

## IMPACT OF CLIMATE CHANGE ON INFANTS AND CHILDREN IN NIGERIA: A LEGAL PERSEPCTIVE

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### Abstract

*The subject of climate change is a reality in our current world. Scholars have written and examined the causes, effects and proffer solutions to this global reality and threat. The paper provides a review of the impact of climate change in Nigeria, with peculiar reference to the consequences on infants and children as a vulnerable population. Furthermore, this paper contains case studies and future estimates, that emphasize the growing dangers for infants and children as a result of extreme weather events, air pollution, coastal floods, and wars. Vaccination, nutrition programs, access to healthcare, clean water and sanitation, and climate-resilient infrastructure are among the recommended adaptation and mitigation strategies to protect this vulnerable group. Finally, the paper provides a thorough introduction to the multidimensional impact of climate change on Nigerian newborns and children. It demands for rapid action, adaptation, and collaboration to alleviate the negative effects and protect society's most vulnerable members. It also supports additional study and analysis to solve the region's severe climate challenges.*

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## **1.0 Introduction**

Climate change refers to long-term shifts in temperatures and weather patterns, such shifts can be natural, due to changes in the sun's activity or large volcanic eruptions.<sup>1</sup> The climate in Nigeria has been changing tremendously this is evident in: increases in temperature; variable rainfall; rise in sea level and flooding; drought and desertification; land degradation; more frequently, extreme weather events; affected fresh water resources and loss of biodiversity.<sup>2</sup> The durations and intensities of rainfall have increased, producing large runoffs and flooding in many places in Nigeria.<sup>3</sup>

Climate change is a complex environmental problem because of its long-term uncertain timeframe, scales of occurrence, differential impacts and vulnerabilities, as well as equity and justice within the global power asymmetries. For instance, the impacts of climate change are already driving people back into poverty and undermining growth.<sup>4</sup> It is also reflected in drought, desertification, rising sea levels, erosion, floods, thunderstorms, bush fires, landslides, land degradation, more frequent,

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<sup>1</sup>Joseph Romm, 'Extreme weather and Climate Change' [1-9-2022] 1(42) *Climate Change* <10.1093/wentk/9780197647127.003.0002> accessed 23 October 2023

<sup>2</sup>NwannekaOnwudiwe, 'Review on climate change impacts on air quality in Nigeria' [2023] 1(21) *Springer Climate* 217-232

<sup>3</sup> Ibid.

<sup>4</sup>AkudoAzu and KizitoAlakwe o, 'Communication and Raising Citizen's Consciousness of Climate Change Challenges and Adaptation in Nigeria' [14-2023] 13(4) *International Journal of Environment and Climate Change* 203-219, also Adegbite A.E and Adebayo A.T(2024), *The Role Of Courts In Protecting Vulnerable From Impacts Of Climate Change: Nigeria In Perspective*, being a PhD Law Seminar Presentation at the Lead City University Ibadan, Post Graduate College, January 2024

extreme weather conditions and loss of biodiversity.<sup>5</sup> All of which continues to negatively affect human and animal life and also the ecosystems in Nigeria.<sup>6</sup> Climate change is increasingly becoming a serious challenge to Nigeria's socioeconomic development. Various manifestations of its impact are evident in Nigeria.<sup>7</sup>

Children and infants are the most affected of the vulnerable groups, they can't decide for themselves and are subjects to other person's decisions. Across Nigeria, children experience increased temperatures and polluted air leading to health problems such as asthma and other dangerous respiratory conditions; poor education, resulting from economic inequality.<sup>8</sup> Children can experience mental health impacts from major storms, fires, and other extreme events that are expected to increase with a changing climate. They also can suffer from other changes, such as having to move due to climate threats.<sup>9</sup>

This paper will look into the effects of this climate change on the infants and children as a vulnerable group in Nigeria. To do this, it will delve into the vulnerability of infants in Nigeria, the health impact, nutritional impacts, displacements and conflicts etc,

## **2.0 Climate Change in Nigeria**

Nigeria's climate is influenced by its geographical location, topography, and the interactions of various air masses. Nigeria is situated in West Africa, between latitudes 4°N and 14°N, and longitudes 2°E and 14°E. It

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<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> John FB Mitchell, 'The "Greenhouse" effect and climate change' [1989] 27(1) *Review of Geophysics* 115-139

<sup>8</sup> Rema Hanna and Paulina Oliva, 'Implications of climate change change for children in developing countries' [2016] 26(1) *JSTOR* 115-132

