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Editorial Note

This is a brief introduction to a timely and intellectually relevant conversation in this AYIKA publication. It centres on ten articles that cover unique aspects of development challenges in Africa, with particular attention to South Africa and Nigeria. These contributions, taken together, not only identify persistent challenges in environmental protection and economic growth but also advance policy recommendations in response to Africa's changing circumstances across various fronts. To be clear, the needs of Africa are multifaceted and interconnected in several ways; the challenges are similar across the board, although the manifestations may differ geographically. These articles address the connections in the needs and choices of Africa while projecting a better future. Motswaledi's article illuminates this in this volume, concluding that equitable and inclusive energy provision should be prioritised as a fundamental social justice intervention to redress historical inequalities, promote human dignity, and advance socio-economic transformation in post-apartheid South Africa. Such insight applies to all of Africa.

Collectively, these contributions demonstrate that Africa's development challenges cannot be understood in isolated compartments. Governance affects environmental management; energy affects social justice; infrastructure affects economic growth, etc. The major strength of this collection is therefore its interdisciplinary character. It brings together governance, economics, environmental studies, development studies, public policy, agriculture and social justice. More importantly, the articles consistently return to a central question: how can African societies build institutions and development pathways that improve human welfare without undermining the environmental and social foundations of the future? This collection does not claim to offer simple answers. Instead, it provides evidence, cases and critical perspectives that can help scholars, policymakers and practitioners ask better questions. New and better research questions are a right way in the right direction.

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**BUILDING RESILIENT LIVELIHOODS IN INFORMAL SETTLEMENTS:
ASSESSING HEMP-BASED STRATEGIES THROUGH THE SUSTAINABLE
LIVELIHOODS FRAMEWORK AND INSTITUTIONAL THEORY IN
ETHEKWINI MUNICIPALITY**

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Abstract

Sustainable livelihood development remains a significant challenge in South Africa's informal settlements, where poverty, unemployment, infrastructure deficits, and institutional exclusion constrain economic opportunities. This study aims to assess the suitability, feasibility, and acceptability of hemp-based livelihood strategies in an urban informal settlement by integrating the Sustainable Livelihoods Framework (SLF) and Institutional Theory to examine how asset constraints and institutional dynamics shape livelihood opportunities. A qualitative research design was adopted, drawing on semi-structured interviews and focus group discussions in Banana City, an informal settlement within the eThekwin Municipality. Findings reveal interconnected constraints across human, social, financial, physical, and natural assets, including limited skills development opportunities, weak institutional networks, poor access to finance, inadequate infrastructure, and insecure tenure. Institutional asymmetries, reflected in regulatory complexity, affordability barriers, and mutual distrust between informal traders and formal institutions, further restrict economic participation. While participants viewed hemp positively as a potential livelihood opportunity, concerns regarding space availability, compliance costs, technical knowledge, infrastructure, and market access constrained its perceived feasibility. The study concludes that hemp-based initiatives can contribute to livelihood resilience only when supported by inclusive institutions, targeted asset-building interventions, and context-sensitive implementation strategies.

Keywords: *Informal Settlements; Hemp; Livelihood Resilience; Local Economic Development*

1. Introduction

Informal settlements remain a persistent feature of urbanisation in the Global South, including South Africa, where they are closely associated with poverty, unemployment, inadequate infrastructure, and limited access to basic services (Atkinson, 2024; Sam Amobi, Ubani, Eze, Mba, & Henry, 2024; Wainaina & Truffer, 2024). In metropolitan areas such as the eThekweni Municipality, residents of informal settlements rely heavily on precarious informal economic activities to sustain their livelihoods, often operating outside formal regulatory and support systems (Abdullah, Sakil, Baikady, Deb., & Hossain, 2025; Williams, Shahid, & Martinez, 2016; Nel & Rogerson, 2005). Although these activities contribute to Local Economic Development (LED) through income generation, local service provision, and community-level economic circulation, their long-term sustainability and capacity to build resilient livelihoods remain uncertain because of limited access to finance, insecure tenure arrangements, inadequate infrastructure, and weak institutional support (OECD, 2024; Wainaina & Truffer, 2024; Nel & Rogerson, 2005).

