



## Small-Scale Gold Mining and Rural Livelihoods: Case of Wozoli Silobela Ward 22, Kwekwe District (Zimbabwe)

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### Abstract

This paper explores the socio-economic impact of small-scale gold mining on deprived local communities in the Wozoli community. Causal and push factors such as drought and lack of formal employment have been identified as the most determining factors that drive communities to informal small scale gold mining. Cluster sampling of 5 mines and the attendant working groups/syndicates were employed provide feasibility and practicality to the data collection process. While snowball sampling was used to identify mining sites. Data were collected through questionnaires to miners in 5 selected mines, field observation and interviews were held with stakeholders and community leadership. The results of the study revealed that small-scale gold mining has transformed the socio-economic situation of Wozoli community in Silobela (Kwekwe). The sector has promoted direct and indirect employment, agglomeration of economic activities in the community and its finances diversified livelihoods. However, the study also noted that miners do not sell all the gold through official designated channels but tended to favour black market which offers relatively high prices. Consequently, it became evident that the informal mining sector has an insignificant contribution to local and national treasury because it is prone to corruption, illicit flows and smuggling of gold at the expense of the national economy. Additionally, informal mining has had a devastating impact on the local environment which has been attributable to the use of rudimentary mining techniques and failure to implement EIA provisions. The authors recommend the need for enabling policy framework, formalisation of mining groups in local communities as well as competitive prices to small scale gold miners so as to curb smuggling and black market.

**Keywords:** Poverty; Sustainable development; Agglomeration of economy.

### Introduction

The downturn in the source livelihoods and the attendant economic challenges that have bedevilled Zimbabwe, especially from the last decade of the last millennium has seen communities exploring alternative means of survival. In the Midlands Province, a province inundated with mineral resources, communities began to explore small scale mining as an option to irk out a living. This paper discusses how people in the Wozoli and surrounding areas have derived socio-economic benefits from small –scale mining. Mining is one of the major economic activities = that has contributed to the global wealth. As poverty escalates, a combination of climate change, reduction in agricultural production and adverse economic situation, in Zimbabwe and Africa at large has forced many rural communities in auriferous areas to diversify to small scale gold mining as a poverty alleviation strategy. Poverty in rural areas of Zimbabwe is an aftermath of marginalisation and alienation of people from their natural resources before and after independence of Zimbabwe. Therefore, in this momentous arena of participatory paradigm, it is high time when poverty should be alleviated through the participation of local people in mining of locally available mineral resources. As it is propounded in resource base theory that development is determined by natural resources that a region possesses. The research illuminates and explicitly presents the importance of local exploitation and utilisation of local resources for the development of that confined resource base region.

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## Overarching Objectives of the Study

In undertaking the study, the researcher principally sought establish the socio-economic benefits of small-scale mining to the people of Wozoli communal area. Additionally the study sought to identify to what extent small-scale gold mining would promote diversified sustainable livelihoods. Lastly, the researchers intended to establish the kind of support that the government rendered to the miners in the area to ensure the sustainability of small-scale gold mining.

## Literature Review on Small Scale Mining

Globally, small-scale miners produce hundreds of thousands of tonnes of gold annually (Eftimie, etal 2009). Small-scale mining is defined as any single unit mining operation having an annual production of unprocessed material of 50,000 tonnes or less as measured at the entrance of the mine (Gandiwa and Gandiwa, 2012). It has become a crucial livelihood strategy that employs more than 13 million workers and sustaining 80-100 million people worldwide (Murwendo, et al 2011). In Africa, many countries notably, Kenya, Ghana, Tanzania and Zimbabwe small-scale mining of precious minerals has made a significant impact on the socio-economic lives of people and communities involved directly or indirectly in the sector (Amankwah&Anim-Sackey, 2003).

