

AMÍLCAR CABRAL AND THE POLITICAL ECOLOGY OF CLIMATE CHANGE: A CONTRIBUTION TO RAISING AWARENESS

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Abstract

This study recovers the intellectual legacy of Amílcar Cabral, an agronomist and leader of the liberation struggle in Guinea-Bissau and Cabo Verde, situating his studies on erosion, soil conservation, and climate (1945-1960) within the contemporary debate on climate change, environmental justice, and political ecology. Starting from Cabral's concept of "soil-life-climate balance", the work argues that Cabral, decades before its scientific recognition, discussed fundamental issues of climate change, such as the distinction between natural and anthropogenic erosion, climate coloniality, and the importance of local knowledge for ecological adaptation. The study articulates Cabral's scientific trajectory with his critique of colonialism and imperialism as structures that produce environmental degradation, analyses the principle of unity and struggle as a foundation for a collective African response to the climate crisis, and examines the relevance of his technical and political proposals for the specific case of Cabo Verde, in light of recent data on soil erosion, water scarcity, and climate vulnerability in the archipelago. It can be concluded that Cabral's thought offers a theoretical and practical framework that remains underexplored in Cabo Verdean academia, one capable of engaging in dialogue with contemporary authors on climate justice and decolonial ecological politics.

Keywords

Amílcar Cabral; Cabo Verde; climate change; climate justice; colonialism, political ecology; soil conservation.

Resumo

Este estudo recupera o legado intelectual de Amílcar Cabral, engenheiro agrónomo e líder da luta de libertação da Guiné-Bissau e de Cabo Verde, situando seus estudos sobre erosão, conservação do solo e clima (1945-1960) no debate contemporâneo sobre mudanças climáticas, justiça ambiental e ecologia política. Partindo do conceito de Cabral de "equilíbrio solo-vida-clima", o trabalho argumenta que Cabral discutia, décadas antes de sua consolidação científica, questões elementares das mudanças climáticas, como a distinção entre erosão natural e antropogénica, a colonialidade climática e a importância dos saberes locais para a adaptação ecológica. O artigo articula a trajetória científica de Cabral com sua crítica ao colonialismo e ao imperialismo como estruturas produtoras de degradação ambiental, analisa o princípio de unidade e luta como fundamento para uma resposta africana coletiva à crise



climática, e examina a atualidade de suas propostas técnicas e políticas para o caso específico de Cabo Verde, à luz de dados recentes sobre erosão do solo, escassez hídrica e vulnerabilidade climática no arquipélago. Conclui-se que o pensamento de Cabral oferece um arcabouço teórico e prático ainda pouco explorado pela academia cabo-verdiana, capaz de dialogar com autores contemporâneos da justiça climática e da política ecológica decolonial.

Palavras-chave

Amílcar Cabral; Cabo Verde; colonialismo; conservação do solo; ecologia política; justiça climática; mudanças climáticas.

How to cite this article

Matos, Pedro Andrade (2026). Amílcar Cabral and the Political Ecology of Climate Change: a Contribution to Raising Awareness. *Janus.net, e-journal of international relations*. Thematic Dossier – Geopolitics of Anxiety: Ideology, Identity, and (Un)Bordering in Contemporary Europe and Asia, VOL. 17 Nº. 1, TD4, October 2026, pp. 220-241. DOI <https://doi.org/10.26619/1647-7251.DT0726.10>

Article submitted on 26 June 2026 and accepted on 19 August 2026.





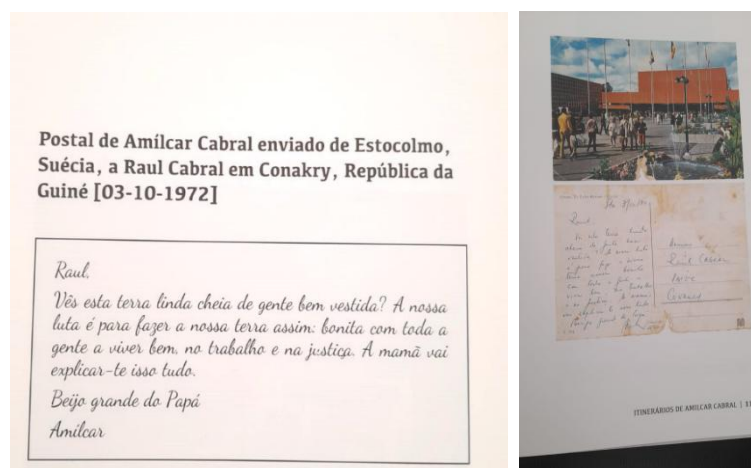
AMÍLCAR CABRAL AND THE POLITICAL ECOLOGY OF CLIMATE CHANGE: A CONTRIBUTION TO RAISING AWARENESS¹

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Introduction

Four months after the Stockholm Conference on the Human Environment (1972), Amílcar Cabral visited Sweden. From there, he sent his son, Raul, a postcard from Stockholm (Image 1). In the message, he wrote that, as Stockholm was a beautiful city where people enjoyed a good quality of life, with work and justice, he wished that one day, through struggle, the people of Guinea-Bissau and Cabo Verde would also achieve economic and social development.

Image 1. Postcard sent by Amílcar Cabral from Stockholm



Source: Cabral et al., 2018

¹ Conflict of Interests - The author declares no conflicts of interest.



The Stockholm Conference sought to reconcile environmental protection and development needs, which had previously been seen as contradictory, between developed countries, which began to advocate for environmental protection, and developing countries, which sought to use their natural resources to promote economic development.

However, the impact of human actions on the environment became evident, and it was necessary to recognize that economic and social progress needed to consider the limits of nature and its preservation. Although the Conference did not reach an agreement, discussions began on ecological awareness and sustainable development.

