Original Research Article

'For the Love of the Environmen

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Reflections on Professional Music Practice and Climate Change in Nigeria

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6 Abstract

7 This paper reflects on issues of noise pollution through professional music practice and its impact on the environment. The paper argues that while many physical phenomena like bush 8 9 burning, gas flaring, gaseous emissions and deforestation have been put forward as major causative factors in global warming and climate change, the issue of noise pollution through 10 excessive sound pressure levels of music production by way of music merchandising, 11 12 products promotion and live performances in indoor and outdoor venues, have been 13 underplayed as a possible causative factor. It argues further that if sound is propagated through the vibration of air molecules creating regions of high pressure (compression) and 14 15 low pressure (rarefaction), then there is a relationship between sound production and climate 16 changes. The paper first and foremost reflects on the theory that 'loudness equates power and domination of space' and seeks to understand why music/sound professionals, 17 government agencies and music consumers have come to accept loudness as a way of life in 18 19 Nigeria as in many other African countries. Data for this paper were gathered through observation of music production events, interviews with professionals and audiences. The 20 paper concludes that the technology of digital downloads, acoustic treatment of performance 21 22 venues, training and re-training of music and sound re-enforcement professionals as well as appropriate legislation by government, are some significant ways to check noise pollution 23 24 generated from professional music practice thereby making our environment more 25 ecologically-friendly.

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27 Keywords: Environment, Reflections, Music, Practice, Climate, and Change

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29 Introduction

30 In about 2004, our departmental band was contracted to play at a dinner organised by the 31 Otolaryngological Society of Nigeria (an association for Ear, Nose and Throat doctors (ENT). As 32 usual, we wanted to impress the audience not just with the quality of our music but also in terms of 33 volume or amplitude of our musical equipment. As the band struck the first chord, somebody walked 34 up and asked us to reduce the volume of the music which we did. As we continued to play, there were 35 yet, more calls for reduction of sound pressure and volume levels until we were practically singing 36 and playing in soft whispers before we were allowed to continue the performance. Afterwards, the 37 doctors took time to educate us and my band on the dangers of loud music, especially as regards 38 auditory perception and gradual loss of hearing. Their complain made very little sense to us then 39 especially considering our acquired behaviour of professional practice where the core lesson is 'the

40 louder the better', our instrument for creating audience awareness and domination of the musical41 atmosphere.

42 Several years later when I began to study sound and teach acoustics and electronics to 43 undergraduate students, we began to come across terms like 'threshold of pain', 'listeners' fatigue', 44 'frequency bias', 'grating', 'sympathetic vibration, 'the decibel scale' and so on all of which represent 45 'danger signs' as regards loud music. It was at this point in our academic and professional practice 46 that we came to appreciate the lessons I learnt from the ENT doctors that night. In about 2001/2002, 47 there was also news making the round that a church building collapsed in Ibadan, Western Nigeria 48 due to long exposure to sound from a pipe organ. All these point to the fact that sounds has the power 49 to affect both human and physical phenomena.

50 The consensus opinion in many areas of environmental research is that the climate is 51 changing and that the change is due mainly to human activities and their impact on the environment. 52 Climate change caused by human activities or anthropogenic factors have given birth to a new 53 climatic terminology referred to generally as global warming. While many physical phenomena like 54 bush burning, gas flaring, gaseous emissions from vehicles, industries and deforestation among 55 others, have been held accountable for climate change in various parts of the world, the impact of very 56 loud sounds on the environment as it relates to issues in global warming and climate change have 57 been largely ignored until very recently. This paper attempts to fill this gap by drawing attention to 58 the growing culture of loud music/noise through musical productions and merchandising and their 59 likely impact on the environment. As a way to foreground my discussion. I will let you in on the 60 decibel scale which attempts to capture the volume of sound from various sources in modern 61 societies.

