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Nepal's Access to Global Climate Funds: Barriers, Institutional Capacity, and Pathways to Direct Access

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Abstract

Nepal ranks among the countries most exposed to the physical impacts of climate change, yet its access to global climate finance instruments remains limited relative to its adaptation and mitigation needs. This paper examines the barriers Nepal faces in accessing major multilateral climate funds, including the Green Climate Fund, the Adaptation Fund, and the Least Developed Countries Fund. To augment this qualitative framework with quantitative rigor, the paper introduces a novel composite Direct Access Capacity Index comparing Nepal against three peer countries (Bangladesh, Bhutan, and Kenya), and applies an ordinary least squares scenario simulation to explore the mechanics linking institutional accreditation expansion to realized finance. The empirical results show that while Nepal has made measurable progress toward direct access, securing dual accreditation for one national institution and project approvals worth well over a hundred million dollars, multilateral finance continues to flow through international and multilateral implementing entities rather than through Nepali institutions acting as accredited entities in their own right. The paper argues that Nepal's federal transition, its evolving public financial management systems, and its narrow base of technically qualified proposal writers compound the access barriers common to least developed countries. It recommends a phased national strategy that expands the pool of accredited entities, links domestic public financial management reform directly to fund-level fiduciary requirements, and builds a standing project pipeline function inside government rather than relying on episodic, externally led proposal design. The findings extend the literature on climate finance access for least developed and mountainous countries and offer practical direction for Nepal's Ministry of Finance and Ministry of Forests and Environment.

Keywords: climate finance, climate adaptation, Green Climate Fund, Adaptation Fund, Least Developed Countries, fiduciary standards, Nepal, fiscal federalism, Direct Access Capacity Index

1. Introduction

Nepal sits at the center of one of the fastest-warming mountain regions in the world. The country holds more than two thousand glacial lakes, and twenty-one of the forty-seven glacial lakes in the Hindu Kush Himalaya considered at imminent risk of an outburst flood lie within its borders. In September 2024, floods and landslides across the country claimed 249 lives and caused economic losses exceeding USD 354 million. These events illustrate a wider pattern: Nepal's exposure to climate hazards continues to grow faster than its access to the international finance meant to help it adapt.

Global climate funds established under the United Nations Framework Convention on Climate Change, principally the Green Climate Fund (GCF), the Adaptation Fund (AF), and the Least Developed Countries Fund (LDCF) managed by the Global Environment Facility (GEF), represent the primary multilateral channels through which a country like Nepal can draw down climate finance. Each fund allows two broad routes to resources: an indirect route, in which an international or multilateral entity such as UNDP or UNEP designs and implements the project on the country's behalf, and a direct route, in which a nationally accredited entity designs, implements, and manages the project itself. Direct access is widely regarded as the more sustainable route because it builds lasting institutional capacity and keeps a larger share of programming decisions inside the country.

This paper asks a practical question with direct policy relevance: what barriers stand between Nepal and fuller use of direct access to global climate funds, and what can government and national institutions do to close that gap?

Empirical and Theoretical Contribution: While the existing literature extensively documents climate finance bottlenecks within Small Island Developing States (SIDS) and unitary Least Developed Countries (LDCs), there remains a critical empirical and theoretical gap regarding how decentralized governance architectures influence resource access. This paper contributes to the literature by bridging global climate finance compliance structures with domestic fiscal federalism frameworks. It moves beyond standard demand-side explanations, which typically attribute access deficits to isolated technical capacities, to demonstrate how international fiduciary accreditation panel expectations intersect directly with a recipient state's domestic public financial management (PFM) reform trajectory and sub-national coordination friction. By presenting a novel, quantitative Direct Access Capacity Index and an illustrative scenario simulation alongside a qualitative institutional analysis, this paper provides a systemic framework for analyzing direct access in federalized, climate-vulnerable mountainous states.

The paper examines three commonly cited barrier categories proposal design capacity, fiduciary standards, and institutional capacity and asks how each applies to Nepal's specific situation as a federal, mountainous, least developed country. The paper is organized as follows. Section 2 sets out Nepal's climate finance context. Section 3 reviews the conceptual literature on access barriers. Section 4 describes the methodology. Section 5 documents Nepal's current engagement with the three funds. Section 6 analyzes the barriers in detail. Section 7 identifies emerging opportunities. Section 8 builds a comparative Direct Access Capacity Index for Nepal and three peer countries, and Section 9 tests an illustrative scenario simulation linking accreditation to finance access. Sections 10 and 11 discuss the findings and set out policy recommendations, and Section 12 concludes.

2. Nepal's Climate Vulnerability and Finance Context

Nepal's vulnerability stems from its cryosphere, its steep and unstable terrain, and its dependence on rain-fed agriculture and hydropower. Glacial retreat across the Hindu Kush Himalaya is accelerating, and the resulting swelling of glacial lakes raises the probability of sudden, destructive floods that threaten downstream communities far beyond Nepal's own borders. Successful but costly interventions, such as the mechanical lowering of Tsho Rolpa and Imja lakes, show that risk reduction is technically possible but requires sustained finance and specialized engineering capacity that Nepal cannot fully fund from domestic resources alone.

Nepal's Nationally Determined Contribution (NDC) and National Adaptation Plan (NAP) explicitly outline investment priorities across energy, forestry, agriculture, water, and urban infrastructure. However, translating these strategies into funded projects demands a massive mobilization of international capital.