These discussions were not new to African countries and societies, which have always regarded nature as a space for the fulfilment of humankind in its spiritual and cultural dimensions, far beyond the material dimension, which remains the concern of Western societies (Leff, 2001; Vambe & Zegeye, 2008)

Amílcar Cabral was an African who consciously thought and acted strategically to enhance the quality of life of African peoples, working on multiple fronts (Ferrão, 1988; Neves, 2017; el Nabolsy, 2020). Despite this, his involvement with the independence struggles of Guinea-Bissau and Cabo Verde, as well as other political commitments, forced him to dedicate himself more to political issues and reduce his scientific activity as an agricultural engineer and researcher of the environmental problems that afflicted Portuguese colonies in the first half of the 20th century.

Between 1945 and 1960, Cabral developed remarkable theoretical and practical studies, as well as recommendations on erosion, soil conservation, climatology, and agricultural systems in Cabo Verde, Portugal (Alentejo), Guinea-Bissau, and Angola. These works, published in academic journals and scientific reports, reveal a thinker who articulated, in original and rigorous parameters, technical knowledge, social analyses, and long-term concerns regarding the relationship between humans and nature.

Regarding the title of this paper, although Amílcar Cabral did not directly address climate change as we understand it today, his agrarian studies of erosion provide insights into processes now associated with climate dynamics. Based on his observations of the soil-life-climate balance, his analysis of erosion as a phenomenon accelerated by human activity, his study of droughts in Cabo Verde, and his advocacy for integrated conservation planning, Cabral anticipated debates and proposals that would only become relevant in environmental science decades later.

This article guides the following research question: To what extent can Amílcar Cabral's agronomic and political thought contribute to contemporary debates on climate change issues, particularly in the context of Cabo Verde?

The study adopts a qualitative and interdisciplinary approach that relies on documentary and bibliographic research methods. It analyses Cabral's agronomic writings on soil conservation, erosion, climate, and agriculture, as well as his political texts on colonialism, liberation, and African unity, placing them in dialogue with contemporary literature on political ecology, climate justice, decolonial environmental thought, and climate coloniality.

The following sections analyse Cabral's agronomic trajectory, his systemic vision of nature, the relationship he establishes between colonialism and environmental degradation, the



case of Cabo Verde, the need for African unity in the face of the climate crisis, and finally, the relevance of his thought to contemporary political ecology, especially in the context of Cabo Verde.

Cabral's Agronomic Trajectory

Cabral was born on September 12, 1924, in Bafatá, Guinea-Bissau. He spent his youth in Cabo Verde, where he dedicated himself to primary and secondary studies and met a reality that would shape his academic decisions and search for solutions to transform reality.

He graduated in Agronomic Engineering from the Higher Institute of Agronomy of the Technical University of Lisbon in 1952, with a thesis on soil erosion in the Alentejo, specifically in the region of Cuba. During his studies, he specialised in Pedology and Soil Conservation, areas of scientific development at the time, particularly in the United States, with the work of Hugh Hammond Bennett (1881–1960), considered a pioneer in soil conservation, who highlighted that erosion affects not just small farmers, but the entire economy.

The choice to study agronomy was made in a context marked by food crises, famine, recurring droughts, and profound economic difficulties affecting the Cabo Verde Islands, besides the impact of colonialism on the living conditions of Africans.

Cabral witnessed the droughts that plagued the archipelago, especially the famine of the 1940s. At that time, he was approximately 17 years old and already had a clear understanding of the severity of drought, their consequences, and their natural and unnatural causes. In addition to this personal experience, the Cabo Verdeans have historical memories of even more dramatic periods, such as the famines of 1773–1776 and the crisis of 1831–1833, which caused approximately 30,000 deaths in the archipelago (Lopes, 2021).

Young Cabral also discovered interesting sources at home to raise awareness of the land and insularity. His father, Juvenal Cabral, wrote about droughts, famine, and rain. In a short text about rain, Juvenal writes: "Drought, the habitual cause of our torments; drought, age-old enemy of our progress; drought, cruel generator of black famine, under whose gloomy auspices the poor die, the rich become impoverished, the cattle wither, and the trees dry up" (Juvenal Cabral, 1949).

Cabral, as a son, shared the experience in the poem "The Island" (1945), layering ecological sensitivity that evokes the natural fragilities of the Cabo Verde islands: "sleeping mother / naked and forgotten, /dry, /lashed by the winds". In this passage, Cabral exposes the archipelago's natural vulnerabilities, which become recurrent in the literature and music of the archipelago.

In the poem "Return," there is a hope fed by the rain, which solidifies as an extraordinary event that transforms the lands and the state of mind of the people, revealing, through the verse "the whole island / in a few days has already become a garden," how semi-arid ecosystems, after long periods of drought, spring to life (Cabral, 1990). The poet speaks of a Cabo Verde that, with the arrival of the rain, transforms into a fertile and prosperous



field, revealing a window of opportunity that the countryman must seize with care to sow, tend, harvest, and store.

In this context, choosing agronomy meant pursuing a scientific understanding of the soil conditions, agricultural production, and the survival of populations in a territory heavily influenced by environmental and structural factors. However, in another territory, such as Guinea-Bissau, which had abundant water, the colonial policy of imposing cultural practices for export added another layer to the condition of the colonies as spaces serving the interests of the colonizers.

Cabral was not convinced by natural causes alone (Neves, 2017; el Nabolsy, 2020), because Cabo Verde was not (is not) the only place in the world with these vulnerabilities. However, he questioned why people lived in such extremes: when the rain came, they lost agricultural products, and when drought arrived, they had not even a grain of corn left to feed the poor, even though Guinea-Bissau served as a breadbasket that met Portugal's needs. Therefore, deliberate political (in)action determined the life and death of the people.

He also witnessed the dramatic consequences of the assistance disaster, which occurred on February 20, 1949, in Praia, Cabo Verde. After a long period of drought, hundreds of people were awaiting a hot meal and donations. The collapse of a wall caused the death of 232 people, an episode that reflected the extreme social vulnerability of the population, a result of the economic and political conditions imposed on the archipelago by Portugal (Lopes, 2021), which earned severe internal and international criticism, as people viewed it as the face of a colonial system that used hunger as an instrument of war.

