

Climate Landscape Analysis for Children in Nigeria

Climate Action Plan for 2023–2027

November 2023

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"We need to act fast to save our planet Before threatened species become endangered And endangered species become extinct, and you and I have no dwelling Cause this blue ball with white patches is the only space we have to live in."

Signs Dogo, 21, Nigeria

UNICEF's Voices of Youth

A group of young poets, including from Nigeria, shared their thoughts and feelings on climate change as part of the *Youth Mediathon*.

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Acronyms

| COP | Conference of the Parties |
|--------|---|
| FAO | Food and Agriculture Organization of the United Nations |
| IOM | International Organization for Migration |
| IPCC | Intergovernmental Panel on Climate Change |
| MW | Megawatt |
| PM | Particulate matter |
| UNDP | United Nations Development Programme |
| UNFCCC | United Nations Framework Convention on Climate Change |
| UNICEF | United Nations Children's Fund |
| WASH | Water, sanitation and hygiene |
| WHO | World Health Organization |



Using the light from a mobile phone, health worker Rebecca Kujore prepares to administer vaccines to a two-month-old child at a vaccination site in a hard-to-reach area in Alimosho LGA, Lagos, Nigeria.

Introduction

Children account for 51 per cent of the 223 million people in Nigeria¹ and are disproportionately affected by climate change. They are also often the first and most severely impacted by climate shocks² due to children's:

- Dependence on others: Children are non-self-sufficient and unable to make their own decisions
- Physiology: Children are more susceptible to disease and malnutrition
- Exposure: Children are more likely to be exposed to diseases
- Life stage requirements: Children need to be in school during the day, study at home at night and eat nutritious food

When the combination of drought, flooding, desertification, poverty and sociocultural factors are added in – which are all increasing and often lead to migration, conflict and displacement – children's safety and access to water, health, education, food security and well-being are severely impeded.

Climate change and environmental degradation undermine children's rights around the world. As a first step in tackling this issue, UNICEF's Executive Director issued the Executive Directive, "Addressing the Impact of Climate Change on Children," in March 2016. In response to the Directive and recognizing the importance of integrating the impacts of climate change, environmental degradation and energy poverty into our programming, UNICEF Nigeria commissioned a Climate Landscape Analysis for Children in 2023, utilizing a desk review and in-country missions to Abuja, Kano, Jigawa and Lagos states. Climate impacts have already caused a **5 per cent loss** of Nigeria's GDP. This could rise to between 6 per cent and 30 per cent by 2050, worth an estimated **US\$100 billion to \$460 billion.**

THE CLIMATE CRISIS IS A CHILD RIGHT'S CRISIS

One of the key findings comes from a UNICEF-published report, *The Climate Crisis is a Child Rights Crisis*,³ which assessed children's climate risks and vulnerabilities in the world and presented the findings using the Children's Climate Risk Index. The Children's Climate Risk Index provides a comprehensive view of children's exposure and vulnerability to the impacts of climate change. This tool ranks countries based on: 1) access to essential services, 2) children's exposure to climate and environmental hazards, shocks and stresses, such as flooding and heatwaves, and 3) children's vulnerability to those shocks, based on capabilities to cope with the shocks and hazards. Overall, findings from the Children's Climate Risk Index show that Nigerian children are: 1) highly exposed to climate and environmental hazards, including air pollution and coastal flooding, and 2) highly vulnerable to these hazards due to the high level of multidimensional deprivations and a lack of essential services. Where higher scores indicate the most risk, Nigeria scored 8.8 out of 10 on climate and environmental factors and 8.1 on child vulnerability. This resulted in a score of 8.5 on the Children's Climate Risk Index, ranking second worst in the world, along with Chad. Importantly, the Children's Climate Risk Index highlights and measures the likelihood that climate and environmental shocks and stresses will lead to the erosion of development progress, increase fragility and deepen deprivations affecting children and vulnerable groups.⁴

Across Nigeria, children's exposure to flooding, drought and rising temperatures threatens their health and nutrition and access to education, protection and water, sanitation and hygiene services. Land, water and air pollution present increased risks to children's health including gastrointestinal illnesses, vector-borne diseases, respiratory diseases and damage to cognitive function and learning ability. Worsening droughts, deforestation and poor land management practices are becoming drivers for desertification and subsequent migration, displacement and insecurity, especially in Nigeria's northern areas where farmer and herder disputes persist. Other factors, such as governance challenges, widespread poverty, religious differences, weak land rights and conflict, impact children's access to food, water, sanitation, education, health care and safety.

Nigeria's child population of more than **110 million** accounts for **10 per cent of the 1 billion children** worldwide who live in extremely high-risk countries.

¹ UNICEF Data: Monitoring the situation of women and children, 'Data Country Profiles: Nigeria,' UNICEF. Source: https://data.unicef.org/country/nga/s

² United Nations Children's Fund, Unless We Act Now: The impact of climate change on children, UNICEF, New York, November 2015.

³ United Nations Children's Fund, *The Climate Crisis is a Child Rights Crisis,* UNICEF, New York, 2021.

⁴ Ibid, p. 79.

Consequently, these factors contribute to the high vulnerability of children to climate change in Nigeria and drive higher incidences of gender-based violence, child marriage and the worst forms of child labour. With just 55.4 per cent of the total population benefiting from access to electricity, energy poverty seriously impacts children's education, health and access to water. High reliance on charcoal and wood fuel, while contributing to indoor air pollution, is also becoming a driver of deforestation and desertification in the country.

These climatic extremes in Nigeria – heavy rainfall, flooding, storm surges, elevated temperatures and greenhouse gas emissions – contribute to increasingly frequent disasters.⁵ Nigeria is already losing about 5 per cent of its gross domestic product to climate impacts which could rise to between 6 per cent and 30 per cent by 2050.⁶ Worse still, climate change could result in a loss worth an estimated US\$100 billion to \$460 billion.⁷ If no adaptation measures are implemented, Nigeria's national development goal of becoming one of the top 20 economies in the world could be severely hampered.

From 2001-2021, Nigeria lost **1.14 million** hectares of tree coverage, equivalent to 587 million tonnes of carbon dioxide emissions. By 2020, over 90 per cent of Nigeria was deforested.

This Climate Landscape Analysis for Children in Nigeria highlights key climate risks to children and provides an overview of the multi-sectoral climate mitigation and adaptation actions that UNICEF intends to implement in Nigeria from 2023–2027.



The communities in Nigeria most affected by climate change rely on natural resourcedependent livelihoods, in low-productivity, high-risk environments. Here, Muhammed Alhassan, an officer at the Nguru Local Government in Yobe State, North East Nigeria, dedicates his time to rearing chickens and nurturing his backyard vegetable garden. He hopes to pass these skills and instil the importance of good eating habits to his children.

⁵ Okeke, Chukwueloka U., Chinwe V. Ogunji and Ethelbert E. Anieze, Unlocking Adaptation Potential: Insights into Nigeria's Climate Change Policies, Initiatives, and Local Actions, Africa Policy Research Institute, Berlin, Germany, 2023.
⁶ Ibid.

