

CHAPTER 11

PROTECTING HUMAN RIGHTS THROUGH CLIMATE CHANGE COMMITMENTS: THE CASE OF NIGERIA'S NATIONALLY-DETERMINED CONTRIBUTION

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1 Introduction

Climate change has been described as the greatest environmental challenge because of its interwoven complexity with science and other socio-economic issues, such as its threat to the attainment of sustainable development.¹ The linkages between climate change and sustainable development are at the heart of climate change response, mitigation and adaptation. According to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC report) 2014, limiting the effects of climate change is necessary to achieve sustainable development and equity, including poverty eradication.² The IPCC report further states that the gains of sustainable development are at risk of being eroded by insufficient adaptation response to emerging climate change impacts.³

The IPCC report also linked the increasing frequency of extreme weather events and natural disasters, rising sea levels, floods, heat waves, droughts, desertification, water shortages, and the spread of tropical and vector-borne diseases as being direct and indirect threats to the full and effective enjoyment of a range of human rights including the rights to life, water and sanitation, food, health, housing, self-determination, culture and development.⁴ Climate change, therefore, requires a global rights-based response. The United Nations (UN) through its Office of the High Commissioner for Human Rights and other mechanisms highlights the

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1 O Adejonwo-Osho 'Effective fulfilment, implementation, and supervision of the validation and registration requirements for clean development mechanism (CDM) projects: A missing link in the achievement of the sustainable development objective of the CDM' PhD thesis, University of Dundee, 2012.

2 Intergovernmental Panel on Climate Change Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (2014) 17.

3 As above.

4 Intergovernmental Panel on Climate Change (n 2) 151.

links and key impacts that climate change directly and indirectly has on an array of internationally-guaranteed human rights such as the right to life, and have advocated a human rights-based approach to climate change.⁵ The Preamble to the Climate Change Paris Agreement⁶ acknowledges that⁷

climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.

Internationally-recognised human rights and fundamental human rights guaranteed by state constitutions, especially those dependent on the environment, are adversely or will be adversely impacted by climate change without appropriate mitigation and adaptation action. This chapter examines the potential for Nigeria's NDC strategy to protect human rights, especially in key sectors identified as having high GHG mitigation potentials, through climate action.

This chapter is divided into four parts: the introduction to the issues; part 2 provides background information on climate change in Nigeria, highlighting the impact on certain sectors of the society. Part 3 is divided into two parts and offers insights to Nigeria's NDC and the sectors targeted for achieving Nigeria's emission reduction commitments. It examines national implementation strategies and provides analysis and prospects for emission reduction in Nigeria's NDC, especially in two of the key sectors with high GHG mitigation potentials, namely, the oil and gas and energy sectors. Part 3 also examines how the key mitigation measures identified in Nigeria's NDC can protect human rights through climate action. Part 4 concludes by summing up the analysis in the chapter and proposes credible solutions that ensure that climate change mitigation and adaptation efforts are adequate and otherwise amenable with the fundamental human rights guaranteed by the 1999 Constitution of Nigeria.

5 See Office of the United Nations High Commissioner for Human Rights 'Key messages on human rights and climate change', https://www.ohchr.org/Documents/Issues/ClimateChange/KeyMessages_on_HR_CC.pdf (accessed 8 October 2019); UN Human Rights Office of the High Commissioner 'Open letter from the United Nations High Commissioner for Human Rights on integrating human rights in climate action', <https://www.ohchr.org/Documents/Issues/ClimateChange/OpenLetterHC21Nov2018.pdf> (accessed 8 October 2019); Human Rights Council 'Human rights and climate change' Resolution 10/4 25 March 2009; The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on long-term cooperative action under the Convention UNFCCC Decision 1/CP.16, <https://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf> (accessed 8 October 2019).

6 The Paris Agreement was adopted as a decision of the Conference of the Parties to the UNFCCC, and its text is included as an annex to that decision. Conference of the Parties, Draft decision /CP.21, Adoption of the Paris Agreement 20, UN Doc FCCC/CP/2015/L.9/Rev.1 12 December 2015.

7 See Preamble para 6 of the Paris Agreement.

2 Climate change impacts on human rights: A case for improved environmental performance in Nigeria

Nigeria is located in sub-Saharan Africa with a total landmass of 923 773 square kilometres.⁸ According to current empirical data Nigeria is the most populous country in Africa with an estimated population of over 184 million people which accounts for about 47 per cent of West Africa's population.⁹ The country is endowed with abundant and diverse energy, mineral, and biological resources including crude oil, natural gas deposits, limestone, coal, tin, columbite, asbestos, iron ore, gold, silver, lead and zinc.¹⁰ Nigeria is one of the leading producers of crude oil in the world and it has the largest natural gas reserves in Africa.¹¹

Developing countries are vulnerable in different degrees to climate change.¹² Nigeria is highly vulnerable to climate change, although the impacts across the different geographical zones vary in extent, severity and intensity.¹³ The World Climate Change Vulnerability Index 2015 classifies Nigeria as one of the ten most vulnerable countries that will be impacted by climate change.¹⁴ According to a 2009 report on the impacts of climate change on the Nigeria's economy, between 2 and 11 per cent

8 O Ajai 'The balancing of interest in environmental law in Nigeria' in M Faure & W du Plessis (eds) *The balancing of interests in environmental law in Africa* (2011) 380.

9 The World Bank 'Nigeria overview', <https://www.worldbank.org/en/country/nigeria> (accessed 8 October 2019).

10 World Bank Country Report 'Nigeria', <http://www.worldbank.org/en/country/nigeria> (accessed 1 October 2019).

11 As above; see also 'Nigeria: World encyclopaedia of nations', <http://www.encyclopedia.com/topic/Nigeria.aspx> (accessed 1 October 2019).

