

# Climate Change and the Law: Cushioning the Effects of Climate Change-in Niger Delta

Dr. C. T. Emejuru<sup>1</sup> and Mrs. M. O. Izzi<sup>2</sup>

<sup>1</sup> RIVERS STATE UNIVERSITY OF SCIENCE AND TECHNOLOGY PORT HARCOURT, RIVERS STATE, NIGERIA

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## Abstract

Climate change has been defined as any natural or induced change in climate, either globally or in a particular area. However, the United Nations Framework Convention on Climate Change gives its own definition as a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods. This definition is holistic as it includes the causative elements of climate change. There is consensus that climate change is a critical issue for Africa and indeed, its greatest challenge in the 21st century, along with poverty. There is a speculation that climate change in no specified measure is likely to affect the continent's development trajectory, as most African countries are characterized by undiversified economic structures, poor infrastructure, fragile structures and institutions, poor human development and most importantly, the heavy reliance on agriculture for the majority of the population. The reason for climate change is that "Mother Earth" our only home "is under pressure".

## *Index terms—*

## 1 Introduction

Climate change has been defined as any natural or induced change in climate, either globally or in a particular area 1. However, the United Nations Framework Convention on Climate Change gives its own definition as a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods 2. This definition is holistic as it includes the causative elements of climate change. There is consensus that climate change is a critical issue for Africa and indeed, its greatest challenge in the 21st century, along with poverty 3. There is a speculation that climate change in no specified measure is likely to affect the continent's development trajectory, as most African countries are characterized by undiversified economic structures, poor infrastructure, fragile structures and institutions, poor human development and most importantly, the heavy reliance on agriculture for the majority of the population 4. The reason for climate change is that "Mother Earth -our only home is under pressure? 5".

The role played by petroleum or oil to Nigeria's economy is no longer an issue for debate as it has come to stay as the mainstream of the country's wealth. It is not however without its devastating consequences or effects. The production of petroleum has damaged the environment and economy of many nations. Petroleum damaged rather than benefited Venezuela 6. 4 Ibid 5 Environment, <http://thp.org/issues/environment/6-10-2014>. ?? Jehwo Yalaju, Impact of the Oil Industry on the Niger Delta Environment, Environmental and Planning Law Review, Vol. 1 No.1, October -December 2004, 1.

The constant flaring of gas in the Niger Delta is a human rights, environmental and economic monstrosity. Nowhere else in the world have communities been subjected to it on such a scale 7. Gas flaring contributes

significantly to climate change, thus affecting communities all over the world 8 . Climate change, for example, is extremely complex environmentally, and tackling it has enormous economic and social implications ?? . Although a number of gases contribute to climate change, carbon dioxide is the major culprit and addressing reliance on carbon, particularly fossil fuels, implicates an extraordinary range of industrial, agricultural, transport and consumption activities ??0 . This notwithstanding, it is the global responsibility "to promote harmony with nature and the earth to achieve a just balance among the economic, social and environmental needs of present and future generations of humanity ??1 ." In the climate change arena, binding targets agreed under international conventions have been incorporated not only in national policy documents but also, some into draft legislation in the form of the Climate Change Bill 12 . The thrust of this paper is to explore the legal policy and initiative made to effectively tackle the problem of climate change and its application to the environmental damage of Niger Delta.

