



doi 10.5281/zenodo.10090348

Vol. 06 Issue 11 Nov - 2023

Manuscript ID: #01100

Challenges of Enforcement of Government ban of illegal Mining in Taraba State, Nigeria

By

Oruonye, E.D. PhD, Musa D.G. & Ahmed, Y.M., PhD

Department of Geography, Taraba State University, Jalingo Taraba State, Nigeria.

Corresponding: eoruonye@gmail.com

ABSTRACT

The solid mineral resource exploitation landscape in Taraba State has been dominated by the activities of small scale miners. The Nigerian government have put in place several mining laws and regulations to guide the exploitation of the solid mineral resources in the country, Taraba State inclusive. Despite this, illegal mining has been on the increase across the State. The study is anchored on the theory of the tragedy of the commons developed by Biologist Garret Hardin in 1968 to describe the issues with common property resources and the deterioration of renewable free access resources. The study adopted the qualitative research design approach using desk review of existing literature, field observations and key informant interview. Data was analyzed using the content analysis method. The findings of the study reveals that the Federal Ministry of Solid Mineral Resources does not have the capacity to effectively police the illegal mining sites in the State. So many illegal miners have been arrested over the years, many of whom were bailed and others made to pay fine. However, the enforcement of the ban on illegal mining activities has not been effective. Some of the challenges of effective enforcement of the ban include lack of adequate funding, lack of adequate manpower, difficult terrain and absence of good road network in the LGAs where illegal mining activities are taking place, high level of political connectedness and state protection the illegal miners enjoyed. Other challenges include involvement of foreign corporations in illegal mining, lack of prosecution of arrested illegal miners over the years, structural problems with Nigeria's fiscal federal system and porous nature of Nigeria's border. Based on the findings the study recommends the need for formalization of the artisanal small scale mining activities, compelling prospective mining companies to present evidence of processing of the minerals, Nigerian government to consider amending the mining act and to deal with involvement of foreign nationals through diplomatic channels, collaboration between the federal and state governments and Nigeria government to modernize the mining sector.

KEYWORDS:

Artisanal mining, common pool resources, degradation, illegal mining and small scale mining.



This work is licensed under Creative Commons Attribution 4.0 License.

Introduction

Illegal mining activities are becoming a global environmental challenge in recent time as countries of the World struggle to regulate mining activities within their territory. About 20 million people worldwide engage in illegal mining and contribute almost one-fourth of the world's gold output (Hilson, 2001). The small-scale mining sector has been reported to have large development potential in Africa. At their peak in 2017, the small scale mining in Niger State alone employed as many as 600,000 people and created opportunities for local infrastructural development (*Ogbonnaya, 2020*). However, these large development potential of the mining sector has been greatly undermined by the activities of illegal small scale miners who made huge profits from the sector at the expense of vulnerable populations.

In Nigeria, the activities of illegal mining are on the rise daily across the different parts of the country. Taraba State is well endowed with abundant solid mineral resources. The mineral resources were supposed to be highly protected and sustainably exploited for the ultimate benefit of the entire citizenry of the State. These solid mineral resources like alluvial gold has been mined for over a century around the Gashaka Gumti National Park right from the advent of the colonial era in Nigeria. After independence in 1960 the solid mineral resource exploitation landscape in the state has been dominated by the activities of small scale miners.

The activities of the small scale illegal miners are often conducted without proper permits, in violation of mining regulations and environmental laws of the Federal Republic of Nigeria. The activities of the small scale illegal miners are characterized by use of simple crude implement which has devastating effect on the physical environment. The Nigerian government have put in place several mining laws and regulations to guide the exploitation of the solid mineral resources in the country, Taraba State inclusive. This included the Nigerian Minerals and Mining Act 2007 which was passed into law on March 16, 2007 to repeal the Minerals and Mining Act, No. 34 of 1999 for the purposes of regulating the exploration and exploitation of solid materials in Nigeria.

However, despite the existence of the mining laws and regulation, communities that are endowed with mineral deposits have witnessed large influx of both foreign and indigenous artisanal small scale miners. This was made possible by the low barrier entry nature of the mining activities in the State and country. The activities of the artisanal small scale miners are usually informal, illegal, unregulated and ill-equipped. Thus, the miners carry out their activities without obtaining the necessary mining license and approval of regulating authorities in the State and country at large.

