A CRITICAL APPARAISAL OF THE LEGAL FRAMEWORK REGULATING ARTISANAL AND SMALL SCALE MINING IN NIGERIA

BY

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CHAPTER ONE

1.1 Introduction

This study focuses on a critical appraisal of the legal framework regulating artisanal and small scale mining in Nigeria hereinafter referred to as ASM. Mineral resource development is one of the most crucial engines for economic growth and development in the modern world. Countries rely on natural resources for their political and economic survival. Interestingly, natural resources are spread across territorial boundaries, and territorial integrity and national sovereignty are almost always at stake in the presence of mineral resources. Wars were fought over these natural endowments; lives were lost; and territories were also lost. With the increasing developments in science and technology and the increasing discoveries of new resources, man has developed means of harnessing these resources for sustainable growth and development. But technology has made mineral resource development a largely capital intensive business requiring huge financial and human resources to ensure optimum exploitation and utilization of the resources. Therefore, mineral resource development is increasingly becoming the preserve of the states and the large multinational corporations that can muster the necessary capital and technical expertise to undertake such large business ventures. This large scale mining often attracts series of legislative steps or measures to ensure strict regulation and the derivation or realization of the proceeds of investment by both the state and the large multinational companies. In Nigeria, there are series of regulations designed for this purpose.

However, the traditional form of mining or artisanal by which many individuals earn a living is not a subject of specific regulation in Nigeria. It is regulated under different legislative instruments, creating what might be termed ‘regulatory confusion’. With the increasing poverty, income inequality and massive unemployment in the country many people are increasingly

resorting to artisanal mining with little or no regard to any regulatory prescriptions. The consequences of this in the recent times have been enormous. The Zamfara State lead mining by individuals has led to incalculable human and material damages, foremost of which was the recent incident of lead poisoning. It is evident that Mineral Laws in Nigeria are usually designed for industrialized mining with a view to promoting private investment and providing tax revenues for the state. Obviously, mining companies operate under technically qualified supervision and with access to required financial means. Other business, practical and legal necessities may also be required. Artisanal mining is often not capable of meeting legal requirements and or regulations designed for the medium or large scale mining. It is therefore, sometimes synonymous with informal or illegal mining because often miners are kept vulnerable and at the mercy of unscrupulous middle men. Countries with workable artisanal mining legislation demonstrate that informality is not a generic characteristics of this class of mining. In fact, artisanal mining can be a formal and legal means of earning a livelihood, and an opportunity to create more jobs and tackle the deepening poverty in the country.

It is important to emphasize that artisanal mining plays an important role in the generation or creation of employment and sustainable means of earning a livelihood in Nigeria. However, most artisanal mining are being carried out using rudimentary technology causing negative impact on both the environment and human health. Despite having laws and regulations governing the mining sector in the country, the regulation and control of artisanal mining has remained challenging and ineffective. Evidently, the current legal framework is not conducive for artisanal mining operators nor is it easily enforceable. One reason for this is that many artisanal mining operators are not aware of the existing legal framework and often operate with the general belief that these resources are ownerless. Another possible reason is that mining

legislation and regulations are often drafted, enacted and adopted to primarily address the needs and challenges of the large scale mining operators, but artisanal mining is often given a brief and insufficient reference. Therefore, there is an increasing concern whether the existing legal framework governing the mining sector in Nigeria is suitable for artisanal mining and whether any conscious legislative effort is required to effectively govern the artisanal mining activities in the country.

1.2 Statement of Problem

There has been increasing number of artisanal miners in Nigeria largely as a result of the pressing economic and social problems bedeviling the country. As the rate of artisanal mining increases, its significance also increases. But as both the rate and significance of artisanal mining increase, legal prescriptions remain pause. The law is supposed to be responding to the dynamic nature of the society and addressing the increasing challenges brought by economic underdevelopment. The law must not only be responsive, it must also be effective. Importantly, the effectiveness of the mining legislation has been questioned by the increasing level of non-compliance by industry operators. Therefore, despite the regulations put in place by the Government of Nigeria, artisanal mining is often carried out in a manner that runs contrary to the guide lines and provisions of the law as enshrined in the Nigerian Minerals and Mining Act 2007, Nigerian Minerals and Mining Regulations 2011, Environmental Impact Assessment Act, LFN 2004, National Environmental Standards and Regulations Enforcement Agency Act 2008. This may not be unconnected with the increasing rate of illiteracy, deepening poverty and other socio-economic crises in the country.

1.3 Scope of the Research

The primary focus of this research work is the critical appraisal of the legal framework regulating artisanal mining in Nigeria, the scope will however be widened to examine the position of artisanal mining in international law and then look at certain jurisdictions where ASM is given the deserved regulatory attention

1.4 Research Questions

From the above, the following questions constitute the main research questions:

I. What are the inadequacies of the existing legal instruments as they relate to the regulation of artisanal mining in Nigeria?

II. How and in what ways can these inadequacies be addressed to tackle the challenges confronting artisanal mining towards enhancing mineral resource development in Nigeria?

III. What lessons can Nigeria learn from other countries having a highly developed and regulated artisanal mining regime?

IV. What can be done to ensure a balance between the need for regulation of artisanal mining activities and the pressing socio-economic challenges facing overwhelming majority of Nigerians particularly poverty and unemployment?

1.5 Objectives of the Research

In view of the foregoing, this research seeks to undertake a critical appraisal of the current mining regulations in Nigeria with a view to determining the status of artisanal mining particularly with respect to the areas of the environment, labour, mineral rights, exploration and mining permit and skills development. In doing this, the study also highlights the strengths and weaknesses of the current legal framework for artisanal mining operators and suggests ways to

inform the policy and decision making process on how best artisanal mining could enhance livelihoods without degrading the environment.

1.6 Research Methodology

In answering the key research questions, the research employs the doctrinal methodology. Specific legislations on mining in Nigeria and case law would be critically reviewed. These constitute the primary sources of the research. Relevant academic writings in books, journals, newspaper reports, workshops, conferences, unpublished papers and other research works are also important sources of information for this research. A comparative methodology will also be used in comparing certain jurisdictions where ASM is given the deserved regulatory attention.

1.7 Literature Review

Many literature has been written on the subject of Artisanal and Small – Scale Mining in Nigeria and other jurisdictions by several researchers, but to my knowledge, none of the said researchers have written specifically and absolutely on the Critical Appraisal of the Legal Framework Regulating Artisanal Mining in Nigeria. Hence, this research is conducted with a view to filling the gap left by the other researchers and to contribute to knowledge and literary presentation.

Yeboa J.Y[1] is of the opinion that mining activities have resulted in land degradation leading to limited land available for local food production and other agricultural purposes. She further contend that mining activities have lots of environmental and health impact. This emanated from

[1] Yeboa J.Y Environmental and Health Impact of Mining on surrounding Communities: A case study of Anglo Gold Ashanti in Obuasi, M.A Thesis (unpublished), Faculty of Social Sciences, Kwame Nkrumah University of Science and Technology, Ghana, 2008.

the method of operation by the mining companies, its effect on the natural environment as well as the people in the surrounding communities.

The health cost of mining operations sometimes outweight the benefit gained. This writer has written much on Environmental and Health Impact of mining generally but has not provided enough on artisanal mining.

Tychsen J et al [2] wrote a hand book for artisanal and small – scale mining in Nigeria and according to them, the Handbook has been written to help improved the performance of artisanal and small – scale mining operators in Nigeria. They contend that ASM operators throughout Nigeria face many challenges, the most important being lack of training and information in: Geology, Mining methods, Minerals processing method, Business skills to improve mining operations, Safety and health practices and environmental management.

Tychsen J et al have written much about ASM guidelines but did not provide guidance on the ASM legal framework. Inspite of this gap, the literature supports the foundation of this study.

Rosemary M et al [3] authored a report titled increasing the contribution of ASM to poverty reduction in Tanzania. They are of the opinion that ASM has considerable potential to reduce poverty and in comparison to National level statistics, ASM communities fare better in terms of poverty levels than other communities. These writers did not address the legal framework on ASM.

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[2] Tychsen J. et al, A.S.M Handbook for Nigeria, Geological Survey of Denmark and Greenland (GEUS), Copenhagen K. 2011.

[3] Rosemary M et al Increasing the Contribution of Artisanal and Small Scale Mining to Poverty Reduction in Tanzania. In: Report prepared for the Department of International Development (UK) (October, 2004).

Wall E et al[4] provided a document which is designed to help Large Scale Mining Companies identify the nature of ASM activities being undertaken in their regions and subsequently to use this understanding to identify appropriate models for engagement with artisanal and small – scale miners. These writers have written a lot on how artisanal mining can engage with large scale – mining but they did not discuss on the legal regime on artisanal mining, let alone appraising same.

Mallo SJ et al[5] are or the opinion that, the mining industry in Nigeria is one of great potential which has the capacity to contribute to local and foreign exchange earnings as well as the attractor of foreign direct investment thereby boosting the country's economy. They agued that, as it currently exits, artisanal mining in Nigeria is often an illegal and high risk activity, because it is practiced on a small – scale by people who are often poor, uneducated, and lack employment opportunities.

Coppin NJ[6] Thoroughly write on past, present and future mining in Nigeria. He has discussed artisanal mining activities since from its inception in Nigeria and its present condition as well as characteristics.

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[4] International Council on Mining and Metals et al, Working together: How large scale mining can engage with artisanal and small-scale miners. 2010 Page 5 available at http://www.working Together….PILOT VERSION pdf last visited on 04/07/2014 at 2:23pm.

[5] Mallo SJ et al, Artisanal Mining of cassiterite: the sub surface (LOTO) approach, sheet 390, Rayfield Jos, Nigeria. Continental J Environmental Science 5(2): 38 – 50, 2011 available at http://www.wiloludjournal.com

[6] Coppin NJ., Sustainable Management of Mineral Resources Project. In: Sectoral Environmental and Social Assessment Final Report, Wardell Armstrong, (2005) page23. Available at /users/HP/…/SESA Final Report Nov. 05.pdf

Cislac Policy Brief [7] talks on solid minerals sector and hinged their argument that the sector is part of the extractive industry, thus must in addition to the main law regulating the sector be also covered by the provision of the NEITI Act which governs the extractive industry.

However, the focus of the enforcement of NEITI provision have tended be concentrated on the oil and gas sector. They have argued that the Ministry of Mines and Steel Development is only concerned with the implementation of the mining Act. These writers focused their discussion on transparency in extractive industries but did not critically discuss the Mining Act and identify the need of artisanal miners.

Jacob I. D[8] is of the opinion that artisanal mining has an impact on the environment in Nigeria. According to him, the most commonly talked about environmental impacts have been on the oil producing region of the Niger Delta where agricultural surface and underground water resources have been badly affected. However, artisanal mining of solid minerals pervade the entire country leaving behind their effects on the environment.

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[7] Civil Society Legislative Advocacy Center, Policy Brief on Solid Mineral Sector for the National Assembly at 7 available at http://www.cislacnigeria.net, last visited on 23/06/2014.

[8] Jacob I. D. the Impact of Artisanal and Illegal Mining on the Environment in Nigeria available at https://www.unilorin.edu.ng/.../P28 , last visited on 29/012015.

Goldman L et al [9] exclusively and extensively wrote on artisanal and small – scale gold mining and they are of the opinion that is has long been practiced in Nigeria and around the world. Bolstered by historically high gold prices, a lack of viable alternative likelihoods, and a ready – if expensive – supply of mercury, there has been a resurgence of ASGM activities in Northern Nigeria in recent years. This resurgence, however, has come at a price – namely, devastating lead – contaminated gold ore. These writers wrote on recommendations to Address Mercury and Lead Exposure.

Karen H, [10] wrote extensively in artisanal and small – scale mining in Africa and is of the opinion that small – scale mining in Africa, in particular is plagued with many problems including inadequate legal and regulatory framework, low productivity, application of rudimentary and inappropriate technology. The industry is also faced with problems such as isolation from the main stream of economic development, adverse environmental effects, health and occupational hazards. His writing addresses the problem by looking at the interaction of the complex network of issues affecting the ASM Sector and its contribution to poverty alleviation.

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[9] Goldman L. et al, Artisanal and Small Scale Gold Mining in Nigeria: Recommendations to Address Mercury and Lead Exposure, In: Report Prepared by the Environmental Law Institute, Washington DC, 2014 at page 16, available at www.eli.org, last visited on 24/01/2015.

[10] Karen H. Regional Workshop: Small-scale Mining in Africa – A Case for Sustainable livelihood, 2008 Amsterdam Netherland, page 16 available at www.cfc_report_mining_2008_final_2_pdf, last visited on 23/06/2013.

Agnes G.M [11] is of the opinion that artisanal and small – scale mining is a significant sector for people's livelihoods and the National economy. Yet the impact on the environment and human health is a big concern. The technology used in extracting gold through the use of mercury is creating a lot of pollution to the environment which affects water bodies and biodiversity. ASM also poses a great health risk to the people in the sector as well as those in surrounding areas. She argued that the poor performance of ASM is caused by many factors, including inappropriate institutional framework, inadequate resources to establish good practices and environmental degradation.

Onubugo H[12] wrote that Nigeria has had a long, it dysfunctional history of mining. Organized mining in the country can be traced to the execution of the minerals survey of the then Southern protectorate in 1903, and the then Northern protectorate in 1904. In pre – colonial times up to the first decade after independence, Nigeria was a major producer and even exporter of coal, tin, columbite and other minerals. It is trite to say that Nigeria is very well endowed and rich in terms of solid minerals. However, as a result of over dependence on crude oil exports and consequent earning, the mining sector has been experiencing a serious downturn. The writing of this author centered on laws practice and procedure relating to mining Bustness M Nigeria The – coal perspective.

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[11] Agnes, G.M. Environmental Degradation under Artisanal and small scale Mining in Tanzania:Can Innovation in Institutional Framework Help, International Journal of Environmental Protection, 2012, Vol. 2 ISS. 9, PP 7-16, available at http:/www/c:……/IJEP10148-20120920-155422-2188-3287

[12]Onubogu H. Solid Minerals – Laws, Practice and Procedures Relating to Mining Business in Nigeria – The Coal Perspective, Juriscope, A Complication of Workshop Materials of the ALPHA JURIS Continuing Legal Education Series, 2008

Ladan M.T[13] wrote extensively on Law, cases and policies on Energy, Miniral Resources, Climate charge, Environment, Water, Maritime, and Human Right in Nigeria. He gave an overview of the Nigerian Mineral and Mining Act 2007.

Tumai M. [14] wrote on regulating mining in South Africa and Zimbabwe: Communities, the environment and perpetual exploitation.

UN[15] International Guidelines on Mercury Management in Artisanal and Small – Scale Gold Mining.

1.8 Chapterisation

This study has been broken down into six (6) chapters as follows

Chapter one is the general introduction which consist of statement of problem, scope of the research, research questions, objectives of the research, research methodology, literature review and the chapterisation.

Chapter two is the conceptual framework of the study which conceptualized key concepts in artisanal and small scale mining, it discusses the nature of artisanal mining, characteristics of artisanal mining, imperatives for regulating mining activities, impacts of artisanal mining and the conclusion of the chapter.

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[13] Ladan M.T. Law, Cases and Policies on Energy, Mineral Resources, Climate Change, Environment, Water, Maritime and Human Rights in Nigeria, A.B.U. Press Ltd, Zaria, Nigeria, 2009,

[14] Tumai M. Regulating Mining in South Africa and Zimbabwe Communities, the Environment and Perpetual Exploitation, 9/1 Law, Environment and Development Journal (2013) available at http://www.lead-journal.org/content/1303/.pdf

[15] U.N International Guidelines on Mercury Management in Artisanal and Small – Scale Gold Mining 2007.

Chapter three (3) is the international efforts towards regulating artisanal and small scale mining which consists of introduction, international law and artisanal mining: sovereignty and state responsibility, treaties, artisanal mining under the Minimata Convection on Mercury (MCM) 2013, MCM background and objectives, state parties' obligations under the MCM, 2013, treaty implementation bodies, other treaties, international soft laws on artisanal mining and conclusion.

Chapter four (4) focuses on legal and institutional framework on artisanal mining in Nigeria which discuses the legal framework on ASM in Nigeria comprising legislative instruments, policies and regulations, the regulatory bodies, which consists of ministry of mines and steel development, mining cadastre office, mines inspectorate department, mines environmental compliance department, ASM department, the federal ministry of environment, MIREMCO, state environmental laws, traditional rulers and the conclusion

Chapter five (5) focuses on the critiques of the legal framework on artisanal mining and it consist of introduction, adequacy of the existing legal framework such as the constitution of the federal republic of Nigeria 1999, Minerals and Mining Act 2007, Minerals and Mining Regulations 2011, administrative and regulatory inadequacy, the NETTI act 2007, the 2008 minerals and metal policy, environmental laws, policies and regulations, institutional inadequacy and the conclusion.

Chapter six (6) of the study comprise of summary, conclusion, findings and the recommendations

CHAPTER 2

CONCEPTUAL FRAMEWORK

2.0 Introduction

This Chapter covers the conceptual framework of the study. It conceptualizes the key issues on artisanal mining in Nigeria showing the relationship between the concepts of natural resources, mining and artisanal mining. The chapter then examines the origin of artisanal mining in Nigeria and its effects on the larger society. The final section concludes the chapter.

The significance of artisanal mining to economic development of countries and empowerment of individuals cannot be overemphasized. There is no doubt that a comprehensive regulatory framework on artisanal mining will aid towards the development of the sector. Across the world, some countries take regulation of artisanal mining activities very serious because of the importance of the sector and its potential impacts on the environment and the society at large.

2.1 Key Concepts in Artisanal Mining

Artisanal mining is part of the general mining of minerals and natural resources. It is important to first understand some fundamental concepts which constitute the core of artisanal mining before discussing the latter.

a. Mineral / Natural Resources

All forms of mining, including artisanal mining, are about extracting and utilizing *mineral* or *natural resources*. The phrase n*atural resource is* a combination of two words: 'natural' and 'resources.' The former literally means something brought about by nature while the latter means useful assets.[2]The Oxford Dictionary of Economics defines resources as follows:

> Anything which can contribute to economic activity. This includes natural resources, including both those located on land and those in or under the sea; human resources, including labour of various skills and qualifications; capital goods or man-made means of productions.

[2]Warner ed. Oxford advance Learners Dictionary, 7thedn.

The same dictionary then defines natural resources in economic terms as follows:

> Factors of production provided by nature. This includes land suitable for agriculture, mineral deposits, and water resources useful for power generation, transport and irrigation. It also includes sea resources, including fish and offshore mineral deposits. The effective availability of natural resources is stringly influenced by human activities: most agricultural land has been drained and fertilized, mineral resources have ben surveyed, and the accessibility of resources depends on the provision of transport links. Some apparently natural resources are in fact man-made…natural resources can be depleted by over-exploitation leading to deforestation and erosion.[3]

The above definition is very wide. The *Black's Law Dictionary* defines *natural resources* as follows:

> 1. Any material from nature having the potential economic value or providing for the sustenance of life, such as timber, minerals, oil, water and wild life.
> 2. Environmental features that serve a community's well-being or recreational interests such as parks.[4]

Therefore, *natural resources* mean those assets and economic valuables mostly buried underground and endowed by nature which can be used for general development. It is important to stress that natural resources extend beyond things found beneath the earth surface. They include even land, water and aquatic lives. Therefore, strictly *natural resources* are different from *mineral resources*.