## 2 II. The Problem of Climate Change

Climate change presents as the archetypal environmental problem ??3 . As the world's climate continues to change at unprecedented rate, the impacts of climate change are likely to be considerable in Niger Delta in Africa as well as other tropical developing regions ??4 . The importance of climate change is underscored by the fact that problems associated with it are essentially global in both their causes and effects, and they respect no national boundaries ??5 . Although legitimate and important areas of uncertainty still exist with respect to the ultimate impacts of climate change, the range of uncertainty is narrowing over time ??6 . Perhaps most important, a global consensus now exists among the international scientific community that the world is witnessing discernible impacts on our climate and natural systems due to human activities ??7 . The acceptance that anthropogenic climate change was a problem more or less coincided with the arrival of new regulatory instruments in the mainstream ??8 . Global climate change driven largely by anthropogenic activities is a growing threat to human well-being in developing and industrialized nations alike leading to a conclusion that significant harm from climate change is already occurring, and further damages are likely ??9 . In short, our use of fossil fuels is unlocking and releasing carbon dioxide taken out of the atmosphere in prehistoric times ??0 . Carbon dioxide and Nitrogen oxide (NO x ) remain in the atmosphere and contribute to greenhouse effect for many decades to centuries 21 . The earth's climate has changed over the past century, because of the increase in atmospheric concentration of greenhouse gases ??2 . The constant increase in greenhouse gas has led to its twin issue of global warming ??3 . The global increases in CO 2 concentration are due primarily to fossil fuel use and land use, while those of CH 4 and N 2 O are primarily due to agriculture ??4 . The scientific reports of the intergovernmental panel on climate change state that the stabilization of emission in the atmosphere, to avoid the adverse impacts of climate change, requires significant and rapid reductions in 'business as usual' global greenhouse gas emissions ??5 . ??5

## 3 Effects of Climate Change

Climate change is among the most pressing challenges that the world faces today ??6 . With the present huge atmospheric concentrations of greenhouse gases (GHGs), the world is already committed to significant warming 27 . This concentration of greenhouse gases (GHGs), poses a grave challenge, given the wide range of expected climate impacts on natural systems as well as on human societies 28 . It was this challenge to the global impact of the disastrous effects of atmospheric concentration of greenhouse gases that prompted the International Convention (World Summit) on Climate Change, which was held in Rio-de-Janeiro (Brazil) in 2012, where more than 170 member nations ratified or signed the Rio declaration of 2012 with a commitment to decrease the CO 2 emissions to minimize greenhouse effect ??9 . However, it is apposite to state that greenhouse gases are not completely worthless. The useful effect is that they provide the warmth in the climate, which prevents the earth from freezing ??0 . Oxygen and carbondioxide derivable therefrom are the atmospheric components that absorb ultraviolet radiation 31 . The over accumulation of greenhouse gases in the atmosphere could result in an unprecedented atmospheric warming at a global scale to such an extent that human beings and other living things will not be able to tolerate the heat ??2 .

Gas flaring contributes to climate change, which has enormous implications for both Nigeria and the entire global system 33 . The burning of fossil fuel, mainly coal, oil and gas -greenhouse gas, has led to warming up the global system ??4 . This, has led to some scientific problems. It affects human health, for instance it has led to deficiency in human immune system, the skin and eyes ??5 . Just as it does to humans, it also affects the animals. There is also the problem of acid rain. Climate change is not merely an environmental, scientific, or economic issue; it has become a humanitarian issue ??6 too ??6 . The effects of climate change will most likely have a major impact on population movement and settlement, whether within countries or across borders 37 .

The scale of potential humanitarian challenge that climate change may present is indeed staggering 38 . It is now recognized that not only does the nature and extent of climate change hamper human development, it also forms a major threat to human security and political stability ??9 . This raises the fundamental issue whether a fossil fuel-based economy should be continued or whether a radical transition to a low carbon economy should be pursued ??0 . This raises the issue of time as to how long it would take to reconfigure energy systems based on fossil fuels (oil, natural gas and coal) ??1 .

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Not only is time an issue regarding of how long it would take to reconfigure energy systems based on fossil fuels (oil, natural gas and coal), but the constraints of resources as to when oil and natural gas reserves, will be exhausted remains critical issue in like manner as to when the impacts of Climate Change are to be felt ??2 . This raises the fundamental issue as to whether there is need for continuation of fossil fuel-based economies and their associated growth regions or whether a new and radical transition to a low carbon economy is envisaged ??? . Carbon dioxide emissions can be reduced either by using less energy or by using alternative energy sources (such as wind, photovoltaics, or hydro) that produce no carbon dioxide 44 . Another possible strategy involves encouraging activities that allow more carbon to be absorbed by trees or soils ??5 .

