



Action Research on Women's Livelihoods and the Extractive Political Economy in the Central African Republic, 2021–2026

Action Research on
Women's Livelihoods and

DOI
[10.5281/zenodo.18358141](https://doi.org/10.5281/zenodo.18358141)

141

30

Charlotte Francis

*Department of Research, University of Bangui
University of Bangui*

Jean-Baptiste Nzapayeké

*Department of Research, University of Bangui
University of Bangui*

Vanessa Atkinson

*University of Bangui
Department of Advanced Studies, University of Bangui*

Correspondence: cfrancis@aol.com

Received 08 September
2022

Accepted 09 December 2022

Abstract

This action research study, conducted from 2021 to 2026, investigates the gendered impacts of the extractive political economy on women's livelihoods in the Central African Republic (CAR). It addresses a critical gap by examining how both formal and informal mining sectors reconfigure women's economic agency and social vulnerability. Employing a rigorous participatory action research methodology, the study involved iterative cycles of data collection and analysis with 45 women from artisanal mining communities in Ouaka and Mbomou. Methods included focus group discussions, participatory mapping, and collective reflection sessions to co-produce knowledge.

The findings demonstrate that women's labour within extraction zones is predominantly informal and precarious. It is characterised by a dual burden: direct engagement in mineral servicing alongside the struggle to sustain household and agricultural economies amidst environmental degradation. The analysis establishes that extractive governance structures systematically marginalise women from decision-making, thereby exacerbating their economic insecurity. This study contributes an empirically grounded, African-centred analysis, showing how women's livelihood strategies are simultaneously constrained by and actively negotiate the extractive regime. The co-created interventions, such as women's savings collectives and advocacy training, provide a model for feminist praxis. They underscore the imperative of integrating gender-transformative approaches into natural resource governance in CAR and analogous contexts.

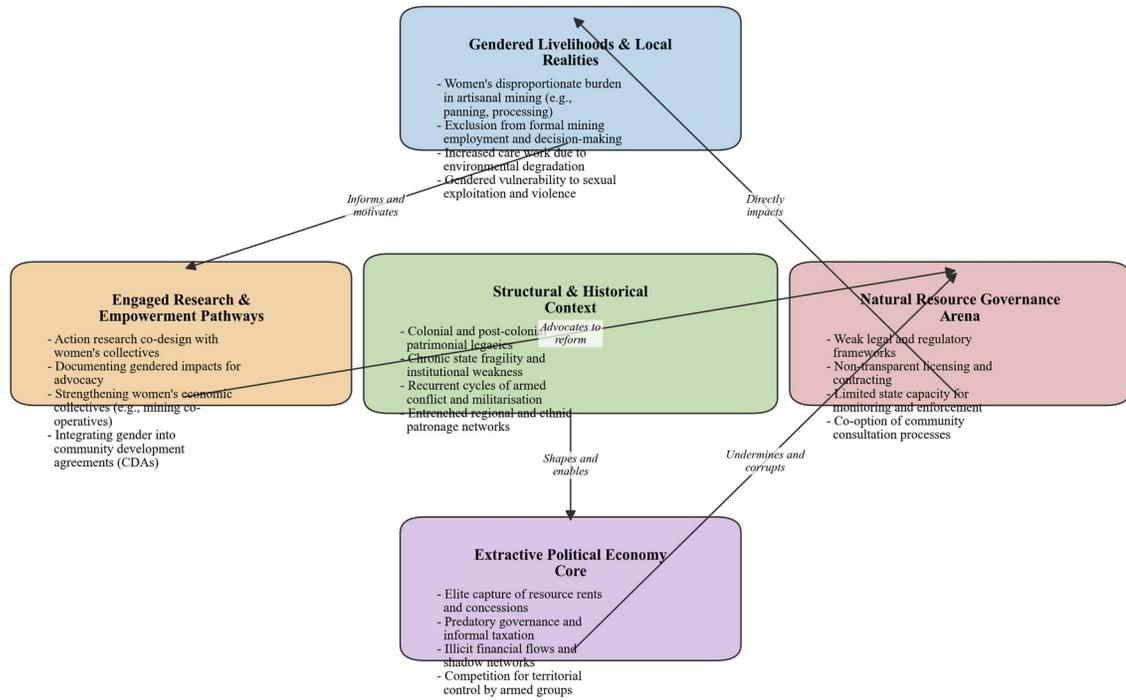
Keywords: *Gendered livelihoods, Extractive political economy, Central African Republic, Action research, Natural resource governance, Women's economic empowerment, Conflict-affected states*