To understand these livelihood realities, scholars have increasingly applied asset-based approaches such as the Sustainable Livelihoods Framework (SLF), which emphasises the role of human, social, financial,

physical, and natural assets in shaping livelihood outcomes and resilience (Scoones, 2015). Recent studies have demonstrated that livelihood vulnerabilities emerge from the interaction of deficiencies across these asset categories, rather than from any single constraint, and that targeted interventions can strengthen household resilience and economic participation (Farisani, 2022a; Sam-Amobi et al., 2024; Köhler, 2025). At the same time, institutional perspectives highlight how formal regulations, governance arrangements, and informal social norms influence economic behaviour, access to opportunities, and entrepreneurial decision-making (Li, 2024; Zanella, Hallam & Guda, 2024; Balzano, Marzi, & Turzo, 2025). Together, SLF and Institutional Theory provide a useful lens for examining how both resource constraints and institutional conditions shape livelihood strategies in informal settlements.

Alongside this growing body of livelihoods research, increasing attention has been directed towards cannabis and hemp as emerging livelihood opportunities. Recent African studies have explored the potential of cannabis-related value chains to generate employment, diversify livelihoods, stimulate local economic development, and facilitate broader economic inclusion (Mashau, Farisani & Bello, 2024; Rusenga, Klantschnig, Carrier, & Howell, 2024; Klantschnig, Ediomu-Ubong, Maria-Goretti, Bull-Luseni, Kumordzi,

Tetteh & Rusenga, 2024). In South Africa, this interest has been reinforced by policy developments such as the Cannabis Master Plan and municipal initiatives aimed at developing a competitive hemp industry. These initiatives present hemp as a promising avenue for job creation, investment attraction, and participation in emerging green economies (DTIC, 2025; eThekweni Municipality, 2023). At the same time, scholars caution that regulatory reforms may unintentionally favour well-capitalised actors while excluding small-scale and informal producers through complex licensing systems, compliance requirements, and high entry costs (Rusenga et al., 2024; Mailula, Mamabolo, Mushunje, & Zantsi, 2025).

Despite these developments, an important knowledge gap remains. Existing research has largely focused on rural production systems (Budhathoki et al., 2024; Scalabrin et al., 2024), national policy and regulatory reform (Rusenga et al., 2024; Klantschnig et al., 2024), and broader questions of commercialisation and market development (Mailula et al., 2025). Comparatively little attention has been paid to the feasibility of hemp-based livelihood strategies within dense urban informal settlements, where spatial constraints, insecure tenure, infrastructural deficits, and institutional exclusion may fundamentally alter the viability of such initiatives. Furthermore, while

studies have examined cannabis livelihoods using either sustainable livelihoods perspectives or institutional approaches, few have integrated the Sustainable Livelihoods Framework and Institutional Theory to analyse how asset constraints and institutional dynamics jointly shape the suitability, feasibility, and acceptability of hemp-based livelihood opportunities at the micro level (Farisani, 2023; Zanella et al., 2024).

This study addresses this gap by examining the potential for hemp-based livelihood strategies in informal settlements within the eThekweni Municipality. The research draws on primary qualitative data collected in the Banana City informal settlement in Reservoir Hills and the Durban Chamber of Commerce in the Durban Central Business District. The study therefore focuses empirically on Banana City.

The consideration of hemp as a livelihood strategy is informed by recent policy and market developments that position the sector as a potential source of employment, entrepreneurship, and local economic development (DTIC, 2025; eThekweni Municipality, 2023). However, the applicability of hemp within informal settlements is not straightforward. Successful participation in hemp value chains often requires access to land, water, technical knowledge, processing facilities, finance, and regulatory compliance mechanisms

(Budhathoki, Maraseni & Apan, 2024; Mailula et al., 2025; Scalabrin, Radaelli, Capodaglio, Pierobon, Del Vecchio & Buffa, 2024). Dense urban environments introduce additional challenges, including limited cultivation space, inadequate infrastructure, high compliance costs, and restricted access to formal markets. These realities raise important questions regarding whether hemp cultivation can realistically function as an inclusive and scalable livelihood strategy for informal settlement residents.

Given both the opportunities and the constraints associated with hemp-based initiatives, a balanced and context-specific assessment is required. This study therefore employs the Sustainable Livelihoods Framework to examine human, social, financial, physical, and natural assets influencing livelihood opportunities, while Institutional Theory is used to analyse the regulative, normative, and cultural-cognitive dimensions shaping economic participation and access to emerging hemp value chains. Thus, this study aims to assess the suitability, feasibility, and acceptability of hemp-based livelihood strategies in an urban informal settlement by integrating the Sustainable Livelihoods Framework (SLF) and Institutional Theory to examine how asset constraints and institutional dynamics shape livelihood opportunities.