<sup>9</sup> Ibid.

experiences a tropical climate characterized by distinct wet and dry seasons.<sup>10</sup> Climate is divided into four different *climate zones*:

- i. Tropical zone from 0°–23.5°(between the tropics) ...
- ii. Subtropics from 23.5°–40° ...
- iii. Temperate zone from 40°–60° ...
- iv. Cold zone from 60°–90°

This change is characterized by rising sea levels; fluctuating rainfall, higher temperatures, flooding, droughts, desertification, land degradation, and an increase in the frequency of extreme weather events are all contributing factors to Nigeria's changing climate.<sup>11</sup>

Climates are controlled by latitude, elevation, nearby water, ocean currents, topography, vegetation, and prevailing winds.<sup>12</sup>

## **2.1 Causes of Climate Change**

### **2.2 Heat-trapping Greenhouse Gases and the Earth's Climate**-Greenhouse gases in the atmosphere trap heat and warm the earth.<sup>13</sup>

- i. **Greenhouse Gases**- any gas that absorbs infrared radiation (net heat energy) released from the Earth's surface and reradiates it back to the Earth's surface, thereby contributing to the greenhouse effect. The most

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<sup>10</sup>G Byremo and others, 'Effect of climatic change in children with adoptic eczema' [2006] 61(12) European journal of allergy and clinical immunology 1403-1410

<sup>11</sup>Jianghiang Wang and others, 'Influence analysis of building types and climate zones on energetic, economic and environmental performances of BCHP systems' [September 2011] 88(9) Applied energy 3097-3112

<sup>12</sup>AyanladeAyansina and others, 'Rainfall variability and drought characteristics in two agro-climatic zones: An assessment of climate change challenges in Africa' [2018] 630(1) Science of Total environment 728-737

<sup>13</sup>V Balaram, 'Combating Climate Change and Global Warming for a Sustainable Living in Harmony with Nature' [2023] 6(3) JGR 5706

significant greenhouse gases are carbon dioxide, methane, and water vapour.<sup>14</sup>

- ii. **Reflectivity or Absorption of Solar Energy**- The Earth's albedo, or the amount of radiation reflected, accounts for around 30% of total incoming solar energy. The remaining 70% of radiation is absorbed. Reflected radiation just bounces off the Earth's atmosphere and returns to space.<sup>15</sup>
- iii. **Modifications to the Earth's Orbit and Rotation** Gravitational forces gradually shift Earth's orbit between more circular and elliptical configurations over 100,000 to 400,000 years.<sup>16</sup>

### 2.3 Different Climate Types

- i. **Tropical**-Tropical climates have monthly average temperatures of 18°C (64.4°F) or greater in the lowest month, with hot temperatures all year.<sup>17</sup>
- ii. **Dry**-There are two sorts of dry climates: arid and semiarid. Most dry areas receive 10 to 30 centimeters of rain per year (four to 12 inches), whereas semiarid climates receive enough to maintain large

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<sup>14</sup>SR Ali, 'An overview on greenhouse effect' [2021] 11(11) *ACADEMICIA: An International Multidisciplinary Research Journal* 994-1000

<sup>15</sup>C vassiliades and others, 'A climate sensitive design approach to BIPV: Investigating the nexus between solar energy and thermal comfort in cities in Sweden and Cyprus' [2023] 243(13) *Elsevier* 1178-1192

<sup>16</sup>C Bertrand and others, 'High frequency variations of the Earth's orbital parameters and climate change' [2002] 29(18) *Geophysical Research Letters* 1-40

<sup>17</sup>O Mata-Guel Erik and others, 'Impacts of Anthropogenic Climate Change on Tropical Montane forests: An appraisal of the Evidence' [2023] 98(4) *Biological Reviews* 1200-1224

grasslands. Temperatures in both dry and semiarid areas vary greatly on a daily and seasonal basis.<sup>18</sup>

- iii. **Temperate**-The Earth's temperate climates are distinguished by generally moderate mean annual temperatures, with average monthly temperatures exceeding 10°C in their hottest months and exceeding 3°C in their coldest months.<sup>19</sup>
- iv. **Continental** - Continental regions feature colder winters, greater snowfalls, and shorter growing seasons. They are the zones that exist between warm and polar climates. Seasonal shifts are extreme in continental regions.<sup>20</sup>
- v. **Polar**-A polar climate is one in which the temperature is regularly below freezing, the weather is frigid, and the ground is covered with snow. These locations do not receive direct sunlight or heat from the sun. Polar climates may be found in the Arctic's North Pole and the Antarctic continent's South Pole.<sup>21</sup>