Zimbabwe experienced an upsurge in artisanal gold mining in the 1990s, largely as a result of a deteriorating agricultural sector and the layoff of public sector workers following implementation of a series of economic structural adjustment programs (Gandiwa and Gandiwa, 2012). Unemployment has shockingly increased to over 80% in the past decades due to economic and political crises which depleted away foreign and domestic investments (Murwendo et al., 2011). Large-scale mines downsized their operations and even closed down due to high operational costs and political uncertainty, releasing many people to small-scale mining. In Zimbabwe, small-scale gold mining has become important due to escalating poverty and lack of employment opportunities in the formal sector, (Logan, 2004). The people depending on small-scale gold mining are usually members of poor rural households in developing countries (Heemskerk and Oliviera, 2003). Murwendo et al., (2011) noted that small-scale gold mining is viewed as a 'golden' opportunity for the poor, despite the social, environmental and health challenges.

According to Amankwah, and Anim-Sackey, (2003) mining operations are useful in basic skill development and contribute to the transformation of unskilled labour into semi-skilled and skilled workers. More importantly, due to the low barriers to entry in terms of capital needs and formal educational requirements, small-scale mining operations offer excellent opportunities for the evolution of indigenous entrepreneurs. Small-scale gold mining increases economic power to rural communities, and in that way, contributes positively to social development (Maponga and Ngorima, 2003). Small scale gold mining had become the source of income in local communities, miners could manage to cater for the family needs and take children to school through the income derived from small scale mining.

Small-scale mining sector is the major employer of the rural communities which had sustained the rural economies during the times of economic downfall in developing countries (Kwaku, 2013). In rural areas other jobs are low paying or non-existent, small-scale gold mining has become a valuable source of employment in sub Saharan Africa. According to ZIMTRADE (2005) in Zimbabwe mining sector employs on average 55 000 people per annum. It is estimated that small scale mining in developing countries like Ghana employs about 96 % of the 52,000 people employed in mining sector (Kwaku, 2013). Small scale mining has the great potential to reduce rural unemployment and poverty. Apart from the direct employment contributions of small-scale mining, it also generates substantial numbers of indirect jobs in other sectors of the economy due to the demand created for production inputs, transport and other services (Amankwah and Anim-Sackey, 2003). If all the people engaged in related service activities—goldsmiths, traders and food vendors are considered the employment figure becomes significantly higher.

Small scale mining has also promoted livelihoods diversification in rural economy which has strengthened the resilience of rural communities. Ellis, (2000) cited by Urassa, (2010) defines livelihood diversification as a process by which rural households construct an increasingly diverse portfolio of activities and assets in order to improve their standards of living. Livelihood diversification is generally a good thing for rural poverty reduction. Small-scale mining is an essential activity in many developing countries as it provides an important source of livelihood, particularly in regions where economic alternatives are critically limited (Hinton et al., 2003). In addition, during periods of drought, artisanal mining provides an alternative source of livelihood (Maponga&Ngorima, 2003). Gandiwa and Gandiwa, (2012) states that artisanal mining is believed to sustain the livelihood of at least two million people in Zimbabwe, directly and indirectly through ancillary services and secondary economic activities. Therefore, with proper support and planning, artisanal mining could occupy the gap between small and large-scale mining and contribute to the development of resilient, sustainable communities.

Scoones, (2014) in his article titled "Zimbabwe's gold rush: Livelihoods for the poor or a patronage economy or both?" notes that artisanal mining has changed local people's livelihoods and future prospects, and has contributed to local and national economy. He further alluded that small-scale gold mining has reduced rural unemployment and has the high potential of promoting infrastructural development like roads, electricity and commerce. However, Mawowa, (2013)

viewed small scale gold mining as contributing less to the national treasury because of the political muscled individuals using their political stamina to grab the mines and buying gold through non-formal procedures. These middlemen according to Mawowa, (2013) and Centre for Natural Resource Governance, (2013) have gold trading networks in South Africa and Mozambique, promoting the illicit financial flows hence depriving the national treasury of the revenue for national economy. Artisanal mining generates no/less income for the fiscals and thus artisanal mining communities tend to be neglected by the Government.