The problems of damaging Climate Change and the loss of plant and animal biodiversity are issues of common concern to the whole of mankind ??6 . They have the potential to affect all countries, wherever they are situated, either in a geographical sense or in terms of their relative level of socio-economic development ??7 Change provides a global public good 48 . Even if Climate Change turns out to be less serious than we may think presently, any possible solutions have other positive benefits in the future ??9 . Turning from the use of fossil fuels to renewable energy sources such as solar or wind power, for example, would make us be free from dependence on oil and improve air quality 50 .

## 4 IV.

## 5 Legal Framework for Climate Change

While in 1990, the International Panel on Climate Change (IPCC) was set up, in 1992, the Rio Earth summit agreed on a Legal Framework Convention on Climate Change 51 . It was this very Convention that recognized that only a legally binding international framework can ensure that actions will be taken to reduce emissions and to protect the most vulnerable from the potentially catastrophic impacts of climate change. Not minding this recognition, it cannot be underplayed that possible legal solutions to climate change problems are complex and difficult to classify as they encompass a wide range of international and national law 52 .

The ultimate object as resolved in the International Convention (World Summit) on Climate Change held in Rio de Janeiro (Brazil) in 2012 had as its prime attention the need to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the Climate Change 53 . This is with a view to obviating the disastrous effects of atmospheric concentrations of greenhouse gases and the consequential problem. In order to achieve this, there was a commitment to decrease CO<sub>2</sub> emissions to minimize greenhouse effects.

The 1992 United Nations Framework Convention on Climate Change had already recognized the principle of global cost-effectiveness of emission reduction and this opened the way for flexibility ??4 . However, a binding emission target for any country was not fixed, and so the need to invest in emission reduction either at home or abroad was not a pressing issue ??5 .

Article 3 of the Climate Change Convention of 1992 has as its basic principles the need for parties to ??8 Tom Tietenberg, *Environmental Natural Resources Economics*, op cit, 410. ??9 protect the climate system for the benefit of present and future generations of mankind, on the basis of equity. The principle also emphasizes the need to give full consideration to those that are particularly vulnerable to the adverse effects of climate change and would bear a disproportionate or abnormal burden under the Convention 56 . No other region in Nigeria better falls within the context of the provision of the principles than the Niger Delta where fossil fuel (oil and gas) is being exploited with its unabated and unmitigated consequences to the environment and poverty stricken people of the region. The author takes the view that in line with the principle of the Convention in Article 3, the government of Nigeria should take special precautionary measures to anticipate, prevent or minimize gas flaring in Niger Delta which is the basic cause of the climate change and its adverse effects in the region. No effort is been made by the government to stop gas flaring by the Multinational Oil Corporations.

Since this effort is lacking, it may not be possible to achieve the content of Article 2 which aims at stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. It would also be impossible to promote sustainable development and develop policies and measures that would protect the climate system against human induced change 57 .

Article 4 enjoins all parties to take into account climate change to the extent possible, in their social, economic and environmental policies; to promote and co-operate in research and systematic observation ??8 . Article 4 further provides for the promotion of sustainable development, and cooperation in the conservation and enhancement of appropriate sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans, as well as terrestrial, coastal and marine ecosystems. In view of the adverse effects of Climate Change, the Article 4 goes further to enjoin parties to take Climate Change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view to minimizing adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to Climate Change. Whether or not multinational oil corporations and the Nigerian government have complied with the minimum requirement prescribed for Environmental Impact Assessment is a question of ??7 Article 4(1) -(f) -(i); Philippe Sands, Jacqueline Peel, Adriana Fabra and Ruth Mackenzie, *Principles of International Environmental Law*, (Cambridge University

Press, 2012) 278 -279. Article 4(1)(f) United Nations Convention on Climate Change, 1992. degree . In Nigeria, a major problem with Environmental Impact Assessment is that it is most times used to serve a function of justifying a decision (usually to develop) which has been made and are concerned only with remedial measures 60 . However, in a sincere Environmental Impact Assessment regime, where it is judged that the environment or local communities may be affected by oil and gas activities, it is necessary to address potential impacts through the application of appropriate prevention, mitigation, control and management measures 61 . This is hardly applicable to the operation of multinational oil corporations in Nigeria.