12 According to the Stern Report, developing countries are especially vulnerable to the physical impacts of climate change because of their exposure to an already fragile environment, an economic structure that is highly sensitive to an adverse and changing climate, and low incomes that constrain their ability to adapt. See N Stern *The economics of climate change: The Stern Review* (2007) 93.

13 According to Nigeria's NDC, '[t]he relative vulnerability of the six geopolitical zones of Nigeria indicates a general south-north divide. The three northern zones show higher vulnerability than those in the south. This reflects the higher rainfall and socio-economic development of the south. The south-south shows highest relative variability among the three southern zones, reflecting the challenges of coastal flooding and erosion, as well as the impact of petroleum exploration and exploitation in that part of the country.' See Nigeria's Intended Nationally Determined Contribution, http://www4.unfccc.int/submissions/INDC/Published%20Documents/Nigeria/1/Approved%20Nigeria's%20INDC_271115.pdf (accessed 10 October 2019).

14 The 2011 Climate Change Vulnerability Index (CCVI) evaluates 42 social, economic and environmental factors to assess national vulnerabilities across three core areas. These include exposure to climate-related natural disasters and sea-level rise; human sensitivity, in terms of population patterns, development, natural resources, agricultural dependency and conflicts; and future vulnerability by considering the adaptive capacity of a country's government and infrastructure to combat climate change. See Climate Change Vulnerability Index 2015, http://reliefweb.int/sites/reliefweb.int/files/resources/Climate_Change_2015_Press_Countries_V01.pdf (accessed 4 May 2019). The analysis was published by Verisk Maplecroft, a global risk analytics company. See also S Kreft & D Eckstein 'Global Climate Risk Index 2014: Who suffers most from extreme weather events? Germanwatch Briefing Paper, <https://germanwatch.org/en/download/8551.pdf> (accessed 8 October 2019).

of Nigeria's gross domestic product (GDP) could potentially be lost by 2020 if adaptation strategies are not implemented.¹⁵ An assessment of the climate change vulnerability of various sectors of the Nigerian economy, including human settlement and health; water resources; wetlands and freshwater ecosystems; energy, industry, commerce; agriculture, food security, land degradation, forestry and biodiversity; and coastal and marine zones indicates that virtually all of the sectors present some evidence of vulnerability to climate change.¹⁶

A considerable proportion of the population is at risk of water stress and reduced agricultural yields. It is estimated that since 1963 the surface area of Lake Chad has shrunk to nearly one-twentieth of its original size, from approximately 25 000 to 1 350 square kilometres due to climatic changes and to high demands for agricultural water.¹⁷ As a result of water shortages from Lake Chad, hydro-electric power generation suffers frequently from low in-flow into the dams and the farming community that depends on the lake and its ecosystem are threatened, resulting in reduced agricultural yields, unsustainable farming practices and killings and destruction of properties between herdsman and farmers in Nigeria. Nigeria's contribution to the total global Green House Gas (GHG) emissions is estimated to be about 1 per cent of the global total.¹⁸

The 2018 Environmental Performance Index (EPI) ranked Nigeria 100 out of 180 countries surveyed in the world, with a score of 54.76 per cent, an improvement on previous years' scores.¹⁹ The low ranking may be attributed to several domestic challenges.²⁰ According to Ajai, the national framework and response strategy to environmental issues face some peculiar and sometimes general challenges.²¹ For example, although there are a plethora of environmental legislations and regulations, Nigeria struggles with entrenching a coherent institutional framework to drive their enforcement and implementation.²² Environmental degradation and

15 See Country Report to the Rio+20 Summit 'Nigeria's path to sustainable development through green economy', <https://sustainabledevelopment.un.org/content/documents/1023nigerianationalreport.pdf> (accessed 8 October 2019).

16 Building Nigeria's response to climate change 'Climate change information on Nigeria', <http://www.nigeriaclimatechange.org/ccinfo.php> (accessed 4 May 2019).

17 United Nations Environment Programme 'Vital water graphics: An overview of the state of the world's fresh and marine waters', <http://www.unep.org/dewa/vitalwater/article116.html> (accessed 1 June 2019).

18 R Cervigni et al (eds) *Low carbon development opportunities for Nigeria* (2013).

19 Environmental Performance Index 'Nigeria', <https://epi.envirocenter.yale.edu/epi-country-report/NGA> (accessed 8 October 2019). Countries are assessed and scored based on their performance in the following indicators: health impacts; air quality; water sanitation; water resources; agriculture; forest; fisheries; biodiversity and habitat; and climate and energy. The 2015 EPI ranked Nigeria 133 out of 180 countries surveyed in the world, with a score of 58.27%.

20 Ajai (n 8) 381.

21 As above.

22 The lack of a coherent framework could be attributed to a constitutional lacuna with regard to which tier of government has co-ordinating control over the governance of the environment. Jurisdiction over the management and regulation of the environment is shared by the federal, state and local governments. The Constitution does not explicitly or adequately give the federal government the legislative powers to assume a coordinating role in the management and conservation of the entire field of the

pollution are widespread and compliance with environmental legislations and guidelines, especially in key sectors such as manufacturing and the oil and gas sector, is more in breach.²³ However, despite the challenges²⁴ there are newly-introduced policies and programmes, such as the National Generator Emission Control Programme (NGECP) which, if adequately implemented, will enhance Nigeria's climate change commitments, especially its NDC and allied issues affected by climate change such as human rights protection.²⁵