Mineral is any natural inorganic matter that has a definite chemical composition and specific physical properties that give it value.[5] The Nigerian Mineral and Mining Act, 2007 defines *mineral* narrowly as follows:

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[3]Warner ed (note1) at 316-7.
[4] Garner, ed. Black's Law Dictionary, 7edn, at pp.1049-50
[5]Garner ed (note3) 1009

Mineral excludes mineral oil but includes the following as classed:

a. Metalliferious minerals including antimony, arsenic, bismuth, cerium, copper, cobalt, columbium, ehromium, cadmium, iron, leading, manganese, mercury, molybdenum, nickel, tantalum, tin, tungsten, zinc and all others of a similar nature to any of them and all ores containing them and combination of any of them with each or with any other substance except those that occur in the form of precious metals;
b. Combustible carbonaceous mineral, including
    1. Tarsands,
    2. Coal,
    3. Lignite, including brown coal and any coal which the Minister may declare to be lignite if advised by the Director of Mines that the estimated average ash content is so high or the estimated thermal value is so low that the coal may properly be classed as lignite;
c. Precious mineral including-
    1. Precious stones, namely: amber, amethyst, beryl, cat's eyes, chrysolite, diamond, emerald, garnet, opal, ruby, sapphire, turquoise, and all other substances of a similar nature of any of them,
    2. Precious metal, namely: gold, silver and any metal of the platnoid group in the unmanufactured state, including ore containing any of those metal excluding any ore containing thoe metals in combination with other minerals when the metal cannot be worked apart from the mineral and the value of the metal is less than the cost of producing both the metal and the mineral;
d. Radioactive mineral namely: mineral, either raw or treated (including residue and tailings) which contain by weight at least 0.05 per cent of uranium or thorium including but not limited to

    1. Monazite sand and other ores containing thorium, and
    2. Carnotite, pitchblende and any other ore containing uranium,
e. The valuable part of any ore or other substance when unmanufactured; and

f. The product of treating or addressing any ore or other substance for marketing or export.[6]

From the above, *mineral* is a term that consists of many precious stones, metals and unmanufactured ores that could be treated, used or transformed into another product for the purpose of human use.

b. Mining

Mining is the removal of minerals from the earth's crust in the service of man.[7] The Encarta Encyclopedia also defines *mining* as the selective recovery of minerals and materials, other than recently formed organic materials from the crust of the earth.[8]Mining has also been defined as the extraction of valuable minerals or other geological materials from the earth, usually (but not always) from an ore body, vein, or (coal) seam.[9]Materials recovered through mining include bauxite, coal, diamonds, iron, precious metals, lead, limestone, nickel, phosphate, rock salt, tin, uranium, and molybdenum. Any material that cannot be grown from agricultural processes must be mined. Mining in a wider sense can also include extraction of petroleum, natural gas, and even water.

The Nigerian Mineral and Mining Act, 1999 defines it as 'to intentionally mine minerals and includes any operation necessary for the purpose.[10] A mine is any place, excavation or working on which, in which or by which any operation in connection with mining is carried on.[11] The oldest known mine in available archaeological records is the "Lion Cave" in Swaziland. Available literature indicates that basically, there are eight steps to mining process.[12] These are as follows:

1. Prospecting to locate ore.
2. Exploration to defining the extent and value of ore where it was located.
3. Conduct resource estimate to mathematically estimate the extent and grade of the deposit.

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[6]Mineral and Mining Act, 1999, section 259.
[7]Down and Stock, 1977 cited in Acheampong, 2004:1
[8]Encarta encyclopaedia
[9]Acheampong, 2004
[10]Mineral and Mining Act, (note5).
[11]. Mineral and Mining Act, (note5)
[12] See Yeboa J.Y, Environmental and Health Impact of Mining on surrounding Communities: A case study of Anglo Gold Ashanti in Obuasi, M.A Thesis (unpublished), Faculty of Social sciences, Kwame Nkrumah University of Science and Technology, Ghana, 2008, page 35.

4. Conduct mine planning to evaluate the economically recoverable portion of the deposit.
5. Conduct a feasibility study to evaluate the total project and make a decision as whether to develop or walk away from a proposed mine project. This includes a cradle to grave analysis of the possible mine, from the initial excavation all the way through to reclamation.
6. Development to create access to an ore body.
7. Exploitation to extract ore on a large scale.
8. Reclamation to make land where a mine had been suitable for future use.[13]

Thus, in the light of the above processes, mining is simply the activity of extracting and processing economically valuable minerals.[14] Mining operations under the Minerals and Mining Act 2007 are the operations and works carried out in the course of minerals exploitation, inclusive of the sources of and exploitation for minerals beneficiation, processing and contract mining.

Mining Methods

Mining is divided in terms of methods into four basic types. They are:

1. Firstly, materials may be mined from surface mines, open pits, quarries, or other diggings open to the atmosphere. This group constitutes by far the greatest number of mines in the world.
2. Secondly, there are underground mines, entered through shafts or tunnels.
3. Thirdly, there is the recovery of minerals and fuels through boreholes.
4. Finally, there is underwater mining or dredging, which is now extending to the potential mining of the deep oceans.[15]

2.2 Nature of Artisanal Mining

There is a lack of internationally agreed definition of artisanal mining, not unsurprisingly given the diversity within the sector. However, country-specific explanations do exist, reflecting locally relevant situation and development processes. Criteria used in country level definitions include: level of employment, annual production output, capital investment, and size of claim,

[13]Tychsen J. et al, A.S.M Handbook for Nigeria, Geological Survey of Denmark and Greenland (GEUS), Copenhagen K. 2011, page 8.
[14]Nigerian Minerals and Mining Act, 2007, Section 164.

[15]Yeboa J.Y (note11) page 36.

artisanal operations (low levels of mechanization) and/or the use of simple equipment and depth of mining operations.[16]

Broadly speaking, artisanal mining refers to mining by individuals, groups, families or cooperatives with minimal or no mechanization, often in the informal (illegal) sector of the market.[17] It is broadly understood to refer to mining activities that are labour-intensive and capital, mechanization and technology poor.[18] Attempts to define artisanal mining activities on the basis of human resources, production, capital and revenue have all proved impossible due to wider variety of minerals mined and the heterogeneity within the sector.[19] Artisanal mining is a livelihood strategy adopted primarily in rural areas. Minerals are extracted by artisanal mining by people working with simple tools and equipment, usually on the informal sector, outside the legal and regulatory framework. When not formalized and organized, artisanal mining can be viewed negatively by governments, environmentalists, etc, because of its potential for environmental damage, social disruption and conflicts.

Almost all artisanal miners are unregistered, unregulated and unprotected. Most work for nothing except what they are lucky enough to find.[20]

Artisanal mining according to Minerals and Mining Act, 2007 means:-

> *"mining operations limited to the utilization of non-mechanized methods of reconnaissance, exploration, extraction and processing of minerals resource within a small-scale mining lease area.*[21]

In Nigeria, artisanal mining practices are unguided and unregulated. Over 95% of mining activities in Nigeria are artisanal and another 95%[22] of these are illegal (this includes minerals such as Tourmaline, Galena, Limestone, Feldspar, Tantaline, Coal etc. Policies in place are

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[16] M. Rosemary et al, Increasing the Contribution of Artisanal and Small Scale Mining to Poverty Reduction in Tanzania. In: Report prepared for the Department of International Development (UK) (October, 2004) at page 19.
[17] Thomas H. et al, Artisanal and Small Scale Mining Challenges and Opportunities, Russel Press Ltd, Nottingham, UK, 2003, page 5.
[18]Thomas H. et al. (note16).
[19] International Council on Mining and Metals et al, Working together: How large scale mining can engage with artisanal and small-scale miners. 2010 Page 5 available at http://www.working Together….PILOT VERSION pdf. last visited on 04/07/2014 at 2:23pm.
[20]Mallo SJ et al, Continental J. Environmental Sciences 5(2): 38–50, 2011, page 40.
[21]Minerals and Mining Act, (note13).
[22] Mallo (note 19).

inadequate, and miners are untrained and contribute hugely to environmental degradation, and poor quality operational techniques and the loss of minerals. Most activities have proceeded undocumented, resulting in loss of minerals and precious stones. This has caused substantial losses in revenue to the country by way of exports, as well as through royalties and taxes[12].

Today, the situation in the Artisanal mining sector has been described by some as utterly chaotic with a virtual breakdown in law and order in the mining areas (especially since the dissolution of the Mines Field Police Force). At present, this disorganized sector probably provides a rural livelihood to many thousands of informal artisanal miners in Nigeria in all six regional mining zones. However, because of the government's nonchalant attitudes regarding artisanal mining in Nigeria and because the vast majority of these miners work casually, seasonally or informally, it is impossible to determine the actual number of workers in the sector, although some claim there may be as many as 400,000.[23]

For over 2,400 years, the mineral resources of Nigeria have been exploited using artisanal method from basic clays to base metals and gold. Between 400 BC and 200 AD vibrant societies and kingdoms such as the Nok culture exploited iron and clay deposits and produced the famous terracotta figurines.[24] Between the 11th and 12th century, the Ife and Oyo kingdoms mined and used a variety of minerals. From 1903 to 1940, artisanal mining operation dominated mining in Nigeria. From 1970 till date, Artisanal mining has continued to dominate mining in Nigeria.[25]

Nigeria is blessed with a lot of mineral resources that are widely distributed across the country. As a result, mining is done virtually in all the states of the Federation. Many communities are affected by mining activities, while a lot of people are employed in the sector. This sector was left in the hands of an informal group of untrained and ill-equipped artisans who carried out their activities unregulated in several communities making negligible contributions to the overall GDP.[26]

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[23]Coppin NJ., Sustainable Management of Mineral Resources Project. In: Sectoral Environmental and Social Assessment Final Report, Wardell Armstrong, (2005) page23. Available at /users/HP/…/SESA Final Report Nov. 05.pdf last visited on 05/09/2013 at about 11:41am.
[24]Tychsen J. et al, (note12) page 10.
[25]Tychsen J. et al, (note12) page 10.
[26] Civil Society Legislative Advocacy Center, Policy Brief on Solid Mineral Sector for the National Assembly at 7 available at http://www.cislacnigeria.net last visited on 23/06/2014.

The absence of inadequate legislation and poor law enforcement in the mining sector, not only deprived the nation of the potential wealth available from this sector, but also put the health and lives of millions of people in jeopardy. This stems from the dire environmental and health consequence of the unsophisticated methods deployed by its practitioners. The death of about 162 children from lead poisoning traced to local processing of gold in parts of Zamfara State, Northern Nigeria is a case in point[16].

It is clear that despite many attempts, a common definition of artisanal mining is yet to be established. In some countries, a distinction is made between 'artisanal mining' that is purely manual and in a very small scale and 'small-scale mining' that is more mechanized and in a larger scale. In some West African Countries (Mali, Niger and Burkina Faso), small-scale mining is differentiated from artisanal mining by the presence of permanent fixed installations established once the existence of an ore body is confirmed[17].

2.2.1 Characteristics of Artisanal Mining

Artisanal mining is characterized by a number of factors or conditions which are given below[27]:

I. Lack or very reduced degree of mechanization, great amount of physically demanding work;
II. Low level of occupational safety and health care;
III. Deficient qualification of the personnel at all level of the operation;
IV. Inefficiency in the exploitation and processing of the mineral production (low recovery of values);
V. Exploitation of marginal and/or very small deposits, which are not economically exploitable by mechanized mining;
VI. Low level of productivity;
VII. Low level of salaries and incomes;
VIII. Periodical operation by local peasants or according to the market price development;
IX. Lack of social security;
X. Insufficient consideration of environmental issues;
XI. Chronic lack of working and investment capital;
XII. Mostly working without legal mining titles;

[27]CISLAC Policy Brief (note24).

XIII. Gender issues and child labour;

XIV. Poor access to market and support sevices.[28]

These parameters characterized the artisanal mining as an artisanal activity.

2.2.2 Brief History of Mining in Nigeria

As noted above, mining in Nigeria is over 2,400 years old with initial mining taking place in the form of artisanal mining as practiced by communities while searching for natural resources within their environment for their social and economic benefits.[29] This was the case with the ancient civilizations as seen in the Nok Culture (340 BC), the Igbo Ukwu bronze civilization (705 AD) Ife and Benin Bronze works flourished between 1163–1200 AD and 1630–1648 AD, respectively, using basic clays, base metals and gold amongst others.

Organized mining started in Nigeria around 1903 following the commissioning of the minerals surveys of the Southern and Northern protectorates in that year.[30] Organized mining of cassiterite and its associated minerals like tantalite and columbite started in 1905 by the Royal Niger Company in Jos, Plateau State while Coal exploration and mining commenced in 1906. The Geological Survey of Nigeria was established as a Department of the government in 1919 to take over the work of the survey team which started in 1903.

Government established the Nigerian Coal Corporation in 1950 and the Nigerian Mining Corporation (NMC) in 1972 with activities starting in 1973 and the National Iron Ore Mining Company (NIOMCO), Itakpe in 1979.[31]The NMC was mandated by Decree 25 of 1972 establishing it to acquire, prospect, procure and dispose minerals found in Nigeria excluding coal, petroleum, and iron ore. Nigerian Coal Corporation was responsible for coal exploration and exploitation, and NIOMCO was given the responsibility to produce iron ore for the country's steel plants in Ajaokuta and Aladja. While the first two have been scrapped by Government with most of its subsidiary companies privatized, the third organization is yet to be privatized but is currently not producing due to government indecision as to what should be its fate.[32]

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[28]Tychsen J. et al, (note12) page 10.
[29]Tychsen J. et al, (note12) page 10.
[30]Ministry of Mines and Steel Development: Changing Face of Nigeria's Mining Sector, Page 1 available at http://www.changingfaceof...ningsector1 _2pdf ;last visited on 9/05/2013 at 11:25am.
[31]Ministry of Mines (note28).
[32]Ministry of Mines (note28).

Solid minerals mining in Nigeria before the establishment of the Nigerian Mining Corporation in 1972 was dominated by the private sector, especially in tin production, with Government only facilitating mining activities through the provision of infrastructure in mine fields as well as collecting royalties, rents and other related rates from mining operators.[33] Nigeria was at one time the largest exporter of columbite and number eight in tin production in the world.

The nationalization policy of the early 70s, which resulted in foreign company owners leaving the Nigerian mining sector, lead to a sharp drop in mineral production, but with the discovery of petroleum in 1958 and the global energy crisis in the seventies, the attention of the Government finally shifted from solid mineral sector to the petroleum sector resulting in very poor activities in the sector.[34]

The nationalization policy coupled with the drop in tin prices of 1985, which caused so many jobs to be lost in the mine fields as well as the introduction of the Structural Adjustment Programme (SAP) in Nigeria in the 1980s, resulted in the re-emergence of artisanal and small-scale mining (ASM) in the area of metal and gemstone production. Other reasons for the increase in metal and gemstone ASM were the civil war (1967–70), a massive Naira devaluation, which resulted in re-trenchments and labour movement coupled with an increasing crave for foreign exchange, which created a ready market for the export of ASM-mined products led by intermediate traders and mineral smugglers.[35]

The Mineral Ordinance of 1946, the Coal Ordinance of 1950 as well as the Explosives Act of 1964 and the Explosives Regulations of 1967 provided the legal framework for the development of solid minerals in Nigeria before the enactment of the Minerals and Mining Act, No. 34 of 1999. This act was later replaced by the Nigerian Minerals and Mining Act 2007 for the purpose of regulating all aspects of exploration and exploitation of solid minerals in Nigeria. The Nigerian Minerals and Mining Regulations were produced in 2011 to guide the implementation of the 2007 Act.

The mineral sector in Nigeria is currently dominated by artisanal and small-scale mining operations, mainly informal, working with rudimentary methods and limited technical training,

[33]Ministry of Mines (note28).
[34]Ministry of Mines (note28).
[35]Ministry of Mines (note28).

social provision or environmental consideration. It is only in quarrying that large-scale operations exist with the construction companies (stone aggregates and laterite) and cement manufacturers (limestone, coal, etc) dominating.

The desire by Government to diversify the national economy through solid mineral exploitation amongst others, led to the creation of the ministry of Solid Minerals Development in 1995, now Ministry of Mines and Steel Development (MMSD) with the mandate of ensuring full exploration and exploitation of the abundant solid mineral potentials of the country.
The Government's wish to attract foreign investors to the Nigerian solid mineral sector has resulted in

- Increased mineral exploration activities arising from the creation of the Nigerian Geological Survey Agency which successfully carried out a geophysical survey of the country;
- The creation of the Mining Cadastre Office charged with transparent administration of mineral titles on a first-come-first-serve and use-or-lose-it basis resulting in an increase in mineral title acquisition by both local and international mining operators;
- Increasing the capacity of ministry staff to carry out designated functions as well as increasing the capacity of the ASM to carry out mining in a sustainable manner through the activities of the Sustainable Management of Mineral Resources Project (SMMRP);
- Enactment of relevant laws and regulations needed to regulate mineral exploration and exploitation activities in a transparent manner;
- The important decision to extend the EITI principles to the solid minerals sector[36].

The MMSD had identified thirty-four minerals of economic importance in Nigeria across the six regional mining zones. Every state, apart from Bayelsa is said to contain areas of mineral wealth. Within the minerals, Government has highlighted a number of strategic minerals that have the potential to contribute significantly to Nigeria's economic development. These include barite, gold, bitumen, iron ore, lead/zinc, coal and limestone.

[36] Tychsen J. et al, (note12).

2.3 Imperatives for Regulating Mining Activities

Mining is an ancient activity, occupation or business that many people live on for centuries. As an important economic activity with direct effects on economic prosperity and human well-being, it is desirable to have laws and regulations that will ensure orderly mining. In fact, history has shown that no mining activity will flourish successfully without regulations. For artisanal mining, the following are the necessary imperatives for regulations:

2.4 Impacts of Artisanal Mining

Artisanal mining has a number of impacts on the society.

i. Environmental Impacts

Mining of minerals is an environmentally unfriendly activity and has thus attracted global attention from the standpoint of its environmental impact.[37] Generally, mining affects all the components of the environment and the impacts can be permanent/temporary, beneficial/harmful, repairable/irreparable, and reversible/ irreversible.[38] However, the impacts produced by artisanal and illegal mining activities are felt most by the ecology, land and atmosphere. These environmental impacts are perhaps of greatest concern to many observers of the mining sector.[39]

There is no doubt that small-scale mining has contributed significantly to land degradation, deforestation, health and safety problems. Small scale miners are wasteful because of their high-grading practices.

The miners are only interested in free minerals (gold, tantalite, etc). Thus, any "locked up mineral" is lost as tailings.[40] In addition, the miners shift from one place to the other once the high grade ores are exhausted or once the extraction becomes impossible without rehabilitating the mined areas.[41]

Self-evidently, mercury and lead also cause detrimental environmental impacts. Up to 95% of mercury used in ASGM is released into the environment. Since mercury air emissions are

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[37]Jacob I.D the Impact of Artisanal and Illegal Mining on the Environment in Nigeria available at http://www.unilorin.edu.ng/.../P28 last visited on 29/01/2015 at 4:00pm.
[38]Jacob I.D. (note34).
[39]Jacob I.D. (note34).
[40]Thomas H. et al, (note16).
[41] Jacob I. D. (note36).

globally transported, ASGM practices have a global impact.[42] Dredging and sluicing during mining also cause severe land degradation and river siltation.[43] The increases in suspended sediment from river siltation hinder the penetration of light into the water and greatly affect the supply of nutrients.[44] The suspended sediment also tends to carry high concentrations of mercury. A recent UNEP report predicted that warmer temperatures induced by global climate change would increase rates of organic productivity and bacterial activity in water that could trigger a more rapid conversion of mercury to methyl mercury, its more potent form.[45]

Unlike mercury, lead dust does not travel very far, but dust that settles out on the ground can easily contaminate the soil.[46] During periods of heavy rain, the lead can leach into groundwater systems, contaminating them in the process. Lead dust can also affect animals grazing nearby in many of the same ways it affects humans. In addition, artisanal mining activities cause other environmental harms, such as the destruction of natural habitats at mining and waste disposal sites.

Efforts to minimize the health and environmental impacts of ASGM have mainly focused on lead exposure due to the 2010 lead poisoning outbreak in Zamfara State. Basic improvements in ASGM practices, such as moving operations outside of household areas and villages, have already reduced lead exposure for children and others. Miners are also being encouraged to wash their hands and clothing before returning to their communities from the processing sites.[47] The Nigerian government has recently been promoting the use of wet milling machines over dry machines to minimize the production of lead dust. In September 2013, the Federal Government received a 5 delivery of iGoli and wet milling machines from the South African government for the safer mining programme in Zamfara.

