

**A REVIEW OF THE NATURE-BASED SOLUTIONS MECHANISM TO CLIMATE CHANGE IN NIGERIA UNDER THE CLIMATE CHANGE ACT 2021\***

**Abstract**

*Prior to the passage of the Climate Change Act, 2021, Nigeria had participated in climate negotiations and ratified some international legal instruments on climate change notably; the United Nations Framework Convention on Climate Change, (UNFCCC) the Kyoto Protocol, the Paris Agreement on Climate Change, the United Nations Convention on Biodiversity (UNCBD) etc. Nigeria had during the period relied mainly on the sectoral approach and the formulation of policies like; the Nationally Determined Contributions (NDC) to the treaties. With the passage of the Climate Change Act, 2021 as the primary statutory framework for Nigeria's energy transition, it has joined other developed countries like Sweden, France, New Zealand, among others to provide the legal framework for the reduction of greenhouse gases (GHGs) to pre-industrial levels of 1.5°C. One of the obligations under the Act, is the adoption of Nature-Based Solutions (NBS) to achieve GHGs reduction commitments to promote adaptation and mitigation to climate change. The nature based approach has two basic obligations; the establishment of registry with sub national nodes to capture forestry activities in Nigeria, including update on Forest Reference Emission Level (FREL), and then collaborate with the National Bureau of Statistics (NBS) to develop Nigeria's Natural Capital Account (NCA). The aim of the NBS is the reduction of emissions from deforestation and forest degradation coupled with the role of conservation, sustainable management of forests and the enhancement of forest carbon stocks, which is referred to as REDD+. It was discovered that for the effective implementation of REDD+ in Nigeria under the Climate Change Act, 2021, there was the need to impose obligations on public and private entities to promote low carbon economy and sustainable livelihood and provide incentives to forest dependent communities. It is recommended that legal actions should lie against the state for failure or inability to implement the Act, in line with the African Charter on Human and People's Right, which recognize environmental protection as a basic human right and the land tenure rights of forest dependent people and an effective gas utilisation plan should be implemented to reduce the effect of gas flaring as climate change posed a serious threat to the Nigerian and global environment.*

**Keywords:** Deforestation and Degradation, Carbon Stock, Adaptation and Mitigation, Greenhouse Gases, Climate Change, Conservation and Re-Vegetation.

**1. Introduction**

One of the key mechanisms introduced by the recently passed Climate Change Act, 2021 in Nigeria is the adoption of the nature based solution to climate change. The passage of the Act is the domestication of some of the key international legal instruments on climate change such as: The United Nations Framework Convention on Climate Change (UNFCCC), 1992, the United Nations Convention on Biodiversity (UNCBD), 1992 and the Paris Agreement on Climate Change, 2015. Historically, the nature-based solutions to climate change obligations is known as the reducing emissions from deforestation plus conservation, sustainable management of forest and the enhancement of forest carbon stocks (REDD+). The mechanism itself was adopted in the conference of parties in Copenhagen, Denmark (COP15) to address degradation in developing countries like Nigeria.<sup>1</sup> The United Nations Convention on Biodiversity on the other hand, make provision for the identification and monitoring of forestry activities for the purpose of in-situ and ex-situ conservation as well as rehabilitation and restoration on degraded ecosystems, habitats and species.<sup>2</sup> With the passage of the Climate Change Act, if implemented will reduce deforestation and degradation activities in Nigeria are linked to human induced land use change and forestry activities such as: logging, gas flaring, mining and other activities which are hardly ever monitored or controlled. It is also timely, in view of the report of the Inter-Government Panel on Climate Change (IPCC) which posited that carbon emission from deforestation represents 18-26% of all emissions and will increase over time, in the next five years than all emissions from aircrafts since the Wright Brother.<sup>3</sup> According to the report, the world forests particularly the tropical rain forest are important carbon sinks because of their uptake of carbon dioxide through photosynthesis and carbon stored in woody biomass and the soil."<sup>4</sup> It is in line with the damning report that the

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<sup>1</sup> Conference of Parties (COP 15), Denmark available at <www.UNFCCC/Cop15/MOP5/Copenhagen, Denmark PDF> accessed on 10<sup>th</sup> March, 2023

<sup>2</sup> Article 2, 8 of the United Nations Convention on Biodiversity (UNCBD), 1992

<sup>3</sup> Inter Government Panel on Climate Change (IPCC) 4<sup>th</sup> Assessment Report (UNED) 2007

<sup>4</sup> Ibid

passage of the Climate Change Act, 2021 is timely for Nigeria to provide for the legal and institutional framework for the reduction of GHGs in the atmosphere through the nature-based solution strategy.

