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Framing the '*Double Burden*': A Critical Policy Discourse Analysis of the Climate-Poverty Nexus in the World Bank's CCDRs for LDCs

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ABSTRACT: Climate change and poverty are intertwined global challenges that disproportionately impact Least Developed Countries (LDCs). However, how global institutions discursively construct the climate-poverty nexus to legitimize their policy recommendations remains underexplored. Drawing on Critical Policy Discourse Analysis (CPDA), this study investigates how the World Bank Group frames the relationship between climate change and poverty in its Country Climate and Development Reports (CCDRs) for LDCs, as well as the discursive legitimation strategies embedded in these constructions. Findings identify two dominant, complementary discursive frames: the vulnerability frame and the causality frame. The vulnerability frame constructs poor and marginalized groups as passive victims of climate impacts, leveraging on attributive relational and passive material processes, and deploys moral evaluation as a legitimization strategy to position adaptation policies as a non-negotiable moral imperative. In contrast, the causality frame positions climate change as an active, causal agent driving poverty dynamics, utilizing active material processes and extended causal chains, and employs scientific rationalization to legitimize mitigation policies as rational, long-term investments aligned with LDCs' development priorities. These two frames collectively shape a hybrid policy agenda that integrates ethical imperatives with technocratic efficiency, reflecting the World Bank's attempt to legitimize its institutional influence on LDC climate-development trajectories. This research contributes to the scholarship on discourse in global climate governance by equipping stakeholders to engage with international policy advice critically and fostering more context-sensitive strategies for LDCs.

Keywords: Climate change; Poverty; Critical policy discourse analysis; World Bank; CCDRs; Least Developed Countries; Policy legitimation

1. Introduction

Climate change and poverty are two deeply intertwined global challenges, with international frameworks such as the Sustainable Development Goals (SDGs) and the Paris Agreement explicitly linking poverty eradication (SDG 1) and climate action (SDG 13). Climate change, widely recognized as "the

defining challenge of our era" [1], has transcended purely environmental boundaries to emerge as a critical political and developmental issue, reshaping global dynamics of equity and justice. Poor populations are disproportionately vulnerable to extreme events, disruptions, and shocks such as health hazards, natural disasters, conflicts, and economic downturns, and often lack resources to cope with and recover from such impacts. While the discussions around loss and damage have reinforced public awareness that less developed countries and poor populations bear the brunt of climate change impacts, researchers have long emphasized that climate change vulnerabilities, impacts, and responses are deeply entangled within political, social, and economic progresses that create and perpetuate poverty [2]. This entanglement is particularly pronounced for Least Developed Countries (LDCs), where climate change and poverty together impose a "double burden" with compounding, disproportionate effects. Home to over 1.1 billion people trapped in acute poverty, LDCs face a unique and overlapping set of challenges: their reliance on climate-sensitive livelihoods, limited infrastructure, and weak governance systems amplify their vulnerability to climate shocks, while pervasive poverty further undermines their adaptive capacity to mitigate and respond to these impacts [3,4].

Existing literature have identified several dominant narratives that frame the complex, intertwined relationship between climate change and poverty. One prominent narrative, as illustrated in the World Social Report [5], posits that climate change can generate a "vicious cycle" characterized by deepening poverty and vulnerability, worsening inequality, and further destabilizing the already precarious situation of many disadvantaged groups. This narrative is supported by a substantial body of empirical research, which confirms that climate change exacerbates poverty through both direct and indirect channels, including undermining consumption patterns, eroding asset bases, reducing productivity, and constraining livelihood opportunities [6–9]. For instance, Reference [10] demonstrate that rising temperatures disproportionately harm agricultural productivity in low-income regions, directly reducing household incomes and deepening poverty. Conversely, poverty itself can also amplify vulnerability to climate shocks, as resource constraints, inadequate social protection, and limited political voice leave poor communities ill-equipped to cope with or adapt to climate impacts [11–16], trapping them in a self-reinforcing cycle of deprivation and risk.

Critical scholarship further elucidates that this vicious cycle and compounding hardship are deeply rooted in underlying structural inequalities. It is argued that high-income countries and affluent populations, who are responsible for the majority of historical carbon emissions, shift climate risks onto low-income countries and poor communities [17–19]. For example, Reference [20] document how agricultural households in South Africa, who are already marginalized by limited adaptive capacity, bear the brunt of climate shocks such as rising temperatures. Compounding this injustice, poor groups and vulnerable communities generally lack the adaptive capacity and resources to cope with climate hazards [21] and are often excluded from climate policymaking processes. For instance, Reference [22] show that low-income communities are sidelined in clean energy transition decisions, leading to policies that fail to address their needs and may even exacerbate existing inequalities [23].