Between 1952 and 1954, Cabral worked as an agronomist in Portuguese Guinea, where he conducted extensive field surveys to study cropping systems, local agricultural practices, and erosion problems. In Lisbon, he worked on soil studies for Angola and researched the storage of agricultural products until 1960. That year, he dedicated himself entirely to the political struggle for the liberation and independence of Guinea-Bissau and Cabo Verde.

According to José Eduardo Ferrão (1988), Cabral's scientific activity encompasses two complementary dimensions: one eminently technical, linked to agronomic work, the study of soils and scientific knowledge applied to the territory; and another, deeply human, marked by an ethical and political concern for the social utility of his work. Cabral understood that engineers, especially Africans, should not limit their role to producing technical knowledge; they should also commit to contributing to the valorization of the "Afro-Negro" and ensure that the wealth generated by natural resources benefits Africa (Ferrão, 1988, p. 21).

Cabral's scientific work was also characterized by the rigorous use of systematic research methods, employing tools such as demographic statistics, mathematical formulations, field surveys, and the comparative method to analyze diverse agricultural and environmental realities. He adopted a critical stance towards the mere transposition of agricultural models developed in other regions of the world, arguing for the need to carefully analyze African agroclimatic conditions due to their ecological, social, and historical specificities.

However, the agricultural census conducted in Guinea-Bissau (1952–1955) allowed him to develop political awareness, as he studied natural resources, soils, crops, and local agricultural practices in detail (Ferrão, 1988; Neves, 2017). Therefore, Cabral argued that



the research should not be a technical or statistical exercise alone but should also have a clear social purpose, aimed at improving the living conditions of the population. For the young researcher, "a census, if it does not aim at improving the living conditions of the people to whom it refers, is not only a useless task; it is a harmful undertaking" (Silva, 1988; Ferrão, 1988, p. 24).

Through this work, Cabral understood the material structures of peasant life, the relationships between soil, climate, and modes of production, especially the agroecological systems of Guinea-Bissau, and the awareness necessary for political transformation (Neves, 2017). These structures, to which Cabral referred, relate to colonialism and imperialism, as well as their consequences in several areas, including the environment. Therefore, the next task is to grasp the system that caused the environmental crisis.

Colonialism, Imperialism and Environmental Degradation

These three concepts interconnect: colonialism as a political structure dehumanized Africans and created the basis for imperialism to plunder African resources to meet the needs of European metropolises. Therefore, it caused environmental degradation that exacerbated the destruction of traditional land management systems and impoverished the quality of life for Africans.

To understand Cabral's environmental thinking, it is necessary to situate it within the broader context that propelled him towards critical awareness. As the son of two countries subjected to Portuguese colonialism, he was acutely aware of the consequences of colonization not only in the political and economic spheres, but also in the environmental aspect, because it destroyed a harmonious way of life and an African worldview of the natural environment shaped by work and culture. In this sense, colonization represented a violent rupture of this relationship and the imposition of a model that completely ignored the African as both a subject and sovereign in their relations with the surrounding environment (Neves, 2017; el Nabolsy, 2020).

Cabral emphasized that colonization and imperialism were deeply interconnected, insofar as "imperialism is piracy transplanted from the seas to dry land, reorganized, consolidated and adapted to the objective of plundering the material and human resources of our peoples" (Cabral, 1965, p. 78). The colonial system constituted a global structure of economic, social, and political domination aimed at the systematic exploitation of colonized territories, which materialized in the land, agriculture, and living conditions of the peasants (Maddox, 2006; Uzoigwe, 2010; el Nabolsy, 2020)

This materialization places the responsibility for the greatest socio-environmental disasters in modern history on colonialism. More than a political system of domination, it implied profound transformations in territories, economies, and relationships between human societies and nature. The intensive exploitation of natural resources, driven by external interests, produced lasting forms of environmental degradation and social inequality.

The culmination of this destructive process occurred within the framework of the Berlin Conference (1884-85), whose stated aim was "to occupy in depth, colonize Africa and extract from its soil and subsoil all the energy sources sufficient and necessary for the



European machine" (Tenreiro, 1946, p. 159; Uzoigwe, 2010). The specialized literature looks at the political impacts of Africa's partition. However, we should also consider its effects on environmental disasters. These disasters harmed the African population, ruined economies, and increased poverty (Maddox, 2006)

In this regard, Cabral framed colonialism as economic domination of nature, which employs "political domination" by extending "the forces of the imperialist or colonial state into the land it wants to dominate economically" (Cabral, 1969, p. 33). For Cabral, in colonialism and neocolonialism, the essential characteristic of imperialism remains: the denial of the historical process of the dominated people through the violent usurpation of freedom in the development of national productive forces.

Agriculture was the area that suffered the most from the dual process of destruction and replacement and, obviously, did not align with the Schumpeterian logic of 'creative destruction', since innovation mattered less and the reconfiguration of a system to serve only the capitalist interests of the colonising countries mattered more.

Cabral criticized the system of monocultures and intensive agriculture imposed by Portuguese colonization in African territories, arguing that it represented a danger by generating a situation of economic dependence focused on exports to Europe, which replaced family farming while the local population remained in poverty (el Nabolsy, 2020; Maurice Taonezvi, 2008; Taques et al., 2023). As he wrote:

Colonialism introduced a new production system to Africa, in which it applied, or attempted to apply, European agricultural practices to the itinerant system, without considering the differences in environmental conditions, based on a presumed logic of superiority of practices, resulting in the devastation of African lands (Cabral, 1954, p. 413).

This agricultural transformation and the introduction of exotic species generated sociological vulnerabilities and altered local food systems and agrobiodiversity (Havik et al., 2018). Thus, in their analysis, famine emerges as a socially produced phenomenon, resulting from the (dis)articulation between environmental factors and the Portuguese government's political decisions.

Therefore, historical legacies of colonialism and imperialism connect climate change to global patterns of economic exploitation and shape the scientific frameworks through which people study and interpret climate, denying rich countries historical responsibility for climate imbalance (Mercer & Simpson, 2023).

