



# The Journal of Sustainable Development Law and Policy



ISSN: 2467-8406 (Print) 2467-8392 (Online) Journal homepage: <https://www.ajol.info/index.php/jsdlp>

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**To cite this article:** Ruth Oore-ofe, Ogunnowo & Victor Ojajorotu (2023). Illegal Gold Mining and Sustainable Human Security in Osun State, Nigeria. The Journal of Sustainable Development, Law and Policy. Vol. 14:2. 198-221, DOI: [10.4314/jsdlp.v14i2.11](https://doi.org/10.4314/jsdlp.v14i2.11)

**To link this article:** DOI: [10.4314/jsdlp.v14i2.11](https://doi.org/10.4314/jsdlp.v14i2.11)



Published online: December 1, 2023.

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# ILLEGAL GOLD MINING AND SUSTAINABLE HUMAN SECURITY IN OSUN STATE, NIGERIA

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**Citation:**

Ruth Oore-ofe, Ogunnowo & Victor Ojakorotu (2023). Illegal Gold Mining and Sustainable Human Security in Osun State, Nigeria. *The Journal of Sustainable Development, Law and Policy*. Vol. 14:1. 198-221.

**Submitted:**

7 July 2023

**Final version received:**

27 October 2023

**ISSN:** 2467-8406 (Print)

2467-8392 (Online)

**ABSTRACT**

There is an abundance of gold in Osun state, Nigeria. The illegal exploration of gold is a bane of the state. Section 44 (3) of the Nigerian Minerals and Mining Law of 1999 vests the ownership and control of mineral resources within the country on the Federal Government. However, anthropogenic activities such as illegal mining thrives in Osun state, further altering the ecology of affected communities. Farmlands have been confiscated by illegal miners and dug about 200 meters below landscape, allowing for erosion and soil contamination. The study aims to assess the environmental security effects of illegal mining on the host communities in Osun state, Nigeria. While environmental security is the focal point of discourse, other elements of human security stem from the former. Secondary sources such as books, journals, and internet materials will be employed. The study finds out that the enactment of sustainable development policies and legal frameworks notwithstanding, illegal gold mining activities thrive in the local communities of Osun state, Nigeria. The study therefore recommends that regulatory agencies conduct surveillance of the mines and strictly enforce punitive measures to defaulters of the mining law in Nigeria.

**Keywords:** mining, environmental security, Osun state, mining law.

## 1. INTRODUCTION

The United Nation's initiative of the Sustainable Development Goals (SDGs) notwithstanding, illegal gold mining activities across the globe continues to hinder the aim of achieving a healthy world. Such regions as sub-Saharan Africa, Asia and Latin America have witnessed illegal gold mining activities and its adverse impacts on human security. In Peru for instance, illegal gold mining activities proliferates the ecosystem and indigenous lands of the Peruvian Amazon. The health, security, economic growth and development of the local communities where illegal gold mining activities are carried out in Peru, are being threatened on a regular basis. The Peruvian government has hitherto worked with the United States Agency for International Development (USAID) to ensure the bizarre situation is salvaged.<sup>1</sup>

Illegal gold mining activities have also threatened the biodiversity conservation of protected areas in Zimbabwe. This illegal activity has thrived in the country as a result of such challenges as the lack of defined conservation policies, and impoverishment. The activities of illegal gold miners are usually not regulated, as such, the miners employ simple tools in carrying out gold mining activities, thereby destroying the ecosystem of the communities. In 2014, illegal miners in Zimbabwe began to employ technologically advanced tools within the protected areas, yet the regulations of the country have not been effective enough in the control of illegal gold mining activities within the country.<sup>2</sup>

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<sup>1</sup> USAID, *Illegal gold mining* (United States Agency for International Development, 2023) < <https://www.usaid.gov/peru/our-work/illegal-gold-mining>> Accessed 05 October, 2023.

<sup>2</sup> Dethier N. Evan, Shannon L. Sartain and David A. Lutz, 'Heightened levels and seasonal inversion of riverine suspended sediment in a tropical biodiversity hot spot due to artisanal gold mining' (Proceedings of the National Academy of Sciences, 2019); Chakuya Jeremiah, Norman Munkuli, Courage Mutema and Edson Gandiwa, 'An assessment of the impact of illegal artisanal gold mining on the environment in parts of Chewore Safari Area, Northern Zimbabwe' (2023)5 Environmental Research Communications

The process of extracting gold from the earth surface requires that toxic chemicals such as mercury and cyanide are applied. This can in fact, contaminate the soil, the water bodies, and the air. In essence, the soil nutrients are destroyed such that plants find it difficult to germinate as it should; the water bodies become polluted so much that there is hardly ever potable water for consumption;<sup>3</sup> the air is also polluted with particulate matters that are destructive to the body system when inhaled. This pollution can have detrimental impacts on the health of the members of the host communities of illegal gold mining activities. The adverse effects include; respiratory problems, skin diseases, diarrhea, cancer and other health conditions. More so, the illegal gold mining activities can result in deforestation and soil erosion, that further results in environmental degradation and loss of biodiversity.<sup>4</sup>

Gold mining activities in Osun state, Nigeria existed since the mid eighteenth century. In recent times however, illegal gold mining activities have been the order of the day.<sup>5</sup> By implication, majority of the gold mining activities in the state are carried out without taking cognizance of the extant legislations that guide these mining activities. In fact, these illegal mining activities have allowed for an influx of migrants from within and without the country. For instance, the prohibition of illegal mining activities in Zamfara state, have led to the influx of illegal gold miners into Osun state. More so, the Chinese have taken to the business of

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<sup>3</sup> Uthman Samad, 'Investigation: How illegal mining fuels poverty, river pollution, sacred, grove desecration in Osun State' (The Cable, 2022) <<https://www.thecable.ng/investigation-how-illegal-mining-fuels-poverty-river-pollution-sacred-grove-desecration-in-osun>> Accessed 19 May 2023.