However, many areas are still using dry milling machines and other unsafe practices (including mercury amalgamation) which are continuing to expose miners, their families, and their communities to harm.[48]

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[42]USEPA,International Actions for Reducing Mercury Exposure and Use. available at https://www.EPA.gov/internationaltoxics/mercury/index.html last visited on 24/01/2015.
[43]USEPA (note 41).
[44]Telmer et al, World Emission of Mercury from Artisanal and Small Scale Gold Mining.
[45]USEPA (note 41).
[46]USEPA (note 41).
[47] USEPA (note 41).
[48]Goldman L. et al, Artisanal and Small Scale Gold Mining in Nigeria: Recommendations to Address Mercury and Lead Exposure, In: Report Prepared by the Environmental Law Institute, Washington DC, 2014 at page 16, available at www.eli.org, visited on 24/01/2015.

ii. Health Impacts

The health impacts of both lead and mercury are not immediately noticeable and manifest themselves over time. A comprehensive review of scientific studies indicates that ASGM communities experience neurologic and kidney effects, as well as possible immunotoxic/autoimmune effects from mercury exposure.[49] The most common effects of mercury exposure are mental retardation, delayed development, seizures, and vision and hearing loss, with the cardiovascular and central nervous systems the most vulnerable. Many of these effects occur with lead poisoning also, in addition to nerve damage, reproductive problems, liver and kidney damage, and muscle coordination.[50] For both mercury and lead poisoning, the health effects are more pronounced in young children. Extreme exposure can lead to coma or even death. For women, exposure to mercury positively correlates with an increase in malformations and miscarriages during pregnancy. Many women have also reported menstrual cycle disorders.[51]

Although they both derive from artisanal mining practices, it is important to consider lead and mercury exposure pathways separately. Concentrated lead in the soil from which the gold is mined is the exclusive source of lead poisoning. Lead concentrations in the soil at some locations have been measured to be greater than 100,000 ppm (or an astonishing 10 percent by weight), vastly exceeding US EPA standards of 400 ppm.[52] As the mined ores are mechanically grounded and processed, lead dust is released into the air. Dry milling, which is commonly employed during the processing stage, tends to magnify the level of dust produced. In many areas, lead processing was typically done within housing compounds, with women using the same mortars and pestles used to prepare food. Even where this processing occurs outside of the village, miners often return home with clothes contaminated with lead.[53]

Children who traveled to the mines to sell food during the day are also exposed to lead and mercury contamination, and similarly facilitate cross-contamination by bringing unsold exposed

[49]Goldman L. et al (note47).
[50]Goldman L. et al (note47).
[51]Goldman L. et al (note47).
[52] Goldman L. et al (note47).
[53] Goldman L. et al (note47).

food back into the village.[54]Aside from the airborne transport of lead, the grinding and sluicing process often occurs near village water sources, contaminating surface water with lead.

Mercury is used in ASGM to amalgamate the gold and separate it from the fine-grained material.[55]The residual mercury attached to the gold is later burned off and released in vapor form, which can be easily inhaled by people in the vicinity. This pathway can be particularly harmful, especially since more mercury is absorbed through inhalation than through ingestion or dermal exposure. Some of the mercury runoff also enters waterways, where it is converted into methyl mercury by anaerobic organisms.[56] This methyl mercury is absorbed by phytoplankton and makes its way up the food chain before it is ingested by downstream residents through contaminated fish. Methyl mercury is known to be far more toxic than pure mercury.

The lead exposure is also defined by the particular geology of the region. The gold deposits in the Zamfara area are naturally associated with lead. Because these deposits are primary deposits, they require grinding and milling processes to liberate the gold, which generates dust, and therefore leads to extensive lead exposure.[57]

iii. Economic Impacts

First and foremost, artisanal mining provides a source of income and revenue for millions of people in Africa, both directly and indirectly. The miners themselves typically receive a very small percentage value of their product but the revenue chain may be long and complex, therefore many people may gain an income from the production, transport, processing and re-selling of the minerals.[58]

External perceptions of this chain are often that there are only two broad categories of actors – the exploited, impoverished miners and the predatory, wealthy traders – but this limited analysis fails to recognize that, often, it is more likely that there are much larger numbers of people all

[54]Goldman L. et al (note47).
[55]Jacob I. D. (note36).
[56]Goldman, (note47).
[57]Goldman L. et al (note47).
[58]Jacob, (note36).

making a small income at various levels, and a handful of top actors making a significant return.[59]

It is certain that the miners are often exploited. However, efforts to improve their income by removing other economic actors from the ASM chain must be considered carefully. Miners may restrict their activity to the physical extraction of the minerals.[60]Those employed as washers and transporters may only work in these activities, not in the mines themselves. If the mine is remote from its market, the presence of traders or their agents ensures that miners do not leave the mines to travel to their buyers. The opportunity cost of leaving the particular activity sector in which any individual is engaged is a key factor which maintains specific roles and the complexity of the supply chain.[61]

The role of mineral traders and "middle men" is crucial for the functioning of the chain in many instances. Traders typically provide pre-financing which enables the miners to purchase tools, pay entry fees to mines, and to support their families during periods of transition or when mineral returns are low. Whilst this access to credit is an essential function, it also creates debt relationships which, at their most benign, can result in preferential pricing for the traders and, at worst, can result in a debt burden which acts as a trap prohibiting exit from the sector.[62] The debt can even be passed on to the next generation.

A key issue limiting economic return is the often inefficient exploitation and beneficiation methods used, which also curtail the life of the mine. Artisanal mining methods are only suitable for certain types of resources and, if they are used on ore bodies which have a profile better suited to industrial exploitation, the potential overall return to the economy may be lost.[63]

The artisanal mining community (this term being used to apply to all actors in the chain from mine to the point at which the minerals enter the formal economy) is largely isolated from

[59]Goldman, (note 47).
[60] Goldman, (note 47).
[61]Karen H. Regional Workshop: Small-scale Mining in Africa – A Case for Sustainable livelihood, 2008 Amsterdam Netherland, page 16 available at www.cfc_report_mining_2008_final_2_pdf last visited on 23/6/2013 at 6:27pm.
[62]Karen H (note 60), page 16.
[63] Karen H (note 60), p.14.

mainstream economic development opportunities.[64] This isolation results from a range of factors, many of which are based on the question of legality of artisanal mining.

Where artisanal mining is illegal, or operates largely outside weakly-enforced or inappropriate legal structures, it is often excluded from government or donor social and economic development frameworks.[65] The question of legality also contributes to the economic marginalization of artisanal mining as it restricts access to fair and competitive markets as well as creating a barrier to accessing the resources that could contribute to its entry into the mainstream economy.[66]

This spills over into other economic impacts as, when ASM is relegated to being an illegal activity, the taxes, site fees, licensee fees, royalties, etc, that should be due to the national treasury are instead appropriated by the various actors who control the sites and the trading chain. ASM is often migratory, seasonal, and rarely effectively monitored in terms of numbers and scale so its contribution to the economy is rarely accurately estimated.[67]

Another key point in relation to exclusion from mainstream economic development is that there exist local forms of organization, institutions and social/power relationships, which underpin inequalities and discrimination and contribute to the social, and hence economic, marginalization of artisanal mining communities.

iv. Social Impacts

ASM, particularly artisanal mining, has profound impacts on all aspects of the social structure and functioning of those engaged directly in the work, and those communities proximal to artisanal mining sites. Artisanal mining may be highly seasonal due to rainfall and the need for water for mineral processing or, conversely, due to flooding of mining areas during the rain. ASM is often used as a supplementary income source for farmers, which also promotes seasonal work patterns. For these reasons, and due to the nature of exploration for new mineral resources as mines are exhausted, ASM is frequently migratory.[68]

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[64]Karen H (note 60).
[65]Karen H (note 60).
[66]Karen H (note 60).
[67]I Karen H (note 60).
[68]Goldman, (note 47) p. 5.

Typically, for metals and gemstones in particular, artisanal mining provides labour opportunities for large numbers of men who live in camps associated with the mines. Over time, these camps may disappear or may transform into more permanent settlements, depending on the scale of the resource and the duration of mining activity.[69]

As the camps are established, service providers (often women) move to the camps to gain employment in minerals transporting, washing, sorting, grading or treatment.[70] They also come to trade essential goods, provide tools and materials, set up restaurants, or to gain employment in the sex trade. Mining camps can be highly vibrant economic entities, albeit sometimes short-lived. They can often cause rampant local inflation. If camps become established on an ad hoc basis, particularly in response to a minerals 'rush', or if they over-run an existing village or community, sanitation and hygiene conditions are often extremely poor creating health hazards.[71] This is compounded by the often promiscuous lifestyle associated with some artisanal mining where the daily cash payment for minerals is sometimes used for alcohol, drugs and payments to sex workers. All of this can compound the risk of the spread of STDs, including HIV/AIDS. The migratory nature of ASM can also give rise to polygamy if miners abandon families or start new families in mining areas.[72]

A key feature of artisanal mining in Africa is the use of child labour. In some areas, children may constitute a significant component of the ASM workforce. This is universally condemned by the UN Convention on the Worst Forms of Child Labour yet, in many countries, even if there is national legislation to ban children from mines, enforcement may be severely lacking. ASM can have serious repercussions on children's physical and mental health and moral wellbeing, as well as disrupting or preventing their access to education. Conversely, ASM may be the only livelihood option available to families to pay for their children's education and some children are employed in peripheral activities which are less dangerous and enable them to work outside school time to make a financial contribution to the family and their own schooling[73].

[69]Goldman, (note 47) p. 5
[70]Goldman, (note 47) p. 5
[71]Goldman, (note 47) p. 5
[72]Goldman, (note 47) p. 5
[73]Goldman, (note 47) p. 5

Artisanal mining teams, associations and communities are highly complex groupings of people, often with a well-structured hierarchy.[74] Even if a site or camp looks chaotic to an outsider's view, some investigation will typically reveal specific roles in team structures, differential pay rates, taxes, authorizations, security, loyalties, royalties, dependences and debts.[75] Added to these layers of interactions and relationships may be tribal or ethnic issues, gender issues, traditional law, and superstition.

v. Gender Impacts

Around 30 percent of the global workforce of artisanal miners is composed of women, with the highest percentage (40 to 100 percent) found in Africa. Studies have shown that the smaller the size of the mining operation and the greater the degree of mechanization, the larger the role played by women. Women's roles and responsibilities within gold mining communities vary greatly. While women may dig and carry ore, they are more commonly involved in the processing stage, which includes crushing, grinding, sieving, washing, panning, and amalgamation with mercury. Women do not appear to be involved in mercury processing in Zamfara and possibly elsewhere in Nigeria. To a lesser extent, women may own mining concessions; serve as mine operators, dealers, or buying agents; or own mining equipment. Women also frequently provide goods and services to mining operations in the form of cooking and selling food, running shops, and sometimes working in the sex trade.[76]

Because of their involvement in artisanal gold mining, particularly gold processing, women and their children working in artisanal gold mining are susceptible to their own set of health concerns. Generally speaking, women face the greatest risks from carrying heavy materials, washing ore in contaminated water, and becoming exposed to chemicals when burning gold amalgam. Likely afflictions for women and children working in or around mines include gastroenteritis, lung inflammation, respiratory infections, spinal, joint, neck and back damage, frequent cuts and bruises, in addition to the extremely hazardous effects of exposure to mercury and lead.[77]

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[74]Goldman, (note 47) p. 5
[75]Goldman, (note 47) p. 5
[76]Goldman, (note 47) p. 5
[77] Goldman, (note 47) p. 5

These gender-differentiated impacts bring added challenges and considerations to addressing some needs within the ASGM sector, as well as unique opportunities to improve the quality of artisanal miners' life and health.

vi. Mercury Exposure

Exposure to mercury during the amalgamation process poses one of the greatest health threats to women working in artisanal gold mining. While mercury exposure is dangerous for both women and men, socio cultural factors often lead to greater exposure for women, and women suffer more severe physical harm from such exposure.[78] In a number of countries (though not necessarily Nigeria), mercury amalgamation and amalgam decomposition are often carried out by women, putting them in direct contact with mercury.[79] This process can frequently take place in the home, especially in Muslim communities under Sharia law, where women typically must stay within their family compounds. Direct open-air burning to separate mercury from the mercury gold amalgam may also take place in the home or small sheds near the mining site, leading to high exposure to mercury vapors in these enclosed spaces. The amalgamation process is also sometimes carried out with cooking stoves and kitchen utensils, items with which women, as the predominant food providers, frequently come into contact. Additionally, since women are usually responsible for caring for young children and babies, their participation in mining activities is often done with babies tied to their backs or toddlers at their sides, exposing their children to the same health hazards.[80] While awareness of the risks associated with mercury is scarce among all miners, socio-cultural inequities particularly hinder access to information for women, often leaving them unaware of the risks they and their children face with repeated mercury exposure.

[78] Goldman, (note 47) p. 5
[79] Goldman, (note 47) p. 5
[80] Goldman, (note 47) p. 5

vii. Lead Exposure

In addition to mercury, lead also poses significant health threats to women and their children. In Zamfara State, lead poisoning has claimed the lives of hundreds of children, and even those who were treated and survived remain in danger.[81] Exposure to the toxic effects of lead stems from the rock grinding conducted with flour mills and mortars and pestles in the home (although processing activities have now moved outside the housing compounds in at least some areas); the dust that miners, young girls selling food to miners, and others transport back to their families on their clothes and bodies; and the housing compounds dirt floors and mud bricks, which contain lead-contaminated soil. Women spending considerable time with children inside the home experience even greater exposure. As girls between the ages of 6 and 15 marry and become pregnant, their bodies will release lead stored like calcium in their bones. According to the Columbia University professor who developed Succimer, the treatment for lead poisoning, this can cause miscarriages and reduced brain function of some form in their children.[82]

viii. Other Health and Safety Concerns

Other serious health and safety concerns for women living and working in artisanal mining communities include violence and threats to sexual and reproductive health from prostitution and sexual violence.[83] Illicit trade in drugs and prostitution, and the violence that often accompanies it, may be more prevalent in communities established as part of a gold rush than in more well established communities that have a stronger government presence, family ties, and social cohesion.[84]

Nevertheless, violence against women in artisanal mining communities has been documented on a global scale. Along with such violence, the sex trade in artisanal mining communities leads to a high rate of infection with HIV/AIDS and other sexually transmitted diseases. Complicating this

[81] Jacob, (note 36)
[82] Jacob (note 36)
[83] Goldman, (note 47) p. 5
[84] Goldman, (note 47) p. 5

situation is the fact that women often work longer hours than men but earn less. Studies have shown on average they earn four times less potentially leading them to seek other sources of income, even through such high-risk work as prostitution.[85] Among the poorest households in rural communities are those in which the men have migrated to urban areas or mining centers, leaving the women as de facto heads of household. In these and other communities with few other options for generating revenue, women may work excessive hours, endangering their health and that of their children without benefits or security.[86] Child prostitution can also occur in ASM communities, where virginity is held in high esteem and where fears of HIV/AIDS and other sexually transmitted diseases also exist.[87]

2.4 Conclusion

Artisanal mining is very common not just in Nigeria but in many countries of the world. It is an important economic activity whose impacts cannot be ignored in any civilized society. The laws in Nigeria recognized the importance of this form of mining and therefore they define it and make provisions for regulating it. However, whether these laws are adequate or not is entirely a different issue which shall be examined in the next two chapters of this research.

[85]Karen H. (note 60)
[86]Karen H. (note 60)
[87]Goldman, (note 47) p. 5

CHAPTER THREE

INTERNATIONAL EFFORTS TOWARDS REGULATING ARTISANAL AND SMALL SCALE MINING

3.0 Introduction

This chapter focuses on the international best practices and other global efforts aimed at reducing the poor practices in artisanal mining as a basis for assessing whether the Nigerian legal framework regulating artisanal mining addresses the key issues involved. The chapter first looks at the traditional international law position on artisanal mining, then proceeds to look at the recent Minamata Convention on Mercury and then narrows the discussion to other related international instruments having bearing with artisanal mining. The chapter will then briefly discuss the positions in some countries and compare them with the position in Nigeria. The final section concludes the chapter.

There is some consensus that artisanal mining can be environmentally damaging and can create serious health and safety consequences for workers and surrounding communities largely due to poor practices in mining and processing of minerals.[88] Added to this danger is the regulatory paucity or inadequacy particularly at the domestic levels where these activities take place. Consequently, these mining activities were outlawed in many countries thereby forcing many small scale miners to go underground while at the same time preventing formal development of this important sector which has become a strong buffer for socio-economic dislocations in many countries.[89]

However, over the years the international development community has turned its attention to the ASM sector making efforts to shape the emergence of international law principles on the issue. In the last 10 years international donor agencies have recognized the close relationship between ASM and poverty. Thus, ASM is now on the agendas of many national governments, and of bilateral and multilateral donor organizations.[90] Therefore, it is important to examine the position of ASM in international law and then look at certain jurisdictions where ASM has been given the deserved regulatory attention.

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[88]ECA, A Compendium on Best Practices on Small Scale Mining in Africa, Addis Ababa, 2002, at p. 3.
[89]ECA(note 1)
[90]ECA(note 1)

For a start, it is important to point out that there is no single international treaty on artisanal and small scale mining. In fact, even international mining law is just emerging. But after years of discussion and negotiations, in 2013 the international community finally established a legal framework designed to address, among other issues, poor practices in artisanal and small scale mining and their impacts to the environment and human health.[91]The devastating effects of mercury wastes and the significant socio-economic position of artisanal mining contributed to this development. There are other conscious global and regional efforts aimed at providing workable framework on artisanal mining with a view to eliminating or reducing its negative side effects on the communities. As noted in the previous chapters, artisanal mining involves the use of substantial amount of mercury in mineral processing, often in highly unsafe and environmentally hazardous conditions.

3.1 International Law and Artisanal Mining: Sovereignty and State Responsibilities

The traditional position of international law with respect to all forms of mineral resource activities is what came to be referred to as the "hands-off" approach because of the general principle that nation-States have sovereignty - that is, supreme, independent political and legal control - over their own natural resources[92] as recognized and declared by the famous UN Resolution 1803to the effect that 'the right of peoples and nations to permanent sovereignty over their natural wealth and resources must be exercised in the interest of their national development and of the well being of the people of tile State concerned.'[93] This principle has become part of customary international law and reiterated

In several international instruments such as the Charter on the Economic Rights and Duties of States and international environmental law instruments such as the provision of Principle 21 of the **Stockholm Declaration**:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their owner sources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to

[91] See the Minamata Convention on Mercury, 2013.
[92]Pring G., International Law and Mineral Resources, UNCTAD's series on Mining, Environment and Development, UNCTAD.
[93]See UN General Assembly Res. 1803 (XVII) Permanent Sovereignty over Natural Resource, 1962.

> the environment of other States or of areas beyond the limits of national jurisdiction.

This traditional 'hands off' position means that states have both the powers and responsibilities to develop their respective mineral resources sectors with little or no interference from the outside. This partly explains the variations and lack of uniformity in the regulation of artisanal mining among countries with many countries criminalizing this form of mining while others paying leap service to this sub-sector. Therefore, there is no single body of international law of mining. This is because States are naturally reluctant to give up their sovereign control over such an important part of their economies.[94]

> In part, it is because of the very primitive state of international law, which lacks conventional law-making bodies... In part, it is because most international law lacks conventional command-control enforcement, leaving compliance largely to the political will of the individual sovereign States. Finally, in part, it is because all international law is not created equal; some international rules are classed as legally binding or "hard law" … while others are viewed as non-binding, aspirational, or "soft law."[95]

However, states' sovereignty could be limited through treaties, customary practices, general legal principles or judicial decisions.[96] Hence, today there are three constraints to the traditional principle of permanent sovereignty over natural resources: the international environmental law principle that States are responsible for preventing trans-boundary environmental harm to other States,[97]the undertakings and agreements of specific treaties and the emerging principles of sustainable development and other international soft laws.[98]

Because of lack of consistent state practice or general principle of law on artisanal mining, we shall focus only on treaty and soft law obligations of states.

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[94]Pring G. W. (note 5)
[95] Pring G. W. (note 5) at p.9
[96]ICJ Statute, article 38.
[97]The second half of Stockholm Principle 21
[98]Pring G.W.,(note 7)

3.2 Treaties

There are no specific treaties on the regulation of artisanal mining, but certain treaties have made provisions for controlling poor practices in artisanal mining.

3.2.1 Artisanal Mining under the Minimata Convention on Mercury (MCM), 2013

As highlighted above, there is no single international instrument regulating or dealing with artisanal mining but recently the MCM set certain standards that are significant for our present purpose.

3.2.1.1 MCM: Background and Objectives

After rounds of intensive talks, which began in 2010, on January 19, 2013, over 100 governments agreed to an international mercury treaty that encourages governments to do more to address the threat of mercury to health and safety particularly in the area of artisanal and small scale mining.[99] This marks the first environmental treaty that contains specific action on the prevention and treatment of mercury poisoning in the area of artisanal mining.[100] The treaty does address to some extent the use of mercury in artisanal gold mining, in various products and processes, and in emissions from industrial facilities, such as coal-fired power plants, but fails to set timeline for the complete phasing out of mercury in small-scale mining by state parties. The treaty is called the "Minamata Convention" after one of the worst mercury poisoning disasters that occurred in Japan in 1956.