Small-scale gold mining is associated with activities that jeopardized the achievement of the environmental sustainability (Millennium Development Goal (MDG) 7). Small-scale gold mining elsewhere in the country, have received a lot of criticism from policy implementers and environmentalist (Gandiwa and Gandiwa, 2012). This has led many researchers to focus more on environmental effects of small-scale mining giving less attention to the socio-economic benefits that accrue to the community endowed with such precious minerals. Many small-scale miners use rudimentary equipment such as dredging boats, water pumps, pickaxe, shovel, mercury and of late excavator, a technology that is not environmentally friendly (Gandiwa and Gandiwa, 2012). The destruction of vegetation is a common occurrence on mining sites, especially in reef mining, as miners follow rich gold belts. Small scale mining has negative effect on environment because the miners do not give it the attention it deserves. The study aims to assess the socio-economic impact of small-scale gold mining on local communities in the Wozoli community area. The major contention of this study is that small-scale gold mining has positive impacts on socio -economic welfare of local communities.

### **Envisaged Contribution to Existing Knowledge**

Available literature (Gandiwa and Gandiwa, 2012); (Maponga and Ngorima, 2003); (Kitula, 2006) have revealed that small scale mining is detrimental to environment, however: it has great potential of alleviating poverty in auriferous areas. The gap that exists is that these studies were done in Kenya, Ghana, Tanzania, Madagascar and even Zimbabwe as well, but more focus was on the environmental and small scale mining. In Zimbabwe, scholars were focusing on the environmental impacts of small scale gold mining save Murwendo et al., (2011) who studied in Kadoma (Mashonaland East) focusing on small scale mining and its contribution in promoting sustainable livelihoods, and Mawowa, (2013) studied in Kwekwe District (Midlands) focusing on the political economy of small scale gold mining. While Mawowa, (2013) studied on the political economy of small-scale gold mining in Kwekwe District, this study looked at the socio-economic impacts of small scale gold mining in the same district.

### **The Study Area**

Kwekwe District is situated in Midlands Province in the centre of Zimbabwe about 216 kilometres from capital, Harare. The District is endowed with natural resources land and minerals such as gold, chrome and iron. WozoliSilobela Ward 22 is under the administrative District of Kwekwe, it is highly endowed with deposits of gold with numerous small-scale mines. The main economic activities are farming and mining. According to Zimstat, (2012) Population Census the Kwekwe District has a total of 229 507 people and the Ward 22 under study has a total population of 9 682. For public services the Ward have 4 schools, 2 primary and 2 secondary schools and one mission hospital.

### **Research Methodology**

The study adopted a qualitative approach to collect and analyse non-numeric data. Quantitative aspects were however used through the administration of questionnaires to collect data on aspects like the number of workers in a mine, and age group of the mine workers. The quantities of tonnes of ore and the quantity of gold produced per tonne were also obtained through questionnaire. This was used to broaden the scope of data collected. Primary data were collected mainly through, questionnaires, observation and interviews with stakeholders. Questionnaires were distributed to miners in 5 selected mines. Interviews were held with stakeholders who were local leaders, local business people, Environmental Management Agency (EMA) authorities, and Zibagwe Rural Council (ZRDC). Secondary data were obtained by reviewing existing literature. Information from published sources, local statistics kept in various departments (Ministry Of Mines And Mining Development), and various websites was also reviewed. The targeted population of the study comprised of 75 small scale miners (mine workers) and mine managers, 2 heads of government department (ZRDC, and EMA), 3 local business people and local leaders which include a Headman and 2 kraal heads. This totalled to a sample size of 83 respondents. A total of 73 questionnaires were administered to small scale miners and complimented with interviews which were held 8 stakeholders. A two-stage cluster sampling design was used, in which clusters at the first stage of sampling were 5 mines and the second stage cluster were of working groups/syndicates. Simple random sampling was used to select these groups/syndicates from each mine. A Snowball sampling was employed to locate the mining sites by being directed by the first identified subjects (miners). A snowball sampling method was used to identify mining sites in the area whereby identified miners were asked whether they knew other nearby mining sites and give directions to locate the sites.