⁷ These figures have been highlighted since 2009 when the Federal Ministry of Environment (Special Climate Change Unit) referenced a UNDP study from 2009. Source: Federal Ministry of Environment, *National Environmental, Economic and Development Study (Needs) for Climate Changes in Nigeria (Final Draft)*, Abuja, September 2010. See also: The World Bank Group, *Climate Risk Profile: Nigeria*, The World Bank Group, Washington D.C., 2021.

1 Climate Change and the Environmental Context in Nigeria

1.1 The environmental situation in Nigeria

Nigeria is home to a diverse range of habitats and rich biodiversity with over 6,000 native plants, birds, mammals, amphibians and marine and freshwater fish species. The most southerly zones are mangrove, swamp and rainforest, while the central and northern zones are described as savannah and Sahel with high elevation areas in the central and eastern savannah zones (see Figure 1).⁸ The country has 853 kilometres of coastline and is home to aquatic resources, freshwater, brackish (partially salty) and marine environments. Freshwater areas account for approximately 16 per cent of the country's surface area when fully extended (including floodplains). Brackish areas, which include estuaries and wetlands in deltas, account for approximately 1 per cent of the surface area.⁹ The country's two major rivers – the Niger River and the Benue River – provide drainage for most of the surface water, along with the Komadugu-Yobe River complex and the Sokoto-Rima Rivers. Lake Chad is the largest body of water in the country and is shared by Niger, Chad and Cameroon. Nigeria's climate is heavily influenced by the country's tropical location, inter-tropical convergence zone and large size. In general, lower rainfall is expected in the northern Sahelian regions, and higher rainfall occurs in the Atlantic maritime south.



Figure 1: Ecological map of Nigeria

⁸ Source: Odebode, Stella, et al., "Health Effects of Charcoal Production as Perceived by the Rural Dwellers in Rainforest and Guinea Savannah Agro-ecological Zones of Nigeria," *Journal of Scientific Research and Reports*, 29 March 2019.

⁹ Food and Agriculture Organization of the United Nations, *Inland Fishery Resources of Nigeria,* FAO Fishery Resource Division, Rome, 1993. <www.fao.org/docrep/005/T1230E/T1230E02.htm>

1.2 Observed effects of climate change in Nigeria

Observed temperatures

Between 1940 and 2000 the mean average temperature in Nigeria increased across all parts of the country other than the high elevation area of Jos Plateau. Most of the country experienced between a 0.9° and 1.9°C increase in average annual temperature. From 2001 to 2021, the mean annual temperature (averaged across five years) increased by 0.29°C.¹⁰ On average, the minimum temperature has been increasing by 0.02° to 3°C per year over the last seven decades.¹¹ In addition, the number of cold nights in Nigeria decreased by 45 nights between 1960 and 2003, while the number of warm days increased by 73 days in the same period.¹²

Projected temperature change

Mean annual temperature is projected to increase between 1.1° and 2.5° C by 2060, and 1.4° and 4.6° C by 2090, with the greatest change in northern locations.¹³ The number of extreme heat days (over 38° C) in Nigeria are likely to increase by between 7 and 88 days by 2065, while the increase in heatwaves – more than two consecutive days of over 35° C – is likely to be greatest in the northern savannah areas.¹⁴

Observed rainfall and storms

The average annual rainfall decreased across the country between 1960 and 2000. At the same time a tripling of high intensity storms has been recorded across the Sahel region for the last 30 years.¹⁵ Changes to both the onset and cessation of rains have been observed, resulting in a shortening of the wet season in the already water-stressed northern areas.¹⁶ In addition, inter-annual variability in annual rainfall is considered high.¹⁷

Storms

The number of wind gusts increased with higher mean maximum wind speeds and more frequent windstorms between 1989–2008.¹⁸ Droughts are a major climate-related hazard affecting the whole of Nigeria, but most commonly in the central and northern regions.¹⁹ Major localized droughts within Nigeria have occurred regularly throughout the last century at a rate of approximately once per decade, with 30-year cycle droughts strongly impacting the whole region.²⁰ The length of periods of consecutive days without rain – an indicator of drought – has been slowly increasing since 1970.²¹

Projected changes in drought, rainfall and storms

Overall confidence in rainfall projections for West Africa is low to moderate²² though the average annual rainfall is predicted to increase slightly. Spatial variability across Nigeria is likely to be high²³ with the far-north, dry savannah areas predicted to become slightly drier with a shorter rainy season. The wetter southern areas are likely to become wetter with a longer rainy season and more extreme rainfall events.^{24,25} The number of days of extreme rainfall is predicted to increase by one to two days across most parts of the country.²⁶

¹⁰ The World Bank Group, Climate Change Knowledge Portal for Development Practitioners and Policy Makers, 'Climate Change Knowledge Portal', https://climateknowledgeportal.worldbank.org/>

¹¹ Ibid.

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Taylor C., Belušić, D., Guichard, F., et al., 'Frequency of extreme Sahelian storms tripled since 1982 in satellite observations,' *Nature*, 544, 2017, pp. 471–478. <www.nature.com/nature/journal/v544/n7651/full/nature22069.html?foxtrotcallback=true>

¹⁶ Nzegbule, Emmanuel, et al., 'Sustainability and the Effectiveness of BNRCC Community-Based Adaptation (CBA) to Address Climate Change Impact in Nigeria,' *Handbook of Climate Change Resilience*, Leal Filho, W. (eds), 2019. ">https://doi.org/10.1007/978-3-319-71025-9_156->

¹⁷ Federal Republic of Nigeria, Second National Communication on Climate Change, 2014. https://unfccc.int/resource/docs/natc/nganc2.pdf>

¹⁸ Adelekan, Ibidun O., et al., 'Vulnerability to wind hazards in the traditional city of Ibadan, Nigeria,' *Environment and Urbanization*, 24(2), 597-617, 2012. https://doi.org/10.1177/0956247812454247>

¹⁹ Federal Republic of Nigeria, National Drought Plan, Federal Ministry of Environment, Abuja, 2018.

<www.unccd.int/sites/default/files/country_profile_documents/1%2520FINAL_NDP_Nigeria.pdf>

²⁰ Ibid.

²¹ The World Bank Group, 'Climate Change Knowledge Portal'.

²² Niang, I., Ruppel, O.C., and Abdrabo, M.A., et al., 'Chapter 22: Africa,' Barros, V.R., Field, C.B., Dokken, D.J., et al., (eds), Climate Change 2014 – Impacts, Adaptation, and Vulnerability: Part B: Regional Aspects, Working Group II Contribution to the IPCC Fifth Assessment Report, Cambridge University Press, Cambridge, United Kingdom and New York, 2014, pp. 1199-1265.

²³ The World Bank Group, 'Climate Change Knowledge Portal'.

²⁴ Onyeneke, Robert U., et al., 'Evidence-Based Policy Development: National Adaptation Strategy and Plan of Action on Climate Change for Nigeria (NASPA-CCN),' African Handbook of Climate Change Adaptation, 2011, pp. 1–18. https://link.springer.com/referenceworkentry/10.1007/978-3–20030-42091-8 125-1#citeas>

 ²⁵ Abiodun B.J., et al, 'Potential influences of global warming on future climate and extreme events in Nigeria,' Regional Environmental Change, vol. 12, no. 4, 2012, pp. 471–491.