The continuous rise in illegal mining activities in the country and State in particular has been attributed to various factors which included rising incidence of poverty and unemployment, inadequate enforcement of mining regulations, and the high profitability of the mineral resources. This has been worsened by the lure of quick financial gains and greed which has led to the proliferation of illegal mining operations, with widespread negative implications for the State economy. The local communities where these illegal small scale mining take place have over the years suffered serious environmental damages as a result of the activities of the miners. Illegal mining activities is believed to cause Nigeria a loss of billions of naira in revenue due to tax evasion. It has equally accelerated the depletion of agricultural lands and forest reserves especially in the Gashaka Gumti National Park, Taraba State, Nigeria.

The activities of illegal small scale miners have resulted in not only destruction of the environment but has been associated with the increasing security challenges in the state and country at large. It has

been reported recently that illegal mining activities are contributing to the rising violent local conflicts as those funding the mining activities fight over control of the mine fields. It is claimed that sponsors of illegal mining activities are protected by some state governments in what has been described as organised crime project (*Ogbonnaya, 2020*).

The increasing social, economic, environmental and security challenges associated with illegal mining activities has brought to the fore the fact that the Federal Ministry of Solid Mineral resources does not have the capacity to effectively police illegal mining activities in the country. This has made many State Government in Nigeria to intervene to stop the activities. Many State Government has thus enacted special bill banning illegal mining and constituted special task force with mobile court to try offenders on the spot. The Taraba State Government follow suit and enacted the executive order No. 5 of 2023 banning all forms of mining activities in the state and constituting task force and a mobile court to enforce the ban order. This intervention in the mining sector which is seen to be on the exclusive list of the constitution of the Federal Republic of Nigeria has a lot of encumbrances that will limit its success. It is against this background that this study examines the effect of illegal mining and the challenges of effective enforcement of the ban in Taraba State.

Theoretical Framework

This study is anchored on the theory of the tragedy of the commons. Biologist Garret Hardin coined the term "tragedy of the commons" in 1968 to describe the issues with common property resources and the deterioration of renewable free access resources. The tragedy of the commons is the term used to describe the overuse and ensuing depletion of a resource when it is considered to be freely accessible. Hardin use "The Tragedy of the Commons," to describe the common pasture opened to a set of herdsmen. Hardin believed that as a rational being, each herdsman would increase the number of animals in his herd as much as possible, which would inevitably lead to overharvesting and the destruction of the common, unless a third party enforced corrective rules (Isaza, 2013). In such a situation, each resource user must deal with a social conundrum where the potential short-term private gains from harvesting are at odds with the long-term interests of the group (Ostrom, 1998).

The tragedy of the commons is a situation in which everyone has a legitimate claim to a fair share of a resource, yet doing so would harm everyone else and there would be no way to stop others from using it (Boyle, 2020). Usually, this tragedy is connected to resources from a common pool. According to Ostrom, common pool resources (CPR) are those that have complex prohibitions and finite resource units, meaning that when one person uses them, it reduces the amount of the resource that others can use (Ostrom, 1998). Irrigation systems, fishing areas, pastures, forests, water or the atmosphere, and other mineral resources including gold, diamonds, and bauxite are examples of shared resources. Mineral resources are finite in nature (limited resource), and the fact that they could likely be found anywhere and accessed by anyone makes it fall into the domain of common pool resource (Rassios, 2019).

Unlike the herders in the open pasture, illegal miners must figure out how to extract and recover the resource rather than whether to do so or at what pace is best. According to Siegel and Veiga (2010), artisanal gold mining is a distinctive kind of subsistence, in which miners' revenues from gold are rather sizable and their ignorance of known mineral reserves is evident (Lahiri-Dutt, 2004). In contrast to consumers of replenishable CPR, resource users in artisanal small scale mining also face a social conundrum related to how gold is recovered. Every miner tends to choose the cheapest method of mercury amalgamation in the gold recovery (ore beneficiation) process, ostensibly to profit himself as much as possible in the short term (Sarfo, 2021). However, the entire community, which includes

the miner himself, is worse off than if a cleaner and more productive technology were used. Thus, unlike the social conundrum surrounding renewable common pool resources, the conundrum faced by artisanal small-scale miners is not limited to the extraction, availability, or depletion of this non-renewable resource. Another conundrum is the public-good conundrum, which is the decrease of pollutants brought on by the gold recovery process (Ostrom, 1998).

