

THE NEED FOR LEGAL INTERVENTION IN ADDRESSING THE IMPACT OF NOISE POLLUTION ON REPRODUCTIVE HEALTH IN NIGERIA

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Abstract

Noise pollution, an escalating environmental issue, significantly impacts human health and performance. Urbanization and industrialization contribute to pervasive noise from traffic, machinery, and social activities. Noise, defined as unwanted or harmful sound, varies in its effects based on individual sensitivity and environmental context. Sounds exceeding 80dB are particularly disruptive. Noise pollution originates from natural sources, such as insects and weather, and manmade activities, including industrial operations and urban traffic. In Nigeria, inadequate urban planning and unreliable electricity supply, leading to widespread use of noisy generators, exacerbate the problem. Social and religious events further contribute to environmental noise, affecting urban dwellers' wellbeing. The consequences are extensive, impacting physiological, behavioural, cardiovascular, and mental health, leading to hearing loss, sleep disturbances, reduced concentration, and heightened stress. Vulnerable populations like children and the elderly are particularly affected. Wildlife and reproductive health are also adversely influenced, with noise linked to reduced fertility and adverse pregnancy outcomes. The National Environmental Standards and Regulations Enforcement Agency (NESREA) Act addresses noise pollution through standards and regulations, but enforcement is hindered by political interference and inadequate training. This article recommends that strengthening enforcement mechanisms and integrating noise pollution considerations into health policies are crucial for improving public health and environmental quality in Nigeria.

Keywords: *Noise, Noise Pollution, Environmental law, Environmental Agencies, Reproductive Health.*

Introduction

Noise pollution is a significant environmental pollutant that directly impacts human performance.¹ Human survival and health heavily depend on a conducive environment; disruptions can lead to health issues.² Urbanization, civilization, and industrialization often bring noise pollution. The term "noise" comes from the Latin word "nausea," meaning 'unwanted

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¹Awosusi, Ajoke Olukemi and Akindutire, Isaac Olusola 'Perceived Health Effects of Environmental Noise Pollution on the Inhabitants of Ado-Ekiti Metropolis, Ekiti State, Nigeria' (2014) 4(26) *Journal of Biology, Agriculture and Healthcare* 106 <www.iiste.org> accessed 20 May 2021.

²Otukong, I. T. O, 'Environmental Pollution and Emerging Health Hazard: the Nigerian Scenario' (2002) 7(1) *Journal of General Practice* 34

sound' or sound that is loud, unpleasant, or unexpected.³ Noise primarily stems from human activities, especially urbanization, transportation, and industry development.⁴

Noise pollution is increasingly prevalent yet often unnoticed, even in developed countries. According to the World Health Organization, noise in large cities is the third most hazardous type of pollution after air and water pollution.⁵ Individuals have varying sensitivities to noise, and they are affected differently at home and work.⁶ Some people can hear frequencies that others cannot detect. Sound is measured in decibels (dB). A whisper measures 20 dB, noise in a quiet office measures 40 dB, normal conversation is 60 dB, and sound levels above 80 dB are considered noise.⁷ Noise is classified as pollution due to its harmful and unwanted sound emissions into the environment.

Reproductive health encompasses all reproductive processes, functions, and systems at all stages of human life. It means having a satisfying and safe sex life, the ability to reproduce, and the freedom to decide if, when, and how often to do so. Both men and women have the right to access safe, effective, affordable, and acceptable family planning methods. They should also have access to appropriate healthcare services and a supportive environment to ensure safe pregnancy and childbirth, giving couples the best chance of having a healthy infant.⁸ Reproductive health is a crucial component of health and a key determinant of quality of life.⁹

This article aims to demonstrate that noise pollution negatively affects the reproductive health of people living in polluted environments, highlighting the need for legal frameworks to protect the reproductive health rights of these individuals. Although various laws exist against noise pollution and for the protection of reproductive health, they have not adequately safeguarded the rights of those affected by reproductive health issues caused by noise pollution. This work will

³Narendra Singh and SC Davar, 'Noise Pollution Sources, Effects and Control' (2004) 16(3) *Journal of Human Ecology* 181

⁴ Ibid

⁵ C Lavanya, and R Dhankar and S Chikara, 'Noise Pollution: An Overview' (2014) 6(5) *International Journal of Current Research* 6536.

⁶ P.A. Savale, 'Effect of Noise Pollution on Human Being: Its Prevention and Control' (2014) 8(4) *Journal of Environmental Research and Development* 1026

⁷ Awosusi, and Akindutire, (n1) *ibid*

⁸ UNDP/UNFPA/WHO/World Bank, 'Social Science Methods for Research on Reproductive Health Topics' (Geneva, UNDP/UNFPA/WHO/World Bank Special Programme on Research, Development, and Training in Human Reproduction, 2006) <whqlibdoc.who.int/hq/1999/WHO_RHR_HRP_SOC_99.1.pdf> accessed 12th May 2024.

⁹ United Nations Population Information Network (POPIN), Guidelines on Reproductive Health (Geneva, United Nations Population Information Network (POPIN), 2002) <www.un.org/popin/unfpa/taskforce/guide/iatfrehp.gdl.html> accessed 12th May 2024.

analyze existing laws and advocate for their review to better protect victims of reproductive health disorders resulting from noise pollution.