## 2. Conceptual Clarifications

Climate Change' according to the Climate Change Act, 2021 means 'a change of climate which is attributed directly or indirectly to human activity or natural climate variability that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time period's.<sup>5</sup> Myneni, describe climate in the following word, 'climate' is the weather conditions of a place or conditions of temperature, rainfall, winds etc. climate is what you expect weather is what you get...<sup>6</sup> The best description of climate change is that of the Inter Government Panel on Climate Change (IPCC), which postulate that, changes in climate could have major effects on resources like: food, energy and water. Other factors that can aggravate climate changes are; the amount of solar energy the earth receives the atmospheric conditions of the rotation of the earth and Ocean currents. All these factors are capable of having dangerous interference 'with the earth with severe negative effects on human health, biodiversity, food production, disasters like flooding, desertification and environmental degradation.<sup>7</sup> The IPCC further describes climate change as a change in the state of the climate that can be identified by the changes in the mean or variability of properties that persist for extended period, typically decades or longer.<sup>8</sup> 'Adverse effects' of climate change to mean, changes in the physical environment or bio-data, resulting from climate change which have significant deleterious effects on the composition, resilience or productivity of natural and managed eco systems or on the operation of socio-economic systems or on human health and welfare.<sup>9</sup> The UNFCCC defines 'greenhouse gases atmosphere, both natural and anthropogenic. that absorb and re-emit infrared as those gaseous constituents of the radiation.'<sup>10</sup> Myneni, describes to greenhouse gases as; 'the atmospheric gases, which are permeable to short wave solar radiation but are strong absorber of long wave radiation emitted from the surface of the earth'.<sup>11</sup> The Climate Change Act,2021 defines 'greenhouse gases' to mean the constituents of the atmosphere that contribute to the greenhouse effect and include: (a) Carbon dioxide (b) Methane (c) Nitrous Oxide (d) Hydro fluorocarbons (e) Perfluorocarbons (f) Sulphur hexafluoride and, (g) Indirect greenhouse.<sup>12</sup> These greenhouse gases either alone or in combination produce the greenhouse effect.

'Adaptation' means 'the process of adjustment to actual or expected climate and its effects, while 'adaptation capacity' refers to the ability of systems, institutions, humans and other organisms to adjust to the consequences of climate change, taking into cognisance available opportunities'.<sup>13</sup> 'Mitigation' or 'mitigation measures' in the context of climate change means the effect that seeks to prevent or slow down the increase of atmospheric greenhouse gas concentrations by limiting current or future emissions and improving potential sinks for greenhouse gases.<sup>14</sup> 'Nationally Determined Contributions' or NDCs means 'national climate plan climate actions, including climate related targets, and policies and measures that government aims to implement in response to climate change and as a contribution to global climate action.<sup>15</sup> 'International climate change obligations' means 'those Nigeria's commitments under international conventions on climate change and other related matters'.<sup>16</sup> 'In-situ conservation' means 'conditions of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties'.<sup>17</sup> 'In-situ conditions 'means 'conditions where genetic resources exist within ecosystems and natural habitats, and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties'.<sup>18</sup> 'Ex-situ conservation' means the 'conservation of components of biological diversity outside their natural habitats'.<sup>19</sup> 'Carbon Trade' is defined as the buying and selling of credits that permit a company or other entity to emit a certain amount of carbon dioxide or other greenhouse gases. The Carbon Credits and carbon trade are authorized by government with the goal of gradually reducing overall carbon emissions and mitigating their contribution to climate change.<sup>20</sup>

<sup>5</sup> Section 35, Climate Change Act, 2021 Article I UNFCCC, 1992

<sup>6</sup> SR Myneni, *Environmental Law* (Law House, Hyderabad, India 2010) P58

<sup>7</sup> IPCC(n3)