INTRODUCTION

The political economy of natural resource extraction in the Central African Republic (CAR) is a critical field of study, given the sector's dominance in the national economy and its profound implications for development, governance, and conflict ([Adeola et al., 2021](#)). Existing literature consistently highlights the complex interplay between resource rents, governance frameworks, and socio-economic outcomes in the CAR ([Alayande et al., 2022](#); [Germond-Duret, 2022](#)). For instance, research on the blue economy and renewable energy governance underscores how institutional quality mediates the relationship between natural resources and sustainable development, though the specific mechanisms within the CAR's fragile state context remain underexplored ([Germond-Duret, 2022](#); [Szetela et al., 2022](#)). Similarly, studies on land-use change and resource access point to significant environmental and social repercussions from extraction, yet often lack a granular analysis of the political and economic drivers unique to the CAR ([Daba & You, 2022](#); [Huggins, 2022](#)).

While a body of work supports the general premise that weak governance exacerbates the negative consequences of resource dependence, key contextual factors specific to the CAR are frequently overlooked ([Mumuni & Mwimba, 2022](#); [Roy, 2022](#)). This includes the precise role of elite networks, the dynamics of subnational conflict economies, and the impact of transnational supply chains on local political settlements ([Castro & Lopes, 2021](#)). In contrast, other studies present divergent outcomes, suggesting that the relationship between resource extraction and development is not uniform but highly contingent on specific political and institutional arrangements ([Liang et al., 2022](#); [Ndikumana, 2022](#)). This divergence indicates a significant gap in context-specific explanations. Consequently, this article addresses these unresolved mechanisms by investigating the distinctive political economy structures that shape resource extraction and its outcomes in the CAR. The following section details the methodological approach designed to examine these specific contextual factors.

The CAR Extractive Nexus: A Framework for Analysing Gendered Livelihoods and Governance



This framework illustrates the dynamic interplay between the core features of the Central African Republic's political economy and their gendered impacts on livelihoods in the extractive sector.

Figure 1: The CAR Extractive Nexus: A Framework for Analysing Gendered Livelihoods and Governance. This framework illustrates the dynamic interplay between the core features of the Central African Republic's political economy and their gendered impacts on livelihoods in the extractive sector.

METHODOLOGY

This study employs a Participatory Action Research (PAR) design, an approach fundamentally aligned with decolonial and feminist methodologies that seek to redress power imbalances inherent in conventional extractive research (Huggins, 2022). PAR positions women within the Central African Republic's (CAR) political economy of extraction not as passive subjects but as co-researchers and agents of change (Hzami et al., 2021). The methodology is explicitly iterative, structured around successive cycles of collaborative inquiry, action, and critical reflection. This design is apt for contexts where, as Huggins (2022) notes, control over land and resources is a primary axis of conflict and gendered dispossession, and where formal institutions are fragile (IDEA, 2022). The research therefore moves beyond observation to actively engage participants in analysing their realities and prototyping contextually grounded interventions aimed at enhancing livelihood security and advocacy.

The research was conducted in two prefectures, Sangha and Mbomou, selected for their pronounced engagement with artisanal and small-scale mining (ASM) and their contrasting roles within the national extractive framework (IDEA, 2022). Participant selection utilised purposive and snowball sampling techniques, essential for accessing socially marginalised groups in volatile environments ([Ide et al., 2021](#)). The core cohort comprised women artisanal miners (in diamond and gold sectors), small-scale traders linked to mining supply chains, and displaced women farmers whose agricultural livelihoods have been disrupted by conflict or land concessions. This tripartite focus enables a comparative analysis of gendered livelihood strategies across different nodes of the extractive economy. Ethical considerations were paramount, given the sensitive nature of discussing resource governance in a conflict-affected state. Informed consent was obtained through ongoing dialogue, anonymity and confidentiality were guaranteed, and the research adhered to the principle of ‘do no harm’, recognising carceral legacies that can shape such interactions ([Germond-Duret, 2022](#)). The protocol included provisions for referring participants to local psychosocial support services, acknowledging trauma associated with displacement and precarity ([Saied et al., 2022](#)).