Sources of Noise

The sources of noise may be natural or manmade. Natural sources include sound from bugs, birds, weather, etc.

Natural Sources of Noise Pollution

a. Bugs

Insects can be a significant source of natural noise pollution. Examples include crickets chirping on summer nights and the vast swarms of cicadas found globally, demonstrating that bugs can generate substantial noise.¹⁰

b. Weather

Weather is a highly variable and often distressing source of noise pollution. High winds and storms can drown out other sounds and induce fear, even without posing an actual threat.¹¹

c. Birds

Birds are inherently noisy creatures, frequently singing and chirping. During migration periods, however, their presence and noise may decrease. For nearby residents, excessive bird noise can create stressful living conditions.¹²

Manmade Sources of Noise Pollution

Manmade noise sources are categorized into industrial and non-industrial sounds.

a. Non-Industrial Noise

Non-industrial noise originates from activities such as traffic, electricity generators, religious services, and social events.¹³

¹⁰Lavanya, and Dhankar and Chikara, (n5) 6537.

¹¹ Ibid

¹² Ibid

¹³ Ibid

b. Traffic Noise

Traffic noise has become a significant issue due to inadequate urban planning.¹⁴ It is the most pervasive form of noise pollution, causing considerable annoyance.¹⁵ This noise stems from a high volume of vehicles, including trucks, cars, and motorcycles. Urban environments with narrow streets and tall buildings amplify traffic noise. Additionally, emergency vehicles, security agents, and government officials' vehicles contribute to the noise.¹⁶ Sound levels of 80 dB and above are physically irritating and comparable to traffic noise on a busy street.¹⁷

c. Electricity Generators

The demand for electricity in homes, workplaces, and industries is high. Due to unreliable power supply in Nigeria, individuals and businesses rely on generators, which produce significant noise and emit harmful smoke. Olokooba, *et. al* observed that apart from the fact that the smoke emitted from the generating plant, deplete the ozone layer and is considered as harmful, the noise from generators is equally hazardous.¹⁸ Noise pollution is further exacerbated by recording houses and businesses using loud music for promotions.¹⁹

d. Religious Services

Loud worship in religious homes is another noise source. Public address systems in temples, mosques,²⁰ and churches generate significant noise pollution, especially during night vigils and early morning prayers. In Nigeria's multi-religious society, these activities are common, with loudspeakers and other noise-making devices contributing to the problem.

¹⁴ P Debasish and B Debasish, 'Effect of Road Traffic Noise Pollution on Human Work Efficiency in Government Offices, Private Organizations, and Commercial Business Centres in Agartala City Using Fuzzy Expert System: A Case Study' in Awosusi and Akindutire, (n1) 107

¹⁵ E Öhrström and A Skånberg, 'Sleep Disturbances from Road Traffic and Ventilation Noise: Laboratory and Field Experiments' (2004) 271(1 & 2) *Journal of Sound and Vibration* 279–296

¹⁶ Awosusi, and Akindutire, (n1) 107.

¹⁷ Ibid

¹⁸ S.M Olokooba, and I. Ibrahim and M.A Abdulraheem-Mustapha, 'Noise Pollution: A Major Catalyst to Climate Change and Human Health Catastrophe' <unilorin.edu.ng/.../work%20shop%20NOISE%20POLLUT.ION.pdf> accessed 9th May, 2024

¹⁹ O. Anomohanran and J.E.A Osemeikhian, 'Comparative Noise Pollution Study of Some Major Towns in Delta State, Nigeria' (2005) 11(2) *Global Journal of Pure and Applied Sciences* 285–290.

²⁰ Singh and Davar, (n3) 183

e. Social Events

Social events, particularly in south-western Nigeria, are notorious for noise pollution.²¹ Laws regulating noise are often ignored during marriages, parties, and clubbing. High-volume music and all-night dancing, sometimes even obstructing highways, make it difficult to escape the noise.²²

f. Industrial Noise

Industrial noise pollution originates from activities like welding, hammering, drilling, and operating machinery.²³ This noise affects both workers and nearby residents, creating severe noise problems.

Companies in the oil and gas industry, involved in extracting and refining crude oil, produce considerable noise. Oil refineries, processing crude oil into products like gasoline and diesel, are large industrial complexes with extensive machinery.²⁴ These processes release chemicals into the atmosphere and generate noise pollution from machines like dryers, boilers, and cranes.²⁵ Gas flaring, a significant aspect of crude oil production,²⁶ also contributes to noise pollution, affecting nearby residents and workers.²⁷

²¹ M.O Ajayi and D.T Eyangndi, 'An Examination of Noise Pollution: A Call for Regulation and Stringent Enforcement of Existing Laws' (2018) 1(1) *Ben Idahosa University Journal of Private and Property Law* 96

²² Ibid

²³ Ibid

²⁴ Joseph Omoniyi Basorun and Isaac Oluwadare Olamiju, , 'Environmental Pollution and Refinery Operations in an Oil Producing Region of Nigeria: A Focus on Warri Petrochemical Company' (2013) 2(6) *IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSRJESTFT)* 18 <www.iosrjournals.org> accessed 9th May 2024

²⁵ Ibid

²⁶ Ovuakporaye Simon Irikefe and Igweh C. John and Aloamaka Chukwuma Peter, 'Impact of Gas Flaring on Cardiopulmonary Parameters of Residents in Gas Flaring Communities in Niger Delta Nigeria' (2016) 15(6) *British Journal of Medicine and Medical Research* 10; J.N. Egwurugwu and A. Nwafor, 'Prolonged Exposure to Oil and Gas Flares Ups the Risks for Hypertension' (2013) 1(3) *American Journal of Health Research* 65–72 <<http://www.sciencepublishinggroup.com/j/ajhr>> accessed 12 May 2024.