### **3.1 Infants and Children's Rights in Nigeria**

According to the Nigerian Child's Rights Act 2003, a child is a person who has not yet reached the age of adulthood, whether natural, cultural, or legal. Under this Act, a child is defined as a person who has not attained the age of 18 (eighteen) years. On the other hand, Infants are typically described as the very young offspring of human beings. The concept

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<sup>18</sup>Tong Siqin and others, 'Future changes of dry-wet climate regions and its contributing climatic factors in China based on CMIP6 models' [2023] 43(8) *International Journal of Climatology* 3570-3589

<sup>19</sup>Christopher Fernandez, 'Climate change-induced stress disrupts ectomycorrhizal interaction networks at the boreal-temperate ecotone' [2023] 120(34) *PNAS* 1-10

<sup>20</sup> *ibid.*

<sup>21</sup> *ibid.*

“infant” is generally considered to designate the human young from birth to 12 months<sup>22</sup>.

The promotion and the protection of a child’s rights in Nigeria are well written in the constitution. They are recognized as a vulnerable group that needs to be cared for and protected from the harmful as much as possible and in all ramifications. The major legislation that protects a child in Nigeria is the Child's Right Act.<sup>23</sup> This act was enacted by the National Assembly in 2003 to provide for and protect the right of every Nigerian child. It provides that the best interest of a child should be paramount in all actions that concern a child. Some of the key aspects of the rights enshrined in the constitution are:

### **3.1.1 Right to Life and Dignity:**

The Nigerian constitution guaranteed the right of a child to life. It further emphasizes the dignity of a child and protection from any forms of harm.<sup>24</sup>

### **3.1.2 Right to education:**

As related to the international conventions of child rights, Nigerian constitution affirms that every child has the right to compulsory free basic educations.<sup>25</sup>

### **3.1.3 Protection from discriminations:**

The constitution emphasizes the prohibition of discrimination of a child on the ground of religion, social status, or ethnicity. This also follows that every child is treated fairly without exceptions or excuses.<sup>26</sup>

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<sup>22</sup><https://www.cdc.gov/ncbddd/childdevelopment/positiveparenting/infants.html> retrieved January 22<sup>nd</sup>, 2024

<sup>23</sup>Child’s Right Act, 2003

<sup>24</sup> S. 33 and 34 of the Constitution of the Federal Republic of Nigeria, 1999, as amended.

<sup>25</sup> Ibid. S. 18(3) (a)

<sup>26</sup> Ibid. S. 42

### **3.1.4 Protection from exploitation:**

Child labour is explicitly prohibited in the constitution, trafficking and any forms of exploitation. It further emphasises that they should be protected from any forms of work that will interfere or disturb their education or proper growth.<sup>27</sup>

### **3.1.5 The best interest of the child**

This is a fundamental principle of the constitution. This principle guides any decision making about children affairs. Child's Right Act of 2003 provides for and protect the right of every Nigerian child<sup>28</sup>. It provides that the best interest of a child should be paramount in all actions that concern a child.<sup>29</sup>

## **4.1 Vulnerability of Infants and Children**

Climate vulnerability describes the degree to which natural, built, and human systems are at risk of exposure to climate change impacts. Poverty and inequality both present significant adaptation limits, resulting in unavoidable impacts for vulnerable groups, including women, young people, the elderly, ethnic and religious minorities, Indigenous People, and refugees.<sup>30</sup>

According to Levitas et al., 2007<sup>31</sup>, social exclusion which results in vulnerabilities, is a complex and double dimensional process which

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<sup>27</sup> Ibid. S. 34

<sup>28</sup> Olusegun O. Adegbite A.E. (2017) Appraisal of Child Neglect in Nigeria: A Legal Perspective .*ABUAD, AJPIL*, Afe Babalola University, *Vol.III, No 1 2017*also on [www.researchgate.net](http://www.researchgate.net)

<sup>29</sup> S. 1 and 2 of the Child's Right Act, 2003

<sup>30</sup>Bennett Charmian and Sharon Friel, 'Impacts of Climate Change on Inequities in Child Health' [2014] 1(3) MPDI Children's Journal 461-473

<sup>31</sup>Levitas, R., Pantazis, C., Fahmy, E., & Gordon, D.(2007).The multi-dimensional analysis of social exclusion, Project Report. University of Bristol,Bristol. [www.dera.ioe.ac.uk](http://www.dera.ioe.ac.uk).