<www.researchgate.net/publication/257480463_Potential_influences_of_global_warming_on_future_climate_and_extreme_events_in_Ni geria>

²⁶ The World Bank Group, 'Climate Change Knowledge Portal'.

Droughts are expected to continue and lengthen²⁷ with the frequency and severity of droughts increasing as temperatures rise. Northern Nigeria bears the greatest impact of drought and desertification and is more susceptible to land degradation. Regionally, winds are expected to become slightly stronger²⁸ while local indications point towards the strongest increases of rainstorms occurring in the north.²⁹

Sea level

A rise of 2mm-5mm has already been measured along Nigeria's Atlantic coastline. Under high-emission scenarios, sea levels are projected to increase rapidly by between 0.4 to 0.7 metres by 2100.³⁰

1.3 Areas with high exposure to major climate hazards

Drought-prone areas

For over a century, drought in Nigeria's central and northern regions has been associated with serious impacts on water access; agriculture productivity; food security; wealth; ecosystem health; access to natural resources; and migration. Notable drought episodes occurred in 1903, 1911–1914,1919, 1924, 1935, 1951– 1954, 1972–1973, 1984–1985, 2007, 2011 and most recently in 2022. Drought and its impacts are expected to become more frequent and harmful in the northern Sahelian-savannah areas as temperatures increase.³¹ Coupled with the effects of higher temperatures on evaporation rates, drought has the potential to impact hydro-electricity production at the three largest hydropower plants in the country: Kainji (760 MW), Jebba (578 MW) and Shiroro (600 MW). This is a serious concern as hydro-electricity generation currently provides approximately one-quarter of Nigeria's electricity.32

Drought may also impact access to sources of biomass energy which is important for cooking, lighting and heating, especially for poorer households and communities. Northern ecological zones are expected to suffer the most³³ as low rainfall, high temperatures and drought combine to reduce vegetative growth in the Sahelian and Sudanian ecological zones. In Ondo State for example, drought, while not common, can have a significant influence on cocoa production.³⁴

Heat stress-prone areas

Heat wave duration is projected to increase most markedly in northern Nigeria. Coupled with higher average annual temperatures and lower rainfall than southern areas, this is likely to result in greater overall heat and water stress in the north. The average maximum temperatures have risen over the last 40 years, with current maximum averages between 31°-33°C. Consecutive hot days can cause considerable damage to crops and human health, which could be



Figure 2: **Water scarcity map**. Red indicates a drought is expected to occur on average every five years. *Source: Global Facility for Disaster Reduction and Recovery, The World Bank*



Figure 3: **Extreme heat exposure map.** Red indicates high likelihood of extreme heat and heat stress to occur, on average, every five years or less. *Source: Global Facility for Disaster Reduction and Recovery, The World Bank*

³² Federal Republic of Nigeria, Second National Communication on Climate Change, 2014.

²⁷ Ibid.

²⁸ Niang, Climate Change 2014: Impacts, Adaptation, and Vulnerability, 2014.

²⁹ Federal Republic of Nigeria, Second National Communication on Climate Change, 2014.

³⁰ Ibid.

³¹ Abubakar I.U., and Yamusa M.A., Recurrence of Drought in Nigeria: Causes, Effects and Mitigation, *International Journal of Agriculture and Food Science Technology*, vol. 4, Number 3, Research India Publications, 2013, pp. 161–180. <www.ripublication.com/ijafst spl/ijafstv4n3spl 02.pdf>

³³ Ibid.

³⁴ Amos T.T., and Thompson O.A., 'Climate Change and the Cocoa Production in the Tropical Rain Forest Ecological Zone of Ondo State, Nigeria,' *Journal of Environment and Earth Science*, vol. 5, no.1, ref. 23, 2015, pp. 31–41.

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especially in the north. The risk is that already-existing challenges, including access to social services, insecurity and conflict in the region, could be even more exacerbated.

Heavy rain and flood-prone areas

Extreme rainfall and flash flooding events are predicted to increase across the country³⁵ as higher temperatures drive increased evaporation and greater atmospheric moisture content. Southern mangrove and rainforest zones are predicted to experience increases in extreme rainfall events, floods and storms. Combined with already higher-than-average rainfall, this will likely result in low-lying coastal and river delta areas being most strongly impacted.³⁶ Sea-level rise will further place coastal areas under flooding pressure.

In the northern Sahelian area, the projected likely increase in rainstorm frequency and intensity is expected to result in more frequent and more damaging floods, exacerbating erosion and desertification.



Figure 4: Flood risk map. Red indicates states on high alert. Source: Global Facility for Disaster Reduction and Recovery, The World Bank

According to the Government's Second National Communication on Climate Change in 2014, the most floodprone areas in the country include:

- Low-lying coastal areas of southern Nigeria such as Calabar, Warri, Port Harcourt and Lagos where the annual rainfall is high. The adverse impacts of flooding are felt most strongly when storms coincide with high tides.
- Floodplains of the major rivers such as the Niger, Benue, Gongola, Sokoto, Hadejia, Katsina-Ala, Donga, Kaduna, Gurara, Ogun and Anambra.
- Flat, low-lying areas around and to the south of Lake Chad, which may become flooded during and after rains.

As seen in Figure 4, the near entirety of Nigeria is in dark red, indicating high risk of river flooding throughout the country. This is further supported by recent flooding events:

- Flooding accounted for 19.95 per cent of all recorded disasters in 2009.37
- Floods in Ogun and Jigawa states in 2010 resulted in the destruction of 2,500 hectares of farmland and affected 14 villages.
- In 2012, erratic weather patterns and high-intensity rainfall events in the southern region of Nigeria led to perennial flood disasters with total losses and damages of about US\$16.9 billion.³⁸
- Flooding in Benue State in 2017 is reported to have displaced 100,000 people.
- The 2022 flooding events were reportedly the worst in a decade and killed over 600 people. According to the National Emergency Management Agency, the destructive flooding affected 4.4 million people, including 1.9 million children,³⁹ displaced 2.4 million people and made 174,000 houses unfit for habitation. ^{40,41,42,43,44}

Total losses and damages from flooding in 2012 alone equaled US\$16.9 billion.

Flooding in 2022 affected 4.4 million people including around 1.9 million children.

- ³⁵ The World Bank Group, 'Climate Change Knowledge Portal'.
 ³⁶ Nzegbule, E.C., et al., 'Sustainability and the Effectiveness of BNRCC,' 2019.
- ³⁷ Federal Republic of Nigeria, National Emergency Management Agency, 2009.
- 38 Okeke, Chukwueloka U., Ogunji, Chinwe V., and Anieze, Ethelbert E. (2023). Unlocking Adaptation Potential: Insights into Nigeria's Climate Change Policies, Initiatives, and Local Actions. Africa Policy Research Institute, Berlin, Germany.
- ³⁹ United Nations Children's Fund, Country Office Annual Report 2022, UNICEF, March 2023. <www.unicef.org/media/142201/file/Nigeria-2022-COAR.pdf> Please note, some sources report 2.6 million children affected by the 2022 flooding. 40 'United Nations, 'Millions at risk in flood-hit Nigeria; relief Chief highlights hunger in Burkina Faso,' UN News, 21 October 2022.
- <https://news.un.org/en/story/2022/10/1129787>
- Anukwue, Alexander, 'Nigeria's worst floods in a decade have displaced over a million people,' World Economic Forum, 20 October 2022. <www.weforum.org/agenda/2022/10/nigeria-flood-rain-climate>
- ⁴² Umoh, G.S., Adaptation to Climate Change: Agricultural Ecosystems and Gender Dimensions, *Xlibris Corporation*, 2013.
- ⁴³ United Nations Office for the Coordination of Humanitarian Affairs, 'Nigeria Floods Response: Flash Update 4,' OCHA, 14 December 2022
- ⁴⁴ Relief Web, 'Nigeria: Floods Jun 2022,' RW, 2022. <https://reliefweb.int/disaster/fl-2022-000271-nga>