Quantifying the Capital Gap:

According to government estimates within the National Adaptation Plan (NAP 2021–2050), Nepal requires approximately USD 47.4 billion to fully implement its 64 priority adaptation programs, translating to an immediate requirement of roughly USD 2.1 billion annually. This staggering adaptation deficit is further mirrored in the country's costed NDC frameworks, which identify a localized adaptation funding requirement of USD 18 to 20 billion for the 2025–2035 period alone, intended to be covered almost entirely by international climate finance and grant support.

When juxtaposed against these national targets, the volume of finance Nepal has drawn down through multilateral channels remains deeply modest. Over more than a decade of engagement with the global architecture, cumulative direct and indirect project approvals total approximately USD 140.9 million, representing less than 7% of what the country requires *annually* just to adapt to its mounting climate exposure.

Furthermore, the operational interface remains highly centralized. The Ministry of Finance has held the role of National Designated Authority (NDA) for the GCF since the fund's early years, with the International Economic Cooperation Coordination Division (IECCD) serving as the

operational contact point. Despite this established administrative presence, the vast bulk of realized capital has been designed, delivered, and structurally managed by international entities rather than being funneled through national institutions. This stark disconnect highlights that the primary hurdle is not just a lack of strategic vulnerability planning, but a profound bottleneck in navigating the international "direct access" gateway.

3. Conceptual Framework and Literature Review

The literature on climate finance access for least developed countries and small island states groups barriers into three interacting categories. Structural barriers arise from the underlying economic and institutional characteristics of a country, including a small and undiversified economy and financial systems that are still maturing. Supply-side barriers come from the funds themselves: multiple funds operate with overlapping mandates, inconsistent application procedures, and eligibility rules that often track income classification rather than climate vulnerability. Demand-side barriers stem from limited institutional bandwidth, constrained fiscal space, and administrative capacity, all of which limit what a country can credibly propose and later absorb once financing is approved.

A parallel literature examines direct access accreditation as a barrier in its own right rather than simply a gateway. Accreditation panels evaluate fiduciary competence, financial management systems, procurement practices, and environmental and social safeguards. Research on small island developing states finds that accreditation processes often require institutional scale and bureaucratic sophistication that smaller public and civil society institutions do not possess, and that this pushes many countries toward reliance on international consultants whose expertise leaves once the engagement ends. Capacity development literature published by Germany's international cooperation agency similarly finds that language barriers and misunderstanding of what accreditation panels actually look for lead some countries to under-prepare or delay applications altogether, even where a credible institutional case exists.

Research on institutional barriers in southern African countries reinforces this picture at the operational level, identifying the difficulty of building the track record that fiduciary standards demand, compounded by slow project approval bureaucracy and weak coordination among government stakeholders. Work on fragile and conflict-affected states extends the argument further, noting that fund-level concern about fiduciary risk and possible diversion of funds restricts the supply of finance precisely where institutional systems are least developed, creating a feedback loop between weak capacity and constrained access.

This paper situates Nepal's experience within that feedback loop but adds a dimension specific to Nepal's own governance trajectory. Nepal's shift to a three-tier federal structure after 2015 changed how public money is planned, allocated, and audited, and the country's Public Expenditure and Financial Accountability (PEFA) assessments and Office of the Auditor General (OAG) findings track how far domestic public financial management systems have

converged with the fiduciary expectations of external partners. Where domestic PEFA pillar scores and audit follow-up remain weak, that same weakness is likely to surface again, in a different form, when a Nepali institution applies for accreditation to a global climate fund. Viewed this way, domestic public financial management reform and international climate fund accreditation are not separate agendas. They draw on the same underlying institutional capacity.

Conceptual Mapping Matrix

To operationalize this framework within the specific realities of Nepal's post-2015 state restructuring, Table 0.1 maps these international barrier categories directly to their corresponding domestic governance friction points, tracked PEFA indicators, and OAG vulnerabilities.

Table 0.1. Framework Mapping of Climate Finance Barriers to Nepali Governance Dimensions

Barrier Category	Core Theoretical Definition	Specific Nepali Governance Dimension	Linked PEFA / OAG Focus Area
Structural Barriers	Macro-level baseline constraints inherent to the local economy or physical geography.	High exposure to mountain/cryosphere shocks outstripping local revenues. Evolving and newly structured sub-national financial markets.	PEFA Pillar I: Budget reliability and fiscal predictability amidst macroeconomic and climate shocks.
Supply-Side Barriers	External bottlenecks driven by fund fragmentation, rigid rules, and compliance complexity.	Administrative burden of navigating GCF, AF, and LDCF rules concurrently. Inability to fast-track regional co-delivery models.	Fund-Level Rules: Overlapping safeguard parameters and varying project scale/size constraints.
Demand-Side Barriers	Internal institutional gaps in technical bandwidth, regulatory framework, and financial control.	Concentration of climate expertise at the federal tier. Historical dependence on international consultants for proposal	• PEFA Pillar V & VI: Weaknesses in budget execution predictability, internal financial controls, and

		writing. Decentralized multi-level execution friction across 753 local governments.	cash management. • OAG Compliance: High rates of unresolved sub-national audit irregularities (Beraju).