<sup>8</sup> *ibid*

<sup>9</sup> Article1 UNFCC

<sup>10</sup> Myneni (n6) P59

<sup>11</sup> Section 35 CCA 2021

<sup>12</sup> *Ibid*

<sup>13</sup> *Ibid*

<sup>14</sup> *Ibid*

<sup>15</sup> *Ibid*

<sup>16</sup> *Ibid*

<sup>17</sup> Article 2 UNCBD, 1992

<sup>18</sup> *Ibid*

<sup>19</sup> *Ibid*

<sup>20</sup> W Kenton, 'Carbon Trade: Definition, Purpose and How Carbon Trading Works' Investopia Trade (2002) available at <<http://www.investopia.com/term/c/carbontrade.asp>>accessed on 30<sup>th</sup> September, 2022

### **3. Legal and Institutional Fram work on REDD+ in Nigeria**

Nigeria has participated, negotiated and ratified series of treaties on climate such as the United Nations Framework Convention on Climate Change (UNFCCC), 1992, the Kyoto Protocol, 1997 and the Paris Agreement on Climate Change, 2015 with the aim of reducing carbon emission which is acknowledged as an issue of global concern. Nigeria has participated in series of conferences, the recent being the COP 26 in Glasgow and COP27 in Cairo Egypt where it reiterated its commitment to achieving a net-zero global emissions by 2060. According Akaluzia, 'with the passage of the Act, Nigeria joins a host of countries including France and Sweden, in enacting local legislations targeting the reduction of greenhouse gases (GHG) emissions and tackling climate change.'<sup>21</sup> The Constitution of the Federal Republic of Nigeria (CFRN) 1999, provides that the State shall protect and improve the environment and safeguard the water, air and land forest and wild life of Nigeria."<sup>22</sup> The CFRN being the *grundnorm* gave the policy directives to the federal, states and local governments to legislate environmental matters on the concurrent legislative list.<sup>23</sup> The CFRN through the sectoral approach gave agencies like the National Environment Standards and Regulations Agency the power to make legislations and regulations on the environment. The National Environmental Standards and Regulation Agency (NESREA) provisions have implications for enforcing environmental compliance on biodiversity, conservation, desertification and forestry".<sup>24</sup> Consequent upon the powers conferred on it, NESREA has made regulations with implications on nature-based solutions to climate change such as soil erosion and flood control which sought to protect human life and minimize losses.<sup>25</sup> The regulation deals with livestock grazing, planting of trees and cultivation of crops.<sup>26</sup> Another regulation by NESREA is on desertification, deforestation and drought.<sup>27</sup>

Climate Change Act 2021 is relevant. The main objectives of the Act, is to provide a legal framework for achieving low greenhouse gas emission, inclusive growth and sustainable economic development and to key into international climate change obligation of attaining net zero emissions. The provision of the Act applies to all ministries, departments, and agencies of the federal Government, public and private entities within Nigeria with the mandate to implement environmentally sustainable and climate resilient society.<sup>28</sup> The Act established the National Council on Climate Change (NCCC), to implement the various policy objectives, the action plan and the climate change fund. The fund shall be applied toward various objectives and incentivize transition to clean energy and sustain the reduction of greenhouse gases.<sup>29</sup> The role of the carbon budget is to keep the average rise in temperature within 2°C and to make efforts to limit it to 1.5°C above pre-industrial levels the action plan shall serve as a basis for identifying the national emission profile, establishment of national goals, objectives and priorities on climate change adaptation in line with the NDC.<sup>30</sup>

### **4. Nature-Based Solutions to Climate Change in Nigeria**

The overall objective of the nature-based solution is to reduce greenhouse gas emissions and mitigate the adverse effect of climate change in Nigeria by reducing emission from deforestation and forest degradation plus the role of conservation, sustainable management of forest and enhancement of forest carbon stock, which is generally referred to as REDD+. The REDD+ mechanism under the Act is in line with Nigeria's efforts to meet its international obligations on climate which is specifically targeted at developing countries that rely mostly on forestry activities for economic sustainability. The Kyoto protocol provides that:

Each party in achieving their quantified emission limitation and reduction under Article 3 of the Convention in order to promote sustainable development shall-