involves the lack/denial of resources, rights, goods and services: the ability to participate in the normal relationships and activities that are available to the majority of people in economic, social, cultural or political arenas of a society. Social exclusion is hence a multi-dimensional process with outcomes that cover economic, social, and cultural aspects of marginalization<sup>32</sup>. Contents of existing developmental Agenda on children, especially the United Nations Sustainable Development Goals, 2030 have consistently defined vulnerable groups to include children, youth, women, and persons with disabilities. For example, the 25<sup>th</sup> Declaration of the SDG 2030 states that<sup>33</sup>;

*“...all people, irrespective of sex, age, race or ethnicity, and persons with disabilities, migrants, indigenous peoples, children and youth, especially those in vulnerable situations, should have access to life-long learning opportunities that help them to acquire the knowledge and skills needed to exploit opportunities and to participate fully in society. We will strive to provide children and youth with a nurturing environment for the full realization of their rights and capabilities, helping our countries to reap the demographic dividend, including through safe schools and cohesive communities and families”*

Children are especially vulnerable to climate change because of their physical and cognitive immaturity: Compared to adults, children breathe more air and drink more fluid for their body weight. Also, because they are shorter and spend more time on the ground, they are closer to ground-

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<sup>32</sup>Adegbite A.E(2024) Dimensions And Theories Of Children's Socio-Economic Exclusion available at SSRN, retrieved on January 31<sup>st</sup> 2024

<sup>33</sup>Adegbite A.E(2024),Dimensions And Theories Of Children's Socio-Economic Exclusion available at SSRN, retrieved on January 31<sup>st</sup> 2024

level pollutants. Infants and children have fewer defense mechanisms to protect them against environmental toxins and chemicals.<sup>34</sup>

Childhood is arguably the most vulnerable period of human life. Children are highly dependent on others to satisfy their basic needs, and this makes them particularly vulnerable. This is, of course, true for other stages of life as well.<sup>35</sup>

By 2050, a further 24 million children are projected to be undernourished as a result of the climate crisis. By 2040, it is estimated that one in four children will be living in areas with extreme water shortages. Almost 160 million children are exposed to increasingly severe and prolonged droughts.<sup>36</sup>

#### **4.2 Health Impact on Infants and Children**

Young children and infants are particularly vulnerable to heat-related illnesses and death, as their bodies are less able to adapt to heat. In the first years of life, the vital organs and the brain are developing rapidly, and are more sensitive to potential damage caused by exposure.<sup>37</sup>

Substances and factors that can impact the health and well-being of infants and toddlers include, but are not limited to: Dust, dirt, and irritants. Fragrances and airborne particles. Chemicals and toxins. Risks to child health include low birth weight, malnutrition, not breast feeding,

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<sup>34</sup>Sheridan Bartlett, *Adapting cities to climate change* (1st edn, Routledge 2009) 25

<sup>35</sup> *Ibid.*

<sup>36</sup>ChrisJ Cuomo, 'Climate Change, Vulnerability, and Responsibility' [11 March 2020] 26(4) *HYPATIA* 690-714

<sup>37</sup>Pettoello-Mantovani Massimo and others, 'The effects of climate change and exposure to endocrine disrupting chemicals on children's health: A challenge for pediatricians' [2023] 4(3) *Elsevier* 1-10

overcrowded conditions, unsafe drinking water and food and poor hygiene practices<sup>38</sup>.

The leading causes of death among children include respiratory infections, diarrhea diseases, measles, malaria, malnutrition and newborn conditions. Many children deaths are preventable through vaccination, adequate home care, access to health care services, improved rates of breastfeeding and better nutrition<sup>39</sup>.

Rising temperatures and decreased air quality affect kids by increasing asthma attacks and allergies, worsening pregnancy outcomes, creating food insecurity, increasing mental health problems, developmental delays, and changes in their genetic makeup<sup>40</sup>.

Scientists discovered increased heat was linked to fast weight gain in babies, which increases the risk of obesity in later life. Higher temperatures were also linked to premature birth, which can have lifelong health effects, and to increased hospital admissions of young children<sup>41</sup>.