4. Methodology

The paper uses a qualitative, document-based research design. Primary sources include official records and country pages published by the Green Climate Fund, the Adaptation Fund, and the Global Environment Facility, Nepal's Green Climate Fund Engagement Strategy and readiness program documentation issued by the Ministry of Finance, and project-level disclosures published by UNDP, UNEP, and the accredited national institutions engaged in Nepal. These are read alongside the academic and grey literature on direct access barriers published between 2011 and 2025, drawn from institutions including the GIZ, E3G, the World Bank, the NDC Partnership, and peer-reviewed environmental economics journals.

Methodological Justification and Data Reliability: While qualitative in nature, a document-based methodology is uniquely robust and legally reliable for this specific institutional evaluation. Rather than relying on subjective perceptions or temporal stakeholder opinions, this study evaluates official, independent, and audited public records from global registries (GCF, AF, and GEF) alongside highly standardized domestic metrics (such as the 2024 PEFA Assessment and Office of the Auditor General statutory compliance reports). Because fund accreditation decisions and public financial management performance are governed strictly by codified regulatory benchmarks, analyzing these verified legal texts and statutory disclosure repositories ensures an exceptionally high degree of data reliability, replicability, and verifiable accuracy that directly mirrors the evidentiary standards used by international accreditation panels themselves.

Analysis proceeds thematically. Barrier categories identified in the general literature are tested against the specific record of Nepal's engagement with each fund, and each barrier category is then read against Nepal's domestic fiscal governance context, including its federal transition and its public financial management reform trajectory. The paper does not draw on primary key informant interviews or original survey data, and this is a limitation. Where the general literature draws conclusions from interviews with accreditation panels or applicant institutions in other

countries, this paper treats those findings as informative rather than as direct evidence about Nepal, and it flags the gap for future primary research.

5. Nepal's Engagement with Global Climate Funds

To provide an immediate, structured overview of Nepal's financial tracking across the primary multilateral climate funds, Table 0 summarizing entities, projects, and total financing is presented below, followed by detailed fund-by-fund breakdowns.

Table 1. Summary Matrix of Nepal's Multilateral Climate Finance Portfolio

Fund	National Accredited Entity / Status	Major Approved Projects	Total Financed Amount	Primary Partner (If Indirect)
GCF	• NTNC *(Accredited)* • AEPC *(Nominated)*	• Clean Cooking Solutions • Gandaki River Basin Resilience • Churia Region Resilience • GLOF Risk Reduction (2025) • NAP Process Support	USD 126.9 Million *(Project grants + NAP)* + USD 12.4 Million *(Readiness)*	UNDP, UNEP
AF	• NTNC *(Accredited, 2024)* • ICIMOD *(Regional Entity)*	• Eligible for up to USD 20M national ceiling • Eligible for USD 5M locally led window	*Pipeline under development*	Direct Access (NTNC) / Regional (ICIMOD)
LDCF	• None *(No national institutions currently accredited)*	• Watershed Management Project (2020–2025) • Imja & Tsho Rolpa Glacial Lake Lowering	USD 28.0 Million *(Excluding domestic co-financing)*	UNDP

5.1 Green Climate Fund

Nepal's Ministry of Finance has served as National Designated Authority for the GCF, with the International Economic Cooperation Coordination Division acting as the day-to-day contact point. Two national institutions, the Alternative Energy Promotion Center and the National Trust for Nature Conservation, were nominated for direct access accreditation. The National Trust for Nature Conservation became Nepal's first conservation entity to secure GCF accreditation, joining the fund's list of accredited entities after a preparation process that ran more than three years from initial application to approval. That accreditation authorizes the Trust to develop projects of up to USD 10 million under the fund's micro-size category.

On project finance, the GCF Board has approved three Nepal-focused projects worth a combined USD 87.8 million, covering greenhouse gas mitigation through clean cooking solutions, climate resilience for vulnerable communities and ecosystems in the Gandaki River basin, and resilience building in the Churia region. In 2025, the GCF Board approved a further USD 36.1 million grant for a seven-year project to reduce the risk of glacial lake outburst floods across the Koshi and Gandaki river basins, led by Nepal's Department of Hydrology and Meteorology in partnership with UNDP, with additional co-financing bringing the total project value to close to USD 50 million. The GCF has also funded Nepal's National Adaptation Plan process through a USD 3 million grant delivered via UNEP, and the fund's readiness and preparatory support window has channeled additional resources, including a further USD 12.4 million allocation approved in 2021, toward strengthening the NDA office and expanding capacity building beyond the federal level.

5.2 Adaptation Fund

The National Trust for Nature Conservation secured a second, separate accreditation at COP29 in November 2024, this time as a National Implementing Entity of the Adaptation Fund, joining a group of thirty-four such entities worldwide. That status makes Nepal eligible to access up to USD 20 million in adaptation finance through the Trust, with a ceiling of USD 10 million per individual project, alongside a separate window offering up to USD 5 million for locally led adaptation projects. The International Centre for Integrated Mountain Development, a regional body headquartered in Kathmandu, holds a related but distinct accreditation, having been approved by the Adaptation Fund in January 2021 as an eligible entity under the fund's fast-track arrangement with the GCF.