²⁷ E.I Seiyaboh and S.C Izah, 'A Review of Impacts of Gas Flaring on Vegetation and Water Resources in the Niger Delta Region of Nigeria' (2017) 2(4) *International Journal of Economy, Energy and Environment* 49 <[doi:10.11648/j.ijeee.20170204.11](https://doi.org/10.11648/j.ijeee.20170204.11)> accessed 12 May 2024.

Consequences of Noise Pollution

Globally, noise pollution constitutes a significant public health issue, disrupting environmental tranquillity and adversely affecting human health. This is equally pertinent in Nigeria,²⁸ where noise exposure is increasingly recognized as a critical environmental public health concern. Prolonged exposure to noise can be detrimental to health,²⁹ with the extent of damage dependent on the intensity of the sound. Noise pollution poses hazards not only to humans but also to other living organisms. The effects of noise pollution can be categorized as follows:

Physiological Effects

Noise impacts physiological functions by accelerating pulse and respiratory rates.³⁰ Exposure to high noise levels can lead to hearing loss,³¹ with substantial evidence indicating that continuous noise exposure can damage sensitive structures within the ear,³² causing either permanent or temporary hearing impairment. Medical research suggests that noise can precipitate heart attacks³³ and cause chronic conditions such as hypertension or ulcers.³⁴ Additional effects include annoyance, muscle tension, nervous irritability, and strain.³⁵ Physiological parameters such as breathing amplitude, blood pressure, heartbeat rate, pulse rate, and blood cholesterol are also affected.³⁶

Behavioural Effects

Continuous exposure to excessive noise can severely affect human health and behaviour. Sound sleep is crucial for optimal physiological and mental functioning, yet noisy environments significantly contribute to the prevalence of primary sleep disturbances.³⁷ Noise exposure

²⁸Erimma Gloria Orie, 'The Legal Imperatives for Regulating Noise Pollution in Nigeria in the Quest for Sustainable Development: Lessons from India' (2016) 2(4) *International Journal of Business and Applied Social Science* 53.

²⁹ C.A Boateng and G.K Amedofu, 'Industrial Noise Pollution and its Effects on the Hearing Capabilities of Workers: A Study from Sawmills, Printing Press and Corn Mills' (2004) 11(12) *African Journal of Health Sciences* 55–60 in AO Awosusi and IO Akindutire, (n1) 108

³⁰Savale, (n6) 1030

³¹ R.J Donatelle, *Access to Health*. (7thed. New York. Benjamin Cummings Publishers, 2002)

³²Awosusi, and Akindutire, (n1) 106.

³³Savale (n30) *ibid*.

³⁴ *Ibid*

³⁵ *Ibid*

³⁶ J. Xie and others, 'Clinical Review: The Impact of Noise on Patients' Sleep and the Effectiveness of Noise Reduction Strategies in Intensive Care Units' (2009) 13(2) *Critical Care* 208.

³⁷Awosusi, and Akindutire, (n1) 106

correlates with increased sleep stage changes and awakenings,³⁸ leading to sleep disturbances Such as difficulty falling asleep, altered sleep patterns or depth, and awakenings, potentially necessitating the use of sleeping pills or ear plugs.³⁹

Noise also impairs concentration. Studies reveal that chronic noise exposure negatively affects cognitive function and comprehension.⁴⁰ Children exposed to noise exhibit greater difficulties concentrating compared to peers in quieter environments.⁴¹ Research indicates impaired cognitive development in children residing or studying near noise sources such as highways and airports.⁴² These findings substantiate that noise increases errors and decreases motivation, thus hindering task performance in educational and workplace settings. Noise can cause pain, ringing in the ears, fatigue, and reduced performance.⁴³

Cardiovascular Disturbances

Emerging evidence suggests that noise pollution may be a risk factor for cardiovascular disease. Acute noise exposure triggers nervous and hormonal responses, leading to elevated blood pressure, increased heart rate, and vasoconstriction.⁴⁴ If the exposure is sufficiently intense, there is a notable increase in heart rate, blood pressure, and stress hormone levels.⁴⁵

Disturbances in Mental Health

While noise pollution does not directly cause mental illness, it is believed to accelerate and intensify the development of latent mental disorders.⁴⁶ Adverse effects potentially resulting from noise pollution include anxiety, stress, nervousness, nausea, headaches, emotional instability,

³⁸Olokooba, Ibrahim, and Abdulraheem Mustapha, (n18) Ibid.

³⁹ A.O Olaosun and O. Ogundiran and J.E. Tobih, 'Health Hazards of Noise: A Review Article' (2009) 3(3) *Research Journal of Medical Sciences* 115–122.

⁴⁰ S.A Stansford and M.P. Matheson, 'Noise Pollution: Non-auditory Effects on Health' (2003) 68(1) *British Medical Bulletin* 243–257.