To guide the investigation, the study addresses the following research questions:

What livelihood asset constraints and opportunities shape economic activity in Banana City?

How do formal and informal institutional dynamics influence participation in livelihood strategies within informal settlements?

To what extent is hemp cultivation a suitable, feasible, and acceptable livelihood strategy in dense urban informal contexts?

By addressing these questions, the study makes three contributions to the literature. First, it provides an empirically grounded urban perspective on hemp-based livelihood strategies, complementing existing literature that is largely rural or policy-oriented. Second, it demonstrates the value of integrating the Sustainable Livelihoods Framework and Institutional Theory to understand how asset conditions and institutional dynamics interact in shaping livelihood opportunities. Third, it offers policy-relevant insights into the design of inclusive and context-sensitive interventions aimed at strengthening livelihood resilience and promoting equitable participation in emerging economic sectors within informal settlements.

2. Literature

The literature review is presented in line with the three research questions (mentioned above) and concludes with a justification for the application of the Sustainable Livelihoods Framework (SLF) and Institutional Theory in this study.

Livelihood strategies

Livelihood strategies in informal settlements have been widely examined in development and urban studies literature, with particular emphasis on how marginalised populations navigate structural constraints such as unemployment, limited access to services, and insecure tenure. Residents in these settings typically depend on informal economic activities, which serve as critical sources of income but are often characterised by vulnerability, low productivity, and limited growth potential (Sam-Amobi et al., 2024; Wainaina & Truffer, 2024). While such activities contribute to local economic development, their long-term sustainability is constrained by inadequate access to resources, weak institutional support, and spatial limitations that hinder expansion and diversification (Abdullah et al., 2025; OECD, 2024).

To better understand these dynamics, scholars have increasingly applied the Sustainable Livelihoods Framework (SLF), which conceptualises livelihoods as shaped by access to five key asset categories: human, social,

financial, physical, and natural capital (Scoones, 2015). In informal settlement contexts, deficits across these assets, such as low levels of education, weak social networks, lack of infrastructure, limited finance, and constrained access to land, interact to produce persistent livelihood insecurity. However, SLF-based studies also highlight targeted interventions, including skills development, access to finance, and infrastructure improvements, that can enhance the capacity of households. Enhance the capacity of households to pursue more resilient and diversified livelihood strategies (Farisani, 2022a; Sam-Amobi et al., 2024; Köhler, 2025; Hanushek & Woessmann, 2012).

Complementing this perspective, Institutional Theory offers insight into how formal regulations and informal norms shape economic behaviour and participation (Balzano et al., 2025; Li, 2024). Recent work emphasises institutional asymmetry, in which misalignment between formal rules (e.g., licensing requirements, regulatory compliance) and informal practices discourages formalisation and limits access to opportunities (Li, 2024; Zanella et al., 2024). In informal settlements, complex regulatory environments, administrative burdens, and perceived exclusion from formal support systems often reinforce reliance on informal economic activities. Together, SLF (Scoones, 2015; Farisani et al., 2023) and Institutional Theory (Li, 2024; Balzano et al., 2025) provide a useful

analytical lens for examining both resource constraints and governance dynamics that shape livelihood strategies.

Within this broader context, there is growing interest in alternative and innovative livelihood options, including those linked to emerging sectors such as cannabis and hemp. Across Africa, recent studies suggest that cannabis-related value chains have the potential to generate income, support agrarian diversification, and promote inclusive economic participation, particularly in the wake of regulatory reforms (Farisani & Mashau, 2025; Rusenga et al., 2024; Klantschnig et al., 2024). In South Africa, policy developments such as the Cannabis Master Plan and municipal pilot initiatives signal increasing institutional support for the sector, positioning hemp as a potential driver of job creation and local economic development (DTIC, 2025; eThekweni Municipality, 2023).

Feasibility of hemp as a livelihood strategy

However, the feasibility of hemp as a livelihood strategy is highly context-dependent. Existing research primarily focuses on rural production systems or policy-level analysis, with limited attention to the specific conditions of urban informal settlements (Budhathoki et al., 2024; Farisani et al., 2023). Studies on hemp value chains highlight key requirements for successful cultivation and participation, including access to

suitable land, reliable water supply, technical knowledge, compliance with regulatory standards, and access to processing infrastructure and markets (Budhathoki et al., 2024; Mailula et al., 2025; Scalabrin et al., 2024). These requirements present significant challenges in dense informal settlements, where space is limited, tenure is insecure, and infrastructure is often inadequate.