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68 Fig. 1.**The Decibel Scale**

Db	Source
0	Threshold of hearing
10	Quite whisper
20	Conversation
20-50	Quite conversation
40-45	Hotel/theatre
50-65	Loud conversation
65-70	Traffic on busy street
65-90	Train
75-80	Factory (light medium work)
90	Heavy traffic
90-100	Thunder
110-140	Jet plane take-off
130	Threshold of pain
140-190	Space rocket take-off

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(Source: Encarta Premium Dictionary 2009)

70 This list above is typical of a Western society. When placed in the African context, the list 71 will have to be extended to include sounds from mosques and churches (which are growing in leaps 72 and bounds in modern African societies), noise of school children, sounds from record shops, street 73 vendors, generators, light/heavy ammunitions, music merchandising/promotion, live performances, 74 street shows and so on. It is important to observe also that, the phenomena listed in the decibel scale 75 do not occur in isolation. For example a factory will not stop work because a jet plane is taking off; 76 neither will noise of heavy traffic cease when thunder strikes. It therefore means that in modern 77 societies, experiencing noise from multiple sources amounted to several decibels of sound amplitude 78 almost on a daily basis. Again, while most of the sounds generated by the sources listed in the decibel 79 scale exists momentarily, musical shows may last for several hours which translates to several hours

of 'charging' the atmosphere with continuous vibrations of molecules of air. Among other things, this paper will reflect on the theory that loudness relates to power and domination of space and seeks to understand why music/sound professionals, government agencies and music consumers in Africa have come to accept loudness as a way of life. The paper then examine ways through which professional musical practice can contribute to issues of environmental degradation and what measures can be put in place to arrest this development.

86 .Music, the Arts and Climate Change: A Review

Although issues of climate change and global warming began more as scientific enquiries and discourses, recent history has shown that there are great academic and artistic interests in the arts and the environment. For example, in 2009, Richard L. Wallace of the environmental studies programme of Ursinus College Pennsylvania compiled a list of 282 songs released by musicians on environmental issues (Anderton : 1978), while photo exhibitions have been organised in other areas with thematic focus on climate change. It has also been reported that Michael Jackson was working on a song on climate change before his death (Enendu: 1994).

94 Energy, climate change and impact of different music delivery methods was the focus of a 95 study by Christopher L. Weber, Jonathan G. Koomey and Scott H. Mathews (2009) of the Department 96 of Civil and Environmental Engineering, Carnegie Mellon University; Lawrence Beckley National 97 Laboratory and Stanford University. Their study assessed the energy and carbon dioxide emissions 98 with several alternative methods of delivering one album of music to a final consumer, either 99 through traditional retail method or via e-commerce sale of compact disc using digital download 100 services. Their study observed among other things that purchasing music digitally reduces the energy 101 and carbon dioxide emissions by between 40-80%. This reduction is due to the elimination of CDs, 102 CD packaging and the physical delivery of CDs to households, while still conceding to the fact that 103 there are increasing emissions associated with internet data flows (Microsoft and Intel 2009).

At the University of Cambridge, the Centre for Research in Arts, Social Sciences and the Humanities (CRASSH) has a study group focused on climate change³. This interdisciplinary group explores issues surrounding climate change from an aesthetic and cultural standpoint, giving voice

107 and platform to a growing number of artists, writers, film directors, journalists, photographers and so 108 on. Several issues have been raised on the subject of noise pollution in Nigeria today. Many 109 legislative arms of government have also discussed and called for immediate actions on noise 110 pollution taking into account its relative health hazards to millions of Nigerians. Such action 111 was taking by the Lagos State House of Assembly through a motion "Need for Regulation 112 of Noise Pollution in Lagos State (www.vanguardngr accessed on July 24, 2015) calling on 113 the executive governor of Lagos to embark on public enlightenment campaign to sensitise the 114 public on the dangers of noise pollution. The Nations Newspaper also reported that Acoustics 115 experts have warned that unless the government enforces laws that will prevent noise 116 pollution, many individuals may become deaf' (www.thenationonline accessed October 7, 117 2015). Noise is our enemy. It is not only loud enemy of our ears; it is also an enemy to the 118 environment as it pollutes our surroundings. Constant exposure to loud noise, experts say, 119 affects our auditory system; especially when it is above the normal 85 decibels (dBs). Noise 120 above the normal decibels is capable of perforating our ear membranes which can result in 121 temporary hearing loss. The picture below is a good sample of the types of horn speakers 122 used by most churches, mosques and recorded music sellers in Lagos and other parts of 123 Nigeria:



