

# Between Artisanal Mining and Insecurity in Nigeria: A Search for Sustainable Mineral Production amid Illegality

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## Abstract

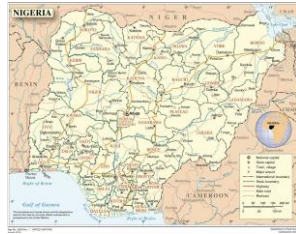
The Nigerian mining industry is currently being rocked by internal conflicts with criminal elements both within and outside the country penetrating artisanal mining sites with the intent of intercepting their operations and stealing extracted mineral ores. These incessant incursions into mine sites by the invaders mostly result in heavy human casualties and huge economic losses. In this paper, persistent issues of insecurity and artisanal mining across Nigeria have been examined. Primary data collected through field studies, administered questionnaires and oral interview, and secondary data sourced from literature review were used to assess the effect of insecurity on mineral production. The processed, interpreted and analysed data were then subjected to Microsoft Excel for further analysis. Sponsorship of illegal mining has been traced to have the same root with funding of banditry (terrorism) and cattle rustling in North-western Nigerian States. About 80% of artisanal mining activities in this geopolitical zone are illegal, while over 5,000 people have been killed in Zamfara State alone since 2014 when the mining-related violent crimes had been on the increase. The sponsors of these atrocities have been identified to include politicians who have huge mining stakes in their communities and dictate the pace with their wealth. Thus, armed banditry and smuggling of unprocessed minerals have reduced informal mineral production in the country to insignificant figures. Hence, the paper identifies amendment of the current Mining Act to decentralise the ownership and control of mineral resources to the State Level rather than saddling such with the Federal Government alone, exploring robust diplomatic channels with the neighbouring countries to curb the involvement of foreign nationals in illegal mining and other forms of criminality, engaging the mining professionals in critical sectors of the economy and initiating community policing through responsible traditional leadership as panaceas for sustainable mineral production in the country.

**Keywords:** Insecurity; artisanal mining; banditry; kidnapping; mineral production.

## 1 Introduction

Artisanal mining can be defined as informal mining activities by group of persons working in small size operations using low technology, rudimentary and primitive techniques, with little or no capital. In spite of its inefficient productive capacity, artisanal mining, together with small-scale mining, contributes 20% to 25% to global annual production of gold, diamonds, tin, tantalum, and cobalt (Schwartz, 2021). Artisanal mining is obviously an already established method of exploiting mineral deposits in the country and it is estimated to be over 95% prevalent (Oramah et al, 2015), while 95% of it is also illegal (Mallo, 2012). It involves over 500,000 persons across the affected states (Hayes, 2008). Nigeria has gone through difficult stages of insecurity since the

advent of insurgency in 2009 but such instability reached its peak few years ago when elements of insecurity such as banditry, kidnapping, cattle rustling and other violent crimes emerged as the major links to illegal mining in Northern Nigeria. Therefore, artisanal mining sites across the country have become apparent enclaves for bandits and other criminal gangs, who ambush the unsuspecting miners and kill them to steal their mineral ores. Figure 1 shows the administrative map of Nigeria, while Figure 2 shows major artisanal mining sites in Nigeria.



**Fig. 1 Administrative Map Nigeria (Source: Anon, 2021)**



**Fig. 2 Artisanal Mining Sites in Nigeria**

Historically, artisanal mining in Nigeria has, over the years, been prone to massive safety and environmental hazards (Salati and Mustapha, 2016). However, reports of fraudulent deals, theft of ores and criminal acts in artisanal mines had remained inadequate, scanty, and unverified until 2019 when armed conflict, banditry, violent crime and kidnapping took the center-stage in Zamfara State due to gang rivalry over the control of gold mines across the State (Amosu and Adeosun, 2021). According to the United Nations (UN) report, the first half of 2019 saw Nigeria witnessing worsening rate of insecurity tagged ‘volatile 61’ attributed to Boko Haram insurgents, resulting in worsening humanitarian conditions such as population displacement and food insecurity (Anon. 2021). In the same vein, the Global Terrorism Index (GTI) covering events of 2019/2020 ranked Nigeria third place, resulting from terrorist attack deaths and recording the second largest reduction in deaths from terrorism in 2019; it is a reduction of 39.1% compared to the previous year and 83% lower than its peak period in 2014. Insecurity in North-western Nigeria and by extension, greater part of West Africa’s Sahel Region, is apparently rooted in mineral resources-related conflicts. Shortage of water and limited land driven by environmental degradation and climate change is often cited as the major cause of such violent competitions (Aina and Quinn, 2021).

