12

EXPLOITATION OF NATURAL RESOURCES AND RECLAMATION OF LAND IN NIGERIA: A CASE STUDY OF PLATEAU STATE

BY TOLU OGBORU, Ph. D* AND CHRISTIANA MANASSEH**

ABSTRACT

Modern mining involves the exploration and removal of minerals from the ground with minimum damage to the environment. This is unlike how mining was carried out many years back, particularly in developing countries. In Nigeria, a great deal of mining activities occurred in Plateau State where Tin mining (which the state was well known for) began in the 19- century. This activity subjected Plateau tin fields to gross environmental degradation and pollution. These environmental hazard was not considered nor remedied by the benefactors (colonial government) during the first forty six(46) years, thus leading to the devastation of substantial arable land. This paper examined mining practices in Plateau State and their impact on the land resources in the state vis-àvis the previous and extant provisions of the Mining and Mineral Acts, other laws and policies for reclamation of mined lands in Nigeria. It revealed that there was no legislation that required mining license holders to restore

** Legal Practitioner E-mail: christy-luid amail com

Lecturer, Faculty of Law, University of Jos, Jos Plateau State, E-mail, orborust@yahoo.com

mined lands to an environmentally sound condition on completion of mining activities. As a result, mined lands in Plateau State were left in their degraded form causing them to become death traps and health hazards to humans and the environment. Additionally, the Minerals and Mining Act 2007 failed to proffer solutions for the reclamation of such lands, it only provides for how current mineral title holders can reclaim or restore mined lands. The paper therefore brought to the force the need for these lands to be reclaimed by the government. Consequently, we concluded that there is need to review the present Minerals and Mining Act 2007 to reflect reclamation of abandoned mine fields as an avenue to promote individual rights to life and a healthy environment guaranteed under the Constitution of the Federal Republic of Nigeria 1999.

1.0 INTRODUCTION

Nigeria as a nation is blessed with numerous natural resources. These natural resources have over time been exploited for economic and developmental purposes. There are 34 different minerals which are distributed across the country's geology.

A few of them are: tin, gold, bitumen, columbite, lead, limestone, gemstone, feldspar, coal, tantalite, iron-ore, barytes, cassiterite, tale and bauxite in the hinterland and crude oil in the Southern part of Nigeria. Exploitation of natural resources across the country has resulted in untold environmental damage, particularly arising from after effects of the exploitation of non-oil resources such as tin, coal, iron ore and bauxite among others. Prior to the discovery of crude oil in Nigeria, the extraction and smelting of tin in Northern Nigeria, particularly Plateau State, began several years ago. This exploration remained a small scale activity, until 1904, when prospectors from the Niger Company discovered its source in the Jos-Bukuru-Ropp Area of Plateau State (then Benue - Plateau).

¹ Vision 2020 National Technical Working Group, "Economic Transformation Blueprint: Minerals and Metals Development", July 2009, 20 at < www.ibenaija.org >_ Accessed: 12/11/15.

^{&#}x27;S. J. Mallo and H. N. Wazoh, 'Reclamation of Abandoned Mined-Out Areas of Bukuru Rayfield' [2014] (8) Journal of Environmental and Food Technology, 2 http://www.iostriournals.org, Accessed: 28/08/15. 'Kponmworsa O. Omoruyi and Daniel T. Achi., 'Exploring Private Remedies for Pollution Damages under Nigerian Law: A Critical Appraisal' [2003] (5) J. Public Law & Constitutional Practice, 74

Fed Dept. Antiquities, National Museum Jos. 1979 The History of Tin Mining in Nigeria.

With this discovery, commercial exploitation of the deposits began Exploitation of tin on the Plateau was at its peak in 1943 with the production of 15,842 tons. However, production experienced a downward spiral by 1984 which affected tin mining in commercial quantity. Mining exploration have left a legacy of a derelict landscape covering about 316 square kilometers on the Plateau (about 4% of land area). These degraded mine fields make up about 60% of farm land area, with over 90% of same not reclaimed till date... Until 1946, mining activities in Nigeria were majorly carried out under poor legislative guide, particularly in respect to reclamation of mined fields. However, despite the existence of legislation requiring commercial mining companies to reinstate land damaged by open cast tin mining, only some three square kilometers of the 316 square kilometers affected by mining have been reclaimed, and most of this is as a result of state activity, not by benefactor companies as required by the 1946 Mining legislation. This paper sets out to examine the consequences of mining activities on the Plateau environment and the adequacy or otherwise of extant statutory framework on reclamation/restoration of abandoned mine fields resulting from the activities.