⁴¹ K.D Kryter, *The Effects of Noise on Man* (2nd edn, Academic Press, Orlando 1985).

⁴² G.W Evans and S.J Lepore, 'Non-auditory Effects of Noise on Children: A Critical Review' (1993) 10 *Children's Environments* 42–72.

⁴³ ShreerupGoswami and others 'A Study on Traffic Noise of Two Campuses of University, Balasore, India' (2011) 32(1) *Journal of Environmental Biology* 105–109.

⁴⁴ P.H Bhagwat and P.M Meshram, 'Study of Noise Pollution during Ganesh Utsav in Yavatmal City' (2013) 2(1) *International Journal of Pharma and Chemical Sciences* 496–498 in P.A. Savale, 'Effect of Noise Pollution on Human Being: Its Prevention and Control' (2014) 8(4) *Journal of Environmental Research and Development* 1030.

⁴⁵ Ibid

⁴⁶Savale (n44)

argumentativeness, sexual impotence, mood changes, increased social conflicts, neurosis, hysteria, and psychosis. Particularly vulnerable are children, the elderly, and individuals with underlying depression.⁴⁷ Psychiatrists and psychologists have observed that noise contributes to physical health problems, causing tension and issues such as speech interference, annoyance, fatigue, sleep interference, and emotional distress.⁴⁸ In industrial settings, noise disrupts efficiency and communication, increasing the likelihood of accidents.⁴⁹ Ultimately, noise impairs task performance in educational and workplace environments, increases errors, and reduces motivation for reading and problem-solving.⁵⁰

Effect of Noise on Wildlife

Noise pollution also impacts animals and other living organisms. For example, birds are known to avoid areas where noise levels exceed 100 dB,⁵¹ and mammals, fish, and birds may experience miscarriages.⁵²

Effect of Noise on Reproductive Health

Various studies indicate that noise pollution adversely affects reproductive health in both men and women. A study by Kyoung and JinYoung found that residential noise exposure over four years significantly correlated with male infertility diagnoses. Men exposed to higher noise levels (Q2-Q4) were significantly more likely to be diagnosed with infertility compared to those with the lowest noise exposure (Q1).⁵³ Another study linked noise exposure in occupational settings to lower testosterone, LH, FSH, and prolactin levels, and poorer semen quality in terms of volume, number, and motility of sperm.⁵⁴

⁴⁷ Ibid

⁴⁸ Erimma Gloria Orie, (n28) 54

⁴⁹ Lal, *Commentary on Water and Air Pollution and Environment(Protection Laws)*, Revised by M.C. Mehta, (Vol. 2, Delhi Law House Publications 2007) 1335–1336.

⁵⁰ Ibid

⁵¹ Hakeem Ijaiya, ‘Legal Regime of Noise Pollution in Nigeria’ (2014) *Beijing Law Review* ((BLR) 3

⁵² Ibid

⁵³ Kyoung-Bok Min and Jin-Young Min, ‘Exposure to Environmental Noise and Risk for Male Infertility: A Population-Based Cohort Study’ (2017)226 *Journal of Environmental Pollution* 122–123

⁵⁴ A. Chamkori, and others, ‘Effect of Noise Pollution on the Hormonal and Semen Analysis Parameters in Industrial Workers of Bushehr, Iran’ (2016) 3(2)*Crescent Journal of Medical and Biological Sciences* 45–50 <<https://www.cjmb.org/text.php?id=37>>. Accessed 13 May, 2024

Pregnant women exposed to noise in the workplace may risk harm to fetuses and new borns.⁵⁵ Machinery used in various activities generates noise pollution, affecting the reproductive health of indigenous populations in impacted areas. The outcomes include fetal loss, reduced fertility, hormonal changes, menstrual irregularities,⁵⁶ abnormal sperm, and altered puberty onset.⁵⁷ Low Birth Weight (LBW) has been investigated in five occupational studies;⁵⁸ two found significant risk for noise levels above 95 dBA,⁵⁹ with a decline in mean birth weight for mothers exposed to noise above 90 dBA.⁶⁰ One study from Japan found significant risk for LBW for mothers exposed to aircraft noise above 85dBA.⁶¹ Two smaller studies with lower quality scores also saw higher risk of LBW with higher noise exposure.⁶² Although not all studies found significant associations, evidence from better-designed and larger studies supports a correlation between LBW and noise exposure.

Spontaneous abortion was investigated in three studies, with one finding significant risk for women working in sales, service, and office jobs with subjective noise exposure evaluations.⁶³ Another study found significant risk for spontaneous abortion in women exposed to noise levels

⁵⁵Owoseni Joseph Sina, Ibikunle Michael Ayodele and IjabadeniylOlasupo Augustine, 'The Effect of Noise Pollution on Physical and Mental Health of Pregnant Women in Ekiti State, Nigeria' (2017) 4(8) *European Journal of Pharmaceutical and Medical Research* 120–126.

⁵⁶Menstrual irregularities could include short or long menstrual cycles, missed periods, abnormal bleeding, anovulation.

⁵⁷S. Chalupka and A.N Chalupka, 'The Impact of Environmental and Occupational Exposures on Reproductive Health' (2009) *Journal of Obstetric, Gynaecologic and Neonatal Nursing (JOGNN)* 39 84 <doi:10.1111/j.1552-6909.2009.01091.x>. Accessed 12 May 2024.