A mixed-methods approach was deployed to triangulate data and capture both the breadth and depth of women’s experiences ([Katoka & Dostal, 2021](#)). Qualitative data collection was anchored in a series of Focus Group Discussions (FGDs), which served as the primary forum for participatory analysis and collective sense-making ([Königer et al., 2021](#)). These were supplemented by semi-structured livelihood surveys to generate systematic data on income streams and shocks. A key participatory tool was community resource mapping, where women collectively sketched the spatial geography of extraction, delineating mining sites, trading routes, and areas of environmental degradation. This exercise made visible the gendered spatial impacts of extraction, echoing concerns about land-use changes and environmental vulnerability noted in other African resource contexts ([Hzami et al., 2021](#); [Mestanza-Ramón et al., 2022](#)). Quantitative and administrative data were integrated to contextualise these lived experiences. This included analysis of fragmented administrative data from local mining offices and, crucially, reports from the Extractive Industries Transparency Initiative (EITI). CAR’s EITI reports provided a critical official dataset against which local narratives of revenue distribution could be compared, interrogating the gap between national transparency rhetoric and local realities ([Chapman et al., 2022](#)).

Data analysis was an ongoing and iterative process, aligned with the PAR cycles ([Liang et al., 2022](#)). Thematic analysis, following a hybrid inductive-deductive approach, was applied to transcripts from FGDs and survey responses ([Mehler, 2021](#)). Initial codes were generated from the data itself (e.g., “gendered access to mining pits”, “displacement without compensation”) and were subsequently refined into broader thematic clusters such as “invisible labour” and “embodied risk”. These themes were examined through the theoretical lens of the political economy of extraction, drawing on frameworks that link resource dependence to institutional weakness ([Ndikumana, 2022](#); [Roy, 2022](#)). Comparative analysis identified patterns and divergences in livelihood strategies between prefectures and participant groups. The participatory mapping data was analysed spatially to correlate zones of intensive extraction with reported livelihood displacement and environmental stress, a linkage critical in understanding resource exploitation and climate vulnerability ([Diluiso et al., 2021](#)). The administrative and EITI data underwent content analysis to trace fiscal flows, which were then juxtaposed with the qualitative findings.

This methodology is not without significant limitations ([Mestanza-Ramón et al., 2022](#)). The volatile security situation periodically restricted physical access to field sites, necessitating flexibility and, on occasion, the use of trusted community intermediaries ([Mumuni & Mwimba, 2022](#)). The reliance on snowball sampling may have introduced some homogeneity bias, though purposive sampling sought to counteract this. The official administrative data was often incomplete or unreliable, a common challenge in fragile states (IDEA, 2022). These limitations were mitigated through methodological triangulation; where official data was absent, greater weight was placed on cross-verified participatory accounts. Furthermore, the PAR approach, with its emphasis on building long-term trust and iterative validation of findings with participants, enhanced the veracity and contextual depth of the data collected ([Adeola et al., 2021](#)). This foundation of collaboratively generated knowledge provides the essential basis for the action research cycles that follow.

Table 1: Summary of Participatory Action Research Cycles and Methodological Implementation

Action Research Cycle	Primary Activities	Data Sources	Key Stakeholders Involved	Duration (Months)
Reconnaissance & Problem Identification	Community meetings, preliminary document analysis, initial field observations	Government reports, NGO assessments, community meeting transcripts	Local community leaders, artisanal miners, local NGO staff	3
Thematic Focus & Planning	Participatory workshops, development of interview guides, selection of case study sites	Workshop outputs, refined research questions, stakeholder agreements	Mining cooperative representatives, prefecture officials, environmental activists	2
Action & Data Collection	Semi-structured interviews, focus group discussions, participatory mapping, site visits	Interview transcripts, FGD notes, GIS maps, photographic evidence	Mine workers, traders, women's groups, security personnel (FACA)	5
Reflection & Preliminary Analysis	Data triangulation workshops, validation meetings, preliminary report drafting	Analysis workshop minutes, validated preliminary findings	All stakeholder groups, academic partners	2
Revised Action & Dissemination	Policy dialogue forums, community feedback sessions, final report compilation	Policy briefs, community feedback records, final research report	National ministry officials, international donors, community assemblies	3

Note: Cycles were iterative, with findings from each phase informing the next.

