Agricultural Marketing and Commercialization Journal
8(2), 146-153, 2024, ISSN Print: 2676640X, ISSN online: 2676-7570

Commercialization of Mines Discovered in Agricultural Lands

Masoomeh Sohrabi Mollayousefi[1]

Received: 03 Aug 2024/ Revised: 07 Sep 2024/ Accepted: 01 Oct 2024/ Published: 31 Dec 2024

Abstract

The commercialization of mines discovered in agricultural lands poses significant challenges that require careful management and regulatory oversight. Balancing the economic benefits of mining with the need to preserve agricultural productivity is essential for ensuring food security and sustainable development in affected regions. Stakeholder engagement and robust policy frameworks are vital for addressing the competing interests of mining and agriculture effectively. A suitable research method for studying the commercialization of mines discovered in agricultural lands is qualitative methods research. Conduct structured surveys among local farmers and mining companies to gather studies on land use changes, economic impacts, and food security issues. This can help quantify the extent of land conversion from agriculture to mining and its effects on local livelihoods.

Keywords: Agricultural Lands, Commercialization, Mines Discovered

Introduction

The commercialization of mines discovered in agricultural lands represents a critical intersection of economic development and environmental sustainability. As mining activities expand into regions traditionally dedicated to agriculture, they pose significant challenges to food security, land use, and local livelihoods. This phenomenon is particularly evident in countries like Ghana, where the push for mineral extraction often leads to the displacement of farming communities and the degradation of arable land. Historically, mining has been viewed as a catalyst for economic growth, promising job creation and infrastructure development. However, the reality is more complex. The encroachment of mining operations on agricultural lands not only reduces the availability of land for food production but also leads to soil degradation and water contamination. The chemicals used in mining processes can pollute both soil and water sources, further threatening agricultural productivity and community health. Moreover, the competition for land between mining and agriculture intensifies existing socio-economic disparities.

[1] Department of Petroleum, Mining and Materials Engineering, Central Tehran Branch, Islamic Azad University, Tehran, Iran.

Farmers often find themselves at a disadvantage, losing their livelihoods as mining companies acquire land rights. This shift can exacerbate poverty and food insecurity in affected areas, as local communities struggle to adapt to the loss of their agricultural base. In response to these challenges, there is an urgent need for effective policy frameworks that balance the interests of mining companies with those of agricultural stakeholders. Stakeholder engagement and transparent communication are essential for developing cooperative strategies that mitigate the negative impacts of mining on agricultural lands. By fostering collaboration between miners, farmers, and government entities, it is possible to create a sustainable approach that supports both economic development and food security. While the commercialization of mines in agricultural lands offers potential economic benefits, it also raises significant concerns regarding environmental sustainability and social equity. Addressing these issues requires comprehensive research and proactive policy measures that prioritize the well-being of local communities and the preservation of vital agricultural resources.

Impact local farmer on mine commercialization

Involving local farmers in mine commercialization can significantly enhance community development and sustainability. This engagement fosters a symbiotic relationship between agriculture and mining, which can alleviate rural poverty and promote local economic growth.

Economic Benefits: Local farmers can diversify their income through partnerships with mining operations, leading to improved livelihoods(Hilson 2011). Community Development Agreements (CDAs) often include provisions for local agricultural support, ensuring that mining benefits are shared with the farming community(Yaya Bocoum, Kabore et al. 2023).

Social Impacts: Engaging farmers helps mitigate the negative social impacts of mining, such as loss of traditional livelihoods and cultural practices, by integrating agricultural activities into mining operations (Suopajärvi, Ejdemo et al. 2017). Corporate social responsibility initiatives often focus on community engagement, which can redefine local identities and empower farmers (Mayes 2014).

Sustainable Practices: Collaborative efforts between miners and farmers can lead to sustainable land use practices, enhancing both agricultural productivity and mining efficiency(Hilson 2011, Yaya Bocoum, Kabore et al. 2023). While the integration of local farmers into mining operations presents numerous benefits, it is essential to address potential conflicts over land use and resource allocation to ensure equitable outcomes for all stakeholders. Table 1 illustrate the studies about farmer's impact.