PEER REVIEW UNDER

125 The few examples above highlight the growing interest in climate change as a cultural and artistic 126 phenomenon. Music by its very nature is multidisciplinary spread across the arts, social sciences, 127 pure and applied science, medicine and technology among others. Again, music, especially the 128 commercially promoted type, involves a long chain of human activities and energies. From song 129 writing to studio recording, cassette/CD duplication, live performances in theatres/ auditoria or open 130 spaces, promotion and distribution of recorded music to the final consumer, the music production 131 chain continually interacts with the environment as sonic, electrical, technological and industrial 132 phenomena justifying its study as an anthropogenic factor in climate change.

133 Recently, eateries, fuel filling stations and motor garages are not left out in the notorious 134 attitude of using loud sound/noise to shorten human life's span. Visits to some of these places have 135 indicated that just at the entrance, you will be welcomed by loud sound emanating from the amplified 136 speaker system which may make you to think of a birthday or other celebration is on-going in the 137 premises. The wattage of sound emanating from those speakers will leave customers partially deaf for 138 about sixty minutes (60 minutes) after disengaging from the eatery. This practice of loud music 139 playing at eateries has become another of advertising their product and calling attention of people but 140 little does the operators realise the dangers caused on the inhabitants of these areas where such eatery 141 is located. A pictorial example as given below is a confirmation of my participant observation at 142 Tantalizer Ile – Ife which is a typical resemblance of the operation in virtually the Tantalizer's 143 eateries nationwide:

144 Tantalizer eatery at Opa area of Ile-ife. Picture taken on July 15, 2015 @ about 3pm



146 Worship auditoria are not left out in this obnoxious attitude of loud sound production which is 147 referred to (within the religious circle) as strong 'element of praise' (Marcuse: 1975). However, as can 148 be observed from the examples above, there is very little research if at all, on music and the 149 environment in the Africa yet, the threat of sound/noise pollution is currently on the increase in many 150 African urban societies and the likely consequences on climate change and environmental is worth 151 our academic attention. For many years as a church musician, my argument has always been on the 152 need to adequately treat the acoustics of worship auditorium. There is the need to take into 153 consideration what wattage of sound can any room accommodate? Speakers systems are set up in the 154 church without proper acoustic consideration. The Pastor, the choir and the congregation with no 155 sound amplifying support

156 Sound Production, Transmission, Reception and the Environment

157 The branch of physics which deals with sound is known as acoustics. Acoustics can therefore 158 be defined as the science that studies sound production, transmission, reception and the effects of 159 sound in a given space or channel. In simple terms, sound is thought of as movement of air 160 caused by a vibrating body. "Sound is essentially, the movement of air in the form of pressure 161 waves, radiating from a source and radiating in all directions" (Collison 1976 cited in Enendu 162 1994: 17). Three basic elements are needed to create sound: A vibrating body. A medium for 163 the vibration to travel in and a receiver who converts the vibration to a useable form. 164 Vibrations (sound level) are strongly close to the source and gets weaker with distance. The 165 speed at which the vibration travels is known as the speed of sound and is dependent on 166 atmospheric pressure. Generally, the speed can be taken as 300metres per second (m/s). 167 However, it is very rare to have a simple state of a vibrating body, a medium and a receiver 168 because many things vibrate in our environment at the same time producing unwanted signals 169 which we generally refer to as noise. Thus we speak of signal-to-noise-ratio; the ration of the 170 wanted signal to the unwanted signal.