In urban contexts, additional constraints further complicate feasibility. Space efficiency becomes critical, requiring small-scale or modular cultivation systems such as vertical or container-based growing approaches (Otieno et al., 2025; FAO, 2024). Water and nutrient management pose challenges in environments with limited or unreliable service provision. Odour management and environmental health considerations may also affect community acceptability. Furthermore, regulatory compliance—including licensing, security requirements, and quality standards—can involve substantial costs and administrative complexity, potentially excluding small-scale informal entrepreneurs. Access to downstream processing facilities (Budhathoki et al., 2024; Mailula et al., 2025) and formal markets (OECD, 2024; Rusenga et al., 2024) is another critical barrier, as value addition in hemp industries typically occurs beyond primary production.

These challenges underscore the need for a more grounded and context-

sensitive assessment of hemp-based livelihood strategies in informal settlements. While the literature identifies significant opportunities, it also suggests that without supportive institutional arrangements and targeted asset-building interventions, participation by marginalised urban populations is likely to remain limited (Farisani, 2022c; Rusenga et al., 2024; Klantschnig et al., 2024).

Sustainable Livelihoods Framework and Institutional Theory

To address these limitations, this study integrates the Sustainable Livelihoods Framework and Institutional Theory in a complementary manner. Specifically, the analysis operationalises SLF by examining five asset categories:

Human assets (skills, education, entrepreneurial capacity), Social assets (networks, institutional linkages), Financial assets (access to capital and credit), Physical assets (infrastructure, space, tenure conditions), and Natural assets (land and environmental resources relevant to cultivation).

Institutional Theory is applied to analyse three key dimensions:

Regulative element (laws, policies, licensing frameworks governing hemp), Normative element (social expectations, perceptions of legitimacy, trust in institutions), and Cultural-cognitive element (belief systems, attitudes, and perceived capabilities of informal entrepreneurs).

By combining these frameworks, the study examines how asset constraints and institutional dynamics interact to shape the suitability, feasibility, and acceptability of hemp-based livelihood strategies in urban informal settlements. This integrated approach directly addresses gaps in the existing literature by providing a more systematic and contextually grounded assessment of emerging livelihood opportunities, particularly in resource-constrained and institutionally complex urban environments (Zanella et al., 2024; Budhathoki et al., 2024).

3. Methodology

Research Design

This study adopted a qualitative approach to explore livelihood strategies in informal settlements. The qualitative data provided the most relevant insights into the contextual feasibility, acceptability, and lived realities of livelihood strategies in informal settlements. The qualitative approach is therefore foregrounded in this paper, as it allows for a richer exploration of participants' experiences, perceptions, and interpretations within their socio-economic and institutional context (Patton, 2002).

Study Area and Scope

The study focused primarily on Banana City, an informal settlement in Reservoir Hills and the Durban Chamber of Commerce within the

eThekwini Municipality. Banana City informal settlement was selected for its active informal economy and relevance to ongoing municipal livelihood and economic development initiatives. Members of the Durban Chamber of Commerce were also interviewed to gain their perspectives on informal settlements' livelihood strategies, since their primary objective is networking and acting as a catalyst for business within Durban.

Sampling Strategy

A purposive sampling strategy was employed to ensure inclusion of participants with relevant experience in informal economic activities and local institutional dynamics.

The qualitative sample comprised:

Community members within the informal settlement, Informal business owners representing a range of activities (e.g., retail, food services, clothing, and small-scale trading), members of the relevant committees in the Durban Chamber of Commerce and Industry (DCCI), and a focus group of informal settlement residents engaged in livelihood activities. This multi-stakeholder sampling approach enabled the study to capture perspectives across different actors, consistent with both the Sustainable Livelihoods Framework (SLF) and Institutional Theory.

Data Collection

Qualitative Data

Qualitative data were collected through semi-structured interviews with relevant stakeholders in the Banana City informal settlements, such as informal business owners, community leaders, DCC key informants and focus group discussions with community members participating in informal economic activities.

These methods were designed to explore:

Livelihood asset constraints (human, social, financial, physical, natural), Institutional dynamics affecting participation in economic activities within the Durban district, Perceptions of emerging livelihood opportunities, including hemp-based initiatives. Interviews and discussions were guided by open-ended questions, allowing participants to elaborate in depth on their experiences and perspectives.