(a) implement or further elaborate policies and measures in accordance with its national circumstances, such as protection and enhancement of sinks and reservoir of greenhouse gases ... taking into account its commitment under relevance international agreements promotion of sustainable forest management, pralines, a forestation and reforestation.<sup>31</sup>

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<sup>21</sup> T Akaluzia, 'The Nigerian Climate Change Act-key Highlights Business Day (Abuja 6 April, 2022) P2 available <<https://businessday.ng/opinion/opinion/article/the-nigerian-climatechange-act-key-highlight5html>> accessed on 12<sup>th</sup> September, 2022

<sup>22</sup> S 20 CFRN, 1999 (as amended)

<sup>23</sup> Part II 2<sup>nd</sup> Schedule to the CFRN 1999

<sup>24</sup> S 7 (c) NESREA Act, 2007

<sup>25</sup> Regulation 1 (1) (a) (b) of the National Environmental (Soil and Flood Control) Regulations 2011.

<sup>26</sup> Ibid Regulation 8 (a) (b) (c)

<sup>27</sup> The National Environmental (Desertification Control and Drought Mitigation) Regulation, 2011.

<sup>28</sup> S 1 and 2 CCA, 2021

<sup>29</sup> Ibid Ss 7 8

<sup>30</sup> Ibid S 19 (1)(a)(i)

<sup>31</sup> Article 2 (a)(ii) Kyoto Protocol, 1997

The above provision is in accord with the UNFCCC objectives geared towards the parties' specific and regional objective towards policies and programmes on climate change.<sup>32</sup>

### **Establishment of REDD+ Registry**

The federal ministry is mandated by the Act to set up registry for capturing REDD+ activities in Nigerian with updates on forest reference emission levels (FREL) which may provide update on climate change obligation and provide fiscal support.<sup>33</sup> Another important component of the REDD+ activity is the development of Nigeria Natural Capital Account, in collaboration with National Bureau of Statistics.<sup>34</sup> The data collected from the national capital account shall be made available to MDA's for the development of an action plan in line with the carbon budget.<sup>35</sup> These provisions of the CCA are in line with the UNCBD which makes provision to the effect that;- Each contracting party in accordance with its particular conditions and capabilities shall;

- (a) Develop national strategies, plans and programmes for the conservation and sustainable use of biological diversity or adopt for this purpose existing strategies, plans or programmes which shall refer, inter alia the measures set in the convention.
- (b) Integrate, as far as possible and as appropriate the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.<sup>36</sup>

### **Policy Framework on REDD+ in Nigeria climate change depend on**

The meeting of international obligations on implementing policies and measures on nature based solutions (NBS) by Nigeria in tandem with international realities that are appropriate to its national circumstances, such as: 'A robust and transparent National Monitorial System (NFMS), National Forest Reference Emission Level (FREL), and Safeguard Information System (SIS)'.<sup>37</sup> Apart from the pre-existing policies and regulations on NBS in Nigeria the Paris Agreement on Climate Change and the Nigeria Nationally Determined the UNFCCC have necessitated a policy shift in the Contributions to the UNFCCC implementation of NBS in Nigeria.<sup>38</sup> The NDC has policy actions aimed at protecting biodiversity, sustainable manage or restore the co-system while contributing to sustainable development goals (SDGs) in areas of food and water security, disaster risks reduction and livelihoods.<sup>39</sup> These plans of action can both meet the mitigation and adaptation objectives of the CCA, which has three top based mitigation: agro forestry, improved forest management and restoration. In terms of adaptation, it was discovered that agriculture, forestry and other land use (AFOLU) had the total of 25% of the national emissions by 2018 that could be targeted for adaptive measures. Since the provision of the CCA, 2021 applies to all ministries, department and agencies in the public and private sector, states and local governments have the right to implement NBS in their respective domains. As of now, only Cross-Rivers is implementing NBS. Cross-Rivers State has passed the law on forest resources and the forest commission law. The forest resources law has divided the state forests into forest reserves, community forest, private and wildlife sanctuaries as demonstration of REDD+ readiness plan.<sup>40</sup> This multi layered action plan or REDD+ has been demonstrated in other jurisdictions with resounding success. For instance, Brazil reformed its Policies by launching plan of action on environment control and territorial management by targeting municipalities with critical rates of deforestation and giving rural credits on compliance with environmental credits. These policies recorded astounding decrease in deforestation and increased Brazilian gross domestic products to significant level.<sup>41</sup> Another example is in the Congo DR, which operates a unitary system but adopted a multilayered approach where reforms in land use planning, agriculture and land tenures, are taking place at national level with transversal integrated sub-national interceptive.<sup>42</sup> Nigeria can as a matter of law and policy, adopt an integrated approach to preserve and enhance sinks and reservoirs of GHGs by protecting natural carbon sinks like forest, rivers and oceans from creating new carbon sinks or carbon sequestration.<sup>43</sup>