<sup>4</sup> Oyetunde Tobi, 'Contaminated water, destroyed farmlands: Osun residents bear brunt of illegal gold mining as government looks away' (Sahara Reporters, 2022) <<https://saharareporters.com/2022/04/14/contaminated-water-destroyed-farmlands-osun-residents-bear-brunt-illegal-gold-mining>> Accessed 20 May 2023; Taiwo-Hassan Adebayo, 'Special Report: Osun in the mud as mining greed intensifies'(Premium Times, 2022)<<https://www.premiumtimesng.com/news/headlines/525526-special-report-osun-in-the-mud-as-mining-greed-intensifies.html?tztc=1>> Accessed 19 May 2023.

<sup>5</sup> Makinde W. Olu, Oluyemi A. Emmanuel and Olabanji I. Oluremi, 'Assessing the impacts of gold mining assessing the impacts of gold mining operations on river sediments and water samples from ilesa west local government area ILESA West Local Government Area of Osun State, Nigeria' (E3S Web of Conferences 2013)

illegal mining in the state.<sup>6</sup> These sets of individuals migrate to Osun state with the aim of making profit from illegal gold mining activities, even at the detriment of the host communities members and the ecology of the state.

Gold mining in Osun State, Nigeria has important human security implications that should not be ignored. The concept of human security refers to the protection of individuals from different threats, that include; economic, environmental, political, and social threats.<sup>7</sup> This paper emphasizes on environmental security as an element of human security. Unguided gold mining activities in Osun State have hitherto threatened the health, safety, and livelihoods of the local populace, that is the host communities' members of the locations of illegal mining activities.

There are various security concerns associated with the illegal gold mining activities in Osun State,<sup>8</sup> this includes the exploitation of vulnerable populations and the increase in criminal activities such as smuggling and money laundering. These vices further lead to social instability and violence, jeopardizing the security and safety of members of the host communities.

A comprehension of the human security and particularly the environmental security implication of gold mining activities in Osun State becomes pertinent for policymakers, stakeholders, and the general public. Effective gold mining regulation and over-sight functions of gold mining activities will to a large extent alleviate the risks and make certain that the benefits of mining are circulated fairly, without compromising the security of members of the host communities. To achieve a robust discussion, although the focal point of this study is hinged around environmental security, other human security implications of gold mining in

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<sup>6</sup> Adejumo Kabir, 'Oyetola inaugurates committee to tackle illegal mining' (Premium Times, 2021) <<https://www.premiumtimesng.com/news/456813-oyetola-inaugurates-committee-to-tackle-illegal-mining.html?tztc=1>> Accessed 22 June 2023.

<sup>7</sup> United Nations Development Programme, Human Development Report (Oxford University Press, New York, 1994)

<sup>8</sup> Oniyide G. Omotayo & Salako O. Oyewole, 'Assessment of contribution of Ilesha gold mining to employment creation and revenue generation in Osun state' (Presented at the Annual National Conference of Nigerian Institution of Metallurgical, Mining & Materials Engineers, Ilorin, Kwara State held 24 -25, November, 2021)

Osun state is evaluated as environmental insecurity may not be discussed in isolation.

This paper is divided into eight sections. After this introduction, Section 2 discusses the concept of environmental security as an element of human security. Section 3 discusses illegal gold mining activities in Osun state. Section 4 examines the environmental security impacts of illegal gold mining activities in Osun state, Nigeria. Section 5 analyses the economic security impacts of illegal gold mining in Osun State. Section 6 further evaluates Sustainable Development Policy Guidelines for illegal mining in Osun state, Nigeria the community security impact of illegal gold mining in Osun State. Section 7 considers the sustainable development policy guidelines for illegal mining in Osun state, Nigeria. Finally, the study provides sustainable development policy recommendations with the objective of tackling the threats of human security, posed by gold mining activities in Osun state, Nigeria.

## **2. THE CONCEPT OF ENVIRONMENTAL SECURITY AS AN ELEMENT OF HUMAN SECURITY**

The United Nations Development Programme (UNDP) in 1994 published the Human Development Report, where the concept of human security was introduced. The report opines that the notion of security that focuses on the protection of individuals from military threats was too narrow. It becomes necessary to develop a more all-inclusive approach. The report identified seven dimensions of human security, these include; economic security, food security, health security, environmental security, personal security, community security and political security.

Around the world in recent times, there have been various challenges of insecurity that individuals must grapple with. These include insecurity as it pertains to individuals' health, job, safety,

food and the environment.<sup>9</sup> The discourse of human security simply depicts that the threats to human existence do not occur in isolation. That is, while one form of insecurity is being addressed, it is also expedient that attention is paid to the other forms of insecurity to ensure that mitigation efforts against insecurity are not duplicated.

For the purpose of this study, the concept of environmental security is discussed. The UNDP Report (1994) defines environmental security as "the security of people's physical environment, including their natural and built surroundings". Environmental security as one of the dimensions to human security, refers to the safety of human communities and the natural habitat from the hazardous impacts of human activities. It recognizes the interconnectedness of the human and the ecological systems, that is, the relationship that exists between man and his environment.<sup>10</sup> The basic objective of the environmental security discourse is to ensure that humans and the environments they are found in are adequately catered for such that the present and future generations of a given environment benefit from it. A range of issues are embedded in the discourse of environmental security, these include; climate change, deforestation, environmental pollution, and the loss of biodiversity.