Figure 3 shows artisanal gold mining and processing activities within communities in Shiroro Local Government Area of Niger State, North-central Nigeria.



**Fig. 3 Alluvial Gold Miners in Shiroro LGA of Niger State**

Report of a research conducted by Villegas et al. (2021), focusing on potential links between gold mining and violent competitions in twenty four (24) selected gold mining origin countries of which Nigeria is part, is apparently in concurrence with other global indicators concerning the high rate of mining-based conflicts. In the report, mining-related conflicts in the North-western Nigeria gold mining communities are reputed to have claimed the lives of 6,139 people, including women and children; bandits in these areas use women and children for arms smuggling and sex trafficking thereby subjecting the country’s mining industry to higher domestic violence incidences than other sectors of the economy.

Zamfara, and to a lesser extent, Katsina and Kaduna States top the Northern Nigerian regions where bandits gain access to artisanal mining sites and engage in high profile killings and mineral ore theft. The Zamfara crisis is particularly fuelled by competition for agricultural land use and grazing between farmers (who are also the artisanal miners) and herders on one hand and struggle for access to water by both parties on the other hand (Bartrem et al., 2022). Simultaneously, cattle rustling and kidnapping of miners and farmers in mining communities have become almost daily occurrences with majority of the residents running away and abandoning their farms and mining pits. There are, however, strong indications that influential individuals, including politicians with mining stakes in such communities, connive with bandits who besiege the gold mining pits to kill miners and

steal their gold ores to trade them in exchange for arms and ammunition (Donald, 2019). Consequently, mining communities are deserted as artisanal miners and their families flee to safer communities to take refuge and find alternative means of livelihoods. In view of the aforementioned scenarios which have significantly reduced mineral production amid increasing illegality and created a sustainability gap, this paper attempts to ventilate issues surrounding insecurity and artisanal mining in Nigeria with view to searching for a lasting solution towards sustainable mineral production. Figure 4 shows artisanal gold mining activities in Bukuyyum community in Zamfara State, North-western Nigeria.



**Fig. 4 Artisanal Gold Mining in Bukuyyum Community, Zamfara State**

## 2 Resources and Methods Used

The use of primary data in this paper was to access information on insecurity issues in Nigeria as it affects artisanal mineral production. This involves collection of production data from selected mining sites in Zamfara, Katsina, Kaduna and Niger States. Information on miners killed, injured or displaced by banditry across the affected communities as well as mineral transactions and smuggling within mining communities was also gathered to aid discussions and inference. To assess the impact of insecurity on artisanal mineral production, conceptual analysis as adopted by Salati *et al.* (2014) on artisanal and small-scale gold mining (ASGM) was also employed.

Questionnaires were administered to local miners in the Zamfara, Katsina and Kaduna States which are the states with the most prevalent cases of armed banditry, kidnapping and cattle rustling

around their ASGM sites. The questionnaires were administered to the respondents to collect their opinions on the rate and extent of insecurity in their communities; respondents' opinions were also sought on threats posed by the activities of bandits and other criminal elements to their livelihoods and environment and the impacts of such threats on their overall environmental and economic survival. One hundred and ninety eight (198) questionnaires were randomly administered to miners in the affected ASGM communities, out of which one hundred and seventy eight (178) were returned, while twenty (20) copies could not be retrieved. One hundred and sixty three (163) copies were acceptable for analysis after careful screening for adequacy and sufficiency of information and fifteen (15) copies rejected.

Apart from questionnaire administration, structured interviews were also conducted for Ministry officials, district and village heads, and other selected stakeholders, including the leadership of the local miners in the study areas, to complement data already collected and get sufficient information on insecurity in the selected states as it affects artisanal mineral production. Secondary information obtained mainly from the print and mass media such as newspapers, magazines, television, radio, etc. as well as literature from industry, academics and government bulletin was also heavily relied upon to complement the available primary data for the study as the subject of insecurity in minefields often makes headlines and serves as a means of valuable information. Practical experiences from field and narrations from victims and survivors of attacks, especially on ASGM sites which usually corroborate the existing data were also collated to justify evidences from literature and other sources.