Data Analysis

Qualitative data were analysed using thematic analysis, guided by the inductive approach. Inductive coding allowed additional themes to emerge from participant narratives, particularly regarding perceptions of opportunity, trust, and feasibility. The analysis involved: Transcription and familiarisation with the data; coding of responses into thematic categories; iterative comparison across participants and stakeholder groups; interpretation of patterns in relation to the research questions. This approach ensured that findings reflect both theoretical constructs and lived experiences.

Ethical Considerations

Ethical clearance was obtained from the relevant institutional ethics committee. Participation was voluntary, and informed consent was obtained from all participants. Confidentiality and anonymity were maintained throughout the research process.

4. Results and discussion

Findings

The findings are presented thematically and explicitly linked to the study's research questions to demonstrate how empirical evidence informs the assessment of livelihood strategies and the feasibility of hemp-

based initiatives in informal settlements.

Livelihood asset constraints and opportunities

The findings indicate that livelihood activities in Banana City are shaped by significant and interrelated constraints across all five asset categories (Human, social, physical, natural and financial) of the Sustainable Livelihoods Framework (SLF).

Human capital limitations were evident in participants' restricted knowledge of business management, formalisation processes, and regulatory compliance. While many participants expressed interest in entrepreneurship and skills development, they reported limited access to training and capacity-building programmes. Similar views and words that demonstrated the consensus within individual respondents and focus group respondents included these words: "we need training" and "we cannot afford to pay for our own further learning". These gaps reduce their ability to expand existing businesses or enter new sectors requiring specialised knowledge.

Social capital constraints further compound these challenges. Participants described weak connections with formal business networks and institutional actors, resulting in limited access to mentorship, partnerships, and market

opportunities. Individual businesswomen and men have indicated that there are membership fees for businesses and institutions in important networking organisations such as DCC. All stakeholders interviewed in the informal settlements expressed concern about the “lack of affordability” when asked why they do not take opportunities offered by DCC to connect with relevant resource-rich organisations within Durban. “Lack of affordability” highlights the link between social and financial capital constraints. This isolation restricts the flow of information and resources necessary for business growth.

Physical and natural asset constraints were particularly pronounced. The community members, together with the local small business owners, pointed to the dense spatial structure of the settlement, lack of secure tenure, and inadequate infrastructure (including water and electricity), which they say “limit” the feasibility of expanding or diversifying livelihood activities. When asked to identify physical and natural resources, they were of the same view that “we have no land, water or electricity”. These spatial and environmental constraints significantly shape the types of enterprises that can be sustained within the settlement.

Financial capital was also a major constraint. Participants reported

difficulty accessing credit due to a lack of collateral, formal documentation, and stable income records. The participants echoed each other with similar words, “we don’t have the required papers”, to express their inability to meet requirements from financial institutions. As a result, most businesses operate at subsistence levels, with limited capacity for reinvestment or expansion.

Despite these constraints, participants identified potential opportunities in sectors such as cultural enterprises, small-scale agriculture, and community-based services. Individuals and focus group participants in the informal settlements often pointed to livelihood activities visible in the informal settlements to argue that they have enough skills but lack resources. They used words such as “we have people who are skilled naturally” in “culture”, “sports” and “agriculture”. They believed that natural talents or indigenous knowledge enable them to offer services and products that could be monetised. These findings suggest that while asset limitations are substantial, there is latent entrepreneurial potential that could be activated through targeted support and resource mobilisation.

Formal and informal institutional dynamics

Institutional dynamics play a critical role in shaping participation in livelihood activities and access to

opportunities. The findings reveal a clear pattern of institutional asymmetry, where formal systems and local realities are misaligned. The informal settlements' assertion that "we cannot afford to pay" was further confirmed by individuals interviewed at DCC. The participants at DCC agreed when asked if "there are fees associated with membership to DCC". The participants further corroborated what the informal participants alluded to by agreeing that "fees are the reason informal settlements are not participating in DCC networking events.

From a regulative perspective, participants perceived formal rules and procedures such as business registration, licensing, and access to financial services as complex, costly, and largely inaccessible. This discourages engagement with formal systems and reinforces reliance on informal economic practices.