2.0 EXPLOITATION OF NATURAL RESOURCES ON THE PLATEAU

Mineral resources are important sources of national wealth. In harnessing them, they must pass through some vital stages which include exploration, mining and processing. Several notable environmental hazards arise in the course of this exploration, particularly, when proper attention is not given to environmental protection. The earliest methods of tir extraction involved the use of pick and shovel, with water used to separate the ore. This practice restricted exploitation of reserves within the surface, thereby depriving mining companies the opportunity to explore in commercial quantity. This

¹ M. J. Alexander, 'Soil Development on Mine Spoil on the Jos Plateau: Soil Profile Descriptions'. [1984] Report No. 1, Jos Plateau Environmental Resources Development Programme, University of Durham.

¹ Ibid.

A. Achor, 'Plateau Communities where Unclaimed Mining Ponds are Graves', Leadership (Abuja, 15[11] 14) http://leardership.ng/news Accessed 28:08\15

^{&#}x27; Ibid

¹ Mineral Ordinance 1946

[&]quot; Alexander (n.5) 44

[&]quot;I. Aighedion and S. E. Iyayi, 'Environmental Effect of Mineral Exploitation in Nigeria' (2) (2) International Journal of Physical Sciences, 33 cited in Joseph Yachim Awaomim, 'Effects of Abandoned Opened-Mine Pits on Property Values in Dorowa, Nigeria', a paper presented at the African Real Estate Society Conference, Kigali, Rwanda from 23-26/10/13, 1

immediately stirred the need for mechanized system at exploitation, which replaced the pick and shovel style with bulldoze, s in 1920. The first dragline excavator was introduced on Nigerian mine fields in the year 1924, thus heralding the start of major steep sided landscape changes, with variable multi-peaked mounds, deep paddocks (10-30 meters), which rapidly became flooded as soon as mining activities seized. Mining techniques expected to be adhered to by miners such as phased overburden removal, whereby top soil, subsoil and overburden are removed and kept separately were violated, as mining companies excavated simultaneously, without recourse to best practice, thereby degrading the environment. Investigations reveal that over 4,000 mining ponds dot the land scape of Jos, Plateau State. This led to the 1982 declaration which termed the central area of Plateau a "disaster area", due to the damage caused on the land, water and human health. This aroused the concern of government and the public on the need to reclaim abandoned mine fields (which are more popularly called 'mine ponds' because of the water that has filled many of the fields) on the Plateau:

Relevant legislation as at the time mining activities commenced in Nigeria seem to have been more concerned with exploitation of available natural resources, rather than the environmental impact of mining practices on the environment. Poverty and illiteracy on the part of host communities were major factors, which encouraged the nonchalant response on land reclamation from mining lease holders. This is because most indigenous original land owners who were compensated by these mining lease holders, thought that was good enough and being ignorant of the fact that mining companies were expected to reclaim mined lands by the provicious of the 1946 regulation, failed to agitate for same. Improper planning and monitoring of mining activities, in such a manner as to maximize the benefits by the government further led to the uncontrolled acts of environmental degradation by lessees.

3.0 THE IMPACT OF MINING ACTIVITIES ON PLATEAU STATE ENVIRONMENT

As mentioned earlier, commercial exploitation of tin by mining companies introduced the use of sophisticated machines aimed at maximizing profit. These

[&]quot;1. Hill, 'Land Resources of Central Nigeria: Agricultural Development Possibilities' [1978] (2B) The Jos. Plateau. Land Resource. Div.Dir. Overseas Survey Land Resource, 29

[&]quot; Achor A. (n 7)

[&]quot; Ibid

activities were not without gross environmental consequences, which are of particular concern to both host communities (where mining activities were directly carried out) and the government at large. Below are few environmental hazards that resulted from mining activities on the Plateau:

Land degradation/Pollution: Over ninety years after mining activities came to a halt, the tin mining landscape of Jos in Plateau State is characterized by a degraded landscape covering some 300 square kilometers of wasted land, visible in dumps and mounds, mined ponds, reservoirs, incessant soil destruction, mine tailings, and suspended loads of excavated sand, without a corresponding compensation and or acts of reclamation. The existing mine ponds and spoils are relatively large pits of varying depths covered with water, resulting from excavation of the earth during mining. The over 4,000 ponds dotting the landscape of Plateau State earlier mentioned, have over the years posed great threats to human lives and property. Most of these mining ponds are located in-between major roads, thus causing several irremediable accidents that have claimed lives. Several livestock are also reported to have been drowned in these ponds/mine wells. Furthermore, these mine fields are akin to time bombs because the surface layers are susceptible to sudden collapse which are likely to cause great damage to both human lives and property.