2.1 The Paris Agreement and human rights

The historic Paris Agreement was adopted on 12 December 2015. The Agreement retains the founding principle of the UN Framework Convention on Climate Change (UNFCCC), such as the international principle of Sustainable Development,²⁶ Precautionary Principle and the principle of Common but Differentiated Responsibility (CBDR).²⁷ In addition, the Paris Agreement acknowledges the environmental justice dimensions of climate change and introduces human rights obligations such as climate justice, and the rights of women, vulnerable groups, and indigenous peoples. Thus, the Preamble acknowledges that

climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.²⁸

The key elements of the Paris Agreement includes the goal of holding global warming below 2° Celsius; a system of national pledges to reduce

environment and development. The current situation has resulted in confusion, replication of agency duties, turf wars between competing agencies and a lack of coordination. See *Attorney-General of Lagos State v Attorney-General Federation* (2004) 18 NWLR (Pt 904) 1. See also O Fagbohun & O Adejonwo-Osho 'Toward coherent governance and effective protection: The legal and regulatory framework for managing the environment in Nigeria' *Unilag Journal of Comparative Law* (forthcoming) and OG Amokaye 'Environmental pollution and challenges of environmental governance in Nigeria' (2012) 10 *British Journal of Arts and Social Sciences* 26.

23 O Oluduro & O Oluduro 'Oil exploitation and compliance with international environmental standards: The case of double standards in the Niger Delta of Nigeria' (2015) 37 *Journal of Law, Policy and Globalization* 67. See also H Ijaiya & O Joseph 'Rethinking environmental law enforcement in Nigeria' (2014) 5 *Beijing Law Review* 306.

24 Environmental legislations are not implemented and where they are enforced, enforcement does not cut across; they are sometimes corruptly enforced or often enforced only with a revenue collection motive.

25 O Adejonwo-Osho 'The regulatory and institutional framework for climate change response in Nigeria' (2015) 33 *Journal of Private and Property Law* 100.

26 See art 2(1) of the Paris Agreement.

27 See art 2(2) of the Paris Agreement.

28 See Preamble para 6 of the Paris Agreement.

emissions referred to in the Paris Agreement as ‘nationally determined contributions’ (NDC); the mixture of mandatory and non-mandatory provisions relating to parties’ mitigation contributions,²⁹ the reliance on transparency rather than legal enforcement to promote accountability and effectiveness; the shift away from the annex I and non-annex I differentiation in terms of emission reduction commitments towards a more flexible approach that encompasses all countries, whether developed or developing; the pledge to mobilise climate finance from public and private sources; and, perhaps most importantly, the bottom-up approach of the agreement.³⁰

NDCs are emission reduction commitments of countries after 2020. The commitments include changes across the entire sectors of a country’s economy, or in specific sectors such as energy, manufacturing, forestry. It could be through the implementation of emission reduction projects such as energy efficiency project, it could be policy oriented such as introduction and implementing carbon tax and so forth. Thus, the commitments are made according to the different capabilities of parties to the Paris Agreement. For instance, developing countries with advanced capabilities submitted their mitigation goals in the form of economy-wide goals, such as emission reduction targets below business as usual scenarios (BAU), reducing national GHG intensity, and so forth. Other developing countries expressed their mitigation goals as a collection of policies, programmes and specific mitigation activities.³¹ The agreement requires parties to provide the information necessary to ensure that their NDCs are clear and transparent, become progressively more ambitious over time, and to track progress in implementation.

The Paris Agreement aims to address the threat of climate change by requiring states to make nationally-determined contributions to greenhouse gas mitigation (NDCs) and working towards meeting the commitments in their NDC, and to transparently report on their activities towards fulfilling those commitments (the transparency framework which ensures that all countries are playing their part in addressing the challenge of climate change). The COP24 parties agreed to a ‘rule book’ dubbed the Katowice Climate Package (KCP), a set of guidelines for implementing the Paris Climate Change Agreement.³² This ‘rule book’ now gives NDCs

29 D Bodansky ‘The legal character of the Paris Agreement’ *Review of European, Comparative, and International Environmental Law Journal* (forthcoming), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2735252 (accessed 17 March 2019).

30 J Vinales ‘The Paris Climate Agreement: An initial examination’ <http://www.ejiltalk.org/the-paris-climate-agreement-an-initial-examination-part-i-of-ii/> (8 October 2019); A Savaresi ‘The Paris Agreement: A rejoinder’ *EJIL: Talk!* <http://www.ejiltalk.org/the-paris-agreement-a-rejoinder/> (accessed 8 October 2019).

31 K Mbeva & P Pauw ‘Self-differentiation of countries’ responsibilities: Addressing climate change through intended nationally determined contributions’ (German Development Institute Discussion Paper 4/2016, http://www.die-gdi.de/uploads/media/DP_4.2016.pdf (accessed 2 March 2019).

32 United Nations Framework Convention on Climate Change ‘New era of global climate action to begin under Paris Climate Change Agreement’ UN Climate Press Release 15 December 2018, <https://unfccc.int/news/new-era-of-global-climate-action-to->

more meaning or 'bite' and promises to support a hardening of NDCs into free-standing binding commitments.³³

Climate change is a human rights threat with causes and consequences that transcend borders. Unmitigated climate change threatens the enjoyment of fundamental human rights guaranteed by national constitutions such as the right to life, human dignity, healthy environment, adequate housing and self-determination. Therefore, climate justice requires that climate change strategies, such as mitigation and adaptation measures adopted by states, are consistent with existing human rights agreements, obligations, standards and principles.