To a large extent the discourse of environmental security is closely related to other dimensions of human security, such as economic, social, and political security. For instance, the degradation of the environment can aggravate the level of poverty and social inequality in a community.<sup>11</sup> It can as well prompt conflicts over natural resources endowments of an affected area. In the Niger Delta region of Nigeria for instance, the oil extraction activities of the multi-national oil companies have to a large extent degraded the communities' environment from its natural state. This has

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<sup>9</sup> 'United Nations Development Programme, Human Development Report (Oxford University Press, New York, 1994)

<sup>10</sup> Elliott Lorraine, 'Human security/environmental security' (2015)21 *Contemporary Politics*, 21(1), 11,24; Upreti B. Raj, 'Environmental security: Concepts, issues and problems' (2013) *Human Security in Nepal: Concepts, Issues and Challenges*, 211; Brauch H. Gunter, 'Conceptualising the environmental dimension of human security in the UN' (2008)59 *International Social Science Journal* 59 19,48

<sup>11</sup> Boyce K. James, 'Inequality as a cause of environmental degradation' (1994)11 *Ecological Economics*, 169, 178.

paved way for poverty as indigenous farmers and fishermen can no longer cultivate and fish on the now degraded lands and the contaminated water bodies. The traders are stranded as there are no longer aquatic foods to trade in. the gas flaring and oil spill have destroyed the environment. Consequently, the members of the host communities have reacted with hostility and brewed tensions.<sup>12</sup> In the same vein, the illegal mining of gold in Osun State, Nigeria has resulted in the pollution and destruction of farmlands, ripping indigenous farmers of their land and inability to cultivate for the purpose of subsistence.<sup>13</sup> Rather than experiencing mutual benefits of mining activities, only one party benefits of these anthropogenic activities, leaving the other party to the deal with the debris of the activities.

Environmental security as an important dimension of the concept of human security emphasizes on the protection of people and their communities from environmental threats and disasters. It not only encompasses the comprehension of the intricate relationships between human beings and their natural environment, but also the effects of human activities on the environment. Environmental security is as well closely related with sustainable development, laying emphasis on the necessity to balance economic growth with the protection of the environment and social welfare.<sup>14</sup>

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- <sup>12</sup> Nwozor Agaptus, 'Depoliticizing environmental degradation: revisiting the UNEP environmental assessment of Ogoniland in Nigeria's Niger Delta region' (2020)85 *GeoJournal* 883, 900; Chijioke, B., Ebong, I. Bassey and Ufomba Henry, 'The Impact of oil exploration and environmental degradation in the Niger Delta region of Nigeria: a study of oil producing communities in Akwa Ibom state' (2018)18 *Global Journal of Human Social Science* 54,70; Imosemi Adekunbi and Abagwu N. 'Compensation of Oil Spill Victims in Nigeria: The more the oil, the more the blood' (2013)2 *Singaporean Journal of Business Economics, and Management Studies* 30, 43; Abraham M. Nath, 'Functional education, militancy and youth restiveness in Nigeria's Niger Delta: The place of multi-national oil corporations (MNOCs)' (2011)5 *African Journal of Political Science and International Relations*, 442; Wali Amina Laraba, 'Oil wealth and local poverty: Exploitation and neglect in the Niger Delta' (Webster University, 2008)
- <sup>13</sup> Alade Adebola Afolake, 'Conflict between miners and host Communities in Ijesaland, Nigeria' (Doctoral dissertation submitted to the University of Ibadan, Nigeria, 2019)
- <sup>14</sup> Háák Tomáš, Svatava Janoušková and Bedřich Moldan, 'Sustainable Development Goals: A need for relevant indicators' (2016)60 *Ecological indicators* 565, 573; Sneddon Chris, Richard B. Howarth and Richard B. Norgaard, 'Sustainable development in a post-Brundtland world' (2006)57 *Ecological economics* 253, 268.

The concept of environmental security is of utmost importance in recent years as the globe becomes increasingly conscious of the effect of human activities on the natural environment. In 2007, the United Nations General Assembly acknowledged the significance of environmental security in its resolution on promoting a culture of peace and non-violence around the world.

Various scholars have contributed to the advancement of the concept of environmental security. In his book "The Environment and Security," Simon Dalby (2002) maintains that environmental security should be comprehended as a multifaceted and dynamic system that incorporates political, economic, social, and ecological factors. In the same vein, Ken Conca and Geoffrey D. Dabelko (2002), in their book "Environmental Peacemaking," lay emphasis on the importance of diplomacy and cooperation in addressing environmental security issues.

In sum, environmental security is a major constituent of human security, with the objective of protecting individuals and communities from threats to their physical, social, and economic well-being. Environmental security also discusses the protection of the natural environment and its resources, which includes, water, air, and biodiversity. Environmental security reckons with the importance of addressing environmental problems so as to promote sustainable development and protect the well-being of human populations. The concept of environmental security suggests policies and practices with the aim of reducing the negative effects of human activities on the environment, and to ensure that natural resources are utilized in a sustainable way.<sup>15</sup>

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<sup>15</sup> Baloch Muhammad Awais, Salah Ud-Din Khan and Zübeyde Şentürk Ulucak, 'Poverty and vulnerability of environmental degradation in Sub-Saharan African countries: what causes what?' (2020)54 *Structural Change and Economic Dynamics* 143, 149

### 3. ILLEGAL GOLD MINING ACTIVITIES IN OSUN STATE, NIGERIA

Nigeria is one of the countries on the continent of Africa with the abundance of natural resources, one of which is gold. The mining of gold is profitable and has the potential of growing Nigeria's economy if well harnessed.<sup>16</sup> During the 1970s, Nigeria was largest producer of gold in the world until the 1980s and the 1990s when it experienced a decline in the production of gold. The gold mining industry was revived at the beginning of the new millennium and has continued to witness progress. In 2022, gold reserve in Nigeria was estimated at 21.46 metric tons. In recent times, and world over, Nigeria is the sixth-largest producer of gold, and has 5% of the world's gold reserves.<sup>17</sup>

The potential economic benefits of gold mining notwithstanding, artisanal or illegal gold mining activities have been rampant in the country. While this may serve as employment opportunities for individuals in the rural areas where there are scarce job opportunities, illegal gold mining activities to a large extent destroys the environment and by extension become hazardous to the physical well-being of members in host communities. This is owing to the fact that illegal mining activities are usually carried out by a group of individuals who do not strictly comply with the regulations that guide gold mining in Nigeria. For instance, in the course of illegal mining activities, simple tools and methods are used to extract the natural resources from the earth crust. More so, toxic chemicals like cyanide and mercury are used in the course of illegal gold mining. When this is done, the major adverse effects