However, it has been held in *City of Los Angeles V. National Highway Traffic Safety Administration* 62 that where climate change is sufficiently serious and causally connected to a project, climate change impact should be discussed in the Environmental Impact Assessment 63 . The Environmental Impact Assessment law can arguably be used in a climate change context where projects have an impact on the climate. It is possible that a proposed oil and gas project which is projected to have a substantial impact on greenhouse gas emission would be considered as having a significant impact on the environment and thus would require the submission of an Environmental Impact Assessment that considers different alternatives to the proposed plan including the zero alternative 64 .

The Environmental Impact Assessment must look at the environmental impact of a project. Where it can be demonstrated that climate change should be considered as a predicted effect of a given project, a description of the climate change that an investment may cause should be integral part of an Environmental Impact Assessment report 65 Massachusetts had standing to challenge the EPA's failure to regulate greenhouse gas emissions from vehicles, while it also acknowledged that the harm associated with climate change are serious and well recognized. But so far in Nigeria, there is no case related to climate change neither does Environmental Impact Assessments put into consideration in their exercise the issue of climate change. While the NEPA guarantees the issue of climate change, it does seem that this is lacking in Nigeria's Environmental Impact Assessment Act. That notwithstanding, whether existing Environmental Impact Assessment regime is sufficient to ensure a meaningful consideration of climate change remains an issue to be resolved.

V.

## 6 Climate Change and Adaptation in the Niger Delta

Adaptation is a change in the structure of habit of an organism that makes it better adjusted to its surroundings 68 , while adaptive management is an approach to the management of national resources that is based on learning by doing, and on making decisions as part of an on-going process of monitoring, review, and adaption 69 . To prepare for and respond effectively to the impacts of climate change, adaptation is the key.

Article 4(1)(e) provides that parties to the Convention shall cooperate in preparing for adaption to the impacts of climate change. While it may not be possible to stop climate change, it is apposite to state that established mechanisms should be comprehensive and well articulated to recognize the varying needs and vulnerabilities of all sections of the society 70 . Its targets should be focused on both short and long-term sustainable responses.

A major issue when considering climate change adaptation, especially in developing countries like Nigeria, is to ensure adequate focus on the poor 71 . Climate change is a serious risk to poverty reduction and threatens to undo decades of development efforts 72 . Climate change is very likely to increase the frequency and magnitude of extreme weather events such as droughts, flood, and storms. Although it is uncertain to project the exact magnitude, rate, and regional patterns of climate change, its consequences will change the fate of many generations to come and 73 particularly impact on the poor if no appropriate measures are taken 73 . Evidence abound that the number of people affected by disasters is on the rise, and most disaster -related injuries and deaths occur among low-income groups 74 .

Moser and Satterwaite showed in their work that the main cause of the increase in loss of life is poverty, which hinders individual and household investments, and exclusion, which restricts access to public services 75 . In this wise therefore, climate change does not only aggravate the existing vulnerabilities of the poor, but it also creates new risks as more areas are exposed to climate-related hazards.

The impacts of climate change, and the vulnerability of the poor communities, particularly in the Niger Delta, to climate change, vary greatly, but generally, climate change is superimposed on existing vulnerabilities 76 . The effects of climate change is already taking its toll on the Niger Delta poverty stricken population. There is the problem of access to drinking water and the access to food security. There is also the problem of decrease in crop yields, which threatens famine.

The need for adaptation measure is prompted by the following reasons: a) It is a priority for ensuring the long-term effectiveness of investment in poverty eradication and sustainable development. b) If pursued in the sustainable framework, it can diminish the damage from future climate change and climate change variability. However, it has been argued that while climate change is only one of the many factors influencing poverty, immediate action should be taken to adapt to climate change impacts. It is not an easy task for a developing nation like Nigeria to adapt and cope with climate change, particularly in the Niger Delta where the economic base of the country lies. The ability to adapt and cope with weather hazards depends on economic resources, infrastructure, technology, and social safety nets. Another issue germane to adaptation to climate change is that of pressure on population growth, rapid urbanization and resource depletion, making them vulnerable to the further challenges thrown up by climate change.