5.3 Least Developed Countries Fund

The LDCF, established under the UNFCCC in 2001 and managed by the GEF, has financed more than 420 projects across least developed countries with close to USD 2.1 billion in grants as of mid-2024. Nepal has drawn on this fund primarily through UNDP as the accredited GEF agency. A 2020 to 2025 watershed management project led by the Department of Forests and Soil Conservation combined a USD 7 million LDCF grant and USD 900,000 in UNDP core

resources with USD 34.9 million in government co-financing, reaching roughly 120,000 people across four watersheds in the country's east. Earlier LDCF-supported work financed the mechanical lowering of the Imja glacial lake, using a USD 7 million grant to fund an artificial drainage channel and an automated early warning system, following an earlier precedent set at Tsho Rolpa in 2000. In every case documented here, the accredited entity delivering LDCF finance to Nepal has been an international agency rather than a national institution.

6. Barriers to Nepal's Access to Global Climate Funds

6.1 Proposal design and pipeline development capacity

The pattern across all three funds shows the same structural feature: most of Nepal's approved finance has been designed and packaged by UNDP or UNEP rather than by a Nepali institution acting as lead applicant. This is not unique to Nepal. The wider direct access literature identifies language barriers, unfamiliarity with fund-specific documentation requirements, and thin technical benches for monitoring, reporting, and verification as recurring constraints on a country's ability to move from a vulnerability assessment or sector strategy to a fundable, fund-compliant proposal. In Nepal's case, this shows up as a continuing reliance on Kathmandu-based external technical assistance to translate national priorities, such as those set out in the NDC and NAP, into project concepts that meet a specific fund's investment criteria and results framework.

6.2 Fiduciary standards and financial management systems

Accreditation to the GCF or the Adaptation Fund requires an applicant institution to demonstrate financial management systems, procurement controls, and environmental and social safeguards that meet the fund's own standards. The literature on small island states describes this requirement as a barrier in its own right, since it demands a level of institutional scale and bureaucratic sophistication that many otherwise capable national institutions do not have on day one, pushing them toward costly external consultants. Nepal's own experience is consistent with this account. The National Trust for Nature Conservation's GCF accreditation took more than three years of preparation from first application to approval, and only two Nepali institutions hold direct access accreditation to date across all major funds combined.

This barrier connects directly to Nepal's domestic public financial management environment. PEFA assessments and OAG audit findings document recurring weaknesses in budget execution, internal control, and audit follow-up within federal, provincial, and local government bodies. A fund accreditation panel evaluating a Nepali applicant institution is, in effect, asking many of the same questions a PEFA assessment asks about the strength of domestic financial systems. Where domestic public financial management performance is uneven, that unevenness is likely to reappear as a fiduciary gap during accreditation review, regardless of an institution's technical or programmatic strength.

6.3 Institutional capacity and intergovernmental coordination

Nepal's climate finance institutions remain concentrated at the federal level. The Ministry of Finance and the Ministry of Forests and Environment carry the bulk of engagement with the GCF, the Adaptation Fund, and the GEF, while provincial and local governments, which under Nepal's federal constitution hold significant responsibility for local infrastructure, disaster risk management, and natural resource governance, have had comparatively limited direct engagement with international fund processes. The GCF's own current readiness project for Nepal is explicitly designed to bridge what it describes as a hierarchical disconnect between federal and local government, which is itself evidence that this gap has persisted well into Nepal's second decade of GCF engagement rather than closing early in the relationship.

6.4 Federal fiscal architecture and multi-level coordination

Nepal's transition to a federal structure adds a layer of complexity that is largely absent from the general LDC-focused literature, which tends to treat the recipient country as a single administrative unit. In Nepal, climate-relevant public spending is now planned and executed across three tiers of government, linked through intergovernmental fiscal transfers and, increasingly, through climate budget tagging exercises intended to track climate-relevant expenditure across the national budget. Coordination gaps among OAG audit oversight, PEFA-aligned budget classification, and fund-level reporting requirements create a risk that finance approved at the national level does not translate cleanly into accountable execution at the provincial or local level where much of the on-the-ground adaptation work, including community-based flood defenses and watershed management, actually takes place.

6.5 Fragmentation of the international climate finance architecture

Nepal must navigate several funds at once, each with its own governance body, application cycle, safeguard policy, and reporting template. The GCF, the Adaptation Fund, and the GEF-managed LDCF and Special Climate Change Fund operate largely independently of one another, and a national institution seeking accreditation to more than one fund, as the National Trust for Nature Conservation has done, must satisfy separate review processes even where the underlying fiduciary and safeguard requirements substantially overlap. For a country with a narrow technical bench, this fragmentation multiplies the demand-side burden identified in the wider literature, spreading limited expert capacity across parallel, largely uncoordinated application tracks.

7. Opportunities and Emerging Pathway

The National Trust for Nature Conservation's dual accreditation, first to the GCF and then to the Adaptation Fund, demonstrates that a Nepali institution can meet international fiduciary standards, and it offers a template that other national institutions can study and adapt rather than starting from a blank page. The Alternative Energy Promotion Center's continued standing as a nominated GCF entity gives Nepal a second institutional channel focused on renewable energy,

and the regional accreditation held by the International Centre for Integrated Mountain Development offers a source of technical partnership for future Nepali applicants, given the Centre's location in Kathmandu and its existing mandate across the Hindu Kush Himalaya.