Sarfo (2021) further observed that beside the social dilemma, every miner faces an individual dilemma which he described as involving a within-person externality, or “internality.” Herrnstein et al (1993) insist that this phenomenon can occur for reasons such as lack of awareness of the consequence, or motivational downgrading of otherwise obscure consequences of action. When considering the aforementioned, it is obvious that the effects of illegal gold mining activities, which affect everyone else, especially the numerous innocent ones, make it an undeniable candidate for tragedy of the commons (Hardin, 1968). Accordingly, a “tragedy of the commons” is experienced when miners engaged in illegal gold mining ignore the impact that their decisions have on the entire community (Eshun, 2018). As a result, everyone pays a price for illegal mining activities (a negative result of a greedy few) (Sarfo, 2021).

Conceptual Framework

This study is anchored on the concept of degradation. Degradation is a normative concept with different meaning. Degradation is the deterioration of the quality and productivity of land due to mining and other human activities. Degradation according to World Resources (1989) is “the diminution of the biological productivity expected of a given tract of land”. Environmental degradation refers to the decline in the productive capacity of an ecosystem due to processes induced mainly by human activity (mining inclusive) (Ayuba, 2005). Degradation is keyed to human expectations, which varied by land use. Indeed, each type of land – farmland, wildland or rangeland for example is nothing more than a set of expectations about the form its biota should take. The United Nation Convention on Desertification (UNCOD) defined environmental degradation as;

“reduction or loss in arid, semi-arid and dry subhumid areas, of the biological or economic productivity and complexity of rainfed cropland, irrigation cropland, or range, pasture, forest and woodlands resulting from a process or combination of processes arising from human activities and habitation patterns such as; soil erosion caused by wind and or water; and long term loss of natural vegetation” (Ragnar *et al*, 1999).

This definition allows different interpretations of “biological and economic productivity and complexity” but it does imply that not all land use changes and landscape transformations should be termed degradation. Local resource users perceived some changes as improvements in productivity, while others may see the same changes as degradation (Ragnar *et al*, 1999). Degradation may be specified and operationalised according to specific human interests and a particular type of use. Two important aspects of “degradation” are irreversibility and resilience of the resource use system. Irreversibility refers to the fact that degradation is an effectively permanent decline in the rate at which the land yields livestock products under a given system of management (Ragnar *et al*, 1999). “Effectively” means that the natural processes will not rehabilitate the land within a timescale relevant to humans (Dixon *et al*, 1989; Ragnar *et al*, 1999). This definition of degradation excludes reversible changes and should be used only to describe irreversible changes in soil fertility. An alternative definition is presented by Tiffenet *al* (1994) that “degradation is the degeneration of the natural resource base to the point where the cost of restoring it to a level where it can support people at a reasonable standard of living become prohibitively high”. Mining activities leads to the removal of

vegetative cover of the earth, destruction of the natural habitats and the contamination of soil and water. Mining can also cause soil erosion and the loss of fertile land.

Methodology

The study adopted the qualitative research design approach. Information were obtained from desk review of existing literature online. Fieldwork report especially field observations and key informant interview were also used. Key informant interviews with officials of the Federal Ministry of Solid Minerals Jalingo office and members of the task force were conducted to explore their perspectives on illegal mining activities in Taraba State. The content analysis method was used to analyzed the data collected.

