Mining-Induced Displacement and Compensation in Zambia: A Mixed-Methods Study of Community Experiences

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ABSTRACT

Background. Mining-led displacement in resource-rich states raises persistent questions about compensation adequacy and procedural fairness. Zambian evidence is limited, and existing accounts rarely separate failures attributable to operator conduct from those inherent in the prevailing compensation paradigm.

Methods. A convergent parallel mixed-methods study was conducted in Sinazongwe (Southern Province) and Kalumbila (North-Western Province) districts. A structured survey was administered to 62 household representatives recruited by cluster sampling (41 men, 21 women; mean age 43). Ten focus groups were held: four at Maamba (Maamba Energy Limited), one at Nkandambwe (Collum Coal Mine), and five at Shinengenenge, Kalumbila (Trident Mine). The two Sinazongwe settlements form a within-district contrast holding administration, customary authority and commodity constant while varying the operator. Survey data were analysed descriptively; transcripts were analysed thematically against Cernea's Impoverishment Risks and Reconstruction framework and integrated through a joint-display matrix.

Results. Displacement clustered in 2014–2016. Consultation was reported by 43 of 62 respondents (69.4%), yet the same proportion took no part in setting compensation amounts, and all groups described consultation as notification of a settled decision. Sixteen of 55 (29.1%) held no written agreement, rising to 8 of 9 at Nkandambwe. Mean recalled compensation was ZMW 8,740.38 (nominal, unverified). Fulfilment diverged sharply: 29 of 62 (46.8%) were paid in full, while 56 of 62 (90.3%) reported at least one unfulfilled non-monetary undertaking, most often replacement land. Forty-four of 62 (71.0%) could not resume prior livelihoods, reflecting sedentary farming imposed on mixed hunting, gathering and charcoal-trading economies and the exclusion of commons from valuation. Qualitative data showed payment to male heads producing dissipation and desertion, so household receipt is not a proxy for household benefit. Outcomes were equivalent across operators; procedural form was not.

Conclusion. Livelihood restoration failed under all operators and is paradigmatic rather than firm-specific. Reform requires independent valuation, statutory land-for-land restoration, mandatory written agreements and gender-responsive payment. Findings rest on a purposive sample and recall-based values.

Keywords: mining-induced displacement; compensation; resettlement; Zambia; participation; resource governance; mixed methods; gender

INTRODUCTION

Development-induced displacement represents a significant global challenge, with mining activities contributing substantially to forced population movements in resource-rich regions. Ravenstein's foundational work on migration (1885, 1889) established economic factors as primary drivers of human mobility, a framework that persists in contemporary displacement studies. The term "displaced persons," coined by Kulischer, has evolved to encompass various categories of forced mobility, with mining-induced displacement emerging as a distinct category within development-induced displacement discourse.

In Zambia, the mining sector constitutes a cornerstone of economic development, contributing approximately 12% to GDP and 70% to export earnings. However, this economic contribution comes at significant social cost, with communities near mining operations experiencing displacement without adequate compensation or resettlement support. The Council of Churches in Zambia (CCZ), guided by principles of social justice and human dignity, initiated this study to document community experiences and inform policy advocacy.

Previous research on mining-induced displacement highlights several critical issues: disruption of livelihoods, loss of cultural identity, gender disparities in compensation distribution, and inadequate participation in decision-making processes. Studies in Ghana, India, and Indonesia document similar patterns, suggesting systemic challenges in mining governance globally. Despite these documented impacts, Zambia lacks comprehensive studies examining the specific experiences of displaced mining communities, particularly regarding compensation adequacy and long-term resettlement outcomes.

This study addresses this gap by examining: (1) the consultation processes preceding displacement, (2) compensation fulfilment and adequacy, (3) socioeconomic impacts on displaced households, and (4) gender dimensions of resettlement outcomes. The findings contribute to both academic understanding of development-induced displacement and practical policy formulation for sustainable mining governance.

METHODOLOGY

Study design and setting

The study employed a convergent parallel mixed-methods design, in which a structured household survey and a programme of focus group discussions (FGDs) were conducted concurrently, analysed separately, and integrated at the point of interpretation. The design was selected because the two strands address different aspects of the research problem: the survey establishes the distribution and prevalence of compensation and displacement outcomes across the sample, while the qualitative strand establishes the processes that produced those outcomes and, in one important respect reported in Section 4.6, corrects an inference that the survey instrument alone would support.

Fieldwork was conducted in two purposively selected districts:

- **Sinazongwe District, Southern Province** a coal mining district, in which two separate displacement-affected settlements were included: the Maamba resettlement area, associated with Maamba Energy Limited, and Nkandambwe, associated with Collum Coal Mine.
- **Kalumbila District, North-Western Province** a copper mining district, represented by the Shinengenenge resettlement area, associated with Trident Mine (Kalumbila Minerals Limited).

The districts differ in commodity, operator, regional context, customary authority and the period over which mining activity has been established, and the between-district comparison supports assessment of whether displacement outcomes are specific to a commodity or operational context or common across them.

Analytical design: the within-district contrast

The inclusion of two settlements within Sinazongwe District is a deliberate feature of the analytical design rather than an artefact of sampling convenience. Maamba serves as the primary coal case and Nkandambwe as a within-district contrast case.

The contrast holds constant the district administration, the provincial regulatory environment, the customary authority, the commodity, and the broad agro-ecological and livelihood context, while varying the operator. This isolates operator conduct as the dimension of difference. Collum Coal Mine has a documented record of regulatory non-compliance and adversarial community relations, including the 2013 seizure of the mine by the Zambian government; Maamba Energy Limited operated through a formalised though, as Section 4 reports, substantively inadequate — compensation process. The characterisation of each operator's regulatory record rests on external documentary sources and is cited in Section 3, not inferred from participant testimony.

The design permits the study to distinguish two questions that are frequently conflated in the displacement literature: whether livelihood restoration failed, and whether the process by which displacement was effected was procedurally arbitrary. The first is examined as a potentially paradigmatic feature of mining-induced displacement common to all three operators; the second is examined as a dimension along which operators differ. The separation of these two dimensions is developed in Sections 4.8 and 6.

Sampling and participants

Survey. Cluster sampling was employed within displacement-affected communities in which stakeholder relationships had been established through the Natural Resources Governance Project under the Council of Churches in Zambia with support from Norwegian Church Aid and Danish Church Aid (NCA-DCA). Sixty-two household representatives participated. The sample comprised 41 men (66.1%) and 21 women (33.9%); this distribution reflects cultural norms governing who is recognised as head of household and therefore who was identified as the appropriate respondent and is not an estimate of the sex composition of the affected population. Its implications for the gender findings are addressed in Section 2.7.

Inclusion criteria required that participants be (1) aged 18 years or older, (2) heads of households or their nominated representatives, and (3) residents of communities affected by mining displacement within the preceding decade.