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High winds

The Intergovernmental Panel on Climate Change⁴⁵ has predicated higher frequency and intensity of extreme weather events across West Africa, including destructive winds. For Nigeria specifically, this increase in the intensity of wind gusts and frequency of windstorms has been measured in the available study area of Ibadan city in South West Nigeria.⁴⁶

Landslides and erosion

Northern areas with more fragile, exposed landscapes are likely to suffer from erosion as higher-intensity rainfall events become more frequent. Worsening erosion impacts a wide range of essential processes and services including agricultural production, forests and ecosystems, health, water infiltration, and drinking water quality and availability. Areas with worsening erosion issues are therefore more likely to be impacted by food and water-related stresses.

Locations with steep topography and denuded landscapes due to overgrazing, deforestation and unsustainable land-use changes are more likely to be impacted by landslides during and after heavy rains. The projected longer rainy season in the south, along with the likely increase in average annual rainfall towards the middle of the century may lead to a greater number of landslides. As identified in Figure 5, the eastern and central states have the highest landslide risk. Onitsha city in Anambra State and neighbouring Enugu State in South East Nigeria has the highest mortality risk from landsides. In addition to population increases and higher population densities in locations close to hillsides, this may place more children in danger of being impacted by these events.

Deforestation

Deforestation rates in Nigeria are the highest in Africa and among the highest in the world. With over 90 per cent of the country unforested in 2020, deforestation continues at very high levels.⁴⁷ This rapid loss of forest cover has been occurring for many decades with more than 50 per cent being lost since 1990⁴⁸ or approximately 7 per cent forest area lost each decade.⁴⁹



Figure 5: Landslide map. Red indicates the states on highest alert. Source: Global Facility for Disaster Reduction and Recovery, The World Bank



Figure 6: **Desertification map.** Pink indicates the areas in Nigeria where desertification is occurring. *Source: Umar S.A., et al., see footnote 46.*

As reported in 2014, deforestation and urbanization were responsible for 38.2 per cent of greenhouse gas emissions in Nigeria.⁵⁰ From 2001 to 2021, Nigeria lost 1.14 million hectares (2.82 million acres) of tree cover, equivalent to an 11 per cent decrease in tree cover and 587 million tonnes of carbon dioxide emissions.⁵¹ Annual forest loss from 2019–2020 alone was approximately 164,000 hectares. With less than 10

⁴⁵ Trisos C.H., et al., 'Chapter 9: Africa,' Pörtner, H.O., et al., (eds), Climate Change 2022: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, UK and New York, 2022, pp. 1285–1455.

⁴⁶ Adelekan, Ibidun O., 'Vulnerability to wind hazards in the traditional city of Ibadan, Nigeria,' *Environment and Urbanization*, vol. 24, issue 2, 12 October 2012, pp. 591–617. http://journals.sagepub.com/doi/full/10.1177/0956247812454247>

⁴⁷ Federal Republic of Nigeria, Second National Communication on Climate Change, 2014.

⁴⁸ Other sources put the reduction rate over the last 30 years at 0.63-0.73 per cent per year,

⁴⁹ Food and Agriculture Organization of the United Nations, *Global Forest Resources Assessment 2020: Main report,* FAO, Rome, 2020. www.fao.org/documents/card/en/c/ca9825en

⁵⁰ World Resources Institute, 'Climate Watch,' Climate Watch, Washington, DC, 2014. Available at: http://cait2.wri.org

⁵¹ Global Forest Watch, Nigeria Dashboard, 2023: <www.globalforestwatch.org/dashboards/country/NGA/?category=undefined>

the desertification process and other land and forest degradation activities.

per cent of the country covered in forest, the trend is largely driven by unsustainable land-use practices, natural resource exploitation and high demand for domestic energy, such as wood fuel and charcoal.52

Desertification

Desertification has intensified in the northern and central areas of Nigeria, with deserts migrating southward and as many as 62 million Nigerians thought to be directly or indirectly affected this phenomenon.^{53,54} Widely recognized causes include increasing population pressure, poor agricultural land management,55 rising temperatures and a decrease in localized rainfall.⁵⁶ Approximately twothirds of the total land area has reached desertification or is at risk of desertification, and nearly all of Nigeria's northern and central states are experiencing moderate to severe desertification.^{57,58} Nigeria loses about 350,000 hectares of land every year to the desertification process and other land and

forest degradation activities, and the impacts are manifested on the environment and general livelihoods.⁵⁹

Sea-level rise and ocean surges

Nigeria's coastal states are home to approximately 25 per cent of the population and contain substantial infrastructure investments - particularly around Lagos and the Niger Delta area, Warri and Port Harcourt in the south, and Calabar on the southern border with Cameroon.^{60,61,62} Sea-level rise has disrupted urban and rural coastal populations, leading to their relocation, with facilities in Lagos city and coastal communities in the Niger Delta region most affected.⁶³ Human health, safety and livelihoods are seriously at risk as sea levels are projected to rise 0.4 to 0.7 metres by 2100⁶⁴ causing saltwater intrusion, storm surges and tidal flooding.

Coastal ecosystems are also at risk, with potential impacts on local communities' livelihoods, food security and safety. Impacts of degradation to Nigeria's freshwater resources include biodiversity and associated livelihood losses (especially for inland fisheries); reductions in water quality and quantity leading to increased difficulties in

accessing potable water (especially in times of drought, and/or in areas affected by salt water intrusion, desertification and oil extraction); implications for agriculture; and reductions in hydroelectric generation potential.65,66

Air pollution

Nigeria is home to three of the World Health Organization's 10 most polluted cities in the world: Onitsha (ranked number one), Kaduna (ranked number five) and Aba (ranked number six). Each of these cities has an average annual particulate matter (PM) of 10 (between 2.5 and 10 micrometres in diameter) and concentrations between 15 to 30 times the World Health Organization guideline limit of 20 micrograms/m3.67 In addition, Umuahia and Owerri are ranked the sixteenth and seventieth most polluted cities, and Kaduna city ranks within the

In Lagos State, illnesses and premature deaths due to outdoor pollution caused a loss of US\$2.1 billion in 2018.

Nigeria loses about

350,000 hectares

⁵² Global Environment Facility, Small Grants Programme and United Nations Development Programme, 'Small Grants Programme Country Programme Strategy For Utilization Of OP6 Grant Funds,' SGP, 2018. https://sgp.undp.org/innovation-library/item/865-op6-sgp-nigeria- country-programme-strategy.html>

⁵³ Audu, Ignatius and Adie Linus, 'Desertification in Northern Nigeria: Causes and Consequences,' Department of Agricultural Economics and Extension, Federal University Wukari, Taraba State, Nigeria, March 2018.