LDCs are prone to falling into policy trade-offs in formulating development plans and policies under this burden, which may further exacerbate the vicious cycle. These countries grapple with a fundamental tension, *i.e.*, eradicating poverty requires sustained economic growth while climate action demands emissions reductions and adaptation investments, which often creates resource competition [24,25]. For instance, Reference [26] highlight that climate mitigation policies may significantly increase global poverty by triggering macroeconomic losses and disrupting price stability. Reference [27] show that poverty alleviation in low- and lower-middle-income countries can inadvertently lead to increased carbon emissions. This inherent policy tension underscores the profound complexity of aligning development and climate goals, particularly for the world's most vulnerable nations.

Against this backdrop, international organizations such as the World Bank, IMF, and UN agencies act as "norm entrepreneurs" [28] and play a pivotal role in shaping global development agendas. Among them, the World Bank is renowned for developing and releasing a series of flagship reports, such as the *World Development Report* (WDR), the *Turn Down the Heat* series (2012–2018), and, more recently, the *Country Climate and Development Reports* (CCDRs). These reports frame climate action as integral to poverty reduction, positioning themselves as "actionable roadmaps" for aligning climate and development goals. They aim to support countries to identify ways to accelerate their development ambitions in line with their own nationally determined contributions and long-term strategies, while proposing concrete, priority actions to foster development alongside resilience-building [29]. Notably, however, these seemingly "authoritative documents" are not merely neutral policy tools but rather discursive practices that construct problems, frame solutions, and legitimize institutional interventions, thereby shaping how various stakeholders understand and inform operations. As ref. [30] argue, international organizations usually wield "authoritative knowledge" to frame global problems, often embedding Western-centric or neoliberal values (e.g., market efficiency, private-sector-led growth) into their policy narratives. Reference [31,32] further critique how World Bank discourse has historically framed "underdevelopment" as a technical failure, rather than a product of colonialism or structural inequality.

Drawing on a Critical Policy Discourse Analysis approach, this study aims to examine how the climate-poverty nexus is discursively framed in the World Bank's Country Climate and Development Reports (CCDRs) for Least Developed Countries (LDCs) and how these discursive frames are mobilized to legitimize the Bank's policy recommendations. By doing so, this study contributes to a deeper understanding of the role of discourse in global climate and development governance, particularly in the context of LDCs, and equips stakeholders with critical analytical tools to engage with international policy advice. Ultimately, it seeks to foster more equitable, context-specific strategies that effectively address the intertwined challenges of climate and poverty in LDCs.

2. Methods

2.1. Data

The data for this study consists of official documents drawn from the World Bank Group's *Country Climate and Development Reports* (CCDRs), with a specific focus on reports for Least Developed Countries (LDCs).

Launched by the World Bank in 2021, CCDRs represent a flagship diagnostic and planning instrument for integrating climate and development priorities in client countries. In contrast to generic global reports, CCDRs are country-specific documents characterized as "actionable roadmaps" that align national climate ambitions with development objectives. They assist countries in identifying pathways to accelerate development progress in line with their climate actions and long-term strategies, while proposing concrete priority actions to foster inclusive development and enhance climate resilience. Thus, they provide structural policy guidance for prioritizing climate mitigation, adaptation, and resilience-building measures while aligning with development goals such as poverty reduction, inclusive growth, and sustainable development. Targeting a wide range of stakeholders (*i.e.*, governments, civil society, the private sector, and international partners), CCDRs serve as influential texts that shape both global development-climate agendas and national-level policy priorities.

LDCs were selected as the analytical context because they are widely recognized as the most vulnerable to climate change due to their structurally fragile economies, high poverty prevalence, and limited institutional, technical, and adaptive capacities. This structural vulnerability renders LDCs a critical site for examining how the climate-poverty nexus is discursively constructed within international policy discourse, which may differ from those in middle-income or high-income countries. LDC eligibility was determined

in accordance with the classification criteria established by the United Nations Conference on Trade and Development [33]. The UNCTAD framework identifies LDCs based on three core dimensions: (1) per capita income, defined as a gross national per capita below $11,135; (2) human assets, measured by indicators such as health, education, and nutrition; and (3) economic and environmental vulnerability, assessed through exposure to climate shocks, economic instability, and structural fragility.

As a result, a total of 18 CCDRs were included in the analysis, covering 24 LDCs across three regions: Africa, Asia, and the Pacific (see Table 1). The sample was selected so as to ensure the geographic representativeness and alignment with the World Bank's priority LDCs for climate-development integration. All reports were publicly available on the official website of World Bank.

Table 1. List of CCDRs and Covered Countries.