## **2.1 Relationship between Illegal Mining and Elements of Insecurity**

A comparative analysis was done in the paper to examine the relationship between illegal mining and elements of insecurity such as banditry, kidnapping and cattle rustling with a view to bringing to the fore their common peculiarities. Northwestern Nigeria has, over the years, become the strongholds of bandits who wreck havoc on mostly rural areas of the region (Anon. 2021); they often attack mining sites, especially high value mineral deposits like gold reserves which cut across Katsina, Zamfara, Sokoto, Kebbi and other states in the region. Zamfara State is a hub of both massive crop and livestock farming and this serves as another point of attraction for the armed actors who besiege their farms to rustle cattle and rob the farmers of their money and other valuables. Since the artisanal miners are equally the farmers in the community, the proximity between their farms and mines provides an easy link for the attackers to strike. There is an apparent increasing rivalry among the various armed groups operating in the North-western States of Katsina and Zamfara States whose attacks on mining sites and farms are only stopped based on agreed terms of conditions by their victims (Amosu and Adeosun, 2021).

## **2.2 Illicit Ore Transactions and Smuggling by ASGM Operators and Bandits**

ASGM communities in Zamfara State such as Anka, Bukkuyum, Maru and Bungudu are good case studies in this respect. Gold reserves in Zamfara State are quite massive and cut across many communities which share borders with other North-western states in Nigeria as well as Niger Republic. In these gold-rich communities, gold trade is an important source of income to the armed bandits to purchase weapons and ammunition through which they unleash terror on the villagers and miners (Donald, 2019). According to Igwe (2021), a strong and glaring nexus has been established between the activities of bandits and illicit mining. Hence, trade in gold and other minerals in the State has also helped to fund the bandits' war against the government forces over the years. These violent local conflicts and rural banditry, associated with illegal mining, have traversed most parts of Kaduna, Katsina, Kebbi, Sokoto and Zamfara states where over 3, 600 people were kidnapped between 2011 and 2019. In

Zamfara State alone, 6, 319 people, including women and children, were reportedly killed between June 2011 and May 2019 (Ogbonnaya, 2020).

Chinese nationals are identified as major players in illegal mining operations and illicit ore transactions across artisanal mining sites in Nigeria, and together with influential individuals in those mining communities, fund their activities (Ogbonnaya, 2020; Salati, 2015). Other foreign nationals from neighbouring African countries like Niger, Chad, Cameroun and Mali also massively participate in massive illegal mining and illicit ore trade, especially in gold mining and processing. According to Amosu and Adeosun (2021), these activities translate to smuggling of gold ores from the mining sites across the porous borders passing through various countries until the ores reach the world mineral market unprocessed and low-graded. Currently, the Birni-Gwari axis of Kaduna, referred to as 'the axis of danger and hazards' and the Katsina-Kebbi-Zamfara axis, popularly known as 'the epicenter of rural banditry' are some of the routes leading to these gold deposits where the criminal elements attack the miners and steal their ores (Ogbonnaya, 2020). Data from UN Comtrade revealed that between 2012 and 2018 about 97 tonnes of gold worth over 3 billion dollars were smuggled out of Nigeria (Igwe, 2021). Ogbonnaya (2020) also quoted the former Nigerian Minister of Mines and Steel Development as attributing the loss of 353 billion naira (over US\$900 million) by the country to the activities of illegal miners and smuggling syndicates between 2016 and 2018. The various armed groups often besiege artisanal mining sites to hijack mining activities by killing the miners and stealing their ores which are either undergoing processing or unprocessed; the stolen ores are then transported and smuggled through the borders outside the country for further transactions. Hence, there are glaring evidences that these criminal networks fuelling insecurity in the North-western Nigeria and spreading fast to other parts of the country thrive in collaboration with traditional rulers, politicians and foreign opportunists who are exploiting the mineral deposits to fund their activities.