Currently, about 128 countries have signed the Minimata Convention on Mercury (MCM), 2013 while 12 countries have ratified it. It will become effective after 50 ratifications.[101]The Convention followed the decision of 20 February 2009 of the Governing Council of the United Nations Environment Programme to initiate international action to manage mercury in an efficient, effective and coherent manner.[102] This was largely spurred on by the recognition of the substantial lessons of the Minamata disaster, in particular the serious health and environmental effects resulting from the mercury pollution, and the need to ensure proper management of

[99]UNEP,Conference of Plenipotentiaries on the Minamata Convention on Mercury, Kumamoto, Japan, 10 and 11 October 2013.
[100]UNEP (note 12)
[101]MCM, 2013, article 31.
[102]UNEP, (note 12)

mercury and the prevention of such events in the future.[103] Therefore, the objective of the Convention 'is to protect the human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds.'[104]

Under the convention, "Artisanal and small-scale gold mining" means gold mining conducted by individual miners or small enterprises with limited capital investment and production."[105]This is not different from the general characteristics examined in the previous chapter. Because countries define ASM in a variety of ways the MCM adopts a broad definition to allow for variations in differing national contexts. The scope of Article 7 does not distinguish between formal and informal ASM operations, thus both types are covered. The Convention envisions the development of formal ASM operations by mandating that specific steps to facilitate formalization or regulation of ASM operations be included in the development of a country's National Action Plan.[106]

3.2.1.2 State Parties' Obligations under the MCM, 2013

The Convention sets out in detail the obligations of state parties in respect of reducing the use of mercury in artisanal mining and other areas as follows:

1. Obligation to Eliminate Use of Mercury

Under the Convention state parties are required to take measures aimed at eliminating or at least reducing the use of mercury in artisanal mining. The Convention provides thus:

> Each Party that has artisanal and small-scale gold mining and processing within its territory shall take steps to reduce, and where feasible eliminate, the use of mercury and mercury compounds in, and the emissions and releases to the environment of mercury from, such mining and processing.[107]

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[103](note 12)
[104] Minimata Convention, 2013, article 1
[105] Minimata, (note 17) article 2.
[106]See Lennete D. &Gutteirez, R., Minimata Convention on Mercury: Ratification and Implementation Manual, Natural Resources Defence Council, 2015, available at: http://www.nrdc.org/international/files/minamata-convention-on-mercury-manual.pdf
[107] Minimata, (note 17) article 7 (a)

This is a mandatory international responsibility for each state party. The convention does not define what amounts to 'taking steps'. However, in line with the general treaty interpretation of similar words under the ICESCR, *taking steps* should be immediate and such steps should be deliberate, concrete and targeted as clearly as possible towards meeting the obligations recognized' in the Convention.[108] One such immediate, concrete and targeted step is for every state party to develop a national action plan and this is also a separate legal obligation under the treaty.

2. Obligation to Develop a National Action Plan (NAP)

Under the MCM, state parties are required to determine the rate or level of artisanal mining within their territories in order to develop and implement a national action plan which is reviewable after every three years.[109] The MCM provides as follows:

> Each Party shall notify the Secretariat if at any time the Party determines that artisanal and small-scale gold mining and processing in its territory is more than insignificant. If it so determines the Party shall:
> (a) Develop and implement a national action plan in accordance with Annex C;
> (b) Submit its national action plan to the Secretariat no later than three years after entry into force of the Convention for it or three years after the notification to the Secretariat, whichever is later; and
> (c) Thereafter, provide a review every three years of the progress made in meeting its obligations under this Article and include such reviews in its reports submitted pursuant to Article 21.[110]

This means that a party must determine if ASM in the its territory is"more than insignificant."[111] There is no explanation on what this means in the MCM. In the absence of further guidance, a country may utilize various metrics or criteria to make this determination, such as the amount of mercury used, the number of miners, the volume of gold produced, the number or size of mining

[108] See for instance, ECOSOC, GENERAL COMMENT NO. 3.
[109]MCM, 2013, article 7 (3)
[110]MCM, (note 23) article 7.
[111] MCM, (note 23) article 7(3)

sites, and/or the ASM impacts on public health and the environment.[112] Clearly, the ASM in Nigeria and many other developing countries is 'more than insignificant'. If is not significant enough, then the NAP is not necessary.

Pursuant to Annex C of the MCM, 2013 such national action plan shall include the following:

> (a) National objectives and reduction targets;
> (b) Actions to eliminate:
> (i) Whole ore amalgamation;
> (ii) Open burning of amalgam or processed amalgam;
> (iii) Burning of amalgam in residential areas; and
> (iv) Cyanide leaching in sediment, ore or tailings to which mercury has been added without first removing the mercury;
> (c) Steps to facilitate the formalization or regulation of the artisanal and small-scale gold mining sector;
> (d) Baseline estimates of the quantities of mercury used and the practices employed in artisanal and small-scale gold mining and processing within its territory;
> (e) Strategies for promoting the reduction of emissions and releases of, and exposure to, mercury in artisanal and small-scale gold mining and processing, including mercury-free methods;
> (f) Strategies for managing trade and preventing the diversion of mercury and mercury compounds from both foreign and domestic sources to use in artisanal and small scale gold mining and processing;
> (g) Strategies for involving stakeholders in the implementation and continuing development of the national action plan;
> (h) A public health strategy on the exposure of artisanal and small-scale gold miners and their communities to mercury. Such a strategy should include, inter alia, the gathering of health data, training for health-care workers and awareness-raising through health facilities;

[112] Lennete D. (note 19)

(i) Strategies to prevent the exposure of vulnerable populations, particularly children and women of child-bearing age, especially pregnant women, to mercury used in artisanal and small-scale gold mining;

(j) Strategies for providing information to artisanal and small-scale gold miners and affected communities; and

(k) A schedule for the implementation of the national action plan.

In addition, a state party may include in its national action plan additional strategies to achieve its objectives, including the use or introduction of standards for mercury-free artisanal and small-scale gold mining and market-based mechanisms or marketing tools.[113] The content of this Annex C is wide enough to ensure effective regulation of artisanal mining by respective state parties. Every state party should develop an action plan that must include a framework to ensure the formalization or regulation of the artisanal and small-scale mining sector. The treaty recognizes that the ultimate objective of eliminating or reducing the use of mercury in small scale mining activities is only feasible where there is adequate regulatory framework and institutional oversight.[114]This is because artisanal and informal gold mining on a small scale is one of the largest sources of mercury pollution. Each government is required under the treaty to create a national action plan to ban the most harmful forms of mercury use, promote mercury-free mining processes, protect children and women of childbearing age, and improve the health of mining workers.[115]

Most artisanal and small-scale miners operations are informal in nature with very little organization. The lack of formal organizations contributes to the difficulty of regulating and assisting the sector, and also stands in the way of miners obtaining capital necessary to invest in better practices. Therefore, formalization acts to bring miners into the formal economy, offers them an opportunity for more access to capital and longer-term stability, and provides the means to regulate the environmental management practices in the sector, as well as occupational safety and health.[116]

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[113] MCM, ANNEX C
[114] MCM (note 27)
[115] MCM (note 27)
[116]Lennete D. (note 19) at p. 32

Although the MCM is silent about the difference between legal and illegal ASM, it can be argued that the MCM applies to both. This is because a closer look at the measures under Annex C indicates how Article 7 applies to both legal and illegal ASM operations:

a. Include steps to facilitate formalization- informal operations are often considered illegal in many jurisdictions, as these operations may not have the necessary permits or requirements to operate.[117] Thus, countries would need to include illegal operations under its NAP.

b. Strategies for promoting the reduction of emissions and releases of and exposure to mercury in ASM – this measure focuses on the reduction of emissions and releases regardless whether the sources are from legal or illegal operations.[118]

c. Strategies for managing trade and preventing diversion of mercury and mercury compounds to ASM– this measure requires measures to address the potential illegal trade of mercury and diversion of domestic mercury for use in ASM.[119]

d. Strategies for involving stakeholders in the implementation and continuing development of the NAP– ASM miners, whether operating legally or illegally, are stakeholders that have a direct impact on NAP development and implementation. Their engagement and participation in implementing Article 7 is indispensable.[120]

e. Public health strategy on the exposure of ASM miners and their communities– the Convention applies equally to both legal and illegal miners, with regard to the protection of public health.[121]

3. Other Related State Obligations

There are other related obligations under the MCM. These include the following:

a. *Health Services for Population at Risk*: The convention requires that state parties should develop and implement strategies and programmes to identify and protect populations at risk, particularly vulnerable populations. This may include adopting science-based health guidelines relating to the exposure to mercury and mercury compounds, setting targets for mercury exposure reduction, where appropriate, and public education, with the participation of public health and other involved sectors.[122] State parties should consult

[117] Lennete D. (note 19). 33
[118] Lennete D. (note 19), at p.34
[119] Lennete D. (note 19).
[120] Lennete D. (note 19)
[121]Lennete D. (note 19)
[122] MCM (note 23), article 16.

the WHO and the ILO on these issues and in particular they should implement appropriate health-care services for the prevention, treatment and care for populations affected by the exposure to mercury or mercury compounds and also 'establish and strengthen, as appropriate, the institutional and health professional capacities for the prevention, diagnosis, treatment and monitoring of health risks related to the exposure to mercury and mercury compounds.'[123]

b. *Cooperation, Technology Transfer and Information Exchange*: State parties agreed to cooperate in providing, within their respective capabilities, timely and appropriate capacity-building and technical assistance particularly to developing country Parties.[124] In addition, developed country parties shall encourage the 'development, transfer and diffusion of, and access to, up-to-date environmentally sound alternative technologies to developing country parties.'[125]Also, parties are required to facilitate the exchange of: scientific, technical, economic and legal information concerning mercury and mercury compounds, including toxicological, eco toxicological and safety information; information on the reduction or elimination of the production, use, trade, emissions and releases of mercury and mercury compounds; information on technically and economically viable alternatives to mercury-added products, including information on the health and environmental risks and economic and social costs and benefits of such alternatives; and epidemiological information concerning health impacts associated with exposure to mercury and mercury compounds, in close cooperation with the World Health Organization and other relevant organizations, as appropriate.[126]

c. Education and Awareness: Each party is required to make available to the public relevant information on: the health and environmental effects of mercury and mercury compounds; alternatives to mercury and mercury compounds in artisanal mining; the results of its research, development and monitoring activities in that regard.[127] Also each party shall engage in education, training and public awareness related to the effects of exposure to mercury and mercury compounds on human health and the environment in

[123] MCM (note 23).
[124] MCM (note 23), article 14.
[125] MCM (note 23).
[126] MCM (note 23), article 18.
[127] MCM (note 23), article 18.

collaboration with relevant intergovernmental and non-governmental organizations and vulnerable populations, as appropriate.[128]

d. Reporting and Implementation of Obligations under the Treaty: Under article each state party shall file a report to the Conference o Parties on the measures it has taken to implement the provisions of this Convention and on the effectiveness of such measures and the possible challenges in meeting the objectives of the Convention.[129] In addition, states shall 'develop and execute an implementation plan, taking into account its domestic circumstances, for meeting the obligations under this Convention.'[130]

Although it may seem too early to assess any country's compliance with the treaty because it is an infant treaty yet to take effect, it is clear that Nigeria has not enacted any specific local legislation to deal with the use of mercury in artisanal mining in the country. Nor is there any National Action Plan to eliminate or reduce the use of mercury in artisanal mining in the country. Other forms of obligations under the treaty such as provision of health services to populations at risk, information dissemination or awareness campaigns have been pushed to the states and local governments, entities which are not recognized under international law for the purpose of the treaty obligations.

3.2.1.3 Treaty Implementation Bodies

Apart from the above legal obligations of the state parties, the MCM established treaty implementation body called the Conference of Parties with a secretariat[131] and a dispute resolution mechanism.[132] The conference of parties has the following functions under the MCM:

> (a) Establish such subsidiary bodies as it considers necessary for the implementation of this Convention;
> (b) Cooperate, where appropriate, with competent international organizations and intergovernmental and non-governmental bodies;

[128] MCM (note 23).
[129] MCM (note 23), article 21.
[130] MCM (note 23), article 20.
[131] MCM (note 23), article 24.
[132] MCM (note 23), article 25.

(c) Regularly review all information made available to it and to the Secretariat pursuant to Article 21;

(d) Consider any recommendations submitted to it by the Implementation and Compliance Committee;

(e) Consider and undertake any additional action that may be required for the achievement of the objectives of this Convention.[133]

The United Nations, its specialized agencies and the International Atomic Energy Agency, as well as any state not a party to the MCM, may be represented at meetings of the Conference of the Parties as observers.[134]

3.2.2 Other Treaties

Another important treaty that touches on ASM is the 2000 Southern Africa Development Community's Mining Protocol agreed upon by the parties with the objective of creating a thriving mining sector that can contribute to economic development, alleviate poverty and improve the standard and quality of life in the region.[135]The protocol identified as one of the important areas of cooperation as the promotion of small scale mining within the region. This protocol took into consideration the Harare Guidelines on Small- and Medium-Scale Mining (1993) and the Yaoundé Vision For ASM (2002) was also inspired by it. Both the Harare Guidelines and the Yaoundé Vision provide a framework for encouraging development of small and medium scale mining as a legal, sustainable activity in order to optimise its contribution to social and economic development. The importance of providing simple, clear, understandable and stable laws and regulations in the sector is re-emphasized in the guidelines.[136]

It is important to point out that the SADC region gives more attention to ASM than other regions in Africa. A particular study found that in this region there are a range of rights for ASM (namely prospecting permits, special purpose tenements for gemstones, small-scale mining

[133] MCM (note 23), article 23.
[134] MCM (note 23).
[135] ECA, Harmonization of Mining Policies, Standards, Legislative and Regulatory Frameworks in Southern Africa, United Nations Economic Commission for Africa Southern Africa Office, 2004.
[136]ECA (note 49).

licenses, and artisanal miners' rights) to facilitate exploration, mining, mineral processing by the sector.[137] Other rights of the ASM operators in this region include:

a. The reservation of specific deposits (areas) for such activities;

b. The introduction of preferential rights, which not only give communities preference in the granting of licenses, but also give them strong negotiation powers to enter into third-party agreements;

c. Granting local commissioners the authority to issue ASM rights, register rights and collect returns, claim fees and mineral royalties.[138]

In line with the objective of the Mining Protocol, 2000 the members are presently working to harmonize their laws on ASM and for each member to come up with a specific legislation on the issue.[139]

There are other treaties talking about some aspects of mining although without any specific reference to ASM such as the 1991 Bamako Convention, the Basel Convention, the 1995Waigani Treaty, the 1989 Lome Convention, the African Convention on the Conservation of Nature and Natural Resources, the1979 Convention on Long-Range Transboundary Air Pollution (LRTAP) -with its four protocols setting specific emissions limitations on sulphur dioxide (1985, 1994),nitrogen oxides (1988, 1998) and volatile organic compounds (1991) - provides very substantive restrictions on some of the basic mineral beneficiation pollutants in northern hemisphere countries (EU, United States, Canada, Russia, etc.) and the LRTAP Heavy Metals Protocol is of serious concern to the metal mining/smelting industry, both because of its air quality restrictions.[140]

3.3 International 'Soft' Laws on Artisanal Mining

This section looks at the various soft laws on artisanal mining. These are largely non-binding legal instruments such as the UN Resolutions, Guidelines, Industry Codes, etc.

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[137]ECA (note 49), at p.49

[138]ECA (note 49)

[139]Tumai M. Regulating Mining in South Africa and Zimbabwe: Communities, the Environment and Perpetual Exploitation, 9/1 Law, Environment and Development Journal (2013), p.31 available at http://www.lead-journal.org/content/13031.pdf, last visited on 16/05/2015.

[140]ECD (2009), "Minerals and Pro-Poor Growth", in *Natural Resourcesand Pro-Poor Growth: The Economics and Politics*, OECD Publishing.http://dx.doi.org/10.1787/9789264060258-13-en

1. UNGA Resolutions

There are a number of UNGA resolutions that have largely indirect bearing on ASM.

a. UNGA Resolution on Permanent Sovereignty Over Natural Resources

This is not directly related to ASM but reflects the global concern for state control of mining activities and underlies the overall regulatory powers of countries over their mineral resources. Permanent sovereignty reflects the "inherent and overriding right" of a state to control the exploitation and the use of its natural resources.[141]The principle of PSNR as contained in this important UN Resolution has become part of customary international law.[142]The wide acceptance of the principle of PSNR constituting customary international law was also evidenced by its inclusion in the International Covenant on Civil and Political Rights (ICCPR) as well as in the International Covenant on Economic, Social and Cultural Rights (ICESCR).[143]However, Resolution 1803 was not about regulation of natural resources but recognition of rights of states to assert ownership through regulation and even expropriation. This was further supported by the CERDS as examined below. Therefore, it did not make any provision regarding artisanal mining. It is only relevant here because it confirms the powers and authority of the states to regulate this and other forms of mining. And as the principles contained therein have become evidence of state practice, it can be argued here that Nigeria has an international obligation to adequately and effectively regulate artisanal mining within its territory. This is because for Nigeria to be able to determine the fate of its mineral resources, it is necessary that it enjoys the corollary rights to regulate the use and exploitation methods under international law. Ignoring artisanal mining and reducing it to the informal sector means the country has ignored this important international responsibility.

b. Charter of Economic Rights and Duties of States (CERDS)

The adoption of the Charter of Economic Rights and Duties of States (CERDS) followed the line of the PSNR principle. The CERDS recognizes the imperative of protecting the environment as a

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[141]Franz Xaver Perrez, The Relationship Between "Permanent Sovereignty" And The Obligation Not To Cause Transboundary Environmental Damage, at p.1

[142]Pring W., op cit.

[143]Art. 1(2), International Covenant on Civil and Political Rights, Dec. 16, 1966, 999 UNTS 171 (1967); Art. 1(2), International Covenant on Economic, Social and Cultural Rights, Dec. 16, 1966, 993 UNTS 3 (1967).

collective responsibility of all states and that each state must establish its development policies in line with this common responsibility.[144] Article 30 provides:

> The protection, preservation and enhancement of the environment for the present and future generations is the responsibility of all States. All States shall endeavour to establish their own environment and development policies in conformity with such responsibility. The environmental policies of all States should enhance and not adversely affect the present and future development potential of developing countries. All States have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction. All States should co-operate in evolving international norms and regulations in the field of the environment.

c. Artisanal Mining and Sustainable Development Principles: The Stockholm Declaration, the Rio Declaration and Agenda 21

These Declarations did not talk specifically about artisanal mining. But Principle 5 of the Stockholm Declaration is of particular relevance to mining. It provides that: 'the non-renewable resources of the earth must be employed in such a way as to guard against the danger of their future exhaustion and to ensure that benefits from such employment are shared by all mankind.' Principles 2 and 3 also sought to safeguard natural and renewable resources.

Rio Principle 2 repeats Stockholm Principle 21 - affirming state sovereignty over resources and the prohibition against transboundary harms and adds that States may "exploit their own natural resources pursuant to their own environmental *and developmental* policies."Principles 11 and 13 call on States to enact "effective environmental legislation" and laws of "liability and compensation" for victims of environmental damage. While there is no specific chapter in Agenda 21 dealing with ASM or even the minerals sector, there are a host of provisions of direct and indirect relevance to mineral development. For instance, Chapter 10 requires a holistic land resource management and this includes:

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[144]UNGA, Charter on the Economic Rights and Duties of States, GA Res. 3281(xxix), UN GAOR, 29th Sess., Supp. No. 31 (1974) 50

"the capacity of the environment to absorb the effects of resource use, the sustainability of the supply of essentially non-renewable resources, and the possibilities for modifying production and consumption patterns through greater efficiency of use, new technologies, recycling and substitution".

