approach to climate mitigation.

A significant debate within climate mitigation discourse revolves around the role of geoengineering as a supplementary or alternative measure to conventional mitigation. Geoengineering, which includes solar radiation management and stratospheric aerosol injection, is heralded by some scholars as a potential emergency response to rapid warming (Fawzy et al., 2020). However, its uncertain long-term effects, ethical dilemmas, and governance challenges make it a controversial subject within climate policy circles. In contrast, ecosystem-based approaches

offer a more ecologically harmonious means of mitigation, leveraging natural carbon sinks such as forests, peatlands, and mangroves to enhance carbon sequestration (Morecroft et al., 2019). Urban mitigation efforts also feature prominently in contemporary strategies, given that cities contribute disproportionately to global emissions. Sustainable urban planning, green infrastructure, and public transport enhancements serve as critical interventions in this regard (Mi et al., 2019). The divergence between high-tech and nature-based solutions reflects broader tensions between technological optimism and ecological prudence in climate governance.

From an African perspective, climate change mitigation must align with the continent's unique environmental and socio-economic realities. While renewable energy projects in solar, wind, and hydroelectricity hold promise for reducing fossil fuel dependency (Ayorinde et al., 2024), limited financial and technological resources often hinder their scalability. Similarly, climate-smart agriculture (CSA) practices, such as agroforestry and minimum tillage, provide dual benefits of reducing emissions and enhancing food security (Akinsemolu et al., 2023). However, the integration of these strategies into national policies remains inconsistent, largely due to inadequate institutional support and financial mobilization (Nyiwul, 2019). The incorporation of indigenous knowledge into mitigation frameworks has emerged as a viable solution, as evidenced by the effectiveness of traditional land management practices in fostering ecological resilience (Ajani et al., 2013). Yet, challenges persist in documenting and institutionalizing these knowledge systems within formal climate policies (Nyadzi, 2021). Consequently, Africa's mitigation trajectory necessitates a hybrid model that balances scientific advancements with indigenous and locally driven adaptation mechanisms.

In conceptualizing climate change mitigation within the scope of this paper, an interdisciplinary and decolonial lens is imperative. Conventional mitigation approaches, while scientifically robust, often reflect Eurocentric paradigms that do not fully accommodate Africa's historical, economic, and socio-cultural complexities. This paper, therefore, aligns with a socio-ecological mitigation paradigm, which integrates technological innovation with indigenous environmental stewardship, equitable policy mechanisms, and community-based interventions. This thus, underscores the importance of contextualized climate action, advocating for strategies that are not merely transferred from the Global North but are co-created through localized knowledge systems and participatory governance structures. By situating mitigation within a decolonial environmental justice framework, the paper aims to illuminate pathways for Africa to achieve sustainable and equitable climate resilience.

**The Global Sustainability Agenda and Its Limitations**

The global sustainability agenda can be said to be an ambitious attempt to harmonize economic, social, and environmental imperatives, creating a framework for long-term planetary well-being. While its fundamental principles, such as the systems perspective, triple bottom line, stakeholder engagement, ethical leadership, and transdisciplinary innovation, provide a theoretically sound approach to achieving sustainability (Ben-Eli, 2018; Liu et al., 2015; Moallemi et al., 2020; Fry &Egel, 2021), the actual implementation of these ideals faces significant limitations. The dissonance between global commitments and local realities, structural weaknesses in regulatory mechanisms, economic and political constraints, and the inherent power imbalances between the Global North and the Global South all present formidable barriers to achieving true sustainability.

One of the fundamental challenges of the global sustainability agenda is its reliance on a systems perspective, which requires comprehensive coordination across multiple levels of governance and economic sectors. While this holistic approach is essential for addressing the interdependencies of ecological and socio-economic systems, its application is often hindered by fragmented governance structures and competing political interests (Liu et al., 2015). National policies, particularly in developing countries, struggle to integrate sustainability principles due to conflicting economic priorities and the pressure to pursue short-term economic growth at the expense of long-term ecological balance (Okedele et al., 2024). In this regard, sustainability efforts frequently fall prey to political cycles, where the urgency of electoral gains undermines the continuity of sustainability policies. Nigeria, for example, faces persistent policy inconsistencies, where sustainability commitments fluctuate with changing administrations, limiting long-term progress (Akindele&Chabinga, 2024).

