Quest Journals
Journal of Research in Environmental and Earth Sciences
Volume 12 ~ Issue 11 (November 2026) pp: 37-48
ISSN(Online) :2348-2532
www.questjournals.org

Research Paper

Climate Change and the Sustainable Development Goals (SDG 13) in South-South Nigeria: A Policy Review

Dr.Sunny O. Asomaku[1]
[1]*Centre for Disaster Risk Management and Development Studies, University of Port Harcourt, Nigeria,*
Corresponding author Email address: sunny_asomaku@uniport.edu.ng
ORCID:0000-0002-5819-515X

Abstract
The six South-South states of Nigeria (Akwa Ibom, Bayelsa, Cross River, Delta, Edo and Rivers) sit at the point where Nigeria's climate risk and its petroleum economy overlap most tightly. Low-lying deltaic land, recurrent river and coastal flooding, decades of gas flaring and a thin subnational policy base make the region a demanding test of how far national climate commitments translate into progress on Sustainable Development Goal 13 (climate action). This paper reviews the federal and state policy instruments that bear on SDG 13 in the region: the Climate Change Act 2021, the National Climate Change Policy 2021–2030, the 2021 update of the Nationally Determined Contribution (NDC), the 2022 Energy Transition Plan, the 2025 third NDC (NDC 3.0) and the state-level instruments that could be located. Using structured documentary analysis against the targets of SDG 13 (13.1, 13.2, 13.3 and 13.a), the review finds that national architecture has matured quickly since 2021, particularly on legal mainstreaming (target 13.2) and on stated financing needs (13.a), but that adaptation (13.1) and climate education (13.3) remain thinly specified for deltaic communities, and that subnational instruments are sparse, uneven and weakly funded. Three governance gaps are identified: an overlap in institutional mandates at the federal level, the limited domestication of national policy in the states, and a mitigation agenda weighted toward land-use accounting rather than the oil-and-gas sources concentrated in the region. The paper closes with six prioritised policy recommendations and a research agenda.

Keywords: *Climate Policy; SDG 13; Niger Delta; South-South Nigeria; Nationally Determined Contribution; Climate Change Act 2021; Adaptation Governance*

Received 02 Nov., 2026; Revised 11 Nov., 2026; Accepted 13 Nov., 2026 © The author(s) 2026.
Published with open access at www.questjournals.org

I. Introduction

Climate change is no longer a distant planning problem for the people of the Niger Delta. In the middle of 2012, record rainfall and the release of water from upstream dams produced the worst flooding Nigeria had seen in decades, and the Post-Disaster Needs Assessment that followed documented heavy losses across the Niger and Benue basins, with the delta states among those affected (Federal Government of Nigeria, 2013). Subsequent reporting by the Global Facility for Disaster Reduction and Recovery (GFDRR, n.d.) put economic damage and loss from that single event at close to US$17 billion across the twelve most affected states. The episode did more than destroy houses and farmland; it forced the country to admit that disaster risk, climate variability and development planning could not be handled by separate agencies working in separate silos.

Sustainable Development Goal 13 asks governments to take urgent action to combat climate change and its impacts. Its targets call for strengthened resilience and adaptive capacity (13.1), the integration of climate measures into national policies and planning (13.2), better education and institutional capacity (13.3), and the mobilisation of climate finance (13.a) (United Nations, 2015). For a federal state such as Nigeria, these targets cannot be met by federal pronouncements alone. Most of the practical work of land-use control, drainage, coastal management, emergency response and community engagement sits with state and local governments, and in the South-South geopolitical zone those governments operate in one of the most environmentally stressed settings in Africa.

The region is also where the carbon intensity of Nigeria's economy is most visible. Gas flaring associated with oil production has been linked to emissions of greenhouse gases, volatile organic compounds and particulate

matter, with documented consequences for health, housing and livelihoods in host communities (Uchegbulam et al., 2022). At the same time, an assessment of the Niger Delta using seventeen physical, social and human-influence indicators found that roughly 42.6% of the delta is highly vulnerable to sea-level-rise-driven flooding (Musa et al., 2014). The region is therefore both a major source of national emissions and a front-line receiver of climate impacts, a combination that makes policy coherence unusually important.