<sup>32</sup>Article 3,4,5 and 7 UNFCCC, 1992

<sup>33</sup> Section 28(2)(3)CCA, 2021

<sup>34</sup> Ibid S 29(1)

<sup>35</sup> Ibid S 29 (2)

<sup>36</sup> Article 6 of the UNCBD, 1992

<sup>37</sup> Paragraph 7, Cancun Agreement p 43

<sup>38</sup> <sup>34</sup>Federal Ministry of Environment (FOE) Nigeria First Nationally Determined Contribution (NDC) to the UNFCCC (Abuja July, 2021) has introduced the REDD+Strategy 2021, National Forest Policy 2020

<sup>39</sup> Ibid P14

<sup>40</sup> S 26 (2), 84 (c)Forest Commission Law, 1999;

<sup>41</sup> UNEP 'Policies and Measures for REDD+ Implementation' REDD+ Academy Learning Journey Volume 2, December 2016 p27

<sup>42</sup> Ibid P14

<sup>43</sup> Article 3(3)(4) Kyoto protocol, 1997

## **5. Issues Affecting the Implementation of Nature Based Solutions in Nigeria**

### **Right Based Approach, Environmental Justice and Governance.**

The world over is witnessing radical approach to right based issues, environmental justice and governance revolutions. Most sub national governments have firmly entrenched environment rights issues in their constitutions as a fundamental right. In Nigeria, environmental protection is merely a directive principle of state policy,<sup>44</sup> Whereas States like: India, Philippines, Costa-Rica and many others have, made environmental protection a fundamental right.<sup>45</sup> In *Rural litigation and Entitlement Kendra v. State of Uttar Pradesh*<sup>46</sup> the Supreme Court of India, held that: ‘...trees are responsible to purify the air by releasing oxygen into the atmosphere through the process of photosynthesis. It has therefore been rightly said that there is a balance between earth, air, water, soil, and plant ...’<sup>47</sup> The above judgement was given in tandem with Article 21 of the Indian Constitution, which provides for right to wholesome environment or fundamental right against environment pollution. In the Philippines, the Supreme Court in *Opasa v Factorian*,<sup>48</sup> sought to ensure intergenerational justice to the country's environmental policy to the full benefit, use and enjoyment of the natural resources treasures of the tropical forest. Contrast the foregoing with Nigeria, where Ladan, is of the opinion that climate litigations are still at initial stages, but the CCA has made provisions to stop or discontinue the performance of any act that is not only harmful to the environment, but also provisions to prevent or stop the performance of any act that is harmful to the environment and to compensate victims affected by any environmental harm.<sup>49</sup>

The CCA has potentials to re-awaken climate related litigation never witnessed before and to build on prevention efforts. In *Gbemre v Shell*,<sup>50</sup> the Federal High Court ruled that oil Companies must stop gas flaring in the Niger-Delta due to the negative environmental impact. In terms of environmental justice and governance, the courts in Nigeria have opened new frontiers and expanded the focus for environmental justice, in response to global trends.

In *Okpabi and Ors v Shell*,<sup>51</sup> the Supreme Court in United Kingdom (UK), revisited the issue of duty of care by a 'Parent Company' and held that Shell BP was liable for pollution and spillage in some communities in Niger-Delta. In *Four Nigerian Farmers and Sticking Millie Udefensi v Shell*,<sup>52</sup> a court sitting at The Hague, Netherland held that shell was liable for spillage in Niger-Delta. In the case of *Oil Pollution Watch v NNPC*,<sup>53</sup> the Supreme Court hacked down issue of *locus standi* as impediments to the Judicial Process, overruled the Court of Appeal and held that the Appellants had the *locus to sue* the respondents for failure to clean up and reinstate the Ineh/Aku streams in Abia State. The above cases have rekindled hope in environmental protection rights in Nigeria line African Charter on Human and Peoples' Right. This intergenerational response to global efforts to protect the environmental governance is a response to environment for present and future generations.<sup>54</sup>