Region	Countries Included	Number of Reports/Countries Covered
Africa	Angola, Benin, Djibouti, Democratic Republic of the Congo, Ethiopia, G5 Sahel (Burkina Faso, Chad, Mali, Mauritania, Niger), Liberia, Madagascar, Malawi, Mozambique, Rwanda, Senegal, United Republic of Tanzania	13/17 *
Asia	Bangladesh, Cambodia, Nepal, Yemen	4/4
Pacific	Pacific Atolls (Kiribati, Marshall Islands, Tuvalu)	1/3

* Notes: The discrepancy between reports and countries in Africa arises because the G5 Sahel region is covered in a single joint CCDR, which includes five sovereign nations (Burkina Faso, Chad, Mali, Mauritania, Niger).

To ensure systemic analysis, qualitative content analysis was conducted using the qualitative analysis software ATLAS.ti 23. The unit of analysis was defined as sentences or paragraphs that explicitly or implicitly address the interplay between climate change and poverty. Through iterative open coding, a total of 183 relevant excepts were systematically identified and extracted from the 18 reports. These excerpts were labeled with descriptive codes (e.g., "climate-induced poverty", "poverty-driven vulnerability") to capture initial themes. To enhance reliability, two rounds of independent coding were further conducted by the authors at a 4-week interval. The initial results were compared, and discrepancies were resolved through systematic discussion and reference to the original text, ensuring consistency in thematic interpretation. This process refined the initial descriptive codes into two core thematic categories and 12 subcategories (e.g., "vulnerability", "causality", "adaptation-centered solutions"), which formed the basis for subsequent analysis.

2.2. Analytical Framework

This study adopts Critical Policy Discourse Analysis (CPDA) as the overarching theoretical and analytical lens, which integrates Critical Discourse Analysis (CDA) with Critical Policy Studies (CPS). Both CPS and CDA conceptualize policy as rooted in political 'imaginaries', the discursive simplification of an infinitely complex terrain of political action and the assumed landscape of possibilities for governmental intervention. In this way, policies construct a particular version of a problem, legitimated on the basis of available expert evidence, and are shaped by the dominant mode of governance [34]. CDA is an approach to social scientific research that combines detailed textual analysis with theoretically informed accounts of the phenomena under investigation. Its core objective is to identify how language (re)produces social practices and privileges certain ways of doing, thinking, and being over others. Specifically, CDA examines how language contributes to the constitution, contestation, and transformation of social problems, and legitimizes existing power relations [35,36]. Complementarily, CPS is a well-established approach to policy research characterized by a strong analytical focus on discourse and rich contextualization of the social settings in which policies are enacted and interpreted.

As an integrated perspective, CPDA provides a robust analytical tool for exploring how discourse shapes social reality. It involves the systematic analysis of semantic, syntactic, and discursive relations

within texts, as well as global patterns and relations between texts, to reveal how such discursive representations serve institutional agendas.

To systematically unpack the discursive construction of the climate-poverty nexus in our target CCDRs texts, a two-level analytical framework was developed, as detailed below.

At the intra-sentence analysis, we draw on the transitivity system from Systemic Functional Linguistics [37], which explores how clauses construe "the world of experience into a manageable set of process types" (p. 170). Transitivity reveals how speakers or writers represent actions, participants, and relationships, thereby shaping perceptions of causality, agency, and responsibility. For this study, climate change and poverty are treated as core "participants", and their semantic roles and relational configurations within clauses are analyzed to address the key question: *How are climate change and poverty positioned as actors, victims, or contextual factors in individual propositions?* Following [37], four process types are prioritized for their relevance to constructing the climate-poverty nexus: (1) material processes which represent "doings" or "happenings", involving actors (who/what initiates the action), goals (who/what is affected), and circumstances (contexts like time, place, or manner); (2) relational processes which serve to "characterize or identify" entities, further divided into attributive relations (assign attributes to an entity) and identifying relations (equate two entities); (3) mental processes which capture cognition, perception, or emotion; and (4) verbal processes which involve communication, which highlight authoritative claims or policy mandates.

Moving beyond individual clauses, the inter-sentence level examines how climate-related and poverty-related propositions are linked across sentences and paragraphs to form coherent narratives. This analysis draws on discourse relational theory [38], which identifies the logical relations that structure text and guide reader interpretation. The central question addressed here is: *How are individual clauses about climate change and poverty organized into persuasive, stable narratives that advance policy arguments?* To answer this, we analyze both the explicit "cue words" (e.g., "because", "consequently", "however") that signal logical relations (e.g., causality, contrast, concession) and cohesive devices, including reference, substitution, and lexical cohesion, which bind propositions together and reinforce narrative coherence.

To connect discursive patterns to the legitimation of World Bank policy recommendations, we draw on van Leeuwen's [39,40] framework of discursive legitimation. This framework identifies four core strategies used to justify and normalize social practices, institutional policies, and ideological positions: authorization, moral evaluation, rationalization, and mythopoesis. These strategies are employed to unpack how the discursive framing of the climate-poverty nexus in CCDRs serves to legitimize the Bank's policy advice for LDCs.