## Findings of the Study

The study establish that there are several push-factors that have driven the Wozoli communities into engaging in informal enterprises such as small-scale gold mining. The different push-factors, herein called drivers, include drought and limited formal employment opportunities.

### Drivers of Small Scale Gold Mining

Climate change has had an enduring impact on the regularity and predictability of rain. This has resulted in erratic rainfall patterns, and in most cases, recurrence of drought, forcing people to explore alternative sources of livelihood. Consequently recurrent drought and lack of formal employment have been found to be the most determining push factors that have pushed communities to the limit. It has been found that the attractive income tended to come from the extraction of precious minerals thereby making the small scale gold mining a lucrative volition to most people. Statistical evidence from respondents noted that 91% of small scale miners concurred that lack of formal employment was the major causal factor of small-scale gold mining, while 84% respondents from stakeholders indicated the same. Drought was also considered as ranking second to lack of formal employment. A cumulative total of 57% from stakeholders and 62% of panners concurred that drought has pushed them into informal gold mining. In support of these findings (Mawowa, 2013) noted that small scale gold mining has become the major source of rural employment as it has provided a significant survivalist livelihood opportunities. On the same note, Logan, (2004) highlighted that small scale mining in less economically developed countries has become important due to escalating poverty and lack of employment opportunities in the formal sector. As a result, the researchers concluded that the concurrence emanating from available literature and the events ensuing from Wozoli small scale mining has rendered credence to the fact that most rural livelihoods hinge on such informal economic ventures and activities as small-scale gold mining, as communities seek alternative livelihood strategies to irk out a living.

### Small-Scale Gold Mining Activities

The 116 mine workers that formed the sample population for this study operated in groups or ‘syndicates’ (see Table 4.2). These syndicates were made up of people who trust each, mostly friends or relatives. The syndicates would operate in shifts or would sink their own shafts at new points within the claim. As they work ore is piled up to tonnage which would be ferried to nearby stump mills where all the processing and purification is done. Stones with visible gold are collected and processed on the site using nodules and harmful chemicals like mercury to trap the gold. Each group/syndicate earned its wage from the proceeds of gold it milled during its shift. This had often meant maximum utilisation of time while working underground. However, the group not working on the shaft would engage in the panning of gold at the site. After the milling of gold ore, proceedings were shared at a ratio of 50% between the syndicate and the owner of the mine claim. In all 5 selected mines no heavy machinery was used in mining processes. The miners used, shovels, picks with small handles, chisels, hammers, buckets and ropes, hired compressors to drill holes for rock explosion and drain water from the shafts. The compressors were hired at US\$100 per hour. The table below shows the working groups/syndicates and number of shifts per mine.

**Table 4.2 Working groups/syndicates in five surveyed mines**

Name of mine	Number of working groups	Number of shifts per day	Total
De Me Good	4	3	7
Gothic	7	4	11
Arizona	5	3	8
Northampton	5	4	9
Gangarabwe	3	0	3

Gothic Mine operated at a large scale with highest number of working groups and had its own transport (2 tractors) to ferry ore to the mill. Gangarabwe had the least working groups, with no shifts and each group had its own working shaft. It was found that working in shifts makes the mine operations well organised and it promotes order and avoids conflicts among miners for each group would only work in a shaft when its turn has come. The mine operations were better organised and the workers got a wage, after milling. Number of people per group varied with mine however 6 people were the maximum number that comprised a group.