The Office of the United Nations High Commissioner for Human Rights (OHCHR) conceptualises the relationship between human rights and climate change as entailing ten elements.³⁴ States have an obligation to respect, protect, fulfil and promote all human rights for all persons without discrimination; ensure that all persons have the necessary capacity to adapt to climate change by adopting appropriate adaptation measures that will protect and fulfil the rights of all persons, particularly those most vulnerable to the negative impacts of the negative impacts of climate change; guarantee effective remedies for human rights violations caused by climate change; pursue sustainable, human rights -based development through allocating resources for the progressive realisation of economic, social and cultural rights, as well as for the advancement of civil and political rights and the right to development; share resources, knowledge and technology through international cooperation in order to address climate change; and ensure equity in climate action.

While climate change affects people globally, it is generally accepted that those that have contributed the least to climate change such as the poor, children and the future generations, are those most affected. Therefore, equity in climate action requires that climate action should benefit such people; states should actively support the development and dissemination of new climate mitigation and adaptation technologies including technologies for sustainable production and consumption; protect human rights from business harms, businesses must be accountable for their climate impacts and participate responsibly in mitigation and adaptation efforts with full respect for human rights; guarantee equality and non-discrimination; and ensure meaningful and informed participation.³⁵

According to the OHCHR, these elements are essential and should be reflected in all climate action in order to foster policy coherence and help ensure that climate change mitigation and adaptation efforts are adequate,

33 begin-under-paris-climate-change-agreement-0 (accessed 8 October 2019).
F Sourgens 'Paris Agreement: Regained or lost? Initial thoughts' *EJIL: Talk!* <https://www.ejiltalk.org/paris-agreement-regained-or-lost-initial-thoughts/> (accessed 4 June 2019).

34 Office of the United Nations High Commissioner for Human Rights (n 5).

35 As above; see also D Elliott & LF Cook *Climate justice and the use of human rights law in reducing greenhouse gas emissions* (2016).

sufficiently ambitious, non-discriminatory and otherwise compliant with human rights obligations.³⁶ Thus climate change is recognised within the UN and other multilateral bodies as a legitimate human rights concern and that states have human rights obligations to prevent the negative impacts of climate change.³⁷

The process of incorporating human rights into climate policies and action is referred to as a 'rights-based approach'. Citizens are more likely to support climate action when rights are promoted, respected and protected through, for instance, policies and strategies adopted to address climate change.³⁸ Elliott and Cook suggest that local, national and international climate policies that include a 'rights-based approach' promote policy coherence, legitimacy and sustainable outcomes in reducing our emissions.³⁹

A rights-based approach entails strengthening the capacity of states to meet their obligations to protect and promote human rights and empowering citizens to claim those guaranteed rights. A rights-based approach in climate action will ensure equity and protect citizens from harms caused by the activities of businesses and other non-state actors. A rights-based approach to climate change requires that states strengthen procedural obligations in the context of environmental decisions, such as environmental impact assessment and access to environmental information, and facilitate public participation in environmental decision-making.⁴⁰ According to Elliot and Cook, the integration of a rights-based approach in climate change policy is a direct channel for strengthening public support for climate action.⁴¹

3 Nigeria's NDC: Protecting human rights through climate action

According to Nigeria's NDC,⁴² the drivers of climate change in Nigeria

36 Office of the United Nations High Commissioner for Human Rights (n 5).

37 D Elliott & LF Cook *Climate justice and the use of human rights law in reducing greenhouse gas emissions* (2016) 7.

38 As above.

39 Elliott & Cook (n 37) 9. See also J Knox *Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment* UN Doc A/HRC/31/52 7 13.

40 Elliott & Cook (n 37) 8.

41 As above.

42 Nigeria's Intended Nationally Determined Contribution (n 13); see also 'Executive Summary Nigeria's INDC', https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Nigeria%20First/Executive%20Summary_Nigerian%20INDC_271115.pdf (accessed 4 May 2019). Apart from the NDC, the existing regulatory and institutional framework for climate change response in Nigeria includes the National Adaptation Strategy and Plan of Action on Climate Change for Nigeria (NASPA-CCN), a policy document on climate change mitigation and adaptation. See National Adaptation Strategy and Plan of Action on Climate Change for Nigeria, <http://nigeriaclimatechange.org/naspa.pdf> (accessed 4 May 2019). The NASPA-CCN seeks to minimise risks, improve local and national adaptive capacity and resilience, leverage new opportunities, and encourage international cooperation in order to reduce

are agriculture, land use and land use change, oil and gas, power, manufacturing, and transportation, with activities in land use change and forestry, agriculture and oil and gas sector contributing the biggest chunk.⁴³ Nigeria's contribution to global emissions as of 2010 is estimated to be 1 per cent of total global emission.⁴⁴ Nigeria's approved NDC emphasises the delivery of direct development benefits and sustainable growth of the economy through policy measures that help to alleviate poverty, increase social welfare and inclusion, as well as improve individual well-being and promote a healthy environment. It aims to achieve reduction in GHGs emissions from the BAU scenario using historical emissions data between 2010 and 2014 for predicting 2015 to 2030 emissions scenario.⁴⁵

The key measures of achieving Nigeria's emission reduction commitment includes ending gas flaring by 2030; generate off-grid solar PV of 13GW (13 000MW);⁴⁶ efficient gas generators; increase energy efficiency annually by 2 per cent that will result in 30 per cent efficiency by 2030; increased use of public transportation such as buses, trains, and light rail; increase the capacity and efficiency of the electricity grid; and promote the use of climate smart agriculture and reforestation. Thus, the NDC targets key carbon intensive sectors of the economy such as the oil and gas, energy, transport, agriculture and land use and transport sectors.