Despite this, there is little consolidated analysis of how national climate instruments connect to SDG 13 in the six South-South states specifically. Most commentary treats Nigeria as a single unit or focuses on the oil-and-gas dimension alone. This paper addresses that gap. It asks: (1) what climate-relevant policy instruments exist at federal and state level that apply to South-South Nigeria; (2) how well do they cover the four SDG 13 targets most relevant to the national context; and (3) what governance gaps most limit implementation, and how might they be closed?

II. Conceptual Background

2.1 SDG 13 as a policy-coherence problem

SDG 13 is best read less as a stand-alone goal and more as a test of coherence across the 2030 Agenda. A flood-protection scheme affects food security, health, infrastructure and ecosystem goals; a flaring-reduction programme touches energy access, air quality and public revenue. Policy coherence in this sense requires that climate objectives are written into sectoral plans, budgets and legal duties, and not left in a free-standing climate document. Target 13.2 captures this idea directly, and it is the main lens through which the national instruments reviewed here are assessed.

2.2 Climate vulnerability in the Niger Delta

The Intergovernmental Panel on Climate Change (IPCC, 2022) identifies African coastal and deltaic settings as highly exposed to sea-level rise, flooding and erosion, with adaptive capacity constrained by finance, institutions and data. In the Niger Delta these pressures are compounded by subsidence, rapid urbanisation, unsustainable land use and the legacy of oil spillage and flaring. Musa et al. (2014) show that low slope, low elevation and high wave energy concentrate vulnerability in the coastal fringe, while population growth and groundwater use add to social and human pressures. Vulnerability here is not only a function of hazard; it is shaped by who lives where, what they depend on, and which institutions are present to help when water rises.

2.3 Federalism and subnational climate governance

Nigeria's federal structure means that national commitments depend on state-level uptake. A communiqué from a South-South regional workshop convened by the National Emergency Management Agency (NEMA, 2011) in Asaba already named the non-domestication of national climate-adaptation and disaster-risk policy in the region as a constraint, and urged the establishment of State Climate Change Offices and State Emergency Management Agencies wherever none existed. More than a decade later, as Section 6 shows, the pattern of uneven state capacity has changed less than one might hope.

III. Study Area and Methods

3.1 Study area

South-South Nigeria comprises six states on the Gulf of Guinea coast and its hinterland: Akwa Ibom, Bayelsa, Cross River, Delta, Edo and Rivers (Figure 1). The zone includes the core of the Niger Delta, the principal oil-producing area of the country, and also the Cross River forest landscape, which has been Nigeria's pilot jurisdiction for the REDD+ forest-carbon programme (UN-REDD Programme, n.d.). Within one geopolitical zone, therefore, one finds low-lying wetlands, petroleum infrastructure, dense urban centres such as Port Harcourt, Benin City and Calabar, and some of the largest remaining tracts of tropical forest in the country.

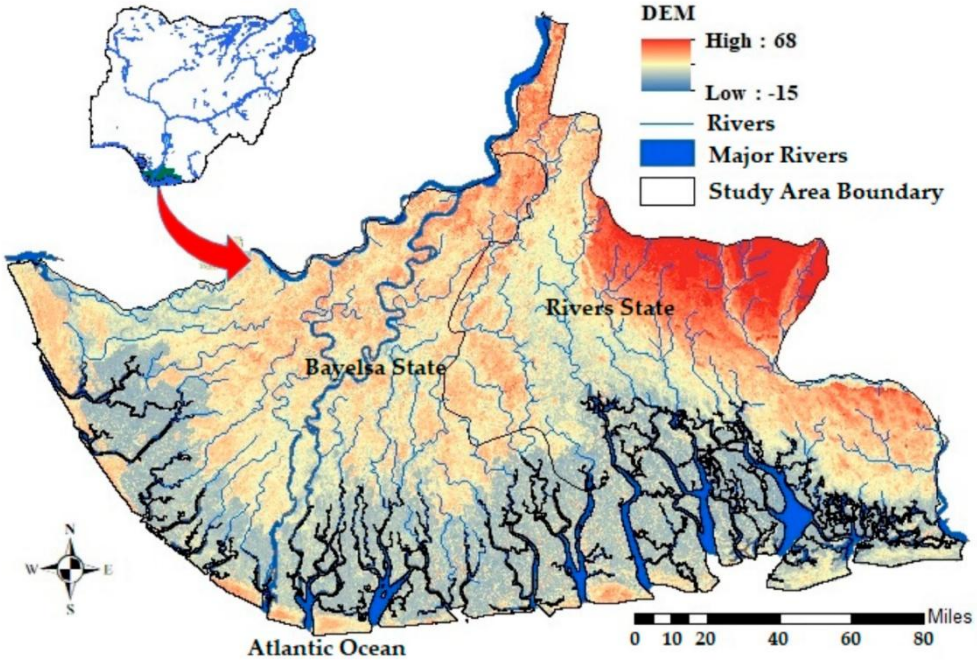
QGIS Map: South-South Nigeria Climate-Policy Status and Elevation