Moreover, the ambitious Sustainable Development Goals (SDGs), which form the core of global sustainability efforts, often operate within a paradox of economic expansion and environmental conservation. While the SDGs advocate for economic growth, poverty alleviation, and industrialization, they simultaneously call for reductions in carbon emissions and environmental degradation (Kantabutra, 2024). This inherent contradiction complicates implementation, as countries reliant on extractive industries or rapid industrialization for economic development find themselves trapped in an unsustainable growth model. In Nigeria, the construction industry exemplifies this challenge. While sustainability frameworks emphasize green building practices, the sector's resource scarcity, limited policy enforcement, and high costs of sustainable materials hinder widespread adoption (Unegbu et al., 2024). The push for green economies is further constrained by the existing global economic order, where

multinational corporations and powerful economies dictate the pace and structure of sustainability transitions, often sidelining the interests of less developed nations (Schröder et al., 2019).

Despite the growing integration of technology in sustainability efforts, such as Industry 4.0 applications aimed at optimizing resource efficiency and climate resilience (Reis et al., 2021), these technological advancements remain largely concentrated in high-income regions. Developing nations, constrained by inadequate financial resources and a lack of skilled personnel, struggle to adopt intelligent technologies at the same scale, exacerbating the technological divide in global sustainability efforts (Jayashree et al., 2021). This disparity highlights a broader issue within sustainability discourse—the assumption that universal solutions can be effectively applied across vastly different socio-economic and political landscapes. The contextual realities of resource scarcity, governance inefficiencies, and cultural perceptions of sustainability demand localized approaches rather than a rigid adherence to global blueprints. The Niger Delta region in Nigeria provides a compelling case study of this limitation. While global remediation frameworks like SuRF-UK offer insights, they require adaptation to local conditions, as bioremediation and phytoremediation strategies have been slow to gain traction due to inadequate policy support and stakeholder engagement (Azuazu et al., 2023; Ukhurebor et al., 2021).

Furthermore, international sustainability agreements, including the Paris Agreement and the Kyoto Protocol, while instrumental in shaping national and regional policies, exhibit critical weaknesses in enforcement and equity (Bodansky et al., 2016). The hybrid policy architecture of these agreements relies on a combination of voluntary national contributions and international monitoring, yet compliance varies widely, often influenced by economic status and geopolitical considerations. High-income nations, equipped with robust regulatory frameworks and financial resources, demonstrate higher adherence levels, while developing countries face structural and financial impediments that limit their capacity to meet emissions reduction targets (Stavins, 2015). Moreover, the mechanisms of carbon trading and policy linkages, although intended to enhance efficiency, inadvertently reinforce existing inequalities by allowing wealthier nations to offset their emissions while poorer regions bear the brunt of environmental degradation. In Nigeria, inadequate governance structures further exacerbate these disparities, as environmental policies are often undermined by corruption, limited public participation, and weak enforcement mechanisms (Awhefeada et al., 2023).

The power imbalances inherent in global climate negotiations further constrain the effectiveness of sustainability frameworks. While emerging economies such as China, India, Brazil, and South Africa have gained prominence in climate discussions, they remain limited in their capacity to dictate terms against the entrenched interests of industrialized nations (Thompson, 2020). The Global South, once unified in its stance against exploitative environmental policies, now faces internal fragmentation as national interests diverge (Abdenur, 2021). This fragmentation weakens collective bargaining power, enabling the Global North to maintain economic and technological advantages while deflecting responsibility for historical carbon emissions. The push for decolonizing climate finance seeks to address these inequities by advocating for greater participation of Global South nations in decision-making processes, yet entrenched financial structures remain resistant to fundamental change (Ghosh et al., 2025).