Notably, Nigeria aims to reduce emissions per real GDP from the base year from 0,873 kg CO₂e to 0,491 kg CO₂e in 2030, which will result in 43,8 per cent CO₂e reduction in GHGs from the 2010-2014 BAU scenarios.⁴⁷ Likewise in monetary terms, it aims to increase its GDP per capita from US \$2 950 as at 2014 base year to \$3 964 by 2030, resulting in 34,4 per cent GDP per capita by 2030.⁴⁸ However, this reduction is attributed to both 20 per cent unconditional and 45 per cent conditional mitigation objectives respectively.⁴⁹ Thus, Nigeria states that it will achieve 20 per cent target GHG reduction without external support for implementation. In addition, the NDC set a conditional 40 per cent reduction in GHGs contingent on international support in the form of climate finance, smart technology development and transfer, and capacity building.⁵⁰ Therefore, climate finance is a condition for undertaking ambitious mitigation and adaptation for further incremental reduction of GHG emissions.

The estimated cost for implementing the mitigation and adaptation measures stated in its NDC is \$142b while the national benefit for

Nigeria's vulnerability to the negative impacts of climate change.

43 Cervigni et al (n 18).

44 See Nigeria's Intended Nationally Determined Contribution (n 13); see also United States Environmental Protection Agency (EPA) 'Global Greenhouse Gas Emission Data 2011' <http://www3.epa.gov/climatechange/ghgemissions/global.html#four> (accessed 4 June 2019).

45 The GHGs targeted are CO₂, N₂O and CH₄.

46 Note that the NDC does not specify a time frame within which this will be achieved.

47 Nigeria's Intended Nationally Determined Contribution (n 13).

48 As above.

49 As above.

50 As above.

implementing these measures are calculated to be about \$304b.⁵¹ This implies that GHG emissions per capita will reduce by 0,68 tonnes with unconditional activities but with additional support and climate finance Nigeria can reduce her per capita emission by 1,53 tonnes GHG.⁵² The NDC cautions that some of the policies and mitigation measures contained therein can only be implemented with significant international support. Therefore, mitigation measures that require substantial investment, even if cost effective over the life of the investment will be carefully reviewed before being implemented.

As evidenced by analysis above, there can be clear linkages between Nigeria's NDC and its key measures for achieving its emission reduction commitment, and its potential to protect and enhance human rights as guaranteed by the Nigeria's Constitution 1999. For instance, the NDC measures to end gas flaring by 2030 and to generate electricity using off-grid solar PV will enhance and promote the right to a healthy environment and the right to life. However, the crux of the matter lies in the strategies adopted to marry the linkages that are already in place, that is, there needs to be a greater cohesion for effective implementation. Success will be dependent on factors such as climate finance, capacity building, effective legal and institutional framework, especially addressing the issues of certain legislations, such as the Associated Gas Re-Injection Act of 1979 and its Associated Gas Re-Injection (Continued Flaring of Gas) Regulations of 1984, that act as a drawback on the existing regulatory and institutional framework in response to climate change,⁵³ co-ordination between key governmental institutions or agencies, and the political will to drive the process. A Nigerian court in a ground-breaking decision in the case of *Gbemre* held that the provisions of the Associated Gas Re-Injection Act of 1979 and its Associated Gas Re-Injection (Continued Flaring of Gas) Regulations of 1984 that allowed continued flaring upon the payment of fines and penalties were void and inconsistent with the fundamental rights guaranteed in Chapter 4 of the Constitution, particularly the right to life and a healthy environment.⁵⁴

3.1 Assessment of Nigeria's key mitigation measures

There are several elements to the NDC. Generally a country's NDC should be ambitious in terms of its set goals; result in transformation of GHG intensive industries; transparent such that stakeholders can monitor effective implementation of stated goals; equitable with regards to

51 As above.

52 As above.

53 See eg the Associated Gas Re-injection Act, Cap A25, LFN 2004 and The Associated Gas Re-Injection (Continued Flaring of Gas) Regulation, LFN, 2004 that allows for the continued flaring of associated gas upon the payment of penalties by the multinational oil companies operating in Nigeria. This issue is discussed in greater detail below.

54 *Gbemre v Shell Petroleum Development Company Nigeria Ltd & Others* (2005) AHRLR 151 (NgHC 2005).

country's fair share of emission reduction burden; and ensure that climate change considerations are infused into relevant national policies and programmes such as those on sustainable development, environmental protection, poverty alleviation. The following part considers prospects for human rights protection in two of the key NDC sectors with high GHG mitigation potentials; the oil and gas and energy sectors, especially policies and programmes that provide links, and possible challenges with regards to attaining the set goals.

3.1.1 Oil and gas sector and flare-out date

Gas flaring is the highest contributor to GHG emissions in Nigeria. The country is rated one of the top 30 gas flaring nation globally.⁵⁵ Developing countries are responsible for about 85 per cent of the global emissions caused by flaring,⁵⁶ and yet it is in these countries that the associated gas could, for example, be used to provide access to affordable and clean energy for industries and households use. Gas flaring has both adverse environmental and human health implications. The implication of gas flaring on human health are as a result of exposure to hazardous air pollutants emitted during incomplete combustion of gas flare.⁵⁷ The health implications of humans being exposed to these pollutants include cancer, neurological, reproductive and developmental effects, deformities in children, lung damage and skin problems.

Nigeria's NDC aims to achieve a flare-out date by 2030. The mitigation measures identified in the oil and gas sector are enforcement of gas flaring restrictions, development of gas-to-power plants at sites where associated gas is being flared, blending 10 per cent by volume of fuel-ethanol with gasoline (E10) and 20 per cent by volume of biodiesel with petroleum diesel (B20) for use in the transportation fuels sectors.