Vulnerability to climate change is structured by imperialist social relations, perpetuating what some authors call "climate coloniality" (Sultana, 2022) by reinforcing economic, social, and racial inequalities stemming from colonization.

DeBoom (2022) defines climate coloniality as "atmospheric violence" that determines who deserves to live and who can be sacrificed, leading to the dehumanization of colonized peoples and revealing that the history of environmental destruction is a historical process, with those affected continuing to be the victims of colonization.



Scientific evidence shows that the average temperature of the Earth has been on a continuous rise since around 1850, with particularly high levels observed at the end of the 20th century. Due to anthropogenic activities, global temperature has increased from +0.66 to +1.00 °C relative to the pre-industrial baseline, and sea level has risen from +0.15 to +0.25 m (IPCC, 2021, p. 45). This process is closely tied to the Industrial Revolution, during which the expansion of machinery and industrial production intensified the use of fossil fuels, thereby linking it directly to colonial accumulation and the current climate crisis.

As early as the 1970s, systematic analyses pointed to the influence of human activities on the warming of the climate system (IPCC, 2021). Even after the scientific confirmation of the problem in the 1960s–1970s, political inaction prevailed due to the economic interests of industrialized countries (Weart, 2008).

Cabral was assassinated in January 1973, leaving a huge void at a time when the limits of economic growth on a finite planet were being discussed, and the first investigations that raised concerns about the global climate were emerging, demanding a series of ideas and proposals on how humankind could relate to the environment. Despite his premature death, his agronomic studies and principles of struggle still help us understand and tackle the climate crisis.

The Soil-Life-Climate Balance and Land Conservation

One of the central concepts in Cabral's agronomic thought is the "soil-life-climate balance," which provides a systemic understanding of nature. According to Cabral, human exploitation of land profoundly alters the natural conditions of the complex soil-life-climate dynamic. Environmental degradation is not just the result of isolated actions but is part of the economic structure of society, which transforms nature to satisfy specific human interests, frequently harming ecological balance. From this concept, Cabral addresses the great dilemma between food and demographic development, warning that when this dilemma is not addressed on an equal basis but is subordinated to particular interests, collective interests are compromised, thereby jeopardizing both socioeconomic and natural systems (Silva, 1988).

Important thinkers, such as the Brazilian geographer Milton Santos (2006) and the Mexican economist Enrique Leff (2001), reinforce this perspective by pointing out that the concern is not with the preservation of nature, but with a particular social order, whose economic rationality prioritizes profit to the detriment of common goods and the environment.

In Cabral's analysis, soil is not inert; rather, it maintains a living relationship with human social structures (César, 2023). Therefore, the destruction of the soil translates into the destruction of humankind, as it weakens the natural conditions essential for humankind's survival. This interpretation updates to account for the fact that the weakening of a natural ecosystem also entails weakening human rights (Gibson et al., 2005).

In this equation, climate is one of the central factors conditioning the development of plants that feed people. The essence of agriculture rests on the triad of land-plant-climate, in which "man begins to create his own food." Cabral emphasized that climate contributes to



soil formation and fertility, but it can also function as its destroyer by influencing degradation and erosion processes that directly affect the land's productive capacity. Despite little attention has been paid to the care of climate and nature itself. Even subsequent discussions on sustainable development, starting with the Brundtland Report (1987), have focused more on satisfying human needs than on nature itself, or, at most, on preserving nature to meet material interests.

However, Cabral was already working with an advanced definition of conservation that parallels the concept of sustainable development. For him, "classifying soils, from the point of view of conservation, is to order them into different groups, relative to their possibilities of use, without destruction" (Cabral, 1954a).

This definition links use and conservation, recognizing that soil protection cannot be separated from the subsistence needs of populations, a current perspective known as sustainable development or green economy. The Intergovernmental Panel on Climate Change (IPCC, 2021) recognizes that soil degradation is both a product and an amplifier of climate change, releasing sequestered carbon into the atmosphere and reducing water retention capacity.

Therefore, Cabral's compliment lies in his inversion of logic: instead of worrying about material needs, human beings should first take care of the source that raises all the vital energies they need, and food would come as a natural process, not artificially induced.

This includes understanding the soil as a "natural, independent, historical, and dynamic body" and vegetation as an essential factor for climate balance. Cabral (1954a) perceived that environmental degradation was not simply a technical problem but a matter of disrupting complex balances involving interactions among soil, climate, vegetation, and human actions.

Cabral (1954a) defends the role of natural vegetation in maintaining this balance. From this systemic perspective, Cabral formulates an ethics of the human-land relationship that holds significant relevance to contemporary climate governance. He argues that the naturally asymmetrical human-soil relationship, insofar as the land sustains humankind while humankind destroys it, must become symmetrical for humankind's own subsistence. He notes that human actions, whether collective or individual, need to be controlled for their own benefit (Silva, 1988, p. 25). With this awareness, Cabral was able to distinguish between natural erosion and erosion accelerated by anthropogenic actions:

This type of erosion, which occurs slowly and gradually within the soil-life-climate balance, which is integrated into the development process and does not harm it, is called normal or natural erosion. Under natural conditions, soil losses are generally limited to those caused by normal erosion. The ideal of conservation is to ensure that these losses are not significantly exceeded, despite alterations to natural conditions resulting from land exploitation (Cabral, 1954a, p. 165).



Cabral clearly identified accelerated erosion as a result of human activity.

It is precisely the exploitation of the land by man that alters the natural conditions in which the dynamic balance of soil-life-climate has been realized. The exploitation of the land by man requires his interference in this balance. Human needs, such as food, fuel, shelter, and livestock farming, require the destruction of the natural vegetation that covers the soil (Cabral, 1954a, p. 166).

This typology provides interesting insights for contemporary climate thinking because it allows us to identify where human action is altering systems that, on their own, would maintain a dynamic equilibrium. Thus, Cabral proposes a conservation approach that goes far beyond isolated technical measures and integrates planning that articulates scientific knowledge, local characteristics, and social dimensions.