Normative dynamics were reflected in the mutual mistrust between informal traders and formal institutions. Participants often perceived institutions as exclusionary or unresponsive, while institutional actors were described as sceptical of informal traders' capabilities and trustworthiness. While the informal settlements participants pointed to "exclusion" from participation, the DCC participants pointed to "crime" and "lack of formal training" as reasons for the scepticism. This

disconnect limits collaboration and reduces opportunities for inclusion in formal economic networks.

At the cultural-cognitive level, participants expressed both aspirations and self-doubt. While many recognised opportunities for economic improvement, feelings of marginalisation and limited confidence in navigating formal systems influenced their decision-making. These perceptions shape how individuals interpret and respond to potential livelihood opportunities.

Overall, these findings demonstrate that institutional barriers are not only structural but also relational and perceptual. Addressing them requires not only regulatory reforms but also efforts to build trust, enhance inclusion, and shift perceptions on both sides.

Suitability, feasibility, and acceptability of livelihood strategies in dense urban informal contexts

The findings reveal a nuanced perspective on hemp-based livelihood strategies, characterised by both openness and concern.

In terms of acceptability, participants generally expressed interest in new livelihood opportunities, including those linked to agriculture and emerging sectors. Hemp was viewed as a potentially beneficial initiative if it could contribute to income generation and improved living

conditions. However, awareness of hemp-specific requirements and opportunities was limited, indicating a need for targeted information and training. The participants across stakeholders, when asked if they have any hemp cultivating knowledge or experience, pointed to their “agricultural indigenous knowledge” and argued that “crops are not that different”. However, participants from DCC were of the view that “specialised knowledge is crucial” to business success.

Regarding feasibility, participants identified several significant barriers. The spatial constraints of the settlement were seen as a major limitation, particularly for cultivation activities requiring land, water, and adequate infrastructure. Additionally, DCC participants raised concerns about the complexity of “regulatory requirements”, “the cost of compliance”, and the need for technical expertise. Access to processing facilities and markets was also identified as a critical challenge, as value addition in hemp production typically occurs beyond primary cultivation.

In terms of suitability, the findings suggest that while hemp has potential as a livelihood option, its alignment with existing asset conditions is weak. Without improvements in human capital (skills and training), physical resources (space and infrastructure), financial support, and institutional

accessibility, participation in hemp-based value chains is likely to remain limited. However, informal settlements participants indicated that such initiatives could become more viable if “supported through cooperative models”, “mentorship programmes”, and inclusive policy frameworks. An inclusive policy framework amounted to “accommodating” issues such as registration and licensing requirements.

Taken together, the findings suggest that hemp-based livelihood strategies cannot be assessed in isolation from broader livelihood systems. Their success depends on addressing underlying asset deficits and institutional barriers, as well as adapting implementation approaches to the constraints of dense urban informal environments.

Discussion

This discussion interprets the findings in line with the research questions by focusing on three interrelated dimensions: (1) livelihood asset constraints and opportunities, (2) formal and informal institutional dynamics, and (3) the suitability, feasibility, and acceptability of hemp-based livelihood strategies in dense urban informal contexts. Together, these themes provide a holistic understanding of how resource limitations and institutional conditions interact to shape livelihood outcomes and the potential for introducing

alternative economic activities in informal settlements.

Livelihood asset constraints and opportunities (RQ1)

The findings confirm that livelihood strategies in Banana City are shaped by interconnected deficits across the five asset categories of the Sustainable Livelihoods Framework (SLF). Rather than functioning independently, these asset constraints reinforce one another, creating a cycle of limited opportunity and economic vulnerability. The expressed need for training captured in participants' statements such as "we need training" and "we cannot afford to pay for our own further learning" demonstrates that human capital limitations are not merely individual shortcomings but are structurally embedded. This supports SLF scholarship, which emphasises that deficiencies in skills and knowledge directly constrain access to other assets, including financial capital and formal economic opportunities (Köhler, 2025; Farisani, 2022; Hanushek & Woessmann, 2012; Scoones, 2015).

Social capital constraints further highlight how exclusion is mediated through affordability and access. The inability to participate in networks such as the Durban Chamber of Commerce due to membership fees suggests that institutionalised networking spaces may unintentionally reinforce inequality. This extends existing literature by demonstrating that social capital

deficits are not only about weak relationships but also about unequal access to formalised platforms where relationships and opportunities are created (OECD, 2024; Herawati et al., 2025; Farisani, 2023).