3. Results

Through systematic coding and textual analysis at both intra-sentential and inter-sentential levels, we find that two dominant discursive frames are prevalent in the sampled CCDRs—the vulnerability frame and the causality frame. Distinct linguistic patterns and ideological functions characterize these two frames, yet they operate in complementary ways to represent the World Bank's discursive construction of the climate change-poverty nexus and further shape its recommendations for LDCs' policy pathways.

3.1. The Vulnerability Frame

The vulnerability frame emerges as a pervasive discursive pattern across the CCDRs, which represents the climate-poverty nexus through the lens of structural susceptibility and passive exposure rather than exploring the dynamic and reciprocal interactions between climate action and poverty reduction. In other words, this frame prioritizes the identification of *who* is affected by climate-related risks over *why* and *how*

such vulnerabilities are created and sustained, thus systematically constructing poor and marginalized populations as passive, defenseless recipients of external climate shocks.

At the intra-sentential level, the vulnerability frame is linguistically realized through two dominant grammatical structures within the transitivity system: attributive relational processes and passive material processes. Both structures serve to discursively construct vulnerability as an inherent, fixed attribute of poor communities, while strategically positioning climate-related factors as external, background contexts. For example,

> *The poor are particularly vulnerable to climate impacts due to their dependence on rural livelihoods, greater engagement in outdoor work, substandard housing, and poor access to resources.* (Djibouti)
>
> *Poor, rural, agriculture-reliant households are most vulnerable to climate-induced shocks.* (Benin)

In both cases, an attributive relational process is employed via the relational verb "*are*", which links the Carrier ("*the poor*", "*poor, rural, agriculture-reliant households*") to the Attribute ("*particularly vulnerable*", "*most vulnerable*"). In the Djibouti CCDR, "*climate impacts*" does not function as an Agent (an active entity that acts on the Carrier) but rather as a Circumstance introduced by the preposition "*to*" and contextualized by the subsequent phrase ("*due to their dependence...*"). This semantic role configuration constructs "vulnerability" as an inherent trait of "*the poor*", while "*climate impacts*" are framed as a background trigger that exacerbates this preexisting condition rather than a structural force that contributes to poverty and vulnerability.

Besides, passive material processes also reinforce this narrative of passivity by manipulating semantic roles within clauses, by strategically shifting the Agent to the Goal or Recipient position, while either omitting the Agent entirely or positioning climate-related burdens as external, unaccountable Agents. This linguistic choice usually erases the agency of poor communities, framing them as passive recipients of harm rather than active actors capable of mitigating or resisting climate shocks. A representative example is from the G5 Sahel CCDR,

> "*The burdens from climate change fall disproportionately on the poor and most vulnerable*". (G5 Sahel)

In this sentence, "*burdens from climate change*" is assigned the role of Agent (the active entity performs the action "*fall*"), while "*the poor and most vulnerable*" are constructed as passive Goal (the entity affected by the action). In other words, the Agent ("*burdens from climate change*") is framed as an abstract, inevitable force, which acts on the Goal without any possibility of resistance or agency on the part of the poor.

In addition to the two transitivity processes outlined above, another prominent linguistic feature of the vulnerability frame is the recurrent collocation "the poor and most vulnerable", a standardized lexical bundle that appears consistently across the sampled CCDRs. This collocation transcends narrow income-based definitions of poverty to encompass a range of multiply marginalized groups, including women, children, ethnic minorities, persons with disabilities, and elderly populations. By aggregating these diverse groups under a single, unified category, this lexical choice enhances the moral salience of vulnerability claims, framing these populations as ethically deserving of external intervention and support. For example,

> "*The poor and most vulnerable populations are most impacted due to their reliance on agriculture and other climate-sensitive natural resources for income and livelihoods*". (Bangladesh)
>
> "*Climate change introduces additional shocks and aggravates existing challenges, disproportionately affecting the poor and the most vulnerable, exacerbating poverty and inequalities, and ultimately complicating Mozambique's efforts to diversify its economy*". (Mozambique)

In both instances, the collocation "*the poor and most vulnerable*" consolidates diverse marginalized groups into a single moral category, constructing vulnerability as a collective, shared condition that reinforces the need for targeted policy interventions.

In short, the vulnerability frame naturalizes poverty and vulnerability by strategically omitting references to the deep structural drivers of susceptibility, such as historical inequality, colonial legacies, uneven global trade regimes, or domestic policy failures. This discursive choice stands in stark contrast to the IPCC's [3] definition of vulnerability as "the propensity or predisposition to be adversely affected" (p. 2927), which encompasses both communities' sensitivity to climate shocks and their lack of adaptive capacity, factors inherently shaped by broader structural contexts. In contrast, the CCDRs focus narrowly on individual and community-level deficits, framing poverty and vulnerability as products of local circumstances rather than outcomes of systemic inequalities.