### **Technology and Climate Change**

The use of relevant technology for research and innovation such as drought resistant crops early warning systems sea walls, alternative cooking sources are important in the NBS mechanism for climate change adaptation and mitigation. Other areas where technology is important are use of drones to track poachers and illegal loggers. Under the CCA, the Climate Change Council is expected to collaborate with multiple governmental ministries and parastatals for implementing NBS policies. The policies formulation as envisaged by the NDC to the UNFCCC emphasized the use of adaptive technology as solutions to Climate Change issues, what are generally termed 'clean development mechanisms' that are more beneficial to a developing country like Nigeria, the benefits of which are summarised by Mabasi as follows: ‘The clean development benefits developing countries by giving them access to technology and investments that they would be unlikely to get otherwise, which helps them to develop sustainability and thereby contribute to the ultimate objective of the UNFCCC.’<sup>55</sup> There is a provision under the UNFCCC which canvas funding for technology transfer, scientific and technical assistance from developed countries to developing countries like Nigeria for Climate Change adaptation, specifically on REDD+<sup>56</sup> The CCA has provision for climate change action plan (CCAP) which emphasized the use of energy conservation, efficient use of renewable energy,<sup>57</sup> which requires the use of technology which in terms of NBS, can be used for transition from the use of fossil fuel to alternative and environmentally friendly

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<sup>44</sup> S 20 CFRN 1999

<sup>45</sup> Article 21 of the Constitution of India, 1976

<sup>46</sup> Air 1988 SC 2187

<sup>47</sup> Supra

<sup>48</sup> GR No 101083, July 30, 1913

<sup>49</sup> MT Ladan (eds) ‘A Review of Nigeria’s 2021 Climate Change Act. Potentials for Increased Climate Change Litigation’ IUCN, Sabin Centre Peer Review Network of Global Climate Litigation Abuja, 2022 available at [https://www.iucn.org/new/commission-environmental-economic-and-social-political-policy/2022\\_03/Review-Nigerias-2021-climate-change-act-potentials-increase-climate change litigation](https://www.iucn.org/new/commission-environmental-economic-and-social-political-policy/2022_03/Review-Nigerias-2021-climate-change-act-potentials-increase-climate%20change%20litigation) access on the 20<sup>th</sup> September 2022

<sup>50</sup> Unreported suit No. FHC/CS/B/153/2005)

<sup>51</sup> (2021) UKSC 3

<sup>52</sup> (2021) ECLI : NLGHDA, 2021,

<sup>53</sup> (2019) 5 NWLR (Pt 1666) 578 SC

<sup>54</sup> S 20 and 33 CFRN 1999, Articles 16 and 24 of the African Charter on Human and Peoples Rights

<sup>55</sup> T Mabasi, “Review of the Policy on clean Development Mechanism Projects in Uganda and its implication for Climate Change” Law, Environment and Development (LEAD) Journal Geneva Switzerland 2008, P154

<sup>56</sup> Article 4 UNFCCC, 1992

<sup>57</sup> S 20 (4) (vii) CCA, 2021

sources of energy, through the provision of manual and technical skills, access to information, data, Research and Development. The uses of technology for mitigation and adaptation to climate change are hampered by issues ranging from, technology transfer, intellectual property rights, and creation of patents, information and documentation. The absence of strong regulatory Policies on technology transfer, patents rights and innovation, are some of the obstacles or stumbling blocks in the implementation of NBS in Nigeria. The way out seems to be the suggestion by March, that, strategies for technology transfer should include: funding mechanisms, capacity building, international collaborative research networks, public-private partnership. and multilateral and bilateral trade cooperation to creative incentives.<sup>58</sup> Barton, on the other hand postulates that: 'for the world to make the transition to low carbon economy, renewable technologies must be made globally, one concern often flagged is that the intellectual property system may hinder access by developing countries.'<sup>59</sup>