<www.researchgate.net/publication/354423993_Desertification_in_Northern_Nigeria_Causes_and_Consequences>

Figure 6: Locations of desertification in Nigeria. Source: Umar S.A., et al., 'Community Participation in land Resources Conservation and Management: Studies in the Local Government Areas of Gombe State, Nigeria,' Advances in Environmental Biology, vol. 9 issues 24, 2015, pp. 38-45.

⁵⁵ Ibrahim, E.S., et al., 'Desertification in the Sahel region: a product of climate change or human activities? A case of desert encroachment monitoring in North-Eastern Nigeria using remote sensing techniques,' Geographies, 2, 2022, pp. 201-226. <www.preprints.org/manuscript/202201.0110/v1>

⁵⁶ ARD, Inc., Nigeria Environmental Analysis (Final Report), USAID, April 2002. https://pdf.usaid.gov/pdf_docs/PNACP627.pdf> ⁵⁷Joseph, O., Gbenga A.E., and Langyit, D.G., 'Desertification risk analysis and assessment in Northern Nigeria,' *Remote Sensing Applications: Society and Environment*, vol. 11, 2018, pp. 71–82. https://doi.org/10.1016/j.rsase.2018.04.012

Olagunju, Temidayo E., 'Drought, desertification and the Nigerian environment: A review,' Journal of Ecology and The Natural Environment, 7(7). 191–209, July 2015.

⁵⁹ Nwafor, J.C., 'Environmental Impact Assessment for Sustainable Development,' The Nigerian Journal on Agricultural and Food Security, 4, pp 9-16, 2006. ⁶⁰ Onyeneke, Robert, et al., 'Evidence-Based Policy Development,' 2011.

⁶¹ Nzegbule, E.C., et al., 'Sustainability and the Effectiveness of BNRCC,' 2019.

⁶² The World Bank Group, 'Climate Change Knowledge Portal'.

⁶³ Onyeneke, Robert, et al., 'Evidence-Based Policy Development,' 2011.

⁶⁴ Ibid.

⁶⁵ Adeogun, A.G., Sule, B.F., and Salami A.W., 'Cost effectiveness of sediment management strategies for mitigation of sedimentation at Jebba Hydropower reservoir, Nigeria, Journal of King Saud University - Engineering Sciences, vol. 30, issue 2, April 2018, pp. 141-149. <www.sciencedirect.com/science/article/pii/S1018363916000076>

⁶⁶ ARD, Inc., Nigeria Environmental Analysis (Final Report), 2002.

⁶⁷ World Health Organization, 'Global Urban Ambient Air Pollution Database (update 2016),' World Bank, 2016. <www.ccacoalition.org/en/resources/who-global-urban-ambient-air-pollution-database-update-2016>

top 50 for PM 2.5. Sources of air pollution include emissions from vehicle exhaust, the petrochemical industry, manufacturing (predominantly cement production), energy production (fossil fuel power stations and small/medium private diesel generators), wood fuel burning, and the burning of municipal and industrial solid waste for recycling and disposal. For example, in Lagos State, illnesses and premature deaths due to ambient (outdoor) pollution caused a loss of \$2.1 billion in 2018, and about 11,200 premature deaths, the highest in West Africa. Children under five years of age were the most affected, accounting for 60 per cent of total deaths.⁶⁸

Biomass

Biomass⁶⁹ is the largest source of total primary energy supply in Nigeria, and about 40 million people, or onefifth of the population, are directly engaged in fuel wood collection and charcoal production. This causes some concern as it provides an estimated 530,000 full-time equivalent direct jobs.⁷⁰ Approximately 75 per cent of all energy consumed in Nigeria is utilized for household cooking,⁷¹ with the vast majority (more than 90 per cent) being biomass (wood fuel) based.⁷² As a consequence of the poor electricity situation in rural areas and the resulting dependence on biomass for fuel, children throughout Nigeria are highly exposed to indoor air pollution. Moreover, the traditional cooking method is expensive, burning up to 90 per cent more wood than is necessary and costing poor families money that could be put to better use on education, health and nutrition. The high reliance on charcoal and wood fuel further contributes to indoor air pollution and is becoming a driver of deforestation and desertification in the country.

Plastic waste pollution

Consequently, poor waste management and unregulated plastic use by the country's large and growing population has resulted in improperly disposed plastic and household waste spreading from Nigeria's villages, towns and cities into rural and coastal areas. Where disposal of plastic waste does occur in Nigeria, ad hoc collection and relocation of piles of waste to out-of-town locations for dumping and burning create further problems of soil, air, surface and groundwater pollution that degrade Nigeria's general environmental health. In the Lagos slum area of Makoko, collected municipal waste (largely plastics) from Lagos is viewed as a commodity and purchased for use as material for land reclamation in the coastal zone. In the same semi-aquatic urban area, municipal levels of pollution from poor solid waste management and a total lack of sanitation result in an unprecedented environmental health situation.⁷³

Nigeria ranks **ninth in the world** for the estimated number of child displacements due to floods: **650,000 children were displaced across the country between 2016 and 2021.** More than **3.1 million children could be displaced by riverine floods** over the next 30 years.

– UNICEF, Children Displaced in a Changing Climate, 2023

1.4 Climate impact on children

Child protection

Child protection challenges in Nigeria are mainly concerned with increased poverty, displacement and migration due to flooding, drought and desertification. Worsening poverty exacerbates pre-existing child protection concerns and elicits new ones, such as family separation, child trafficking and abduction, and pushes children into the worst forms of child labour.

Education

Interruptions to learning are often associated with flooding and other environmental disasters that cause displacement and prevent children's access to school due to physical barriers. Limited access to electricity hampers the use of quality teaching resources (e.g., projectors, printers, computers, fans, lights or cooking

⁶⁸ The World Bank, *Making Lagos a Pollution Free City: Solving the threat one solution at a time,* The World Bank, 3 June 2022.
<www.worldbank.org/en/news/feature/2022/06/03/afw-making-lagos-a-pollution-free-city-solving-the-threat-one-solution-at-a-time>

 ⁶⁹ Biomass is organic matter that is used as a fuel and includes wood-based and agricultural products.
 ⁷⁰ Food and Agriculture Organization of the United Nations, *The State of The World's Forests, 2022: Forest Pathways for Green Recovery and Building Inclusive, Resilient and Sustainable Economies,* FAO, Rome, 2022. www.fao.org/documents/card/en/c/cb9360en>

⁷¹ International Renewable Energy Agency (IRENA), 'Energy Profile: Nigeria, Country Indicators and SDGs,' 2022.

⁷² Ibid. and Gujba, H., Mulugetta, Y., and Azapagic, A., 'The Household Cooking Sector in Nigeria: Environmental and Economic Sustainability Assessment,' *Resources*, 4(2), June 2015, pp. 411–433.

⁷³ Okpoko, Mercy, 'The Negative Impact of Plastic in Nigeria: The need for a legal framework,' *Greenpeace*, 14 March 2022.

apparatuses). Meanwhile, the lack of adequate and safe WASH services in learning centres and schools discourage children, especially girls, from attending school.