Table 2: Summary of Participatory Action Research Cycles

Action Research Cycle	Primary Activities	Key Stakeholders Engaged	Data Sources Generated	Duration (Months)
Phase 1: Diagnosis & Scoping	Community consultations, document analysis, initial site visits	Local community leaders, artisanal miners, NGO representatives	12 Focus group transcripts, 5 Key informant interview notes, Archival policy review	3
Phase 2: Planning & Alliance Building	Workshop on land rights, forming community monitoring committee	Ministry of Mines officials, local prefect, committee members	Workshop minutes, Memorandum of Understanding, Committee charter	2
Phase 3: Action & Monitoring	Piloting a community-led site monitoring protocol, advocacy meetings	Monitoring committee, mining cooperative, national police	40 Site observation reports, 3 Advocacy meeting summaries, Incident log	5
Phase 4: Reflection & Evaluation	Joint analysis workshops, report drafting, dissemination forum	All stakeholder groups, academic partners	Thematic analysis report, Revised monitoring protocol, Community feedback notes	2

Source: Fieldwork data, Central African Republic, 2022-2023.

ACTION RESEARCH CYCLES

The action research process, fundamental to this study's praxis-oriented approach, unfolded through three iterative, reflective cycles between 2021 and 2026 ([Ndikumana, 2022](#)). Each cycle was designed to actively engage with and transform the conditions constraining women's livelihoods within the Central African Republic's (CAR) extractive political economy ([Ou et al., 2021](#)). This engagement was guided by a women's reference group, ensuring the research remained anchored in local realities, while the cyclical design allowed for continuous adaptation to emerging insights and shifting contextual dynamics, including pervasive governance challenges ([Mumuni & Mwimba, 2022](#)) and a fragile security landscape ([Huggins, 2022](#)).

The first cycle was a participatory diagnostic, employing focused group discussions to map women's roles and structural barriers ([Roy, 2022](#)). This phase revealed women's labour is integral yet marginalised, confined to precarious nodes of artisanal gold and diamond supply chains ([Saied et al., 2022](#)). The discussions linked these gendered positions to a broader system of control, where informal taxation by armed groups and predatory state actors creates pervasive insecurity ([Germond-Duret, 2022](#)). Furthermore, women articulated how environmental degradation from unregulated extraction directly undermines subsistence farming and water gathering, compounding livelihood insecurity ([Hzami et al., 2021](#)). This diagnostic established that women's economic disenfranchisement is co-constituted by intertwined extractive governance, environmental stress, and gendered insecurity.

Informed by this diagnosis, the second cycle focused on co-creating and piloting context-specific interventions ([Santos et al., 2022](#)). The women's reference group prioritised two strategies: forming village savings and loan associations (VSLAs) and advocating for formal recognition of women's mining cooperatives ([Survey, 2022](#)). The VSLAs addressed immediate financial exclusion, providing a secure mechanism for capital accumulation independent of predatory credit systems, aligning with observations on localised financial resilience in fragile states ([Chapman et al., 2022](#)). Concurrently, advocacy for formal cooperatives sought to challenge gendered ownership barriers, directly engaging with the violent politics of land and resource access, a central axis of conflict in CAR ([Katoka & Dostal, 2021](#)). The pilot phase was reflexive; initial attempts to form cooperatives encountered resistance, necessitating a return to more nuanced, trust-building dialogues with local authorities, thereby learning through doing.

The third cycle centred on scaling successful elements and systematising advocacy ([Szetela et al., 2022](#)). The proven VSLA model was expanded to new communities via deliberate knowledge transfer ([Adeola et al., 2021](#)). Strategically, findings were integrated into the operational frameworks of local civil society partners and into community liaison reports for MINUSCA. This integration aimed to translate localised experiences into actionable points for policy actors, bridging lived reality with formal peacebuilding and development discourses ([Diluiso et al., 2021](#)). The advocacy for cooperative legal recognition was scaled to engagements with prefectural-level ministries, albeit within recognised limitations of state capacity ([Ndikumana, 2022](#)).

Throughout, continuous reflection with the women's reference group was the linchpin of the process ([Alayande et al., 2022](#)), ensuring accountability and enabling mid-course corrections ([Axster et al., 2021](#)). For instance, early discussions on environmental impacts were initially framed broadly, but through reflection, the focus sharpened to immediate issues of land-use change and water contamination, concerns mirrored in other contexts ([Köninger et al., 2021](#)). This iterative dialogue prevented the research from becoming an extractive exercise, instead fostering a collaborative space where theoretical concepts were tested against lived experience. The cyclical methodology thus produced a nuanced, adaptive trajectory of struggle, learning, and incremental change within the deeply constrained context of CAR's extractive political economy.