Cabral notes that every region has limits based on its climate and soil. Planning should take these limits into account. In his analysis of the climate of Black Africa, he highlighted specific characteristics such as "high and nearly continuous temperatures, high atmospheric humidity, and abundant rainfall" (Cabral, 1954b), the intense combination of which contributes to soil degradation.

According to Cabral (1954b), the evolution of agriculture in Black Africa should address fundamental issues: a) the need to utilize all the resources of Black Africa, which will require the progressive transformation of nature; b) the need to apply the wealth derived from these resources to Black Africa itself; c) the need to establish an agrarian structure that prevents disorderly and greedy exploitation of the land; d) the need to provide Black people with access to all means of defence against the adversity of the climate; e) the need to foster the cultural development of Afro-Black people; and f) the need to select and utilize everything useful in Afro-Black farming systems, as well as what, from European techniques, is relevant to Black Africa (Cabral, 1954b, pp. 414–415).

To address poverty and soil fragility in Black Africa, Cabral proposed a system that reconciled agricultural practices without soil destruction, incorporated new techniques through regular updates, and supported the collective use of land, ensuring that the community shared in the benefits. This vision reflects the understanding that individual land ownership became synonymous with wealth, economic, and, consequently, political dominance, which is why the structure of property was inseparable from environmental issues.

Ayompe and Epie (2025) document that sub-Saharan Africa today faces precisely the vulnerabilities that Cabral identified as structurally produced, especially the fact that 60% of the population depends on climate-sensitive sectors, having faced a 20% reduction in crop yields, including maize and sorghum. As a result, it is not only the agricultural sector that is affected; it also shines through in other sensitive sectors, such as education and health, increasing the vulnerability of families, revealing that agriculture is a vital sector for considering issues such as food sovereignty and economic empowerment that allow for increased responsiveness, and nature-based solutions.



Unity and the Fight Against Climate Change

Another concept necessary for resolving climate issues is the principle of unity and struggle, shaped in Cabral's thought as a force to end colonial domination in African lands. In the important document "General Slogans of Our Party" (1965), Cabral defined unity as a dynamic concept that allows for the preservation of everyone's personality while working together towards a concrete objective. In this vein, unity is an act, a necessary condition for things to happen. The clarity of unity becomes useful when applied to the reality of people facing a problem. If, in the colonial era, Cabral was referring to colonialism, it becomes interesting to understand, within this process of coloniality, the current struggle against climate change.

The need for struggle, as advocated by Cabral and transformed into a force capable of ending colonial domination, remains alive insofar as "the more united we are, the more we will live up to what everyone knows and what it is: unity is strength" (Cabral, 1965, p. 5).

Cabral defines struggle under the normal condition of all beings in the world. Because the colonialists occupied the land and exerted a force that defined the destiny of Africans, sowing war between tribes and leading to violence and destruction, the logic prevails: if there is a force that exerts pressure, there is also one that reacts, which Cabral considers resistance to colonial force (1965, p. 8). In short, Cabral argues that unity and struggle complement each other. Unity is necessary, but to achieve unity, one must also fight.

Cabral's unity and struggle mobilize a meaningful argument for continental solidarity, insofar as awareness must transcend the logic that a benefit for one country should correspond to a benefit for other African countries. Fighting only for national interests reinforces Africa's historical weakness of divide and conquer.

For Cabral, the struggle relies on understanding the concrete reality of the land, which is embedded in a more complex reality: "we are part of a concrete reality that is Africa, fighting against imperialism, against racism, against colonialism" (Cabral, 1965, p. 25). Failure to understand these interconnections can result in errors with high costs for African countries. This is meaningful because an environmental problem is never only an environmental problem, but results from economic, sociological, and political decisions (Le Prestre, 2000).

The environmental degradation described by Cabral in African territories is part of a global structure of exploitation that, as he demonstrated, crosses the borders of colonies and independent states. The response to this structure also required a supranational dimension: African unity. As this strategy was applied to the national liberation struggle, which proved to be the only way to defeat the colonial powers aided by imperialist powers, the activation of this strategy is necessary because Africa loses when its countries act alone and in a disorganized manner, and its countries win when they act together and fight for climate justice.

From this perspective, the climate struggle occupies a place similar to that of the anti-colonial struggle, constituting a condition for humanity to continue to exist and, only then, to coexist. The reinterpretation of the notion of "people" in a political and climate context suggests an awareness that the "people" should be included as those committed to guaranteeing the conditions of existence and, by implication, to preserving present and



future life. Those who deny or sabotage these conditions, like climate change deniers or those blocking necessary actions, should be excluded from this political view.

Cabral argued that the end of colonialism was a historical necessity because the former system denied the existence of colonized peoples. Hence his central idea: "to coexist, one must first exist." In short, there can be no dialogue, democracy, or coexistence when a group is deprived of the minimum conditions for life (Busk, 2025). Today, it is not only colonialism that threatens existence but also its consequences, which have become as lethal as the colonial system. Therefore, the climate crisis has continued the colonial project of reducing the quality of life and causing death for people who continue to face exploitation and suffer from the harmful effects of this process.

The idea of resistance is remarkable because it is an asset that can only be activated by the oppressed and vulnerable people, both to save their own lives and the lives of their enemies and to combat the banalization of life. This asset also highlights a person's desire to live on their land, their way, in harmony with nature. That benefits everyone.

For Cabral, the fight against hunger and drought would become an integral part of the national liberation project, understood not only as formal independence but also as the capacity to manage natural resources, produce food, and guarantee human dignity. Agriculture, as a dimension of economic resistance, emerged as a weapon that strengthened independence and a path to freedom. Cabral (1969) sums up the issue by saying, "A people who can't produce their own food can't have anything else in life".

Political sovereignty would go hand in hand with food sovereignty; this is fundamental, as hunger continues to be an instrument of the subjugation of African peoples to the powers and interests of the small elite, in collusion with global elites, who condition the immediate resolution of hunger on popular support for the obscure interests of these elites. In this sense, uniting to produce and manage their own food reduces dependence and places the survival of Africans under the management of the continent's wealth through serious institutions committed to food sovereignty at the continental level.