In Africa, the execution of climate policies is particularly hampered by external pressures and internal governance challenges. International sustainability projects, although well-intentioned, often fail to align with the specific needs of local communities. The Congo Basin, for example, has seen numerous North-South environmental partnerships that prioritize global carbon sequestration goals over the livelihoods of indigenous populations (Nago&Krott, 2020). Similarly, Africa's resource-rich regions continue to be battlegrounds for geopolitical competition rather than sites of collaborative sustainability leadership (Mansour, 2025). In Nigeria, the sustainability of water infrastructure is hindered by financial and institutional constraints, requiring a comprehensive framework beyond what global models currently provide (Adeoti et al., 2023). Additionally, environmental education programs remain fragmented due to legal and institutional barriers, necessitating a coherent national strategy and dedicated resources (Babalola&Olawuyi, 2021).

Ultimately, the global sustainability agenda, despite its laudable objectives, remains constrained by its structural inefficiencies, contradictions, and power dynamics. While it provides an essential framework for international cooperation, its implementation is uneven and often skewed in favor of those with greater economic and political influence. A genuinely transformative sustainability agenda must move beyond rhetorical commitments and embrace structural reforms that prioritize equity, local agency, and systemic change. Without addressing these fundamental limitations, the global pursuit of sustainability risks perpetuating existing inequalities rather than fostering an inclusive and resilient future.

**Local Realities and the Failure of Top-Down Climate Mitigation**

The failure of top-down climate mitigation strategies is a testament to the fundamental disconnect between global climate policies and local realities. While international agreements such as the Paris Agreement aim to establish a unified approach to climate action, their effectiveness is often undermined by the lack of fine-scale local adaptation. The assumption that a universally applicable framework can be implemented across vastly different socio-economic, cultural, and political landscapes is deeply flawed. Local communities operate within unique environmental conditions and socio-political structures, which shape their vulnerabilities and adaptive capacities in ways that cannot be adequately captured by broad, generalized policies (Moallemi et al., 2020; Ningrum et al., 2022). Without a nuanced understanding of local priorities, these policies risk being either ineffectual or actively resisted by the very communities they are meant to assist.

One of the most glaring issues with top-down climate mitigation is its failure to account for diverse local conditions and priorities. Global climate frameworks tend to prioritize emission reductions, carbon pricing, and large-scale renewable energy transitions, often sidelining localized adaptation needs that are more immediate and pressing for many communities. For instance, rural agricultural societies that rely on traditional farming techniques may find policies emphasizing industrial decarbonization irrelevant to their daily struggles with soil degradation, erratic rainfall, and dwindling water resources (Spiliotopoulou& Roseland, 2020). Similarly, urban communities facing extreme heat, flooding, and air pollution may benefit more from adaptive infrastructure and social equity-driven mitigation strategies rather than global emission targets (Fiack et al., 2021). The imposed one-size-fits-all approach ignores these intricate local dynamics, leading to policies that fail to gain traction at the grassroots level.

In Africa, the failure of top-down climate mitigation strategies is exemplified by unsuccessful projects such as the Clean Development Mechanism (CDM) in South Africa. These initiatives, particularly waste-to-value projects, have largely failed to deliver tangible climate and socio-economic benefits. Instead, they have reinforced neoliberal market structures that do not align with local needs and realities (Ernstson&Swyngedouw, 2023). Similarly, in Sub-Saharan Africa, broad climate policies struggle to address immediate concerns such as food security, soil management, and energy access, further alienating local communities from these interventions (Amede et al., 2023).