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<sup>16</sup> Oladipo Olalekan David, Noah Oluwashina Afees and Agbalajobi Sunday Ayodele, 'An Empirical Analysis of the Contribution of Mining Sector to Economic Development in Nigeria' (2016)19 *Khazar Journal of Humanities & Social Sciences*; Nwankwo Allwell Okechukwu, 'Harnessing the potential of Nigeria's creative industries: Issues, prospects and policy implications' (2018)4 *Africa Journal of Management* 469,487

<sup>17</sup> Wigmore Trading, 'An analysis of Nigeria's gold reserves in 2022 and its impact on the economy' (Wigmore Trading, 2022) <<https://wigmortrading.com/an-analysis-of-nigerias-gold-reserves-in-2022-and-its-impact-on-the-economy/#:~:text=With%20an%20estimated%20gold%20reserves,of%20the%20global%20gold%20reserves>> Accessed 7 June 2023

are environmental degradation and the health hazards to the illegal miners and members of the host communities.<sup>18</sup>

Illegal gold mining activities have been reported in communities of Osun and Zamfara States, Nigeria, which have led to the degradation of the environment and the loss of revenue for the government.<sup>19</sup> In June 2020, illegal mining activities were suspended in Zamfara state by the federal government of Nigeria, due to illegal gold mining activities that were also associated with criminal activities as reasons for the suspension. The suspension of mining activities then allowed for the migration of illegal miners to neighboring states such as, Osun state to continue same activities.<sup>20</sup>

The military intervention to put an end to illegal gold mining activities in Zamfara state led to the increase in illegal mining activities in Osun state, as these illegal miners moved into Osun state in their thousands in search of a means of survival. Such communities as Iponda, Araromi, Itagunmodi, Idoka, and Obokun among others host the illegal gold miners in Osun state, Nigeria. Usually, illegal miners adopt crude tools in extracting gold from the earth crust. These miners are either working for an individual who has acquired an expanse of land for the purpose of illegal mining or, they work as individuals only searching for a means of survival all by themselves. Axes and shovel are used in digging out the earth surface in search for raw gold. If not found, the search and digging continues the following day, as there are no technological advanced devices to indicate portions of the land that may possess this natural resource being searched for.<sup>21</sup> This is

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<sup>18</sup> Boboye Akintunde, 'Small-scale mining in Nigeria: Potential for growth, but at what cost?' (Guardian, 2023) <<https://guardian.ng/energy/small-scale-mining-in-nigeria-potential-for-growth-but-at-what-cost-2/>> Accessed 6 June 2023

<sup>19</sup> Adeoye Abiodun, 'Operate according to standards or get out! – Osun Govt. warns Miners' (Radio Nigeria, 31 March 2022) <<https://radionigeriaibadan.gov.ng/2022/03/31/operate-according-to-standards-or-get-out-osun-govt-warns-miners/>> Accessed 22 June 2023.

<sup>20</sup> Obi Kelechukwu Charles and Iwuoha Victor Chidubem, Untold story of the expanding armed banditry in Nigeria's Northwest: linking the communal-level collaborators (Third World Quarterly, 2023)

<sup>21</sup> Adanikin Olugbenga, 'INVESTIGATION: Digging for death, untold story of Osun artisanal gold miners' (ICRN Nigeria 2019) <<https://www.icrnigeria.org/investigation-digging-for-death-untold-story-of-osun-artisanal-gold-miners-2/>> Accessed 09 June, 2023

how portions of a whole land are rendered rather useless continuously. An unsuspecting individual may even fall into these dug pits and get killed as each pit dug measures about 200 meters radius deep. This is done even with the use of crude implements, without the consideration of safety measures such as the use of safety boots and helmets.<sup>22</sup>

Unfortunately, illegal gold miners are not solely Nigerians, but also foreigners like the Malians, the Nigeriens and the Chinese.<sup>23</sup> For instance, illegal Chinese miners have been recorded to dwell in Itaagun, Atakunmosa West Local Government area of Osun state, Nigeria. They have confiscated a large expanse of lands in the forests as well as farmlands of indigenous farmers, for the purpose of carrying out illegal gold mining activities.<sup>24</sup> The Ministry of Mines and Steel Development is saddled with the responsibility of issuing mining licenses to gold mining companies. Any individual or entity carrying out gold mining activities without the license to operate by the government is an illegal gold miner. The Ministry of Mines and Steel Development records that there are about 12 licensed gold miners in Osun state. According to the investigation of the International Center for Investigative Reporting [ICIR] (2019), a piece of land is acquired without the knowledge of the King of the concerned community. A Respondent narrated that a parcel of land could be sold for N10,000. If this transaction is done with the knowledge of the King, he is paid N30,000 while the 'Soun', the King's aide is paid N20,000 as his own fee. This transaction is usually a temporary

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- <sup>22</sup> Adejumo Kabir, 'With police support, illegal gold mining thrives in Osun communities' (Premium Times, 2019) <<https://www.premiumtimesng.com/regional/ssouth-west/369305-with-police-support-illegal-gold-mining-thrives-in-osun-communities.html?tztc=1>> Accessed April 2023; Taiwo-Hassan, A. 'Special Report: Osun in the mud as mining greed intensifies' (Premium Times, 2022) <<https://www.premiumtimesng.com/news/headlines/525526-special-report-osun-in-the-mud-as-mining-greed-intensifies.html?tztc=1>> Accessed 19 May 2023.
- <sup>23</sup> Ajaja Tunde, 'Illegal gold mining: Foreigners steal Nigeria's wealth amid dwindling revenue, mounting debts' (Punch, 2021) <<https://punchng.com/illegal-gold-mining-foreigners-steal-nigerias-wealth-amid-dwindling-revenue-mounting-debts/>> Accessed 7 June, 2023
- <sup>24</sup> Adejumo Kabir, 'With police support, illegal gold mining thrives in Osun communities' (Premium Times, 2019) <<https://www.premiumtimesng.com/regional/ssouth-west/369305-with-police-support-illegal-gold-mining-thrives-in-osun-communities.html?tztc=1>> Accessed 14 April 2023.

one; it is made solely for the purpose of extracting gold illegally, yet the land is left uncovered having dug it to get the natural resource.<sup>25</sup> In other areas, the land is valued within the range of N60,000 and N200,000.