3.2. The Causality Frame

In addition to the passive, attribute-focused vulnerability frame, the causality frame appears as another salient discursive pattern across the sampled CCDRs. Unlike the vulnerability frame, which foregrounds vulnerability as an inherent attribute, the causality frame establishes explicit directional causal relationships between climate change and poverty, focusing specifically on *how* climate change actively shapes poverty dynamics. To formalize causal links, the frame deploys distinct linguistic and discursive devices, either by employing active material processes to cast climate change as an active agent at the intra-sentential level or by weaving discrete clauses into extended, sequential causal chains through the use of logical connectors and anaphoric reference.

At the intra-sentential level, the causality frame is linguistically encoded through active material processes with strong transitivity that explicitly positions climate change, climate shocks, or climate-related harms as the Agent—an active entity capable of directly producing, altering, or shaping poverty-related outcomes (assigned the semantic role of Goal or Result). This grammatical choice is further reinforced by a consistent set of high-intensity causal lexical verbs, including "*increase*", "*exacerbate*", "*prevent*", "*reduc*e", and "*lead to*", all of which semantically encode a one-way relationship where climate-related factors act on poverty, rather than vice versa. For instance,

> "*Climate change will increase the poverty rate in Mozambique. In all the future climate scenarios, the economic losses from climate change impacts increase poverty*". (Mozambique)
>
> "*Climate change will reduce—and potentially reverse—the pace of poverty reduction, increasing the level of poverty in 2050 by up to 6.8 percentage points*". (Senegal)
>
> "*Among the poorest 20 percent of rural residents, climate shocks are the most important determinants of reduced household consumption and can lead to more significant asset losses and long-term poverty*". (Madagascar)

As shown in the above excerpts, the Mozambique CCDR employs active material processes are employed centered on the causal verb "*increase*". Here, "*climate chang*e" and its associated "*economic losses from climate change impacts*" are clearly positioned as the Agent, while "*the poverty rate*" and "*poverty*" are assigned the role of Goal. This semantic configuration leaves no ambiguity about the directional causality: climate change is framed as an active driver that directly elevates poverty levels, with no mention of reciprocal or contextual dynamics.

Similarly, the Senegal CCDR uses a sequence of causal verbs "*reduce*", "*reverse*", and "*increase*" to emphasize the Agent status of climate change. The primary verb "*reduce*" positions climate change as an Agent that actively obstructs progress in poverty reduction (the Goal), while the participle "*increasing*" extends this causality to a subsequent Goa—"*the level of poverty in 2050*". The specific numerical detail

("*up to 6.8 percentage points*") further amplifies the perceived urgency and certainty of the causal impact of climate change.

In the Madagascar CCDR excerpt, the phrase "*most important determinants*" semantically elevates "*climate shocks*" above all other potential drivers of poverty (e.g., structural inequality, inadequate governance), framing them as the primary Agent shaping poverty outcomes. Furthermore, the causal verb "*lead to*" links the Agent to a sequential chain of Goals (*i.e.*, "*reduced household consumption*", "*more significant asset losses*", and "*long-term poverty*")—each dependent on the prior, thereby constructing a cumulative, irreversible causal pathway initiated by climate shocks. This linguistic sequencing enhances the narrative that climate change is not just a contributing factor, but a root cause of persistent poverty among marginalized rural populations.

At the inter-sentential level, the causality frame elaborates multi-step causal narratives through explicit logical connectors (e.g., "*resultant*", "*thus*"), anaphoric pronominal reference (e.g., "*these losses*"), and sequential reasoning to integrate discrete propositions into a single, cohesive causal pathway. As [41] observes, causality presents a "basic universal reasoning principle" (p. 181) in text interpretation; the CCDRs strategically leverage this cognitive structure to guide readers toward the conclusion that climate change functions as the central driver of poverty outcomes in LDCs. For example, the Liberia CCDR constructs a tightly sequenced, multi-step narrative linking climatic impacts to agricultural production, household food insecurity, and ultimately poverty:

> "*Rice, a main staple in Liberia, is extremely reactive to higher humidity, extreme temperatures, heavy rainfall, and the pests that flourish under these conditions. The CCDR finds that Liberia's rain-fed rice production could be reduced by up to 13 percent over 2041–2050 from climate change compared to the baseline scenario. The resultant decrease in income and heightened reliance on costly imports could exacerbate poverty and food insecurity for many Liberian households*". (Liberia)

In this excerpt, the logical connector "*resultant*" acts as a key discursive bridge, formally linking intermediate climate-induced harm (*i.e.*, "*reduced rice production*") to subsequent household-level outcomes, including lower income, higher import costs, and deepened poverty and food insecurity. By chaining these events through explicit causal marking, the text constructs a linear, unbroken pathway from climate change to worsening poverty.