#### **4.3 Nutritional Impact on Infants and Children**

Increasing temperatures and decreasing precipitation lead to a higher probability of malnutrition stunting and being underweight among children, supporting the notion that temperature has a direct effect on child malnutrition and precipitation an indirect effect<sup>42</sup>. These effects are more prominent in rural areas than in urban areas.<sup>43</sup>

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<sup>38</sup>JohnMBalbus, 'Implications of global climate change for the assessment and management of human health risks of chemicals in the natural environment' [January 2013] 32(1) *Environmental toxicology and chemistry* 62-78

<sup>39</sup> *ibid.*

<sup>40</sup> *ibid.*

<sup>41</sup> *ibid.*

<sup>42</sup>J Moreno Ashby and others, 'Niche modeling of dengue fever using remotely sensed environmental factors and boosted regression trees' [2017] 9(4) *Remote Sensing* 328

<sup>43</sup>Caccialanza Riccardo, 'Interlinkages between Climate Change and Food Systems: The Impact on Child Malnutrition—Narrative Review' [2023] 15(2) *MPDI Nutrients* 416

Proper nutrition is essential for children's physical and mental growth. Extreme events, such as wildfires, floods, heat waves, and droughts may disrupt food production and distribution, increase costs, and limit availability.<sup>44</sup> These impacts could make it harder for children to get healthy food.

If extra CO<sub>2</sub> in the atmosphere makes those crops less nutritious, it will be even harder to feed the world's growing population. The details: In most of the places where food is grown today, crop yields are likely to be lower because of more frequent heat waves, worse air pollution, floods, and droughts.<sup>45</sup>

Climate change worsens unsustainable food systems by directly impacting soil fertility, rain patterns, crop yields and food production, food-nutrient and anti-nutrient composition, and nutrient bioavailability. These changes decrease macro- and micronutrients available in the global food supply.<sup>46</sup>

Climate change may affect certain disease-causing organisms in the food chain. For instance, *Escherichia coli* (*E. coli*) could increase with a warmer and more humid climate. These climate changes, combined with other social and economic factors, may increase children's vulnerability to some food-related illnesses.<sup>47</sup> For example, children are more prone to severe illness or complications from *E. coli* infections.

Therefore, climate change will directly affect the infant and children at the most in the following ways: Food scarcity, Malnutrition, stunting and

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<sup>44</sup>KP Acharya and others, 'Establishment and recent surge in spatio-temporal spread of dengue in Nepal' [2020] 9(1) *Emerging Microbes & Infections* 676–679

<sup>45</sup> *Ibid.*

<sup>46</sup>Vermeulen Sonja j and others, 'Climate Change and Food Systems' [July 2012] 37(11) *Annual Review of Environment and Resources* 195-222

<sup>47</sup>Lafferty Kelvin d, 'The ecology of climate change and infectious diseases' [April 2009] 90(4) *Ecological Society of America* 888-900

wasting, Micro and macronutrients deficiency, infants feeding practice, waterborne diseases, Dietary diversity etc.

#### **4.4 Respiratory Issues/Impact on Infants and Children**

Climate change has the potential to increase outdoor air pollutants, such as dust from droughts, wildfire smoke, and ground-level ozone. Ground-level ozone and particulate matter are associated with increases in asthma and other respiratory conditions in children.<sup>48</sup>

Spikes in ground-level ozone are linked with increased hospitalizations for chronic obstructive pulmonary disease (COPD), pneumonia, asthma, allergies, and other lung problems.<sup>49</sup>

#### **4.5 Displacement and Conflicts**

Displacement caused by extreme climate change and resources related conflicts have a disproportionate impact on infants, who are often at the receiving end of the crisis because they are dependent on others especially love ones to care for them. These displacements can be due to extreme weather events, conflicts over scarce resources, refugee camp conditions. All of these conditions have psychological and developmental impacts on the infants and the required nutrition needed for proper growth will be unavailable. Health condition like kwashiorkor, malgrowth and premature death often trail the infants during this period.<sup>50</sup>

#### **4.6 Government Policy and Response**

Nigeria, like many parts of the world, is experiencing climate change. In particular, the country is becoming warmer. Various studies show that annual and seasonal timescales indicate a significant positive increase in temperatures in Nigeria. They show that mean temperatures have been

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<sup>48</sup>J Luck and others, 'Climate change and diseases of food crops' [10 January 2011] 60(1) Plant Pathology 113-121

<sup>49</sup> Ibid.