Water, Noise and Air Pollution: Pollution damage relates mainly to the manmade or man-aided alteration of chemical, physical or biological quality of the environment beyond acceptable limits. Pollution can also be defined as the discharge of toxic substances into the air, land and water and the release of heat in such quantities or concentrations as to exceed the capacity of the environment to render them harmless. The gradual release into the natural environment of toxic chemical pollutants such as heavy metals and other radioactive rays resulting from suspended loads of excavated soil and other waste materials dumped at unreclaimed mine field, have over the years polluted the atmosphere. Dust and noise arising from mining activities further contributed to acts of pollution, which could lead to severe health challenges causing respiratory infections, waterborne diseases, ear and or cancer challenges to mention but a few. These toxic chemicals, such as lead poisons released into waters, have over the years affected the health of inhabitants who have relied on such water sources for drinking and other domestic purposes. Some of these water sources used for irrigation farming have further depreciated the agricultural value of crops cultivated using same, thereby affecting

[&]quot;S. N. Jiya and H.D. Musa, 'Impacts of Derived Tin Mining Activities on Landuse/Landcover in Bukuru, Plateau State, Nigeria' [2012] (5)(5) Journal of Sustainable Development http://www.cesenet.org/jsd Accessed: 28/08/15.

[&]quot; Mallo and Wazoh (n 2) 253

[&]quot; Ibid

[&]quot;Aigbedion and lyayi, (n 11) 33.

the health of consumers of such food crops. The entree system is also not safe from these consequent damages, as natural resources are gradually depleting. Needless to say, the gross environmental damage suffered as a result of mining activities are till date fresh in the memories of surrounding communities, by virtue of the visible unreclaimed mine fields.

Loss of lives and Property: Great loss of human lives, livestock and property are increasingly being recorded on yearly basis in Plateau State. resulting from drowning in mine ponds, of humans and vehicles. Sometime in 2002, a tragic incident claimed the lives of five members of one family (the Andongs) in one day at Kuba village in Bokkos local government area of Plateau State. A car they were travelling in fell into one of the ponds. Again, sometime in May 2015, three teenagers got drowned in a mining pond near the Lamingo dam in Jos East Local Government area of Plateau State on their way back home after school. These are just a few amidst hundreds of lives often claimed by these mine ponds. Livestock owners and cattle rearers have over the years bemoaned their losses as these ponds claim the lives of their animals on a daily basis. This is because several abandoned mine pits are scattered all over the state, and have over the years been covered by grasses. It is therefore usually difficult to detect any danger when traversing such sites. These have been, and are till date, death traps for both human lives and animals. Many have been trapped in such pits and are only discovered after their death. Some of these pits are breeding habitats for poisonous snakes. which have over time hunted the inhabitants of several communities around abandoned mine fields."

4.0 LAND RECLAMATION

Land reclamation is the gamerium from the sea concettants or other mater posities and restoration of productivity or use to lands that have been degraded by human activities or impaired by natural phenomena. Natural occurrences or man's numerous interference with the environment through mining or exploitation of natural resources can alter the environment and or land scape. The need therefore to redeem the environment back to its initial position, prior to its alteration in the

[&]quot;Section 34 NESREA Act 2007

This incident is within the personal knowledge of one of the authors as the incident occurred next to her village – Butura Kampani in Bokkos Local Government area.

[&]quot;The teenagers (four of them) were Senior Secondary School (SS3) students who were writing their Senior School Certificate Examination (SSCE), being their final exams at that time. They went swimming in the pond on their way from school. Three of them drowned while the fourth one survived.

[&]quot; Achor, (n 7) 5

[&]quot;"Land Reclamation", OECD Glossary of Statistical Terms at< https://statis.oecd.org> Accessed 14/11/15.

course of such exploitation is the act of reclamation. Technically or specifically, reclamation is aimed at improving lands that have been degraded by mining and other similar activities.* Jordan also defined reclamation as "any deliberate attempt to return a damaged ecosystem to some kind of productive use or socially acceptable condition." Reclaimed lands are normally used for agricultural or infrastructural developmental purposes. Below is a breakdown of few ponds on the plateau, which research shows, may be reclaimed, and others that can be reclaimed but at huge cost because they can only be converted for agricultural purpose due to the rise in their water level.

TABLE 1: RECLAMABLE AND IRRECLAMABLE MINE PONDS ON THE PLATEAU.