171 "Sound is essentially, the movement of air in the form of pressure waves, radiating from a 172 source and radiating in all directions" (Collison 1976 cited in Enendu 1994:17). In all, sound waves 173 moves through the air once generated causing ripples and changes in air pressure which we 174 perceive as sound. Sound waves are longitudinal waves just like ocean waves; creating crest 175 and troughs (rising and falling waves) as they move through the air (see Anderton 1978: 8-176 10). There is therefore a strong relationship between sound and atmospheric pressure or other 177 climatic conditions. This accounts for the differing behaviour of sound in various places and 178 enclosures. Generally sound waves are set in motion when an object is made to vibrate and is 179 then transmitted usually through the air or atmosphere and received by the human ear. The 180 basic elements of sound include frequency (arising from the number of crest-trough 181 combination per second), amplitude (loudness) as well as intensity (strength of signal).

182 Generally, sound waves are set in motion when an object is made to vibrate and is then 183 transmitted usually, through the air or atmosphere and received by the human ear. The basic elements 184 of sound include frequency (arising from the number of crest-trough combination per second), 185 amplitude (loudness), and speed of travel as well as intensity (strength of signal). Music is generally 186 referred to as organised sound that is pleasant to the ear while noise is defined as unorganised or 187 unwanted sound that is unpleasant to the ear. However, it is important to point out that a very thin line 188 exists between music and noise. Consequently music can easily become noise especially when it gets 189 into the threshold of pain and grating arising from excessive decibel output and frequency bias.

Music is considered noisy when it played at excessive volume with accompanying distortion of pure signals. It then becomes unpleasant to human ear. A major distinction between sound and noise is that sound is regarded as noise when it becomes a source of inconvenience to the conveniences of man and animal. Noise pollution is not unique or peculiar to developing countries alone; it is a common occurrence and of highest magnitude in most of the advanced countries. For instance, Kapoor and Singh (1995) assert that China until the third century used noise for torturing instead of hanging men for dangerous crime.

197 Similarly in India, until lately, considered noise grievous just like any other serious crime198 (Nagi, Dhillon and Dhlwal: 1999).

199 Loudness as Power and the Domination of Space

200 Schaffer (1977) argues that "loudness relates to power" (Cited in Machin 2000: 116). In the 201 same vein Van Leeuwen (1999) sees volume (loudness) as connected to social status and also that 202 noise takes up or invades a social space (cited in Machin 2000:116). While these assertions may be 203 true, it should be stressed here that the idea that loudness relates to power is not African especially 204 given the acoustic nature of our instruments as well as performance contexts and audience size. 205 Rather, loudness as power and domination of space may be traceable to the West where the industrial 206 revolution introduced not only electronic equipment with volume controls but most significantly, the 207 technology of amplification and sound reinforcement which have come to define contemporary 208 professional musical practice. Based on the effects of European incursion and eventual colonisation 209 (Emielu: 2013). African musicians and their audience have inherited the technology of loudness as an 210 essential aspect of contemporary musical performances. As Greene rightly observes "as Western 211 sound technologies are drawn into music making around the world, their hard wirings begin to 212 structure local musical practices in certain ways, imposing their musical logics on societies that adopt 213 them (Greene 2005 p 6). In this sense "musicians have become not only producers of music but also 214 significant consumers of technology" (Thèrberge 1997 cited in Greene and Porcello 2005 pp.6-7). 215 However, while industrial societies have evolved several laws to regulate loudness, most African 216 nations do not have functional laws in this regard. Rather, for both patrons and musicians and 217 marketers, loudness remains connected to social status and power which supports schaffer's theory. 218 The end result of all these is the creation of a sound culture of loudness. We give a few examples here 219 to buttress our points.