## **3 Results and Discussions**

### **3.1 Between Surging Banditry in the North and Shrinking Mineral Production**

Analysis of data collected through questionnaire administration and interviews was done using Microsoft Excel and Statistical Package for Social Sciences (SPSS). The questionnaire administration and interviews mainly focused on general insecurity in the mining communities across the North-western states and their correspondent impacts on artisanal mineral production. One of the major findings corroborated by both primary and secondary data collected is the effect of the Federal Government ban on all forms of gold mining in Zamfara State in 2019 which was a response to a dire security situation. The ban was responsible for miners leaving Zamfara mining communities for other parts of the country to continue their mining activities. The resulting impact of the ban is a significant reduction of mineral produced by the artisanal miners in Zamfara State in particular and Northwest in general. Also, as confirmed by Ogbonnaya (2020), state governments in this geopolitical zone have held negotiations and dialogues with the criminal groups and illegal miners to curb the loss of lives and properties created by illegal mining and banditry but to no avail as these acts of illegality have continued unabated, along with associated conflicts. Also, as shown in Figure 5 from the level of education of the respondents, illiteracy/ignorance remains a major factor contributing to the declining artisanal mineral production as all efforts to bring modernity and innovation to gold mining and processing techniques in the mining communities are defied, thus worsening the insignificant mineral production by miners. This is alluded to by Salati (2015). The fact that there is a glaring decline in gold production in the North-western region of Nigeria is an overwhelming affirmation by the artisanal miners as shown in Figure 6 depicting the summary of the responses of respondents. In the same vein, the overwhelming acceptance by the respondents interviewed is a strong attestation that insecurity is responsible for a decline in artisanal gold production in North-western Nigeria as indicated in Figures 7 and 8.

Donald (2019) is also in concurrence with the findings from questionnaires and interviews results on factors fuelling banditry in Zamfara State. This agreement is a confirmation that trade in gold and other minerals from Zamfara State has helped to fund years of fighting between bandits and government forces in the country's North-west zone. Clearly, a major source of funds for the

bandits is the mines where minerals are stolen and carted away after the miners have been killed. Thus, there is significant reduction of miners working in the mines with a corresponding reduction of artisanal minerals produced (see Table 1 and Figure 7 below). Therefore, as surging banditry claimed over 5000 lives in five years (Donald 2019), artisanal mineral production also dwindled significantly. As revealed from both primary and secondary sources of information, bandits demand money and processed mineral from miners as a condition to allow them to operate in the minefield; thus, miners who agree to their terms of condition engage in insignificant mineral production, while majority of them flee their mining sites for fear of being killed or kidnapped.

### **3.2 Identified Panaceas to Curb Insecurity and Boost Sustainable Mineral Production**

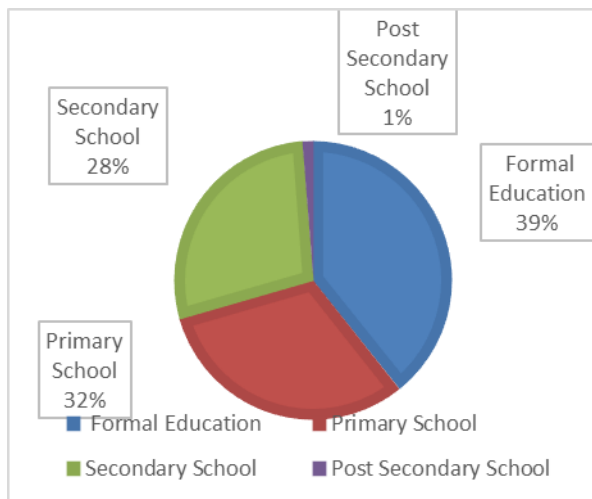
The need to bridge the gap created by increasing insecurity in Nigeria's mining communities and its correspondent stunted artisanal mineral production requires proactive measures that are capable of improving security and boosting mineral productivity. In furtherance of this gap - bridging effort, the paper is in total concurrence with the following identified measures which would serve as panaceas to removing impediments of insecurity in mining communities with a view to restoring sanity and sustainable mineral production:

- i. Amendment of the current Mineral and Mining Act, 2007, with a view to decentralising the ownership and control of mineral resources to the State Level rather than saddling such with the Federal Government alone as suggested by Salati (2015) and Oramah et al. (2015);
- ii. Exploring robust diplomatic channels with the neighbouring countries such as Niger, Mali, Cameroon, Chad, etc. and consolidating on the existing security bonds among them would help secure the porous borders and curb the involvement of foreign nationals in illegal mining and other forms of criminality within the vulnerable mining communities;
- iii. Engaging experienced and seasoned mining professionals in critical sectors of the