S/N	APPROXIMATE AREAS	APPROXIMATE AREA(A) LXB(m²)	APPROXIMATE DEPTH (D)m	APPROXIMATE VOLUME (V)m²	RECLIMATION
ī	Yelva treatment plant (Pond)	45.500m²	; 19m	45,500m² X 9m -anto-	Irreclainable
<u>?</u> 3	Yelus block industry poed	1.500m²	· (a	1,500m² X 6m =9,000m²	kreelainable
3	Rativol top pond l	45.000m²	7m	16,000m² X 7m =112,000m²	Irrectainsable
1	Rainwell top posst2	16,000m²	70	45,000m ² X 5m +315,000m ³	irreclassiabit
5	New private University pond	6,000m;	3 5m	6,000m* X 3 5m =21000m*	Irreclasmable
6	Ray field Resort pond	360.000m;	12m	360,000m* X 12m =1,370,000m ³	Intellemable
1	Remany fish mangement farms intraction pond i	12,000m²	1.5m	12,000m2 X 1 5ms	Irreclamable
1	Renny fish integrated farms limited Pand 2	12.000m²	250	12.000m ² X 2m = 33800m ³	Irreclaimable
9	Remony fish integrated farms limited Pond 3	1,800m²) in	1,800m ² X 1.2m = 1,500m ³	Irrectamable
10	Rennsj fish integra ted farms limited Pond 4	20.000m²	Sea	20.000m ² X 7m = 112,000m ³	Reclaimable
II	Remay fish micgrated farms busied Pond 5	18,0000	1.5m	18,000m X 1.5m =27000m	Reclamable

W. R. Jordan, et al. 'Ecological Restoration as a Strategy for Conserving Diological Diversity' [1988] (12) Environmental Management, 55 – 72 cited in Fagbohun, O., Ibid.

Mallo and Wazoh (n.2) 31

12	Rennay fish unacquated Carnes humaed Pond 6	36,000m*	1 Sm	36,000m X 1 5ms -54000m³	Reclamable
13	Remay fish sategrated farms benefit Pond 7	16,900m°	2=	16,900m X 2m -33800m	Reclamable
14	Retinal fish integrated farms binned Pond 1	14,400m	1 5m	14,400m X 1 5m -21600m	Reclasmable
15	Reason fish untegrated Current hannied Pond I	1,250m²	1 2m	1,250m X 1 2m -1,500m	Reclamable
16	Fadacro pond	10.000m	¢m	10,000m X6m=60,000m	Reclamable
17	Gartero pond	2900m²) en	2\$00m; X 6m; - 9,000m	Reclamable
16	Rand pand	15,000m²	In .	, 15,000m X Im -15000m	Reclamable
19	Terrace pond	1,300,000m²	12 5m	13 00000m X 12 5m -16 250 000m	Reciprosèle

Source: Mallo & Wazoh, Department of Geology & Mining, University of Jos, Nigeria

The table above clearly represents measurements in water levels and space covered above mining ponds. The table further classifies ten (10) as reclaimable and (9) as irreclaimable mines due to increase in their water level. Note however, that many ponds tagged irreclaimable, can be reclaimed and used for agricultural and infrastructural development activities but not without huge financial commitments. As a matter of fact, most of the said irreclaimable ponds are already in use by fish farmers for agricultural purpose. Though, it should be noted that ponds converted for such agricultural purposes should be barricaded to ensure the safety of inhabitants.

Although legislation covering mineral rights, registration of leases and compensation for loss of land was introduced soon after 1904 in Nigeria, there was no provision relating to reclamation of mined fields. Expectedly, swathes of land were mined out but were never restored or reclaimed. This lacuna afforded lessees the opportunity to mutilate and abandon mined fields in degraded and polluted states, notwithstanding the adverse impacts of these practices on the environment and the lifestyle of host communities. Thereafter, the colonial administration introduced the Mineral Ordinance 1946. This was the first legislation that regulated mining activities in Nigeria and it provided for the reclamation of mined out lands. This was a welcome development. However, it failed to achieve its objective of ensuring that mining lease holders restored the lands to their original state. This was basically due to certain factors such as the nebulous manner in which some

provisions were couched," poor implementation strategies," illegal mining activities" and unwillingness on the part of mining companies to surrender their leases. Eventually, the Mineral Ordinance 1946 was replaced by the Minerals (Amendment) Act 1998 which was operational for a short while before being repealed by the Mineral and Mining Act 1999. The latter was thereafter repealed by the Minerals and Mining Act 2007 (MMA 2007).

During this pre-MMA 2007 period, the government set up Reclamation Agencies to enforce the provisions of the Mineral Ordinance 1946 on reclamation and restoration. The most effective of the agencies set up for this cause was the Mine Lands Reclamation Unit (MLRU) established in 1948 by the Northern Region government, aimed at reclaiming areas not retrospectively covered by the Mineral Ordinance and restoring old mines to farmlands." The MLRU reclamation policy aimed at finding methods that will rapidly restore damaged lands, and improve soil fertility. The MLRU reclamation process involved the removal of all spoil mounds by using them to infill abandoned mining paddocks, after which eucalypt plantations (forestation) were raised on recovered mine lands, with the hope of returning same to their original owners to be used for agricultural purposes. This was to ensure that the soil regains some form of lost nutrients, necessary for productive agricultural practice. This agency was able to reclaim about 61