### Gold Production in Selected Mines in Wozoli Ward 22 (Kwekwe District)

Table 4.3 shows the recordings of annual gold outputs in selected five mines in 2014 excluding leakages at the mine claims and the milling site. Gothic mine recorded the highest output (255 ounces thus 7,14kgs), followed by Northampton (211 ounces), Gangarabwe (87 ounces), Do Me Good (66 ounces) and Arizona (48 ounces). The level for production was dependent to the level of operation Gothic recorded high production because it operated at a large scale throughout the year whereas Arizona and Do Me Good Mines had low production because the mines do not operate during rainy season as the shafts will be full of water and shafts are at risk of collapsing during this time. However, for each mine it took an average of one and a half weeks to produce five tonnes of gold ore. The mean gold yield per load (5 tonnes) is between 9 and 26 grammes. The table below shows the gold production in selected mines.

**Table 4.3 Gold production in selected mines in Silobela Wozoli Ward 22 Kwekwe District in 2014**

Name of mine	Gold production/ (ounces)	Percentage %
Gothic	255	38
Northampton	211	32
Gangarabwe	87	13
Do Me Good	66	10
Arizona	48	7
<b>Total</b>	<b>667</b>	<b>100</b>

### Small Scale Gold Mining and Socio-Economic Benefits

Generally small scale gold mining (SSGM) has been realised as the golden opportunity for socio-economic transformation in auriferous and has kept the local community surviving during the times of severe drought and economic crises in last 2 decades. The study found that SSGM has improved the general socio-economic status of Silobela. The miners alluded that mining has helped them in educating their children from primary to secondary and even tertiary. Some miners in a general conversation told their stories about the assets they purchased by the money they earned from mining. Stories were also told of people who were poor but now driving cars and opened shops and restaurants using the money they earned from mining. The mine owners who are also the members of the community had used income from gold mining to invest in retailing.

Small-scale mining activities taking place in the area has contributed to a gradual expansion of Wozoli business centre. In an interview a business woman explained that small-scale gold mining has increased income of the locals and that has positively impacted the retail business in the area. She further reiterated that small-scale gold mining has made local business more viable compared to the time when the major economic activity was agriculture which its income is seasonal, and uncertain because of the erratic rain falls. In this study it was found that small scale gold mining has caused the agglomeration of the economy at Wozoli as it has attracted other services such as flea markets that sell clothes, and mobile phones, barber shops and hair salons, welding shops and transport services. This would eventually promote economic localization if the sector is supported by policy, through value addition and beneficiation cluster as stipulated in Zimbabwe Agenda for Sustainable Socio-Economic Transformation (ZimAsset) 2013-2018 economic blue print. As a result rural to urban migration in search for employment is reduced. This corresponds with Amankwah&Anim-Sackey, (2003) as they state that in rural communities where mining takes place, the activity has reduced rural exodus, promoted local economic development and contributed towards poverty reduction. The table below shows the commodities purchased using money from selling gold.

Table 4.4 Selected goods and services purchased using money from selling gold

Expenditures	Number of respondents	Percentages (%)
Pay school and hospital fees	9	12
Electrical gadgets	6	8
Food	32	42.7
Clothes	17	22.7
Invest in property	4	5.3
Vehicles	7	9.3
<b>Total</b>	<b>75</b>	<b>100</b>

As shown in (Table 4.4:) about 43% of the respondents mentioned that they spent the money on food, 23% on clothes, 8% on electrical gadgets, 9% on vehicles and 12% on paying school fees. The study also confirmed that gold miners/panners extravagantly utilise the money earned from gold mining in a short space of time with no savings. One of the key informants pointed out that high income from gold mining and extravagant expenditure has attracted commercial sex workers in Wozoli business centre which has promoted the spread of Sexual Transmitted Diseases (STIs) and HIV/AIDS in Wozoli. The results in table 4.4 indicate that most of the money was spent on consumption goods. This gives a picture that most of the miners ventured into mining as a survival strategy rather than as a long-term investment.

