Reparative Climate Finance and Energy Transitions: Addressing Debt, Development, and Climate Action in Ghana

Concept Paper
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In Brief

Ghana, like many post-colonial economies, finds itself trapped in a vicious cycle of sovereign debt, economic dependency, and climate vulnerability. While global financial institutions push for market-based climate solutions, these mechanisms fail to address the structural injustices that continue to undermine Ghana's ability to transition towards renewable energy. This paper argues that climate reparations, in the form of debt cancellation, non-debt-creating climate finance and direct compensatory investments, offer a pathway to a just energy transition. To truly address the deep-rooted problems behind Ghana's energy and economic struggles, we must see climate reparations as more than just financial aid. At the moment, many international climate funds come with strict conditions that limit Ghana's ability to choose its own energy path.

Drawing from global case studies, historical emissions data, and Ghana's own energy landscape, this paper illustrates that the concept of climate reparations is not about charity. It is about fairness. Countries that have benefited from centuries of pollution and exploitation have a responsibility to repair the damage and support those now facing the harshest effects of climate change.

Instead of relying on more loans, green bonds, or complex financial tools, reparative climate finance would involve canceling unfair debts and offering direct support without adding new burdens. Climate reparations can rectify the legacy of extractivism, reshape national energy policies, and empower local communities in the fight for climate justice.

1. Introduction: The Climate-Debt Nexus in Ghana

Ghana's energy transition sits at the intersection of climate injustice and economic dependency. Like many African nations, Ghana bears negligible historical responsibility for global greenhouse gas emissions, contributing less than 0.05% of total global emissions. Yet communities in Ghana are disproportionately vulnerable to rising sea levels, extreme weather events, and food insecurity (World Bank, 2022). At the same time, the country faces crippling external debt, primarily inherited from colonial economic structures and post-independence financial entrapment under the IMF and World Bank's structural adjustment programs (SAPs) of the 1980s. This debt burden limits the fiscal space necessary to invest in renewable energy infrastructure, forcing the government to rely on expensive fossil fuel imports and privatized energy projects that exclude local communities (Kumi, 2020).

What would it mean for the African continent, and particularly for countries like Ghana, if climate reparations were treated not as an enforceable right? If the Global North's historical responsibility for the climate crisis translated into meaningful, unconditional actions such as debt cancellation, public finance, and technology transfers? These questions are not naïve. They are rooted in international law, environmental ethics, and the lived experience of communities already suffering the consequences (African Futures Lab, 2024). Yet, the responsibility is fragmented across governments, corporations, and multilateral institutions, leaving no clear path for justice. The Paris Agreement, for instance, emphasizes procedural flexibility and national self-differentiation, allowing countries to set their own mitigation targets. However, this approach lacks robust accountability structures to ensure that developed nations fulfill their historical obligations as highlighted by Huggins and Maguire (2017).

In this vacuum, regional awareness becomes the starting point for a dialogue. How can there be justice if those most affected are unaware that justice is owed? Without widespread civic education and coordinated regional engagement through platforms like ECOWAS and the AU, reparations risk being discussed in elite circles while frontline communities are left out. Many communities are not informed that climate reparations are their right. Raising public awareness must be at the heart of any reparations campaign. It is only through informed, unified voices across the continent that Africa can demand for the accountability it deserves.

2. Ghana's Energy Transition in the Shadow of Debt

Ghana's energy sector presents a complex paradox. Despite being rich in renewable energy potential, the country remains heavily reliant on fossil fuel-based thermal power, which contributed approximately 63% to its annual electricity generation by 2022, with hydropower accounting for 30% (Energy Commission of Ghana, 2022). The country's renewable energy generation, which includes solar and wind, contributes less than 1% to the national grid (Boamah & Rothfuß, 2021). The continued dominance of thermal power is largely due to historical investments in oil and gas infrastructure, international financing mechanisms that favor large-scale fossil fuel projects, and contractual obligations with independent power producers (IPPs) that supply thermal electricity at high capacity charges, even when actual demand is low (IRENA, 2021; Gyamfi et al., 2020).