Several judicial pronouncements have established that environmental degradation, occasioned for example by gas flaring, is an infringement of several human rights such as the right to life and the right to a healthy environment.⁵⁸ The African Commission on Human and Peoples' Rights (African Commission) in the case of *SERAC* recognised the link between human rights and environmental protection in the landmark case. The communication alleged that the Nigerian government through

55 World Bank 'Flaring intensity – Top 30 flaring countries (2013-2017)', <http://pubdocs.worldbank.org/en/543961531836926475/GGFR-5.pdf> (accessed 10 October 2019).

56 As above.

57 See A Ajugwo 'Negative effects of gas flaring: The Nigerian experience' (2013) 1 *Journal of Environment Pollution and Human Health* 7; Environmental Rights Action/Friends of the Earth Nigeria and the Climate Justice Programme 'Gas flaring in Nigeria: A human rights environmental and economic monstrosity', https://friendsoftheearth.uk/sites/default/files/downloads/gas_flaring_nigeria.pdf (accessed 10 October 2019).

58 See *Social and Economic Rights Action Centre (SERAC) & Another v Nigeria* (2001) AHRLR 60 (ACHPR 2001); Gbemre (n 54).

the state oil company, Nigerian National Petroleum Company (NNPC), and Shell Petroleum, an international oil company, has exploited oil reserves in Ogoniland with no regard for the health or environment of the local communities, disposing toxic wastes into the environment and local waterways in violation of applicable international environmental standards. The oil company also neglected and failed to maintain its facilities causing numerous avoidable spills in the proximity of villages. The resulting contamination of water, soil and air had serious short and long-term health impacts, including skin infections, gastrointestinal and respiratory ailments, and increased risk of cancers, and neurological and reproductive problems. Nigeria was found to have breached several of the rights guaranteed by the African Charter on Human and Peoples' Rights (African Charter)⁵⁹ including the right to life and to a healthy environment.⁶⁰

Nigeria's climate change emission reduction commitments under the Paris Agreement makes an effective, open, transparent regulatory system for gas flaring imperative. Achieving the flare-out date is important for climate change and equally important for human rights guaranteed by the Constitution and for the achievement of the SDGs. However, in order for Nigeria to achieve its flare-out date of 2030, there are some hurdles to consider. Achieving the flare-out date requires enabling laws and the effective implementation of such laws and regulation. The provision of infrastructures such as gas gathering infrastructure, the buy-in of oil and gas companies involved in gas flaring and the political will to make it succeed. Removing barriers to the diffusion of clean fuel such as natural gas and removing subsidies for non-sustainable fuels such as kerosene, discouraging use of 'dirty fuels' such as firewood and charcoal at the household level, and enhancing access to clean energy.

Liquefied petroleum gas (LPG) is considered a clean, lower carbon, efficient energy especially as a household cooking fuel. However, LPG is relatively available and affordable only to a small percentage of the Nigerian population. Nigeria's population is estimated to be about 177,5 million, representing an estimated 40,6 million households.⁶¹ While the LPG outreach is limited to urban areas, it is further restricted to a small percentage of middle and high-income earners. These consumers predominately fall into lower upper and upper socio-economic classes, representing less than 2 per cent of the population. This is despite the fact that Nigeria's gas reserves are estimated to be about 188 trillion standard cubic feet (SCF), making Nigeria the seventh most endowed gas nation in the world and number one in Africa. According to the Department of Petroleum Resources (DPR), natural gas production in Nigeria is constrained by the lack of infrastructure to monetise natural gas that

59 Nigeria is a signatory to the African Charter on Human and Peoples' Rights and has domesticated it by virtue of the African Charter on Human and Peoples' Rights (Ratification and Enforcement) Act Ch A9 (Ch 10 LFN 1990).

60 *SERAC* (n 58).

61 See <http://data.worldbank.org/country/nigeria> (accessed 10 October 2019).

is currently being flared.⁶² As a result, natural gas and LPG are not the most common household fuels used for cooking in Nigeria.⁶³ Reduction in legacy flaring requires a comprehensive and methodological approach from national government, relevant agencies and regulators and oil companies and operators. A generally accepted approach in addressing legacy flaring includes to establish realistic flare-out plan; create an enabling environment, both fiscal and otherwise for gas utilisation investments; co-ordinate operators investments programme and closely monitor them to ensure that they are implemented within the timeframe of flare-out plans; the provision of infrastructures such as gas gathering infrastructure and establish a continuing stakeholders participation and co-operation all relevant stakeholders, particularly operators.⁶⁴ Removing barriers to the diffusion of clean fuel such as natural gas and removing subsidies for non-sustainable fuels such as kerosene, discouraging use of 'dirty fuels' such as firewood and charcoal at the household level, and enhancing access to clean energy.

3.1.2 Energy sector

In the energy sector the NDC aims to increase the use of renewable energy in Nigeria's energy mix, build multi-cycle power stations, increase the capacity of existing power stations by 20-50MW, enhance energy efficiency by attaining 2 per cent per year energy efficiency culminating in 30 per cent efficiency by 2030, and encourage use of natural gas rather than liquid fuels. Prior to the privatisation of the electricity sector in Nigeria, the sector performed below expectations and some would argue that in spite of privatisation, the sector is still performing below expectations.⁶⁵

The electricity sector in Nigeria is plagued by several challenges,⁶⁶ including a lack of infrastructural development to match Nigeria burgeoning population and commercial activities; inadequate funding,

62 Global Legal Group 'International Comparative Legal Guide to Gas Regulation 2006', <http://www.aluko-oyebode.com/files/gas06-chapter-18-nigeria.pdf> (accessed 10 October 2019).

63 H Gujba et al 'The household cooking sector in Nigeria: Environmental and economic sustainability assessment' (2015) 4 *Resources* 412 413. Also see World Energy Outlook 2006 'Energy for cooking in developing countries', <https://www.iea.org/publications/freepublications/publication/weo-2006---excerpt---energy-for-cooking-in-developing-countries.html> (accessed 10 October 2019).