There is no gainsaying that illegal gold mining activities are a challenge in mining communities in Osun State, Nigeria. It therefore becomes important for the government at all levels to be intentional about addressing this issue.

#### **4. ENVIRONMENTAL SECURITY IMPACTS OF ILLEGAL GOLD MINING ACTIVITIES IN OSUN STATE, NIGERIA**

Illegal gold mining activities in Osun state, Nigeria, have had significant environmental impacts. These impacts include deforestation, land degradation, and water pollution.

##### **4.1 Land degradation and Deforestation**

Gold mining activities lead to the degradation of the land in mining areas. Gold mining activities often take place on farmlands consequently degrading the land, destroying farmlands and its vegetation. A major form of degrading the land is also by digging the land. An illegal gold miner having dug a portion proceeds to other portions to dig, all in search of gold. A pit could measure up to 3.4m deep.<sup>26</sup> Hence, the numerous dug parts of the lands, left unrepaired allow for erosion on the land, and the infertility of the soil. The soil becomes compressed, making it difficult for vegetation to thrive. On many occasions also, the topsoil is removed, such that the land is left barren and infertile.<sup>27</sup>

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<sup>25</sup> Adanikin Olugbenga, 'INVESTIGATION: Digging for death, untold story of Osun artisanal gold miners' (ICRN Nigeria 2019) <<https://www.icrnigeria.org/investigation-digging-for-death-untold-story-of-osun-artisanal-gold-miners-2/>> Accessed 09 June, 2023

<sup>26</sup> Adeoye Nathaniel Olugbade, 'Land degradation in gold mining communities of Ijesaland, Osun state, Nigeria' (2015)8 *GeoJournal*, 535, 554

<sup>27</sup> Oyetunde Tobi, 'Contaminated water, destroyed farmlands: Osun residents bear brunt of illegal gold mining as government looks away' (Saharah Reporters, 2022) <<https://saharareporters.com/2022/04/14/contaminated-water-destroyed-farmlands-osun-residents-bear-brunt-illegal-gold-mining/>> Accessed 20 May, 2023.

Figure 1: An abandoned and non-remediated gold mining site in Ibodi community of Osun state.



Source: International Center for Investigative Reporting (ICIR)

More so, illegal gold mining activities in Osun state have led to significant deforestation in the mining areas. Many trees are cleared to allow for illegal gold mining operations, resulting in the loss of wildlife habitats and the destruction of biodiversity. Deforestation also contributes to the events of soil erosion and landslides, further damaging the environment.

#### **4.2 Water pollution**

Illegal gold miners having dug through the earth surface to get raw gold, go to the nearest waterbodies to wash up the gold in preparation for sale or for the process of refining. This act hinders that natural flow of water as well as contaminates the waterbodies. The tailings and the residues of the raw minerals are left to flow through the waterways, thereby rendering the source of water useless and poisonous for inhabitants of the communities.<sup>28</sup> The

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<sup>28</sup> Taiwo-Hassan Adebayo, 'Special Report: Osun in the mud as mining greed intensifies' (Premium Times, 2022) <<https://www.premiumtimesng.com/news/headlines/525526-special-report-osun-in-the-mud-as-mining-greed-intensifies.html?tztc=1>> Accessed 19 May 2023.

waterbodies in Osun state as a result of illegal gold mining are polluted with such harmful materials as cyanide, mercury and lead. The use of mercury in the process of illegal gold mining polluted the sources of water, and makes it unsafe for consumption by humans and animals alike.<sup>29</sup>

Sahara Reporters in 2022 reported that about 20 communities in Osun state have been rendered helpless as they go in search of clean water over long trekking distance. The polluted water also causes health problems for the local communities. The particulate matters and heavy metals present in the waterbodies have exposed the inhabitants of these communities to such diseases as; cancer, kidney diseases, paralysis and brain damage, among other diseases. The animals that also drink from these water sources also are gradually going into extinction.<sup>30</sup>

Illegal gold mining activities in communities of Osun state have particularly polluted the famous River Osun. Having tested samples of water from the river, it was discovered that the water contains chemicals that are harmful to human existence. The continuous pollution of the river affects the over two million residents and numerous livestock of Osun state who depend on the river for their livelihood and source of drinking water.<sup>31</sup>

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<sup>29</sup> Oyetunde Tobi, 'Contaminated water, destroyed farmlands: Osun residents bear brunt of illegal gold mining as government looks away' (Sahara Reporters, 2022) <<https://saharareporters.com/2022/04/14/contaminated-water-destroyed-farmlands-osun-residents-bear-brunt-illegal-gold-mining>> Accessed 20 May, 2023.

<sup>30</sup> Ibid.

<sup>31</sup> Uche Henry, 'Groups beam searchlight on mining activities in Osun, sorrowful tales unveiled' (Sun News Online, 2022) <<https://sunnewsonline.com/groups-beam-searchlight-on-mining-activities-in-osun-sorrowful-tales-unveiled/>> Accessed 16 June, 2023

Figure 2: Polluted section of a river in Osun State



Source: Sahara Reporters, 2022.

In sum, illegal gold mining activities in Osun state have had significant environmental impacts, this includes deforestation, soil erosion, water pollution, and the destruction of wildlife habitats. Due to the fact that the ecosystem and human health of the inhabitants of affected communities are greatly impacted, it becomes pertinent that there is an enforcement of stricter environmental regulations and sustainable mining practices to mitigate the adverse impacts of gold mining in Osun state.

## **5. ECONOMIC SECURITY IMPACTS OF ILLEGAL GOLD MINING IN OSUN STATE**

### **5.1 Displacement of indigenous farmers**

The abundance of gold in Osun state has not necessarily translated into wealth for the state; its inhabitants, the government workers and the pensioners therein. The payment of salaries of government workers and pensioners are often irregular. As of June 2021, the Debt Management Office records that Osun state owed domestic debt of about ₦133.36bn. More so, there is hardly enough funds to finance major developmental projects and to develop

infrastructures in the state.<sup>32</sup> To avoid total penury, many government workers and pensioners practice farming in order for subsistence.