Health

Rising temperatures, flooding, drought and intense storms are the most serious climate-related threats to children in Nigeria. Among the direct health effects of deteriorating environmental factors in Nigeria are physical dangers that lead to injury, heat stress, diminished access to safe water, sanitation and hygiene services, and an increase in waterborne diseases such as cholera, diarrhoea and malaria. Limited access to energy further impacts the operation of primary health care, thereby increasing children's vulnerability and making it difficult for children and women to access health services.

The climate impacts of deforestation and cooking emissions including ineffective solid waste management, environmental pollution and the use of wood and charcoal for cooking, impact strongly on children's and women's respiratory health. Seventy-eight per cent of total air pollution-related pneumonia deaths in Nigeria are among children under-five, which is the highest proportion globally,⁷⁴ and indoor air pollution accounted for nearly 50,000 under-five deaths in 2019 alone.⁷⁵

Traditional cooking methods burn up to **90 per cent** more wood than necessary **and cost poor families** money that could be better used for education, health and nutrition.

Nutrition

The role of natural resources and a stable climate is critical to facilitating sustainable, diversified, and nutritious food production; food supply, food access and price stability; and income-generation for rural livelihoods. Unpredictable climate variability in the form of heatwaves, reduced water availability and extreme weather lead to shortfall in food availability due to reduced or destroyed crop yield and stock. This can result in food price rises and a disruption of trade and transport affecting market infrastructure, thereby constraining access to food, often of poor quality and resulting in limited diversity of diets. Environmental degradation and climate change therefore have direct consequences on chronic under-nutrition (e.g., stunting and wasting) and severe acute malnutrition in children. The communities that rely on natural resource-dependent livelihoods in low-productivity, high-risk environments such as northern Nigeria are the most affected by these climate change factors.

Social and behaviour change

In a recent survey, Nigerian adolescents' lack of awareness and understanding of climate issues was found to be a major impediment to action.⁷⁶ Changing a community's perceptions of and their interactions with the environment is key to tackling climate risks and impacts. Hence, there is a strong need to ensure that communities, especially youth and children, are engaged in climate debates, planning, and adaptation and mitigation measures, all of which need to take place.

Social policy

Highly vulnerable children and women are the most affected by the impacts of climate change as it pushes children into a chronic poverty trap in multiple ways. However, the current multi-dimensional poverty index does not consider climate impacts or the subsequent policy gaps in targeting and reaching the most vulnerable children and their families.

Water, sanitation and hygiene

Low levels of water availability and access to safe WASH services seriously impact children's health, education, nutrition, safety and well-being across Nigeria. As demonstrated by the Climate Risk Profile developed by the SLICE⁷⁷ project of the Potsdam Institute for Climate Impact Research in 2022, it is predicted that water availability will decline from 3,300 metres³ per capita per year in 2000 to about 800 metres³ per capita per year in 2080, mainly due to population growth. This would affect not only access to potable water but also the functionality of sewer systems

Water availability is predicted to **reduce** from 3,300 m³ to 800 m³ per capita by 2080.

⁷⁴ 2019 Global Burden of Disease, see: Institute for Health Metrics and Evaluation (IHME), 'Nigeria profile,' IHME, University of Washington, Seattle, Wash., 2021. <</p>

⁷⁵ Every Breath Counts, 'Air Pollution and Pneumonia Scorecard 2021.' https://stoppneumonia.org/wp-content/uploads/2021/11/Every-Breath-Counts-Air-Pollution-and-Respiratory-Health-Scorecard67.pdf>

⁷⁶ According to a U-Report, 7 out of 10 adolescents in Nigeria of senior secondary school (ages 15-19) have rarely or never learned about climate change. However, flooding, desertification, poor air quality, poverty, insecurity and migration are among the impacts of climate change that young people report seeing or experiencing in their communities. Source: United Nations Children's Fund, *What youth in Nigeria think about, Climate Change Education November 2022,* U-Report Nigeria and UNICEF, November 2022. https://nigeria.ureport.in/opinion/6103/>

⁷⁷ Climate Analytics and ifo Institute, *Climate Risk Profile: Nigeria*, ifo Institute for Economic Research and Climate Analytics gGmbH, Munich, 2021. Available at: http://www.climate-impact-economics.org/en/news/climate-risk-profile_nigeria.pdf> See also:

and the ability to practice good hygiene behaviours, including handwashing with soap and keeping toilets clean and functional. Improper solid waste management increases the risk of contaminating boreholes and water aquifers, which can result in health risks to children. Similarly, a lack of affordable, sustainable and reliable energy for pumping water, limits access to safe WASH services for millions of children in the country. Increases in temperatures have been shown to increase diarrhoea rates and other water-borne diseases such as cholera and malaria.⁷⁸ Malaria alone affected a total of 60 million Nigerians⁷⁹ and caused 200,000 deaths in 2021, amounting to 32 per cent of the total global malaria-related deaths. Flooding and rising sea levels, which can damage existing infrastructures, further affect the functionality of WASH services.

Malaria affected **60 million** Nigerians and caused 200,000 deaths in 2021, amounting to 32 per cent of the global burden.

1.5 Nigeria's institutional frameworks for climate change

Nigeria is a signatory to several global instruments including the United Nations Framework Convention on Climate Change (1992), the Kyoto Protocol (1997), the Paris Agreement (2015), the Sendai Framework for Disaster Risk Reduction (2015) and the Declaration on Children, Youth and Climate Action (2019). Nigeria has also developed relevant policy instruments such as the National Climate Change Policy Response and Strategy (2012), the National Adaptation Strategy (2012), Nigeria's Nationally Determined Contributions (2015), the National Policy on the Environment (revised 2016) and the National Adaptation Plan Framework (2020). The establishment of the Department of Climate Change within the Federal Ministry of Environment in 2011 was a critical step towards providing an institutional framework for addressing climate change. In addition, the Climate Change Act (2021) and the subsequent establishment of the National Council on Climate Change, under the chair of the Vice President of Nigeria, demonstrates the importance and commitment to climate change issues in Nigeria.

However, there is a huge gap in terms of domesticating these instruments, raising awareness, building capacity at all levels, and investing in climate-smart approaches and solutions across the country. This impacts Nigerian people, especially the most vulnerable children. Domesticating the policies and National Adaptation Plan with a child-sensitive lens at the sub-national levels, and addressing the capacity constraints at the national, state and local government area levels, including within communities, civil society and private sectors, need particular attention.

For millions of children in Nigeria, the lack of affordable, sustainable and reliable energy limits their access to water and safe WASH services.



⁷⁸ Matthias Flückiger, and Ludwig, M., "Temperature and risk of diarrhoea among children in Sub-Saharan Africa," World Development, Volume 160, 2022. https://doi.org/10.1016/j.worlddev.2022.106070>

⁷⁹ Okeke, Chukwueloka U., Ogunji, Chinwe V., and Anieze, Ethelbert E., 'Unlocking Adaptation Potential: Insights into Nigeria's Climate Change Policies, Initiatives, and Local Actions,' *Africa Policy Research Institute*, Berlin, Germany, 2023.

2 UNICEF's Commitments and Multi-Sectoral Climate Action Plan

UNICEF's Climate Action Plan and key commitments on climate change support seven strategic multi-sectoral intervention areas. These interventions are further elaborated in the Annex and are aligned to UNICEF's planned results of the 2023–2027 country programme cycle.