The government has set an ambitious target of achieving 10% renewable energy generation by 2030, yet progress has been slow due to limited public investment, unreliable financing, and an energy market shaped by foreign-controlled contracts. Many large-scale renewable projects remain stalled due to bureaucratic hurdles and a lack of policy coherence. Meanwhile, rural communities continue to suffer from energy poverty, with over 20% of the population lacking access to stable electricity (IRENA, 2022). These inefficiencies are exacerbated by weak grid infrastructure, , high transmission losses, power outages and expensive emergency power purchases. It can be observed quite clearly that, Ghana's debt burden has fundamentally shaped its energy policy of prioritizing short-term economic survival over long-term energy sustainability. As of 2023, Ghana's external debt had ballooned to $58 billion, with annual debt servicing consuming more than 55% of total government revenue (IMF, 2023). These debt obligations have been exacerbated by commodity price volatility, over-reliance on Eurobond borrowing, and restrictive International Monetary Fund (IMF) loan conditions that limit fiscal flexibility (Adu-Gyamfi, 2021).

The debt crisis has left Ghana's government with little room for climate-conscious investment, forcing energy policies that are reactive rather than transformative. Fossil fuel exploration continues to be positioned as a pathway for economic recovery, despite mounting evidence that newly discovered oil and gas reserves will become stranded assets in the near future as global markets transition toward decarbonization (IEA, 2022). Furthermore, Ghana remains locked into long-term take-or-pay contracts with fossil fuel suppliers, where payments must be made even if the purchased

energy is not used, diverting scarce financial resources away from renewable energy projects. Ghana's dependence on external lenders means that its energy transition is often dictated by foreign priorities rather than national interests. The IMF and World Bank have historically pushed for private sector-led renewable energy expansion, promoting Public-Private Partnerships (PPPs) which often benefit multinational corporations but frequently fail to deliver affordable energy to local communities (Newell & Phillips, 2022), often relinquishing the ownership and control over the power sector to foreign powers and the profits from electricity generation flow out of the country instead of being reinvested in local economies.

The cumulative effect of these challenges is a vicious cycle where debt limits Ghana's ability to transition to renewables, while dependence on fossil fuels exacerbates economic instability. Without climate reparations or transformative debt restructuring, Ghana risks being trapped in an energy paradox, forced to expand fossil fuel projects to generate revenue while simultaneously facing global divestment from carbon-intensive industries.

3. Climate Reparations as a Pathway to a Just Energy Transition

3.1 Defining Climate Reparations

Climate reparations are essential for addressing the deep-rooted injustices that have led to the current climate crisis. Unlike traditional climate finance mechanisms, such as loans, carbon offset programs, or conditional aid, reparations focus on historical accountability. They recognize that the climate crisis stems from centuries of exploitation and environmental degradation, particularly affecting the Global South. These reparations are not acts of charity or market-driven incentives but are compensatory measures aimed at rectifying the economic and ecological harm inflicted upon vulnerable nations by industrialized countries of the Global North (Hickel, 2020; African Futures Lab, 2024). A critical aspect of climate reparations is their unconditional nature, ensuring that recipient nations are not subjected to the financial dependencies and structural adjustments that have historically constrained their development pathways (Klein, 2014). Instead, they serve as a means of redress, empowering climate-impacted nations to reclaim agency over their adaptation and mitigation strategies. This approach emphasizes the necessity of dismantling exploitative financial structures and promoting energy sovereignty, thereby enabling nations to pursue sustainable development on their own terms (Obeng-Odoom, 2020).

Climate reparations highlight the demand that those who have historically contributed to and benefited from excessive greenhouse gas emissions must bear the financial responsibility for the resulting environmental destruction. The carbon-intensive industrialization of Europe and North America, which propelled centuries of economic expansion, was facilitated by the extraction of raw materials and labor from the Global South (Roberts & Parks, 2007). Today, countries like Ghana, which have contributed minimally to global emissions, face disproportionate consequences in the form of desertification, erratic rainfall, coastal erosion, and biodiversity loss (Climate Analytics, 2022).