Figure 1 — Administrative and policy status



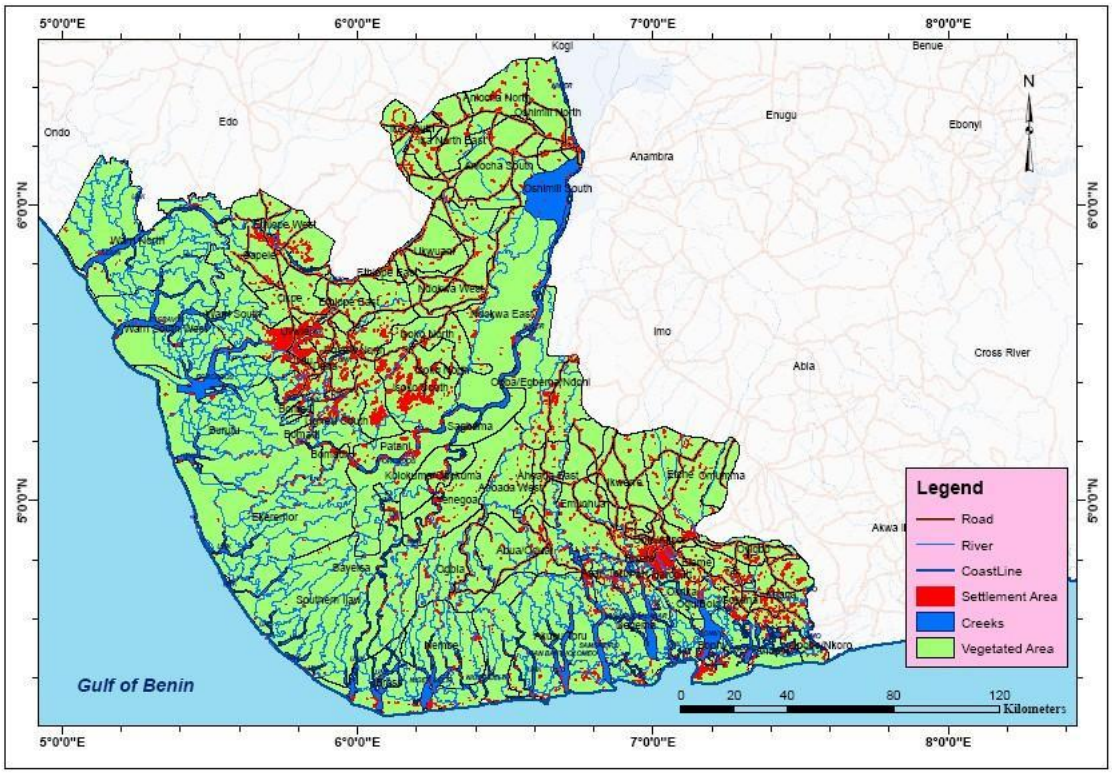
Six state boundaries, state capitals, climate-policy instruments, climate action plans, legislation and evidence gaps.
Source: Researcher's Field work,2026