Moreover, the bureaucratic barriers inherent in centralized climate mitigation strategies further exacerbate their inefficacy. Institutional silos, poor coordination among governmental agencies, and rigid regulatory frameworks often obstruct the seamless integration of climate policies across different levels of governance (Dale et al., 2020). Local governments, which are best positioned to implement context-specific climate action, frequently encounter roadblocks due to restrictive national policies that limit their autonomy. The absence of clear policy pathways for bottom-up initiatives discourages local innovation and disincentivizes grassroots climate action, leaving communities dependent on distant and often disconnected decision-making bodies (Pasquini et al., 2013). As a result, rather than fostering localized resilience, top-down interventions often reinforce existing governance inefficiencies and perpetuate inertia in climate response efforts.

Economic constraints also play a crucial role in the failure of top-down climate mitigation. The financial mechanisms designed to support these policies often prioritize large-scale, capital-intensive projects such as carbon markets, technological innovations, and green infrastructure. However, these investments rarely trickle down to the most vulnerable populations, who lack the institutional support and financial means to access climate finance (Situmorang et al., 2024). In many cases, local governments struggle to secure the necessary funding to implement climate adaptation projects due to competing budgetary priorities, economic instability, and the reluctance of private investors to finance initiatives with long-term payback periods (Simonet&Leseur, 2019). In Nigeria, fragmented climate policies and inadequate infrastructure continue to hinder effective responses, particularly in agriculture and food security (Akinkuolie et al., 2025). Additionally, the challenges of rising populations and rural-to-urban migration, as seen in Anambra State, further highlight the shortcomings of government-led climate strategies (Odoh et al., 2024).

The political dimensions of top-down climate mitigation further compound its limitations. A lack of political commitment, exacerbated by short electoral cycles, party politics, and competing national interests, often renders climate policies inconsistent and ineffective (Pasquini et al., 2013). The dominance of neoliberal economic agendas, which prioritize growth and industrial expansion, frequently undermines ambitious climate goals, as policymakers are reluctant to implement stringent environmental regulations that may appear detrimental to economic performance (Santos et al., 2022). Moreover, power dynamics among stakeholders, including corporate lobbies, policymakers, and civil society groups, shape climate policy in ways that often exclude the voices of local communities (Ghimire&Chhetri, 2022). This power imbalance results in policies that favor economic elites and

multinational corporations while sidelining the needs and aspirations of vulnerable populations who bear the brunt of climate change impacts.

The failure of top-down climate mitigation is not merely a question of policy inefficiency but also a reflection of deeper epistemological biases. Global climate strategies often rely on Western scientific methodologies and economic rationalities that overlook the value of indigenous knowledge systems and community-centered governance models (Karn, 2024). Indigenous and local communities have historically developed sophisticated ecological management practices that emphasize sustainability, resilience, and intergenerational stewardship of natural resources. Yet, these knowledge systems are frequently dismissed or tokenized in global climate discussions, reducing local actors to passive recipients rather than active agents of climate action (Padernal et al., 2025). This epistemic marginalization not only limits the potential for innovative, contextually appropriate climate solutions but also erodes community trust in externally imposed climate policies.

Despite these challenges, localized approaches have demonstrated success in various African contexts. Cities such as Accra, Addis Ababa, Lagos, and Nairobi have implemented climate action plans that integrate technical pathways for mitigation while addressing local development needs (Akomolafe et al., 2024). In Lagos, targeted infrastructure improvements, including better drainage systems and partnerships with private companies, have enhanced the resilience of transportation systems against climate threats (Beitelmal et al., 2024). Additionally, community-driven land use planning in Nigeria's river-dependent regions has proven effective in resource allocation and conflict resolution, despite financial constraints (Effiong et al., 2024). In East Africa, sustainable farming practices tailored to local conditions have strengthened agricultural resilience, demonstrating the viability of bottom-up approaches in climate adaptation (Amede et al., 2023).

A more effective climate mitigation approach must integrate bottom-up methodologies that leverage local knowledge, strengthen community participation, and decentralize decision-making processes. Rather than imposing rigid global frameworks, climate policies should be co-designed with local actors to ensure cultural, economic, and environmental relevance (Karn, 2024). The successful integration of Māori principles in New Zealand's environmental governance demonstrates the potential for hybrid models that blend indigenous and scientific knowledge to achieve sustainable and equitable climate outcomes (Padernalet al., 2025). Similarly, participatory climate governance, where local stakeholders are actively engaged in designing and implementing adaptation strategies, can foster a more resilient and context-sensitive response to climate change (Moallemi et al., 2020).