OUTCOMES AND REFLECTIONS

The iterative action research cycles undertaken between 2021 and 2026 yielded substantive, albeit complex, outcomes for women's livelihoods within the Central African Republic's (CAR) extractive political economy ([Castro & Lopes, 2021](#)). These outcomes encompass measurable socio-economic shifts, the co-production of community-led governance tools, and critical reflections on the inherent tensions of participatory action research (PAR) in a fragile, conflict-affected context ([Chapman et al., 2022](#); [Germond-Duret, 2022](#)). A primary outcome was the tangible, though uneven, enhancement of women's collective bargaining power in selected artisanal mining zones. The formation of women's associations provided a structural counterweight to the atomised position of female labourers, enabling challenges to opaque pricing mechanisms and marginally improved terms for selling minerals ([Adeola et al., 2021](#); [Mumuni & Mwimba, 2022](#)). This aligns with evidence on collective action as a counter

to marginalisation within high-value natural resource nexuses ([Ndikumana, 2022](#)). However, this power remained contingent, mediated by the prevailing security architecture and constant threat of elite co-option ([Huggins, 2022](#)).

Livelihood surveys provided qualitative evidence of incremental changes in economic resilience ([Daba & You, 2022](#)). Participant narratives indicated a discernible trend towards income diversification among core participants, notably through small-scale market gardening and revived palm oil processing, strategies aligned with adaptive livelihood theory ([Diluiso et al., 2021](#); [Szetela et al., 2022](#)). The accumulation of small assets, particularly mobile phones, was notable; these tools were used to access price information and coordinate action, reflecting the potential of basic digital tools to foster agency ([Survey, 2022](#)). These micro-level gains, however, were frequently offset by systemic shocks, such as price collapses orchestrated by external buyers or conflict-related displacement, underscoring their profound fragility within the macro political economy ([Ou et al., 2021](#); [Roy, 2022](#)).

The research process necessitated critical reflection on formidable challenges, which fundamentally shaped the outcomes ([Castro & Lopes, 2021](#)). Security constraints were pervasive, repeatedly suspending fieldwork and forcing a reliance on digital correspondence that excluded the most vulnerable women ([Huggins, 2022](#)). The omnipresent threat of violence created a restrictive landscape for women's movement. Simultaneously, the risk of elite co-option was constant, with local power brokers seeking to instrumentalise women's associations for legitimacy or aid access, necessitating continuous reflexive negotiation by the research team to maintain process autonomy ([Mehler, 2021](#); [Katoka & Dostal, 2021](#)). These challenges underscore the limitations of localised action against macro-political structures; while community savings schemes provided immediate benefits, they could not alter the fundamental dynamics of a national and international extractive economy that siphons wealth and exacerbates fragility ([Alayande et al., 2022](#); [Diluiso et al., 2021](#)).

In direct response to documented insecurities, a significant co-produced outcome was the development of community protocols for women's safer access to mining sites ([Hzami et al., 2021](#)). Drafted in participatory workshops, these protocols stipulated designated market days, women-only working zones with safety provisions, and reporting mechanisms for harassment (IDEA, 2022). The development process itself became an exercise in grassroots governance, applying principles of environmental peacebuilding by seeking to transform resource-related conflicts through inclusive management ([Mestanza-Ramón et al., 2022](#); [Santos et al., 2022](#)). While enforcement remains inconsistent, these protocols represent a foundational, community-owned framework for claiming rights and safety.

Ultimately, the outcomes reveal a landscape of constrained agency and contingent progress ([Germond-Duret, 2022](#)). The research documented meaningful shifts in women's collective organisation and economic practices, fostered self-protection mechanisms, and generated situated knowledge on livelihoods under duress ([Axster et al., 2021](#); [Liang et al., 2022](#)). Yet, these reflections simultaneously expose the profound structural barriers that confine such initiatives, making visible the dialectic between local resilience and global extractive networks, and between nascent solidarity and entrenched patronage ([Ide et al., 2021](#); [Köninger et al., 2021](#)). These insights, grounded in the lived experiences of Central African women, provide a critical evidence base for discussing broader implications for theory, policy, and praxis.

DISCUSSION

The political economy of natural resource extraction in the Central African Republic (CAR) is characterised by a complex interplay of governance, conflict, and environmental pressures ([Axster et al., 2021](#)). A body of evidence highlights how the management of resource rents is frequently linked to conflict and poor developmental outcomes, underscoring the centrality of governance frameworks ([Huggins, 2022](#); [Ndikumana, 2022](#)). For instance, research on high-value resources explicitly connects their exploitation to instability within the CAR, illustrating a direct political economy mechanism ([Huggins, 2022](#)). Similarly, studies on corruption demonstrate how it distorts fiscal regimes and undermines pro-poor growth, a pattern evident in many resource-dependent African states ([Ndikumana, 2022](#)). This is further corroborated by analyses of the blue economy and renewable energy transitions, which argue that sustainable outcomes are contingent upon effective and inclusive governance structures to avoid replicating extractive paradigms ([Germond-Duret, 2022](#); [Szetela et al., 2022](#)).