Similarly, the Djibouti CCDR constructs a layered, macro-to-micro causal chain using anaphoric reference to maintain narrative cohesion across sentences:

> "*Under hotter temperature scenarios, losses are expected to reach nearly one quarter of revenues in the sector, while under the more favorable temperature scenarios, losses would be about one-tenth. These losses are likely to particularly affect the rural poor, given the importance of keeping livestock for their livelihoods. The losses could have more pronounced effects for vulnerable groups such as disabled household members who have few options to earn an income, and whose support depends on scarce household resources*".

Here, the anaphoric phrase "*these losses*" anchors the unfolding narrative, connecting initial sector-level revenue losses (established as the foundational Cause) to progressively targeted impacts on the "*rural poor*", and then narrowing further to harm among highly "vulnerable groups disproportionately". Through this layered, referential, cohesive structure, the text formalizes a cascading causal sequence that centers climate-related shocks as the primary force driving household-level deprivation.

It is worth noting that these two frames–the vulnerability frame and the causality frame–are not competing narratives, but complementary discursive systems that collectively construct a unified representation of the climate-poverty nexus in the World Bank's policy discourse for LDCs. The vulnerability frame leverages attributive relational processes and passive material processes to identify *who*

bears the brunt of climate harm (*i.e.*, poor and marginalized groups) and frames their structural susceptibility as a fixed, inherent condition rooted in local livelihood and resource constraints. The causality frame, by contrast, employs active material processes and extended inter-sentential causal chains to explain *how* climate change acts as an active agent, driving incremental and long-term poverty through linear, sequential impact pathways.

4. Discussion

As ref. [42] argues, "to frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation" (p. 52). In this sense, the vulnerability and causality frames identified in CCDRs are not merely a neutral linguistic exercise to describe the the relationship between climate change and poverty; more importantly, they also serve as a discursive mechanism through which the institutional discourse constructs ideological narratives, mediates social cognition, and (re)shapes public and policy understandings of complex social issues [43]. Therefore, we further reveal the discursive strategies deployed within these two frames to legitimize the World Bank's policy recommendations and interventions on the global climate and development pathway for LDCs.

4.1. Moral Evaluation in the Vulnerability Frame: Legitimizing Adaptation Policies

Within the vulnerability frame, the World Bank mobilizes the moral evaluation strategy to justify its adaptation-related policy recommendations. As [39] indicates, moral evaluation is a core legitimation strategy that centers on normative justification by appealing to shared social values, ethical principles, and collective moral standards to frame a practice as morally right, virtuous, or aligned with communal ideals. In the context of CCDRs for LDCs, the vulnerability frame deploys this strategy to deliberately position climate adaptation not merely as a technical policy action, but as an urgent moral imperative for policymakers, international partners, and other stakeholders.

First of all, poverty is concretized not as an abstract or de-contextualized entity, but as a morally charged category by attaching normative attributes to marginalized groups. Through the attributive relational processes of the transitive system (e.g., the recurrent clause structure "*the poor are vulnerable*"), this frame constructs "*vulnerable*" as an inherent and morally charged quality of poor households and marginalized communities. This discursive practice transforms context-specific and structurally rooted hardships (e.g., limited access to resources, fragile livelihoods shaped by historical inequalities) into universal claims of suffering. In addition, the collocation "*the poor and most vulnerable*", which recurs consistently across the sampled CCDRs, also reinforces this moral categorization. By aggregating diverse marginalized groups (e.g., women, children, rural households, persons with disabilities) under this single, unified moral label, the frame fosters a collective sense of compassion and moral responsibility, thereby positioning these groups as inherently deserving of protection from climate harm.

Furthermore, the vulnerability frame reinforces moral urgency through comparative inequality claims, using terms like "*disproportionately*" to highlight the uneven distribution of climate impacts. By explicitly contrasting the acute suffering of marginalized groups with the relative resilience of more privileged populations (e.g., high-income countries, rich communities), the discourse draws attention to the underlying structural inequality of climate vulnerability, which evokes core principles of climate equity and justice. A key moral argument embedded in this framing is that least developed countries (LDCs) and their poor populations, who bear the least historical responsibility for carbon emissions and climate change, are disproportionately subject to its most severe consequences. This contrast not only underscores the injustice of climate vulnerability but also strengthens the moral imperative for action, as it frames inaction as a violation of basic ethical principles.

Underpinning this moral evaluation strategy is a subtle yet powerful appeal to humanitarian and justice-based norms, which implicitly asserts that governments, international organizations (including the World Bank), and other stakeholders have a fundamental moral obligation to shield these "poor and most vulnerable" groups from climate harm. In turn, this moral framing serves to legitimize the World Bank's adaptation policies not as a technical choice, but as a non-negotiable moral duty to redress inequitable distribution of climate risk and uphold basic principles of justice. By casting adaptation as a corrective measure to address historical and structural injustice, the vulnerability frame justifies the World Bank's policy recommendations as ethically right and necessary, thereby securing public and institutional support for its intervention agenda in LDCs.