Site-level subsample sizes were: Maamba and surrounding Sinazongwe settlements, Nkandambwe (n = 9), and Shinengenenge (n = 17). The two named subsamples are small and are reported in Section 4 as indicative counts only.

Focus group discussions. Ten FGDs were conducted, distributed as follows:

Site	District	Operator	FGDs	Notes
Maamba resettlement area	Sinazongwe	Maamba Energy Limited	4	Includes separate women's groups
Nkandambwe	Sinazongwe	Collum Coal Mine	1	Contrast case; 12 participants (5 women, 7 men)
Shinengenenge	Kalumbila	Trident Mine	5	Includes separate women's groups
Total			**10**	

At Maamba and Shinengenenge, groups were convened to permit disaggregation by sex, with separate women's groups held to allow discussion of intra-household matters that participants were unlikely to raise in mixed company. Groups ranged between approximately 8 and 15 participants. Participants were recruited through community partners from among household's resident in the resettlement areas, with the criterion that each participant's household had been directly affected by displacement.

The single group at Nkandambwe comprised 12 participants, 5 women and 7 men. Its limitations are stated directly in Section 2.7 and are not offset elsewhere in the analysis.

Data collection

Survey instrument. A structured questionnaire was administered in three sections:

- **Socio-demographic background** age, sex, education, occupation, household size and composition.
- **Displacement information** year of displacement, consultation processes, existence and retention of written agreements, warning period prior to relocation.
- **Compensation information** whether compensation was promised, amounts, fulfilment of monetary entitlements, fulfilment of non-monetary undertakings, form of payment, schedule of payment, and livelihood outcomes following relocation.

Monetary fulfilment and non-monetary fulfilment were recorded as separate items, and form of payment (cash or cheque) and schedule of payment (lump sum or instalments) were likewise recorded as separate attributes. These distinctions are maintained throughout the reporting in Section 4, since conflating them produces apparently contradictory figures and obscures the different difficulties each modality created for recipients.

The instrument combined closed-ended items with open-ended questions permitting respondents to describe their experience in their own terms. Interviews were conducted face to face by trained researchers accompanied by local community partners providing translation between English and the local language (Tonga in Southern Province, Kaonde in North-Western Province).

Focus group discussions. FGDs followed a semi-structured guide covering the sequence of events surrounding displacement, the consultation and valuation processes, the substance of undertakings made, the outcome of those undertakings, livelihood change following relocation, intra-household distribution of compensation, and conditions at the resettlement site. Discussions were conducted in the local language with translation, audio recorded where participants consented and supplemented by contemporaneous notes. Recordings were transcribed and translated into English for analysis.

Data analysis

Quantitative strand. Survey responses were coded and entered into SPSS version 25. Analysis was descriptive: frequencies, percentages, means and ranges. No inferential testing was conducted, and none is reported, for the reasons given in Section 2.7.

Qualitative strand. Transcripts were analysed thematically. Coding proceeded in two passes: an initial inductive pass generating codes from the transcripts themselves, followed by organisation of the resulting themes against the risk domains of Cernea's Impoverishment Risks and Reconstruction (IRR) model — landlessness, joblessness, homelessness, marginalisation, food insecurity, loss of access to common property, increased morbidity and social disarticulation.

The IRR framework was used to structure and interpret themes, not to generate them, and themes not accommodated by the model notably the monetisation of previously non-monetary household costs at resettlement sites were retained and reported.

Integration. The two strands were integrated at the interpretive stage using a joint-display matrix (Section 4.9), which sets each survey indicator against the corresponding qualitative finding and classifies the relation between them as convergent, complementary or discordant. Discordant findings are reported as such rather than reconciled; the principal instance is the relation between household-level records of compensation receipt and qualitative evidence of intra-household capture, addressed in Section 4.6.

Reporting conventions

The following conventions apply throughout Section 4 and were adopted in response to the reporting requirements of the study design.

- **Counts with percentages.** All proportions are reported as a count over the applicable denominator alongside the percentage. Where an item was not administered to the full sample, the reduced denominator is stated at the point of reporting.
- **Small cells.** Site-level subsamples (Nkandambwe n = 9; Shinengenenge n = 17) are reported as counts for descriptive purposes and are expressly not used for estimation or for between-site statistical comparison.
- **Currency and base year.** All monetary values are nominal Zambian kwacha (ZMW), unadjusted for inflation or exchange rate movement. Displacement events reported by respondents cluster in 2014–2016, which is used as the reference period for interpreting recalled values. Values are as recalled by respondents and were not verified against documentation.

- **Non-response.** Item non-response is reported explicitly rather than excluded silently, including the 21.0% non-response on year of displacement and the residuals on payment form (32.3%) and schedule (46.8%). In the latter cases the non-response is treated as substantively informative and interpreted accordingly.
- **Attribution of qualitative material.** Verbatim extracts are attributed by site, group and relevant speaker attribute (sex, and where relevant household position), without personal identifiers.

LIMITATIONS

Sample and generalisability. The survey sample (n = 62) is purposive and clustered within communities in which prior relationships existed. It is not a probability sample, and the proportions reported in Section 4 describe this sample only. They are not offered as estimates of population parameters, and no claim of statistical representativeness is made for the study as a whole or for any site within it.

Site-level subsamples. Nkandambwe (n = 9) and Shinengenenge (n = 17) are too small to support estimation. Percentages calculated on these bases are unstable and are reported only where the underlying count is also given.

Qualitative coverage at Nkandambwe. A single FGD was conducted at Nkandambwe. This does not meet thematic saturation for that site, and the group was not disaggregated by sex or age, so the site's qualitative account cannot be internally cross-checked in the way that the multiple, sex-disaggregated groups at Maamba and Shinengenenge permit. Nkandambwe findings are accordingly reported as indicative, and the within-district contrast rests on the convergence of the qualitative account with the documentary record on Collum Coal Mine rather than on the depth of the FGD data alone.

Recall and verification. Displacement events occurred up to a decade before data collection. All monetary values, dates and terms of agreement derive from respondent recall and were not verified against contracts, receipts, valuation reports or operator records. Recall of monetary amounts over intervals of this length is subject to error in both directions, and the mean compensation figure should be read as an order of magnitude rather than a precise estimate.

Evidence of oral undertakings. The item recording unfulfilled non-monetary undertakings relies on respondent recall of commitments that were, in most cases, made orally and not recorded in the written agreement where one existed. The item also records the presence of any outstanding undertaking and does not distinguish a single unmet commitment from comprehensive non-delivery, so it establishes prevalence but not extent.

Household-level measurement. The survey recorded compensation at household level and through a respondent who was, in two-thirds of cases, the male head of household. It cannot therefore measure distribution of compensation within the household, and the qualitative data indicate that household-level receipt substantially overstates household benefit. This is a limitation of instrument design; the gender findings in Section 4.6 rest on the qualitative strand for that reason and are not supported by survey measurement.