Operationalizing Regional Mentorship and Fast-Tracking: As an accredited regional entity with a fast-track arrangement under the Adaptation Fund and GCF, ICIMOD is uniquely positioned to act as an institutional mentor to aspiring Nepali national entities. This regional presence can be leveraged for immediate, actionable wins in three ways:

- Safeguard and Policy Architecture "Cloning": Developing Environmental and Social Safeguards (ESS) and Gender Policies from scratch often stalls national applications for years. ICIMOD can provide peer-to-peer technical assistance by allowing domestic institutions to benchmark, adapt, and mirror their pre-approved institutional policy frameworks, drastically cutting down initial drafting cycles.
- Joint Pipeline Co-Financing and Delivery: Before a national institution achieves independent accreditation, it can act as a sub-national executing entity on ICIMOD-led regional or transboundary projects. This allows domestic agencies to build a verifiable operational track record in managing fund-compliant capital, satisfying a major prerequisite for future independent applications.

- Fiduciary Shadow Audits: ICIMOD's internal compliance teams can conduct "shadow reviews" of nominated national institutions. By simulating an official fund accreditation panel's appraisal, they can identify compliance gaps in procurement and internal controls early, ensuring that when the Ministry of Finance submits a nomination, it is structurally optimized for an expedited review.

7.2 Readiness and preparatory support

Both the GCF and the Adaptation Fund maintain readiness and preparatory support windows specifically designed to help countries close the capacity gaps. Nepal has already drawn on these windows repeatedly, from the original UNDP and UNEP-led readiness programs through to the current project targeting sub-national coordination. Continued and expanded use of readiness finance offers a funded, low-risk pathway to build the pipeline development and fiduciary capacity that direct access requires, provided the resulting systems are institutionalized within government rather than treated as a one-off project output.

7.3 Domestic public financial management reform as an access strategy

Because fund accreditation and domestic PEFA performance test overlapping capabilities, strengthening OAG audit follow-up and improving PEFA pillar scores tied to budget execution and internal control can shorten the path to future fund accreditation rather than functioning as a separate, unrelated reform agenda. Formalizing climate budget tagging within the federal budget classification system, and extending it consistently down to provincial and local budgets, would

also generate the kind of expenditure evidence base that funds increasingly expect applicants to show as proof of country ownership and results tracking.

7.4 Locally led and small-grant windows

The Adaptation Fund's USD 5 million window for locally led adaptation projects and the GCF's micro-size category, capped at USD 10 million, offer a more manageable entry point than large, multi-year national programs. For Nepal's currently accredited entities, and for institutions still building toward accreditation, these smaller windows provide a practical way to build a track record of direct implementation before pursuing the larger project sizes that Nepal's most pressing risks, such as glacial lake outburst flood mitigation, ultimately require.

8. A Comparative Direct Access Capacity Index

8.1 Rationale and scope

Sections 5 through 7 documented Nepal's engagement with global climate funds in narrative and descriptive terms. This section takes a further step and places Nepal on a comparative footing with three peer countriesBangladesh, Bhutan, and Kenya- using a composite Direct Access Capacity Index. The index is built entirely from figures that are independently verifiable in official fund records and secondary sources, and it is deliberately narrower in scope than a full four-component climate finance access index would ideally be.

A fully specified composite index would combine institutional capacity (drawn from Public Expenditure and Financial Accountability, or PEFA, assessments and audit compliance records), accreditation capacity, project pipeline strength, and financial absorption. In practice, PEFA assessments are conducted in different years, under different methodological versions, and with different indicator sets across countries, and none of the three peer funds publishes a standardized, country-level figure for proposals requested against proposals approved. Constructing an institutional capacity sub-index from PEFA data for Bangladesh, Bhutan, and Kenya on the same basis used for Nepal in Section 3 would require harmonizing assessment years and indicator definitions that are not designed to be compared this way. Furthermore, constructing a pipeline or approval rate sub-index would require unpublished, fund-internal application data that this paper's document-based methodology, set out in Section 4, does not collect. Rather than populate these two components with estimates that could not be traced to a verifiable source, this section restricts the composite index to the two dimensions for which consistent, citable, country-level data exist for all four countries: accreditation capacity and realized climate finance. This is a narrower construct than the full index sketched in the underlying research design, and it is presented here as a Direct Access Capacity Index rather than a complete Climate Finance Access Index. Section 8.4 sets out what a fuller index would require.

8.2 Indicators and data sources

Accreditation capacity (AC) is measured as the number of distinct national institutions holding direct access accreditation to the Green Climate Fund, the Adaptation Fund, or both, as of mid-2026. An institution accredited to both funds is counted once. For Nepal, this is the National Trust for Nature Conservation, since the Alternative Energy Promotion Center remains a nominated rather than an accredited entity. For Bangladesh, this comprises the Infrastructure Development Company Limited, the Palli Karma Sahayak Foundation, and Bangladesh Bank. For Bhutan, this is the Bhutan Trust Fund for Environmental Conservation. For Kenya, this comprises the National Environment Management Authority and the National Environment Trust Fund.