Result of the Findings

Illegal Mining Activities in Taraba State

Illegal mining annually costs Nigeria about \$9 billion in losses in revenue (Munir, 2023).The Taraba State government has said it has lost billions of naira to illegal mining over the years (Hunkuyi, 2023).Blue Sapphire is one of the precious stones which has market value in United States of America, Europe and Asia. The Blue Sapphire found in Taraba State is said to be among top best in the world and particularly because of absence of measures in the stone. Apart from the Blue Sapphire, which is found in Sardauna, Gashaka, Gassol and Yorro local government areas, there are many other solid minerals that include tantalite, gold and baryte, among others. At Nguroje illegal mining site, illegal miners were said to be making over N100 million on a daily basis from sales of Blue Sapphire. The new illegal mining hub is the Dogon-Yatshu in the Bali Local Government Area.

The Effects of Illegal Mining on the Environment in the Study area

Illegal mining activities has had enormous environmental damages in the State which ranges from landscape degradation as a result of continuous excavation, abandoned mine-pits, deforestation resulting in large cleared areas, pollution of air, pollution of various water bodies and sources resulting in reduced water quality and destruction of wildlife habitat (plates 1, 2, 3, 4, 5, 6, 7 & 8).



Fig. 1&2Excavated mine pit
Sources: Taraba News, 2023



Fig. 3&4 Extracted mineral resources from mine pit
Sources: Taraba News, 2023

The activities of the illegal miners have also led to the depletion of the topsoil of most lands which was previously used for crop cultivation, thereby reducing available arable lands in the study area with multiplier effect on sources of livelihood.



Fig. 5. Locally made alluvial gold processing stake Fig. 6. Abandoned locally made alluvial gold processing stake
Sources: Fieldwork, 2023



Fig. 7& 8. Abandoned mine pits in Gashaka Gumti National Park Sources: Fieldwork, 2023.

Arrest of illegal miners

The result of the findings of the study reveals that the problem of illegal mining has existed in Nigeria and Taraba States for decades before now. The Federal Government of Nigeria through its department of solid mineral resources have constituted task force on illegal mining activities in Taraba State. The task force has their patrol Hilux van which they use to undertake patrol of the illegal mining sites to apprehend offenders and prosecute them in the court of law. The special task force was made up of representative of the state bureau of solid mineral resources, Nigerian Police Force, Nigerian Social and Civil Defense Corps, Nigerian Army among others. The task force carried out two sensitization campaign at Wukari the Southern part and Bali in the Central part of the State in 2022. The task force also carried out 6 raids of illegal mining sites in 2022. Sadly, the illegal miners often get information that their sites will be raided before the arrival of the task force and run away at sighting the task force, abandoning the collected precious stones. During an interview with the officer in-charge of the Jalingo office, he disclosed that they task force arrested one man at Wukari but he was bailed from the police custody. Another 5 illegal miners were arrested in 2 raids by the task force who were also bailed. According to the officer in charge, illegal mining is a Federal offence that can only be prosecuted in the Federal Court of Justice.

Hence, the findings of the study reveals that the present ban by the Taraba State government is only a renewed effort to stop the menace of the illegal mining activities. The task force on the enforcement of the ban on illegal mining arrested 3,500 illegal miners in Bali LGA. Some of those arrested included 20 nationals of some West African countries including Burkina Faso, Cameroon, Mali, Senegal and Chad (Leadership News, 2023). The arrested suspects had been prosecuted by a mobile court and were being punished accordingly. There were over 20,000 residents of the State involved in illegal mining activities (Nwangoro, 2023). The state government use of mobile court to prosecute offenders has some inherent challenges as such mobile court has no legal jurisdiction to handle such case (Interview, 2023). In the opinion of the interviewee, even the state government enactment of the executive order is also a problem because mining is on the exclusive list of the Nigerian constitution and as such no state government in Nigeria has the power to legislate on it. According to the interviewee, since the State Government has interest, all that would have been required was collaboration with the Federal Solid Mineral resources department in the State so that those arrested will effectively be prosecuted in the Federal Court using the Nigerian Mining law 2007.

The task force recovered 22,373kg of Blue Sapphire and other precious stones from illegal miners in the State (Ayodele, 2023). The chairman of the task force, stated that the 22,373 kg of Sapphire concealed by the illegal miners was recovered at Mayo Sena in Sardauna LGA of Taraba State, while the illegal miners were arrested in several parts of the State. A combined team of police and soldiers had stormed the illegal mining site seven years ago and dislodged the miners and arrested many of them. Sadly, since the dislodgement of the illegal miners from Nguroje site, no further action was taken by the past administrations to control the activities of illegal miners in the State and illegal mining continued (Hunkuyi, 2023).