Absence of operator and state perspectives. The study collected data from affected households only. Operators, district and national government agencies, valuation professionals and customary authorities were not interviewed. Accounts of operator and regulatory conduct are therefore either participant accounts, reported as such, or drawn from external documentary sources, cited as such.

Cross-sectional design. Data were collected at a single point in time. The study describes the position of households at the time of interview and cannot trace trajectories of recovery or further decline, nor establish whether outstanding undertakings were subsequently fulfilled.

Ethical considerations

Ethical approval for this study was granted by the Council of Churches in Zambia (CCZ), which also provided formal guidance and authorization for data collection. Prior to fieldwork, informed consent was obtained from

all participating communities and individual participants. The study's purpose, voluntary nature, right to withdraw without consequence, and confidentiality measures were explained in the participant's own language (Tonga in Southern Province, Kaonde/Lunda in North-Western Province). All participants provided consent before proceeding.

To protect participant privacy, responses were anonymized and coded; no personally identifiable information was retained in the dataset. Verbatim extracts are attributed only by site and group type. Given the sensitive nature of some accounts—which included intra-household conflict, desertion, and disputes with operators—additional care was taken in selecting quotations to ensure no individual or household could be identified from the combination of site, group, and narrative details.

As a further protective measure, separate women's focus groups were convened at Maamba and Shinengenenge to allow female participants to discuss intra-household distribution and gender-specific impacts without the presence of male household heads. This approach was intended to reduce social pressure and encourage candid sharing of experiences.

The study adhered to the principles of social justice and human dignity that guide the Council of Churches in Zambia, ensuring that the research process itself respected the rights and welfare of the displaced communities it sought to document.

LITERATURE REVIEW

Conceptualizing Displacement: Drivers, Typologies, and Theoretical Foundations

Displacement is a complex, multidimensional global phenomenon driven by diverse, often intersecting catalysts. Broadly categorized within human geography and migration studies, forced displacement is triggered by three primary drivers:

- Conflict-Induced Displacement: Triggered by armed conflict, civil strife, insurgencies, generalized violence, or gross violations of human rights, resulting in internally displaced persons (IDPs) and cross-border refugees (Internal Displacement Monitoring Centre [IDMC], 2023).
- Disaster- and Climate-Induced Displacement: Precipitated by acute environmental shocks (flooding, cyclones) or slow-onset ecological degradation (drought, desertification, sea-level rise).
- Development-Induced Displacement and Resettlement (DIDR): Driven by state-sanctioned modernization projects, including hydroelectric dams, transportation corridors, urban renewal, agricultural expansion, and extractive industries (Bartolome et al., 2000; Cernea, 1997; Terminski, 2014).

While conflict displacement is characterized by sudden, involuntary flight under conditions of chaos and acute physical insecurity, development-induced displacement specifically Mining-Induced Displacement and Resettlement (MIDR) is distinct in that it is premeditated, planned, and legitimized under state policy as an imperative for national economic growth (Downing, 2002; Owen & Kemp, 2015). Despite these differences, both forms of displacement converge in their socio-economic aftermath: the abrupt severing of individuals and communities from their land, productive assets, social networks, and cultural heritage.

The foundational theoretical framework for assessing forced displacement across contexts is Michael Cernea's Impoverishment Risks and Reconstruction (IRR) model (Cernea, 1997, 2000). Cernea identifies eight systemic risks inherent to forced dislocation:

- Landlessness (loss of productive agrarian capital)
- Joblessness (loss of wage employment and traditional livelihoods)
- Homelessness (loss of physical shelter and residential security)
- Marginalization (socio-economic downward mobility)
- Food insecurity (diminished caloric and nutritional intake)
- Increased morbidity and mortality (escalated health vulnerabilities)
- Loss of access to common property resources (pastures, forests, water sources)

- Social disarticulation (collapse of mutual-aid networks and social capital)

While Cernea's model originated in dam-induced displacement studies, scholars have demonstrated that MIDR introduces heightened vulnerabilities (Downing, 2002; Fernandes, 2007; Terminski, 2013). Unlike linear infrastructure or water reservoirs with fixed boundaries, mining operations involve ongoing land acquisition, open-cast blasting, environmental contamination (air, soil, and water pollution), and market-driven boom-and-bust cycles that perpetuate prolonged displacement pressures and environmental precarity (Owen & Kemp, 2016; Vanclay, 2017).

The Global Horizon: Compensation Regimes and Rights-Based Safeguards

Globally, the governance of displacement and compensation has shifted over the past four decades from arbitrary state expropriation toward formalized human rights safeguards and risk mitigation frameworks. Historically, governments relied on sovereign powers of compulsory land acquisition (eminent domain), often offering minimal, one-off cash compensation that failed to account for inflation, lost livelihoods, or informal tenure rights (Guggenheim, 1990; Zaman, 2017).

In response to widespread impoverishment documented across Latin America, South Asia, and Southeast Asia (Fernandes, 2007; Terminski, 2014), international financial institutions formulated standardized resettlement policies. The benchmark among these is the International Finance Corporation's Performance Standard 5 (IFC PS5) on Land Acquisition and Involuntary Resettlement (IFC, 2012), alongside the World Bank's Environmental and Social Standard 5 (ESS5). These international standards emphasize several core principles:

- Forced eviction and physical displacement should be avoided wherever feasible through alternative project designs.
- Where displacement is unavoidable, project-affected persons (PAPs) must have their livelihoods and standard of living restored to, or improved beyond, pre-displacement levels.
- Resettlement packages must favour land-based and in-kind compensation over direct cash indemnification, particularly for agrarian and subsistence-dependent populations.
- Compensation must extend beyond statutory titleholders to recognize customary, informal, and seasonal users of communal land and natural resources.

Despite these global normative frameworks, empirical evidence from mineral-rich developing economies reveals an enduring implementation gap (Owen & Kemp, 2015; Vanclay, 2017). Mining companies frequently treat resettlement as a compliance-driven administrative hurdle rather than a long-term development process, leading to elite capture, inadequate asset replacement, and the chronic marginalization of host communities.

The African Continental Perspective: The Intersection of Conflict, Extractivism, and Land Dualism

The African continent presents a uniquely vulnerable landscape where displacement drivers frequently overlap. Sub-Saharan Africa hosts some of the largest populations displaced by armed conflict and civil unrest globally, including protracted crises in the Democratic Republic of Congo (DRC), South Sudan, northern Nigeria, and Mozambique (IDMC, 2023). Recognizing this crisis, the African Union adopted the landmark Kampala Convention (2009) the world's first legally binding regional instrument that obligates states to protect and assist persons displaced not only by armed conflict and natural disasters, but also explicitly by "projects carried out by public or private actors" (African Union, 2009, Article 10).

Across Africa, the boundaries between conflict-induced and resource-induced displacement can be deeply intertwined. In regions rich in high-value minerals such as eastern DRC mining concessions have historically financed armed factions, creating dual pressures where communities are displaced simultaneously by militarized violence and industrial resource extraction (Terminski, 2014). Even in politically stable African nations, resource extraction generates localized, structural conflict between transnational corporations, central governments, traditional authorities, and host populations over land access, benefit-sharing, and environmental degradation (Aboagye, 2014; Hilson & Banchirigah, 2009).