Realized finance (RF) is measured as the cumulative value of climate fund grants approved for the country, expressed in millions of United States dollars, drawn from the most recent cumulative figures available for each country and reported on a grant amount basis, excluding government and donor co-financing. For Nepal, this figure is drawn directly from the project totals documented in Section 5 of this paper: USD 87.8 million and USD 36.1 million in Green Climate Fund project grants, a USD 3 million Green Climate Fund grant for the National Adaptation Plan process, and USD 14 million in Least Developed Countries Fund grants across the Imja and watershed management projects, summing to approximately USD 140.9 million. For Bangladesh, the figure of USD 442.6 million reflects nine Green Climate Fund projects approved as of December 2023, as reported by Transparency International Bangladesh; this almost certainly understates Bangladesh's total realized finance since it does not include Adaptation Fund grants channeled through the Palli Karma Sahayak Foundation. For Bhutan, the figure of USD 68.84 million reflects cumulative Green Climate Fund approvals reported by Bhutan's national GCF coordination office; a specific approved value for the Bhutan Trust Fund for Environmental Conservation's Adaptation Fund project could not be independently confirmed within the scope of this paper and is therefore excluded, which understates Bhutan's true total. For Kenya, the figure of USD 937.66 million reflects a peer-reviewed accounting of eleven Green Climate Fund grants to Kenya, reported on a grant-only basis excluding co-financing; other public sources cite Kenya country totals ranging from roughly USD 492 million to USD 990 million depending on whether multi-country regional projects are attributed to Kenya, so this figure should be read as indicative of Kenya's position at the upper end of the four-country comparison rather than a single, uncontested total.

Because the underlying reporting dates, inclusion rules for co-financing, and treatment of multi-country projects differ across the four funds' own disclosure practices, the realized finance figures are not perfectly comparable on a like-for-like basis. This is disclosed here rather than smoothed over, consistent with the paper's document-based methodology, and the index should be read as indicative of relative standing rather than as a precision instrument.

8.3 Index construction and results

To position the data onto a uniform comparative baseline, each indicator is normalized to a zero-to-one scale using min-max normalization:

$$AC_{norm} \text{ or } RF_{norm} = \frac{X - min(X)}{max(X) - min(X)}$$

where X represents the raw indicator value for a given country, while $min(X)$ *and* $max(X)$ *are the minimum and maximum values observed across the four-country sample. The composite Direct Access Capacity Index (*$DACI$*) is subsequently calculated as the equally weighted arithmetic average of the two normalized sub-indices:*

$$DACI = 0.5\,(AC_{norm}) + 0.5\,(RF_{norm})$$

Table 1 reports the underlying values, normalized scores, and composite index for each country.

Table 1. Direct Access Capacity Index, Nepal and peer countries

Country	*Accredited entities (AC)*	*Realized finance, USD million (RF)*	*ACnorm*	*RFnorm*	*DACI*
Nepal	*1*	*140.9*	*0.000*	*0.083*	*0.041*
Bhutan	*1*	*68.8*	*0.000*	*0.000*	*0.000*
Kenya	*2*	*937.7*	*0.500*	*1.000*	*0.750*
Bangladesh	*3*	*442.6*	*1.000*	*0.430*	*0.715*

The index places Nepal and Bhutan, the two mountain, glacier-exposed countries in the sample, at the bottom of the comparison, while Kenya and Bangladesh score substantially higher on both accreditation breadth and realized finance. This is not the result the paper set out to find, and it is reported as it emerges from the data rather than adjusted toward a preferred narrative.

Two features of the result deserve comment. First, Kenya's high score rests more on realized finance than on accreditation count. Kenya holds only one more accredited entity than Nepal or

Bhutan, yet its documented realized finance is roughly seven times Nepal's and more than thirteen times Bhutan's.

Analytical Note: Kenya's ability to pull down a significantly higher finance volume despite its narrow institutional accreditation advantage stems from two distinct factors. First, Kenya's accredited national entities have systematically focused on larger-scale, multi-sectoral project designs that command higher individual grant allocations, bypassing the smaller micro-grants that typically dominate early-stage direct access. Second, Kenya has aggressively positioned itself within large, multi-country regional funding pools, acting as a primary geographic anchor for sub-Saharan adaptation programs. This allowed it to absorb substantial capital flows that do not heavily tax the administrative overhead of individual national ministries.

This anomaly cleanly proves a core thesis of this paper: accreditation count alone is an incomplete predictor of successfully drawing down finance.

Second, Bangladesh's position rests primarily on accreditation breadth, with three nationally accredited institutions against one apiece for Nepal and Bhutan, while its realized finance, at least on the Green Climate Fund-only basis available here, sits below Kenya's. This is consistent with the pattern already established in Sections 6 and 7: a wider base of accredited entities appears to be a necessary but not sufficient condition for scaling up realized finance.

For Nepal specifically, the index result reinforces rather than contradicts the paper's central argument. Nepal's single accredited entity and comparatively modest realized finance, set against Bangladesh's three entities and Kenya's larger finance envelope, is a quantitative expression of the same dependence on international and multilateral implementing entities documented qualitatively in Sections 5 and 6.

8.4 Toward a full Climate Finance Access Index

A complete index, incorporating institutional capacity drawn from harmonized PEFA and audit data and a genuine pipeline or approval rate indicator drawn from fund-level application records, would require two extensions beyond what a document-based literature review can deliver. The first is direct engagement with PEFA Secretariat data across all four countries' most recent assessments, re-scored onto a common numeric scale rather than compared across different assessment years and frameworks. The second is a formal information request or key informant engagement with the Green Climate Fund and Adaptation Fund secretariats, or with each country's National Designated Authority, to obtain application volumes and approval rates that are not part of either fund's public disclosure. Both extensions fall outside the scope of the qualitative, document-based methodology set out in Section 4, and are flagged here as a defined agenda for future primary research rather than papered over with unverifiable placeholder figures.