Plate 9. Illegal Miners at work
Source: Nwuke, 2023.



Plate 10. Arrested illegal Miners
Source: NAN, 2020



Plate 11. Arrested Illegal Miners
Source: Sahara Reporters, 2023.

Challenges of Effective Enforcement of Government Ban on Illegal Mining

The findings of the study reveal that despite the renewed effort by the Taraba State Government to contain the menace of illegal mining activities in the State, there are challenges that have the potentials to undermined this effort. These challenges include;

- i. Lack of adequate funding: The effective enforcement of the ban on illegal mining will require adequate funding to fuel and service the operational vehicles and pay the security operatives their night allowances.
- ii. Lack of adequate manpower. The illegal mining sites are so many in Taraba State and Nigeria as a whole while the Federal Ministry of Solid Minerals does not have enough manpower required to police the illegal mining activities in the State and country at large. This has continued to reduce the effectiveness of the various special task force set up over the years.
- iii. Difficult terrain and absence of good road network in the local government areas were illegal mining activities are taking place. The illegal miners in their hundreds carried mining activities mostly in remote areas located across rivers and mountains in the State. This location increases the cost of patrolling the sites. High cost of fuel and poor road network make journeys to take more time and cost more fuel.
- iv. The greatest challenges to the enforcement of the government ban on illegal mining activities has to do with the high level of political connectedness and state protection

- the illegal miners enjoyed. This has made them to see themselves as been above the laws of the land.
- v. It has been observed that the rise in illegal mining activities in Nigeria reveals fundamental social, institutional and structural problems in Nigeria's governance system (Ogbonnaya, 2020). It reveals the prevailing socio-economic problems that manifest in the inadequate responses to poverty and poor service delivery by the state. The youth in particular have limited income-generating opportunities, and this is where the sponsors of illegal mining recruit their labour force.
 - vi. The involvement of foreign corporations in illegal mining is another sign of poor governance. Illegal miners often front for politically connected individuals who collaborate with foreign nationals and corporations to dispose their boots. The mineral is routinely smuggled out of the country through neighbouring countries.
 - vii. Lack of prosecution of arrested illegal miners over the years, especially foreign nationals involved have created impression of the existence of a powerful network of organized criminals involving local populations and foreign nationals in Nigeria's mining and extractive sector.
 - viii. The existing legal and regulatory frameworks placed ownership of all mineral resources in the federal government rather than the state governments, who are custodians of all land. For instance, Section 1(1) of the Nigerian Minerals and Mining Act, 2007 gives the federal government ownership and absolute control over all mineral resources in the country, including the mining process. In most parts of Nigeria, the State governments have refused to police and regulate mineral resources because they consider them federal property (Ogbonnaya, 2020). The obsolescence of and inherent contradictions in legal and regulatory frameworks that place the ownership and control of all mineral resources in the federal government instead of state governments, contrary to the Land Use Act, 2004, which places the custodianship of all lands in the hands of state governors. This deep-rooted structural problem facing Nigeria's fiscal federal system which favours the central government is a fundamental problem. The contradictions in the regulatory framework have a tendency of affecting the successful enforcement of the ban on illegal mining in the state.
 - ix. Institutional inadequacies and limitations in the organisational functionality and human capabilities of regulatory and law enforcement agencies. This result in lack of good response from the security organizations.
 - x. Excessive militarisation of state responses, which fail to address the ecological, anthropological, socio-economic and political factors that both cause and sustain the rise in illegal mining and rural banditry.
 - xi. The deep-rooted structural crisis that characterises the lopsided nature of Nigeria's fiscal federal system, which is increasingly tilting in favour of the federal government
 - xii. The porous nature of Nigeria's border makes it easy for the illegal miners to get the extracted minerals out of the country, thereby making it a lucrative business for those involved in the activity. In fact, the illegal miners use the bandits as shield to move out the extracted mineral resources.