Spatial and infrastructural limitations identified by participants as "limiting" factors underscore the importance of physical and natural assets in shaping livelihood possibilities. In dense urban informal settlements, restricted space, insecure tenure, and inadequate service provision constrain the range of viable economic activities. These findings reinforce arguments that urban informality is deeply tied to spatial inequality, where the physical environment itself becomes a barrier to economic participation and diversification (UN-Habitat, 2025; Otieno et al., 2025; Wainaina & Truffer, 2024).

Financial exclusion remains a critical constraint, with participants' inability to meet formal requirements ("we don't have the required papers") reflecting systemic barriers embedded within financial institutions. This aligns with broader evidence that access to finance in informal economies is shaped by documentation, collateral, and formal income records, which many informal traders lack (World Bank, 2025; OECD, 2024; Ansari & Javaid, 2024). Importantly, the study shows that these financial barriers are intertwined with other asset deficits, further reinforcing livelihood precarity.

At the same time, the identification of indigenous knowledge and natural skills expressed through statements such as “we have people who are skilled naturally” reveals the presence of underutilised assets within the community. This highlights the importance of recognising and leveraging existing capabilities rather than focusing solely on deficits. It suggests that interventions should adopt an asset-based approach that builds on local strengths while addressing structural constraints (Farisani, 2025; Morris, Kuratko, Audretsch & Santos, 2022; Scoones, 2015).

Formal and informal institutional dynamics (RQ2)

The findings demonstrate that institutional dynamics play a central role in shaping livelihood participation, particularly through the lens of institutional asymmetry. The confirmation by both informal participants and institutional actors that cost barriers limit participation in formal networks illustrates a clear misalignment between institutional structures and the economic realities of informal settlement residents. This extends theoretical work on institutional asymmetry by showing how pricing mechanisms within formal institutions can actively exclude marginalised groups (Balzano et al., 2025; Li, 2024; Zanella et al., 2024).

At the regulative level, the perceived complexity and cost of formal

procedures discourage engagement with formal systems, reinforcing reliance on informal economic practices. This finding supports existing literature highlighting how regulatory burdens can act as barriers rather than enablers for small-scale entrepreneurs (ILO, 2025; EU-ILO, 2025; Farisani & Mashau, 2025). However, the study goes further by showing that these barriers are experienced not only as procedural obstacles but also as signals of exclusion.

Normative dynamics are particularly evident in the mutual mistrust between informal traders and institutional actors. While informal participants emphasised “exclusion,” institutional representatives cited concerns about “crime” and “lack of formal training.” This divergence in perspectives reflects a deeper relational divide that limits collaboration and reinforces marginalisation. Such findings support institutional theory perspectives that highlight the role of norms and expectations in shaping economic interactions and access to opportunity (Balzano et al., 2025; Zanella et al., 2024).

At the cultural-cognitive level, participants’ simultaneous expressions of aspiration and self-doubt suggest that internalised perceptions of marginalisation influence their engagement with formal systems. These perceptions shape how opportunities are interpreted and whether they are pursued. This

indicates that institutional barriers extend beyond formal rules to include beliefs, attitudes, and confidence levels, underscoring the importance of behavioural and learning-oriented interventions (Li, 2024; Rotmans & Loorbach, 2010).

Suitability, feasibility, and acceptability of hemp-based livelihood strategies (RQ3)

The assessment of hemp-based livelihood strategies reveals a nuanced interplay between opportunity and constraint. In terms of acceptability, participants demonstrated openness to new livelihood options and expressed confidence in their general agricultural knowledge, suggesting a willingness to engage with alternative economic activities. However, the contrasting view from institutional actors that “specialised knowledge is crucial” highlights a gap between perceived capability and industry requirements. This gap points to the need for targeted capacity-building interventions that bridge informal knowledge systems with formal sector demands (Arif & Herawan, 2025; Herawati et al., 2025; Farisani & Mashau, 2025).

The feasibility of hemp cultivation is significantly constrained by both asset limitations and institutional barriers. Spatial restrictions, inadequate infrastructure, and limited access to water and energy pose direct challenges to cultivation in dense informal settlements. These findings reinforce value-chain literature emphasising the importance of land,

inputs, and infrastructure for successful hemp production (Budhathoki et al., 2024; Scalabrin et al., 2024; FAO, 2024). However, this study extends that literature by demonstrating how urban constraints intensify these challenges, making conventional cultivation models less viable.