A defining structural challenge across the continent is legal dualism in land tenure. Post-colonial African states maintain a dichotomy between formal statutory law (governing state and private leasehold land) and unwritten customary law (governing ancestral and communal land administered by traditional chiefs) (Hinfelaar & Sichone, 2019). When foreign direct investment enters rural areas such as gold mining in Ghana (Aboagye, 2014), coal mining in Mozambique, or platinum extraction in South Africa states frequently exercise mineral sovereignty to reclassify customary lands into industrial concessions. Customary smallholders, lacking formal individual titles, are left structurally vulnerable. Compensation negotiations routinely prioritize tribal chiefs or local elites who capture financial windfalls, while grassroots community members receive marginal payouts that fail to compensate for the permanent loss of agrarian commons, water resources, and ancestral domains.

Mining-Induced Displacement in Zambia: Extractive Realities in a Stable State

Zambia occupies a distinctive position in Southern Africa: unlike many of its neighbours, the country has maintained sustained political stability and avoided civil war since gaining independence in 1964. Consequently, forced displacement in Zambia is largely structural and development-induced predominantly driven by large-scale extractive investments (Council of Churches in Zambia [CCZ], 2014; Negi, 2014).

Zambia's economy is deeply dependent on copper and cobalt. Following the privatization of Zambia Consolidated Copper Mines (ZCCM) in the late 1990s, mining expanded from the historic Copperbelt into the "New Copperbelt" of North-Western Province, driven by mega-projects such as Kansanshi, Lumwana, and Kalumbila/Sentinel (Negi, 2014; Siwale & Chileshe, 2020). This expansion necessitated the conversion of tens of thousands of hectares of customary land into industrial surface rights.

The regulatory architecture governing mining-induced displacement, land tenure, and compensation in Zambia has undergone substantial structural reform to rectify historical enforcement gaps and fragmented institutional oversight:

The Lands Act of 1995 (Cap. 184) and the National Land Policy (2021): While the Lands Act continues to legally anchor the dual-tenure system (statutory leasehold versus customary land) and vests all land in the Republican President with compulsory acquisition powers (Republic of Zambia, 1995), the adoption of the National Land Policy in 2021 introduced vital principles to mitigate arbitrary evictions. The policy explicitly calls for the legal protection of customary landholders, requires mandatory consultations and fair compensation prior to land reclassification, and establishes equitable quotas for women and vulnerable groups in land allocation (Republic of Zambia, 2021).

The Minerals Regulation Commission Act No. 14 of 2024: Replacing the direct administrative oversight previously executed under the Mines and Minerals Development Act No. 11 of 2015, this legislation establishes the Minerals Regulation Commission as an autonomous regulatory body. The Act tightens the administration of exploration and mining rights, establishes structured oversight over surface-rights negotiations, and enforces company compliance with environmental, social, and local benefit agreements (Republic of Zambia, 2024a).

The Geological and Minerals Development Act No. 2 of 2025: Enacted to govern geological mapping, mineral development, and artisanal and small-scale mining (ASM), this Act introduces explicit statutory provisions addressing surface disruption. Notably, under Section 7(8)–(9), it provides a formal statutory right for landowners and occupiers to claim prescribed compensation for substantial damage caused during exploration, survey, or development activities, explicitly establishing an offense for non-compliance with local content and community engagement standards (Republic of Zambia, 2025).

The Revised National Resettlement Policy of 2024: Superseding the earlier 2015 policy, the 2024 revision directly targets the shortcomings of past resettlement schemes by formalizing dispute resolution mechanisms, mandating inter-agency collaboration between the Department of Resettlement and mining authorities, and requiring project proponents to adopt in-kind, livelihood-restoring packages over unmonitored cash payouts (Republic of Zambia, 2024b).

Despite these legislative and institutional advancements, significant challenges persist in practice. The operationalization of the Minerals Regulation Commission Act (2024) and the Geological and Minerals Development Act (2025) still faces the historical bottleneck of standardized valuation methodologies: surface rights compensation often defaults to narrow tangible asset calculations (cleared dwellings and standing crops), leaving customary common-pool resources, ancestral lands, and intangible social assets systematically uncompensated. Empirical evaluations in Zambia reveal persistent community grievances (ActionAid, 2017; Sambo, 2016). Mining companies often opt for one-off cash disbursements or construct resettlement housing on less productive, distant peripheral lands. Cash payouts are quickly exhausted due to steep inflation and lack of formal financial literacy, while physical relocation often cuts off rural households from critical common-pool resources (firewood, seasonal foraging, and artisanal charcoal production), triggering Cernea's impoverishment risks of food insecurity, joblessness, and social fragmentation (CCZ, 2014; Negi, 2014; Sambo, 2016).

Identified Study Gaps

While existing scholarship examines the political economy of mining and land governance in Zambia, significant gaps remain that this study aims to resolve:

Methodological Deficit: Need for Mixed-Methods Triangulation:

The majority of Zambian displacement literature consists of qualitative single-site case studies, legal policy critiques, or non-peer-reviewed civil society reports. There is a lack of rigorous, empirical mixed-methods research that systematically integrates:

- Quantitative household welfare metrics: Household asset valuations, compensation-to-loss ratios, longitudinal income shifts, and food security indicators.
- Qualitative community-lived experiences: In-depth contextual narratives examining procedural injustice, dignity loss, and psychological dislocation. Methodological triangulation is essential to substantiate statistical trends with lived community realities.

Neglect of Customary Commons and Intangible Losses in Compensation Valuation:

Zambian compensation frameworks rely heavily on classical asset valuation methodologies (costing physical structures and standing crop yields). Little empirical work examines how communities evaluate and negotiate the permanent loss of customary commons (grazing rights, non-timber forest resources, shared water bodies) and intangible cultural heritage (ancestral shrines, sacred burial grounds, mutual-aid networks).

Intra-Household Disparities and Gender-Differentiated Experiences:

Most existing evaluations treat the displaced household as a single economic unit. In patriarchal customary structures in rural Zambia, compensation negotiations and cash disbursements are conducted almost exclusively with male household heads and traditional authorities. This leaves women, youth, female-headed households, and the elderly severely disempowered, despite women bearing the primary burden of household food provision, water collection, and domestic labor in depleted post-resettlement environments.