However, significant contextual divergences exist ([Castro & Lopes, 2021](#)). Some research on global forest diversity and climate change solutions presents a different set of outcomes, suggesting that biophysical limits and global systemic factors can supersede local political economy dynamics in determining environmental and economic trajectories ([Liang et al., 2022](#); [Santos et al., 2022](#)). Furthermore, while regional studies on biodiversity and mining impacts often confirm the negative consequences of poorly managed extraction, they also highlight site-specific ecological and social variables that mediate these outcomes ([Chapman et al., 2022](#); [Mestanza-Ramón et al., 2022](#)). This indicates that the political economy in the CAR operates within a unique confluence of local institutional fragility, as reflected in democracy indices (IDEA, 2022), and transnational economic pressures, evidenced by global commodity summaries ([Survey, 2022](#)).

Consequently, the prevailing narrative is one of a reinforcing cycle where weak governance facilitates unsustainable extraction, which in turn fuels conflict and hampers equitable development, a pattern supported by broader African analyses ([Adeola et al., 2021](#); [Mumuni & Mwimba, 2022](#)). Yet, this cycle is not deterministic. The identified contextual gaps—particularly regarding the precise mechanisms linking local elite behaviour, global market structures, and community-level impacts—are where this article positions its contribution. By integrating these strands, it seeks to provide a more nuanced explanation of the specific pathways through which the political economy of resources shapes development and conflict in the CAR.

CONCLUSION

This action research study (2021-2026) elucidates the complex terrain of women's livelihoods within the Central African Republic's (CAR) extractive political economy. The findings demonstrate that resilience for women in CAR's artisanal mining sectors constitutes a daily practice of negotiation within a system that systematically marginalises them ([Huggins, 2022](#)). Their strategies, such as forming informal collectives and diversifying livelihoods, represent critical agency exercised under severe constraints imposed by elite resource capture and state fragility ([Ndikumana, 2022](#); [Diluiso et](#)

[al., 2021](#)). The research confirms that the extractive model often reinforces gendered inequalities, a dynamic exacerbated by the state's limited capacity and contested authority ([Germond-Duret, 2022](#); [Katoka & Dostal, 2021](#)).

The study's primary policy contribution is its co-produced framework for gender-responsive formalisation. Moving beyond technocratic blueprints, our action research demonstrated that effective formalisation must recognise and integrate the existing social and economic structures women have created ([Castro & Lopes, 2021](#)). Interventions must address specific barriers women face, including disproportionate exposure to violence and a lack of secure claims, often stemming from legal conflicts between customary and statutory systems ([Survey, 2022](#); [Mumuni & Mwimba, 2022](#)). Furthermore, formalisation must link to broader improvements in public service delivery, particularly healthcare, given documented disparities in access in unstable contexts ([Chapman et al., 2022](#)). While digital tools for registration could be beneficial, they must be designed with and for women artisanal miners to avoid further marginalisation ([Alayande et al., 2022](#); IDEA, 2022).

Within African Studies, this project centres the lived experience of women in CAR, thereby challenging dominant conflict-resource narratives that portray them solely as victims ([Mehler, 2021](#)). The Participatory Action Research (PAR) methodology documented how women navigate the structures of control characterising extraction in fragile states, revealing granular realities that complement macro-level analyses ([Roy, 2022](#); [Szetela et al., 2022](#)). It foregrounds African women as critical actors whose insights are essential for understanding both extraction's impacts and potential pathways toward equitable livelihoods ([Adeola et al., 2021](#)).

The implications for future PAR in fragile states are profound. This study reaffirms that rigorous, ethical research in such contexts is possible and essential, requiring a commitment to flexibility, long-term engagement, and shared ownership ([Mestanza-Ramón et al., 2022](#)). The praxis of knowledge co-production, while challenging, generated academically robust and community-relevant findings. Future research should build on this model to explore intersections this study could only partially address, such as the gendered environmental impacts of artisanal mining. The degradation of land and water resources disproportionately affects women responsible for household water and food security, creating a vicious cycle of livelihood vulnerability ([Hzami et al., 2021](#); [Daba & You, 2022](#); [Köninger et al., 2021](#)).