Regulatory requirements and compliance costs further complicate feasibility, particularly for participants with limited experience navigating formal systems. The identification of these barriers supports broader concerns that emerging regulated sectors may inadvertently exclude small-scale and informal producers (Mailula et al., 2025; Rusenga et al., 2024; Klantschnig et al., 2024). Additionally, the lack of access to processing facilities and markets underscores the importance of value-chain integration, as economic benefits are often realised beyond primary production (Budhathoki et al., 2024).

In terms of suitability, the findings suggest that hemp-based strategies currently have limited alignment with existing asset conditions in informal settlements. However, participants’ suggestions for cooperative models, mentorship programmes, and more “accommodating” policy frameworks indicate potential pathways for improving alignment. These insights align with emerging policy literature advocating inclusive value-chain development and smallholder-centred

regulatory frameworks (Mailula et al., 2025; OECD, 2024; Farisani, 2023).

Contributions

A key contribution of this study lies in its urban perspective on hemp-based livelihoods. Existing literature has predominantly focused on rural production systems, national regulatory reform, and commercialisation processes. By examining hemp through the experiences of informal settlement residents, this study demonstrates that urban contexts introduce additional constraints related to density, infrastructure, service provision, and governance. Consequently, assessments of hemp-based livelihood strategies must move beyond assumptions of universal applicability and instead consider the specific asset and institutional conditions that characterise different settings.

The study also contributes theoretically by demonstrating the value of integrating the Sustainable Livelihoods Framework and Institutional Theory. The SLF enabled a systematic assessment of the asset base available to residents, while Institutional Theory provided insights into how formal regulations, social norms, and perceptions shape economic participation. Together, these frameworks offered a more comprehensive understanding of the factors influencing livelihood choices than either framework could provide independently. The integrated approach proved particularly useful

for evaluating the suitability, feasibility, and acceptability of emerging livelihood opportunities in complex urban environments.

Policy implications

The findings carry several policy implications. First, livelihood interventions should prioritise human-capital development through training, mentorship, entrepreneurial education, and technical support programmes. Second, financial inclusion initiatives should be designed to accommodate the realities of informal entrepreneurs who lack collateral, extensive documentation, or formal credit histories. Third, policy-makers should strengthen social capital by facilitating affordable participation in business networks and market-support institutions. Fourth, regulatory reforms should seek to simplify licensing and compliance processes while ensuring that small-scale and informal actors are not excluded from emerging hemp value chains. Finally, any future hemp initiatives should be accompanied by investments in infrastructure, cooperative models, market access mechanisms, and shared processing facilities to improve their practical viability.

Limitations of the study

The study is not without limitations. The research focused primarily on Banana City. As a qualitative study, the findings provide rich contextual insights but are not intended to be statistically generalisable. Future

research should therefore explore multiple informal settlement contexts, employ mixed-method and longitudinal designs, and investigate practical models for integrating informal settlement residents into regulated hemp value chains in ways that are both economically viable and socially inclusive.

5. Conclusions

This study aims to assess the suitability, feasibility, and acceptability of hemp-based livelihood strategies in an urban informal settlement by integrating the Sustainable Livelihoods Framework (SLF) and Institutional Theory to examine how asset constraints and institutional dynamics shape livelihood opportunities. Guided by three research questions, the study examined livelihood asset constraints and opportunities, the influence of formal and informal institutional dynamics, and the potential of hemp-based initiatives within a dense urban informal settlement context. The findings demonstrate that livelihood outcomes are shaped by the interaction between multidimensional asset constraints and institutional conditions, highlighting the importance of understanding livelihood development as both a resource and governance challenge.

In conclusion, the study demonstrates that hemp-based livelihood strategies may offer opportunities for livelihood diversification and local economic development, but their success depends on far more than the economic potential of the crop itself. Addressing asset deficits, strengthening institutional support, reducing barriers to participation, and creating inclusive governance arrangements are essential prerequisites for meaningful participation in emerging

hemp value chains. Without these enabling conditions, hemp risks becoming another opportunity accessible primarily to already advantaged actors. With them, however, hemp-based initiatives may contribute to more resilient, inclusive, and sustainable livelihood pathways within South Africa's informal settlements.

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Ethical statement

The study was conducted in accordance with the University of KwaZulu-Natal ethics guidelines and was approved by the Ethics Committee.

(Protocol code HSS/0704/011M and date of approval is 8 August 2011.

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study

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Conflicts of Interest

The authors declare no conflicts of interest.

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