In the late 1990s, Benson and Hedges Cigarette Company tagged one of their series of musical shows 'Loud in Lagos'⁴. This show and many others which followed across Nigerian cities usually consisted of heavy wattage of sound generation which could be heard several metres from the venue of performance with the same frequency balance, amplitude and sound intensity. Since this

224 pioneering efforts by Benson and Hedges, many other multi-national companies such as Nigerian 225 Breweries, GLO, MTN, Airtel, Coca-Cola and Pepsi have resorted to using very loud music and 226 popular musicians as brand-marketing strategies in their so-called 'Road Shows'. Events such as 'Star 227 Trek', 'Glo Show', Maltina and Malta Guinness 'Street Dance' among several others, have become 228 important events that involve heavy wattage of music and sound reinforcement as well as gaseous 229 emissions from trucks that transport equipment, generating sets and possibly radiations from 230 electronic/ICT equipment used. These phenomena of course, have their implications on the 231 environment either in the short or long run. It is the contention of this paper that as more and more 232 companies and organizations join this bandwagon in what may be described in advertising terms as a 233 'war of brands', the music will keep on getting louder, if only to enforce and re-enforce brand 234 supremacy and command brand loyalty. While it has been argued above that loudness takes up social, 235 there is no mention of atmospheric space which sound occupies. Since sound travels through the air 236 and also conditioned by atmospheric pressure, it stands to reason that at certain sound pressure levels 237 (SPL), the atmosphere may be saturated with sound and over time could lead to pollution and 238 environmental degradation.

239 Nagata in his discussion was of the that 'loudness' syndrome has encroached into religious 240 worship centres with heavy wattage of sound blaring from Hi-fi equipment in churches especially the 241 modern Pentecostal churches since the 1990s (Nagata: 2001). There seems to be a 'war' of sounds 242 in churches today in a bid to win more converts or show superiority over their 'less endowed' 243 colleagues without considering audience size and other implications for architectural and 244 environmental acoustics. In some of the church services we attended as part of this research, we found 245 out that any attempt to reduce the volume of music or the preacher's microphone volume, was met 246 with vehement resistance and sometimes open confrontation between the sound engineer and the 247 pastor or musicians.

Moving away from the corporate arena, musicians and their patrons have also resorted to a war of supremacy through sound amplitude and intensity. In Nigeria and in Ghana for example, people are attracted to the venue of social ceremonies more by loud noise/music than by invitation cards; the

251 louder the music, the more successful the ceremony. It is also a common practice for celebrants to 252 show their affluence on such occasions by inviting many musical groups to perform. Commenting on 253 the use of sound for social gathering and party celebration, Emielu cited a funeral ceremony attended 254 in Benin City, Nigeria in 2005 which had five live bands playing simultaneously; each child of the 255 deceased hired his/her own band. In such a situation for example, loudness or amplitude becomes a 256 selling-point for the musician and also a sign of supremacy over his 'less fortunate' colleagues. This 257 action of multi-musicians performing at and for a particular occasion as orchestrated by show of class 258 syndrome was a reflection of our level of the dangers acquired through loud sound assimilation. In 259 such a situation for example, loudness or amplitude becomes a selling-point for the musician 260 and also a sign of supremacy over his 'less fortunate' colleagues. The figure below further 261 expresses the point on the loudness of sound:



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263 The speaker system of a band at a social function (picture taken by the researcher on July
264 4, 2015

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The speaker system of two different band groups at a social function (picture taken by the 273 researcher on July 25, 2015

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276 As a result of ignorance of the dangers of loud sound on human health, Nigerians appreciate 277 loud music, especially under the influence of alcohol; this gives strength to the celebrant and guests alike. This is also an avenue to display wealth affluence as a tool for the oppression of 278

- the less privileged. The picture of a man in his late sixties (60s) who was not satisfied with
- sound out and in order to get his feel had to move closer to the front of the speaker to dance.





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Ignorant Nigerian dancing his health out at a social gathering (Picture taken May 27, 2015)

286 Use of Headphones as Sound Facilitator

287 Variety of sound systems is the variety of amplification systems in form that come in all 288 shapes and sizes of headphones and earphones. These devices are potentially dangerous if 289 used improperly, they can cause permanent hearing loss. Hearing loss is defined as a common 290 problem caused by noise, aging, disease, and heredity. Hearing is a complex sense involving 291 both the ear's ability to detect sounds and the brain's ability to interpret those sounds, 292 including musical sounds and the sounds of speech (Oishi: 2011). Exposure to noise 293 pollution, especially for younger people, has gone from huge boom boxes and car stereo 294 speakers to sound delivered directly into the ear through headphones or earphones.