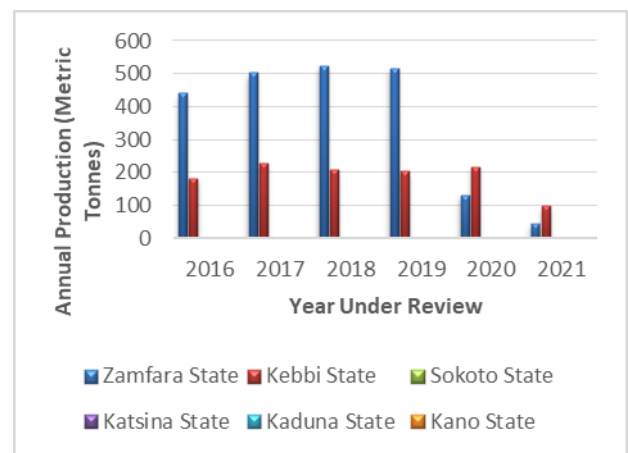
economy such as the Ministry of Mines and Steel Development and Ministry of Environment by using them to evolve policies that are meant to trigger accelerated mineral development and environmental protection in the country; and

- iv. Initiating community policing through responsible traditional leadership and mutual collaboration between government agencies and community security outfits to secure the rural areas including the mining communities is an essential ingredient necessary for peace and development.

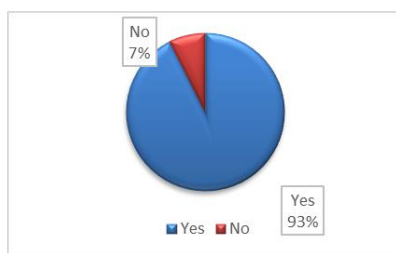
Sokoto (Tonnes)	Nil	Nil	Nil	Nil	Nil	Nil
Katsina (Tonnes)	Nil	Nil	Nil	Nil	Nil	Nil
Kaduna (Tonnes)	Nil	Nil	Nil	Nil	Nil	Nil
Kano (Tonnes)	Nil	Nil	Nil	Nil	Nil	Nil
Total	62	73	73	72	35	14
	5	2	5	1	1	8



**Fig. 5 Educational Level of Artisanal Miners Interviewed**



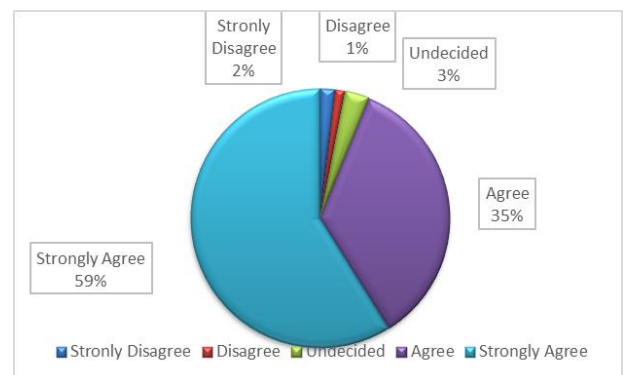
**Fig 7 Estimated Artisanal Mineral Production in North-western Nigeria 2016 – 2021**



**Fig. 6 Response to Question was there perceived decline in Gold Production in the Zone?**

**Table 1 Estimated Artisanal Mineral Production in Northwestern Nigeria 2016 – 2021**

	20	20	20	20	20	20
	16	17	18	19	20	21
Zamfara (Tonnes)	44	50	52	51	13	48
Kebbi (Tonnes)	2	3	6	7	2	48
Kaduna (Tonnes)	18	22	20	20	21	10
Kano (Tonnes)	3	9	9	4	9	0



**Fig. 8 Responses to Questions that Insecurity caused Decline in Gold Production**

## 4 Conclusions and Recommendations

### 4.1 Conclusions

In this paper, the gap created between insecurity in mining communities and insufficient mineral production by artisanal miners has been examined and it can be concluded as follows:

- i. The security of mining communities in Northern Nigeria has been compromised giving rise to banditry, kidnapping, cattle rustling, and other forms of criminality and leading to massive loss of miners' lives and insignificant mineral production;
- ii. There is a strong link between illegal mining and banditry thereby fuelling insecurity in the mining communities;
- iii. Due to armed banditry and smuggling of unprocessed minerals, artisanal mineral production in Nigeria has been significantly reduced;
- iv. Illicit mineral transactions are used in funding banditry, kidnapping and other criminal activities in the mining communities; and
- v. Politicians and influential persons with mining stakes are identified to be the sponsors of banditry and kidnapping in the affected communities.

## 4.2 Recommendation

In view of the aforementioned conclusions, it is strongly recommended that the government develops a formidable framework to facilitate the implementation of all the identified panaceas for curbing insecurity and boosting artisanal mineral production in Nigeria. This is realizable, if there is collaboration among government agencies, the leadership of mining communities and other stakeholders in the Nigerian mining industry.

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