Since vulnerability is framed as stemming primarily from poor and marginalized groups' limited adaptive capacity, the Bank proposes targeted intervention recommendations to "empower" those vulnerable populations. A typical example is Angola's CCDR, which states "*Kwenda, Angola's flagship unconditional cash transfer program, offers a good platform to support poor households in regular times and could be expanded to provide additional assistance when climate-related shocks occur*". This recommendation frames "*cash transfer program*" as both a practical intervention and a moral obligation by linking the program to the protection of the "*poor households*" (a core moral category constructed in the vulnerability frame), the CCDR justifies its expansion as a necessary response to the suffering of the the most vulnerable. The phrase "*could be expanded*" further reinforces the moral urgency of the intervention, implying that inaction would be a failure to uphold the ethical duty to protect marginalized groups from climate hazards.

Besides this, a range of other targeted policy interventions are proposed in the sampled CCDRs, all of which are justified through the same moral lens. These include improving cooling measures in schools, expanding climate-smart irrigation systems, and upgrading housing and urban planning. These interventions are not framed solely as technical fixes to enhance adaptive capacity; instead, they are discursively positioned as ethical responses to suffering and vulnerability.

4.2. Rationalization in the Causality Frame: Legitimizing Mitigation Policies

In the causality frame, the World Bank primarily employs rationalization, which is also a core legitimation strategy that relies on instrumental and cognitive justification by emphasizing practical benefits, logical reasoning, goal achievement, and evidence-based utility [39]. This strategy operates through discursively constructing the climate-poverty nexus as an objective, scientifically grounded causal relationship, projecting the future risks of inaction, and ultimately framing mitigation policies not as additional burden for LDCs (despite their minimal historical contribution to carbon emissions and the potential trade-offs between mitigation and poverty alleviation) but as a rational, forward-thinking policy choice and long-term investment in sustainable development.

The causality frame firstly constructs the climate-poverty link as a scientifically undeniable fact through appeals to what [39] terms "differentiated bodies of knowledge", including economic simulation models, quantitative data, and scientific projections. This discursive move positions the causal relationship between climate change and poverty as objective and evidence-based, rather than a matter of ideological debate, thereby laying the cognitive groundwork for rational mitigation action. As shown above, the Mozambique CCDR leverages climate scenario simulation results to frame causality as empirically proven ("*In all future climate scenarios, the economic losses from climate change impacts increase poverty*"). Similarly, the Senegal CCDR uses precise quantitative metrics ("*climate change will increase the level of poverty in 2050 by up to 6.8 percentage points*") to reinforce scientific credibility. By embedding claims in the language of science, data, and empirical proof, the discourse positions mitigation as a necessary reaction to objective "facts" rather than external pressure or ideological preferences. This appeals directly to LDC

governments' desire for evidence-based, data-driven policies, framing the Bank's mitigation recommendations as technically sound and cognitively rational.

Additionally, this rational necessity is reinforced through future-oriented risk projection, which emphasizes the prohibitive cost of inaction, both in terms of poverty exacerbation and stunted economic development. This discursive strategy frames mitigation as a proactive investment to avoid catastrophic future losses, rather than a passive compliance measure, thereby aligning it with LDCs' long-term development priorities. This is particularly evident in the Liberia CCDR, which warns that unmitigated climate change "*could perpetuate poverty and stunt the country's growth*", and in the Rwanda CCDR, which predicts that climate variability "*is likely to prevent Rwanda from reaching its targets for economic output and poverty reduction*". Thereby, these future-oriented projections tap into LDCs' core policy imperatives—economic growth and poverty reduction—and reframe mitigation as a rational safeguard against these risks. By highlighting that the cost of inaction far outweighs the short-term costs of mitigation, the Bank addresses LDCs' concerns about resource trade-offs and positions mitigation as a pragmatic, forward-looking choice.

These rationalization strategies serve to legitimize the World Bank's mitigation-oriented policy agenda, which urges LDCs to integrate decarbonization into their overall national development strategies. A representative example is the Angola CCDR, which advocates a "*low carbon development pathway that contributes to the eradication of poverty*", a discourse that directly connects mitigation to the country's core development goal of poverty reduction. To operationalize this pathway, the report recommends two key mitigation measures: the expansion of renewable energy (e.g., solar and wind power) and the creation of green jobs in climate-friendly sectors [44–46]. These recommendations are not framed as standards or climate obligations, but as rational investments that deliver dual benefits: reducing carbon emissions (mitigation) while generating employment opportunities and expanding access to affordable energy, both of which support poverty alleviation. A similar case is the Nepal CCDR, which calls for "*climate-smart agriculture*", including drought-resistant crop varieties, sustainable soil management, and integrated water conservation. These measures are framed as rational responses to the proven link between climate variability and agricultural productivity losses (a key driver of poverty in Nepal). By positioning these practices as technically sound, evidence-based solutions, the CCDR justifies their adoption as a way to simultaneously reduce agricultural emissions and enhance food security, thereby safeguarding rural livelihoods and reducing poverty.