Hearing specialist David A Schesse commented that Headphones and earphones appear to be the most damaging. Since noise-induced hearing loss is a result of intensity (loudness) and duration of exposure, these devices may be capable of inducing a permanent bilateral sensor neural hearing loss especially if they are used at a volume setting of four or above for extended periods.

The use of headphone is becoming mostly popular among Nigerians especially, youths between the teen ages and early adulthood; this practice is also found among adults. Many Nigerian are not conscious of the danger inherent in regular use of headphones or

arphones, this action is probably as a result of ignorance of the effects or probably enjoy
loud sound and ignore or defile warnings on the dangers at the expense. The picture below
reflects sample of ignorance of most Nigerians:



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Wearing headphones or earplugs has been suggested as a possible predisposing factor for external ear canal infection since their use can increase the temperature and humidity of the canal, create the potential for skin abrasion and provide a vehicle for the introduction of organisms into the canal skin (Senturia : 1980). It is not wrong criminal to use headphone or earphone to prevent other people from hearing the sound, either for the reason of privacy or to avoid disturbance but if the volume of such device is not controlled then, there is that possibility to affect such user and constitute impairment to ear threshold.

314 Some studies have found somewhat increased risks for temporary hearing damage 315 from listening to music during strenuous exercise, compared to when listening at rest. Some 316 Finland researchers consisting of Airo, Erkko; J. Pekkarinen; P. Olkinuora (1996) 317 recommended that exercisers should set their headphone volumes to half of their normal 318 loudness and only use them for half an hour. With modern technology on the production of 319 noise cancelling headphones which are so effective that a person may not be able to hear 320 oncoming traffic or pay attention to people around him/her. Greenfield (2013) considers this 321 as a general danger that music in headphones can distract the listener and lead to dangerous 322 situations (Greenfield (2013

324 The Way Forward

325 In Nigeria, the problem of noise pollution is wide spread. Several studies report that 326 noise level in metropolitan cities exceeds specified standard limits. A study by Ugwuanyi 327 (2004) conducted in Makurdi, Nigeria found that the noise pollution level in the city was 328 about 3 dB(A) to 10 dB(A) above the recommended upper limit of 82 dB(A). Anomohanran 329 (2008) also found that the peak noise level at road junction in Abraka, Nigeria to be 100 dB 330 (A). This noise level is higher than the recommended level of 60 dB (A) for commercial and 331 residential areas. Ighoroje (2004) investigated the level of noise pollution in selected 332 industrial locations in Benin City, Nigeria. The average ambient noise level in Sawmills, 333 Electro-acoustic market and food processing industrial areas was determined to be above 90 334 dB (A). This noise level is well above the healthy noise level of 60 dB (A).

335 While many African nations have embraced the idea of environmental management 336 which has necessitated the setting up of number national and regional environmental 337 agencies, they are yet to embrace the idea of noise control as an integral part of the 338 framework of policies on environmental protection. In the United States of America for 339 example, out of about 32 environmental laws, provision is made for noise control. The US 340 noise control act of 1972 establishes a national policy to promote an environment for all 341 Americans from noise that jeopardise their health and welfare. The United Kingdom too, has 342 environmental laws including legislation on noise. Of great significance is the formation of The 343 Noise Abatement Society in the U.K. established by John Connell (O.B.E.). In 1960, he 344 successfully lobbied the noise abatement act through parliament, establishing for the first 345 time in the U.K. that noise is a statutory nuisance. Over the years, the society has been 346 involved in creating awareness and education about sound and the use of sound. Due to the 347 ignorance of Nigerians on the fact that there exist a close nexus between noise pollution and 348 sustainable city, little or no attention is paid to the control of noise pollution in Nigeria. The

execution and implementation of the law as regards environmental pollution is never implemented to the letter. It is observed that the persistence of this problem could endanger the future stability of human health and could aggravate the human health catastrophe in the fast growing cities in Nigeria.