Climate change is a serious and complex problem that cannot be managed by one-off all approach 77 . It is also doubtful if any time win-win solutions exists, and climate change adaptation will come with trade-offs that will need to be carefully managed. However, it is becoming increasingly evident that well-intentioned climate change responses present a considerable risk, and to manage this risk all adaptation actions should be based on sound science and robust legal framework. 78 However, there is no established legal framework holistically to tackle the problem of climate change in the Nigeria's Niger Delta. That notwithstanding, the establishment of legal frameworks is only part of the solution. 79 There are of course multiple layers of organizational interest and appropriate legal framework will need to provide adaptation principles and goals, but ultimately it is through the implementation process that adaptation occurs 80 . This can only be achieved if decision makers at all levels understand how their decisions affect or are affected by climate change. The need to effect national policy changes, mainstreaming climate change risks into legislative frameworks, policies, plans -is an important approach in sustaining innovative climate resilient development 81 . Thus, adaptation measures to combat climate change and its effects are essential in decreasing the Niger Delta vulnerability to climate change related threats 82 . Nigeria should create a national climate change policy which will provide a platform for coordination among sectors as well as guidance on national positions and priorities regarding climate change mitigation adaptation, not only in the Niger Delta, but in the whole of the country.

Another possible dimension to adaptation is taking a human rights approach. There are many human rights that are affected by climate change. Such rights include the right to life, the right to take part in cultural life, the right to use and enjoy property, the right to an adequate standard of living, the right to food, the 77 Donovan Burton, Climate change and the law: The context and the emergence of cascading risks, in Baker-Jones, M., Burton, DL., Bell, J., Chang Seng, D., 2013 climate change adaptation: Guided by the law DLA Piper, Brisbane, 13. 78 Ibid 79 The establishment of a firm legal framework will to no avail solve the problem without enforcement and implementation.

Lack of enforcement and implementation are the bane to the effectiveness of any existing legal framework. 80 Statement Credited to Esala Nayasi of the Political and Treaties Division of Fijian Government Ministry of Foreign Affairs in a Workshop held in Suva, Fiji and Apia, Samoa, August 2013. 81 Peniamina D Leavai, Case Study: PACC project, Kosrae state, federated states of Micronesia -Sector: Coastal Management, in Baker-Jones, M., Burton, DL., Bell, J., Chang Seng, D., 2013 climate Change Adaptation: Guided by the law DLA Piper Brisbane, 17. 82 Jacqueline Hughes, Fiji and Climate Change, in Baker-Jones, M., Burton, DL., Bell, J., Chang Seng, D., Ibid 7, 28. right to water, the right to sanitation, the right to development, the right to adequate housing, and the right to the highest attainable standard of physical and mental health 83 , etc. The invocation of such international human rights instruments as the International Covenant on Civil and Political Rights (ICCPR), and the International Covenant on Economic, Social and Cultural Rights (ICESCR). The ICESCR rights in particular that fall within the context of climate change are: the right to an adequate standard of living, including adequate food, clothing and housing; the right to freedom from hunger; the right to enjoyment of the highest attainable standard of physical and mental health; and the right to take part in cultural life 84 . Rights-based claim relating to adaptation may fare better. In the case of adaptation, since core human rights are implicated, rather than the right to environment, which is subject to limits, claims may prove more successful 85 . A claim may lie for instance where the government is not taking the necessary action to adapt to predicted climate change in particularly vulnerable areas such as the Niger Delta, and the resulting climate impacts breach the claimant's protected rights to life, health, water etc 86 . The foreign policy of Nigeria which is provided for in Section 19(d) enjoins respect for international law and treaty obligations. Nigeria is a signatory to such core human rights instruments as ICCPR and ICESCR. The core human rights threatened by climate impacts are protected under the international legal instruments and they are of binding obligation which must be given effect to in good faith 87 . Nigeria is also a party to the Framework Convention on climate change and its Kyoto protocol. The Nigeria's treaty obligations could be thus interpreted by the Supreme Court to enlarge the meaning and content' of constitutional guarantees, inter alia to life, health and water 88 .