[&]quot;Section 67 of the Mineral Ordinance which provided for reclamation of land was particularly problematic. The section provided that "the holder of mineral lease may be required by the mutaster to restore any area in respect of which mining operations has been carried out." The use of the word 'may' in that section exposed the term to several interpretations, most of which were in favour of lessees who frowned at requirement of reclamation of mined fields in order to minimize expenses. Furthermore, the section vested the Minister with the discretion to determine the need for reclamation rather than make it a strict requirement. The implication is that although lessees were expected to reclaim lands exploited by them, they were not bound by this provision to do so, except to directed by the minister, in the exercise of his discretion. It will be right a hold that where the minister extrer knowingly or by oversight failed to give this directive, the lessee was in no way bound to reclaim the land, no matter how degraded it was

Although, the colonial administration created Mine field reclamation agencies to enforce the provisions on the reclamation of mined out lands in the Mineral Ordinance of 1946, the administration was unable to ensure that the agencies discharged this responsibility.

[&]quot;Illegal mining, though conducted on a small scale, has over time contributed to land degradation on the Plateau. The covert operation of the illegal miners encouraged this problem as the legislation did not recognise them.

[&]quot;Even after excessive tin mining exploitation, lessees believed that further (in reserves may still exist on fields leased to them. Thus, they hoarded their titles instead of relinquishing same to the government for proper assessment and reclamation. The position of the law was that, until the lessees parted with their titles, Government had no right to enter into and reclaim any mining field, as that would amount to tresposs. This persisted until around 1948 when mining companies began experiencing financial instability resulting from low market value for tin, thereby making it almost impossible for most of them to allocate their scarce resources for reclamation. As a result of this fall in the value of tin, the mining companies ended their mining activities unceremoniously and abandoned the mine fields. See Alexander, M. J., 'A Review of the Demogratic, Political and Legislative Problems Encountered in the Reclamation of the Plateau Tin fields of Nigeria. [1989] Landscape and Urban Planning, 17.

[&]quot;The Agency was based in Bukuru, Jos. See Alexander, M. J., (n. 30)

mine reclamation areas, covering about 2.9 kilometers of farm lands in Jos, Plateau in 1967, Of the 61 reclaimed mine ponds, forestation was carried out in about 20 reclaimed mines only.

This progressive development however, ceased in 1969 due to instability in government and the tussle for control of the Agency between two ministries - Federal Ministry of Agriculture of the Northern Region Government and Federal Ministry of Public Works. In resolving the tussle, the unit was transferred from the then Ministry of Agriculture of the Northern Region Government, to the Ministry of Public Works, created under the new Benue-Plateau State. Unfortunately, equipment earlier devoted to this mission was immediately diverted for road construction, thereby defeating the ongoing reclamation program. The outright rejection of this policy by some customary owners of mine fields, who saw this development as a strategy on the part of the government to deprive them of their ownership to such reclaimed lands also contributed in ending this project. The persistent environmental hazards and threat to life and property posed by unreclaimed mine fields on the plateau continued until 1976 when the Federal government revisited and funded reclamation activities on the Plateau through the Ministry of Animal and Forest Resources." This policy was again confronted by the political differences between the federal and state government coupled with the misappropriation of allocated funds.

The Federal Government, still interested in alleviating the sufferings and consistent cries of communities located within these mine fields, further instituted the Joint Consultative Committee on Mines land Reclamation in 1979. This body was solely funded by the Federal government and saddled with the responsibility of overseeing reclamation activities in Nigeria. Reclamation at this point was approached from a different angle; contracts were awarded to contractors with competitive tenders, unlike the usual practice of disbursing these funds to state organization who end up misappropriating same. Two schemes, which were awarded these contracts, successfully

¹² M.J. Alexander, 'Reclamation after Tin Mining on the Jos Plateau Nigeria' [1990] (156) (1) Geographical Journal, 44~50

u ibid

[&]quot; Hill (n 12) 3

completed same. This project was again short lived when Nigeria was hit by economic crisis in 1983 and all funding for reclamation ceased³⁴, thus subjecting the Plateau environment and its inhabitants to daily threats, resulting from outstanding unreclaimed mine fields. Since then, attempts at reclamation have been insignificant as evidenced by the thousands of mine ponds still dotting the Plateau landscape till date. The question that then arises is: what is the status of those mined out lands under the current legal regime?