<sup>50</sup>Andrej Privara and Magdalena Privarova, 'Nexus between Climate Change, Displacement and Conflict: Afghanistan Case' [2019] 11(20) Sustainability 5586

consistently increasing throughout the country in the last five decades and have been rising significantly since the 1980s, with a change of 1.01°C (0.52 to 1.5°C) in the linear warming for the period 1951 - 2005. The linear warming for the same period for 30-year averages on a decadal slice further revealed positive changes in temperature by an average of 0.2°C/decade.<sup>51</sup>

The year 2019 has been a blockbuster one for extreme weather with persistent record-breaking floods in many parts of the country. The unusual rains also threaten good harvest.<sup>52</sup>

In 2012, the Federal Executive Council approved a comprehensive strategy policy on climate change: The Nigeria Climate Change Policy Response and Strategy (NCCPRS), the overarching objective of the policy is to promote low-carbon, high-growth economic development and build a climate-resilient society through the achievement of the following targets.<sup>53</sup>

### **5.1. Policy Vision**

The vision of the National Policy on Climate Change is: A low-carbon, climate-resilient Nigeria. Policy Mission Ensure sustainable development and a climate proofed economy through multi-stakeholder engagement.<sup>54</sup>

#### **5.1.1 Policy Goal**

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<sup>51</sup>HaiderHuma, 'Climate Change in Nigeria: Impacts and Responses' (<https://wwwnationalarchivesgovuk/doc/open-government-licence/version/3/>, 10th October 2019) <<http://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/14761>> accessed 7 November 2023

<sup>52</sup> Ibid.

<sup>53</sup>NA Onyekuru and Rob Marchant, 'Nigeria's Response to the Impacts of Climate Change: Developing Resilient and Ethical Adaptation Options' [2012] 25(1) Agricultural and Environmental Ethics 585–595

<sup>54</sup> Ibid.

The Policy's overall goal is to:

Promote a low-carbon, climate-resilient and gender-responsive sustainable socio-economic development. Some of the expected outcomes of the policy's goal include: Reduce vulnerability to climate change impacts across all sectors.

- i. Improved social, cultural, economic and ecological resilience.
- ii. Reduced greenhouse gas emissions. iv. Increased awareness of climate change impacts and adaptation and mitigation measures<sup>55</sup>. ETC

In January 2023, Nigeria adopted new Methane Guidelines that include mandatory measures for oil and gas companies, such as leak detection, to reduce methane emissions from the oil and gas sector. Under the 2021 Climate Change Act, the government is required to develop a carbon tax and carbon trading.<sup>56</sup>

These government initiative face some challenges to their effective implementations including limited funding, inadequate infrastructure and bureaucratic inefficiencies. These challenges will definitely affect the effective delivery of healthcare and nutrition services to the infants.<sup>57</sup>

Government also built health centre across communities and trained auxiliary nurses to man the post to deliver a quick first aids to the infants when cases arise.<sup>58</sup>

### **5.1.2 Community Resilience**

Community based initiatives that prioritize the resilience of infants in the situation of climate change are important for building adaptive and self-

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<sup>55</sup>L Celliers and others, 'Pathways of integrated coastal management from national policy to local implementation: Enabling climate change adaptation' [2013] 1(1) Elsevier 72-86

<sup>56</sup> Ibid.

<sup>57</sup> Ibid.

<sup>58</sup> Ibid.

reliant communities. The local residence should be empowered to handle their own health and safety and to address the main needs of the young ones amongst them.<sup>59</sup> The Nigerian communities have over the decades involved in capacity building, empowering women who are the first defense in the homes, partnership and collaborations with individuals and corporate bodies, been culturally sensitive when implementing project to manage the changes in their environments, and by building resilient attitudes into their daily lives.<sup>60</sup> Individual should use less energy by reducing your heating and cooling use, switching to LED light bulbs and energy-efficient electric appliances, washing your laundry with cold water, or hanging things to dry instead of using a dryer.<sup>61</sup>

### **5.2.1 Case Studies**

#### **5.2.2 Flood displaced families in Lagos**

In recent years Lagos has experienced excessive rainfall and flood has become a constant problem to the families. Many families including those with infants have been displaced from their homes thereby exposing the infants to more health and nutrition dangers.<sup>62</sup>

#### **5.2.3 Conflict-induced displacement in the Northeast**

The Boko-haram menace in the northeast Nigeria cum serious climate change has forced many families to leave their homes in serve for safety. The infants are the most affected since it's a possibility that a mother may

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<sup>59</sup>Shaikh Mohammad kais and others, 'Community Capitals as Community Resilience to Climate Change: Conceptual Connections' [2016] 13(12) *IJERPH* 3390

<sup>60</sup> Ibid.