The first approach and effective measure of abating noise pollution to control through heavy taxation on the so called celebrants and the band, not only this, a minimum volume level of sound production in the public should be prescribed in order to maintain a particular sound volume which will commensurate with the ideal sound level expected.

357 Secondly, Use of Combination of Barriers as Noise barriers is among the most 358 common alleviative measures used. They are most effective if they break the line of sight 359 between the noise source and the receptors being protected, and if they are thick enough to 360 absorb or reflect the noise received. Various materials and barrier facade patterns have been 361 extensively tested to provide maximum reflection, absorption, or dispersion of noise without 362 being aesthetically ugly. According to Mehravaran, (2011), if the line of sight between 363 receiver and highways is blocked with barriers, the 5 dB attenuation can be expected. Then, 364 adding 1 meter to the barrier height provides the additional 1.5 dB attenuation. Length of 365 barriers should be long enough, to diffract only small portion of noise through the edge of the 366 barriers. Barriers should be so long that the distance between receiver and barrier end in at 367 least four times of the perpendicular distance between receiver and barrier.

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Conclusion and Recommendations

This study has drawn attention to an important and emerging area of discourse on arts and the environment and the role of professional music practice and climate change. The paper observes that while some attention is currently being paid to music and climate change, the issue of loud music and noise pollution from such occurrences have been ignored. Our societies, especially in Africa, are becoming very noisy in the name of musicality and over time, this may constitute environmental hazards through distortions in atmospheric pressure. Although establishing a direct relationship

375 between noise/music and climate change will require a multi-disciplinary research over several years 376 and in several climatic and cultural zones, this paper concludes that loud music and noise are subtle 377 agents of environmental degradation. It also submits that electrical/electronic equipment used for 378 sound production and re-enforcement could also cause environmental hazards through some forms of 379 radiations and gaseous emissions. Owing to the increasing noise levels occasioned by very loud music 380 and other agents in African cities, the time has come to begin legislation on noise control. This paper 381 recommends that acceptable optimal standards of sound production either in enclosures or in open 382 spaces should be established for effective sound control. More importantly, a lot of awareness and 383 advocacy should be carried out so as to sensitise the citizenry on the dangers of very loud music 384 which most times translates to noise. Finally, the paper recommends that sound/noise pollution should 385 form part of the environmental policies of African nations. 386 References 387 Anderton, Craig (1978) Home Recording for Musicians. New York: Amsco Publications. 388 389 Emielu, Austin (2013) Nigerian Highlife Music, Centre for Black and African Arts and 390 Civilization 391 Arlene L. B. "The Increase in Noise Pollution: What are the Health Effect and the Harmful of 392 Noise" http://www.findarticles.com accessed 22/06/2015. 393 394 Airo, Erkko; J. Pekkarinen; P. Olkinuora. (1996) "Listening to music with earphones: an 395 assessment of noise exposure," Acustica-Acta Acustica, pp. 82, 885-894. 396 Anomohanran .O, Iwegbue C.M.A, Oghenerhoro I.O and Egbai, I.J.C, (2008) Investigation 397 of Environmental Noise Pollution Level of Abraka in Delta State, Nigeria, 398 Trends in Applied Sciences Research 3 (4): 292-297. Basner Mathias, Wolfgang Babisch, Andrian Davis, Mark Brink, Charlotte Clark, Sabine 399 400 Janssen and Stephen Stanfield: (2013) Journal of Auditory and Non-auditory 401 *Effects of Noise on Health.* The Lancet Publisher, University of Pennsylvania, USA. 402 403 Encarta Premium Dictionary (2009) Microsoft Corporation U.S.A. 404 405 Enendu, L.O.M. (1994) "Sound Recording in Theatre Planning and Installation.In Enendu Okome 406 Onokome (eds.) N.D. The Sight of Sound. Ibadan: Kraft Books.

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