5.0. LEGISLATION FOR RECLAMATION OF ABANDONED MINEDLANDS

5.0.1 The Mineral and Mining Act 2007 with its Attendant Regulations and Policies

There are legislations, regulations and policies in force in Nigeria developed to promote activities in the mining sector. The extant ones are the Minerals and Mining Act 2007, the National Minerals and Metals Policy, 2008 (NMMP 2008), the National Environmental (Mining and Processing of Coal, Ores and Industrial Minerals) Regulations 2009 (the '2009 Regulation') and the Mineral and Mining Regulation 2011 (the 2011 Regulation). The MMA 2007 is the principal legislation that currently regulates mining activities in Nigeria and the other regulations and policy are to give effect to it. It is concerned with environmental protection, land reclaination, rights of hose communities and post exploration

[&]quot;The Ministry of Mines and Steel Development stated that it reclaimed two abandoned mines in Kuba, Barkin ladi area of Plateau State in 2013. See Ministry of Mines and Steel Development, 'Mid-term Report for the Minerals and Metals Sector', June 2013. The authors wish to observe that the mine ponds the Ministry claimed it has reclaimed still pose threats to the lives of the inhabitants of Kuba. Admittedly, the project to reclaim the ponds commenced but it was abandoned as only one of the mine ponds was covered halfway with sand. The second mine pond remains unreclaimed. That is the position till date.

^{*}This policy was developed by the Ministry of Mines and Steel Development in January, 2008.

²⁰ This Regulation was developed by the National Environmental Standards Regulation and Enforcement Agency (NESREA). The purpose is to minimize pollution from the Mining and processing of coal, ores and industrial minerals.

Again the Ministry of Mines and Steel Development issued this Regulations to establish a more coordinated and accountable solid minerals sector in the country and to stamp out the discretionary grant of mineral titles [Its purpose is to sets out the rules, procedures and processes for the acquisition of mineral titles and give effect to the Minerals and Mining Act No. 20 of 2007.

responsibilities. This extant statutory framework all made provisions for reclamation and restoration in one way or the other and they are touted as great improvements on the previous legislation and policies." However, what has come to the forc is that the statutory framework did not address the reclamation of mined lands that were explored before 2007; it only addresses those lands which are subjects of mining leases under it.

Section 114(1) of the MMA 2007 provides that "The Minister shall by order require the grantee of a mining lease to restore any area in respect of which mining operation has been, is being or is to be carried out, on or after the date on which this Act comes into operation". While section 115 stipulates that "Where land which is subject of a mining lease has been exploited, the Reclamation mined out areas" shall be restored by the applicant under the condition of its grant otherwise the relevant provision of section 10 of this Act shall apply." It is clear from section 114(1) that the land restoration requirement is expected of a mining lease holder under the Act. Section 115 on the other hand is confusing the way it is couched as highlighted in italics. As a result, the intention of the drafters is not clear. It is likely this was as a result of typographical errors. If that is the case, we can then deduce that what the drafters meant to write is "Where land which is the subject of a mining lease has been exploited, the "..." mined out areas shall be restored by the applicant under the condition of its grant otherwise the relevant provision of section 10 of this Act shall apply." The inclusion of the italicized word 'the' and the omission of 'Reclamation' gives a clearer meaning to the section. By virtue of this provisions, reclamation, as a post exploration requirement is mandatory, and failure to comply amounts to violation on the part of the lessee. This indeed is a way forward in the mining industry as it is a great improvement on the previous legislation, particularly in relation to environmental protection. However, there is still no indication that previously mined out lands are within contemplation of the Act.

A perusal of section 10 of the Act which section 115 alluded to, does not indicate so either. Section 10 states that the Mining Cadastre Office shall

[&]quot;See sections 114(1) & 115 of MMA 2007 which provide for restoration and reclamation of lands under the Act and the 2009 Regulation, reg 13(2). See also the Nigeria Extractive Industries Transparency Initiative (NEITI), 'Scoping Study on the Nigerian Mining Sector', Final Report, October 2011, 42 at <www.eiti.org > Accessed 12/11/15. The members of NEITI noted in this report that the extant statutory framework mentioned in this paper provide adequate public disclosure requirement on mining operators." Emphasis added

collect a fee for processing of applications for mineral titles and an annual service fee for administrative and management services rendered by the Cadastre. The Mining Cadastre Office was established by the MMA 2007 for the purpose of the administration of Mineral titles and the maintenance of the cadastral registers. It is not clear how the payment of fees to an establishment that has nothing to do with reclamation of lands relate to the requirement of reclamation of land by the mining lease holder. The department created to address the issue of land reclamation is the Mines Environmental Compliance (MEC) Department. Section 18(d) of the MMA 2007 states that the MEC, amidst other functions, should liaise with relevant agencies of Government with respect to social and environment issues involved in mining operations, mine closure and reclamation of land. However, MEC can only become involved in the reclamation of pre-2007 mined lands to the extent that the MMA permits it.