Unfortunately, also, the illegal mining activities have allowed for the confiscation of farmlands, displacing farmers from their major means of subsistence. If the government is not able to translate the abundance of gold into wealth for the citizens of Osun to enjoy, it should not also encourage the displacement of its citizens from their basic means of survival which is farming. It has been alleged overtime that the illegal gold mining activities are known to the government authorities, who have also not taken effective measures to ensure that farmers are not displaced of their indigenous farmlands and jobs.<sup>33</sup> Farmlands are either sold to illegal miners at ridiculous prices or the illegal miners hijack it with little or no compensation. This is done for the sole purpose of extracting gold, and whether gold is found in the land or not, the ground surface is left already destroyed and almost unfit for further crop cultivation.<sup>34</sup>

## 5.2 Impoverishment

For a state whose indigenes' mainstay is farming, it becomes difficult for these individuals to thrive economically having been

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<sup>32</sup> Ajaja Tunde, 'Illegal gold mining: Foreigners steal Nigeria's wealth amid dwindling revenue, mounting debts' (Punch, 2021) <<https://punchng.com/illegal-gold-mining-foreigners-steal-nigerias-wealth-amid-dwindling-revenue-mounting-debts/>> Accessed 7 June, 2023

<sup>33</sup> Adanikin Olugbenga, 'INVESTIGATION: Digging for death, untold story of Osun artisanal gold miners' (ICRN Nigeria 2019) <<https://www.icirnigeria.org/investigation-digging-for-death-untold-story-of-osun-artisanal-gold-miners-2/>> Accessed 09 June, 2023; Adejumo Kabir, 'Oyetola inaugurates committee to tackle illegal mining' (Premium Times, 2021) <https://www.premiumtimesng.com/news/456813-oyetola-inaugurates-committee-to-tackle-illegal-mining.html?tztc=1> Accessed 22 June 2023; Ajaja Tunde, 'Illegal gold mining: Foreigners steal Nigeria's wealth amid dwindling revenue, mounting debts' (Punch, 2021) <<https://punchng.com/illegal-gold-mining-foreigners-steal-nigerias-wealth-amid-dwindling-revenue-mounting-debts/>> Accessed 7 June, 2023; Oyetunde Tobi, 'Contaminated water, destroyed farmlands: Osun residents bear brunt of illegal gold mining as government looks away' (Saharah Reporters, 2022) <https://saharareporters.com/2022/04/14/contaminated-water-destroyed-farmlands-osun-residents-bear-brunt-illegal-gold-mining> Accessed 20 May, 2023.

<sup>34</sup> Adanikin Olugbenga, 'INVESTIGATION: Digging for death, untold story of Osun artisanal gold miners' (ICRN Nigeria 2019) <<https://www.icirnigeria.org/investigation-digging-for-death-untold-story-of-osun-artisanal-gold-miners-2/>> Accessed 09 June, 2023

ripped off their farmlands for the cultivation of crops for subsistence. Unfortunately, the state lacks infrastructures that provide ample job opportunities for its inhabitants; the government employees also do not earn their income regularly, yet, the farmlands are being confiscated, thereby increasing their level of impoverishment. Illegal gold mining activities have to a large extent increased the spate of violence and criminal activities<sup>35</sup> which are also borne out of want and poverty.

## **6. COMMUNITY SECURITY IMPACT OF ILLEGAL GOLD MINING IN OSUN STATE**

### **6.1 Prevalence of Criminal Activities**

Only the Federal government of Nigeria is authorized to issue commercial mining licenses to any mining entity through the Mining Cadastre Office and the Ministry of Mines and Steel Development. As such, the mining company has access to an allotted perimeter of land for exploration and mining of the natural resources. For instance, Segilola Resources Operating Limited (SROL) is the only commercial-scale gold mine in Nigeria, located in Iperindo, Osun state. Recently, artisanal miners carved out a portion of its licensed land for illegal gold mining activities. Although this act is a violation of the law, the artisanal miners have continued to forcefully mine on this land.<sup>36</sup>

The Nigerian Senate reported that as of 2021, \$9bn had been lost to illegal gold mining activities. It is also alleged that the perpetrators who are known to elites in the country connive with the security agents to mine gold illegally. Artisanal gold mining now thrives in the state even close to residential areas, as individuals also make use of firearms to wade off intruders. The artisanal miners claim that they have engaged in this ordeal in order to make ends meet for themselves and their family

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<sup>35</sup> Ajaja Tunde, 'Illegal gold mining: Foreigners steal Nigeria's wealth amid dwindling revenue, mounting debts' (Punch, 2021) <<https://punchng.com/illegal-gold-mining-foreigners-steal-nigerias-wealth-amid-dwindling-revenue-mounting-debts/>> Accessed 7 June, 2023

<sup>36</sup> Egbejule Eromo and Iyora Festus, 'Cry Me A River; How Gold Polluted Nigeria's Sacred Osun River' (Daily Trust 2022) <<https://dailytrust.com/cry-me-a-river-how-gold-polluted-nigerias-sacred-osun-river/>> Accessed 15 June, 2023.

members.<sup>37</sup> In essence, illegal gold miners disregard the notion of human security, but pursue the sole goal of financial stability.

## 7. SUSTAINABLE DEVELOPMENT POLICY GUIDELINES FOR ILLEGAL MINING IN OSUN STATE, NIGERIA

The menace that illegal gold mining in Osun state has posed to the community dwellers and the state as a whole should be checked, especially according to the standards of sustainable development. The essence of sustainable development is to ensure that development provides to individuals, all that they require in the present time, but not at the detriment of generations yet to come.<sup>38</sup> Sustainable development explains the possibility of human interrelationship with the environment. That is, the society can explore the resources embedded in the environment without necessarily destroying the ecosystem, for the present times and for the future.<sup>39</sup>

The focus of the Sustainable Development Goal 1 (SDG 1) is eradicating poverty for all individuals across the globe. Poverty has been fueled by the activities of the illegal gold miners in Osun states. Indigenous jobs of farming and hunting have been particularly interrupted, further hampering socio-economic productivity, and increasing the level of hunger among individuals.<sup>40</sup> Worthy of note also is the fact that, illegal gold mining activities have been spurred by lingering poverty or the lack of a noble alternative source of income. SDG 6 as well, is aimed at addressing clean water and sanitation. That is, in addition

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<sup>37</sup> Ibid.