Longitudinal Livelihood Restoration vs. Short-Term Compliance:

Existing empirical literature predominantly captures community conditions within 1 to 2 years of initial physical relocation. Longitudinal evidence tracking the trajectory of displaced families across extended post-resettlement phases (5+ years) remains scarce. Research is needed to examine whether mining compensation and resettlement packages serve as catalysts for sustainable livelihood restoration or entrench intergenerational socio-economic impoverishment**.**

RESULTS

This section reports the integrated findings of the survey (n = 62) and the ten focus group discussions (FGDs). Quantitative results are presented first within each subsection, and qualitative findings are used to explain, qualify or contradict them. Counts are given alongside percentages throughout. Where an item was not asked of the full sample, the applicable denominator is stated. Site-level subsamples (NKandambwe n = 9; Shinengenenge n = 17) are reported as indicative counts only and are not used for estimation. All monetary values are nominal Zambian kwacha (ZMW) as recalled by respondents, with no documentary verification; the displacement events to which they refer cluster in 2014–2016.

Socio-demographic profile and household context

The sample comprised 62 household representatives, 41 men (66.1%) and 21 women (33.9%). Mean age was 43 years. Mean reported household size was 8 members, with a substantial right tail: several respondents reported units of more than 20 persons, and FGD participants described pre-displacement homesteads exceeding 30 members held together across multiple structures on a single plot.

Household composition is central to interpreting the housing findings that follow. Replacement housing was allocated as a standard unit most commonly a two-bedroom house irrespective of household size, on a one-structure-per-registered-household basis. Because the pre-displacement homestead was typically a cluster of structures accommodating an extended family, the allocation rule converted a spatial arrangement into a numerical one and required households either to compress or to divide. Thirty-three of 62 respondents (53.2%) reported that their household had split following displacement. FGD participants at both Maamba and Shinengenenge described this as the single most consequential and least anticipated effect of resettlement, and as one for which no compensation was offered because no asset was recorded as lost.

Displacement and consultation

Reporting on the year of displacement was incomplete: 13 of 62 respondents (21.0%) did not supply a year. The distribution of those who did is concentrated in 2014–2016, and this period is used as the reference frame for monetary values throughout. The non-response is itself informative, in that respondents who could not date their displacement were generally those describing the least formalised processes.

Forty-three of 62 respondents (69.4%) reported having been consulted prior to displacement. The same proportion, 43 of 62 (69.4%), reported that they took no part in determining the amount of compensation they received. The two findings are not in tension; read together they describe the study's central procedural finding, that consultation occurred without conferring decision-making power.

The qualitative data specify the mechanism. Across all ten groups, participants characterised consultation as a meeting at which a decision already taken was communicated, with a date attached. Participants distinguished sharply between being informed and being asked and reported that questions raised at such meetings concerned implementation timing rather than whether, where or on what terms relocation would occur. No group reported an instance in which a community position altered a valuation or a relocation schedule.

Nkandambwe departs from this pattern in form rather than in outcome. The single group held there described no community-level meeting at all, and instead a sequence of individual approaches to household heads, conducted without written record and without a stated valuation basis. The result was the same exclusion from determination, reached through a less structured route.

Agreements and documentation

Of the 55 respondents for whom the item applied, 16 (29.1%) reported holding no written copy of any agreement. The deficit is heavily concentrated at Nkandambwe, where 8 of 9 respondents (89%) reported no written agreement; the small cell is reported for description only.

FGD accounts identify two distinct routes to the same position. In the first, no written instrument was ever produced and the undertaking was oral. In the second, a document was signed but not retained by the household, the only copy remaining with the operator or an intermediary. Participants at Maamba and Shinengenenge reported the second pattern; Nkandambwe participants reported the first. The practical consequence is identical the household cannot evidence the terms it agreed to but the implications for accountability differ, since the second leaves a record in existence and the first does not.

Compensation: promises, amounts and fulfilment

Coverage and amounts. Forty-four of 62 respondents (71.0%) reported that compensation was promised to them. Among those reporting an amount, the mean recalled sum was ZMW 8,740.38 (nominal, referring principally to 2014–2016). This figure is a recall-based central tendency across heterogeneous asset bases differing in structures, land area, tree crops and household size and is reported to indicate order of magnitude rather than to support comparison between households or sites. Nkandambwe participants recalled settlements as low as ZMW 4,000; this value is a recalled, unverified figure reported by the group and is not corroborated by documentation.

Modalities. Reporting on payment modality was materially incomplete. Twenty of 62 respondents (32.3%) did not report the form of payment, and 29 of 62 (46.8%) did not report the schedule. Among those who did report, cash predominated over cheque, and instalment payment over single lump sum. The high residuals are treated here as a finding rather than as missing data alone: respondents who could not specify the form or schedule of their own payment were, in the qualitative accounts, those for whom no transaction record existed on either side. Form and schedule are reported as separate attributes throughout, since a cash payment may be made in instalments and a cheque as a lump sum, and conflating them obscures the distinct difficulties each created.

Monetary fulfilment. Twenty-nine of 62 respondents (46.8%) reported having received the monetary compensation due to them in full. The remainder reported partial receipt, non-receipt, or were unable to establish what the full entitlement had been.

Non-monetary fulfilment. Fulfilment of monetary compensation and fulfilment of non-monetary undertakings are reported separately, as they were recorded as distinct items and diverge sharply. Alongside cash settlements, respondents reported a range of non-monetary commitments made at the point of displacement: replacement land, housing of specified standard, water and electricity connections, access to schooling and health facilities, and in some accounts employment at the mine. Fifty-six of 62 respondents (90.3%) reported that at least one non-monetary undertaking made to them remained unfulfilled at the time of interview. The item records the presence of any outstanding undertaking rather than the number or value of undertakings outstanding, so it establishes the near-universality of non-delivery without measuring its extent.

The divergence between the two measures is the substantive finding. A household recorded as fully compensated in monetary terms may simultaneously be a household whose replacement land, service connection or employment undertaking was never honoured, and the survey data indicate that most were. Monetary settlement was the component of the compensation package most likely to be completed, and also the component least capable of restoring the displaced position, since the assets it substituted for land, services, proximity to facilities were precisely those promised in kind and not delivered. The 46.8% full-compensation figure should therefore be read as describing the discharge of a cash obligation, not the discharge of the undertaking as a whole.

Valuation basis. No group in any site could state the basis on which its compensation had been calculated. Participants reported that valuation was conducted by the operator or its agents, that no itemised statement was provided, and that awards differed between neighbours with visibly comparable holdings without explanation. Groups consistently identified grazing land, wild fruit and forest products, water access points, and proximity to burial and cultural sites as losses that were not valued at all.

Livelihoods

Forty-four of 62 respondents (71.0%) reported that they had been unable to resume their prior income-generating activity following displacement.

The qualitative data identify a mismatch between the livelihood model assumed by resettlement planning and the one actually practised. Resettlement sites were laid out on the assumption of sedentary smallholder cultivation, with plots allocated on that basis. Participants at Shinengenenge described pre-displacement livelihoods as mixed portfolios combining cultivation with hunting, gathering of forest products, charcoal production and trade, and seasonal movement — a portfolio that depended on access to a wide commons rather than on tenure of a demarcated plot. Relocation extinguished the commons component while compensating only the plot component. Participants reported that allocated plots were smaller, of lower fertility, and in some accounts not allocated at all in the promised area.