Other related chapters include Chapter 19 on Toxic Chemicals, Chapter 20 on Hazardous Wastes, Chapter 30 on economies and the world deal with mineral development.

d. UNEP Policies and Guidelines

UNEP is in the forefront in discussing issues relating to ASM. In fact, it spearheaded the MCM, 2013.[145] It has been in the fore fron in the development of international environmental soft laws such as World Charter for Nature, UNEP's 1978 Draft Principles on Shared Natural Resources (which call for equitable sharing and avoidance of adverse environmental effects), its 1991 Principles and Guidelines for Environmental Management and Sustainable Development in Technical Assistance, its Guidance Document on Transboundary Movements of Hazardous Wastes Destined for Recovery Operations, and its guidelines on Offshore Mining and Drilling (1982), Banned and Severely Restricted Chemicals (1984), Marine Pollution from Land-Based Sources(1985), Hazardous Wastes (1987), Environmental Impact Assessment (1987), and Exchange of Information About Chemicals in International Trade (1987).

e. The U.N International Guidelines on Mercury Management in Artisanal and Small-Scale Gold Mining

These guidelines preceded the MCM. They were proposed for the purpose of assisting government in the development of policy, legislation and regulation that will lead to improved practices of artisanal and small-scale gold mining (ASM).[146] These measures were formulated based on health, environmental, technical, socio-economic and legal assessment that were undertaken by the global mercury project. This project was initiated with the support of the

[145]UNEP, Conference of Plenipotentiaries on the Minamata Convention on Mercury, Kumamoto, Japan, 10 and 11 October 2013.
[146]U.N International Guidelines on Mercury Management in Artisanal and Small-Scale Gold Mining, 2007.

government of Zimbabwe, Tanzania, Sudan, Indonesia, Brazil and Laos, with the United Nations Industrial Development Organization (UNIDO), the Global Environmental Facility (GEF) and the United Nations Development Program (UNDP).[147]

In the absence of an international management code for mercury management in ASM, many governments have been unsure how to address policy in ASM, what hazards are most pressing, and what technical practices should be regulated. These guidelines are aimed at providing technical assistance on standards of operation to promote the minimization of mercury use as well as the elimination of major pollution point sources and occupational health risks in mercury management. The principal technical measures as per the UN International Guidelines on Mercury Management in Artisanal and Small Scale Gold Mining are as follows:

1. Mercury Amalgam Burning: No person should heat mercury amalgam to recover the gold without using a retort, which must be used to contain the mercury vapour releases.[148] Retorts should be used to recycle mercury (in the form of a bowl retort, pipe retort, hood, filter, etc).

2. No Whole Ore Mercury Amalgamation: No person should amalgamate the entire ore, through the use of a mercury-copper plate or putting mercury into any gravity concentrator, centrifuge, or ball mill.[149]

3. Amalgam Barrell: Mercury may be used through a gold recovery unit equipped with an amalgam barrel, provided that the barrel has an amalgam separator.[150]

4. No Mercury-Cyanide Interaction: No person should use mercury in conjunction with cyanide, or conduct cyanidation of mercury-rich tailings.

5. Protection of Water Bodies: No person should use mercury for amalgamation or any other purposes in any natural water body or within a distance of 100 meters' from any natural water body, including rivers, streams, lakes, and other water bodies.

6. Protection of Residential Areas: No person should use mercury for amalgamation or any other purposes in residential areas or within a distance of 100 meters from any residential areas, including villages, towns, cities, or settlement areas.

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[147] U.N International Guidelines (note 60)
[148] U.N International Guidelines (note 60)
[149] U.N International Guidelines (note 60)
[150] U.N International Guidelines (note 60)

7. Storage of Mercury: Mercury should be stored safely at all times when not used; in (a) a secure location that is inaccessible to children; and (b) unbreakable air-tight containers that are covered with a thin layer of water (e.g. 1 centimeter) to prevent mercury evaporation.[151]

8. Disposal of Mercury or Mercury-Contaminated Tailings: Any disposal of mercury should be done in a safe and proper way. No person should discharge mercury, or mercury-contaminated tailings, into a water body. Disposal of mercury must be done by placing mercury in a clay or laterite soil-lined pit of 5 miters depth, located 100 meters' away from any water body. When the hole is filled with mercury and/or mercury-contaminated tailings, this must be covered with 0.5 metres of clay or laterite, then compacted, covered with soil, and revegetated.[152]

9. Centralized Amalgamation Sites: Amalgamation should only be allowed in designated sites (amalgamation pools). For any mining location where amalgamation occurs, the primary license holder or mine manager shall designate a portion of the mining location as the prescribed structure, facility or locale where amalgamation may take place. Amalgamation may only take place in such structure, facility or locale. The holder of an ASM license shall ensure that washing or settling ponds are constructed in his or her license area to provide for washing and sluicing, and no such washing and sluicing shall be done along or close to rivers, streams or any other water sources.

10. Protection from Flooding: The location of amalgamation, and the building where mercury is kept after and before the amalgamation process, bust be situated in areas free of flooding.

11. Responsibilities of Employers: On a mine location where mercury is used, the primary license holder or mine manager should be held responsible for safe mercury-related practices as well as the individuals who use mercury. The license holder or manager should: (a) institute reasonable safety measures to prevent the exposure of employees or other persons to mercury fumes; (b) provide retorts and instruction on how to use retorts; and (c) ensure that no employee or other person handles mercury unless they are wearing suitable protective clothing, including gloves; and should provide such protective clothing free of charge.

12. Protection of Pregnant Women and Children: People who perform amalgamation must ensure that no pregnant women, or children under the age of sixteen, enter the structure, facility or locale in which amalgamation is carried out.

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[151] U.N International Guidelines (note 60).
[152] U.N International Guidelines (note 60)

13. Amalgamation License: In a location where amalgamation occurs, the manager of the location should hold an amalgamation license.

14. Prior Demonstration of Mercury Awareness: When miners apply for mining licenses and before beginning operations, they should demonstrate awareness of how to comply with these guidelines.

15. Mercury-Free Methods: The above guidelines demonstrate minimum threshold requirements. These measures significantly reduce mercury emission and exposure where properly implemented. However, in all cases possible, miners should be encouraged to adopt appropriate mercury-free mineral processing methods.[153]

The above guidelines provide minimum threshold standards that significantly reduce mercury emission and exposure where properly implemented. However, in all cases possible, miners should be encouraged to adopt appropriate mercury-free mineral processing methods. Various technical and environmental aspects of mercury management in ASM are addressed in these guidelines. The central aims of these guidelines are to assist governments in the development of legislation and/or regulation to accomplish the following goals:

(1) Reduce ASM-related mercury emissions into the environment;

(2) Reduce occupational exposures to mercury;

(3) Reduce second-hand exposures by non-miners as well as miners;

(4) Eliminate the major inefficient and unsafe practices of mercury use; and

(5) Reduce unsafe storage and disposal of mercury

f. Younde Vision Statement

In 2002, the United Nations Economic Commission for Africa (UNECA) and United Nations Department for Economic and Social Affairs (UNDESA) held a seminar on 'Artisanal and Small Scale Mining in Africa: Identifying Best Practices and Building the Sustainable Livelihoods of Communities'. The recommendations from that seminar were captured in the Younde Vision statement to "contribute to sustainably reduce poverty and improve livelihood in African Artisanal and Small Scale Mining (ASM) Communities by the years 2015, in line with the Millennium Development Goals."

The goals identified then were: [4]

[153] U.N International Guidelines (note 60).

- Acknowledge and reflect ASM sectoral issues in national legislation and codes;
- Mainstream poverty reduction strategies into mining policy inclusive of ASM policies;
- Integrate ASM policy into processes with linkage to other rural sectors, develop a strategic framework for PRSPs;
- Revisit existing thinking on ASM legislation (traditional land right, and modern land use legislation nexus) and role of central government;
- Strengthen Institutions by improving availability of appropriate technologies and developing analytical and business skills;
- Undertake necessary reforms of the ASM sector: improve policies, institutions, processes and the ASM stakeholders livelihood, reduce child labor, ensure gender equality, improve health and safety develop partnerships, promote sustainable use of natural resources, infrastructure development, land use management.[154]

f. International Financial Institutions

The World Bank and the IMF have also shown interests in the formulation of global standards on ASM.[155] There is also United Nations Revolving Fund for Natural Resources Exploration.

3.4 Conclusion

What the above analysis reveals is that ASM is becoming a major issue of concern and the most important issue is that of formalization and legal framework for regulation. Many countries lack effective legal framework on ASM. As noted above, in Africa the most ASM-conscious region is the Southern Africa. While Namibia is developing a specific legislation on ASM, South Africa, Zimbabwe, Zambia and Lesotho all have made significant provisions on the rights of ASM operators in a legislation dealing with all forms of mining. However, Nigeria has only some few provisions under the MMA, 2007. Fortunately, Nigeria is party to numerous global attempt to improve the ASM sub-sector. In fact, it is a signatory to the 2013 MCM which has made far-reaching provisions on the responsibilities of state parties to re-structure, formalize and regulate the ASM sector with a view to reducing or eliminating the use of mercury in artisanal mining. Unfortunately, the MCM is yet to become effective as an international legal instrument binding on the country.

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[154]Hentschel, et al, Global Report on Artisanal & Small-Scale Mining MMSD, January 2002 No. 70
[155]Hentschel, et al (note 69).

In addition, the above analysis has also shown that by customary international law as evidenced by plethora of state practices and the UN Resolutions such as Resolution 1803 (PSNR), the CERDS, Agenda 21, and the Stockholm and Rio Declarations, Nigeria has an international obligation to ensure adequate and effective regulation of artisanal mining. But as it has been observed legislation must be motivational and rewarding, as well as regulatory and punitive, if it is to impact positively on ASM.[156]

[156]CFC, 2008 Regional Workshop:Small-scale Mining in Africa -A Case for Sustainable Livelihood, *Commodities Issues Series, November 2008*, at p.29.

CHAPTER FOUR

LEGAL AND INSTITUTIONAL FRAMEWORK ON ARTISANAL MINING IN NIGERIA

4.0 Introduction

This chapter discusses the existing legal and institutional framework on artisanal mining in Nigeria. The critical analysis of the adequacy or otherwise of the legal framework shall constitute our discussion in the next chapter.

As noted in the previous chapter, regulating any economic activity is very important in modern societies. In fact, the need to regulate an economic activity is even more compelling when its positive and negative effects are weighted and examined. Where the effects of such activity are openly manifested in the society then, it will be a governance failure not to provide adequate and proper legal framework for the regulation of such activity. The same applies to artisanal mining. A comprehensive legal framework is necessary to safeguard the economy, human lives and the environment in view of the impacts examined in the previous chapter.

4.1 The Legal Framework on Artisanal Mining in Nigeria

A legal framework consists of the totality of all regulatory instruments duly promulgated by the authorities to direct and prohibit certain conducts in relation to something. In the same perspective, an institutional framework is part and parcel of the legal framework and it refers to a law or other formal provision that assigns primary responsibility as well as authority to an agency for the implementation, enforcement and monitoring of certain laws or regulations.[1]

In Nigeria, the mining sector is governed by a number of policies, laws and institutions. Policies are formulated to influence and determine decisions[2], actions and other matters related

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[1]Agnes, G.M. Environmental Degradation under Artisanal and small scale Mining in Tanzania: Can Innovation in Institutional Framework Help, International Journal of Environmental Protection, 2012, Vol. 2 ISS. 9, PP 7-16.
[2]Agnes G.M (note 1)

to the mining sector. Laws on the other hand, are system of rules set to maintain order and protect harm to persons, property and environment while institutions are the implementing agents of the policies and laws. The purpose of having such an institutional framework is to enhance the contribution of the mineral sector to the economy and protection of the environment.

4.1.1 Legislative Instruments, Policies & Regulations

The primary legal instruments on artisanal mining in Nigeria consists of the Constitution of the Federal Republic of Nigeria, 1999; the 2007 Minerals and Mining Act; the Nigerian Mining Corporation Act; the Land Use Act, 1978; the NESREA Act 2007; the 2011 Minerals and Mining Regulations; etc. Three policy documents – the 2008 National Minerals and Metals Policy, the 2009 Vision 2020 National Technical Working Group on Minerals and Metals Development Report, and the 2020 Road Map for the Development of the Solid Minerals and Metals Sector – provide further guidance[7].

These legal and policy tools address artisanal and small-scale mining to varying degrees. While they cumulatively give the statutory agencies a wide range of authority to support artisanal and small-scale miners, in reality the Ministry's assistance to artisanal miners has been predicated on the lawful existence of mining cooperatives, which are far fewer than the number of unregistered miners currently engaged in mining activities.[3]

a. The Constitution of the Federal Republic of Nigeria, 1999

The Constitution of the Federal Republic of Nigeria stipulates in very concise term that matters relating to "Mines and Minerals" are in the Exclusive Legislative List.[4] The constitution provides that the National Assembly shall exercise the legislative powers with respect to mines and minerals[5]. It further provides that the entire property in and control of all minerals, mineral oils and natural gas in, under or upon any land in Nigeria or in, under or upon territorial waters

[3]See Goldman L. et al, Artisanal and Small Scale Gold Mining in Nigeria: Recommendations to Address Mercury and Lead Exposure, In: Report Prepared by the Environmental Law Institute, Washington DC, 2014 at page 16, available at www.eli.org, visited on 24/01/2015.
Item 39, Exclusive Legislative List, 1999 Constitution of the Federal Republic of Nigeria.
[4]Section 44(4), 1999 Constitution of the Federal Republic of Nigeria.
[5]Item Item 39 (note)

and the Exclusive Economic Zone of Nigeria shall be managed in such manner as may be prescribed by the National Assembly.[6]

As the basic law, the constitution does not make detail stipulations on mining. This is understandable because the legislatures have been empowered to regulate mining activities, the executive to implement the laws enacted and the judiciary to interpret and apply the laws[7]. The federal High Court has been vested with exclusive jurisdiction on matters of mining and minerals.[8]

b. Minerals and Mining Act, 2007

Mining in Nigeria is regulated by the Minerals and Mining Act, 2007 (hereafter MMA) as the principal legislation on mining and mineral resources. The Act came into force on 29th March 2007 and it seeks to repeal the Minerals and Mining Act No. 37 of 1999 and re-enact the Nigerian Minerals and Mining Act, 2007 for the purpose of regulating all aspect of the exploration of Solid Minerals in Nigeria, and for related purpose.[9] The Act is to be administered by the Ministry of Mines and Steel Development (MMSD) through its departments and it was passed to strengthen practices in the Mining Sector. It is structured into six chapters and 165 sections covering matters relating to ownership and control of minerals, prospecting, mining and quarrying, small-scale mining, possession and purchase of minerals, environmental consideration and rights of host communities, offences and penalties, as well as miscellaneous provisions.

i. *Ownership*

The MMA reiterates the Constitutional position that the entire property in and control of all mineral resources in, under or upon any land in Nigeria, its contiguous zones, continental

[6]Section 44(4), 1999 Constitution of the Federal Republic of Nigeria.
[7]Onubogu H. Solid Minerals – Laws, Practice and Procedures Relating to Mining Business in Nigeria – The Coal Perspective, Juriscope, A Complication of Workshop Materials of the ALPHA JURIS Continuing Legal Education Series, 2008, page 70.
[8]1999 Constitution (note 6) section 251.
[9]Ladan M.T. Law, Cases and Policies on Energy, Mineral Resources, Climate Change, Environment, Water, Maritime and Human Rights in Nigeria, A.B.U. Press Ltd, Zaria, Nigeria, 2009, page 4.

shelves, exclusive economic zones or any area covered under Nigeria's territorial waters is vested in the federal government on behalf of the people of Nigeria.[10] The MMA requires that all lands in which minerals are found in commercial quantity shall be acquired by the federal government and ownership of the minerals shall only be transferred to a person in accordance with the provisions of the Act.[11]

ii. ***Administration***

The MMA vests wide powers on the Minister of Mines and Solid Minerals to among other things:

a. Ensure the orderly and sustainable development of Nigeria's mineral resources;
b. Develop a well-planned and coherent programme of exploitation of mineral resources taking into account the economic development, ecological and environmental factors;
c. Monitor compliance with the Community Development Agreements by industry operators;
d. Establish the procedure for monitoring developments in the solid minerals sector and encourage the private sector investment in the mineral resources development;
e. Ensure that in the exploitation of mineral resources, an equitable balance between foreign and indigenous interests;
f. Create an enabling environment for private investors;
g. Accelerate the development of technical and professional manpower required in the mineral sector;
h. Maintain liaison between investors and government departments and agencies set up for the purpose of mineral resource development;
i. Prescribe measures for the general welfare and safety of workers engaged in mineral resource development;
j. Assist the private sector in identifying scientific mining projects;
k. Register and keep records of all companies registered to pursue activities in mineral resource development;

[10]Nigeria Minerals and Mining Act, 2007 section 1
[11]Minerals and Mining Act (note 10)

l. Cause to be created such departments or agencies necessary for the administration of the Act;
m. Introduce investment friendly in local content in mining projects;
n. Facilitate the development of indigenous technical and professional manpower required in the mining sector; and
o. Have power to designate a mineral as radioactive mineral.

The Act established the Mining Cadastre Office(MCO) with the responsibility of administering mining titles and keeping cadastral registers.[12] The MCO shall consider applications for and issuance of mining titles and the suspension, revocation, transfer and renewal of same.[13] Also the Act empowers the Minister to establish a Mines Inspectorate Department and Mines Environmental Compliance Departments.[14] The former is responsible for the supervision of reconnaissance, exploration and mining operations to ensure compliance with the MMA[15] while the latter shall monitor compliance by all holders of mineral titles with all environmental requirements.[16] In addition, every state of the federation shall have a Mineral Resources and Environmental Management Committee which, among other functions, shall advice the Minister on the matters affecting pollution and degradation of any land.[17] The committee shall meet at least once every three months and may coop any desirable person in a host community as its member.

The MMA makes a far reaching provision that 'the use of land for mining shall have priority over other uses of land' as it is deemed to be an overriding public interests within the meaning of the Land Use Act. Thus, any right of occupancy granted over any land covered by a mining lease or small scale mining lease granted shall be subject to revocation by the Governor.[18]

Certain obligations are imposed on miners by the Act. For instance, every person undertaking exploitation of minerals under the Act shall keep correct plans of operation, shall keep all

[12] Mineral and Mining Act (note 10) section 5.
[13] Mineral and Mining Act (note 10) section 5(5)
[14] Mineral and Mining Act (note 10) section 16
[15] Mineral and Mining Act (note 10) section 17
[16] Mineral and Mining Act (note 10), section 18.
[17] Mineral and Mining Act (note 10) section 19
[18] Mineral and Mining Act (note 10) section 22.

records of all minerals found on the area of his mineral title lease and shall supply the MCO these records and plans.[19] If any radioactive mineral is found in such area, he shall notify the Mines Inspectorate Department immediately.[20]

The Act empowers MMSD to issue six types of permits, licenses, and leases.[21] Permits generally convey non-exclusive use rights, while licenses provide exclusive rights for a limited purpose and leases provide exclusive ownership rights for a broader purpose.[22] Reconnaissance permits - right to access land to search for mineral resources on a non-exclusive basis.[23]

c. Exploration licenses - right to explore mineral resources on an exclusive basis, including right to erect machinery and plants, along with the right to conduct bulk sampling and sell samples.[24]
d. Mining leases - right to exclusively use, occupy, and carry out mineral exploitation in the area covered by the lease, not to exceed 50km.[25]
e. Small-scale mining leases – right to exploit minerals in area between 5 acres and 3 square km using low level technology or application of methods not requiring substantial expenditure.[26]
f. Water use permits – right to use water for exploration, mining, or quarrying.[27]
g. Quarry leases – right to remove and dispose of any quarriable minerals, including necessary excavation and construction, in area not exceeding 5 square km.[28]

h. Any person undertaking mining not pursuant to any of the above permits is guilty of an offence.[29]

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[19]Minerals and Mining Act (note 10), section 43.
[20]Minerals and Mining Act (note 10), section 44.
[21]Minerals and Mining Act (note 10), section 46
[22]Onubogu H., (note 7)
[23] Minerals and Mining Act (note 10), Section 56 – 58
[24] Minerals and Mining Act (note 10), Section 59 – 63
[25] Minerals and Mining Act (note 10), Section 65 – 70
[26] Minerals and Mining Act (note 10), Section 90 – 91
[27] Minerals and Mining Act (note 10), section 52
[28] Minerals and Mining Act (note 10), section 78
[29] Minerals and Mining Act (note 10), section 46 (12)

Under the Act, purchasers of gold are also required to apply for a license to purchase minerals. The Act specifically requires that gold obtained under a Small-Scale Mining Lease (which includes artisanally-mined gold) be sold to a licensed Mineral Buying Center.[30]

iii. Artisanal and Small-Scale Mining Leases Under the MMA

Although most of the Act is directed at large-scale, commercial mining activities, it does include a short chapter (Chapter 2) on Small-Scale Mining, following the example of its predecessor, the 1999 Decree. The Act defines artisanal mining as a subset of small-scale mining; as such, artisanal mining is included in the requirements governing small-scale mining. Both artisanal and small-scale miners can apply for a small-scale mining lease (with artisanal miners first required to form a cooperative), but there is no lease available under the Act specifically for Artisanal Mining activities.[31]For a person to qualify for a small-scale mining lease, he must satisfy the following:

1. Must be a citizen of Nigeria with legal capacity and who has not been convicted of a criminal offence;
2. Must be a mining cooperative or a body corporate duly incorporated under the CAMA or is a holder of an Exploration License.[32]

In May 2011, MMSD finalized the Minerals and Mining Regulations under the 2007 Act. The regulations include a brief section on "Artisanal and Small Scale Mining Operation", which allows miners to register as artisanal and small-scale mining cooperatives and obtain extension services from the Ministry, including assistance in securing financial support from the Solid Minerals Development Fund.