A united Africa in key international climate negotiations will enhance outcomes and defend its interests on this issue. Although Africa's role in international climate negotiations has evolved significantly, moving from marginalization without a unified position to gradual involvement in climate dialogues (Ngono & Noa, 2022), these efforts have not reached their full potential, especially in relation to historical reparations for the impacts of colonialism and the consequences of climate change for major greenhouse gas emitters.

Climate finance needs for Africa are estimated at around US\$1.4 trillion over the current decade, equivalent to approximately US\$140 billion per year to meet adaptation and resilience requirements. Nonetheless, actual flows have remained far short of this level, averaging around \$35 billion annually, less than 25% of the estimated needs (Dryden & Volz, 2025).

However, the outcomes Africa could achieve through negotiations would not rely on the argument of vulnerability, even though African political leaders have shaped their discourse in that direction. Recalling Cabral's observations is necessary since climate improvement would not only benefit Africans. Cabral's discourse always emphasized placing African



interests at an important level within the context of humanity's interests in general (Cabral, 1979). In this logic, defending African interests is defending those of humanity.

The climate crisis, in this sense, provides fertile ground for articulating African unity around an agenda that is both particular, due to the disproportionate impacts on the continent, and universal, due to the global nature of the threat, as well as Africa's own contributions through nature-based technologies and solutions, along with African practices and worldview.

What Cabral identified as structural injustice rooted in colonialism is consolidating as climate injustice (Táíwò, 2022). This reflection is not simply about knowing who emits more CO₂; it focuses on understanding who has been historically deprived of the capacity to adapt, innovate, and make decisions regarding the use of their territories. This casts a critique on the effectiveness of the political sovereignty of countries in the Global South, as decisions on African issues still occur from the perspective of emitting countries, the former colonizing nations.

The historical patterns of inequality produced by colonialism and pointed out by Amílcar Cabral are currently reproduced in global climate relations, in which the most polluted states, by refusing to fulfil their responsibilities, exacerbate the vulnerability of poor countries that are not responsible for the climate crisis (Ogunbode, 2022).

The goal of resistance, according to Cabral (1969, p. 9), is "to break with the colonial State in our land to create a new, different State, based on justice, work, and equal opportunities for all the children of our land." This horizon of building something new, not destroying the old, is also essential for thinking about responses to the climate crisis: it is not enough to denounce injustices; it is necessary to build alternatives based on justice, redistribution, and sovereignty over natural resources.

Cabral's economic resistance implies the creation of autonomous "productive forces" based on local knowledge and the population's work capacity. This perspective anticipates contemporary discussions on "just transition" and low-carbon economies centered on local communities, contrasting with technocratic market solutions that perpetuate structural dependencies. Larry Busk (2025, p. 72), anchored in Cabral's argument, questions whether, if we accept that colonialism is intrinsically anti-democratic and must be combated, why we should not apply the same perspective to other forms of domination, such as capitalism, which sustains the energy model responsible for the climate crisis. The answer leads to unease regarding the fact that capitalism has become entrenched in all regions of the world, and that the current lifestyle depends on the capitalist system, which generates only external criticism, and not the adoption of an economic model that can replace it effectively.

Local Knowledge and Nature-Based Solutions

Cabral's final and fundamental contribution to contemporary environmental thought is the valorization of local knowledge and interdisciplinary practice. In his studies on Guinea-Bissau, he combined pedological analysis with an understanding of traditional cultural systems and social relations of production, aiming to interpret the collected elements and



perceive the human element behind them, accurately evaluating the productive systems and the relationships among the various stakeholders. This gave him a deep understanding of the social reality of the territory where he lived, a knowledge that the stereotypical reports of colonial society failed to capture.

This approach is useful for contemporary responses to climate change, as it highlights the importance of traditional and Indigenous knowledge for understanding local ecosystems and developing adaptation strategies. Cabral recognized that local farmers possess essential knowledge about soil and water management. What later became established as nature-based solutions to combat climate change had already been understood by Cabral when he systematized the knowledge of Guinean rural populations on soil management, crop cycles, and water conservation while working at the Pessubé Agricultural Post (1953–1954).

Cabral's suggestions for improving the agricultural sector included seed selection according to soil type, crop-livestock intercropping, integrating agriculture with livestock farming, and improving agricultural techniques. The agroecological practices of crop diversification, maintenance of vegetation cover, and sustainable soil management, advocated by Cabral, are considered more effective strategies for climate adaptation (Ayompe and Epie, 2025).

According to Cabral, the man who is unaware of the conditions under which the complex soil-life-climate system operates destroys the earth, the foundation upon which the structure of human societies rests. The educational process activates this awareness by promoting critical thinking, interdisciplinary approaches, and behavioural changes necessary for climate resilience (Silva & Guimarães, 2018).

One of the widely advocated solutions to address climate change is environmental education, which should be mandatory in the curricula of all levels of education, especially in vulnerable countries.

In 2021, UNESCO conducted important work to investigate how African countries integrated environmental issues into their curricula, noting that climate change was integrated into teacher training curricula in 28 countries at the primary level and 35 countries at the secondary level. Among the countries cited as examples is Seychelles, an African state, where the approach is mandatory (UNESCO, 2021).

We should not see African traditions as a proposal to return to an idealized past, but as the development of a scientific and popular culture in which science serves an education that liberates. Cabral's idea of "returning to the source" allows us to understand the path that humanity must take to reverse the climate crisis, which requires the revaluation of popular culture and knowledge (Vambe & Zegeye, 2008).

However, the financing logic of adaptation plans and climate mitigation measures by the main funders in the Global North leaves little room for manoeuvre for countries in the Global South. David Harvey (2003) demonstrates how the credit system functions as a "hook" mechanism, inducing economically vulnerable countries into debt to finance infrastructure that primarily supports resource export rather than local development.