The relation to Section 4.4 is direct. The survey finding that 90.3% of respondents had at least one non-monetary undertaking outstanding is closely matched in the qualitative data. Participants in all ten groups raised commitments made at the point of displacement and not subsequently honoured. Replacement land of equivalent area and quality, raised in every group, was the most frequently cited; employment undertakings, raised at Maamba and Shinengenenge, were described as either never materialising or confined to short-term casual engagement during construction. Participants drew a consistent distinction between what was paid and what was promised, and attributed the failure to restore livelihoods principally to the latter. This supports reading the livelihood finding as a consequence of non-delivery of the in-kind component rather than solely of inadequacy in the cash component.

Gender and intra-household dynamics

The survey recorded compensation at household level and therefore cannot speak to distribution within the household. This is a limitation of instrument design rather than an absence of effect, and it is the point at which the qualitative strand is most clearly not merely illustrative but corrective.

Compensation was paid, in the overwhelming majority of accounts, to the registered head of household, who was in almost all cases male. Women participants at Maamba and Shinengenenge reported that they were not present at valuation, were not consulted on the disposal of the sum received, and in several accounts did not learn the amount. Participants described three recurrent outcomes: dissipation of the sum on expenditure not directed to household reconstruction; escalation of domestic conflict over its control; and desertion. A participant at Shinengenenge described a household in which the male head left with the entire compensation sum, leaving a woman with dependent children in a resettlement house without land, income or any record of what had been received.

The analytical consequence is that household-level receipt is not a valid proxy for household benefit. A household recorded in Section 4.4 as fully compensated may contain adult members who received nothing, had no access to the sum, and were left materially worse off than before displacement. Any measure of compensation adequacy constructed at household level will overstate delivery to the extent that intra-household capture occurred, and the qualitative data indicate it occurred routinely.

Women participants also reported a distinct set of uncompensated losses. Their pre-displacement contribution to household subsistence ran substantially through commons access gathering, water collection, cultivation of unregistered garden plots none of which was registered in their name or valued at all, with the result that the losses falling most heavily on women were the least visible to the valuation process.

Housing, services and infrastructure

The survey did not measure service adequacy at resettlement sites; the findings in this subsection are qualitative and are presented as such. Three issues recurred. First, water: participants at Shinengenenge reported that supplied water was of poor quality, with a high iron content rendering it unpalatable and, in

participants' accounts, unsuitable for some domestic uses, obliging continued reliance on distant alternative sources. Second, distance: resettlement sites placed households further from schools, health facilities and markets than their pre-displacement locations, converting journeys previously made on foot into journeys requiring transport expenditure.

Third, and most consistently raised at Maamba, the monetisation of previously free consumption: households relocated into serviced housing acquired water and electricity accounts and became liable for recurrent charges they had not previously incurred, at the same moment at which their income-generating capacity was disrupted. Participants described utility arrears as a novel and persistent form of indebtedness attributable directly to resettlement.

The infrastructural findings bear on the compensation findings. A lump-sum cash settlement calculated against the value of displaced assets makes no provision for a permanent increase in the recurrent cost of living, and none of the compensation arrangements described in any site incorporated a transitional subsidy or any recognition of the new cost structure.

Within-district contrast: Maamba and Nkandambwe

Maamba and Nkandambwe lie within Sinazongwe District, under the same district administration and the same customary authority, and differ principally in operator: Maamba Energy Limited and Collum Coal Mine respectively. The contrast isolates operator conducts from the district-level and customary variables held constant.

The two sites do not differ in outcome. Livelihood restoration failed in both, non-monetary undertakings went unfulfilled in both, and in neither did consultation confer any influence over terms. They differ in procedural form. Maamba displacement proceeded through identifiable, documented steps community meetings, written instruments, recorded valuations that were substantively inadequate but traceable. Nkandambwe displacement proceeded without community meetings, without written instruments in 8 of 9 cases, without any stated valuation basis, and with awards that group participants described as differing between households for no articulable reason.

The interpretive consequence, developed in Section 6, is that the two dimensions are separable. The failure of livelihood restoration is common to both operators and to Trident at Shinengenenge, and is therefore paradigmatic rather than attributable to any particular firm. Operator conduct determines instead the degree of procedural arbitrariness whether a household that has not been restored can at least establish what it was promised, by whom, and on what basis.

Joint display: integration of survey and qualitative findings

Domain	Survey finding (n = 62)	Qualitative finding	Relation
Household structure	33/62 (53.2%) household split after displacement	Uniform housing units allocated to extended households of up to 30+ members	Convergent; qualitative supplies the mechanism
Consultation	43/62 (69.4%) consulted; 43/62 (69.4%) had no part in determining amounts	Consultation experienced as notification of a settled decision in all ten groups	Convergent; qualitative resolves the apparent tension
Documentation	16/55 (29.1%) hold no written copy; Nkandambwe 8/9	Two routes: no instrument ever created (Nkandambwe) vs. instrument signed but not retained (Maamba, Shinengenenge)	Convergent; qualitative disaggregates a single figure
Monetary compensation	29/62 (46.8%) received in full; mean ZMW 8,740.38 (nominal)	Valuation basis unknown to all groups; awards	Complementary; qualitative addresses

		inconsistent between comparable households	basis, survey addresses receipt
Non-monetary undertakings	56/62 (90.3%) report at least one undertaking unfulfilled	Replacement land raised in all ten groups; employment undertakings unmet or limited to short-term casual work	Convergent; qualitative specifies which undertakings failed
Payment modality	32.3% no response on form; 46.8% no response on schedule	No transaction record held by either party in the least formalised cases	Convergent; qualitative reframes non-response as substantive
Livelihoods	44/62 (71.0%) unable to resume prior activity	Sedentary farming imposed on mixed hunting, gathering and charcoal-trading livelihoods; commons extinguished without valuation	Convergent; qualitative supplies causal account
Gender / intra-household	Not measured (household-level instrument)	Payment to male heads; dissipation, conflict and desertion reported; women excluded from valuation and from knowledge of amounts	**Discordant**; qualitative invalidates household receipt as a proxy for household benefit
Infrastructure and services	Not measured	Poor water quality (Shinengenenge); increased distance to facilities; novel utility costs and arrears (Maamba)	Qualitative only; identifies a cost class absent from compensation calculation
Operator contrast	Nkandambwe 8/9 without written agreement vs. formal documentation at Maamba	Unstructured individual settlement vs. documented but inadequate process	Convergent; supports separation of paradigmatic failure from operator-specific arbitrariness

Interpretive note on the two fulfilment measures

Because the divergence between the 46.8% and 90.3% figures is liable to misreading, it is restated here. The two are not competing estimates of the same quantity. The first reports the proportion of respondents whose monetary entitlement was discharged in full; the second reports the proportion with at least one non-monetary undertaking outstanding. A single household may, and in the modal case does, fall into both. The pattern the pair describes is a compensation practice that completed the component it could settle by transfer and failed to deliver the component that would have restored the displaced position. Wherever either figure appears elsewhere in this manuscript it carries its qualifier for this reason.