64 B Svensson 'Global gas flaring reduction in key countries' Paper delivered at the 25th World Gas Conference, Kuala Lumpur, Malaysia 4-8 June 2012, <http://proceedings.wgc2012.com/> (accessed 10 October 2019).

65 D Adeyemo & A Salami 'A review of privatisation and public enterprises reform in Nigeria' (2008) 4 *Contemporary Management Research* 401 408.

66 A state enterprise known as the National Electric Power Authority (NEPA) was established as an integrated monopoly service provider responsible for generation, transmission, distribution and sales of electricity faced overwhelming challenges in terms of its three core areas of power generation, transmission and distribution. See secs 1 and 7 of the National Electric Power Authority Act 1972, LFN. Eg, the current electricity grid is unable to reliably serve the teeming population and the industrial

irregular maintenance and obsolete power plants; and inefficient and grossly inadequate transmission capabilities.⁶⁷ Liberalisation and commercialisation of the sector led to the Electricity Act of 1990 and its Amendment Act of 1988, the dissolution of electricity authority and its replacement with the Power Holding Company of Nigeria (PHCN).⁶⁸ The current governance structure and legal framework for the electricity sector in Nigeria is the Electric Power Sector Reform (EPSR) Act 2005. This Act unbundled the state's stake in the power sector,⁶⁹ especially the generation and marketing elements of power generation and it made electricity generation, sales and marketing open to independent power providers.

The current grid generation capacity is unable to meet the energy needs of industrial and urban consumers. As a result of this shortfall industrial and other consumers have resorted to the use of inefficient and polluting generators for electricity. In addition, most rural communities remain off the grid, it is estimated that at the current rate of grid expansion, these communities will remain largely underserved, and about 60 per cent of the population lack access to electricity.⁷⁰

3.1.3 Stop-gap strategies and positives

There are recent policies and programmes that have been introduced recently as 'stop-gap' interim measures to enhance Nigeria's NDC measures for achieving its emission reduction commitments. In furtherance of reducing its GHG emissions and its obligations to reduce gas flaring, President Buhari, in his capacity as Minister of Petroleum Resources and in the exercise of the powers conferred upon the Minister by virtue of section 9 of the Petroleum Act,⁷¹ approved the Flare Gas (Prevention of Waste and Pollution) Regulations 2018.⁷² The Regulation provides the framework and the legal basis for the implementation of

sector, most rural communities remain off the grid and about 60% of the population lack access to electricity. As a result of this shortfall in generation capacity, generators are widely used to meet household and industry energy needs. These generators are inefficient and polluting. See also O Amokaye *Environmental law and practice in Nigeria* (2004) 737.

67 These challenges may be classified into legal and constitutional, economic and social. With regard to legal and constitutional challenges, Oke identified issues such as who has power to captive power generation, revocation of land for electricity purpose, host community concerns, a counter-productive dispute resolution mechanisms. See Y Oke 'Energy resources governance for national development: Options for socially sustainable electricity generation, transmission and distribution in Nigeria' *Unilag Research Report* 2015.

68 For an historical overview of the electricity reform in Nigeria, see Y Oke *Nigerian electricity law and regulation* (2013).

69 Note, however, that states usually retain control of electricity transmission and distribution, which are natural monopolies for national security reasons.

70 See Nigeria's Intended Nationally Determined Contribution (n 13).

71 Laws of the Federation of Nigeria (LFN) 2004 (as amended), including sec 5 of the Associated Gas Reinjection Act.

72 Flare Gas (Prevention of Waste and Pollution) Regulations 2018 (the Regulation); Nigerian Gas Flare Commercialisation Programme, <http://www.ngfcp.gov.ng/resources/regulations/ngfcp-regulations/> (accessed 10 October 2019).

the Nigerian Gas Flare Commercialisation Programme (NGFCP). The government exercises its ownership rights to all gas flared in Nigeria under the NGFCP. Such that the government grants licences to third parties, referred to as licensees, to access and collect associated gas from flare points of oil production sites. The licensee is required to set up facilities and necessary technology to facilitate the collection and delivery of gas. All identified flare points are covered by the NGFCP and compliance is tied to the conditions for award and renewals of oil mining licenses and marginal fields for oil companies.⁷³

The objectives of the Regulation include the reduction of the environmental and social impacts of gas flaring and the creation of social and economic benefits from gas flare capture.⁷⁴ The regulation gives the federal government the right to take natural gas produced with crude oil free of cost at the flare and without payment of royalty.⁷⁵ Section 12 of the Regulation prohibits the flaring and venting of natural gas, except pursuant to a certificate issued by the Minister. It abolishes routine flaring by permit holders.⁷⁶ The Regulation stipulates that where 10 000 barrels or more is produced in an OML, the producer shall be liable to pay \$2 per 28 317 standard cubic metres of gas flared within an OML whether routine or non-routine.⁷⁷ On the other hand, where an OML produces less than 10 000 barrels, the producer shall be liable to pay \$0,50 per 28 317 standard cubic meters of gas flared within an OML whether routine or non-routine.⁷⁸ The Regulation also imposes reporting obligations on producers and gas flare-out projects in respect of collating and reporting data in respect of their gas activities.⁷⁹

The current Petroleum Industry Governance Bill (PIGB) (2017), passed by the National Assembly and now before the President for assent, is also expected to address the issue of gas flaring.⁸⁰ The Bill provides provisions for gas flaring measurement, indicating a specified number of days for which a permit would be issued to an applicant as well as the requirement for a gas flaring plan to be submitted.⁸¹ Achieving the flare-out date will be beneficial to Nigeria's climate change obligations and the SDGs. According to the World Bank, achieving the 2030 flare-out date could save around 64 million tonnes of CO₂ per year, which translates

73 As above.

74 See sec 1 of the Regulation.

75 See sec 2 of the Regulation.

76 See sec 12(2) of the Regulation.

77 See sec 13(1) of the Regulation.

78 See sec 13(2) of the Regulation.

79 See sec 4 of the Regulation.

80 'Report of the Senate Joint Committee on the Petroleum Industry Governance Bill 2017', <http://www.petroleumindustrybill.com/wp-content/uploads/2017/05/FINAL-COPY-OF-PETROLEUM-INDUSTRY-GOVERNANCE-BILL-2017-May-15.pdf> (accessed 10 October 2019).