Figure 2 — Elevation and coastal terrain



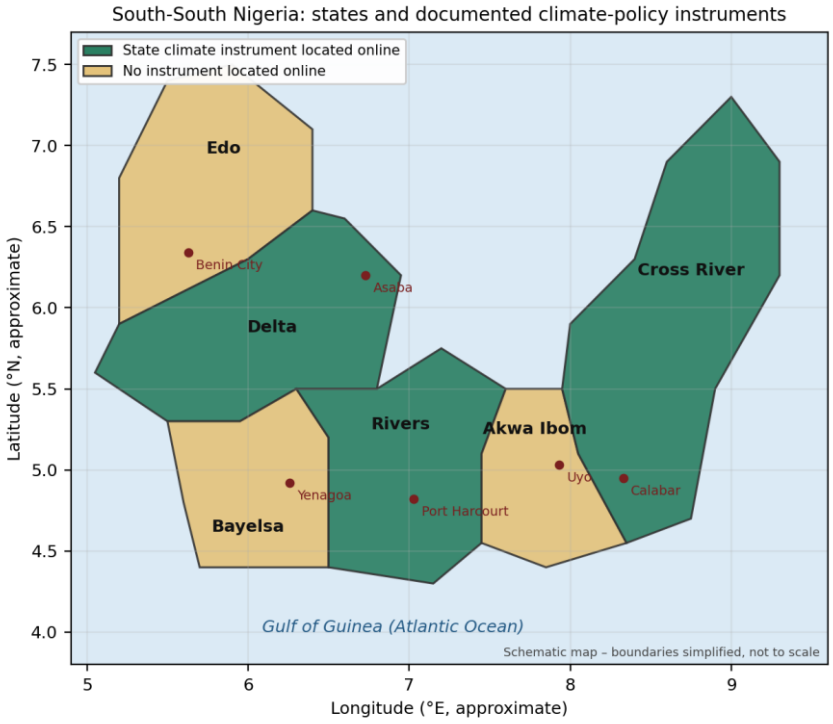
DEM-derived elevation in metres, low-lying coastal and riverine areas, elevation contours and terrain gradients.
Source: Researcher's Field work,2026

Figure 3 — Climate-policy and elevation overlay



Policy coverage overlaid with terrain elevation to support climate adaptation, flood-risk screening and investment planning
Source: Researcher's Field work,2026

Figure 4. South-South Nigeria and the documented status of state climate-policy instruments



Note. Schematic map with simplified boundaries; not drawn to scale. Shading reflects the desktop mapping of subnational instruments reported in The Guardian (Nigeria) (n.d.) and the sources cited in Section 6; it indicates whether an instrument could be located online, not its quality or implementation.

3.2 Review design

The study is a qualitative policy review based on structured documentary analysis. Documents were selected purposively according to three criteria: they are formal federal or state climate-relevant instruments or authoritative summaries of them; they are in force or were in force during the period 2012–2025; and they bear directly on one or more SDG 13 targets. Primary documents (the NDCs, the National Climate Change Policy, the post-disaster needs assessment) were consulted wherever accessible; where the full text of a state or federal instrument could not be retrieved, authoritative secondary summaries from legal and policy databases were used and are identified as such.

Each instrument was read against the four SDG 13 targets that are applicable to Nigeria (13.1, 13.2, 13.3 and 13.a). Target 13.b, which concerns capacity-building in least developed countries and small island developing states, was excluded because it does not apply to Nigeria. Coverage was then summarised on a four-point ordinal scale (none, limited, moderate, strong) according to whether the instrument sets specific measures, assigns institutional responsibility and identifies resources for the target concerned. This appraisal is interpretive. It reflects the author's judgement, it has not been double-coded, and it should be read as indicative rather than as a measurement.

3.3 Limitations of the approach

Three limitations should be stated at the outset. First, the review covers instruments rather than outcomes; it does not measure whether policies have reduced emissions or vulnerability on the ground. Second, subnational documents are often unpublished or difficult to find, so a finding that an instrument could not be located is not proof that none exists. Third, the review relies on published documents and does not include interviews with officials or communities, which would be needed to understand implementation as it is actually experienced.