<sup>61</sup>Rachael Bajayo, 'Building community resilience to climate change through public health planning' [1 April 2012] 23(1) *Health Promotion Journal of Australia* 30-36

<sup>62</sup>Ajibade Idowu and others, 'Urban flooding in Lagos, Nigeria: Patterns of vulnerability and resilience among women' [December 2013] 23(6) Elsevier 1714-1725

abandon her child in the bid to save her life when the situation become dare. This hostile situation put the life of the infant in serious danger.<sup>63</sup>

### **5.3 Malaria outbreak in the Niger Delta**

Due to excessive flooding in recent years and the issue of crude oil spills which have rendered lakes and creek stagnant and dirty, the breeding by the malaria caused by mosquitoes have grown insanely.<sup>64</sup>

Moreover, changing rainfall patterns and rising temperature due to gas flaring from the refineries have created a thriving environment for malaria vectors. Infants in this region can are susceptible to malaria which can have a grave danger to the health and growth.<sup>65</sup>

## **6.0 Future Concern and Projections**

To understand future climate change and projection is the better ways to prepare for them. Statistics have shown that extreme climate change are bound to occur in the futures show preparation for this changes are essential. Let us look at the following projections:

### **i. Increase in frequency and the intensity of extreme weather occurrences**

Projections have shown that the future will be marred with high weather events like heat waves, floods and the likes. Therefore, infants are at the risk of displacements and exposures to harsh conditions that may lead to diseases and death.<sup>66</sup>

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<sup>63</sup>Frederic Noel Kamta and others, 'Insecurity, Resource Scarcity, and Migration to Camps of Internally Displaced Persons in Northeast Nigeria' [2020] 12(17) Sustainability 6830

<sup>64</sup>Vincent Ezikornworweli and Sunday Ighovieefe, 'Climate and Epidemiology of Malaria in Port Harcourt Region, Nigeria' [2015] 4(1) *American Journal of Climate Change* 7

<sup>65</sup> Ibid.

<sup>66</sup>Nwanneka Onwudiwe, 'Review on climate change impacts on air quality in Nigeria' [2023] 1(21) Springer Climate 217-232

**ii. Air Pollutions**

As the temperature increase, air transmitted diseases are likely to be on the increase. Since the infants needs more air and oxygen for their developing brain, they are likely to develop respiratory related diseases.<sup>67</sup>

**iii. Coastal area flooding**

Rising temperature will in turn result in the rising sea level which will eventually cause flooding starting from the coastal communities. This displacement will certainly affects the infants the most because of the flooding and malaria outbreak in the affected areas.<sup>68</sup>

**iv. Conflict and displacements**

Scarcity of resources and extreme weather conditions can contribute to an up-surge in conflict among communities. This conflict will result in the displacements of families and certainly infants who are vulnerable to the repercussion from these disasters. Exposure to conflict will affect their health, nutrition and safety.<sup>69</sup>

**6.2 Adaptation and Mitigation Measures**

Having looked at the future projection and likely effects on the infants at the most, it is important to put in place some mitigating measures to combat these adverse effect on both the young and infants in particular. These are the adaptation and mitigation measures that are necessary.

**i. Vaccination and disease control**

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<sup>67</sup> Ibid.

<sup>68</sup> Ibid.

<sup>69</sup> Ibid.

Putting more efforts to ensure that infants are vaccinated as at when due is important to their safety in time of outbreaks of certain disease.<sup>70</sup>

**ii. Nutrition Programmes**

Educating caregivers on the need to adhere to nutritional instruction given can help reduce malnutrition in the infants. This initiative are vital to their survival in the face of harsh condition.

**iii. Quick access to healthcare**

Getting the healthcare centres closer to the people makes it easy and faster to access them. This will reduce mortality rate in the rural areas and bring government programme and initiatives closer to the communities.<sup>71</sup>

**iv. Clean water and sanitation**

Providing the communities with clean water sources and sanitation measures like refuse bags which will be evacuated will reduce air bourne and water bourne diseases especially among infants.<sup>72</sup>

**v. Climate resilient infrastructure**

Building infrastructures that are resilient to adverse climate change such as healthcare facilities, heater to warm houses during extreme cold or well ventilated houses, planting of trees in preparation for those extreme weathers will go a long way to ensure the safety of infants in both city and rural communities.<sup>73</sup>

**7.0 Conclusion**

It can be concluded that, when viewed through a legal lens, the impact of climate change on infants and children in Nigeria reveals a