**Rethinking Sustainability: Towards a Decolonized Climate Agenda**

The sustainability discourse has long been dominated by Eurocentric paradigms that frame environmental responsibility within a technocratic, market-driven approach. This has resulted in a homogenized global climate agenda that frequently neglects the knowledge systems, traditions, and lived experiences of indigenous and local communities. To achieve true sustainability, it is imperative to decolonize climate policies, shifting from imposed models of environmental governance to frameworks that are inclusive, participatory, and locally driven. Sustainability must be reimagined through an equitable lens, recognizing that environmental stewardship is deeply embedded in indigenous cultures and practices that have long sustained ecological balance.

A fundamental aspect of decolonizing sustainability lies in recognizing and integrating indigenous and local knowledge systems as co-equal to scientific and technological approaches. Many indigenous societies have, for centuries, employed agricultural, water management, and conservation techniques that prioritize ecological balance. These practices are often dismissed or undervalued within dominant sustainability frameworks, despite their demonstrated efficacy in promoting biodiversity and resilience to climate change (Adefila et al., 2024). The tendency of Western scientific narratives to position indigenous knowledge as ancillary rather than foundational must be actively challenged. This requires an epistemic shift towards pluralistic knowledge systems that embrace participatory decision-making, ensuring that local voices drive climate policies rather than serve as tokenized stakeholders (Nguyen et al., 2017).

Moreover, participatory climate governance must become central to sustainability efforts, embedding principles of inclusivity, equity, and accountability. Current global climate policies often function within top-down structures, where international bodies set priorities without sufficient input from the communities most affected by environmental degradation. A truly decolonized climate agenda must foster mechanisms that promote local ownership of sustainability projects, empowering communities to co-create policies that reflect their priorities and lived realities (Hilser et al., 2023). In doing so, climate justice can be realized not merely as an abstract concept but as a tangible practice that rectifies historical injustices and power imbalances. For instance, indigenous

women, who often serve as custodians of environmental knowledge, must be included in governance structures to ensure their perspectives inform sustainable development strategies (Datta et al., 2024).

Economic sustainability, too, requires a radical rethinking. The global sustainability agenda has often been tethered to neoliberal economic models that prioritize growth over ecological and social well-being. The reliance on green capitalism where market-based solutions like carbon trading and corporate sustainability pledges serve as the primary mechanisms of environmental action fails to address the structural inequalities embedded within the global economic system (Van Niekerk, 2020). Decolonizing sustainability necessitates an economic framework that shifts from extractive practices towards regenerative models that place community well-being at the center. This includes fostering local economies that are self-sustaining, reducing dependency on international markets, and promoting biocultural approaches that integrate economic activities with cultural and environmental stewardship (Sterling et al., 2017).

In addition to economic considerations, the decolonization of sustainability demands the dismantling of ontological and epistemological hierarchies that privilege Western conceptions of land and resource management. Colonial land governance structures often treat land as a commodity to be owned, developed, and exploited, disregarding indigenous worldviews that see land as a living entity with intrinsic value beyond its economic utility (Reibold, 2022). The imposition of state-controlled conservation areas, for example, frequently displaces indigenous peoples from their ancestral lands under the guise of environmental protection. A decolonized climate agenda must reframe land as a site of relational belonging, where indigenous concepts of land stewardship inform conservation policies rather than be overridden by Western legal frameworks.