It is important to understand that climate adaptation depends much more on local indigenous knowledge systems than on the importation of external technologies and



solutions, although this is not in the interest of the main funders, who aim to profit from climate issues. In this sense, the devaluation of the discourse is also related to the need to keep countries in the Global South dependent on technologies from the North.

Even in the Global South, politicians remain skeptical and reluctant to promote Indigenous knowledge systems, revealing that discourse does not align with practical actions. It is necessary to promote awareness among Global South agents, leading to epistemic disobedience and a break with colonial power structures to recognize the value systems of communities that interact with species and ecosystems.

This is valuable because certain agroecological practices have been presented as scientific discoveries of Northern countries, when in fact they are practices rooted in the great civilizations of the Global South (David, 2024). This integration, however, cannot be seen merely as ethnographic curiosity; it must be viewed as the practical science of ecological adaptation. This responsibility for valuation lies with the academia and politics of African countries, in the sense of decolonizing the curriculum and deciding what should be studied and its usefulness for solving African problems.

Cabral's Contribution of Thought to Climate Issues in Cabo Verde

To discuss the relevance of Cabral's thought and contributions today, it is worth asking: where is Cabral in Cabo Verdean politics and academia? In Cabo Verde, Cabral has been the target of far more attacks than the necessary and valuable dialogue about his contributions to addressing problems, such as environmental ones.

However, it must be admitted that Cabral still bothers an intellectual elite that was more concerned with reproducing Western theoretical models, without anchoring and involving themselves in the real causes and problems of the African people. Cabral was an organic intellectual, in the perspective of Paulo Freire, acting and thinking from two countries (Guinea-Bissau and Cabo Verde), proposing strategies for the development of Africa and humanity, using science, diplomacy, and a spirit of solidarity to dignify the human being.

Cabral argued for the need for Cabo Verdeans to know their land, the circumstances, and problems of the country to contribute to solving structural problems. Without this deep knowledge, there is no way to transform reality, and this has not happened given the low investment in scientific research and the current debate on the country's history, which involves issues such as drought, famine, water mobilization, and food sovereignty.

Cabral stated that soil erosion is one of the country's biggest problems, which "presents a grim state," and this issue remains the main one (Costa, 2004; Baptista et al., 2015). Cabral placed the problem at a level that everyone knew about, at least its consequences for agricultural activities, despite the political and scientific negligence over the decades in reversing the erosion situation and empowering this vital sector for the country. Regarding the phenomenon of climate change, more than 85% of the Cabo Verde population is aware of and concerned about its impacts on the well-being of their households and on the rainfall cycle itself. Although the municipalities (Ribeira Grande de Santiago, Santa Cruz and Santa Catarina do Fogo) dedicated to agricultural practice are those where the population has heard the least about climate change (INE, 2025), this reveals that those who work in the



sectors most affected by climate issues do not have a complete understanding of the phenomenon and, therefore, have a low capacity for reaction and adaptation.

Cabral's writings on Cabo Verde are particularly relevant for understanding climate vulnerability. In "Some Considerations on Rain" (1949) and in the series "In Defence of the Land" (1949-1952), he documents a dramatic environmental transformation, identifying the destruction of natural vegetation as the primary cause of the aridity of some islands and the development of erosion.

Cabral (1949, p. 5) documents what falls under "environmental memory" or "ecological baseline": a comparison between a past of greater abundance and a degraded present.

Droughts in Cabo Verde have been a long-standing problem, with all the inherent consequences, but it is not uncommon to hear elderly people express nostalgia for the old days of abundance, when singing streams flowed through lush valleys, overlooking hillsides covered in a wide variety of vegetation; references to the good springs that fed the irrigation of crops; mentions of years of plenty, of great production of corn and beans, etc. Well, it is essential to mention that little or nothing of all that remains today.

Recovering this memory brings with it a valuable point: although irregular, it does rain in Cabo Verde, and sometimes in significant quantities. Nevertheless, the large volume that falls into the ocean and what is lost towards the sea, carrying away a portion of arable land, could be used strategically, especially during periods of drought or when plants require additional water to complete their biological cycle.

Cabral describes phenomena that anticipate the contemporary concept of extreme weather events and their consequences, from floods that previously followed a normal course to rainfall that eroded portions of agricultural land, indicating the low capacity for water retention and infiltration in the soil and springs. Therefore, rains that once fed the springs became destructive events.

Currently, data point to enormous pressure on the land, as only 10% is arable, which is insufficient for agricultural demand, forcing the use of steep slopes for rainfed agriculture, which increases erosion (Baptista, 2013). Due to this type of agriculture, soil loss is estimated at 7.8 t/ha (Ministry of Environment, Housing and Spatial Planning, 2013).

Regarding solutions for Cabo Verde, Cabral had already advised Cabo Verdeans to adopt practical measures, including the use of rainwater with minimal loss. This recommendation has not been implemented in a structured and continuous way in public policies related to major infrastructure in rural and urban areas. It has been more of a governmental policy than a state policy.

In 2006, the Cabo Verdean government invested in the construction of six dams² as strategies for retaining and storing rainwater, mostly on the island of Santiago, due to its hydrogeological conditions. In 2010, the government named the construction of the

² Poilão Dam; Saquinho Dam; Salineiro Dam; Faveta Dam; Figueira Gorda Dam; Canto Cagarra Dam and Banca Furada Dam



Saquinho dam in the municipality of Santa Catarina after 'Amílcar Cabral', in recognition of his contribution as an agricultural engineer who grew up in the region.

However, when the reservoirs built to retain and store rainwater reach their storage limit, they lose freshwater to the sea, while in other parts of the islands, the population faces water scarcity. Furthermore, the problem of poor rainwater management extends to urban buildings, squares, and paved roads across the country, which lack rainwater harvesting and storage systems. This would be a solution to several problems in large urban centers and a source of irrigation for green areas, which are scarce in cities.