Also under the 2007 Act, the Mining Cadastre Office grants small-scale mining leases for operations between three acres and five square kilometers. As noted above, the small-scale mining lease covers both artisanal and small-scale mining activity. Each small-scale lease application must be accompanied by evidence of technical competence (at minimum, a

[30] Minerals and Mining Act (note 10), Section 94 – 96
[31]Goldman L. et al, (note 10) page 16
[32]Minerals and Mining Act (note 10), section 49

certificate in mining or a related field) and financial capability (evidence of sufficient working capital through a bank statement or reference letter).[33] In addition, applicants must provide a land survey and a prefeasibility study.[34] A small-scale mining leaseholder cannot engage in extensive and continued use of toxic chemicals, cannot dig more than seven meters, and cannot continually use explosives.[35] In practice, the Mining Cadastre Office encourages small-scale (and artisanal) miners to form cooperatives in order to decrease transaction costs and formalize mining practices. Small-scale mining leases last for five years, after which the lease must be renewed.[36] All leaseholders must apply in order to export minerals for commercial purposes.[37]

An annual surface rent is payable to the owner or occupier of the land subject to the lease.[38] The holder of the small-scale mining lease (and any other mineral title holders) must also pay compensation to the occupier or owner of the land for any disturbance to the surface of the land.[39] In addition, a small-scale mining leaseholder may apply to transfer the ownership of the mineral title, subject to prescribed fees.[40]

Mine operators are also required to ensure that all tailings are properly treated before disposal[41], although in practice many tailings are sold for further processing. In addition, all mineral processors must ensure that toxic materials are stored and used in a safe and secure manner. Mine health and safety is monitored through periodic inspections (conducted by the Mines Inspectorate) that analyzes whether each mine is in compliance with technical requirements.[42] During extraction, a small-scale leaseholder must keep detailed records and must pay royalties based on production.

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[33] Nigeria Minerals and Mining Regulations 2011 section 26(i) (iii) and section 27
[34] Minerals and Mining Regulations (note 33), section 28
[35] Minerals and Mining Regulations (note 33), section 48
[36] Minerals and Mining Regulations (note 33), ss. 50 and 51
[37] Minerals and Mining Regulations (note 33), section 131
[38] Minerals and Mining Regulations (note 33), section 100
[39] Minerals and Mining Regulations (note 33), ss12(2) (d) and 162
[40] Minerals and Mining Regulations (note 33), ss12(2) (d) and 162.
[41] Minerals and Mining Regulations (note 33), section 124
[42] Minerals and Mining Regulations (note 33), ss. 140-141

All leaseholders must submit an approved EIA to the Mines Environmental Compliance Department prior to mining, along with rehabilitation and environmental protection plans.[43]

The EIA is submitted to the Federal Ministry of the Environment with participation from the Mines Environmental Compliance Department (full requirements are discussed further below).[44] In addition, every leaseholder must contribute to an Environmental Protection and Rehabilitation Fund, in proportion to potential adverse impacts from that particular operation.[45] All small-scale miners must also submit a Community Development Agreement, outlining the rights and arrangement between the miner and the community representatives.[46]

c. The 2008 Minerals and Metals Policy

The 2007 Act served as a springboard for the development of the 2008 Minerals and Metals Policy, which reflects a stated desire by the Ministry of Mines to expand the solid minerals sector and capitalize on increasing global minerals prices.[47] The 2008 Policy calls for a comprehensive approach to mineral resources development that supports artisanal and small-scale miners.[48] Related objectives include the promotion of small-scale mining activities and the formalization of informal mining activities, as well as the development of a legal and regulatory framework reflecting international best practices.[49] The Policy also identifies social equity and benefit-sharing for mining communities, in addition to the contribution of ASGM to sustainable livelihoods, among its bases for action. Notably, it directs the Artisanal and Small Scale Mines Department to support artisanal and small-scale miners by organizing, supporting, and assisting small-scale mining operations; providing extension services to ASM operators, improving sustainable livelihoods in ASM communities; facilitating strong relationships between miners and communities; registering ASM operators and mineral buying centers; and maintaining ASM records and reports.[50] The Policy also identifies seven specific objectives for

[43] Minerals and Mining Regulations (note 33), s.16 and 156.
[44] Minerals and Mining Regulations (note 33), ss. 157-160.
[45] Minerals and Mining Regulations (note 33), s. 182.
[46] Minerals and Mining Regulations (note 33), Section 193.
[47] Onubogu H., (note 7).
[48] Ministry of Mines and Steel Development, Minerals and Metals Policy 2008.
[49] Ministry of Mines (note 48).
[50] Ministry of Mines (note 48).

government action, including access to funding, needs-driven research, training opportunities, information sharing, promoting small-scale mining activities, facilitating co-existence of large and small mining operations, and establishing the Solid Minerals Development Fund.[51]

d. Road Map for the Development of Solid Minerals and Metals Sector

Released by MMSD in April 2012, the Road Map sets forth the goal of establishing a vibrant minerals and metals industry and outlines a set of policy priorities for the solid minerals subsector (including a shift from low-level technology mining to modernized mining and processing; forming linkages between ASGM miners and expected medium and large-scale mining investors; promoting a participatory policy process; and ensuring community benefits, among other things).[52]

It also identifies challenges to the development of the solid minerals sub-sector, which include a number of ASM-related factors such as the high proportion of ASM operations leading to environmental degradation and health hazards; the occurrence of illegal mining activities; mineral smuggling; and a lack of appropriate technology.

Although not an official policy, the Vision 2020 National Technical Working Group on Minerals and Metals Development Report, released in July 2009, presents a blueprint for improving Nigeria‘s minerals and metals sector. The report includes an assessment of Nigeria‘s minerals and metals sector, a 2020 vision and strategic plan, and an implementation roadmap and monitoring framework. It also addresses the ASM sector in part, emphasizing the need to minimize the adverse environmental impacts of artisanal mining and the importance of helping the miners form cooperatives and participate more formally in the mining sector. Its recommendations include a provision calling for MMSD to ―control and strengthen‖ artisanal and small-scale mining operations by:

(1) Encouraging the formation of mining cooperatives with a view to empowering them towards sustainable growth in the industry;

[51]Goldman L., (note3), page 20.
[52]Goldman L., (note3),

(2) establishing license buying centers to serve as an interface between mining cooperatives/licensed miners, local users and export markets;

(3) Providing extension services to artisanal and small-scale miners in the form of technical assistance and support services; and

(4) Providing micro-credit to artisanal and small-scale miners.

e. Federal Environmental Laws, Policies, and Regulations

In 1999, Nigeria replaced the Federal Environmental Protection Agency with the Federal Ministry of the Environment. Then in 2007, under the authority of Section 20 of the Constitution, Nigeria passed the National Environmental Standards and Regulation Enforcement Agency (NESREA) Act, which supplanted FEPA as the primary law governing environmental protection. NESREA is a Parastatal organization of the Federal Ministry of the Environment (FMENV) that conducts environmental impact assessments and has a mandate to enforce international environmental agreements such as the Minamata and Basel Conventions.[53]

f. Environmental Impact Assessment

Under the Environmental Impact Assessment Decree No. 86 of 1992, the Ministry of the Environment must complete pre-construction review of activities raising environmental concerns.[54] No activity falling under the mandatory list provided in the Decree, including mining activities in new areas exceeding 250 hectares, in addition to ore processing (including concentrating for gold), can be executed without an EIA.[55] The Minerals and Mining Act and its regulations supplement the Decree by mandating a pre-construction EIA for all mining leases.[56]

[53]Goldman L, (note 3).
[54]EIA Decree No. 86 0f 1992.
[55]EIA Decree (note54) section 13.
[56]Minerals and Mining Act (note 10) section 119.

All completed EIAs are reviewed by the Ministry of the Environment and the Mines Environmental Compliance Department within the MMSD. Under the Decree, EIAs must include a description of the activity, the potential affected environment, and the practical alternatives, along with an assessment of likely or potential environmental impacts, identification and description of mitigation measures, and an indication of gaps in knowledge.[57] Mining-specific requirements include a surface infrastructure plan (including water pollution management), and surface water, groundwater, and air pollution analysis.[58]

In addition to complying with requirements from the Minerals and Mining Act and the EIA decree, mining operations must comply with background environmental law carried out by the Ministry of the Environment through NESREA. The NESREA Act tasks the Ministry of Environment with passing regulations with the purpose of protecting public health or welfare.[59] With respect to mining, the FMENV passed regulations in 2009 governing Pollution Abatement in Mining and Processing of Coal, Ores and Industrial Minerals.[60] The regulations seek to minimize pollution from the mining and processing of coal, ores, and industrial minerals and contain emission limits for specific pollutants, among other things.[61]

g. Extractive Industries Transparency Initiative

The Extractive Industries Transparency Initiative (EITI) brings together governments, companies and civil society to improve openness and accountable management of natural resources revenue. This includes maintaining the EITI Standard, a voluntary country-wide standard that ensures complete disclosure of taxes and other payments that oil, gas, and mining companies make to governments. According to the standard, resource companies must disclose payments, and governments must disclose their revenues. Annual EITI reports, which must be comprehensible and actively promoted, provide citizens the opportunity to learn how much their government receives from natural resources extraction and to demand equitable management of resource wealth. Countries must meet seven requirements to become EITI Candidates and become EITI Compliant when the EITI Board determines that they have

[57] EIA Decree, (note 54) 1(a) (1992, section.
[58] Minerals and Mining Regulations (note 33) section 157-60.
[59] National Environmental Standard, Regulations and Enforcement Agency Act, 2007 section 20(1) .
[60] FME Pollution Abatement in Mining and Processing of Coal, Ores and Industrial Minerals, 2009.
[61] FME Solution (note 60).

satisfactorily met all requirements.[62] Currently 41 countries implement the EITI, twenty-five of which have been deemed compliant.[63]

The Nigeria Extractive Industries Transparency Initiative (NEITI) is tasked with developing a framework for accountability in reporting and disclosure of revenue due to the Nigerian federal government by extractive industries. Under NEITI Act, extractive industries are defined as – any company engaging in prospecting, mining, extracting, and processing gas or minerals, including gold.[64] NEITI was designed to ―eliminate all forms of corrupt practices‖ in extractive industry payments. To this end, NEITI is constituted as an autonomous self-accounting body (albeit one funded by the Government of Nigeria) that must submit biannual reports to the Nigerian President, the National Assembly, and the international EITI Secretariat in Oslo on budgeting, contracts, production costs, and other financial parameters.[65] In addition, NEITI is required to employ independent auditors to examine payments and receipts from extractive industries to ensure accuracy. Upon a finding that a company gave false information or submitted false receipts, the company is required to pay the actual amount of revenue due; may be fined; and may have its permit revoked at the discretion of the President.[66] Managers, directors, and government officials are subject to personal liability unless they can prove that the relevant act occurred without their consent and that they performed due diligence. It is not clear, however, that full compliance with NEITI's requirements has been achieved.

While NEITI has succeeded in increasing financial transparency and accountability in the oil industry, it has not yet been applied to artisanal gold mining.[67] In October 2011, a scoping study on the Nigerian mining sector found a consensus supporting the inclusion of small-scale mining in the NEITI framework.[68] currently; there are no large-scale mineral mining operations in Nigeria. In order to apply to smaller-scale operators (primarily cement manufacturers and construction companies), the scoping study recommended using royalties

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[62] Nigeria Extractive Industries Transparency Initiative Act.
[63] Goldman, (note 3).
[64] NEITI Act, (note 62)section1.
[65] Goldman, (note 3).
[66] NEITI Act, section 12.
[67] Goldman, (note 3).
[68] Goldman, (note 3).

paid to provide a baseline ―materiality point at which NEITI would apply.[69] However, under the suggested materiality point for royalties recommended by the scoping study (N5,000,000), no companies extracting gold or using ASGM were covered at that time.

In 2011, the Civil Society Legislative Advocacy Centre (CISLAC) released a policy brief recommending that NEITI apply to artisanal gold mining.[70] the brief cited health concerns, environmental degradation, and water pollution as primary incentives to spur legislative action. However, CISLAC's recommendation to extend the financial accountability framework to gold mining is yet to be followed.

i. State Environmental Laws and Policies

Nigerian states possess the authority to enact environmental laws that are not preempted by conflicting laws passed by the National Assembly. However, Nigeria has a constitutional provision that enumerates an – exclusive legislative list that vests legislative powers solely in the National Assembly, including with respect to – mines and minerals. Therefore, the Minerals and Mines Act of 2007 and its regulations would preempt most state regulation of ASGM, with some exceptions

All Nigerian states have environmental agencies and environmental laws.[71] These state agencies act under the principle of cooperative federalism, where states have concurrent authority over most environmental matters, subject to a floor established by regulations promulgated by the Ministry of Mines and the Ministry of the Environment.[72] State agencies often monitor and enforce the EIA process, conduct surveys, engage in outreach, and issue permits.

4.2 The Regulatory Bodies

From the above laws and policies, it is clear that there are different institutions established to supervise the mining activities in Nigeria. It should be remembered that the Minerals and Mining Act vests "the entire property in and control of all the minerals, or upon any land in

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[69] Goldman, (note 3).
[70] Goldman, (note 3).
[71] Goldman, (note 3).
[72] Goldman, (note 3).

Nigeria…….. in the government of the federation……..[3]This is a restatement of the provisions of the constitution.[73]

This puts government in a frontal role in mineral development through the Federal Ministry of Solid Minerals Development established in 1995, now Ministry of Mines and Steel Development (MMSD) to facilitate the development of the mining sector in accordance with the policy of the government.

The legal framework governing mining activities and their environmental impact is implemented primarily by two federal agencies – the Federal Ministry of Mines and Steel Development (MMSD), and the Federal Ministry of Environment (FMENV). MMSD administers Nigeria's Mining Law (the 2007 Minerals and Mining Act) and its regulations, while the FMENV administers the country's general environmental protection law (the National Environmental Standards and Regulation Enforcement Agency (NESREA) Act, 2007.

4.2.1 The Ministry of Mines and Steel Development

This was established in 1995 to spur development of the country's solid mineral resources. It is the principal actor with respect to information, policy, and regulatory oversight of the country's solid mineral sector. Its roles include formulating policy; providing information knowledge to enhance investment in the sector, regulating operations; and generating appropriate revenue for the government. The Ministry administers the 2007 Minerals and Mining Act and the 2011 Minerals and Mining Regulations. It contains four primary technical departments, (i) the Mining Cadastre Office (ii) The Mines Inspectorate Department, (iii) The Mines Environmental Compliance Department, and (iv) Artisanal and Small-scale Mining Department. These Departments hold the following responsibilities[5].

4.2.2 Mining Cadastre Office (MCO)

I. Receive and dispose of application for the transfer, renewal, modification, or relinquishment of mineral titles or extension of areas.
II. Maintain a chronological record of all applications for mineral titles.

[73] 1999 Constitution (note 6) section 42.

4.2.3 Mines Inspectorate Department

I. Supervise all reconnaissance, exploration, and mining operation.

II Enforce all health and safety regulations at Mining sites.

Conduct inspections and investigations necessary to ensure compliance with applicable rules and regulations.

4.2.4 Mines Environmental Compliance Department

I. Review all plans, studies, and reports requires from holder of mineral titles with respect to their environmental obligations.
II. Monitor and enforce compliance by holders of mineral titles with all applicable environmental requirements and obligations.
III. Perform periodic environmental audits to ascertain that all regulations and obligations are being met by mineral title holders.

4.2.5 Artisanal and Small – Scale Mining (ASM) Department

I. Monitor and oversee artisanal and small scale mining activities.
II. The ASM department is focused on formalizing the ASM sector and providing extension services to artisanal and small-scale mines.

Generally, the ASM Department seeks to support artisanal and small-scale miners. The Department‘s main responsibilities towards artisanal and small-scale miners is through the provision of extension services for mining cooperatives and small-scale miners, including organizing, support, and assisting them on exploration, exploitation, mineral processing, and entrepreneurial training. The ASM Department aims to facilitate healthy relationships between miners and the community as well as between miners and large-scale corporations. In addition, the Department is tasked with coordinating involvement with international governments and multi-lateral organizations (including UNEP, the World Bank, and the DFID).

4.2.6 The Federal Ministry of Environment

This was established in 1999 to ensure effective coordination of all environmental matters. Its mandates include, among other things, (1) monitoring and enforcing environmental protection

matters; (2) prescribing standards and enacting regulations on water quality, effluent limitations, air quality, atmospheric protection, ozone protection, noise control, and the removal and control of hazardous substances; and (3) cooperating with Federal and State Ministries, Local Government, statutory bodies, and research agencies on matters relating to the protection of the environment and the conservation of natural resources.

4.2.7 Mineral Resources and Environmental Management Committees (MIREMCO)

As noted above, the Minerals and Mining Act calls for the establishment of a Mineral Resources and Environmental Management Committee for each state in the Federation, composed of the following representatives:

I. A representative of the Mines Environmental Compliance Department (to serve as chair);
II. A representative of the Ministry responsible for land or mineral-related matters in the State;
III. The federal Mines Officer responsible for the State;
IV. A representative of the State Ministry of Agriculture or Forestry;
V. A representative of the State Surveyor-General;
VI. A representative of the relevant Local Government Council (when the committee is considering issues affecting a particular Local Government Area);
VII. A representative of the State Environmental Department or Agency; and
VIII. A representative of the Federal Ministry of Environment in the State.[74]

The MIREMCOs are intended to discuss, consider, and advise on environmental issues affecting local interests, including the sustainable management of mineral resources and potential pollution and degradation of land. They are also responsible for deciding all disputes between a mineral title holder and the local community. MIREMCOs are required to meet once every three months and report their findings to the Minister of the Environment. Despite their enumerated list of tasks, MIREMCOs thus far – have been slow to take up their responsibility and are yet to fulfill the rationale behind their establishment, and many MIRECOs have yet to be formed.

[74] Minerals and Mining Act, (note 10) section 19.

4.2.8 State Environmental Laws

Even though states do not have authority over mining activities, as mentioned above, they can regulate environmental pollution. In Zamfara, for example, the State Assembly created the Zamfara Environment Sanitation Agency (ZESA) under the Zamfara Ministry of Environment & Solid Minerals. The same is obtained in many other states. The role of the agency is to protect and improve the environment by helping communities understand their environmental responsibilities. ZESA is charged with regulating activities that can cause harmful pollution and monitoring air, soil, and water quality. The agency's seven departments include Finance and Supply, Operations, Street & Drainage, Pollution, Solid Waste, Enforcement & Inspectorate, and Administration.[75] The Pollution Department is charged with regulating activities that cause harmful pollution by monitoring the quality of air, land, and sewages. The Department has participated in remediation activities undertaken by ZESA in the areas affected by lead poisoning.

Other state environmental laws that purport to address water quality and sanitation in areas with ASM activities include:

I. Borno State Rural Water & Sanitation Agency Law
II. Jigawa State Rural Water Supply and Sanitation Agency Law
III. Kaduna State Waste & Sanitation Agency Law
IV. Katsina State Rural Water Supply & Sanitation Agency Law
V. Yobe State Environmental Protection Agency Law

4.2.9 Traditional Rulers

Although not part of Nigeria's formal government, traditional rulers wield a significant amount of authority at the local level, particularly in the Muslim North. Nigeria's Emirs have been identified as potential change agents in addressing women's health issues, and in Zamfara, the Emir of Anka (the Local Government Area that includes Bagega and other ASGM sites) has been involved in lead remediation and outreach activities. The Emir of Anka has also sought to help mining communities deal with issues of land access and consent.

[75] Goldman (note3).

4.2.10 Local Government Areas

Each of Nigeria‘s 36 states is subdivided into a number of local government areas (LGAs). The system of elected local government authorities was established by the military in 1976 with 300 initial LGAs. Currently, there are 774 LGAs throughout the country. State law determines the functions, structure, finance and composition of each state‘s LGAs; however, the vast majority of LGAs use the ―presidential model. This consists of an elected Chairman, who is the Chief Executive of the LGA, and an elected Local Government Council (LGC) as the legislative branch of the LGA (although it is unclear how many LGAs actually have elected officials in practice). These local governments constitute the third tier of government below the federal and state levels.[76]

LGAs are tasked with supplying basic necessities to their jurisdictions, such as maintaining public conveniences, licensing vehicles, constructing and maintaining roads, and registering births, deaths and marriages.[77] The Local Government Councils also work extensively with their state governments, which provide funding to LGAs. LGCs and their State governments work hand-in-hand on the delivery and maintenance of primary education and health services, as well as agriculture and natural resource development (this does not include mineral exploitation).