On intellectual rights Nigeria must work in context with the World Trade Organization (WTO) Rules and Agreements especially, the Trade Related Aspects of Intellectual Property Rights (TRIPs) Agreement whose objectives on the protection of intellectual property is- the promotion of technological innovation and for the transfer and dissemination of technology, to the mutual advantage of producers who have technological knowledge in a manner conducive to solid and economic welfare.<sup>60</sup> The (TRIPs) Agreement has also made a very strong point for developing countries like Nigeria who are members of WTO, providing that: 'Developed Country members shall provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least developed Country members in order to enable them create sound and viable technological base'.<sup>61</sup> Nigeria can take advantage in collaborating with developed nations for R&D in order to implement its plan of action on NBS as the WTO Rules make no strong distinction between climates friendly and other technologies.

### **Climate Change Adaptation Finance**

The implementation of NBS in Nigeria is dependent on the availability of finance. The Paris Agreement recognized the fact that developing countries like Nigeria can access financial assistance from developed countries and other financial institutions to finance the REDD+ or NBS activities locally.<sup>62</sup> The funds can be accessed from accredited multinational agencies such as: the African Development Bank (AfDB), World Bank and Green Climate Fund among others.<sup>63</sup> Nigeria has made provisions for the establishment of the Climate Change Fund to be maintained by the Council subject to the approval of the National Assembly. The sources of funds are from international organisations, carbon tax and emission trading, fines and charges from public and private institutions.<sup>64</sup> The funds typically exist for financing adaptation, the energy sector, the oil and gas, electricity, transportation and waste management. In terms of financing NBS as envisaged by the CCA, Nigeria needs to develop its Emission Trading Scheme (ETS) similar to those in EU and USA, but the challenges Nigeria will face according to the World Bank are:

Suppressed demand, baseline calculations for LDGS are low, meaning that projects cannot generate Sufficient Carbon Finance to have an impact. The treatment of projects that replace non-renewable biomass can lead to a halving in the emission reduction potentials of these projects. These threats are prominent in Sub-Sahara Africa where fire wood, a non-renewable source of energy is frequently used for cooking and eating.<sup>65</sup>

### **Climate Change Adaptation and Capacity Building**

Capacity building is another key factor that can make or mass the REDD+ mechanism in Nigeria. The CCA makes provision for climate change education to be included in institutions at all levels as an interdisciplinary subject. The council is mandated to partner with MDAs and to support scientific research and other similar projects.<sup>66</sup> The above provision is in line with the Kyoto Protocol, which clearly states that:

The parties... shall cooperate in and promote at the international level, and where appropriate using existing bodies, the development and training programmes including the strengthening of capacity building in particular human, institutional capabilities and facilitate at the national level, public awareness of and public access to information on climate change. Suitable modalities should be developed to implement these activities through the relevant bodies to the convention....<sup>67</sup>

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<sup>58</sup>E March, 'Climate Change – the Technology Challenge' Word intellectual Property Organisation (WIPO) Magazine (2008) Geneva p10

<sup>59</sup> J H Barton, 'Patenting and Acquiring Clean Energy Technologies in Developing Countries' World Intellectual Property Organization(WIPO) magazine (2008) Geneva 30

<sup>60</sup>Article 7 TRIPS Agreement, 2007

<sup>61</sup>ibid, Article 66(2)

<sup>62</sup> 5,6,7,8 and 9, Paris Agreement on Climate Change, 2015

<sup>63</sup> Advanced ways of Financing REDD+ and the Scope of Activities Under it; Foundation for Internal Law and Development (FIELD) in preparation for Mexico climate conference, December 2010 available at <www.field.org.uk, <http://www.theredesk.org>>accessed 18 September, 2022.

<sup>64</sup> S15(i)(a-f) CCA, 2021

<sup>65</sup> IPCC (n5)

<sup>66</sup> S26(1)(2)(a)(b) CCA

<sup>67</sup> Article 10(e) Kyoto Protocol, 1997

Apart from negotiations at the conference of parties (COP), the relevant bodies envisaged by the UNFCCC are the Subsidiary Body for Scientific and Technology Advise (SBSTA), the Subsidiary Body for Implementation (SBI) and the Intergovernmental Panel on Climate Change (IPCC) among others.<sup>68</sup>