Table 1. Some studies about effectiveness of farmers on mine commercialization

Studies	Insights	Conclusions	Reference
Artisanal mining, smallholder farming and livelihood diversification in rural sub-Saharan Africa: an introduction	Involving local farmers in mine commercialization fosters economic synergies, enhancing livelihoods through diversified income sources and reinforcing social networks vital for sustainable rural development in sub-Saharan Africa.	Promote smallholder farming and ASM sustainably. Preserve linkages between smallholder farming and ASM activities.	(Hilson 2011)
Social impacts of the "glocal" mining business: case studies from Northern Europe	Involving local farmers can enhance mine commercialization by fostering cooperation, mitigating negative impacts on agriculture, and ensuring sustainable land use, ultimately leading to community support and smoother operational processes.	Mining is a glocal phenomenon with global impacts. Dependency on mining creates concerns for local communities.	(Suopajärvi, Ejdemo et al. 2017)
'Our' Community: Corporate Social Responsibility, Neoliberalisation, and Mining Industry Community Engagement in Rural Australia	Involving local farmers in mine commercialization can enhance community engagement and legitimacy, but may also reinforce neoliberal frameworks that prioritize corporate interests over genuine local needs and identities.	Mining industry shapes and transforms local communities through neoliberal practices. Corporate social responsibility intersects with neo liberalization, community, and capital.	(Mayes 2014)
Mining community development agreements - practical experiences and field studies	The involvement of local farmers in mine commercialization can enhance community development, ensuring equitable benefits and fostering sustainable practices, ultimately leading to improved local economic resilience and social cohesion.	The paper provides knowledge and assistance for the development and implementation of Community Development Agreements (CDAs). The paper includes case studies, best practices, and model regulations for CDAs.	(Yaya Bocoum, Kabore et al. 2023)
An Impact Analysis of Farmer Field School in China	The paper's title matches your query, but it doesn't address your specific question.	FFS has positive impact on male participants' yield. Factors like wealth and land size influence FFS participation.	(Cai, Shi et al. 2016)
Neoliberal Modes of Participation in Frontier Settings: Mining, Multilateral Meddling, and Politics in Laos	Involving local farmers in mining projects primarily serves to mitigate political risks for investors, rather than genuinely empowering communities, thus impacting mine commercialization by ensuring smoother operations and reduced opposition.	The involvement of local communities in mining projects is primarily a management tool to mitigate risks for investors. Participatory schemes and civil society engagement serve to depoliticize local opposition.	(Hatcher 2015)

Implementing local content under the Africa Mining Vision: an achievable outcome?	The paper does not specifically address the impact of involving local farmers on mine commercialization.	The paper discusses the implementation of local content under the Africa Mining Vision. The paper explores the achievability of economic linkages and diversification.	(Ackah-Baidoo 2020)
Mining versus Farming: An Analysis of the Farmers' Livelihood System	Involving local farmers can mitigate grievances and conflicts, potentially enhancing mine commercialization by fostering community support and improving the perception of mining operations among local populations.	Farmers perceive compensation program as inadequate. Local farmers deprived of livelihoods due to mining operations.	(Adonteng-Kissi, Adonteng-Kissi et al. 2016)
Mining, Chieftaincy and Farmers Livelihoods: The Case of Limestone Mining in Manya Krobo, Ghana.	Involving local farmers in mine commercialization can enhance accountability and ensure equitable distribution of benefits, potentially leading to improved livelihoods and reduced adverse impacts on their assets.	Mining benefits require attention to local chieftaincy politics. Support for livelihood diversification and farmers' empowerment is essential.	(Lawer 2012)
Mining Matters: Natural Resource Extraction and Local Business Constraints	The paper does not address the impact of involving local farmers on mine commercialization.	Local mining activity negatively impacts nearby firms. Mining activity relaxes business constraints for distant firms.	(De Haas and Poelhekke 2016)

Involving local communities in decision - making regarding mine commercialization

Involving local communities in decision-making regarding mine commercialization is crucial for sustainable development and social equity. Effective engagement can be achieved through various strategies that empower communities and ensure their voices are heard.

To Community Rights and Legal Frameworks, Recent legal reforms have granted municipalities and indigenous groups significant opportunities to influence development projects, although many still feel their influence is insufficient. Also, These rights often arise from community pressure, highlighting the importance of advocacy in securing local interests (Foster 2017).

To Corporate Social Responsibility (CSR), Mining companies are increasingly expected to contribute to local well-being, which can enhance their legitimacy and operational success. The nature of corporate involvement varies based on local contexts, indicating that tailored approaches are necessary for effective community engagement (Cheshire, Everingham et al. 2011). Cultural in the Sensitivity and Power Dynamics, Understanding the cultural and ontological differences between mining companies and local communities is essential. Misalignments can lead to conflicts and unsustainable practices(Cane 2014). Engaging with local perspectives,

particularly regarding gender and development, can foster more equitable decision-making processes.

While these strategies can enhance community involvement, challenges remain, particularly in balancing corporate interests with genuine local empowerment. Addressing these complexities is vital for achieving sustainable mining practices (Table 2).