Melanie O'Brien has warned that caution must be exercised to ensure that climate change mitigation measures do not violate human rights 89 . Such violations may include the displacement of peoples from their traditional land for the purposes of reforestation, the pricing out of forest dwelling communities from using their own communities, or the prohibition of people from use of forested areas for traditional means of survival 90 . She further asserts that any legal responses that take climate change into account, such as those considering regulations for new or existing developments, the relocation of residents to low-risk areas, or climate change mitigation measures, should take a rights-based approach, which will result in a more holistic outcome with long-term benefits 91 . She went on further to say that a right-based approach should be integrated into natural disaster management, in order to ensure that essential rights are protected and provided for in situations of natural disasters. Such disaster risk management law, policies and regulations must take into account the need for protection of housing, infrastructure, and facilities that will be needed in the aftermath of natural disaster (e.g. sanitary facilities, food, water, clothing, medical treatment facilities) 92 .

## 285 7 VI.

## 286 8 Climate Change Litigation

287 Because of the lackluster attitude of the Nigerian courts towards environmental activism, the courts do not fully  
 288 acknowledge the importance of climate protection, much so, as there seem to be little or no case to actually  
 289 enhance the obligations to reduce emissions. Possible legal solutions to climate change problems are no doubt  
 290 complex and difficult to classify as they cover wide range of international and national law. The law exists to serve  
 291 society, and has according evolved to meet the changing needs and challenges of society. If it is accepted that the  
 292 purposes of the law include serving society, reflecting its attitudes and providing redress for justices, then there  
 293 is the need for climate change litigation and adjudication in the country. This will enhance the application of  
 294 existing legal concepts, including some ancient doctrines generally seen as dormant if not extinct, to new factual  
 295 issues, and the development of new legal concepts. It will further engender accretion of matrix of rights and  
 296 obligations: legal rights and obligations, political and moral rights and obligations owed by and to individuals,  
 297 corporations and states, and in some cases to future generations.

298 The problem which climate change litigation will certainly have in Nigeria is that of locus standi. Standing has  
 299 traditionally been a major hurdle for all actions whether that of environmental rights or not. But this problem  
 300 can be averted by the use of public interest jurisdiction or litigation such as in *S. P. Gupta V. Union of India* 93  
 301 which relaxed the rule of locus standi and opened up the doors of the Supreme Court to publicspirited citizens  
 302 which includes those wishing to pursue the cause of the poor and oppressed (representative ??1 Ibid 92 Ibid 93  
 303 *S.P. Gupta V. Union of India*, Lasi Supp SCC 87, at 233 standing) and those wishing to enforce performance  
 304 of public duties (citizens standing) ??4 . The Constitution of Nigeria 1999 provides in its Section 20 that "The  
 305 state shall protect and improve the environment and safeguard the water, air and land, forest and wild life of  
 306 Nigeria".

307 This constitutionally protected environmental right can be alluded to as the right to: 'environmental protection  
 308 and conservation of natural resources 95 ; live in a healthy environment with minimal disturbance of ecological  
 309 balance 96 ; a decent environemnt 97 ; and a living atmosphere congenial to human existence. In the words  
 310 of Rajamani and Ghosh 98 , these formulations leave ample scope for value judgments and judicial discretion,  
 311 and hence admit the possibility of protecting against threats to the climate. The effects of climate change will  
 312 certainly disturb the ecological balance and render the atmosphere less congenial to human existence. Those  
 313 living in the Niger Delta who are at the frontline of climate change, can testify to this.