Regulation 13(2) of the 2009 Regulation, states that in the event of a pollution resulting in an impact on the environment whether socio-economically or health wise, the facility shall as specified in Schedule 4 to these Regulations, be responsible for the cost of clean-up, remediation, reclamation, compensation to affected parties and cost of damage assessment and control. In view of the requirement that the facility is responsible for reclamation, it becomes almost impossible for reclamation to take place for many pre-MMA 2007 mined fields, particularly on the Plateau, because the mining leases have been determined and quite a number of the mining companies have ceased to exist. As a result, no operator can be held responsible for the reclamation Furthermore, the 2000 Regulation requires the owner or operator of a facility to submit to NESREA an insurance bond for Reclamation plan. Obviously, this requirement concerns current operators of mining facilities that are holders of mining title. Since this Regulation was made pursuant to section 26 of the NESREA Act, 2007 which empowers NESREA to make regulations for the protection and enhancement of the quality of land resources among other resources, one wonders what it portends for the role of NESREA in this aspect of environmental protection. This is particularly so because NESREA is the enforcement Agency for environmental standards, regulations, rules, laws, policies and guidelines. It

[&]quot; See section 5 of the MMA 2007.

^o See Schedule 4, item (a) of the Regulation. This is pursuant to regulation 13(2) of the Regulation.

is therefore expected to enforce this Regulation and others that relate to the protection of the environment. However, in a situation such as this where the extant laws are silent on the reclamation of pre-MMA 2007 mined lands, the role of NESREA in ensuring this happens is unclear.

The sum of the foregoing is that no provision was made by the MMA 2007 and its attendant regulations for reclamation of pre-MMA 2007 abandoned mined lands and we consider this a serious omission by the legislature. As it is, there is no legislation that directs or empowers any establishment to address the reclamation of the degraded lands in the country. Consequently, threat to land, life, health and the environment of the Plateau people lingers on. Meanwhile, it is only the Federal government that has the power to legislate on mining matters and by extension, the attendant consequence of mining operations on the environment. So since a federal legislation is absent, the State government is somewhat incapacitated.

5.0.2 The Constitution of the Federal Republic of Nigeria (As Amended), 1999

Even though the foregoing statutory framework did not provide for the reclamation of pre-MMA 2007 mined lands, the provisions of the Constitution of the Federal Republic of Nigeria (As Amended), 1999 (CFRN 1999) can be relied on to address the reclamation of lands in the country. Section 33 of the CFRN 1999 provides that 'every person has a right to life, save in execution of the sentence of a court in respect of a criminal offence of which he has been found guilty in Nigeria." A citizen who is protected by this right cannot enjoy it in or within an environment threatened by degradation and pollution. This is because having a safe and healthy environment is a pre-requisite for the enjoyment of this fundamental right to life. The Judiciary in some parts of the world, including Nigeria have interpreted the right to life as including the right to a healthy environment." In SERAC v Nigeria, the African Commission on Human and People's Rights linked environmental protection to the right to life, health, food and property. Also in Gabcikovo Nagymoros' Case, "Judge Weeramantry of the

[&]quot;Hem 39 under the Second schedule to the CFRN 1999

[&]quot;Section 33 CFRN 1999. Emphasis added.

[&]quot;D. Olawuyi, The Principles of Nigerian Environmental Law (Afe Babalola University Press, 2015) 232. Sec Subhash Kumar v State of Bihar AIR 1991 SC 420; Ghemre v Shell (2005), Federal High Court, Benin Unreported Suit No. FHC/B-CS/53-05

^{*(2001)} AliRLR 60 (ACHPR 2001), Communication 155/96.

[&]quot;(1998) 37 ILM 162, 206

International Court for Justice was of the opinion that the protection of the environment is a sine qua non for some human rights including the right to life. Leaving mine ponds uncovered or allowing them to be filled with unclean, toxic water endangers the lives of the indigenous people living in those areas as discussed earlier in this work and is a violation of their right to life. In the case of Kendra v Uttar Pradesh," the Supreme Court of India dealt with issues relating to the environment and ecological balance. The petitioner alleged that illegal mining in the Dehra Dun area adversely affected the ecology and environment. The Court upheld the right to live in a healthy environment and issued an order to cease mining operations despite the investment of money and time by the company.