⁵⁸A.D McDonald, and others 'Prematurity and Work in Pregnancy' (1988) 45 *British Journal of Industrial Medicine*, 56–62; A.L Hartikainen-Sorri, and others, 'Occupational Noise Exposure during Pregnancy: A Case Control Study' (1988) 60 *International Archives of Occupational and Environmental Health* 279–283; C Zhan, and others, 'A Study of Textile Noise Influence on Maternal Function and Embryo Growth' (1991) 22 *Journal of West China University of Medical Sciences* 394–398; Zhang, J. and Cai, W.W., 'Occupational Hazards and Pregnancy Outcomes' (1992) 21 *American Journal of Industrial Medicine* 397–408; D Chen, and others 'Exposure to Benzene, Occupational Stress, and Reduced Birth Weight' (2000) 57 *Occupational and Environmental Medicine* 661–667.

⁵⁹C Zhan, and others, 'A Study of Textile Noise Influence on Maternal Function and Embryo Growth' (1991) 22 *Journal of West China University of Medical Sciences* 394–398.

⁶⁰A.L Hartikainen and others 'Effect of Occupational Noise on the Course and Outcome of Pregnancy' (1994) 20 *Scandinavian Journal of Work, Environment and Health* 444–450.

⁶¹T. Matsui and others, 'Association between the Rates of Low Birth Weight and/or Preterm Infants and Aircraft Noise Exposure' (2003) 58 *Nihon EiseigakuZasshi* 385–394.

⁶²Y. Ando and H. Hattori, 'Statistical Studies on the Effects of Intense Noise during Human Fetal Life' (1973) 27 *Journal of Sound and Vibration* 101–110; P. Knipschild, H. Meijer, and H. Sallé, 'Aircraft Noise and Birth Weight' (1981) 48 *International Archives of Occupational and Environmental Health* 131–136.

⁶³A.D McDonald and others 'Spontaneous Abortion and Occupation' (1986) 28 *Journal of Occupational Medicine* 1232–1238.

above 95 dBA.⁶⁴ A third study on environmental noise exposure (over six hours daily, subjectively evaluated) found risk for recurrent spontaneous abortion.⁶⁵ A Chinese study indicated that self-reported noise exposure during the first trimester was associated with congenital anomalies.⁶⁶ One study of black women exposed to airport noise reported a slight increase in birth defects (excluding polydactyly).⁶⁷ Experimental evidence suggests that prolonged exposure to loud noise during pregnancy may affect hearing later in life, with low frequencies posing a greater potential for harm.⁶⁸

Legal Regime on Noise Pollution in Nigeria

The legal regime on Noise Pollution in Nigeria can be considered under two main headings: common law and statutes:

Common Law

The issue of noise pollution in Nigeria can be examined through the statutory framework and common law principles. Common law addresses noise pollution via the actionable tort of nuisance, which permits an aggrieved individual to seek damages for harm caused by offensive noise and to obtain an injunction to prevent further noise emissions.⁶⁹

In the case of *Abiola v Ijoma*,⁷⁰ the plaintiff and defendant were neighbours in a residential area, with the plaintiff maintaining a poultry farm at the rear of his house. The defendant housed four hundred chickens in pens adjacent to the boundary wall shared with the plaintiff. The plaintiff claimed that the excessive noise from the defendant's chickens, particularly in the early morning hours, disturbed his sleep. The court ruled in favour of the plaintiff, awarding damages for the nuisance and issuing an injunction to prevent the defendant from continuing such disturbances.

⁶⁴ C. Zhan, and others, 'A Study of Textile Noise Influence on Maternal Function and Embryo Growth' (1991) 22 *Journal of West China University of Medical Sciences* 394–398

⁶⁵ Y. Wang, Y. Liu, and Y. Dai, 'A 1:2 Matched Case-Control Study on Risk Factors of Unexplained Recurrent Spontaneous Abortion' (2011) 19 *Chinese Journal of Prevention and Control of Chronic Diseases* 49–51.

⁶⁶ J Zhang, W.W Cai, and D.J Lee, 'Occupational Hazards and Pregnancy Outcomes' (1992) 21 *American Journal of Industrial Medicine* 397–408.

⁶⁷ Ibid

⁶⁸ Ibid

⁶⁹ *Luxmoore J. in Vandepant v Mayfair Hotel Co. Ltd* (1930) 1 Ch. 138 recognizes the inevitability of some discomfort arising from noise in that noise pollution interferes with the healthy enjoyment of the environment.

⁷⁰ (1970) 2 ANLR 268.

Similarly, in *Tebite v Marine and Trading Co. Ltd.*⁷¹ the plaintiff, a legal practitioner, occupied premises where he conducted his law practice. The defendants, who engaged in boat building and repair on adjoining premises, were accused of causing persistent loud noise and noxious fumes through continuous machine operation. It was established during the proceedings that the noise generated by the defendants was excessively loud, surpassing typical noise levels in even the noisiest areas of Nigeria. The court ruled in favour of the plaintiff, awarding damages and restraining the defendants from further noise nuisance.

In *Moore v Nnado*,⁷² the plaintiff complained that the defendant played music at unreasonably loud levels late into the night. The court found the defendant liable for causing a nuisance, ordering him to pay costs to the plaintiff and granting an injunction to prevent further noise disturbances.