The interaction between Emirs and LGAs varies. Some LGAs make use of Emirs and other traditional leaders in conflict prevention and mediation, but give them formal political and administrative support far less frequently.[78]

4.3 Conclusion

The legal framework on artisanal mining is a combination of laws and policies traceable to the constitution. They sought to regulate the activities of small scale miners and ensure orderly mining in the entire country. This chapter merely examined these laws and policies without any critique. The next chapter will do just that

CHAPTER FIVE

A CRITIQUE OF THE LEGAL FRAMEWORK ON ARTISANAL MINING IN NIGERIA

5.0 Introduction

This chapter critically appraises the legal and institutional framework on artisanal mining in Nigeria as highlighted in chapter four (4). It is pertinent to stress that a robust and effective legal framework on mining is important for sustained economic development. The goal here is to examine the existing legal framework to see whether it is adequate and effective in regulating the activities of artisanal miners in Nigeria.

The chapter is divided into four sections. Section two re-visits the outlined legislative instruments on mining and identifies their adequacies as they relate to artisanal mining. Section three examines the strength and capacity of the institutions established to regulate this form of mining. Section four is the conclusion.

5.1 Adequacy of the Existing Legal Framework

It is important to examine whether Nigeria needs to reorient its legal and policy framework towards artisanal miners, who currently carryout the bulk of solid minerals mining activities. This is because although the Mining Act and related Regulations include a number of incentives to attract larger investors, there has not been sufficient large scale mining in Nigeria by larger mining companies. In the meantime, artisanal miners are extracting and processing minerals using dangerous methods, without sufficient access to land, equipment and financing, while their revenues are going untaxed.[157] As noted earlier, the Mineral and Mining Act and the Mining Regulations only briefly address the needs of artisanal miners, primarily by requiring miners to form cooperatives in order to access extension services. Clearly, properly regulated artisanal mining activities can better contribute to development, both on a national and a local scale, without the negative impact on human health and the environment that are currently taking place

[157]Goldman L. et al, Artisanal and Small Scale Gold Mining in Nigeria: Recommendations to Address Mercury and Lead Exposure, In: Report Prepared by the Environmental Law Institute, Washington DC, 2014 at page 30, available at www.eli.org, visited on 24/01/2015.

in some states of the federation. Hence regulating these activities is critical to the mining sector. We start with the position under the constitution.

5.1.1 The Constitution of the Federal Republic of Nigeria 1999

As noted earlier, the Constitution of the Federal Republic of Nigeria stipulates concisely that matters relating to "Mines and Minerals" are in the Exclusive Legislative List[158]. It further provides that the entire property in and control of all minerals, mineral oil and natural gas in, under or upon any land in Nigeria, or in, under or upon the territorial waters and Exclusive Economic Zone of Nigeria shall be managed in such a manner as may be prescribed by the National Assembly.[159]Thus, the constitution has clearly excluded the lower tiers of government from legislating on mines and minerals.

The strength of these provisions is that the constitution put to rest the question of private ownership of minerals in Nigeria. But as the basic law of the land as well as ground norm, the constitution does not make detail stipulations on mining, even though this is understandable because the legislatures have been empowered to regulate mining activities, but their regulations did not adequately address the need of artisanal miners. It becomes clear that over concentration of legislative powers over minerals and mining on the Central government distances small miners from the locus of legislation thereby creating a gap that almost relegate small scale mining to a position of insignificance. The miners are closer to the lower tiers of government. But the two lower tiers of government (States and LGAs) have no direct legislative competence over mining. It can be argued that since the legal basis of all legislative instruments fails to articulate a proper structure for the regulation of this form of mining, any inadequacy found in ordinary legislations could be linked to the constitution itself. This is not to suggest that a detailed constitutional provision on artisanal mining is required in the constitution. But it may explain the inadequacy of provisions under the MMA on small scale mining. In fact, there are not more than five sections specifically meant for artisanal mining under the Act.

[158]Item 39, Exclusive Legislative List, 1999 Constitution of the Federal Republic of Nigeria.
[159]Section 44 (4), 1999 Constitution of the Federal Republic of Nigeria.

5.1.2 The Minerals and Mining Act, 2007, Nigerian Minerals and Mining Regulations, 2011 and Key Legal Challenges

As examined in the previous chapter, the Minerals and Mining Act, 2007 is the principal legislation on mining and mineral resources in Nigeria. It came into force on 29h March, 2007. This Acts seeks to repeal the Minerals and Mining Act No. 34 of 1999, Cap. M.12 LFN 2004 and reenacted the Nigerian Minerals and Mining Act, 2007 for the purpose of regulating all aspects of the exploration and exploitation of solid minerals in Nigeria and for related purposes[160]. The Nigerian Minerals and Mining Regulations 2011 also regulate the mining activities in the country.

Under the Act and the 2011 Regulations, artisanal miners are strongly encouraged, and in some cases required, to form a cooperative association in order to proceed with their activities. Miners must be part of a registered cooperative in order to receive extension services from the Ministry[161], and while both individuals and cooperatives are allowed to apply for a small – scale mining lease, the ministry holds the view that the only way for artisanal miners to obtain such a lease is through a registered cooperative. The requirement for forming a cooperative is specific to each state, but commonly includes the preparation of by-laws and payment of a registration fee, among other things. Once miners have legally formed a cooperative, they must also register it with Ministry of Mines and Steel Development's Central office in Abuja, which imposes additional steps and fees[162]. This will be examined briefly later.

There are some legal problems with this cooperative requirement. First, the dual preregistration requirements impose financial and time consuming burdens that are difficult for many miners to meet. A number of miners may not even be aware that the cooperative requirement exists largely because of illiteracy. It is also unclear who is supposed to register the miners within each state. For example, in Zamfara State the Ministry of Rural Development and Cooperatives is supposed to register artisanal miners, but in reality, it is the state Ministry of Environment and Solid Minerals that is helping miners to form cooperatives. Ministry of Mines and Steel Development is said to be assisting some miners as well, but there appears to be no organized approach for

[160]Ladan M.T. Law, Cases and Policies on Energy, Mineral Resources, Climate Change, Environment, Water,Maritime and Human Rights in Nigeria, A.B.U Press Ltd. Zaria, Nigeria, 2009, page 4.
[161]Nigerian Minerals and Mining Act, Section 91
[162]Goldman(note1) at 16

systematically registering artisanal mining cooperatives. As such, groups of miners who might wish to form a cooperative do not necessarily know whom to contact for help with the process. In the end, the greatest effect of the cooperative requirement may be to prevent miners from receiving needed extension. The implication of this requirement is to disregard individual miners who are either unaware of the prerequisite for forming a cooperative or simply could not form one for whatever reason. It seems the requirement for registering a cooperative was not meant for regulation purposes but for offering extension services to the miners. This is really problematic because the focus seems to be encouraging development of the mining sector for revenue generation while paying leap service to health and environmental concerns.

Another critical issue is that the states do not have uniform laws on the formation of cooperatives. It is clear that the Companies and Allied matters Act is a national legislation. The Mining Act does not seem to contemplate a situation where small scale miners could form other forms of 'cooperatives' such as business names, incorporated trustees. What is important is the formation of a cooperative. But where artisanal miners come together and form a registered limited liability company, they can benefit from any form of extension service. The rigors of registering company and the post incorporation requirements seem to pose significant challenge to many ASMs.

5.1.2.1 Legislative Competence

From our discussion in chapter four, only the National Assembly can enact laws on minerals and mining in Nigeria. It is clear that the states have no business whatsoever in legislating on artisanal mining in Nigeria. There seems to be an overconcentration of legislative powers on the National Assembly thereby giving credence to the notion of a lopsided federalism being operated in Nigeria. It may be argued that this lop-sidedness has created a situation where the National Assembly has now assumed the role of legislating and directing the state executive on matters of minerals and mining. For instance, the MMA has made a provision that every state shall have a Mineral Resources and Environmental Management Committee which, among other functions, shall advice the Minister on the matters affecting pollution and degradation of any land.[163] This is clearly against the principle of federalism entrenched under the constitution. It is respectfully

[163] Minerals and Mining Act (note5), section 19

submitted that there is no need of mandating states to establish this Committee. It can function as a branch or Parastatal of the Federal Ministry of Mines and Steel but not a statutory committee created by the MMA for every state. And if the former option is adopted the problem will be a total exclusion of the state government in matters directly affecting its inhabitants. In reality the committee only exists in paper.

5.1.2.2 Title to Land, Lease for Small Scale Miners and Socio-Legal Challenges

1. Stringent License Requirements

As examined in chapter three, allodial title to land by individuals no longer exists in Nigeria pursuant to the provisions of the Land Use Act, 1978.[164] By the provisions of the Constitution, the Minerals and Mining Act, the LUA and other laws in the country all minerals belong to the federal government.[165] In other words, minerals in Nigeria can only be exploited upon the grant of a license by the government.[166] Therefore, small scale miners extracting minerals anywhere in Nigeria without the requisite license are simply violating the law.[167]Many miners do not hold title (in the form of a Small-Scale Mining Lease) to the lands where they are working to extract minerals such as gold. This may be because they do not know how to obtain a mining lease or they lack the resources to obtain a lease, or because the title to the land in question is already held by somebody else.

The MMA, 2007 requires small scale miners to obtain a small scale mining lease which shall not be less than five acres but must not exceed three square kilometers.[168]The small scale and artisanal mining department shall ensure that mining activities are restricted to the established zones of mineralization. This is important in order to adequately control the mining activities. However, the MMA sets out stringent requirements for the grant of this lease. Apart from the requirement of being a citizen of Nigeria with legal capacity, a mining cooperative or a body corporate registered under the CAMA[169]the applicant shall give evidence of a working capital in the mining of the area applied for, show technical competence to carry out the proposed mining

[164] Land Use Act, 1978, S. 1
[165] Minerals and Mining Act (note5), ss.1 &131
[166] Minerals and Mining Act (note5), section 2.
[167]Minerals and Mining Act (note5), section 131.
[168] Minerals and Mining Act (note5), section 90.
[169] Minerals and Mining Act (note5), section 49.

operation and provide any other relevant information required or prescribed by the Mining Cadastre Office (MCO).[170] These requirements for working capital and technical competence may seem desirable and indispensable highly developed economies with less or nor incidence of poverty and illiteracy. It is submitted here that in the context of Nigeria, these requirements will remain hollow, redundant, unrealistic and impracticable and will further complicate the pitiable situation of small scale mining in the country. In a sector in which 90% per cent of the miners are illiterates and struggling to make ends meet, it may be argued that these lease requirements are simply meant to be observed in the breach.

On the other hand, a lack of formal title can discourage artisanal miners from making long-term investments to improve their mining activities, without the assurance that they can recover their investment. It also means that miners cannot use the land on which they are working to secure credit for obtaining new tools and developing improved technologies. Nor do they have the security of knowing they can continue to mine in a given location for a specific length of time. In Ghana, the lack of available land has been tied to the reluctance of artisanal miners to register, even under a strengthened legal framework, and the resulting expansion of the informal artisanal gold mining economy.[171]

In Nigeria, these challenges are rooted in the country‘s complex land tenure history, the rapid assignment of mineral titles (including for lands under customary title) to speculators and investors following the passage of the MMA, 2007 and the often-fraught relationship between artisanal and large-scale miners.[172] Many mineral deposits lie on lands that have been formally registered to titleholders (predominantly small- and medium-scale operators, as Nigeria has few large-scale mining operators at present). This creates a significant problem of access for artisanal miners, and can lead to conflicts with the license holders. Moreover, although applicants for mineral titles on private land are required to obtain consent from the ‘owner’ or occupier of the land, such consent is not always lawfully obtained. In some cases, mining companies are alleged to have collaborated with traditional rulers to take title to lands.

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[170] Goldman (note1) at 33
[171] ibid
[172] ibid

ii. Disincentives for Stakeholder Participation

The MMA and other laws in Nigeria do not see small scale mining as a multi-stakeholder sector which can address a number of socio-economic problems. Confrontations among the stakeholders have been reported with no appropriate mediating body that can effectively address the conflicting issues.[173]There are no incentives for a multi-stakeholder approach to small scale mining activity in the country. With few large-scale mining operators to date, Nigeria still has a chance to develop a model for engagement that could set a standard for addressing this problem going forward. Experiences from a number of countries reflect the potential benefits that can result when companies engage artisanal miners in a non-confrontational manner. At the same time, issues of mistrust remain and an effective model of how large-scale companies can work with artisanal miners proactively(rather than simply co-existing) is yet to be developed. In the meantime, examples of efforts to bridge the divide between these two groups include:

a. In Mongolia, the establishment and institutionalization of multi-stakeholder councils consisting of mining companies, artisanal miners, and local governments and communities has facilitated dialogue on issues such as mitigation of negative environmental impacts, reducing conflict between stakeholders, and sharing responsible mining practices. The laws in this country have taken care of the potential for conflict while giving due recognition to all concerned stakeholders in the sector. [174]
b. Also in Mongolia, 50 artisanal miners signed an agreement with the Mundalan Trade Company to mine marginal deposits that the firm is unable to use. The agreement also enables the miners to sell their products directly to Mongolia‘s central bank, rather than engaging in the risks of illicit trade. This form of agreement is supported by the law and is far better than what obtains in Nigeria where small scale miners are largely into the business without any form of permit to operate as they struggle for survival. Thus, small scale miners without license could be accommodated within the license of a large scale miner with the aid of general law of contract. The benefits of this are enormous from the

[173]Minerals and Mining Act (note5), 2007, s. 141.
[174] The Asia Foundation, The Asia Foundation In Mongolia holds closing workshop for “Engaging Stakeholders for Environmental Conservation” Program (June2013, available at http://asiafoundation.org/news/2013 last visited on 26/01/2015.).

socio-economic and legal perspectives as it enables companies to deal directly with artisanal miners.[175]

c. In Tanzania, several mining companies are working cooperatively with artisanal and small-scale miners. For instance, a joint venture between the government and a South African company known as MEREMETA Limited, has provided mining and processing equipment to small-scale miners in exchange for the ability to buy gold from the miners.[176] The company also began production-sharing with the ASM producers, participating fully in mining and processing and sharing the final products. This initiative led to the creation of Tembo mine in Geita, now owned by the Canadian company Tembo Gold Corp, which is pursuing a strategy for a community development partnership.[177]

d. Also in Tanzania, companies like Anglo-Gold Ashanti are participating in a Multi Stakeholder Partnership (MSP) on ASM with the Tanzanian government. Anglo Gold pilots the partnership, which seeks to actively engage ASM stakeholders to enhance formalization and to support alternative livelihoods for artisanal and small-scale miners.[178]

e. In Ghana, Abosso Gold Fields Ltd (AGL) developed a ―Live and Let Live plan with ASM miners. Under the plan, AGL agreed to accommodate artisanal miners on its concession as long as the miners' activities did not threaten the company's operations. The plan was administered by a management committee consisting of members from AGL, ASM operators, local government officials, traditional chiefs, police and opinion leaders. When the miners began to encroach on areas earmarked for active mining, AGL would demarcate an alternative site on one of its concessions for their operations. AGL mounted educational campaigns to reassure miners of the miners' ownership and control

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[175] Standway, D. Mongolia's "Ninja" Miners Help State China Lust for Gold, REUTERS (April 19, 2012) available at http://www.reuters.com/article/2012, last visited on 26/01/2015.

[176] *Tesha, A.L., Cooperation Between Small Scale and Large Scale Mining – Tanzania Experience, Growth and Diversification in Mineral Economies Regional Workshop for Mineral Economies in Africa, Cape Town, at 13 (2000).*

[177] *Kulekana, J., Geita Gold Mine: Keen on Safety, Good Corporate Cizenshinp, TANZANIA DAILY NEWS (November, 19, 2013) available at http://allafrica.com/stories2013 last visited on 26/01/2015*

[178] *Geita Gold Mine: Keen on Safety (note167) .*

over their mining activities and profits. The project enjoyed success during the mid-1990's until rising gold prices made marginal concession lands more valuable to AGL.[179]

5.1.2.3 Lack of Capacity

The small scale mining department of the Ministry of Mines and Steel does not seem to have the adequate and capable manpower to address the needs of the artisanal mining sub-sector. The reality is that artisanal and small scale miners lack the capacity to arrest or address health and environmental problems. Artisanal and small scale miners are generally not taking steps to assess or mitigate the adverse environmental impacts of their activities, which include the release of mercury into the air and water, soil degradation, river siltation, and groundwater contamination, among other things. Since most of them lack the requisite technical competence to appraise or determine the dangers of their occupation, a regulatory intervention for training and retraining is vital.

While applicants for a Small-Scale Mining Lease *are* required to submit an Environmental Impact Assessment statement and an Environmental Protection and Rehabilitation Program under Section 119 of the Mining Act, the associated costs and requirements (including hiring a consultant to produce an extensive report) can exceed their financial ability, making it difficult for them to comply and to achieve a measure of environmental protection. As a comprehensive study of small-scale mining in Africa noted, the development of simple regulations for environmental protection is a prerequisite for miners' compliance.[180] The recommended design of a new Artisanal Mining License presents an opportunity to move away from the existing EIA requirement towards alternative approaches.

UNEP's analysis of formalization approaches identified the following considerations for environmental licenses in ASGM[181]

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[179] *International Council on Mining and Metals et al: Working Together: How Large Scale Mining can Engage with Artisanal and Small Scale Miners (2010) available at http://www.icmm.com last visited on 26/01/2015.*

[180] United Nations Economic Commission for Africa, Compendium on Best Practices in Small Mining in Africa (2002) at 90

[181] United Nations Environmental Program, UNEP Chemicals Branch, Analysis of Formalization Approaches in the Artisanal and Small Scale Gold Mining Sector Based on Experiences in Ecuador, Monogolia, Peru, Tanzania and Uganda (at 2012) at 90 available at http://www.unep.org last visited on 26/01/2015.

1. Environmental licenses for ASGM should build, to the extent possible, on established environmental legislation and policy instruments. In many cases, license may need to be adapted to the unique conditions of ASGM.

Evaluation of the impacts of ASGM and specific guidelines for addressing the impacts should be required for all categories of ASGM. Given that this is not practical or efficient for individual small-scale miners; the local authority should develop a simple process for the evaluation of environmental impacts and a management plan for the designated ASGM mining and processing area, given that it is to deliver these independently.

2. Environmental requirements should be simplified to the extent possible (e.g., Environmental Impact Assessments and management plans based on the size of the operation) without reducing the quality of environmental management.

Perhaps the most fundamental tenet of formalization involves the ability to obtain a mineral title. As mentioned above, secured title can go a long way towards helping artisanal miners improve their operations by investing in safer and more effective mining technologies. While Nigeria‘s Mining Act and regulations do allow artisanal miners to obtain a Small-Scale Mining Lease, the process is difficult and costly. The license fee of 10,000 naira (approximately $63 U.S. at current exchange rates), while not prohibitive – particularly for mining cooperatives – is still a substantial sum for poor communities.[182] In addition to the fee, the mineral lease application requires a pre-feasibility study, proof of sufficient working capital and technical competence, and details such as coordinates about the location of the proposed lease, among other things.[183] These requirements are clearly difficult to meet by most small scale miners in Nigeria who are largely illiterates and see mining as a family business that must not be restrained by any legislative intervention or requirement.

The approach taken by MMSD thus far has focused on encouraging miners to form cooperatives in order to apply for a Small-Scale Mining Lease (so as to share the costs and administrative burdens of submitting an application) in compliance with the provisions of the MMA. However, this does not resolve the more fundamental question of the appropriateness of a small-scale mining lease for artisanal mining activities. As an examination of ASM legislation has

[182] Goldman (note1) at 37
[183] Goldman (note1)

concluded, mineral rights should be simple to administer, easily understood by the miners, and enable miners to scale up to the next level of mining operation.[184]

As such, use of the Small-Scale Mining Lease as the primary vehicle for licensing artisanal miners should be revisited. Rather, it would be more effective to create a separate Artisanal Mining License for artisanal miners – one that is tailored to their specific needs and operations.

As noted earlier, the Act provides for the following classes of licenses in the mining sector.