Conclusion

This study has examined the challenges of enforcement of government ban of illegal mining in Taraba State, Nigeria. The study adopted the descriptive research design. The findings of the study reveal that although mining is under the exclusive list of the constitution of the Federal Republic of Nigeria, the Federal Ministry of Solid Minerals lacks the capacity to effectively police the illegal mining sites in the State and country at large. The recent intervention by the State Government through special task force and enforcement is a welcome development that needs to be done in a collaborative manner with the department of the Federal Ministry of Solid Minerals in the State. This will help in the formalization of the activities of small scale mining and overall development of the State.

Recommendations

Based on the findings of the study, the following recommendations were made;

- i. The state government should create an empowerment programme to help organize the artisanal small scale miners to register and formalize their activities with the regulatory bodies. In this way, it will be easy for the regulatory bodies to monitor and control their activities as well as collect the necessary royalties which will translate into more revenue to the government and control of environmental damage from their mining activities.
- ii. The formalization of the artisanal small scale mining activities will also help to create large employment opportunities through the various value chain addition activities of the small scale mining. This will help to ensure that the solid minerals are properly processed before been exported.
- iii. Prospective mining companies applying for mining license should be made to present evidence of processing of the minerals. No minerals should be allowed to be taken out of the country in raw form because the value chain addition through processing will provide enormous employment opportunity to the local people.
- iv. There is need for the Nigerian government to consider amending the mining act to place ownership and control of mineral resources on state governments rather than the federal government.
- v. The Federal Government of Nigeria will also need to deal with the involvement of foreign nationals and corporations in organized crime in the country, through diplomatic channels.
- vi. The need for collaboration between the federal and state governments to curtail illegal mining activities. The ministry alone cannot combat this menace, highlighting the importance of robust dialogue and cooperation with state governments. This cooperative approach, if effectively executed, can help create a more favorable environment for genuine investors, boost investor confidence, and enhance socio-economic transformation.
- vii. Nigeria must modernise the mining sector, formalise employment for miners, and create an environment that attracts legitimate investors in the mining sector.

Reference

- Ayodele, W. (2023). Taraba Seizes 22,373kg of Blue Sapphire, Arrest over 100 illegal miners. ThisDay Online News. <https://www.thisdaylive.com/index.php/2023/09/12/taraba-seizes-22373kg-of-blue-sapphire-arrest-over-100-illegal-miners>
- Ayuba, H.K. (2005). Environmental Science: An Introductory Text Kaduna, Nigeria Loud Publishers. P.56.
- Boyle, M.J.(2020). *What is Tragedy Of The Commons*. [Online] Available at: <https://www.investopedia.com/terms/t/tragedy-of-the-commons.asp>
- Dixon, J.A., David, E. J. and Sharman, P.B. (1989). *The Economics of Dryland Management*. Earthscan publication Ltd. London. pp. 2-39.
- Eshun, M.E.(2018). *Africa Center for Economic Transformation*. [Online] Available at: https://acetforafrica.org/highlights/ghanas-tragedy-of-the-commons-how-about-a-self-regulatory-approach-to-artisanal-mining/?fbclid=IwAR33n-F3UgFYlXBKrdv5PR3yacwkr47JoDjdnN1kJSIz_3BGaQIH59I-gXU#:~:text=Thus%20in%20the%20artisanal%20mining,decisions%20to%20 [Accessed 22 May 2021].
- Hardin, G. (1968). *The Tragedy of the Commons*. [Online] Available at: <https://science.sciencemag.org/content/sci/162/3859/1243.full.pdf>
- Hilson, G. (2001). “Putting theory into practice: How has the gold mining industry interpreted the concept of sustainable development?,” *Miner. Resour. Eng.*, vol. 10, no. 4, pp. 397–413, 2001
- Hunkuyi, M. (2023). Taraba govt moves to stop illegal miners. Daily Trust News, Fri, 25 Aug 2023. <https://dailytrust.com/taraba-govt-moves-to-stop-illegal-miners/>
- Interview (2023). Interview with Mal. Ahmed Saidu, the officer in-charge, Federal Ministry of Solid Mineral Resources on Wednesday, 18th October, 2023 at his office along Donga Road, Jalingo, Taraba State.
- Isaza, C.A.S. (2013). *The Tragedy of the Commons in Artisanal Gold Mining: Evaluation of Mechanisms of Cooperation with Simulation and Economic Experiments*. A PhD thesis presented to Faculty of Engineering, Universidad Nacional de Colombia.
- Leadership News** (2023). Taraba Taskforce Arrests 3,500 Illegal Miners. <https://leadership.ng/taraba-taskforce-arrests-3500-illegal-miners/>
- Munir, A. (2023). Nigeria’s Unending Battle Against Illegal Miners Amid Dwindling Revenue. *National Economy*, <https://nationaleconomy.com/nigerias-unending-battle-against-illegal-miners-amid-dwindling-revenue/>
- News Agency of Nigeria (NAN)(2020). Troops arrest 11 illegal miners, eliminate scores of bandits. The Guardian Newspaper, 23 November 2020. https://www.google.com/imgres?imgurl=https%3A%2F%2Fguardian.ng%2Fwp-content%2Fuploads%2F2020%2F11%2F12727451_img20201123103523_jpeg40a0468dee9ed1b9e325eb4727201b00.jpg&tbnid=MpRRuoY4kVR1QM&vet=1&imgrefurl=https%3A%2F%2Fguardian.ng%2Fnews%2Fnigeria%2Ftroops-arrest-11-illegal-miners-eliminate-scores-of-bandits-dhq%2F&docid=8YOiRvm09UpeOM&w=1080&h=608&hl=en-US&source=sh%2F%2Fim%2Fm1%2F4&shem=uvafe2