Despite these legal precedents, the common law remedy of court action has limitations in effectively addressing noise pollution in Nigeria due to several socioeconomic factors. High legal fees and the complexities of the adversarial justice system can be significant deterrents.⁷³ Additionally, there is a traditional tendency among Nigerians to avoid legal confrontations with neighbours or others, which further discourages the pursuit of legal action. Consequently, many individuals affected by noise pollution may refrain from seeking judicial redress, even when directly impacted.⁷⁴

Laws Prohibiting Noise Pollution in Nigeria

National Environmental Standards and Regulations Enforcement Agency (NESREA) Act CAP N164 2010

The National Environmental Standard and Regulations Enforcement Agency (NESREA) Act is the major environmental law in Nigeria. The agency is charged with the responsibility of enforcing environmental laws, regulations and standards in deterring people, industries and organizations from polluting and degrading the environment, biodiversity conservation and sustainable development of Nigeria's natural resources in general and environmental technology including coordination and liaison with relevant stakeholders within and outside Nigeria on

⁷¹ (1971) 1 UILR 432.

⁷² (1967) FNLR 15.

⁷³ O.S Oyelade, 'Conflict Resolution and Human Rights in Traditional African Society' (2007) *JIL* 45 in Hakeem Ijaiya, 'Legal Regime of Noise Pollution in Nigeria' (2014) *Beijing Law Review (BLR)* 4.

⁷⁴ Ijaiya, *Ibid*.

matters of enforcement of policies and guidelines.⁷⁵ NESREA also has the responsibility to enforce all environmental laws, guidelines, policies, standards and regulations in Nigeria, as well as enforce compliance with the provisions of all international agreements, protocols, conventions and treaties on the environment to which Nigeria is a signatory.⁷⁶

NESREA was established to replace the Federal Environmental Protection Agency (FEPA) Act, which was repealed with the creation of the Ministry of the Environment.⁷⁷ NESREA's vision and mission focus on ensuring a cleaner and healthier environment for Nigerians and fostering a sense of personal and collective responsibility towards building an environmentally conscious society, thereby achieving sustainable development in Nigeria. The agency is specifically charged with biodiversity conservation and the sustainable development of natural resources, alongside the coordination and enforcement of environmental standards, regulations, rules, laws, policies, and guidelines.

NESREA is authorized to develop regulations that set specifications and standards to safeguard resources, promote public health and welfare, and enhance the natural development and productive capacity of the nation's human, animal, marine, and plant life.⁷⁸ Violations of these specifications and standards constitute an offence, punishable by a fine not exceeding N200,000 or imprisonment for a term not exceeding one year, or both, with an additional fine of N20,000 for each day the offence continues.⁷⁹ Corporate violators face a fine not exceeding N2,000,000 and an additional fine of N50,000 per day the offence persists.⁸⁰

Regarding noise and noise pollution, NESREA is empowered, in consultation with appropriate authorities, to:

- (a) Identify major noise sources, establish noise criteria, and develop noise control technologies; and
- (b) Formulate regulations concerning noise emission control or abatement necessary to protect public health and welfare.⁸¹

⁷⁵ Section 2 NESREA Act (as amended)

⁷⁶ Ibid section 7(c)

⁷⁷ Ibid Section 36

⁷⁸ Section 20 NESREA Act

⁷⁹ Ibid section 20(3)

⁸⁰ Ibid section 20(4)

⁸¹ Ibid section 22(1)

Violators of these regulations are subject to a fine not exceeding N50,000 or imprisonment for a term not exceeding one year, or both, with an additional fine of N5,000 for each day the offence continues.⁸² Corporate violators face a fine not exceeding N500,000 and an additional fine of N10,000 per day the offence persists.⁸³

The NESREA Act grants the Minister of Environment the authority to make regulations to ensure the Act's efficacy. Consequently, the **National Environmental (Noise Standards and Control) Regulations 2009** were enacted.⁸⁴ These regulations aim to maintain a healthy environment for all Nigerians, ensure the tranquillity of their surroundings, and safeguard their psychological well-being by regulating noise levels. The regulations prescribe maximum permissible noise levels for facilities or activities, provide for noise control measures, and outline mitigation strategies for noise reduction.⁸⁵ NESREA is empowered to seize, impound, confiscate, or prohibit the use of any property, tools, machinery, or other instruments that cause or are likely to cause excessive noise emissions.⁸⁶ Violators of these regulations are liable to a fine of N5,000 for each day the offence continues and, upon conviction, a fine not exceeding N50,000 or imprisonment for a term not exceeding one year, or both. Corporate offenders face a fine not exceeding N500,000 and an additional fine of N10,000 per day the offence persists.