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<sup>70</sup>S vijayavenkataraman, 'A review of climate change, mitigation and adaptation' (<https://www.sciencedirect.com/science/article/abs/pii/S136403211100459X>, January 2012) <<https://doi.org/10.1016/j.rser.2011.09.009>> accessed 7 November 2023

<sup>71</sup> *ibid.*

<sup>72</sup> *Ibid.*

<sup>73</sup> *Ibid.*

multidimensional challenge that requires urgent attention and comprehensive measures to address. From the lens of legal frameworks, it is evident that existing laws and policies often fall short of sufficiently protecting the rights and well-being of the most vulnerable members of society-children. Due to the increased risks of malnutrition, disease, displacement, and even death that will result from climate change, Nigerian children will face increased exposure to environmental degradation, food insecurity, and health hazards.

These challenges present opportunities for effective legal interventions and policy reforms. By strengthening legal frameworks, prioritizing the rights of children in climate change adaptation and mitigation strategies is paramount. This entails not only enacting new laws but also enforcing existing ones and ensuring their alignment with international conventions such as the Convention on the Rights of the Child. Moreover, integrating child-centered approaches into climate change policies and programs can enhance resilience and foster sustainable development.

Collaboration among government agencies, civil society organizations, international bodies, and local communities is essential in addressing the complex interplay between climate change and child rights. Nigerian children can have a more just and equitable future if stakeholders build partnerships, share resources, and mobilize collective action.

Ultimately, safeguarding the rights of infants and children in Nigeria requires a holistic approach that transcends legal boundaries and embraces the principles of equity, justice, and intergenerational solidarity. As a result of climate change, we must prioritize the well-being of our youngest citizens, ensuring that their rights are protected, their voices are heard, and their futures are secure.

A focus is placed in the article on Nigerian infants and those who are most vulnerable to climate change. There is an urgent call for immediate measures, adaptation strategies, mitigations initiatives and international

cooperation to protect the youngest and most vulnerable members of our society from the harsh reality of climate change.

There should be further and broader studies conducted to identify the areas that need urgent attention and what needs to be done to prevent the imminent disaster from causing irreparable damage.

### **8.0 Recommendation**

Nigeria can take significant strides towards safeguarding the rights and well-being of its infants and children in the face of the growing threats posed by climate change if these recommendations are sufficiently implemented.

- i. Strengthen Legal Protections:** Amend current laws and regulations to expressly emphasize children's rights and well-being in the face of climate change-related hazards. This might include amending current legislation or developing special legal frameworks to address children's vulnerability to environmental change.
- ii. Enforce Existing regulations:** To prevent the negative effects of climate change on children, make sure environmental protection, child welfare, and disaster management regulations are effectively enforced. This involves holding persons accountable for actions that contribute to environmental deterioration.
- iii. Align with International Standards:** Ensure that Nigerian laws and policies are consistent with international treaties such as the Convention on the Rights of the Child (CRC), which provide comprehensive protection for children in the context of climate change.

- iv. **Partnership & Collaboration:** Encourage collaboration across government agencies, civil society groups, academics, international authorities, and local communities to address the numerous issues that climate change poses to children's rights. To increase effect, combine resources, exchange best practices, and coordinate activities.
- v. **Child-Centered Approaches:** Include child-centered views in climate change adaptation and mitigation initiatives at all levels of government. This might include completing kid impact evaluations for policies and projects, as well as actively integrating children in decision-making processes about environmental concerns that affect them.
- vi. **Education and Awareness:** Launch education and awareness initiatives for children, parents, educators, and communities on the relationship between climate change and child rights. Empower children with information and skills to deal with environmental issues and advocate for their rights.
- vii. **Capacity Building:** Offer training and capacity-building programmes for government officials, policymakers, and stakeholders to help them integrate child rights issues into climate change policies and programmes. This will improve the efficacy and sustainability of initiatives designed to protect children from climate-related dangers.
- viii. **Advocate for Climate Justice:** Promote climate justice at the national and international levels, highlight the disproportionate impact of climate change on children, particularly those from marginalised and disadvantaged communities. Call for equitable solutions that prioritise the needs of both current and future generations.

- ix. **Research and Data Collection:** Invest in research and data collection efforts to better understand the specific vulnerabilities of children to climate change impacts in different regions of Nigeria. This evidence-based approach will inform targeted interventions and policy decisions.
- x. **Promote Green and Sustainable Practices:** Encourage the adoption of environmentally sustainable practices at the individual, community, and institutional levels to mitigate the drivers of climate change and protect children's health and well-being in the long term.

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