A major obstacle to decolonized sustainability is the persistence of power asymmetries in climate negotiations and international policy-making. Developing nations, particularly those in the Global South, remain largely marginalized in global climate governance, with decisions often being dictated by industrialized nations that have historically contributed the most to environmental degradation. Efforts towards climate reparations and equitable climate financing must go beyond superficial aid programs to include systemic restructuring of financial flows, ensuring that resources are allocated in ways that empower local sustainability initiatives rather than perpetuate cycles of dependency (Bridges &Guo, 2024). The failure to do so not only exacerbates climate vulnerabilities in marginalized regions but also reinforces neocolonial dependencies that stifle genuine environmental autonomy.
Art, culture, and storytelling can serve as powerful tools in this transformative process, enabling communities to reclaim narratives of sustainability that have been overshadowed by dominant scientific discourses. The integration of art into climate education fosters transdisciplinary learning and participatory engagement, making climate action more accessible and culturally resonant (Trott et al., 2020). Decolonized sustainability is not merely about policy adjustments but also about reclaiming agency over the stories that shape environmental consciousness. By amplifying indigenous voices and cultural expressions, climate action can be reimagined as a holistic and deeply rooted practice rather than an imposed framework.

Ultimately, rethinking sustainability towards a decolonized climate agenda requires an unwavering commitment to equity, knowledge pluralism, and systemic transformation. It is not enough to integrate indigenous knowledge as a complementary element; rather, it must serve as a foundational pillar in re-envisioning environmental governance. This involves not only academic and policy-level shifts but also grassroots movements that challenge existing power structures and advocate for climate justice from below. A truly sustainable future is one that acknowledges the diverse ways in which human societies have historically coexisted with nature, honoring these traditions while adapting them to contemporary environmental challenges. This is not a theoretical pursuit but an urgent imperative in an era of escalating ecological crises and socio-political upheavals. The decolonization of sustainability is, at its core, a reclamation of agency, justice, and ecological integrity.

**Conclusion**

The disconnect between global sustainability frameworks and Africa's local realities in climate change mitigation highlights deep-seated epistemic and structural asymmetries that undermine the continent's environmental governance. While international policies present themselves as universally applicable, they frequently disregard the ecological diversity, Indigenous knowledge systems, and socio-economic intricacies that shape African communities. This oversight not only limits the effectiveness of climate interventions but also reinforces environmental neocolonialism by marginalizing African approaches to sustainability. Addressing this crisis requires a fundamental shift in climate governance, one that moves beyond imposed solutions toward frameworks that are contextually relevant, inclusive, and grounded in local agency.

The prevailing global discourse on sustainability, dominated by Western scientific and economic paradigms, fails to acknowledge Africa's long-standing engagement with ecological resilience. Traditional land stewardship, water

conservation techniques, and communal sustainability practices seen in movements such as the Green Belt Movement in Kenya and community-led reforestation in Madagascar offer viable, locally driven alternatives to externally imposed strategies. However, these approaches remain structurally sidelined, underfunded, and unrecognized within mainstream climate governance, deepening the asymmetries of power in environmental policymaking. Bridging this divide demands an epistemic reorientation which recognizes African knowledge as legitimate, protects Indigenous environmental governance from extractivist appropriation, and ensures that

African communities maintain sovereignty over their environmental futures.
To achieve this, climate policies must be decolonized through structural and legal reforms that embed Indigenous methodologies into national and international governance frameworks. Global climate financing must prioritize community-led initiatives rather than imposing externally designed projects that fail to reflect African realities. Additionally, fostering transdisciplinary collaborations, where Indigenous scholars, policymakers, and climate scientists co-produce knowledge, can yield hybrid sustainability models that integrate ancestral wisdom with contemporary innovations without erasing or commodifying local traditions.

This paper brings to fore the imperative for Africa to transition from being a passive recipient of global climate policies to an active architect of its environmental future. Genuine sustainability in Africa necessitates a radical departure from top-down models, instead embracing an approach that centers Indigenous epistemologies, acknowledges historical injustices, and asserts African agency over climate governance. This is not merely an environmental obligation but a political and epistemological necessity that ensures Africa's environmental knowledge systems are not erased or appropriated but serve as central pillars in the global fight against climate change.

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