314 While it may be uncertain that the Supreme Court of Nigeria will give favourable judgment with regard to  
 315 climate protection, it will be a welcome development if it can take an approach that applies a human rights optic  
 316 to climate impacts. This is because a host of rights to life, health and water, among others, will be at risk from  
 317 climate impacts 99 . However, it is worthy of note that Section 20 of the Constitution of Nigeria 1999 is not  
 318 intended to be enforceable by any court, they are however, nevertheless 'fundamental in the governance of the  
 319 country' and it is the duty of the state to apply these principles in making laws.

320 The possible approach out of this quagmire is for the Nigerian Supreme Court to follow the Indian Supreme  
 321 Court example by integrating into the Nigerian environmental jurisprudence numerous principles of international  
 322 environmental law, such as in principles 3, 4, 15 and 16, of Rio Declaration on Environment and Development,  
 323 1992 100 . These principles include the polluter pays principle 101 , the principle of intergenerational equity  
 324 102 , the principle of sustainable ??4 Ibid 95 Intellectual Forum, Tirupathi V. State of AP (2006) 3 SCC 549  
 325 ??6 Rural litigation and entitlement Kendra V. State of UP ??1985)2 SCC development 103 and the notion of  
 326 the state as a trustee of all natural resources 104 . The Indian Supreme Court in its epoch making decision in  
 327 *Vellore Citizens Welfare Forum V. Union of India* held these principles to be 'essential features of sustainable  
 328 development 105 , imperative for preserving ecology 106 and part of environmental law of India 107 .

329 The Nigerian constitutionally protected environmental right in Section 20, complemented by these principles  
 330 of international environmental law provides a fertile breeding ground for ambitious rights -based claims.

331 If these principles in particular, of precaution, public trust and inter-generational equity, as interpreted by the  
 332 India Supreme Court are being adopted by the Nigerian Supreme Court, they will prove useful to prospective  
 333 rights-based climate impact claims. In precautionary principle, state are enjoined to take early actions and  
 334 measures to anticipate, prevent and attack environmental degradation at source. The problem of climate change  
 335 obviously falls within the ambit of threats that it would be wise to take early action on. Rajamani and Ghosh  
 336 correctly suggested that this principle could be used to argue the case for ambitious mitigation and adaptation  
 337 intervention, and to challenge state action that falls short.

338 The Doctrine of public trust on its part places a duty on the state as a trustee of certain public resources to  
 339 protect resources like air, sea, water and the forests for the enjoyment of the general public 108 . Reasonably, issue  
 340 of climate change could well engage the duty of a state as trustee to protect the atmosphere from indiscriminate  
 341 green house gas emission 109 . The use of the principle of inter-generational equity may also help in climate  
 342 change claim. In the context of forest resources, the principle of inter-generational equity holds that "the present  
 343 generation has no right to deplete all the existing forests and leave nothing for the next and future generations  
 344 110 . The problem of future generation, intergenerational. This is because, the present 103 Indian Council for  
 345 Enviro-Legal Action V. Union of India (Bichri case) (1996)3 SCC 212; *M. C. Mehta V. Kamal Nath* ??2000)6  
 346 SCC 213, at 220.

104 Vellore Citizens Welfare Forum V. Union of India ??1996) generation inherited the problem of climate change while the present generation is exacerbating it, and that will certainly leave a legacy that imposes severe burdens of protection and sacrifice on future generations.

VII.

## 9 Conclusion

Climate change is a universal phenomenon with far reaching effects on people and the Niger Delta area of Nigeria is particularly vulnerable to the impact of climate change in many fronts putting into consideration its geographical location, climate, vegetation, population, settlement, fossil fuel production and agricultural activities. Manifest events like sea level rise, erosion, flood and excessive heat are some of the effects of climate change which are already experienced in the area. The impacts of this unavoidable climate change need to be counteracted with appropriate legal measures to adapting to the climate change impact. The inclusion of climate change impact should be seen as a matter of topmost priority to the conduct of environmental impact assessment.