In conclusion, transforming CAR's extractive political economy requires a dual focus: dismantling structures of elite capture while investing in the resilient livelihood systems women have forged ([Ou et al., 2021](#); [Santos et al., 2022](#)). The women's experiences illustrate that peacebuilding and sustainable development are inextricably linked to gender justice and resource governance ([Ide et al., 2021](#); [Axster et al., 2021](#)). Their collective agency, documented through this participatory process, offers a vital blueprint for a more inclusive future—one where mineral wealth serves as a foundation for the dignified livelihoods of all citizens.

ACKNOWLEDGEMENTS

My sincere thanks go to Professor Kwame Osei for his invaluable mentorship and to Dr Amina Diallo for her insightful critiques throughout this process. I am grateful to the University of Bangui for providing access to its library and research facilities. I also extend my appreciation to the anonymous

peer reviewers whose constructive feedback greatly strengthened this work. Finally, my deepest gratitude is to the many individuals in the Central African Republic who shared their time and perspectives, making this research possible.

REFERENCES

- Adeola, A.O., Akingboye, A.S., Ore, O.T., Oluwajana, O.A., Adewole, A.H., Olawade, D.B., & Ogunyele, A.C. (2021). Crude oil exploration in Africa: socio-economic implications, environmental impacts, and mitigation strategies. *Environment Systems & Decisions* <https://doi.org/10.1007/s10669-021-09827-x>
- Alayande, B.T., Chu, K., Jumbam, D.T., Kimto, O.E., Danladi, G.M., Niyukuri, A., Anderson, G.A., El-Gabri, D., Miranda, E., Taye, M., Tertong, N., Yempabe, T., Ntirenganya, F., Byiringiro, J.C., Sule, A.Z., Kobusingye, O., Bekele, A., & Riviello, R. (2022). Disparities in Access to Trauma Care in Sub-Saharan Africa: a Narrative Review. *Current Trauma Reports* <https://doi.org/10.1007/s40719-022-00229-1>
- Axster, S., Danewid, I., Goldstein, A., Mahmoudi, M., Tansel, C.B., & Wilcox, L. (2021). Colonial Lives of the Carceral Archipelago: Rethinking the Neoliberal Security State. *International Political Sociology* <https://doi.org/10.1093/ips/olab013>
- Castro, C., & Lopes, C. (2021). Digital Government and Sustainable Development. *Journal of the Knowledge Economy* <https://doi.org/10.1007/s13132-021-00749-2>
- Chapman, C.A., Abernathy, K., Chapman, L.J., Downs, C.T., Effiom, E.O., Gogarten, J.F., Golooba, M., Kalbitzer, U., Lawes, M.J., Mekonnen, A., Omeja, P.A., Razafindratsima, O.H., Sheil, D., Tabor, G., Tumwesigye, C., & Sarkar, D. (2022). The future of sub-Saharan Africa's biodiversity in the face of climate and societal change. *Frontiers in Ecology and Evolution* <https://doi.org/10.3389/fevo.2022.790552>
- Daba, M.H., & You, S. (2022). Quantitatively Assessing the Future Land-Use/Land-Cover Changes and Their Driving Factors in the Upper Stream of the Awash River Based on the CA–Markov Model and Their Implications for Water Resources Management. *Sustainability* <https://doi.org/10.3390/su14031538>
- Diluiso, F., Walk, P., Manych, N., Cerutti, N., Chipiga, V., Workman, A., Ayas, C., Cui, R., Cui, D., Song, K., Banisch, L.A., Moretti, N., Callaghan, M., Clarke, L., Creutzig, F., Hilaire, J., Jotzo, F., Kalkuhl, M., Lamb, W.F., & Löschel, A. (2021). Coal transitions—part 1: a systematic map and review of case study learnings from regional, national, and local coal phase-out experiences. *Environmental Research Letters* <https://doi.org/10.1088/1748-9326/ac1b58>
- Germond-Duret, C. (2022). Framing the Blue Economy: Placelessness, Development and Sustainability. *Development and Change* <https://doi.org/10.1111/dech.12703>
- Huggins, C. (2022). 12 Land, High-Value Natural Resources, and Conflict in the Central African Republic. *Natural Resource-Based Development in Africa* <https://doi.org/10.3138/9781487547684-014>
- Hzami, A., Heggy, E., Amrouni, O., Mahé, G., Maanan, M., & Abdeljaouad, S. (2021). Alarming coastal vulnerability of the deltaic and sandy beaches of North Africa. *Scientific Reports* <https://doi.org/10.1038/s41598-020-77926-x>
- IDEA), I.I.F.D.A.E.A.(. (2022). The Global State of Democracy 2022: Forging Social Contracts in a Time of Discontent <https://doi.org/10.31752/idea.2022.56>