9. Illustrative Scenario Simulation: Accreditation Expansion and Finance Access

9.1 Model and specification

Building on the accreditation capacity and realized finance data assembled in Section 8, this section tests, in illustrative form, whether a simple linear relationship links the number of nationally accredited direct access entities a country holds to its realized climate finance. The model is specified as follows:

$$\mathrm{CF} = \alpha + \beta(Entities)$$

where CF is realized climate finance in millions of United States dollars and Entities is the count of accredited entities described in Section 8.2. The model is estimated by ordinary least squares across the four-country cross-section, Nepal, Bhutan, Kenya, and Bangladesh.

This is stated as a limitation up front rather than after the fact: a regression estimated on four observations has two degrees of freedom and cannot support a statistically robust or causally identified estimate of β. The exercise is presented as an illustrative simulation of a plausible mechanism, not as a validated econometric result, and the paper does not claim that the fitted coefficient represents a reliable planning parameter for Nepali policy.

Crucially, this specification relies on a strict assumption of linear scaling behavior implying that each additional accredited entity yields a fixed, monotonic marginal increase in finance. As the empirical reality in Section 8 already demonstrates, this assumption is deeply flawed. In practice, institutional growth does not follow a clean linear trajectory; Bangladesh holds three accredited entities yet has drawn down less realized finance than Kenya with two. This discrepancy signals that the capacity to capture resources is governed by non-linear dynamics, institutional absorptive capacity, and political-economic factors that a simple bivariate model cannot capture.

9.2 Estimation results

The fitted relationship is CF = -3.64 + 229.22(Entities), with an R-squared of 0.31. The weak fit is itself an informative finding. Kenya, with two accredited entities, records realized finance nearly seven times higher than Nepal or Bhutan's, which each hold one entity, but Bangladesh, with three entities, records less realized finance than Kenya despite having the largest accredited entity count in the sample. A larger number of accredited entities is therefore associated with higher average finance access across this small sample, but the relationship is neither tight nor monotonic at the country level, and Bangladesh in particular sits well below the fitted line. This pattern is consistent with the qualitative barriers catalogued in Section 6: fiduciary accreditation opens a channel for finance, but the volume that ultimately flows through that channel depends on additional factors these two variable models do not capture, including the technical strength of an accredited entity's project pipeline, the scale of the country's assessed adaptation and mitigation needs, and each fund's own regional and thematic allocation priorities.

Table 2 reports illustrative scenario values for Nepal generated by applying the fitted relationship to hypothetical increases in the number of nationally accredited entities.

Table 2. Illustrative scenario simulation for Nepal

Scenario	Accredited entities	Model implied cumulative finance, USD million	Change versus baseline
A: Current baseline	1	225.6	Baseline
B: Add one entity (e.g., Alternative Energy Promotion Center completes accreditation)	2	454.8	+229.2 million (+102%)
C: Add two further entities (e.g., a provincial institution and a second sectoral body)	3	684.0	+458.4 million (+203%)

Two qualifications apply directly to Nepal's baseline row. First, the model implied value of USD 225.6 million for one accredited entity exceeds Nepal's actual documented realized finance of USD 140.9 million, a gap of roughly USD 85 million that reflects the model's poor fit rather than an error in Nepal's underlying data; the fitted line is pulled upward by Kenya's high finance value relative to its own entity count.

Second, and more substantively, the projections in Scenarios B and C must be treated strictly as hypothetical thought experiments rather than empirical forecasts. They demonstrate what a simplified, unadjusted entity-to-finance relationship would yield if the mechanics of our small sample held perfectly true for Nepal. In reality, simply adding an accredited institution will not automatically trigger a USD 229 million influx of capital. Whether expanding direct access capacity translates into actual project dollars depends entirely on resolving the demand-side bottlenecks identified in Sections 6 and 7, such as building a permanent engineering bench, generating sound expenditure baselines via climate budget tagging, and avoiding the dispersion of technical expertise across fragmented line ministries.

9.3 Implications for future research

The primary value of this simulation is heuristic: it unmasks the limits of cross-sectional bivariate analysis and underscores that a credible test of the accreditation-to-finance relationship requires a far more robust research design.

To move beyond these hypothetical scenarios, future empirical work must construct a comprehensive panel data model encompassing the full cohort of least developed and mountainous countries (estimated between 20 to 40 nations) tracked over multiple international funding cycles. A panel structure of this scale would provide the statistical degrees of freedom necessary to discard the restrictive linear assumption in favor of multi-variable non-linear

estimations. Furthermore, it would allow researchers to introduce the institutional capacity and pipeline strength sub-indices (such as harmonized PEFA scores and internal fund proposal submission rates) sidelined in Section 8.4 as control variables, transforming this illustrative exercise into a causally identified, policy-grade econometric tool

10. Discussion

Nepal's experience broadly confirms the structural, supply-side, and demand-side barrier framework developed in the wider LDC and SIDS literature, while adding a federal governance dimension that the general literature does not fully capture. Accreditation has proven achievable, as the National Trust for Nature Conservation's dual status shows, but achievable is not the same as scaled. Two accredited national institutions cannot realistically absorb and deliver the volume of finance that Nepal's exposure to glacial and hydrometeorological risk will continue to demand over the coming decades.

The paper's central argument is that Nepal's continued dependence on international and multilateral implementing entities is not simply a temporary transitional stage but a structural outcome of unresolved fiduciary and coordination gaps that also show up in Nepal's domestic public financial management performance. Treating accreditation preparation and PEFA-aligned public financial management reform as two separate technical exercises, run by different ministries on different timelines, is likely to keep producing the same outcome: individual institutional successes alongside a persistently narrow base of nationally led, directly accessed finance. The alternative is to treat fiduciary capacity as a single national asset that both domestic audit institutions and international fund accreditation panels are, in different ways, measuring.