Climate reparations by definition, extends beyond mere financial compensation. It encompass the restoration of degraded ecosystems, restitution for lost livelihoods, and the restructuring of global economic systems to promote fairness and equity. This holistic approach recognizes that true reparative justice involves not only addressing the immediate damages caused by climate change but also transforming the underlying systems that perpetuate inequality and environmental harm. As highlighted by the African Futures Lab (2024), overcoming the principal obstacles to developing an effective climate reparations framework is essential to unlocking the transformative potential of this emerging narrative and empowering climate justice advocates in African countries to challenge the status quo in international climate policy. In summary, climate reparations are a vital component of a just and equitable response to the climate crisis. It demand a comprehensive approach that includes financial compensation, ecological restoration,

and systemic reform, ensuring that historically marginalized communities have the resources and autonomy to build resilient and sustainable futures.

3.2 The Case for Climate Reparations in Ghana

Ghana's vulnerability to climate change is a direct result of centuries of resource extraction and systemic underdevelopment imposed by colonial and post-colonial economic structures. While the United States, European Union, and China have collectively contributed over 80% of historical carbon emissions between 1880 and 2020, the entirety of Africa accounts for less than 3% (Climate Analytics, 2022). Despite this negligible contribution, Ghana faces escalating climate-related disasters, including prolonged droughts, rising sea levels that threaten coastal communities, and extreme weather patterns that devastate smallholder farmers, the backbone of the country's food system (Yaro & Hesselberg, 2021). These challenges are not incidental; they are the result of a global economic system that has profited from Ghana's resources while externalizing environmental costs onto its people.

In addition to bearing the brunt of climate change, Ghana remains trapped in cycles of external debt that severely limit its ability to invest in climate resilience. The country is estimated to require $27 billion by 2030 to meet its renewable energy and climate adaptation targets (Government of Ghana, 2022). Yet, much of Ghana's revenue is funneled into servicing debts accumulated through structural adjustment programs and externally imposed economic policies that have prioritized resource extraction over long-term sustainability (Bond, 2019). The case for climate reparations is therefore undeniable: those most responsible for climate change must pay their fair share. Reparations would provide the financial means to transition to a low-carbon economy without further indebting the nation. More importantly, they would represent a form of economic justice, recognition that Ghana's climate crisis is not self-inflicted but the result of a deeply unjust global system that demands redress.

3.3 Reparations Can Reshape Ghana's Energy Future

i. Debt Cancellation for Climate Investment

One of the most immediate and effective ways climate reparations could transform Ghana's energy landscape is through the cancellation of sovereign debt. Currently, Ghana allocates a significant portion of its national budget to debt servicing, diverting crucial funds away from investments in renewable energy and climate resilience (Kumi, 2022). If debt owed to international financial institutions and creditor nations were written off as part of a reparative climate strategy, Ghana could redirect these resources towards solar, wind, and decentralized energy projects. This shift would not only reduce the country's reliance on fossil fuels but also increase energy access for underserved communities, particularly in rural areas where electrification rates remain low (IEA, 2021).

ii. Unconditional Climate Grants

Traditional climate finance often comes in the form of loans, reinforcing a cycle of economic dependency that undermines the autonomy of climate-affected nations. A reparations-based framework, by contrast, would replace loans with direct, unconditional climate grants. These funds would allow Ghana to implement large-scale renewable energy projects, expand climate adaptation programs, and modernize its energy infrastructure without incurring additional financial burdens (Bassey, 2012). Such grants would be instrumental in ensuring a just energy transition, where marginalized communities, including smallholder farmers and indigenous groups, are not sidelined but are active participants in the country's green transformation.

iii. Technology Transfer and Skills Development

For Ghana to achieve true energy sovereignty, reparations must extend beyond financial transfers to include technology sharing and skills development. At present, most renewable energy technologies, such as photovoltaic solar panels and lithium-ion batteries, are manufactured in the Global North or China, with Africa relegated to the role of a consumer rather than a producer (Newell & Phillips, 2016). Reparations should therefore facilitate the establishment of publicly owned solar and battery manufacturing plants in Ghana, ensuring that the country benefits not only from clean energy but also from job creation and industrial development. This shift would break the neocolonial supply chains that currently define Africa's engagement with global energy markets, allowing Ghana to develop a domestic green economy that serves its own interests rather than those of foreign investors.