In addition, section 20 of the CFRN 1999* provides for environmental protection and states that "the state shall protect and improve the environment and safeguard the water, air and land, forest and wildlife of Nigeria." From this provision, the Government has an obligation to safeguard, among other resources, the land of Nigeria. It is therefore the responsibility of the Government to ensure that degraded lands resulting from mining activities are reclaimed. Reclamation is the only way by which the government can protect the land resources that have been damaged as a result of mining activities. Reclamation of the visibly degraded Plateau environment is no exception to this responsibility. The argument that section 20 of the Constitution is merely directional and non-justiciable by virtue of section 6(6)(c) of the CFRN 1999⁵⁰ can no longer be used by the government to avoid responsibility in the light of the current jurisprudence that recognizes the relationship between human right and the environment. Functionary, a recognizes that this responsibility of the state is entrenched in the fundamental human rights guaranteed by the Constitutions of nations and the African Charter on Human and People's rights. Article 24 of the African Charter on Human and People's Rights provides that all peoples shall have the right to a general satisfactory environment favourable to their development. This is a clear recognition of the fact that a clean environment has significant impact on the survival of a people. Anderson' captures this aptly when he stated that.

227

[&]quot; AIR 1985 SC 652

[&]quot; Ibid

[&]quot;The section states that the Judicial powers vested by the Constitution shall not extend to "...any issue or question as to whether any act or omission by any authority or person or as to whether any law or any judicial decision is in conformity with the Fundamental Objectives and Directive Principles of State Policy set out in Chapter II of this Constitution."

Environmental protection may be cast as a means to the fulfillment of human rights standards. Since degraded physical environment contributes directly to the infringement of human right to life, health and livelihood, acts leading to environmental degradation may constitute to immediate violation of internationally recognized human rights. The creation of a reliable and effective system of environmental protection will ensure the well-being of future generations as well as the survival of those persons, often including indigenous or economically marginalized groups, who depend immediately upon natural resources for livelihood.

Besides, non-justiciability of the Fundamental Objectives and Directive Principles of State Policy under which section 20 falls, simply means that "their enforcement cannot be compelled by a Court, rather it is dependent on the priorities of the Government in power." It is a known fact that any responsible government will make the well-being and survival of its citizens as laid down in section 20, a priority without being compelled to do so. It is therefore imperative to ensure that state obligation protecting this fundamental right to life includes the duty to ensure high level of environmental protection necessary to enjoy the life so protected.

6.0 THE WAY FORWARD

Several years after mining exploration began in Nigeria, particularly on the, Pinnu, and Forty (40) years after the introduction of legislation covering reclamation and restoration of mine ponds or fields, it is disheartening to remise that less than 1% of the area damaged by mining activities has been reclaimed. Consequently, we recommend the following as a way forward in making reclamation of abandoned mine fields in Plateau State, as well as in of or States, a reality.

The absence of any legislation in relation to reclamation of prior abandoned mine ponds has raised the need to legislate on same in ensuring that citizens right to life is protected and their well-being assured. Consequently, the

⁴⁴ M. Anderson, Human Rights Approach to Environmental Protection: An Overview in Human Rights Approach to Environmental Protection' (Clarendon Press 1996) 2

¹⁰ N. Ekanem, "National Assembly should Make Chapter 2 of the 1999 Constitution Enforceable" The Daily Independent (Abuja, 12 /01/11) in Olawuyi, (n.45) 238.

National Assembly need to, as a matter of urgency, review the Minerals and Mining Act 2007 with the aim of addressing reclamation of abandoned mine fields. The 2009 Regulation also needs to be reviewed by NESREA in order to bring it in line with the objective being proposed in this paper.

In the meantime, in view of the provisions of section 20 and section 33 of the CFRN1999 as enunciated in this discourse, the Federal government in conjunction with the Plateau State government, should act proactively by proceeding to assess the state of the degraded mine fields and the threat they pose to lives and property. They should then embark on reclamation projects, aimed at salvaging the land and saving its inhabitants from further calamities. By this, the government would have fulfilled its obligation as set out in section 20.

The paper also proposes that enlightenment or awareness programs should be organized by NESREA and the Ministry of Mines and Steel Development to educate citizens on their right to life as enshrined in the Constitution in relation to the environment and their need to protect the environment in which they live against all forms of degrading acts. People need to know that protecting the environment from harmful impacts of mining activity is a shared responsibility between them, the Government, mining lease title holders and the civil society.

7.0 CONCLUSION

This work revealed environmental impacts resulting from mineral exploitation on the Plateau. It further examined the challenges relating to this activity and the need for reclamation of the lands adversely impacted by it. It further reviewed the applicability or otherwise of relevant legal regimes on reclamation.

It is common knowledge that the Nigerian government is poised to develop the Solid Minerals sector in the country in a bid to diversify the economy. However, the government cannot solely focus on developing the sector while forgetting the glaring environmental challenges confronting Nigerian citizens residing in communities degraded by mining activities. Sustainable development is today, an international phenomenon pursued by both developed and developing Nations. If mining is conducted in a way that will not degrade the environment, it will help achieve the goal of sustainability but having considered the adverse impacts of mining activities on the environment, the need for reclamation of abandoned mine fields cannot be