Table 2. Some studies about Involving local communities in decision -making

Studies	Results	Challenges	References
Squeezing Psychological Freedom in Corporate–Community Engagement	Community consent achieved but increased fragmentation occurred. Corporate engagement strategies limited psychological freedom of participants.	Erosion of community's psychological freedom during engagement. Unethical strategies used alongside best practice engagement.	(Maher 2019)
Corporate social responsibility and stakeholder engagement in Ghana's mining sector: a case study of Newmont Ahafo mines	Newmont Ahafo has a strong CSR presence in Ghana. Stakeholder engagement is crucial for effective CSR programs.	Limited generalizability of findings to other mining companies. Initial reluctance of managers to participate in interviews.	(Ansu-Mensah, Marfo et al. 2021)
Implementing local content under the Africa Mining Vision: an achievable outcome?	The paper discusses the implementation of local content under the Africa Mining Vision. The paper explores the achievability of economic linkages and diversification.	-	(Ackah-Baidoo 2020)
Using Participatory Spatial Tools to Unravel Community Perceptions of Land-Use Dynamics in a Mine-Expanding Landscape in Ghana.	Mapping shows transformation of food-crop areas into mining. Anticipated future landscape changes due to mining activities.	Adverse effects on future food-crop land availability. Fragmentation and segregation of farming land due to ASM.	(Aggrey, Ros-Tonen et al. 2021)
Effective Community Engagement during the Environmental Assessment of a Mining Project in the Canadian Arctic.	Sabina's engagement program was commended and supported by communities. Effective community engagement led to securing major licenses and permits.	Unclear project permitting and regulatory oversight mechanisms. Addressing community concerns about environmental impacts and project management.	(Prno, Pickard et al. 2021)
Mines, Communities, and States: The Local Politics of Natural Resource Extraction in Africa	Local communities can impose costs on states and firms. Governments must balance economic benefits and political support.	-	(Steinberg 2019)

The "Invisible" Local Communities: Foreign Investor Obligations, Inclusiveness, and the International Investment Regime	The paper discusses the invisibility of local communities in international investment law. Recent awards in investor-state dispute settlement continue to ignore local communities.	Local communities lack rights and remedies in investment disputes. Jurisdiction limits enforcement of foreign investor obligations to local communities.	(Perrone 2018)
Indigenous Influence and Engagement in Mining Permitting in British Columbia, Canada: Lessons for Sweden and Norway?	The paper analyzes how Indigenous communities can influence and engage in the mining permitting system of British Columbia (BC), Canada. The paper highlights positive features of the BC system and identifies opportunities for Sweden and Norway regarding mining permitting and Indigenous rights.	Balancing mine developments with Indigenous authority and influence. Lack of ongoing consultation during mine operations.	(Allard and Curran 2023)
Corporate community relations and development: engagement with indigenous peoples	Increased CRD activities labeled as social investments by mining companies. Engagement and partnerships established between company officials and indigenous peoples.	Lack of local government support for social investment. Communities' inadequate education and business skills.	(Blesia, Wild et al. 2021)

Utilizing ways or participatory tools to better capture community perspectives on mining impacts

Participatory tools can significantly enhance the capture of community perspectives on mining impacts by fostering engagement, facilitating dialogue, and ensuring that diverse voices are heard. These tools can be tailored to address specific community needs and contexts, leading to more informed decision-making. The Community Engagement and Impact Assessment could be done by Participatory tools can bridge the gap between community members and mining companies, allowing for direct input into social and economic impact assessments (Lockie and Van Lanen 2008). Also, Techniques such as workshops and interviews have been effective in gathering community concerns, particularly regarding environmental impacts and social identity related to mining activities (Lloyd, Luke et al. 2013). In the other side, Indigenous Community Leverage introduces various tools. Indigenous communities one of them that it have successfully utilized participatory approaches to negotiate with mining companies, ensuring their demands are integrated into corporate decision-making (Anne Trebeck 2007). This leverage often stems from the communities' ability to influence the reputation and profitability of mining operations, highlighting the importance of participatory tools in empowering marginalized voices. The Tool Adaptation and Application want to illustrate the various participatory tools, such as stakeholder identification and conflict management frameworks, that it

can be adapted for mining contexts to facilitate better community involvement (Evans, Moran et al. 2006).These tools not only aid in information collection but also enhance community capacity to engage in ongoing dialogues about mining impacts.

While participatory tools can enhance community engagement, there remains a risk of superficial participation where companies may prioritize image management over genuine involvement. This underscores the need for continuous improvement in participatory practices to ensure they lead to meaningful outcomes for affected communities.