<sup>38</sup> Vitalis Vangelis, 'Round table on sustainable development – Science, the Environment, Economics and Sustainable Development' (Keynote Paper presented to the Research School for the Socio-Economic and Natural Sciences of the Environment (SENSE) Summer Symposium 19-20 June 2003, Amsterdam, Netherland); Schaefer Anja and Crane Andrew, 'Addressing sustainability and consumption' (2005)25 *Journal of Macromarketing* 76,9

<sup>39</sup> Mensah Justice, 'Sustainable development: Meaning, history, principles, pillars, and implications for human action: Literature review' (2019)5 *Cogent social sciences*

<sup>40</sup> United Nations Environment Programme, 'Goal 1: End poverty in all its forms everywhere' (United Nations, 2023) <<https://www.un.org/sustainabledevelopment/poverty/>> Accessed 04 October, 2023.

to ensuring that people around the world have access to hygienic water, the United Nations 2030 Agenda is committed to ensuring that there is sustainability of water resources for the people to survive. In essence, water resource is important to sustainable development, and proper sanitation is pivotal to actualizing sound health and the reduction of poverty. The activities of the illegal gold miners have polluted major sources of water in Osun state, rendering the water non-potable, and resulting in diseases among the people.<sup>41</sup>

Living standards of individuals in environments where natural resources extraction activities take place, should be improved without necessarily endangering the environment. The Nigerian government at various levels have made efforts to ensure that gold mining in Osun state is carried out responsibly without adversely affecting the environmental, and socio-economic lives of host communities. To actualize SDGs 1 and 6, several sustainable development policies have been established to make certain that the gold-mining communities and Nigeria at large, achieve growth in its economy, sanity in its environment as well as social welfare for the citizens.

The Federal Government of Nigeria, in a bid to regulate the bureaucratic process involved in acquiring the license to mine, enacted the Nigerian Mineral and Mining Act 2007, followed by the Nigeria's Mineral and Metal Policy (2008). The Act provides for and emphasizes the Federal government's ownership and control of mineral resources. The administration of the act, and the obligation to ensure sustainable development in the process of the exploitation of mineral resources, is vested in the Minister of Mines and Steel Development.

By virtue of the Nigerian Mineral and Mining Act, 2007, agencies for the proper functioning of the mining sector is established with defined roles. The Mining Cadastre Office (MCO) is saddled with the responsibility of administering mineral titles. The Mines Inspectorate Department (MID) ensures that the exploration and mining of minerals is carried out in compliance with the

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<sup>41</sup> United Nations Environment Programme, 'Goal 6: Clean water and sanitation'(United Nations 2023) <<https://www.unep.org/explore-topics/sustainable-development-goals/why-do-sustainable-development-goals-matter/goal-6>> Accessed 04 October, 2023.

regulations of the Act. More so, the Mines Environment Compliance Department (MECD) is saddled with the responsibility of reviewing the plan and reports of holders of mineral titles, as it concerns environmental compulsions. Among other supporting agencies established by the Act to ensure the effectiveness of the Ministry of Mines and Steel Development are the; Metallurgical Inspectorate, and Raw Material Development (MIRMD), Artisanal and Small-Scale Mining Department (ASM) and Steel and Non-Ferrous Metal Department (SNFM).<sup>42</sup>

As established in the Act, the various licenses that may be acquired by an investor include; Reconnaissance Permit, Exploration License, Small Scale Mining Lease, Mining Lease and Quarry Lease. The Reconnaissance Permit allows its holder access into any land to mine mineral resources. The Exploration License, often with a validity period of 3 years, allows its holder to explore mineral resources within the limit permitted by the license – usually 200square kilometers. The Small Scale Mining Lease is valid for 5 years and permits its holder to conduct small scale mining not beyond 3kilometers. The Mining Lease is valid for 25 years and available to holders of the exploration license and small scale mining lease, to mine minerals in an area to be defined by the mining lease.<sup>43</sup>

By virtue of Section 19 of the Nigerian Minerals Mining Act 2007, the state governments are authorized to establish a partnership with the Federal government on the exploration of solid raw materials. This has led to the establishment of the Mineral Resources and Environmental Management Committee (MIREMCO) in various states of Nigeria, Osun state inclusive. Osun MIREMCO was inaugurated in 2021 by the government of

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<sup>42</sup> Adeshina Taiwo and Moses Joshua, 'De-risking the Nigerian mining sector for sustainable development' (Jee Africa, 2022) <[https://jee.africa/wp-content/uploads/2022/02/DE-RISKING-THE-NIGERIAN-MINING-SECTOR-FOR-SUSTAINABLE-DEVELOPMENT-www.jee\\_africa.pdf](https://jee.africa/wp-content/uploads/2022/02/DE-RISKING-THE-NIGERIAN-MINING-SECTOR-FOR-SUSTAINABLE-DEVELOPMENT-www.jee_africa.pdf) > Accessed 28 September, 2023.

<sup>43</sup> Ibid.