### Local Employment Generation

Small scale mining has promoted local employment in auriferous communities. Small scale mining in Wozoli and the entire Kwekwe District has become one of the largest employers in the District whether permanently or casually. In total all the sampled mines combined have 116 workers (table: 4.5) who were all males with an average of 23 workers per mine. These figures reflect that the industry has high labour absorptive capacity for rural unemployed labour force. The 80% of the selected mines were owned by the local community members. The 20% was owned by the people from the surrounding urban communities which are Kwekwe and Gweru. These mines hired casual labour from the community and some labour being absorbed from urban communities. However, in contrast to Murwendo et al., (2012)'s argument that small scale gold mining benefits only local communities, in this study, the researcher found that SSGM benefits also urban communities which are Kwekwe and Gweru. At some mining sites, all the permanent workers were family members or relatives of the mine claim owners. In an interview the traditional community leader confirmed that majority of the youths in the community are employed in gold panning which he referred to ("isikorokoza") in local language.

The study showed that apart from providing direct employment small scale mining generates a significant number of indirect jobs because it attracts a myriad of economic activities which also in a way create employment. Small scale mining creates more demand for production inputs transport services and other services which further create more employment for the people engaged in such services. This coincide with Amankwah&Anim-Sackey (2003), who argued that if all the people engaged in related service activities— goldsmiths, traders and food vendors are considered the employment figure becomes significantly higher. The table below reflects the number of workers at the selected gold mines.

Table 4.5 Number of workers at the selected small scale gold mines in WozoliSilobela Ward 22

Name of mine	Permanent workers	Casual workers (part-time and seasonal worker)	Total
Gothic	18	12	30
Northampton	15	8	23
Gangarabwe	8	10	18
Do Me Good	16	6	22
Arizona	17	6	23
<b>Total</b>	<b>74</b>	<b>42</b>	<b>116</b>

Table 4.5: shows the total number of permanent and casual workers and the overall total number of workers employed in small scale mining gold in WozoliSilobela Ward 22 mines.

### **Contribution to Local and National Treasury**

At first, secondary data from various websites<sup>2</sup> and mining policy document reviewed have revealed that government has done less to promote and improve the state of artisanal and small scale mining as far as policy and legislation is concerned. Though policy is not articulate about small scale mining the Government of Zimbabwe through the ministry of mines has endeavoured to financially boost the sector 2013 and 2014. Media sources have also confirmed that in 2013 government had earmarked US\$35 million and US\$100 million in 2014 to improve and promote small scale mining industry. Despite such efforts, miners in Wozoli raised the concern that there are deprived of the access to such government loans as they claim that funding seem to be favouring some miners who are politically advantaged; this was aired out by the mine owners in an interview. They believe that there is a lot of corruption and inequalities in the distribution of mining funds by politicians and those who administer the funds. Political interference and corruption in small scale gold mining was revealed in a study by Mawowa, (2013) which revealed that gold rich sites are politicized and contested, and the politics of controlling extraction and trade were part of a bigger story of elite accumulation and patronage.

It was noted that most small scale gold miners depend on informal practises which promote illicit flow of gold as some of the gold is sold in black market. Miners confirmed that black market offers favourable prices which make them prefer to sell their gold in open market to fidelity printers. Key informants from ZRDC and ZIMRA concurred that there are numerous leaks of gold and smuggling which had resulted to little benefits in terms of revenue to District Councils and national treasury. Most importantly the argument by Scoones, (2014) SSGM contributes to local and national treasury/economy is disputed in this study because most syndicates sell their gold in black market which offers high prices. The major beneficiaries were the middlemen who bought gold in small quantities from the mine owners and the mine workers. The issue of illicit flows and smuggling of gold has also encroached in Wozoli small scale mines and thus costing the national economy as it was also reported by Centre for Natural Resources Governance (2013) on research paper about illicit financial flows in Zimbabwe. However, recent media research has noted that the Government of Zimbabwe, cognisant of the leakages that are being experienced in the sale of gold, has devised a new system to plug mineral leakages, especially those emanating from the sale of gold in the black-market<sup>3</sup>. Although, there are leakages of gold and smuggling the government has put a forward world class fiscal frame work to plug mineral revenue leakages and ensure that Zimbabweans benefit optimally from the country's vast wealth.