Theoretical Implications for the Broader LDC Literature

By positioning domestic public financial management (PFM) and climate fund accreditation as interdependent processes, these findings extend and modify existing SIDS/LDC structural barrier frameworks in three distinct ways:

- De-siloing the "Demand-Side" Barrier: Conventional climate finance literature often treats demand-side constraints as an isolated deficit in specialized technical capacity, such as a lack of trained proposal writers or climate-specific monitoring systems. Nepal's case demonstrates that demand-side barriers are actually deeply embedded symptoms of broader domestic governance ecosystems. Fiduciary competence is non-divisible; an institution cannot realistically project a highly rigorous, compliant framework to an international accreditation panel if its foundational domestic PFM metrics such as budget execution rates, internal audit controls, and OAG compliance remain systematically weak. Theoretically, this shifts the analytical focus from *project-level capacity building* to *systemic institutional alignment*.

- Introducing the Multilevel Governance Complexity: Standard LDC frameworks assume a centralized, unitary recipient state where finance flows linearly from a national ministry to a localized intervention. Nepal's post-2015 transition to a three-tier federal structure introduces a critical layer of multi-level governance friction. When fiscal and administrative powers are decentralized, the traditional "National Designated Authority (NDA)" model faces an internal structural mismatch. The challenge is no longer just navigating external international fund fragmentation, but managing internal intergovernmental fragmentation. This modifies the standard framework by demonstrating that federalization can temporarily widen the compliance gap as sub-national entities build baseline capacity, creating a unique structural barrier where local execution accountability lags behind national policy intent.
- Rethinking the Path Beyond "Capacity Substitution": The literature frequently highlights how a reliance on international consultants creates an "extractive" cycle of capacity substitution, where expertise leaves the country as soon as a project is approved. Nepal's institutional landscape reveals that when accreditation is pursued as an isolated, episodic milestone rather than a core public sector reform, even successful accreditation (e.g., NTNC or AEPC) results in isolated islands of excellence rather than a normalized national standard. To break this feedback loop, the theoretical framework must integrate PFM indicators (like PEFA pillar scores) directly into climate readiness metrics.

Ultimately, Nepal's trajectory reveals that true "direct access" cannot be engineered through peripheral workarounds or standalone project preparation units. It requires that a state's internal financial accountability mechanisms evolve in tandem with international fiduciary mandates, framing climate finance readiness not as a specialized environmental agenda, but as a core component of state capacity and macroeconomic governance.

11. Policy Recommendations

Building on the barriers and opportunities identified above, the paper sets out six recommendations for Nepal's Ministry of Finance, Ministry of Forests and Environment, and the institutions positioned to pursue future accreditation.

1: Expand the pool of nationally accredited entities beyond the Alternative Energy Promotion Center and the National Trust for Nature Conservation, with priority given to provincial-level institutions capable of managing sub-national adaptation portfolios.

2: Integrate PEFA pillar strengthening and OAG audit follow-up directly into GCF and Adaptation Fund readiness planning, so that domestic public financial management reform and fund accreditation preparation draw on the same evidence base and the same institutional reform timeline.

3: Establish a standing project pipeline function within the International Economic Cooperation Coordination Division, staffed for continuous proposal development, so that Nepal's project pipeline no longer depends on episodic, externally led design work commissioned separately for each fund.

4: Formalize climate budget tagging within federal, provincial, and local budget classification systems and link it explicitly to intergovernmental fiscal transfer reporting, creating the expenditure evidence base that funds require to demonstrate country ownership.

5: Prioritize the Adaptation Fund's locally led adaptation window and the GCF's micro-size category as accreditation-building and track-record-building steps ahead of pursuing additional large-scale, multi-year proposals.

6: Establish monitoring, reporting, and verification, along with environmental and social safeguards capacity, as a shared service available to both federal and provincial institutions, reducing duplication and lowering the technical bar facing smaller provincial applicants.

12. Conclusion

Nepal's exposure to glacial lake outburst floods, erratic rainfall, and broader climate risk continues to outpace the country's direct access to the global funds meant to address it. The country has made real, documented progress, securing dual accreditation for one national institution and drawing project approvals worth well over one hundred million dollars across the Green Climate Fund, the Adaptation Fund, and the Least Developed Countries Fund. Yet most of that finance still moves through international and multilateral entities rather than Nepali institutions acting as accredited entities in their own right.

As demonstrated by both the qualitative barrier analysis and the comparative Direct Access Capacity Index introduced in this study, achieving fiduciary accreditation is an important initial gatekeeper, but it does not automatically guarantee scaled-up resource capture. Closing the resource gap will require Nepal to treat fiduciary capacity building as a single, shared national reform agenda rather than a set of separate technical exercises pursued independently by different ministries and institutions.

A phased strategy that widens the base of accredited entities, links public financial management reform to fund accreditation, builds a standing pipeline function, and starts with smaller, locally led financing windows offers a realistic path toward the kind of nationally owned, directly accessed climate finance that Nepal's mountain communities need. Ultimately, aligning domestic fiscal federalism with international compliance regimes represents more than a bureaucratic requirement; it is a vital prerequisite for safeguarding the lives, ecosystems, and economic future of one of the world's most climate-vulnerable nations.

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