Cabral proposed intervening directly in the movement of water, creating obstacles and forest hydraulic works to reduce the speed of flash floods. The idea is simple but efficient: if the water flows down with less force, it carries away less soil. Therefore, on steep slopes, Cabral advocated the creation of terraces to stop the flow of water and allow agriculture, to reduce the formation of gullies and conserve the soil, a practice that Cabral highlighted at the time was already in effect on some islands, such as the Island of Fogo. This proposal is also important for urban settlements, where unsafe housing exists.

In waterways, he suggested the use of upstream dikes and other structures (of stone or masonry) to control floods, retain sediments, and reduce the impact of strong currents. He spoke of the importance of harnessing rainwater through reservoirs, such as dams, reservoirs, and cisterns, which contribute to both soil conservation and the sustainable use of water. Cisterns are a low-cost technology that can be encouraged in both rural and urban areas. Only 10% of people have cisterns for rainwater. In rural areas, it is 27,4%, but in urban areas, it's only 5% (INE, 2025). (INE, 2025). It is an architectural aspect that should be mandatory in urban construction because cities like Praia have faced enormous pressure on this vital resource in recent years. Although greywater is not used according to the recycling rules, it can help boost urban vegetation.

Cabral emphasized planting species that protect the soil, including shrub and tree vegetation, as well as crops organized according to contour lines. Here, the notion that the soil needs to be "dressed" to prevent it from being washed away by the rain becomes clear.

Nevertheless, Cabral insists that no one should apply a solution generically, as it depends on a detailed study of the specific conditions of each place. This becomes clearer when he analyses the issue of tree planting. For him, the essential thing in Cabo Verde is not simply planting trees, but "creating green" intelligently, which involves selecting species that adapt to local ecological conditions, can withstand drought, and contribute to soil protection and some economic utility.

The shortage of green spaces has been one of the country's main environmental issues for the past 15 years. Only 0.2% of the total area corresponds to urban woodlands (INE, 2025). Successive reforestation projects have prioritized species such as acacias, which have become a threat to the fertility of agricultural soil and have spread uncontrollably, also due to the decrease in soil preparation for agricultural activity and the abandonment of the countryside.

Cabral (1949) conditions these structures and solutions on economic viability, also to technical studies, but he emphasizes a determining point: "that there be the will (of the leaders and the led), that is, "a conscious desire to carry out works that, by their scope,



contribute to improving the existence of a People who, through countless generations, have had from life only the bitter gall of suffering, the stigma of hunger."

The proposal addresses not only the technical aspects but also the political and institutional field, advocating for the creation of forestry legislation, the training of technicians, and the education of the population. It recognizes that the relationship between humans and trees represents a structural struggle for survival.

If there is one word that runs through all Cabral's concerns, it is hunger. He aligns with the innovative concept of development as freedom, which Amartya Sen and Mahbub ul Haq proposed in the 1990s. This concept presupposes the removal of the main barriers, especially hunger, so that people become more socially complete and can participate freely in the development process.

Agriculture is the area most affected by climate change in Cabo Verde. For Cabral, defending this sector is rational, as it is the basis of the Cabo Verdean economy; therefore, it is the area that allows for the economic emancipation of the people, but it is also the area where the people can contribute their knowledge and experience of nature-based solutions to climate change.

Small producers face various challenges, and climate change exerts more pressure on already fragile production systems. In Cabral's time, the rainfall regime was common knowledge; he himself stated that it was a fact for which rulers could prepare. Today, things have changed, and it is no longer possible for farmers to prepare during the traditional rainy season. In this sense, a convergence between technology and ancestral practices is needed for more resilient agriculture.

However, there are two characteristics of climate change, in relation to rainfall patterns, that Cabral could not have considered: unpredictability and intensity. Currently, it rains out of season and intensely for a short time, causing many damages and destruction. The tragedies that occurred in Praia in 2021, in São Vicente in 2025, and in Tarrafal reinforce the argument that the country has not prepared for this type of event. Nevertheless, unpredictability itself becomes data: if it is not known when or to what extent climate change will impact, the best course of action is to prepare for any scenario, and in this, Cabral's observations serve as compasses.

Conclusion

The path outlined in this article allows us to affirm that Amílcar Cabral, although he did not live to witness the scientific and political consolidation of the global climate debate, formulated, based on his experience as an agronomist and as a leader of the liberation struggle, a systemic understanding of the relationship between soil, climate, and society that anticipates, in conceptual terms, discussions that would gain traction only decades later. The concept of "soil-life-climate balance," his distinction between natural erosion and erosion accelerated by human action, and his definition of conservation as use without destruction constitute contributions that engage directly with what is now designated as sustainable development, nature-based solutions, and climate justice.



More than a technical anticipation, Cabral's thought offers a key to the political interpretation of the contemporary climate crisis. By situating environmental degradation as a structural consequence of colonialism and imperialism, and not as merely natural or accidental phenomenon, Cabral provides a foundation for what recent literature calls climate coloniality - the realization that the vulnerability of countries in the Global South to climate change is not disconnected from the history of colonial exploitation, but rather its continuation in new forms. His defense of African unity as a condition of strength and struggle finds, in this sense, a direct correspondence with the current need for a cohesive African position in international climate negotiations, marked by persistent imbalances in adaptation financing and a historical reparation that has not yet been realized.

At the local level, applying Cabral's thinking to the case of Cabo Verde reveals both the relevance and urgency of his proposals. Soil erosion, identified by Cabral as the archipelago's greatest problem, remains an unresolved challenge; his recommendations on rainwater harvesting and utilization, the resumption of terraced farming, and afforestation adapted to local ecological conditions continue to offer technically sound solutions to problems exacerbated by the increasing unpredictability and intensity of extreme weather events.

Finally, this study also sought to draw attention to a significant void concerning the relative marginalization of Cabral in contemporary Cabo Verdean academic and political debates, especially regarding his scientific production. Recovering this dimension means recognizing him as an organic intellectual who articulated science, local knowledge, and an ethical commitment to human dignity. In this sense, academically valuing Cabral's environmental thought is not an exercise in historical memory; it represents a concrete contribution to contemporary discussions about climate justice from the perspective of Cabo Verde and Africa.

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