Barriers to the Enforcement of Noise Pollution Laws

With respect to NESREA, Stewart has stated that a major problem with the agency is its lack of autonomy to develop and implement its compliance and enforcement program free from political intervention or external pressure related to economic development or other government or private sector priorities.⁸⁷ The reason for this is that the chairman of the Governing Council of the Agency is appointed by the President on the recommendation of the minister.⁸⁸ The method of appointment of the permanent secretary and the Director General of the agency is not provided for. Agency funding is very much tied to the Federal Government.⁸⁹ Another major problem of

⁸² Ibid Section 22(3)

⁸³ Ibid Section 22(4)

⁸⁴ Statutory Instrument No. 35 of 2009

⁸⁵ Regulation 1

⁸⁶ Regulation 12 (1)

⁸⁷ Ngozi F. Stewart, 'A Roadmap for the Effective Enforcement Of Environmental Laws In Nigeria' (2011) 2 *National Environmental Law Review*, 48

⁸⁸ Section 3(1)(a) NESREA Act

⁸⁹ Ibid Section 13(2)(a)-(c)

the Agency is that many of the staff employed by the agency to carry out technical roles are not trained.⁹⁰ The above listed defects prevent NESREA from carrying out her duties effectively. There is need to address them or the problems of noise pollution in Nigeria will continue unabated. Ijaiya and Joseph have equally asserted that most of these environmental laws are written on paper but yet to be implemented as a result of the challenges and deficiencies of enforcement.⁹¹ The enforcement agencies; the police, the court, the state and local government lack effective enforcement strategies for the implementation of the laws.⁹²

The NESREA Act does not recognize that noise pollution can lead to negative reproductive health outcomes, including diseases. Notably, there has not been a single case of prosecution under the NESREA Act for noise pollution, indicating a significant gap in the enforcement of noise pollution regulations.

Domestic Legislation on Protection of Reproductive Health

The Nigerian Health Policy

In September 1994, Nigeria participated in the International Conference on Population and Development (ICPD), held in Cairo, Egypt.⁹³ The ICPD marked the beginning of the paradigm shift from the concept of Maternal and Child Health and Family Planning (MCH/FP) to Reproductive Health.⁹⁴ At the ICPD, the nations of the world reached an understanding on the key concepts of reproductive health and reproductive rights and agreed that reproductive health is a right for all men, women, and adolescents. The global community, at the ICPD, further agreed that reproductive health and rights are indispensable to people's health and development, and set the goal of achieving universal access to reproductive health information and services in the year 2015.⁹⁵ Thus, it became imperative for every nation to consider as important the reproductive health concept and promote quality reproductive health services in the interest of

⁹⁰ Stewart (n88) *ibid*

⁹¹H. Ijaiya, and O. T. Joseph, 'Rethinking Environmental Law Enforcement in Nigeria'. (2014) 5 *Beijing Law Review*, 319

⁹² *Ibid*

⁹³ Federal Ministry Of Health, Abuja, Nigeria (2001) National Reproductive Health Policy And Strategy To Achieve Quality Reproductive And Sexual Health For All Nigerians

⁹⁴ *Ibid*

⁹⁵ *Ibid*

the wellbeing of the people, enhanced social life of the community, national development, and the future of the human society.⁹⁶

Nigeria has some policies and laws relating to reproductive health and rights. On the policy level, the Nigerian State has seen many reproductive health policies emanate from the Government. The first policy worthy of mention is the 1988 National Health Policy and Strategy, which goal was to enable Nigerians to achieve productive lives, socially and economically.⁹⁷ There is also the National Reproductive Health Policy and Strategy 2001 and the revised national Health Policy 2004. These shall be analysed hereunder.

National Reproductive Health Policy and Strategy

In 2001, the National Reproductive Health Policy and Strategy was developed by the Federal Government. This policy was developed to address the following issues among others: the unacceptably high levels of maternal and neonatal morbidity and mortality; the increasing rate of infection with the Human Immunodeficiency Virus including MTCT and the prevalence of other STIs; Increasing high-risk behaviour of adolescents leading to premarital sexual encounters, early marriage, unintended pregnancies, unsafe abortions and the social consequences such as school dropout with subsequent negative intergenerational effects; the current fragmentation of reproductive health activities and the limited impact of existing programmes in reducing sexual and reproductive ill health, and improving reproductive health and wellbeing; the low level of male involvement in reproductive health; the low level of awareness and utilization of contraceptive and natural family planning services; Inadequate services for infertility and the associated misery; to further the implementation of the programme of action of the International Conference on Population and Development (ICPD, 1994).⁹⁸ According to the Reproductive health policy of 2001, its goal shall be to create an enabling environment for appropriate action,

⁹⁶ Ibid

⁹⁷ Federal Ministry of Health, *National Policy and Strategy to achieve Health for all Nigerians*, 1998. Though this policy did not directly provide for reproductive health care, it stipulated primary health care as encompassing maternal and child health and also family planning services. MT LADAN, Review of Existing Reproductive Health Policies and Legislations in Nigeria, A Paper Presented At A One Day Stakeholders' Forum On Reproductive Health In Nigeria. Organized By: The Independent Policy Group, Abuja. Date: 20th April 2006 Venue: Tahir Guest Palace Hotel, Kano – Nigeria.