With the integration of debt cancellation, unconditional grants, and technology transfer into a reparations framework, Ghana can chart a new energy future that is not dictated by external financial institutions but by the needs and aspirations of its people. Reparations, in this sense, are not just about compensation for past injustices; they are about constructing an alternative development paradigm, where energy justice and climate resilience go hand in hand. The moral and financial obligation of the Global North is clear. The question remains: will they honor it?

4. Policy Recommendations

4.1 Establishing a National Climate Reparations Fund

A National Climate Reparations Fund would provide Ghana with a sovereign financial mechanism insulated from the constraints of traditional climate finance, which often comes in the form of loans or corporate-driven initiatives. Such a fund must be publicly controlled, with governance structures that ensure direct representation of frontline communities, labor unions, and civil society groups. Transparency is paramount, historically, international financial assistance for climate adaptation has been funneled through state bureaucracies with limited accountability, often failing to reach the communities most in need. A decentralized, community-led approach would prevent elite capture and ensure that reparative funds directly support those bearing the brunt of climate breakdown. The fund could prioritize investment in decentralized renewable energy, ecological restoration, and climate-resilient agriculture, all driven by local knowledge systems.

4.2 Advancing COP Negotiations and Outcomes

Africa cannot afford to be sidelined in international climate negotiations. Quite often, African governments remain passive due to systemic inequities which silence their voices. Structural barriers, such as limited access to climate finance, constrained research infrastructure, and unrealistic UNFCCC deadlines, disproportionately affect African nations' ability to participate fully and assertively in climate discourse. While the announcement of the Loss and Damage Fund at COP27 marked a symbolic victory, its non-binding nature and dependence on voluntary contributions render it insufficient to meet the scale of the crisis (Roberts & Pelling, 2023). Ghana, in collaboration with the African Union, must advocate for a legally binding framework that links climate reparations to debt cancellation. The Global North holds an ecological debt to the Global South, and it is unjust for countries most affected by climate change to continue repaying loans that financed environmentally harmful projects. African states should not be forced to accept adaptation crumbs managed by institutions like the World Bank or IMF. Instead, they must collectively demand debt cancellation and climate justice (not as charity), but as a right rooted in historical responsibility. The colonial legacy of extraction persists today in financial form, and dismantling this cycle is critical for a just and transformative energy transition.

4.3 Expanding Civil Society Mobilization and Grassroots Advocacy for Climate Justice

True climate reparations will not be won in boardrooms but in the streets, in courtrooms, and in the everyday resistance of affected communities. Civil society organizations (CSOs) must scale up mobilization efforts, ensuring that climate justice remains a political imperative that attracts stronger public debate. Ghana's environmental movements, from local anti-mining resistance groups to youth-led climate activism, must be strengthened through coalition-building and international solidarity. Media engagement is crucial in reframing climate reparations as a human right, countering the Global North's narrative that positions such demands as unrealistic. Without mass public pressure, even the most well-intentioned policy frameworks risk being diluted into symbolic gestures. Litigation is further recommended as an avenue, particularly against multinational polluters.

6. Conclusion

It is time to reconceptualize climate reparations. Reparative climate finance is not a radical demand. Climate reparations is a right, a moral and economic necessity. For far too long, Ghana and the broader Global South have been locked into cycles of extraction, debt, and dependency, dictated by financial institutions that refuse to acknowledge historical accountability. Vulnerable local communities in the Global South have been left to face worsening droughts, rising temperatures and energy poverty.

A proper energy transition requires a systems change. Climate reparations have the potential to transform the systems that keep countries like Ghana dependent and vulnerable. They can help move developing countries away from a global climate finance system that puts profit and efficiency above justice and fairness.

A truly just transition requires a fundamental shift in power, an enforceable obligation. It demands that those responsible for the climate crisis pay their fair share, not through empty pledges but through actual technology transfer, debt cancellation, direct financial transfers, and the dismantling of exploitative trade and investment agreements. Anything less is a continuation of the status quo.

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