81 The PIGB is a part of the 2012 Petroleum Industry Bill (PIB). In an attempt to secure the passage of the Bill, the current government has divided the Bill and intends to pass it in phases. The first phase, the Petroleum Industry Governance Bill, is currently before the President for assent.

into a net benefit of \$61 per tonne.⁸² More importantly, it furthers the attainment of and the SDGs such as the goal on climate change, affordable and clean energy, and sustainable cities and communities.⁸³

The National Environmental Standards and Regulations Enforcement Agency (NESREA) recently announced the National Generator Emission Control Programme (NGECP),⁸⁴ a project aimed at creating a cleaner environment. The use of generators for power supply in both domestic and industrial power use releases harmful pollutants such as oxides of nitrogen (NOx), sulphur dioxide (SO₂), carbon monoxide (CO₂) and unburnt hydrocarbons into the air.⁸⁵ This contributes to poor air quality and negatively impacts the environment and human health. This programme will assist Nigeria in achieving its NDC target of at least 30 per cent energy efficiency in houses, industries, homes, and so forth.

Of particular importance to Nigeria's NDC commitment, the EPSR Act establishes the Rural Electrification Agency (REA) with the responsibility to prepare a sustainable and coordinated rural electrification strategy and plan for Nigeria.⁸⁶ The agency administers the Rural Electrification Fund (REF), a fund established to promote, support and provide rural electrification; achieve more equitable regional access to electricity; maximise the economic, social and environmental benefits of rural electrification subsidies; promote expansion of the grid and development of off grid electrification; and stimulate innovative approaches to rural electrification.⁸⁷

There are still infrastructural deficiencies with regard to the distribution of electricity, the diversification of the national grid and the diversification of energy mix to include renewables such as wind and solar energy. The EPSR Act is silent on the issue of diversifying Nigeria's energy mix. However, the *National Renewable Energy and Energy Efficiency Policy (NREEEP) 2015 aims*⁸⁸

to remove key barriers that put renewable energy and energy efficiency at economic, regulatory or institutional disadvantages relative to other forms of energy, and diversify energy sources such that biomass, solar and wind can feature prominently in the energy mix and as energy sources.

The EPSR Act expressly establishes a liberalised regime that encourages competition and a level playing field for all stakeholders in the electricity sector.⁸⁹ However, more is required to ensure availability of affordable

82 See Nigeria's Intended Nationally Determined Contribution (n 13).

83 Goals 7, 11 and 13 of the SDGs.

84 C Ebuzor 'Generator emission: FG to commence house-to-house inspection in 2019', https://www.pulse.ng/news/local/generator-emission-fg-to-commence-house-to-house-inspection-in-2019/v2jnym0?utm_medium=email&utm_source=newsletter&utm_campaign=daily-2018-12-23 (accessed 10 October 2019).

85 As above.

86 Part IX, secs 88(1) & (4).

87 Sec 88(13) EPSR Act.

88 National Renewable Energy and Energy Efficiency Policy (NREEEP) (2015).

89 See secs 25, 26, 28, 29 & 82 of the EPSR Act.

energy options, incentives to encourage diversification of the energy mix, and devolution of governance to local communities' governmental structure, in order to maximise the benefit of the reformed electricity sector in Nigeria.

4 Conclusion and recommendations

Developing countries will face practical challenges in implementing their NDCs, such as institutional capacity, lack of data, climate finance, poverty alleviation, and so forth. This can hinder progress, even when there is political will to take action. Therefore, it is important for developing countries to build on the momentum of Paris to secure the necessary international support and buy-in of national stakeholders for their implementation road maps.

The implementation of Nigeria's NDC mitigation strategies depend, to a large extent, on existing legislations, regulations, policies and programmes. However, this chapter has highlighted the fact that there are some gaps and updates required in order for existing legislations, regulations, policies and programmes to ensure cohesion and to ensure that existing policies are not working at cross-purposes to Nigeria's mitigation measures. The chapter concludes by recommending that Nigeria should develop an implementation roadmap to ensure achievement of its climate goals and to ensure a coherent and functional framework for governance and coordination of the NDC; update existing legislations that could act as a drawback to the NDC mitigation measures and promulgate legislation such as a Climate Change Act with an institution to drive and coordinate response among key sectors; establish a high-powered inter-ministerial committee to drive implementation across the key mitigation sectors identified in the NDC; partner with the key players in the private sector in order to mobilise private investments for climate finance, ensure industry buy-in and take up by stakeholders through effective stakeholder engagement and public participation.

Threats to the enjoyment of guaranteed human rights such as the right to life, healthy environment, dignity, food, water, and self-determination from climate change emphasises what is at stake if climate action is devoid of human rights considerations. Integrating a rights-based approach in climate policy and action remains the most veritable means of strengthening climate change ambitions, obligations, garnering public support and promoting successful and fair mitigation efforts to limit temperature rises.