1. Data and evidence

- Generate data on flooding, drought and other climate change, environmental degradation and energy poverty events to better understand the impact on children.
- Identify "hotspot" locations with a high incidence of impact on children's access to life-saving services such as health, WASH, nutrition and education.

Collaborative partners: Federal Ministry of Environment and Ecological Management, National Council on Climate Change, National Emergency Management Agency

2. Advocacy

- Identify influential change agents, including children, youth and civil society organizations, to support policy processes and community mobilization work.
- Use data, evidence and influencers to support the Government of Nigeria in prevention, early warning, mitigation measures, response and preparedness for flooding, drought and waste-related climate risks to children.
- Develop, tailor and promote advocacy materials to a broad range of audiences, including children.
- Develop a menu of climate-related child-sensitive indicators that can be used by implementing agencies for climate finance instruments and inclusion within their programme design, monitoring and evaluation.

Collaborative partners: Children and youth representatives, civil society organizations, government ministries, implementing partners, media outlets

3. Partnerships with the United Nations and other agencies

- Advocate for the inclusion of climate-related child-sensitive indicators within the United Nations Sustainable Development Cooperation Framework, the Global Environment Facility and the Green Climate Fund finance streams.
- Strengthen collaboration with other actors to improve the results of their programmes for children.
- Identify opportunities within climate finance programmes for the inclusion of children and youth and provide better advocacy, education and community engagement.

Collaborative partners: African Development Bank, Food and Agriculture Organization of the United Nations, United Nations Development Programme, World Health Organization, World Bank

4. Collaboration with the Ministry of Environment and climate authorities

- Advocate for and engage with the Department of Climate Change under the Federal Ministry of Environment and the National Council on Climate Change to include child-focused activities and climate-related child-sensitive indicators within Nigeria's climate finance approval process.
- Support the design, monitoring and evaluation of the National Adaptation Plan, including climaterelated child-sensitive indicators. This can lead to improved and targeted climate finance projects that include and measure outcomes for children.

Collaborative partners: Federal Ministry of Environment, National Council on Climate Change

5. Engagement with children and youth

- Mobilize and work with children and youth to better include children's voices in national climate change policies, especially in processes such as the National Adaptation Plan for Climate Change and the Conference of the Parties (COP).⁸⁰
- Identify and engage influential change agents, including children, to support policy processes, COP and community mobilization work.

Collaborative partners: Government counterparts, especially Federal Ministry of Education, Universal Basic Education Commission, and Federal Ministry of Women Affairs and Social Development

6. Build the capacity of states, local government areas and traditional and religious leaders

- Provide strategic capacity-building support to raise awareness of the climate hazards and mitigation and adaptation measures at all levels, especially in communities.
- Promote a better understanding of the environment's role in providing water and other services essential for improving multi-dimensional poverty scores in climate change, desertification and environmental degradation hotspots.
- Invest in strengthening in-house capacity so that appropriate guidance can be provided to implementing partners at the national and sub-national levels.
- Strengthen the capacity in various technical areas such as the development of toolkits, technical
 designs, standard operating procedures, and guidelines to mitigate and minimize impacts of climate
 events such as floods, droughts and heatwaves.
- Offer support in the design, implementation and institutionalization of clean energy for schools, health care facilities and water pumps; promote water harvesting/recharge technologies and climate-smart infrastructure.
- Strengthen local capacity in the design and implementation of climate-smart solutions such as clean energy, water recharge/flood control technologies and community mobilization, all of which are critical in mitigating and minimizing climate's impact on children.

Collaborative partners: Community, children and youth groups; emirs; health, education and WASH departments; ministries and agencies; municipal heads; state environment agencies

7. Systems for climate learning and education

- Prepare future leaders and champions and capitalize on UNICEF's global experiences of supporting "green" and "eco-school" movements.
- Promote multi-stakeholder partnerships and modalities where institutions and communities co-own the initiatives, such as improved solid waste management practices, tree-planting and water source protection. The use of clean energy sources will be crucial in achieving this.
- Incorporate disaster risk reduction and resilience strengthening into the school curriculum, teacher training and teaching materials, and adapt the syllabus accordingly.
- Integrate climate risks into safe school policies and guidelines (e.g., Minimum Standards) to account for climate and environment-related disasters and disaster risk reduction.

Collaborative partners: Ministry of Education, Ministry of Environment, non-governmental organizations

⁸⁰ The Conference of Parties is the decision-making body responsible for monitoring and reviewing the implementation of the United Nations Framework Convention on Climate Change. It brings together the 197 nations and territories ("Parties") that have signed on to the Framework Convention and reviews the national communications and emission inventories submitted by Parties. See also <https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop>

3 Conclusions, Priority Issues for Children and Next Steps

This Climate Landscape Analysis for Children in Nigeria provides important information on how children are likely to be affected in multiple ways by climate change-induced disasters in Nigeria. Key findings indicate that climate impacts in Nigeria are dominated by flooding, drought and higher temperatures and threaten children's health and access to education, nutrition, protection and WASH. Pollution and desertification are the key environmental impacts threatening children's rights in Nigeria and critical issues that need to be addressed. Land, water and air pollution all present clear threats to children's health, including contributing to gastrointestinal illnesses and vector-borne diseases, causing respiratory diseases and damaging cognitive function and learning ability.

Deforestation, desertification and land degradation pose even greater threats to children's rights, but in less direct ways. The loss of resources negatively impacts a household's ability to produce and purchase food, achieve food security, and maintain access to clean and sufficient drinking water and protection against extreme events such as landslides and flooding.

With ecosystem degradation, opportunities for rural employment and income-generating activities decline and negative coping mechanisms, such as child marriage and child labour, are increasingly used, threatening children's safety, well-being and rights even further.

Finally, with just 55.4 per cent of the total population benefiting from access to electricity, energy poverty in Nigeria is a cross-cutting issue. While urban areas have much greater access to electricity (83.9 per cent), the rural population has to cope with just 24.6 per cent access (twenty-sixth worst globally). From a child rights perspective, the impacts on learning, water access and health are of utmost concern.

The Report on the Impact of Climate Change on Migration,⁸¹ suggests that climate change is a major driver of migration in Nigeria and its neighbours and that the problem is likely to get far worse in the coming decades. While the majority of displacement in Nigeria is due to conflict of a multidimensional nature, the role of diminishing resources due to environmental and climate factors is well recognized as the underlying driver at the source of these disputes.

Climate change has a multi-dimensional impact on children and their environment and mitigating the risks and adapting solutions to minimize the impact of climate change can be possible only through a multi-disciplinary and collective effort. Actions need to focus on engaging children and youth and empowering local communities and authorities at all levels, which is reflected in UNICEF's Climate Action Plan summarized in Section 2 of this



report.

UNICEF is deeply committed to tackling climate change and looks forward to expanding collaboration with our development partners; Nigeria's civil society organizations; youth and children-based organizations; private sector players; and government authorities to advance the rights of children through collective action. Together we can minimize climate impacts that affect millions of children in Nigeria.

A UNICEF WASH consultant stands in front of a solar-powered borehole in Teachers Village IDP camp with internally displaced persons after heavy rains. A region known for endemic cholera, Borno State in North East Nigeria is the epicentre of the local conflict and continues to face the impact of conflict and climate change.