- Nwangoro, N. (2023). Taraba Govt Laments Involvement Of Over 20,000 Residents In Illegal Mining. Channel News, September 14, 2023. <https://www.channelstv.com/2023/09/14/taraba-govt-laments-involvement-of-over-20000-residents-in-illegal-mining/>
- Nwuke, B. (2023). Illegal Miners Threaten Our Natural Resources, Take Home Billions Daily-Taraba Govt Cries Out. Current Matters, Aug. 22. <https://www.current-matters.blog/2023/08/22/illegal-miners-threaten-our-natural-resources-take-home-billions-daily-taraba-govt-cries-out/>
- Ogbonnaya, M. (2020). How illegal mining is driving local conflicts in Nigeria. Reliefweb online press release, 16th June, 2020. <https://reliefweb.int/report/nigeria/how-illegal-mining-driving-local-conflicts-nigeria>
- Ostrom, E., 1998. A behavioral approach to the rational choice theory of collective action. American Political Science Review 92, 1-22.
- Ostrom, E.(1999). Revisiting the Commons: Local Lessons, Global Challenges. [Online].
- Ragnar, O., Ledeld, T. and Aune, J. (1999). Good practices in Drylands Management, Noragric, Norway. pp.6-20
- Rassios, A. E., 2019. Hobby Lark. [Online] Available at: <https://hobbylark.com/metal-detecting/Where-to-pan-for-gold>
- Sahara Reporters (2023). 11 Burkinabes Who 'Can't Speak Any Nigerian Language' Among 21 Alleged Illegal Miners Arraigned in Taraba Court. August 21, 2023 <https://saharareporters.com/2023/08/21/11-burkinabes-who-cant-speak-any-nigerian-language-among-21-alleged-illegal-miners>
- Sarfo, R. (2021). The Historical Development of the Illegal Mining Sector in Ghana: System Dynamic Modelling Approach to Formalizing the Sector. A Master Degree thesis of the University of Bergen.
- Siegel, S. and Veiga, M.M. (2010) 'The myth of alternative livelihoods: artisanal mining, gold and poverty', Int. J. Environment and Pollution, Vol. 41, Nos. 3/4, pp.272–288
- Taraba News (2023). Taraba Task Force Nabs 3,500 Illegal Miners. TarabaNews Newspaper, Monday, 21 August, 2023, Vol. 03. No. 50.
- Tiffen, M., Mortimore, M. and Gichuki, F. (1994). More People, less Erosion. Environmental Recovery in Kenya. Chichester: Wiley.
- World Resources (1988/89). An assessment of the Resource Base that Support the Global Economy with data tables for 146 countries.