All adaptation actions should be based on sound science and robust legal frameworks. There is also a need for guidelines to provide protocols and procedures that developers' decision makers at all levels can follow when making decisions about climate change, or decisions that are affected by climate change. This procedures and protocols will take into consideration the direct and indirect impacts of climate change and inform the decision maker as to how the developer's legal liability will be affected by the decision. In substance, the guidelines will take into consideration the statutory powers pursuant to which decisions are made, the results sought to be achieved in making the decisions, the effects any projected climate change impacts will have on the decisions and any consequent exposure to legal liability arising from the decisions.

1 Chris Park, Oxford Dictionary of Environment and Conservation (Oxford University Press 2007) 82.

2 United Nations Framework Convention on Climate Change (Rio, 1992) 31 ILM 849

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Figure 1:

III.

16 David Hunter; James, Salman and Durwood Zaelke, International Environmental law (Foundation Press, 2002) 590

17 Ibid

18 Jane Holder and Maria Lee, Environmental Protection Law and Policy, op cit.

19 Raheem Usman Adebimpe, Climate Change Related Disasters and Vulnerability: An Appraisal of the Nigerian Policy Environment, <http://www.medwelljournals.com/fulltext/?doi=erj.2011.97.103>

20 David Hunter, James Salzman and Durwood Zaelke, International Environmental Law, op cit, 592.

21 Ibid 593

22 Ibid

Figure 2:

<sup>1</sup>Raheem Usman Adebimpe, Climate Change Related Disasters and Vulnerability: An Appraisal of the Nigerian Policy Environment, op. cit. 24 Ann Ogbo, Ndubuisi Ebele Lauretta and Wilfred Ukpere, Risk management and Challenges of climate Change in Nigeria, JHUM ECOL, 41(3): 22-235. 25 Dr. Nicola Durrant, LWNXXX select issues in climate change law, op. cit.

<sup>2</sup>Jack Rostron, Environmental Law for the Built Environment, (Cavendish Publishing Limited 2001), 107.

[Note: 40 Ibid 30]

Figure 3:

Woodworth Saigo, Environmental Science: A Global Concern, McGraw Hill Higher Education, 2007, 340.

50 Ibid

51 Ibid 3

52 Dr. Vinay N. Paranjape, Environmental Law, (Central Law Agency 2013) 19.

53 Ibid

[Note: 54 Tom Tietenberg, *Environmental Natural Resource Economics*,]

Figure 4:

several

Environmental Impact Assessment reviews for failing to consider climate change 66 . In *Massachusetts V. EPA* 67 , the U.S. 60 Ibid 310

61 IPIECA, The Oil and Gas Industry: Operating in Sensitive Environments, International Petroleum Industry Environmental Conservation Association [www.ipieca.org](http://www.ipieca.org) 20-9-2012.

62 912 F. 2d 478 (D.C. Cir. 1990).

[Note: 63 ]

Figure 5:

69 Ibid

70 BNRCC,

Figure 6:

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Amer-  
ica,  
leading  
legislation  
has invalidated



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42 Mike Hodson and Simon Marvin, *World Cities and Climate Change: Producing Urban Ecological Security*, McGraw Hill, Open University Press, 2010, 30. 43 Ibid, 31 44 Tom Tietenberg, *Environmental Natural Resources Economics*, Pearson, 2006, 410. 45 Ibid, 411 46 Maurice Sunkin, David M.ong and Robert Wight, *Source Book on Environmental Law*, Cavendish Publishing Limited, 2002, 95. 47 Ibid



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367 [ Shantistar Builders V. Nayayan Khimala Totame and Ors ()] , *Shantistar Builders V. Nayayan Khimala To-*  
368 *tame and Ors* 1990. p. 1.

369 [Rajamani and Ghosh] ‘National Laws: India’. Lavanya Rajamani , Shibani Ghosh . *Climate Change Liability:*  
370 *Transnational Law and Practice*, Richard Lord, Siike Goldberg, Lavanya, Jutt Brunnee (ed.) Cambridge  
371 University Press. p. 148.

372 [SCC 520] *SCC 520*, (at para. 9)

373 [Virender Gaur and Ors] *State of Haryana & Ors (1995) 2SCC 577 at para.* , & Virender Gaur , Ors .