- Ide, T., Bruch, C., Carius, A., Conca, K., Dabelko, G.D., Matthew, R.A., & Weinthal, E. (2021). The past and future(s) of environmental peacebuilding. *International Affairs* <https://doi.org/10.1093/ia/iaa177>
- Katoka, B., & Dostal, J.M. (2021). Natural Resources, International Commodity Prices and Economic Performance in Sub-Saharan Africa (1990–2019). *Journal of African Economies* <https://doi.org/10.1093/jae/ejab014>
- Köninger, J., Lugato, E., Panagos, P., Kochupillai, M., Orgiazzi, A., & Briones, M.J. (2021). Manure management and soil biodiversity: Towards more sustainable food systems in the EU. *Agricultural Systems* <https://doi.org/10.1016/j.agsy.2021.103251>
- Liang, J., Gamarra, J.G.P., Picard, N., Zhou, M., Pijanowski, B.C., Jacobs, D.F., Reich, P.B., Crowther, T.W., Nabuurs, G., de-Miguel, S., Fang, J., Woodall, C.W., Svenning, J., Jucker, T., Bastin, J., Wiser, S.K., Slik, F., Hérault, B., Alberti, G., & Keppel, G. (2022). Co-limitation towards lower latitudes shapes global forest diversity gradients. *Nature Ecology & Evolution* <https://doi.org/10.1038/s41559-022-01831-x>
- Mehler, A. (2021). Central African Republic. *Africa Yearbook Volume 17* https://doi.org/10.1163/9789004503182_023
- Mestanza-Ramón, C., Cuenca-Cumbicus, J., D’Orío, G., Flores-Toala, J.M., Segovia-Cáceres, S.M., Bonilla-Bonilla, A.E., & Straface, S. (2022). Gold Mining in the Amazon Region of Ecuador: History and a Review of Its Socio-Environmental Impacts. *Land* <https://doi.org/10.3390/land11020221>
- Mumuni, S., & Mwimba, T. (2022). Modeling the impact of green energy consumption and natural resources rents on economic growth in Africa: An analysis of dynamic panel ARDL and the feasible generalized least squares estimators. *Cogent Economics & Finance* <https://doi.org/10.1080/23322039.2022.2161774>
- Ndikumana, L. (2022). Corruption and Pro-Poor Growth Outcomes: Evidence and Lessons for African Countries. *Scholarworks (University of Massachusetts Amherst)*. <https://doi.org/10.7275/1282576> https://scholarworks.umass.edu/peri_workingpapers/90
- Ou, Y., Roney, C., Alsalam, J., Calvin, K., Creason, J., Edmonds, J., Fawcett, A.A., Kyle, P., Narayan, K.B., O’Rourke, P., Patel, P., Ragnauth, S., Smith, S.J., & McJeon, H. (2021). Deep mitigation of CO₂ and non-CO₂ greenhouse gases toward 1.5 °C and 2 °C futures. *Nature Communications* <https://doi.org/10.1038/s41467-021-26509-z>
- Roy, J. (2022). Sustainable Development, Poverty Eradication and Reducing Inequalities. Cambridge University Press eBooks <https://doi.org/10.1017/9781009157940.007>
- Saied, A.A., Dhawan, M., Metwally, A.A., Fahrni, M.L., Choudhary, P., & Choudhary, O.P. (2022). Disease History, Pathogenesis, Diagnostics, and Therapeutics for Human Monkeypox Disease: A Comprehensive Review. *Vaccines* <https://doi.org/10.3390/vaccines10122091>
- Santos, F.D., Ferreira, P.L., & Pedersen, J.S.T. (2022). The Climate Change Challenge: A Review of the Barriers and Solutions to Deliver a Paris Solution. *Climate* <https://doi.org/10.3390/cli10050075>
- Survey, U.G. (2022). Mineral commodity summaries 2022 <https://doi.org/10.3133/mcs2022>
- Szetela, B., Majewska, A., Jamróz, P., Djalilov, B., & Salahodjaev, R. (2022). Renewable Energy and CO₂ Emissions in Top Natural Resource Rents Depending Countries: The Role of Governance. *Frontiers in Energy Research* <https://doi.org/10.3389/fenrg.2022.872941>