DISCUSSION

Consultation and participation deficits

The findings reveal a consistent gap between consultation as procedure and participation as influence. Although 43 of 62 respondents (69.4%) reported being consulted before displacement, an identical number, 43 of 62 (69.4%), reported no consultation on the compensation amount they would receive, and 16 of the 55 respondents who reported reaching an agreement (29.1%) held no written copy of it. Consultation in this setting therefore established that relocation would occur without conferring influence over its terms, a configuration Terminski (2013) characterises as participation without power, in which affected populations are informed of decisions rather than party to them.

The distribution of undocumented agreements suggests systematic rather than random failure. Of the nine respondents at Nkandambwe, eight held no written agreement, as did seven of the seventeen at Shinengenenge; site-level counts are reported in preference to proportions because the subsamples are too small to support estimation. Focus group participants located the mechanism in the routing of consultation through traditional authority, which conferred procedural legitimacy on outcomes negotiated above the household level. This arrangement, while institutionally appropriate, aggregated heterogeneous interests into a single point of consent and left gender-specific and intergenerational claims unrepresented.

Documentary evidence from the same operator area indicates that this deficit is not confined to the cohort surveyed here. In the more recent subsidence-driven relocations from Chiyabi village, affected householders reported that valuation surveys were conducted by the mine itself and that no explanation of the basis of assessment was provided, one relocatee stating plainly that "we have no understanding of how they calculated the compensation" (Kasela, 2024). Consent under these conditions was reported as compelled rather than negotiated, residents describing acceptance as unavoidable because neighbours were accepting and because remaining in structurally compromised housing was unsafe.

Compensation adequacy and modalities

Reported compensation ranged from ZMW 1,000 to ZMW 35,000, with a mean of ZMW 8,740, expressed in nominal terms as recalled by respondents and not deflated to a common base year; payments were received across several years, predominantly 2014–2016, so amounts are not directly comparable across cohorts. Against mean household size of approximately eight persons and near-total livelihood interruption, these sums are inadequate on their face. Twenty-nine of 62 respondents (46.8%) considered the compensation promise fulfilled, 22 of 62 (35.5%) reported partial or non-fulfilment, and 11 of 62 (17.7%) did not answer.

Of the 62 respondents, 29 (46.8%) reported having received the monetary compensation due to them in full. Among those who provided information on payment modality, payment methods and schedule are distinct variables and are reported separately. Regarding payment methods, 26 respondents (41.9% of the total sample) received cash and 16 (25.8%) received a cheque; 20 respondents (32.3%) did not report any payment methods. Regarding schedule, 9 (14.5%) received a single lump sum and 24 (38.7%) received instalments; 29 respondents (46.8%) did not report the schedule. The predominance of cash transfer into a partially monetised economy compounds the valuation problem identified by Guggenheim (1990), under which cash settlement captures the market price of assets while omitting the non-market value of land, social networks and cultural attachment. The qualitative strand sharpens this: participants described dwellings as having been priced while grazing land and common-property forest resources were omitted from valuation entirely. The survey's binary record of receipt therefore understates the deficit, since a payment classified as fulfilled may have compensated only a fraction of the asset base lost.

Independent reporting on Collum-affected settlements provides an external benchmark consistent with respondents' own accounts of inadequacy. Payments of ZMW 100 and ZMW 200 were reportedly made to households whose houses cracked and subsequently collapsed in 2015, while the minimum in the recent relocation round was reported at ZMW 1,500 (Kasela, 2024). A householder compensated ZMW 52,800 for two dwellings, land purchase, relocation and re-establishment reported expending ZMW 15,000 on replacement land alone and judged reconstruction to an equivalent standard impossible on the balance. These figures indicate a valuation practice keyed to the depreciated fabric of the structure rather than to the replacement cost of a comparable dwelling on comparable land, which is the standard the resettlement literature and international safeguard practice both require.

Land-for-land settlement, favoured by participants and supported by comparative evidence, preserves productive capacity and locational continuity. Its feasibility is constrained by the sequencing of land acquisition in mining districts, where concession boundaries are established in advance of operational need and reduce the stock of equivalent land available for exchange. At Chiyabi the constraint is compounded by cumulative environmental degradation, reporting describing fields and pastures rendered unsafe by subsidence voids and open pits, and soils left barren and unstable (Kasela, 2024) conditions under which in-situ or adjacent land exchange ceases to be available as a remedy at all.

Gender dimensions and intra-household capture

The clearest divergence between the two strands concerns the distribution of compensation within the household. Because the survey was administered to household representatives in districts where headship is predominantly male, the achieved sample comprised 41 men (66.1%) and 21 women (33.9%); this ratio reflects the sampling unit rather than the gender composition of the displaced population. The instrument recorded receipt at household level and contained no item capturing allocation within it. It is therefore structurally unable to observe what the gender-disaggregated focus groups documented directly: that payment to male heads did not translate into access for women, who reported neither control over the funds nor knowledge of the amounts received, and who associated the transfers with household conflict and mistrust.

This is reported as a substantive finding rather than as measurement error. Women's contributions to household provisioning through cultivation, animal husbandry and informal trade were not separately valued in compensation, while the transfer mechanism vested the proceeds in male heads, consolidating rather than disturbing existing asymmetries in household decision-making. The consequences extend beyond distribution to allocation, since expenditure on schooling and health care is sensitive to which household member controls the resource.

The gendered effect is reinforced where employment functions as a substitute for, or inducement toward, settlement. In the Collum-affected area a significant proportion of the male population is employed at the mine, and the headman of Chiyabi reported that offers of mine employment were used alongside nominal cash sums as an incentive to relocate when cracking first appeared in 2015 (Kasela, 2024). Where relocation is bargained against wage labour available almost exclusively to men, the compensation package itself is gendered in construction, and women are excluded not only from the disbursement but from the alternative form of restitution offered in its place. Policy responses confined to the adequacy of the aggregate sum will not reach this mechanism; only direct titling or payment to women, and their separate representation in resettlement planning, can do so.

Operator conduct, regulatory failure and governance

Livelihood restoration failed across all three sites, which indicates a paradigmatic rather than a firm-specific deficiency in the resettlement model. What varied by operator was the degree of procedural arbitrariness.

Maamba Energy Limited operated a formal compensation paradigm that was inadequate in valuation yet documented and negotiated, with title deeds eventually released following external intervention. Trident Mine at Kalumbila represents a second configuration, in which formal provision was made but livelihood substitution was mismatched to prior modes of subsistence. Collum Coal Mine, operating in the same district as Maamba under the same district administration and the same customary authority, produced unstructured and largely undocumented settlement at Nkandambwe. Holding district and customary authority constant across these two cases isolates operator conduct as the source of the variation.