### **Small Scale Gold Mining and the Environment**

Human activity has always been known to unsettle the environment. Logan, (2004) also noted that communities surrounding the mines suffer from environmental degradation, infectious disease and social problems. A site observation at the Wozoli mining site has shown that small scale mining practises are detrimental to environment, particularly on the ecological environment. It was observed that the activity is characterised by land degradation and deforestation. In the event that gold is exhausted in working pits, they are then abandoned and new pits are sunk, leading to the destruction of ecological environment. Vegetation is destroyed as new shafts are constructed. The abandoned unprotected pits expose both domestic and wild animals at risk falling into the pits, as it was reiterated by the traditional community leader that there are incidents where animals could fall in the unprotected pits.

The working conditions for the workforce for each mine were well below the stipulations in SI 156 of 1995 on health and safety hence the health and sanitation. Workers who stay in the mine site sleep live on makeshift shelters made-up of plastic papers and sacks while others sleep in the pits. There are no toilets miners use bush toilets which makes them vulnerable to diseases such as cholera outbreak especially during the rainy season. The space from one shaft to another is about 2 meters which makes the working conditions unsafe and hazardous to miners' lives.

### **Conclusion and Recommendations**

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<sup>2</sup>[www.gmaz.org](http://www.gmaz.org) and [www.zamsc.org](http://www.zamsc.org)

<sup>3</sup>KudaBwiti (2015). "New system to plug mineral leaks" The Sunday mail June 7, 2015.

The study explored the socio-economic impact of small-scale gold mining on local communities in the case of Wozoli, Silobela Ward 22 Kwekwe District. Small scale gold mining in Wozoli has been found to be highly driven by scourges of poverty as a result of reduction in agriculture production exacerbated by recurrence of droughts. Empirical findings under this study have shown that small-scale gold mining is socio-economically benefiting the local communities involved in the industry. The sector provides more benefits than costs and it proved that it has an impact on socio-economic empowerment of local communities. There are benefits associated with small-scale gold mining project and these are employment generation income, financing of other livelihoods and sending children to school. In spite of these individualistic benefits small scale gold mining has benefitted the Wozoli community with direct and indirect generation of employment, agglomeration of economic activities and diversified livelihoods. This denotes that small scale gold mining creates more golden opportunities for community and national development.

Although, the sector has more local socio-economic benefits it has an insignificant contribution to local and national treasury because it is informal in nature and that makes it prone to corruption, illicit flows and smuggling of gold at the expense of the national economy. The mining practises in Wozoli are detrimental to ecological environment thereby distancing the country from achievement of sustainable development “development that meets the needs of current generation without compromising the ability of future generations to meet their own needs” (Brundtland, 1987 cited in Skaer, 2002: 2). The study recommends that government needs to enact supportive policy, formalization, provision longer term financing for small scale miners’ operations and creation of a viable market as the key factors towards reducing illicit financial flows and smuggling of precious minerals. Such support should be realized in the implementation of the current economic blue print ZimAsset and imbedded in the cluster on value addition and beneficiation in small scale mining sector. This could help the miners to increase their income and bring the gold production into the formal economy. However, it remains to be seen whether communities comprehend the dictates of the ZimAsset economic blue print and its implications on economic development as it concerns small scale gold mining. It also remains to be seen whether the new system to plug leakages at the point of sale would come to fruition, especially given that the black market offers higher prices than the designated selling points.