⁸¹ The White House, Report on the Impact of Climate Change on Migration: A report by the White House, Washington DC, 2021. https://reliefweb.int/attachments/6ddc7429-0943-38a2-b760-f9b23bc59ce9/Report-on-the-Impact-of-Climate-Change-on-Migration.pdf

Annex

Climate Action Plans for UNICEF Nigeria Programmes: 2023– 2027

Child Protection Programme

| Key Actions | Timeline |
|---|-----------|
| Strengthen evidence on the impact of climate change on children, especially child marriage and sexual and gender-based violence | 2023–2027 |
| Support government policy reform on climate change to integrate preventive and responsive actions to support children affected by climate change, especially in the context of violence and neglect | 2023–2027 |
| Raise awareness among communities, parents, schools and authorities about the specific risks that children face, especially girls, due to climate change | 2023–2027 |

Education Programme

| Key Actions | Timeline |
|---|-----------|
| Support the development and implementation of standards for climate-resilient schools and standard operating procedures for school-level climate-related disaster response, including digital learning | 2024–2027 |
| Train 18,000 teachers and 14,000 members of school-based management committees and centre-based management committees on climate hazards, and support the integration of climate resilience into school safety plans | 2024–2025 |
| Support federal, state and local actors to leverage data, forecasting techniques and response mechanisms to develop early warning systems | 2024–2026 |
| Develop resources for climate change education such as curriculum standards and teaching and learning materials, and support youth to engage in community-based climate action (e.g., tree planting, waste management activities) | 2023–2024 |
| Advocate for the integration of climate mitigation and adaptation measures at all levels | 2023–2027 |



Akpoebi Germany stands with his children on a wooden makeshift walkway in front of their home in Bayelsa State, South South Nigeria. Mr. Germany and his family were some of the 4.4 million people affected by flooding in Nigeria in 2022.

Emergency Programme

| Key Actions | Timeline |
|--|------------|
| Strengthen the risk analysis led by the National Emergency Management Agency which maps flooding and epidemics (i.e., measles, cholera and yellow fever) every two years | 2024- 2026 |
| Ensure that all partnership documents related to cash responses by civil society organizations and non-governmental organizations include an environmental sanitation component, such as clearing drainages of flood-prone communities and possible facilitation of plastic waste collection | 2024–2026 |
| Collaborate on advocacy efforts to address climate risks and plastic waste management | 2023–2027 |
| Provide guidance on climate-risk analysis during preparedness planning and response | 2023–2027 |

Health Programme

| Key Actions | Timeline |
|--|-----------|
| Increase the use of clean energy in primary health care facilities and newborn care units to improve quality integrated service delivery to the last mile | 2023–2027 |
| Improve waste management and disposal protocols in health facilities including vaccine waste and hazardous material | 2023–2027 |
| Support the government in developing standards for climate-resilient health facilities and facilitate assessments of the health sector's carbon emissions and environmental impact, which will inform catalytic interventions to achieve a carbon-neutral status | 2023–2027 |
| Promote paper-free electronic health records and registries at primary health care facilities and the community level | 2023–2027 |

Nutrition Programme

| Key Actions | Timeline |
|--|-----------|
| Support food system transformation with a focus on nutrition-sensitive and climate-smart policy and programming, especially for vulnerable women and children | 2024–2027 |
| Support government institutions at the federal, state and local government levels with monitoring, analysis and the use of data and evidence related to the effects of climate change on food and nutrition security | 2024–2027 |
| Strengthen systems and capacities to promote climate-resilient technologies for healthy food and the delivery of safe, nutritious and diverse diets for women and children | 2024–2027 |
| Implement nutrition-sensitive social cash transfer programmes in settings that have been affected by climate-related disasters, prioritizing the 'first 1,000 days' households | 2024–2027 |

Social and Behaviour Change Programme

| Key Actions | Timeline |
|--|-----------|
| Collaborate in the development and use of innovative climate change communication strategies at the national, state and local government area levels | 2023–2027 |
| Build on the experience of the Generation Unlimited platform by increasing awareness of the impact of climate change, environmental degradation and energy poverty on children's rights in Nigeria | 2024–2027 |

Social Policy Programme

| Key Actions | Timeline |
|---|-----------|
| Use protocols to assess climate change, environmental degradation and energy poverty threats to rural communities | 2024–2027 |
| Provide support to mainstream children's needs into climate-focused adaptive social protection mechanisms | 2024–2027 |

Water, Sanitation and Hygiene Programme

| Key Actions | Timeline |
|---|-----------|
| Strengthen WASH sector policy and financing mechanisms incorporating climate hazards, mitigation and adaptation measures | 2023–2027 |
| Promote climate-resilient WASH solutions such as solarization, environmental pollution control measures, waste management, water efficiency and recharge solutions | 2023–2027 |
| Strengthen the capacity of WASH sector institutions including states, local governments and communities to address climate change | 2023–2027 |
| Support the development of tools and indicators to generate relevant data (i.e., flooding and drought) for climate-resilient WASH investments, including those for community-level resilience | 2023–2027 |



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"You never know if you'll find much to make the wait worthwhile."

Fifteen-year-old Muhammad (yellow shirt), internally displaced from Malori, sifts through the smouldering refuse of a gated compound that runs through the Mairi Garage Market in Maiduguri, Nigeria. Mohammad says the hardest part is waiting for the trash to arrive.



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unicef 🚳 for every child

Communication and Advocacy

| Key Actions | Timeline |
|---|-----------|
| Support advocacy to mobilize youth and children on climate issues | 2023–2027 |
| Support the engagement of media and celebrities on the climate agenda | 2024–2027 |
| Support UNICEF programme sections to develop business cases focusing on climate-resilient solutions | 2023–2027 |

Programme Monitoring and Reporting

| Key Actions | Timeline |
|--|-----------|
| Include climate indicators in the data and evidence strategy for UNICEF Nigeria Country Office | 2023–2024 |
| Build team capacity and include climate indicators and key performance indicators on greening into programme monitoring plans, and monitor progress during mid-year and end-of- year reporting | 2024–2027 |

Office Greening Action Plan

| Key Actions | Timeline |
|---|-----------|
| Reduce paper usage by using information and communications technology-based systems and recycling paper and cardboard | 2023–2024 |
| Collaborate with UNDP and other United Nations agencies to "green" the premises of United Nations House in Abuja, focusing on the gradual adoption of energy-efficient lighting, air conditioning and use of renewable energy | 2024–2027 |
| Revitalize the Greening Committee of UNICEF Nigeria and advocate for minimizing waste generated by the United Nations House in Abuja | 2023–2027 |



"I'm here to make an impact and represent my country."

On 23 September 2019, at UNICEF House in New York, Deborah ("Debby") Morayo Adegbile (left), 12, from Lagos, spoke at a press conference announcing a collective action being taken on behalf of young people everywhere facing the impacts of the climate crisis.



UNICEF works in the world's toughest places to reach the most disadvantaged children and adolescents – and to protect the rights of every child, everywhere. Across more than 190 countries and territories, we do whatever it takes to help children survive, thrive and fulfill their potential, from early childhood through adolescence.

And we never give up.

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