Conclusion

The commercialization of mines on agricultural lands offers opportunities and challenges. The merging of mining and agriculture can lead to new land-use strategies that boost local economies and address food security issues. Mining can support agriculture by connecting local farmers with mining companies, benefiting both parties. Using gypsiferous mine water for irrigation has shown positive results while managing environmental concerns. Innovative approaches can repurpose unused mine sites for agricultural purposes, providing economic benefits and food security. Careful management is essential to balance the benefits of mining-agriculture integration with environmental protection and sustainability.

References

- Ackah-Baidoo, P. (2020). "Implementing local content under the Africa Mining Vision: an achievable outcome?" Canadian Journal of Development Studies/Revue canadienne d'études du développement **41**(3): 486-503.
- Adonteng-Kissi, O., et al. (2016). "Mining versus Farming: An analysis of the farmers' livelihood system." The International Journal of Sustainability in Economic, Social and Cultural Context **12**(2): 31-46.
- Aggrey, J. J., et al. (2021). "Using participatory spatial tools to unravel community perceptions of land-use dynamics in a mine-expanding landscape in Ghana." Environmental Management **68**(5): 720-737.
- Allard, C. and D. Curran (2023). "Indigenous influence and engagement in mining permitting in British Columbia, Canada: lessons for Sweden and Norway?" Environmental Management **72**(1): 1-18.
- Anne Trebeck, K. (2007). "Tools for the disempowered? Indigenous leverage over mining companies." Australian journal of political science **42**(4): 541-562.
- Ansu-Mensah, P., et al. (2021). "Corporate social responsibility and stakeholder engagement in Ghana's mining sector: a case study of Newmont Ahafo mines." International Journal of Corporate Social Responsibility **6**: 1-22.
- Blesia, J. U., et al. (2021). "Corporate community relations and development: engagement with indigenous peoples." Sustainability Accounting, Management and Policy Journal **12**(4): 811-845.
- Cai, J., et al. (2016). "An impact analysis of farmer field school in China." Sustainability **8**(2): 137.
- Cane, I. J. (2014). "Community and company development discourses in mining: the case of gender in Mongolia."
- Cheshire, L., et al. (2011). "Examining corporate-sector involvement in the governance of selected mining-intensive

regions in Australia." Australian Geographer **42**(2): 123-138.

- De Haas, R. and S. Poelhekke (2016). "Mining matters: Natural resource extraction and local business constraints."
- Evans, R., et al. (2006). "Beyond NPV—A review of valuation methodologies and their applicability to water in mining." Proc, Water in Mining: 97-103.
- Foster, D. J. (2017). "Replay comes of age." Annual review of neuroscience **40**(1): 581-602.
- Hatcher, P. (2015). "Neoliberal modes of participation in frontier settings: Mining, multilateral meddling, and politics in Laos." Globalizations **12**(3): 322-346.
- Hilson, G. (2011). "Artisanal mining, smallholder farming and livelihood diversification in rural Sub-Saharan Africa: An introduction." Journal of international development **23**(8): 1031-1041.
- Lawer, E. T. (2012). Mining, Chieftaincy and Farmers Livelihoods: The Case of Limestone Mining in Manya Krobo, Ghana, Norges teknisk-naturvitenskapelige universitet, Fakultet for ….
- Lloyd, D., et al. (2013). "Community perspectives of natural resource extraction: coal-seam gas mining and social identity in Eastern Australia." Coolabah(10): 144-164.
- Lockie, N. M. and R. J. Van Lanen (2008). "Impact of the Supplemental Instruction Experience on Science SI Leaders." Journal of Developmental Education **31**(3): 2.
- Maher, R. (2019). "Squeezing psychological freedom in corporate–community engagement." Journal of Business Ethics **160**(4): 1047-1066.
- Mayes, C. (2014). "Governing through choice: Food labels and the confluence of food industry and public health discourse to create 'healthy consumers'." Social Theory & Health **12**: 376-395.
- Perrone, N. (2018). The "Invisible" Local Communities: Foreign Investor Obligations, Inclusiveness, and the International Investment Regime. AJIL Unbound, 113, 16-21.
- Prno, J., et al. (2021). "Effective community engagement during the environmental assessment of a mining project in the Canadian Arctic." Environmental Management **67**(5): 1000-1015.
- Steinberg, J. (2019). Mines, communities, and states: The local politics of natural resource extraction in Africa, Cambridge University Press.
- Suopajärvi, L., et al. (2017). "Social impacts of the "glocal" mining business: case studies from Northern Europe." Mineral Economics **30**: 31-39.
- Yaya Bocoum, F., et al. (2023). "Women's and health providers' perceptions of companionship during labor and childbirth: a formative study for the implementation of WHO companionship model in Burkina Faso." Reproductive Health **20**(1): 46.