## References

- [1] Amankwah, R. K., & Anim-Sackey, C. (2003). Strategies for sustainable development of the small-scale gold and diamond mining industry of Ghana. *Resources Policy*, 29(3-4), 131-138.
- [2] Aryee, B. N. A., Ntibery, B. K., & Atorkui, E. (2003). Trends in the small-scale mining of precious minerals in Ghana: a perspective on its environmental impact. *Journal of Cleaner Production*, 11(2), 131-140.
- [3] Carle, A.C. (2009). Fitting multilevel models in complex survey data with design weights: Recommendations. *BMC Medical Research Methodology*, 1471-2288-9-49.
- [4] Centre for Natural Resources Governance (2013). “Illicit financial flows in Zimbabwe”. Centre for Natural Resources Governance.
- [5] Creswell, S. (ed) (2003). *Research design: qualitative, quantitative, and mixed approaches*. Thousand Oaks, CA: Sage Publications, Inc.
- [6] EEB. (2000). *Environmental performance of mining industry in the work of Tisza Danube Pollution*. European Environmental Bureau, United Kingdom
- [7] Eftimie, A. Heller, K. and Strong, J. (2009). *Gender Dimensions of the Extractive Industries*, World Bank, New York.
- [8] Gandiwa, E. and Gandiwa, P. (2012). Biodiversity conservation versus artisanal gold mining: A case study of Chimanimani National park, Zimbabwe: *Journal of Sustainable Development in Africa* 14, (6)
- [9] Government of Zimbabwe (GOZ) Mines and Minerals Act Chapter 21:05, Government Printers, Harare
- [10] Hilson, G., (2002b). Promoting sustainable development in Ghanaian small-scale gold mining operations. *The Environmentalist* 22, 51–57.
- [11] Hinton, J.J., Viega, M.M., & Viega, A.T.C. (2003). Clean artisanal gold mining: a utopian approach? *Journal of Cleaner Production*, 11(2), 99-115.
- [12] Jerie, S. and Sibanda, E. (2010). “The Environmental Effects of Effluent Disposal at Gold Mines in Zimbabwe: A Case Study of Tiger Reef Mine in Kwekwe, *Journal of Sustainable Development in Africa*: 12, (3),
- [13] Kitula, A. G. N. (2006). The environmental and socio-economic impacts of mining on local livelihoods in Tanzania: A case study of Geita District. *Journal of Cleaner Production*, 14(3), 405-414.
- [14] KudaBwiti (2015). “New system to plug mineral leaks” *The Sunday mail* June 7, 2015.
- [15] Logan, M. (2004). *Making Mining Work: Bringing Poverty Stricken Small-scale Miners into the Formal Private Sector*. International Research Centre.
- [16] Maponga, O., & Ngorima, C. F. (2003). Overcoming environmental problems in the gold panning sector through legislation and education: the Zimbabwean experience. *Journal of Cleaner Production*, 11(2), 147-157.
- [17] Mawowa, S. (2013). The Political Economy of Artisanal and Small-Scale Gold Mining in Central Zimbabwe, *Journal of Southern African Studies*, 39:4, 921-936,

- [18] Murwendo, T., Rusinga, O. & Zinhiva, H. (2011). The role of small-scale gold mining in promoting sustainable livelihoods among local communities in Kadoma district of Zimbabwe. *Journal of Sustainable Development in Africa*, 13(7), 191-200.
- [19] Rabe-Hesketh, S. and Skrondal, A. (2006). Multilevel modeling of complex survey data. *Journal of the Royal Statistical Society-Series A*, 169, 805-827.
- [20] Scoones, I. (2014). "Zimbabwe's gold rush: Livelihoods for the poor or a patronage economy or both?" [Online] Retrieved from: <https://zimbabweland.wordpress.com> [2015, April. 17].
- [21] Urassa, J. K. (2010). "Rural household livelihoods, crop production and well-being after a period of trade reforms": A case study of Rukwa, Tanzania. Doctoral thesis (DPhil), University of Sussex
- [22] ZIMSTAT. (2012). Zimbabwe 2012 Population Census Results National: Datasheets. Harare: ZIMSTAT.
- [23] ZimTrade. (2006). Zimbabwe Economic Challenges. ZimTrade publications, Harare Zimbabwe.
- [24] [www.gmaz.org](http://www.gmaz.org)
- [25] [www.zamsc.org](http://www.zamsc.org)