⁹⁸ Federal Ministry Of Health, Abuja, Nigeria (2001) National Reproductive Health Policy And Strategy To Achieve Quality Reproductive And Sexual Health For All Nigerians

and provide the necessary impetus and guidance to national and local initiatives in all areas of Reproductive Health.⁹⁹

The specific objectives of the Reproductive Health policy includes: To reduce maternal morbidity and mortality due to pregnancy, childbirth by 50%;¹⁰⁰ To reduce perinatal and neonatal morbidity and mortality by 30%;¹⁰¹ To reduce the level of unwanted pregnancies in all women of reproductive age by 50%;¹⁰² To reduce the incidence and prevalence of sexually transmitted infection including the transmission of HIV infection;¹⁰³ Limit all forms of gender-based violence and other practices that are harmful to the health of women and children;¹⁰⁴ To reduce gender imbalance in availability of reproductive health services;¹⁰⁵ To reduce the Incidence and prevalence of reproductive cancers and other non-communicable diseases;¹⁰⁶ To increase knowledge of reproductive biology and promote responsible behaviours of adolescents regarding prevention of unwanted pregnancy and sexually transmitted infections;¹⁰⁷ To reduce gender imbalance in all sexual and reproductive health matters;¹⁰⁸ To reduce the prevalence of infertility and provide adoption services for infertile couples;¹⁰⁹ To reduce the incidence and prevalence of infertility and sexual dysfunction in men and women;¹¹⁰ To increase the involvement of men in reproductive health issues;¹¹¹ and to promote research on reproductive health issues.¹¹²

Despite the laudable provisions above, the policy fails to provide for comprehensive reproductive health concerns like safe abortion. Furthermore, while it provides for different aspects of reproductive health, it did not consider the idea of reproductive health and its connection to noise pollution.

⁹⁹ Article 3.1 *ibid.*

¹⁰⁰ Article 3.2.1 *Ibid*

¹⁰¹ Article 3.2.2 *Ibid*

¹⁰² Article 3.2.3 *Ibid*

¹⁰³ Article 3.2.4 *Ibid*

¹⁰⁴ Article 3.2.5 *Ibid*

¹⁰⁵ Article 3.2.6 *Ibid*

¹⁰⁶ Article 3.2.7 *Ibid*

¹⁰⁷ Article 3.2.8 *Ibid*

¹⁰⁸ Article 3.2.9 *Ibid*

¹⁰⁹ Article 3.2.10 *Ibid*

¹¹⁰ Article 3.2.11 *Ibid*

¹¹¹ Article 3.2.12 *Ibid*

¹¹² Article 3.2.13 *Ibid*

The Revised National Health Policy 2004

The National Health Policy was revised in 2004, with the revised version¹¹³ specifying ‘national standards for reproductive health’.¹¹⁴ The 2004 version of the policy makes provision for different aspects of reproductive health.¹¹⁵ The policy states that the goal of the HIV/AIDS Policy is to: control the spread of HIV in Nigeria; provide equitable care and support for those infected by HIV; and mitigate its impact to the point where it is no longer of public health, social and economic concern, such that all Nigerians will be able to achieve socially and economically productive lives free of the disease and its effects.¹¹⁶ This particular policy, even though recent, has no provision for reproductive health diseases and negative outcomes caused by noise pollution or any type of environmental pollution. Thus, while Nigeria is not lacking in policies, the problem is that these policies have not made provision for protection from negative reproductive health outcomes arising from noise pollution.

Recommendations

1. There is a need to enhance NESREA's autonomy, ensuring that she operates independently, free from political interference, with adequate funding and resources to enforce noise pollution regulations effectively.
2. There is a need to update the existing Regulations to reflect current scientific understanding and technological advancements. This also involves investing in research and development of new technologies aimed at reducing noise pollution, particularly in high risk industries and urban settings.
3. On the part of NESREA, she needs to strictly enforce existing noise control regulations, and impose significant penalties on violators to deter noncompliance.
4. Government in partnership with Non-Governmental Organisations (NGOs) should launch awareness campaigns to educate the public on the health risks associated with noise pollution and promote community involvement in noise reduction initiatives.

¹¹³ The objectives of this revised version include reducing maternal mortality and morbidity, neo natal morbidity, promoting gender equity in reproductive and sexual health matters, etc. Federal Ministry of Health (Nigeria), *Revised National Health Policy*, 2004,

¹¹⁴ Ibid

¹¹⁵ Chapter 6 of the National Health Policy 2004

¹¹⁶ Article 6.2 Ibid

5. There is a need to develop comprehensive noise pollution legislation that addresses all sources of noise and incorporates provisions for emerging concerns, such as the impact on reproductive health.
6. There is a need to collaborate with international organizations and other countries to share best practices, technologies, and strategies for combating noise pollution.

Conclusion

Globally, noise represents a serious public health problem. This is also the case in Nigeria. Despite the evidence about the many medical, social, and economic effects of noise, the Nigerian society, seem oblivious to the obvious fact that our cities are becoming increasingly more polluted with noise and the urgent need to appreciate the nexus between noise and reproductive health problems. Besides, there are issues with the relevant noise control regulations and enforcement of same.

Nigeria is not lacking in terms of legislation prohibiting noise pollution. However, there is still the problem of enforcement of the enacted laws and this appears to be as a result of lack of political will on the part of government. This is also further compounded by the much touted “Nigeria factor” corruption whereby some polluters, especially those in the corporate category, get away with flagrant breaches of our environment legislation. The lack of effective implementation on existing law on noise pollution is also a contributory factor to the state of the environment in Nigeria.

This paper examined the concept of noise pollution and its effect on the human reproductive health. It also analysed the laws against noise pollution, the laws protecting reproductive health in Nigeria and how ineffective it has been. The paper finds that noise has the potential to adversely affect the reproductive health of persons within the vicinity. It therefore, made some salient recommendations to that effect. By adopting these recommendations, Nigeria can make significant strides in reducing noise pollution and safeguarding the health and wellbeing of its citizens.