Osun state to specifically address illegal gold mining activities in the state.<sup>44</sup>

The Federal and states governments of Nigeria incessantly condemn artisanal gold mining activities in Nigeria. These illegal practices engaged in by Nigerians and non-Nigerians alike have been condemned. The Presidency in October, 2020, established the Mining Police which comprised of the Inspector General of Police, the Chief of Army Staff, the National Security Adviser among other key security personnel in the federation. This approach unfortunately has not halted the illegal gold mining activities in Osun state, Nigeria. In furtherance, the government banned, all illegal mining activities in Zamfara state, Nigeria. Rather than experience some sanity where illegal gold mining is concerned, the illegal gold miners simply migrated to Osun state to continue with their mining activities, hence, increasing illegal gold mining activities and its demerits in the state.<sup>45</sup>

More so, considering that the country loses a huge sum of revenue to illegal gold mining, the security agents in Nigeria, directed by the federal government, have ensured the arrest of illegal gold miners in Osun state, foreigners and nationals alike. Capital punishments are also issued to these defaulters. There are yet allegations that illegal gold mining activities are incessant because politicians and the elites in Nigeria support these activities.<sup>46</sup>

In a bid to restrain illegal gold mining activities and ensure that sustainable mining practices are upheld, the government of Osun state issued a strict warning to illegal gold miners. These group of people have been warned to desist from their notorious activities in the state. Host community members are also dissuaded from

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<sup>44</sup> Adejumo Kabir, 'Oyetola inaugurates committee to tackle illegal mining' (Premium Times, 2021) <<https://www.premiumtimesng.com/news/456813-oyetola-inaugurates-committee-to-tackle-illegal-mining.html?tztc=1>> Accessed 22 June 2023.

<sup>45</sup> Ajaja Tunde, 'Illegal gold mining: Foreigners steal Nigeria's wealth amid dwindling revenue, mounting debts' (Punch, 2021)<<https://punchng.com/illegal-gold-mining-foreigners-steal-nigerias-wealth-amid-dwindling-revenue-mounting-debts/>> Accessed 7 June, 2023

<sup>46</sup> Ibid; Oyetunde Tobi, 'Contaminated water, destroyed farmlands: Osun residents bear brunt of illegal gold mining as government looks away' (Sahara Reporters, 2022) <<https://saharareporters.com/2022/04/14/contaminated-water-destroyed-farmlands-osun-residents-bear-brunt-illegal-gold-mining>> Accessed 20 May 2023

leasing their lands out to the illegal gold miners as they also may face the wrath of the law.<sup>47</sup>

In spite of the efforts of the Nigerian government to curb illegal gold mining activities in Osun state, these practices are incessant, and resulting in environmental degradation and pollution of the state. Artisanal gold mining activities remain a bane in actualizing environmental security in Osun state, Nigeria. It therefore becomes pertinent for the Nigerian government to devise a lasting solution to menace, in order to avoid, human and cultural extinction in the state.

## 8. RECOMMENDATION

Osun state Nigeria is endowed with an abundance of gold, hence, the prevalent gold mining activities therein. Unfortunately, the abundance of this mineral resource has not necessarily translated into economic abundance for the state. Instead, the state has witnessed a deplorable level of health, economic, community and environmental insecurity. Artisanal gold mining activities are incessant, hereby frustrating the efforts of the government to curb it. Osun state, Nigeria experiences theft of resources, the pollution of water bodies and the degradation of the earth crust. The indigenes of the state wallow in poverty, filth, ill-health as well as suffer from a degraded environment.

Section 19 of the Nigerian Minerals Mining Act 2007, authorizes the Osun state government to address the issues of illegal gold mining in the state. This devolution of powers allows for MIREMCO in Osun state mete punitive measures on defaulters of the laws that guide gold mining activities in the state. In essence, the policy frameworks that guide the gold mining should be designed by the state's MIREMCO and other commissions determined by the state government, to ensure effectiveness in the enforcement of compliance to extant regulations by gold mining entities in Osun state.

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<sup>47</sup> Adeoye Nathaniel Olugbade, 'Land degradation in gold mining communities of Ijesaland, Osun state, Nigeria' (2015)8 *GeoJournal*, 535, 554

More importantly, it becomes pertinent that the Ministry of Mines and Steel Development, collaborate with MIREMCO to ensure that the standards of the Nigeria Minerals and Mining Act 2007 as regards the exploration of gold in Osun State are upheld. According to the provisions of the Nigerian Minerals and Mining Regulations, 2011, the Ministry must ensure the regular inspection of the mining environment, and the environmental impact assessment of the mining sites. More so, there must be the enforcement of a proper drainage system, and the appropriate disposal of tailings and dumps in the course of gold mining in Osun state. In the event that licensed mining companies flout extant regulations, the regulatory agencies must effect punitive measures such as the suspension of the defaulting company's mineral title or the compulsory payment of compensation.

The government should consider formalizing the gold mining activities in the state, and must strictly ensure adherence to legal frameworks that guide artisanal gold mining activities in the state. A licensing process must be established that every mining entity must follow. For instance, there must be defined portions of lands where gold mining activities must take place, improved technology for prospecting the lands must also be devised such that portions of land are not totally rendered useless. More so, safety equipment in the course of gold mining activities must be emphasized and enforced by the regulatory agencies. By so doing, illegal gold mining activities will be eliminated and gold mining activities conducted in a safe and responsible manner.

The government of Osun state should consider conducting effective geophysical surveys on the earth surfaces to ensure that the locations of resources are identified without necessarily degrading farmlands. To achieve this, practitioners and researchers in relevant tertiary institutions and research institutes should be consulted for guidance. There is also a need to train and educate gold miners in Osun state on the best global practices for mining. The potential risks associated with gold mining activities in the state must be re-iterate to mitigate mining accidents at the mining sites and to promote safe gold mining practices. The quest for individual subsistence must not jeopardize the safety of the environment or the health of the members of the host communities to gold mining operations in Osun state.

The government must consider participatory governance of the mining sector. The federal and state government must engage with the local communities to understand their grievances against gold mining activities. Their concerns should be heard and addressed. The government, the mining companies and the local communities can thereby develop a level of understanding to reduce conflict, conduct surveillance and allow gold mining activities to thrive in the state for the benefit of all parties.

It is imperative for the government of Nigeria to concentrate on the mining of gold in Osun state for economic growth and development of not only the state, but the country at large. It is hitherto glaring that artisanal gold mining activities are more than the mining companies' in Osun state, Nigeria. In other words, the bulk of the gold mined in the state has been done by the illegal gold miners and not the gold mining company present in Osun state. Hence, gold mining revenue is lost to artisanal gold mining with little or no gains accrued yet to the licensed company and to the Federal government of Nigeria.

In sum, these recommendations may be useful in addressing the environmental security implications of gold mining in Osun State, Nigeria and promote sustainable and responsible mining practices.