In a nutshell, as indicated earlier, the vulnerability and causality frames do not operate in isolation but function in a complementary manner to legitimize the World Bank's policy recommendations for LDCs through strategic deployment of two core discursive legitimation strategies: moral evaluation and rationalization. Together, these strategies construct the Bank's policy agenda as both ethically imperative and rationally sound. On the one hand, the vulnerability frame's moral appeals to "protect the vulnerable" resonate with the domestic political imperatives of LDCs, which often face pressure to address the practical hardships and structural inequalities experienced by marginalized populations. For national governments, international partners, and other stakeholders, this frame underscores that it is a non-negotiable moral obligation to enhance the adaptive capacities of "*the poor and most vulnerable*", which is rooted in humanitarian principles and climate justice. On the other hand, the rational claims embedded in the causality frame align with technocratic governance norms increasingly prevalent in global development discourse. By framing mitigation through the lens of rationality, the Bank addresses the inherent tension LDCs face–eradicating poverty requires economic growth, yet climate action demands emissions reductions and adaptation investments which often create resource competition and policy trade-offs [24,25]. This rationalization strategy legitimizes the Bank's mitigation policy recommendations as aligned with LDCs' core development interest, framing mitigation as a win-win solution of practical utility that advances both climate and development goals, rather than a trade-off that diverts resources from poverty reduction.

5. Conclusions

Drawing on a critical policy discourse analysis (CPDA) approach, this study examined how the World Bank discursively constructs the relationship between climate change and poverty in its Country Climate and Development Reports (CCDRs) for Least Developed Countries (LDCs), and uncovered how these discursive frames serve to legitimize the Bank's climate and development policy recommendations.

The findings identified two overarching, complementary discursive frames that collectively shape the representation of the climate-poverty nexus in the sampled CCDRs. The vulnerability frame constructs poor and marginalized groups as passive victims of climate impacts, leveraging on attributive relational processes and passive material processes to emphasize their susceptibility as an inherent, fixed trait, rather than a product of structural inequalities. This frame deploys moral evaluation as a core legitimation strategy, positioning the Bank's adaptation policies as a non-negotiable moral imperative for national governments, international partners, and other stakeholders, rooted in humanitarian principles and climate justice. In contrast, the causality frame positions climate change as an active, causal agent driving poverty dynamics, using active material processes and extended inter-sentential causal chains to establish a undirectional, scientifically proven influence. This frame employs rationalization strategies to legitimize mitigation policies as rational, forward-thinking, long-term investments, framing them as aligned with LDCs' core development priorities rather than extraneous burdens.

This study contributes to the existing scholarship by providing a nuanced, linguistically grounded critical lens to reveal how global governance bodies and international organizations discursively construct policy problems, delimit the scope of acceptable solution sets, and align national governments with their institutional agendas. In addition, this study centers on LDCs as a critical yet understudied context, focusing on their unique and inextricable entanglement of climate vulnerability and chronic poverty. In doing so, the findings seek to equip policymakers, civil society actors, and other stakeholders in LDCs with critical analytical tools to interrogate and contest international climate-development advice, fostering greater agency in navigating global policy pressures.

In conclusion, the climate-poverty nexus portrayed in the World Bank's CCDRs is not a neutral reflection of objective reality, but a strategically constructed discourse that serves to legitimize the Bank's institutional policy agenda. By unpacking these linguistic mechanisms and legitimation strategies embedded in this discourse, this study underscores the crucial role of critical language analysis in understanding and challenging the power dynamics inherent in global climate governance. Future research could extend this analytical framework to other international organizations (e.g., IMF, UNDP) or regional contexts to explore how discursive constructions of climate and poverty vary across institutional and geopolitical settings, thereby further enriching our understanding of the role of discourse in shaping global development and climate policy.

Statement of the Use of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this work, the authors used Deepseek to improve readability and language. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

Author Contributions

All authors contribute to the study conception and design. Data collection and analysis were performed by X.Z. and W.Z. The first draft of the manuscript was written by W.Z. and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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Not applicable.

Informed Consent Statement

Not applicable.

Data Availability Statement

The data used in the current study are available at https://www.worldbank.org/en/publication/country-climate-development-reports, accessed on 13 April 2026.

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Declaration of Competing Interest

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