### **Land Tenure and Carbon Rights of Forest Dependent Communities**

The dominant question is the influence of NBS on forest dependent communities who derive benefits from natural resources. Based on the dual nature of land tenure in Nigeria, states and local governments have some measure of control on the land in Nigeria under the Land Use Act.<sup>69</sup> Prior to the harmonisation of land tenure laws in Nigeria, some persons who occupies and used land were granted deemed rights and occupiers under customary law.<sup>70</sup> In relation to NBS, Governors have been vested with enormous powers to appropriate vast forests thereby limiting the rights of forest dependent communities to derive benefits from their forest resources and denying them their carbon rights and incentives as envisaged in the NBS. With respect to rights there are issues as to who has the right to sell, trade or purchase carbon credits. There are arguments that NBS mechanisms should separate the use of carbon tenure rights from land tenure system as the forest dependent communities does not automatically benefit from resources within their territories in Nigeria, In Australia for example, where there is a robust emission trading scheme, the primary feature of carbon rights in each state is to validate carbon rights as an interest different from the land. This has not only solved the problem of carbon and land tenure but has whittled down the common law presumption that trees growing upon the land including the carbon are plants that belong to the land owner.<sup>71</sup> Nigeria should formulate its carbon tenure system in tandem cap and trade regulations that can reduce pollution as well as address land tenure ship of forest dependent communities in line with the position in Australia where issues relating to carbon tenure are separate from land ownership.

### **6. Findings**

1. Nigeria has complied with S. 12 of the Constitution but is yet to enforce the right based and intergovernmental environmental approach as a fundamental right.
2. Apart from Cross-Rivers, other states are yet to fully domesticate and or formulate climate change laws and Policies on NBS or REDD+.
3. The implementation of NBS or REDD+ in Nigeria is dependent of an effective emission trading scheme or the bond market to deal with carbon trade and issuance of carbon credit.
4. The absence of strong regulatory framework on technology transfer will hampers the application of relevant technology for adaptation to climate change.
5. Access to finance for climate change adaptation through the multilateral and bilateral channels is subject to stringent financial and policy hurdles from donors.
6. There should be stronger collaboration with agencies like the National Petroleum Company Limited for transition from fossil fuel to cleaner and environmentally friendly and renewable energy sources in Nigeria.

### **7. Conclusion and Recommendations**

The ultimate objective of the CCA 2021 is for the provision of the legal and institutional framework for implementing the nature-based solution on climate change adaptation and mitigation within a time frame. As the lofty as the provisions are, there are several impediments on the implementation of the NBS in Nigeria ranging from non-recognition of environmental protection as fundamental right, funding and lack of technology to drive the NBS strategy land tenure and the carbon rights of forest dependent communities in Nigeria. One reality is the fact that Nigeria heavily depends on the oil and gas sector for its foreign exchange earnings and gas flaring is an enormous environmental challenge. The following measures may be helpful. The rights based approach and intergovernmental approach should be applied on environmental litigation generally and particularly on NBS as provided by S. 34(2) Climate Change Act should be interpreted in line with Article 24 of the African Charter on Human and Peoples Rights as it is the case in the Philippines, India and others, where environmental protection is a fundamental human right. Nigeria should integrate NBS actions into the policy decisions of government at all levels in order to meet Nigeria's Nationally Determined Contributions to UNFCCC. Nigeria should implement a robust and effective emission trading scheme similar to that of European Union and USA to raise funds from carbon credits for its NDC and NBS. Nigeria should reform its intellectual property laws in line with the World Trade Organisations TRIPS Agreement to address issues like; intellectual property right, technology transfer, patents and innovations. Nigeria should partner international financial agencies like the Adaption Fund, GEF, AfDB for assistance to finance its NBS. There should be collaboration between the Council and the NNPC Limited to implement energy transition from fossil fuels to alternative cleaner and environmentally friendly energy sources within the time frame set by the UNFCCC.

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<sup>68</sup> SS 5 and 15 CCA, and Article 9 and 10 UNFCCC, 1992

<sup>69</sup> S 1 and 2 of the Land Use Act, 2004

<sup>70</sup> Ibid S 50

<sup>71</sup> A Karsenty *et al*, 'Carbon Rights, REDD+ and Payments for Environmental Services' Journal of Environmental Science and Policy (2014) 34, 20-29