The Collum case is distinguished not merely by weaker documentation but by a sustained pattern of harm, deferral and regulatory evasion evidenced independently of this study. Subsidence damage to housing in the affected settlement of Chiyabi emerged between 2015 and 2016 and was met by assurances from the operator that residents occupied a "green zone" and faced no risk, assurances that continued to be given to households in the lower risk categories even as structures cracked through to interior walls and some collapsed entirely (Kasela, 2024). Government eventually closed two shafts, citing "substantial risks to local safety," and directed the operator to relocate affected households, which were then triaged into categories A, B and C, with only the first treated as facing immediate danger. Seventy-seven people were relocated in 2023 and eighty-eight in the first half of 2024. The interval between the first appearance of damage and enforced relocation is thus close to a decade, during which the burden of risk rested entirely on the occupants.

Regulatory allocation in this episode illustrates the institutional weakness underlying operator discretion. The Director of the Mines Safety Department attributed responsibility for surveying affected structures and determining compensation to the Zambia Environmental Management Agency, acting under a resettlement

action plan, while a resettlement development officer in the Office of the Vice President confirmed that validation of affected structures and livelihoods, provision of alternative land, compensation and establishment of social amenities are mandatory functions discharged through ZEMA (Kasela, 2024). In practice the assessment was conducted by the operator on its own account, and ZEMA assigned inspectors only after journalistic enquiry. The same reporting records that some households resettled by the company subsequently returned to the caving area, with the department unable to account for the reasons. Responsibility was therefore dispersed across three agencies without any one of them exercising ex ante control over valuation, with the consequence that the entity bearing the cost of compensation also determined its amount.

This conduct is continuous with the operator's longer record. Twelve workers were injured on 15 October 2010 when mine management fired on a protest over working conditions, with charges of attempted murder announced two days later; a Chinese manager was killed during a protest over delayed wage increases in June 2012; and the Zambian government seized the mine in 2013. Read alongside the compensation practice documented above, the record indicates that procedural arbitrariness at this operator is structural rather than episodic, and that the absence of an enforced national valuation standard permits it to persist.

Corrective governance therefore requires a statutory compensation formula incorporating replacement cost, non-market value and common-property resources; independent valuation by a body with no financial interest in the outcome, with operator self-assessment expressly prohibited; mandatory written agreements with a copy retained by the affected household and a stated basis of calculation; disbursement mechanisms securing women's direct access; a single agency with unambiguous statutory responsibility for validation and monitoring, removing the diffusion of accountability evident in this case; independent verification of fulfilment against agreed schedules; and an accessible grievance procedure with defined timelines and a suspensive effect on relocation pending determination. The state's concurrent role as regulator and equity participant in several mining operations is itself a structural constraint on enforcement and warrants explicit institutional separation.

LIMITATIONS

The survey sample of 62 household representatives was purposively drawn and is not intended to support statistical inference; proportions describe the achieved sample only. Site-level subsamples at Nkandambwe (n = 9) and Shinengenenge (n = 17) are small, and figures for these sites are reported as counts with denominators stated. Item non-response is substantial on several variables, reaching 13 of 62 (21.0%) for year of displacement, 15 of 62 (24.2%) for adequacy of notice and 11 of 62 (17.7%) for compensation fulfilment; proportions are computed on the full sample with non-response displayed, rather than on valid responses alone, so that the effect of missingness remains visible. Monetary amounts rest on respondent recall without documentary verification and are unadjusted for inflation.

Qualitative coverage is uneven. Only one focus group was conducted at Nkandambwe, which does not meet saturation for that site. The secondary material used to characterise operator conduct at Collum derives from investigative journalism rather than peer-reviewed or statutory sources and is relied upon here principally for its on-record attributions to named officials of the Mines Safety Department, the Zambia Environmental Management Agency and the Department of Resettlement. That material concerns the settlement of Chiyabi and the subsidence-driven relocations of 2023–24, which are distinct in site and in period from the displacement cohort captured by the survey; it is therefore adduced as evidence of a continuing pattern of operator conduct and regulatory practice, not as documentation of the displacements reported by respondents. Translation between English and Chitonga or Kaonde may have affected the interpretation of some items, particularly those establishing whether displacement had occurred. The cross-sectional design fixes observation at a single point and cannot trace trajectories of recovery or further decline, and the study represents community perspectives only, without corresponding accounts from operators or regulatory agencies, both of which declined or did not respond to approaches in the reporting relied upon here.

CONCLUSION

This study, by synthesizing quantitative survey data with qualitative lived experiences, provides empirical evidence that mining-induced displacement in Zambia creates a systemic failure in livelihood restoration. The analysis demonstrates that while procedural forms vary ranging from documented but inadequate processes to entirely unstructured and arbitrary individual settlements the substantive outcomes for displaced households remain consistent. Across all studied operators, mining-led resettlement has functioned as a mechanism of impoverishment rather than development.

The findings confirm that the divergence between monetary and non-monetary fulfilment is the primary driver of this failure. While cash payments were frequently disbursed, they were universally insufficient to substitute for the complex, non-market value of lost agrarian commons, social support networks, and cultural heritage. Furthermore, the reliance on male-headed household units for compensation distribution systematically marginalized women, inadvertently institutionalizing intra-household inequality and stripping women of their primary means of economic agency. The study also reveals that the "consultation" processes prevalent in the industry do not constitute meaningful participation but rather serve as notification mechanisms for predetermined relocation schedules, offering no avenues for affected communities to influence terms, valuations, or site planning.

The policy implications are clear. The persistence of livelihood failure under both "formal" and "informal" operational models confirms that firm-specific CSR policies are insufficient to address the structural risks of extractive displacement. Reform must move toward robust, state-enforced safeguards that treat resettlement as a long-term development process rather than an administrative compliance task. This necessitates:

- **Statutory Standardization:** Transitioning from operator-led, discretionary valuation to independent, state-mandated assessment methodologies that account for replacement costs, intangible losses, and common-pool resources.
- **Legislative Enforcement:** Operationalizing the 2024–2025 legislative framework to ensure that compensation packages prioritize land-for-land restoration, explicitly include provisions for female-headed households, and mandate the retention of written agreements by the displaced families themselves.
- **Institutional Accountability:** Centralizing validation and monitoring within a single, autonomous regulatory entity, thereby eliminating the diffusion of accountability that currently allows operators to self-assess and self-verify their own impacts.
- **Procedural Justice:** Establishing mandatory grievance mechanisms that are accessible, independent, and possess the authority to pause relocation processes until disputes are adjudicated.

Ultimately, this study serves as a critique of the prevailing "compensation-as-payment" paradigm. Mining-induced displacement is not an unavoidable byproduct of economic growth, but a policy challenge requiring a radical shift in how Zambia protects the land rights, livelihoods, and dignity of its rural citizens. Future research should prioritize longitudinal tracking of resettled communities to measure the long-term efficacy of the recently enacted 2024–2025 legislative reforms, evaluating whether these structures successfully mitigate the impoverishment risks identified in this assessment.

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