I. Reconnaissance permit[185]
II. Exploration license[186]
III. Small – scale Mining license[187]
IV. Mining license[188]
V. Quarrying license[189]
VI. Water Use Permit[190]

Artisanal miners who do the bulk of the mining activities can obtain license for only reconnaissance permit, exploration license and small – scale Mining License, but cannot qualify for mining license. In addition and as noted above, even for these three classes of licenses, the artisans may fail to obtain license because of the requirements to show "proof of sufficient working capital" and "technical competence to carry on the purpose. These provisions have unintended negative consequence which is to push many artisans into illegal mining when they fail to get a license, that is where they even applied for one.

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[184] UNECA Compendium (note24) at 22
[185] Minerals and Mining Act, (note5) ss 56 – 58
[186] Minerals and Mining Act, (note5) ss 59 – 63
[187] Minerals and Mining Act, (note5) ss 90 – 91
[188] Minerals and Mining Act, (note5) ss 65 – 70
[189] Minerals and Mining Act, (note5) s 76
[190] Minerals and Mining Act, (note5) s 52

5.1.2.4. Administrative and Regulatory Inadequacy

One might argue that unrealistic responsibilities have been imposed on the Minister of Mines and Steel by the MMA, 2007.[191] These include ensuring an orderly and sustainable development of the sector, creating an enabling environment for investors, accelerating the development of technical and professional manpower for the sector, establishing procedures applicable to mining operations, developing a coherent plan for the solid mineral sector and prescribing measures for the general welfare and safety of workers engaged in mineral resource operations.[192] The Act presumed that the Minister is highly competent in mineral resource development ignoring the political reality in the country. In addition, the administration of licensing is to be done by the MCO established by the Act as an independent body with the responsibility of the administration of mineral titles and maintenance of cadastral registers.[193] The body is to be administered by a Director General. However, no board is provided for the body. This portends grave danger to the industry as it discourages transparency and accountability in license administration. In fact, it seems to make the DG 'a little monarch. Worst still, no requirements or qualifications were prescribed for the office of the DG. The assumption is that he should be a civil servant. But it is a mistake not to prescribe specific educational and professional qualifications for such important office. In addition, it makes proper administration of titles difficult because the officers supporting the DG were also presumed to be competent in mineral resource development. All these have directly and indirectly rendered proper regulation of small scale miners pretty difficult.

A provision that aims to compensate mining host communities is the requirement that no license shall be issued without the signing of Community Development Agreement between the prospective mineral holder and the host community which shall contain undertakings with respect to the social and economic contributions that the project will make to the sustainability of

[191] Minerals and Mining Act, (note5) section 4
[192] Minerals and Mining Act, (note5) section 4
[193] Minerals and Mining Act, (note5) s 5 (1)

such community"[194]. The agreement shall address some or some of the following issues relevant to the host community.

I. Educational scholarship, apprenticeship, technical training and employment opportunities for the indigenes of the communities.
II. Financial or other forms of contributing support for infrastructural development and maintenance such as education, health or other community series, roads, water and power.
III. Assistance with the creation, development, and support to small – scale and micro enterprises.
IV. Agricultural product marketing; and
V. Methods and procedures of environment and socio-economic management and local governance enhancement.

It is not clear how the community development agreement is to be negotiated and by who. Such clarification is needed to prevent some powerful interest in the community from hijacking the community agreement process and its benefits to the community.

The MMA and Socio-Economic Challenges for Artisanal Mining

While the Act has provided for transparent licensing procedure, the focus of the government's policy in the sector has been to attract foreign investment rather than to use the mining sector to create jobs. As a result, there are many areas of concern due to the governance of the sector. These include[195]:

1. Poor or Lack of Monitoring of Health Standards: Informal mining is largely done by people who have very little knowledge about the effects of chemicals on human beings. Many of these chemicals are known to be dangerous to human health. This knowledge is not readily available to many of the artisans and their communities. The result is that such

[194] Minerals and Mining Act, (note5) s 116 (2)

[195] Civil Society Legislative Advocacy Center, Policy Brief on Solid Mineral Sector for the National Assembly at 7 available at http://www.cislacnigeria.net last visited on 23/06/2014

mining activities are done without regards to health and safety regulations. Processing of the mined raw materials are even done at home (as the Zamfara Case Illustrates) without standard equipment and procedures. The result is that both workers and their communities get exposed to large doses of dangerous chemical concentrations which impact negatively on their health. The informality of this has made it difficult for the relevant agencies to monitor safety standards in the processing of minerals.

2. Environmental Degradation: Mining is destructive of the environment. This is why one of the requirements for granting license is the presentation of environmental impact assessment. However, because much of the mining is done informally or even illegally, no impact assessment is done for many of these sites. The result is that these mining activities contribute in exacerbating environmental degeneration. Non-enforcement of the requirement that miners should work to revert mined land back to its pre-mining situation after mining means that mine operators simply abandon exhausted mine sites, thus leaving the site degraded and susceptible to further environmental collapse.
3. Water Pollution: Water is used by miners to wash the mined minerals, often this water is from common water sources that communities used for drinking, irrigation, and other purposes. The use and access to water often leads to conflict over use and management of water sources. But there is even more serious problem. Mining results in polluting water sources. This is because the used water is often drained and emptied into water ways and eventually gets into community water sources. Such washed off water is highly toxic human beings, animals and to crops. In some places, high levels of radioactive and other toxic chemicals have been found in water sources which have been contaminated by used water from mines.
4. Impact on Agriculture: Agriculture and mining are related sectors such that regulating one may impact either positively or negatively on the other. Both sectors offer employment to the people in large numbers. But while agriculture is freely regulated, mining is strictly regulated. Thus, a balance is required to ensure sustainable use of land resources for the benefits of the citizens. The MMA fails to make a provision to ensure this balance. It only makes exemptions for lands occupied by town or village markets, cemetery, archeological sites, reservoir or dam.[196] In fact, the use of land for mining takes

[196] Minerals and Mining Act, (note5) s 3

priority over any other use as it is for 'overriding public interests'.[42] Using lands for mining purposes often affects the quality or fertility of such lands. In spite of the fact that a large proportion of Nigerians are employed in the Agricultural Sector, the country is a net importer of food items. In recent times there are both localized and generalized security problems in the country. Many farmlands are being lost to mining activities. This is particularly so since much of informal mining does not take steps to return the mined area to its pre-mining state. This loss of farmlands to mining activities is contributing to the overall food insecurity profile of the country, creating poverty and worsening living condition of the people. But is also engendering conditions for communal conflicts between miners and farming communities.

5. Loss of Means of Livelihood and Income: Historically, mining in Nigeria has been dominated by artisanal miners. This had provided employment and means of livelihood to many families. However, recent policy making with its emphasis on attracting foreign investment is threatening to end the means of livelihood of many people through the creation of conditions that would make foreign miners to displace artisanal miners. As part of the mining reform of the 2007, a regime of incentive was built into the Mining Act, 2007 so as to attract foreign mining companies. Some of these incentives include:
    i. Exemption from custom and import duties in respect of the plant machinery, equipment and accessories imported specifically and exclusively for mining operations;
    ii. Expatriate quota and resident permit in respect of the approved expatriate personnel; and
    iii. Personal remittance quota for expatriate personnel, free from any tax imposed by any enactment for the transfer of external currency out of Nigeria.
    iv. Tax relief for three years, and may be extended.
    v. Tax deductible reserves for environmental protection, mine rehabilitation, reclamation, and mine closure cost.[197]

    The consequence of these is that artisanal miners cannot compete with these foreign companies. This will thus result in the loss of their means of livelihood.

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[197] Minerals and Mining Act, (note5) section 22

6. A Site of Indecent Jobs: where companies are granted small scale mining lease they often employ workers without regards to national labour legislation. In many cases, they are paid below the minimum wage and they have no right to unionization and collective bargaining. They work under conditions that do not provide standards. Today they present the site of indecent work in the country. The Act has not made elaborate provision for the protection of workers in these mines and the regulators seem technically ill-equipped to deal with the situation.
7. Regime of Opacity and Lack of Accountability: The aim of the NEITI Act is to promote transparency, openness, disclosure and accountability with respect to the extractive industry, of which mining sector is part of. At the moment, there are no sufficient mechanisms through which transparency and accountability can be enforced into mining activities. The result is that government loses millions of Naira yearly not only to illegal mining but also through the lack of mechanisms to ensure proper accountability in the collection and receipts of revenue from mining activities.[198]
8. Incentives for de-Industrialization: One of the incentives the law provides is duty free importation of all mining equipment and plants. This will act as a disincentive for the local production and fabrication of mining equipment, tools and plants in the country. This is contrary to both skills and technology transfer aspiration of the country, and help to undermine industrialization in the country.

5.1.3 The NEITI Act 2007

The solid mineral sector is part of the extractive industry, thus must in addition to the main law regulating the sector be also covered by the provision of the NEITI Act which governs the extractive industry. However focus of the enforcement of NEITI provisions have tended to be concentrated on the oil and gas sector. Part of the problem is that the Ministry of Mines and Steel Development is only concerned with the implementation of Mining Act while seeing the implementation and monitoring of the Nigeria Extractive Industry Transparency Initiative (NEITI) Act as the responsibility of the NEITI Secretariat. What the NEITI Act seems to be suggesting is that small scale and artisanal miners may not be troubled by the need for transparency and accountability. This is not in line with international best practices.

[198] Cislac Policy Brief (note40) at 7

5.1.4 The 2008 Minerals and Metals Policy/Road Map for the Development of Solid Minerals and Metal Sector

These policies were mainly developed to pilot, strategize and encourage the development of the solid minerals sub sector of the industry. They set out objectives and designed strategies to attain the set goals. Fundamentally, the policies seem to focus on the realization of the government's economic agenda of expanding and liberalizing the sector for foreign investments in the sector. In other words, the goal is to reposition the sector to accommodate foreign participation. However, as noted above the framers of this policy did not have the improvement of artisanal mining in mind. More so, they were developed before the Zamfara incidence that killed many people. Thus, they have no much human or environmental face. The crisis in the sub-sector was not much of an issue then. Thus, one can argue that this policy framework is unhelpful in designing a robust legal and policy framework for artisanal mining in Nigeria.

5.1.5 Environmental Laws, Policies and Regulations

The objective of protecting human health and the general environment cut across all segments of mining activities in Nigeria and is covered by the applicable laws on environmental protection such as the NESREA Act. Thus, these legislations do not specifically deal with the health and environmental problems associated with small scale mining. In other words, the regulations are general in nature. However, because of the recent health problems associated with zinc poisoning in some areas of Zamfara State, it seems that small scale mining creates certain specific health problems calling for specific treatment. This may not necessarily invite a legislative intervention but it is indeed a major concern for artisanal miners in the country. This important because environmental protection is not merely a legislative issue but also a constitutional matter.[199]

5.2 Institutional Inadequacy

The regulatory body in respect of artisanal mining in Nigeria is the Artisanal and Small Scale Mining Department in the Ministry of Mines and Steel Development. Understandably, there are no similar departments in the state ministries of mines. In fact many states do not even have ministries of mines and mineral resources. The department in the ministry is largely unknown by the small scale miners in Nigeria. Apart from this disconnect, there is little to suggest that the

[199] See CFRN, 1999, s 20.

department is adequately manned by competent personnel. This is not merely a bureaucratic inadequacy but also legislative one because as discussed above, the MMA fails to make any provisions regarding the qualifications for the offices of both the Minster and the DG of the MCO thereby reducing these important offices to mere political offices for politicians. In essence, there is little to suggest that the MCO and the small scale mining department are manned by competent personnel. This may explain the rarity of information and records in this regard.

There is also the circuitous anti-federal prescription for the creation of the state mineral resources and environmental management committee by the MMA. Aside from this problem, the committee plays little or no role at all with regard to artisanal mining. In addition there has not been sufficient collaboration between the Ministry of Mines and that of Environment.
At the lower level, states and local governments can only do much. In the absence of constitutional empowerment to legislate, it is impossible to expect much oversight from the states and their respective local governments or even the traditional institutions.

5.3 Conclusion

One might argue that the growing health and environmental problems associated with artisanal mining cannot be disconnected from the legal framework. Starting with the constitution, there has not been any deliberate effort to address the peculiarity of small scale mining and its associated problems in Nigeria. Specifically, the MMA, 2007 devotes less than five sections to artisanal mining. This is clearly inadequate. The substance of the Act itself is biased towards large scale mining with emphasis on foreign investors. Thus, the objectives are not directly connected with small scale mining. The revenues from these miners seem unimportant to warrant a robust legal provisions. Yet the effects of inadequate regulations have been manifesting since 2011 with several deaths recorded from incidence of lead poisoning in Zamfara State.

CHAPTER SIX

SUMMARY, CONCLUSION, FINDINGS AND RECOMMENDATION

6.0 INTRODUCTION

The research critically appraised the legal framework regulating artisanal mining in Nigeria and this chapter concludes it by summarizing the work, pinpointing the research findings and making recommendations.

6.1 Summary

The research is summarized as follows:

Chapter one offers the background of the study. It discusses key issues such as the statement of problem, the basic research questions, objectives of the research as well research methodology. The available literature on the subject of artisanal mining were reviewed and it was found out that none was written specifically on the critical appraisal of the legal framework regulating artisanal mining in Nigeria. This research filled the gap left by other researchers and contributes to knowledge.

Chapter Two essentially deals with conceptual framework of certain key terms such as minerals, natural resources, mining as well as nature of artisanal mining. The methods of mining and impacts of artisanal mining were all examined.

Chapter three is essentially on international efforts towards regulating artisanal mining thereby discussing international best practices and other global efforts aimed at reducing the poor practices in artisanal mining as a basis for addressing whether the Nigerian legal framework regulating artisanal mining addresses the key issues involved.

Chapter Four examines the legal and institutional framework on artisanal mining in Nigeria. It identifies and discuses the legal and institutional framework on artisanal mining in Nigeria. This legal framework sought to regulate the activities of small – scale miners and ensure orderly mining in the entire country. The legal framework such as the 1999 Constitution of the Federal Republic of Nigeria, Nigerian Minerals and Mining Act, 2007, Nigerian Minerals and Mining Regulations 2011, 2008 Minerals and Metals Policy, the Road Map for the Development of Solid

Minerals and Metal Sector, 2012, Federal Environmental Laws, Policies and Regulations, The Regulatory Bodies such as the Ministry of Mines and Steel Development, Mining Cadastre Office, The Federal Ministry of Environment etc were equally examined.

Chapter Five critically appraised the legal framework identified in Chapter Four. It re-visit the said legal framework and identified its inadequacies as they relate to artisanal mining. Equally, the strength and capacity of the institutions established to regulate this form of mining was appraised.

Chapter Six concludes the research by summarizing the work, pinpointing the research findings and making recommendations.

6.2 Conclusion

Conclusively, Artisanal Mining is a significant sector for people's livelihoods and the national economy, but it was left in the hands of an informal group of untrained and ill-equipped artisans who carried out their activities unregulated in several communities in the country. Inappropriate legal and institutional framework for Artisanal Mining is the major cause of environmental degradation. Artisanal Mining operators are interested in benefits while environmental cost is not of immediate concern; it is an externality to them. The technology used in extracting gold through the use of mercury is creating a lot of pollution to the environment which affects water bodies and biodiversity. Artisanal Mining also poses a great health risk to the people in the sector as well as those in surrounding areas.

Mining legislation and regulations are often drafted, enacted to primarily address the needs and challenges of the large scale mining operators, but Artisanal Mining is giving a brief and insufficient reference.

However, the traditional form of mining or artisanal by which many individuals earn a living is not a subject of specific regulation in Nigeria. It is regulated under different legislative instruments, creating what might be termed 'regulatory confusion'. With the increasing poverty, income inequality and massive unemployment in the country many people are increasingly resorting to artisanal mining with little or no regard to any regulatory prescriptions. The

consequences of this in the recent times have been enormous. The Zamfara State lead mining by individuals has led to incalculable human and material damages, foremost of which was the recent incident of lead poisoning. It is evident that Mineral Laws in Nigeria are usually designed for industrialized mining with a view to promoting private investment and providing tax revenues for the state. Obviously, mining companies operate under technically qualified supervision and with access to required financial means. Other business, practical and legal necessities may also be required. Artisanal mining is often not capable of meeting legal requirements and or regulations designed for the medium or large scale mining. It is therefore, sometimes synonymous with informal or illegal mining because often miners are kept vulnerable and at the mercy of unscrupulous middle men. Countries with workable artisanal mining legislation demonstrate that informality is not a generic characteristic of this class of mining. In fact, artisanal mining can be a formal and legal means of earning a livelihood, and an opportunity to create more jobs and tackle the deepening poverty in the country.

ASM is becoming a major issue of concern and the most important issue is that of formalization and legal framework for regulation. Many countries lack effective legal framework on ASM. In Africa the most ASM-conscious region is the Southern Africa. While Namibia is developing a specific legislation on ASM, South Africa, Zimbabwe, Zambia and Lesotho all have made significant provisions on the rights of ASM operators in a legislation dealing with all forms of mining. However, Nigeria has only some few provisions under the MMA, 2007

6.3 Findings

After a thorough and meticulous study and analysis of the problem and all its ramification as indicated in the preceding chapters, the following findings are made to address the inadequacies of the existing legal instruments as they relate to the regulation of artisanal mining in Nigeria towards enhancing mineral resources development in Nigeria:

a. Low level of awareness of the regulatory requirements pertaining to artisanal mining in Nigeria. The people engaged in artisanal mining in Nigeria are mostly uneducated and obviously unaware of the legal and regulatory requirements before and while carrying out mining activities.

b. That the requirement of a registered cooperative body as a prerequisite for the grant of mining permits and licenses with regard to artisanal mining is somewhat tedious for the caliber of people engaged in this kind of mining, and thus may encourage an outright and deliberate breach of the law.

c. Having title to land is also another challenge obviously brought about by the provisions of the Land Use Act as miners may find it difficult to obtain valid title to the land wherein the mineral deposits might be available and easier to mine artisanal.

d. Environmental protection seems not to have been seriously regulated under the current legal and institutional frameworks as indicated in the practical happenings where artisanal mining takes place.

e. The regulatory and institutional frameworks have not comprehensively addressed the regulation and supervision of artisanal mining in Nigeria.

f. As a result of the failure to regulate and properly supervise artisanal mining in Nigeria, government is losing huge revenues and risking environmental and health hazards.

g. Going by the totality of the International Law Instruments on Artisanal and Small Scale Mining especially the Minimata Convection on Mercury, Nigeria has not enacted any specific local legislation to deal with the use of Mercury `in Artisanal Mining in the Country, neither incorporate same in the Mining Act, Regulations and the Policies.

6.1.3 Recommendations

1. It is important that artisanal mining has a specific legal treatment distinct from other mining activities such as large scale mining. The technical and economic specificity of artisanal mining associated with the internal diversity and social complexity in relation to other mining activities justifies the different treatment for this sub-sector.

The different treatment can be accomplished in the various ways. In some cases a special chapter is dedicated to artisanal mining in the mining law or code, or in others there is a separate law dedicated to artisanal mining. Some countries have a third approach in which

the mining law has a generic chapter that defines artisanal mining and other fundamental legal concepts but there is also a dedicated law and regulation for artisanal mining.

Regardless of the approach chosen, the important point is to have a legal treatment for artisanal mining that recognizes the special characteristics of artisanal mining in the mining regulatory system of the country. This is not currently the case in many countries.

The consequence is the exclusion of the artisanal mining from the legal world and/or a confusion of artisanal mining with other mining activities (because the mining law does not make a distinction between artisanal mining and large-scale mining for example). Where this situation occurs, it results in giving the same legal treatment for both, which may appear to be beneficial for all but is in fact an important cause of the informality or illegality of the artisanal mining. It commit the mistake of attempting to apply the same right and obligations, legal requirement and administrative procedures of large scale mining to the very different structural, economic and technical realities of artisanal mining, to the detriment of the artisanal mining sector.

2. MMSD and FMENV can work together to simplify the environmental protection requirements for Artisanal miners seeking a small- scale or Artisanal mining license. Options include the development of a general environmental permit, a collective EIA process, or an environmental information sheet (or similar approach) in place of the formal Environmental Impact Assessment and Environmental Protection and Rehabilitation Program currently required under section 119 of the Mining Act.

3. The legal requirement that Artisanal Miners forms cooperatives in order to obtain a mining license and / or extension assistance should be reconsidered

3. The Minerals and Mining Act, 2007 should be revised to make explicit and clear provision to the MCM and other international instruments regulating artisanal mining.