IV. The Climate Risk Context of South-South Nigeria

Table 1 summarises the principal climate-related pressures documented for the zone and the evidence base used here. The list is not exhaustive, and the distribution of hazards varies by state, but it shows how closely climate risk is tied to the political economy of oil and land.

Table 1. Principal climate-related pressures documented for South-South Nigeria

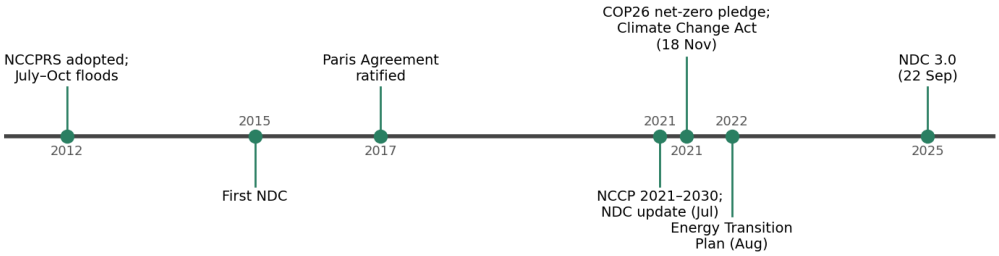
Pressure	Evidence summarised	Source
Coastal and riverine flooding	About 42.6% of the Niger Delta assessed as highly vulnerable to flooding under sea-level-rise conditions; low slope, low elevation and high wave energy are leading drivers.	Musa et al. (2014)
2012 national floods	Heavy rains between July and October 2012, combined with dam releases, flooded settlements along the Niger and Benue systems; reported losses close to US$17 billion across 12 states.	Federal Government of Nigeria (2013); GFDRR (n.d.)
Gas flaring	Upstream flaring linked to greenhouse gases, volatile organic compounds, particulate matter and acid rain, with health, housing and livelihood effects on host communities.	Uchegbulam et al. (2022)
Forest loss	Cross River State holds more than half of Nigeria's remaining tropical high forest and was selected as the national REDD+ pilot.	UN-REDD Programme (n.d.)
Flood and erosion pressure	Akwa Ibom officials have described the state as under pressure from flood and erosion and have set up a technical committee on climate change.	Vanguard (2020)
Oil spills and climate exposure	Bayelsa's governor has described the state as at the epicentre of climate change impacts in Nigeria and cited a major oil spill in Nembe.	Gazette Nigeria (2022)

Note. Entries summarise the cited sources and, in the last two rows, official statements rather than independent measurements.

V. The National Policy Architecture Relevant to SDG 13

Nigeria's climate framework has been built in layers, and the pace picked up sharply around 2021 (Figure 2). Early documents such as the Nigeria Climate Change Policy Response and Strategy of 2012 followed Kyoto-era commitments. After ratification of the Paris Agreement in 2017, the policy base was revised, culminating in the 2021 sequence of the National Climate Change Policy, the updated NDC and the Climate Change Act, with the Energy Transition Plan following in 2022 and NDC 3.0 in 2025.

Figure 2. Timeline of Nigeria's national climate-policy instruments, 2012–2025



Note. Dates compiled from Climate Change Laws of the World (2021), Federal Government of Nigeria (2021a, 2021b), Climate Action Tracker (2023) and Federal Republic of Nigeria (2025).

5.1 Climate Change Act 2021

The Climate Change Act was signed into law on 18 November 2021 and sets an overarching objective of net-zero emissions between 2050 and 2070 (Climate Change Laws of the World, 2021). It creates the National Council on Climate Change, requires a National Climate Change Action Plan and a five-year carbon budget, and establishes a Climate Change Fund. Private entities with fifty or more employees must adopt measures consistent with annual reduction targets and designate a climate change officer for reporting. For SDG 13 the significance is mainly legal: the Act converts climate action from a policy aspiration into a statutory duty, which is exactly what target 13.2 is about. Commentators have nonetheless noted a possible duplication between the new Council and the Department of Climate Change in the Federal Ministry of Environment, which has driven the national response until now (Financial Nigeria, 2022).

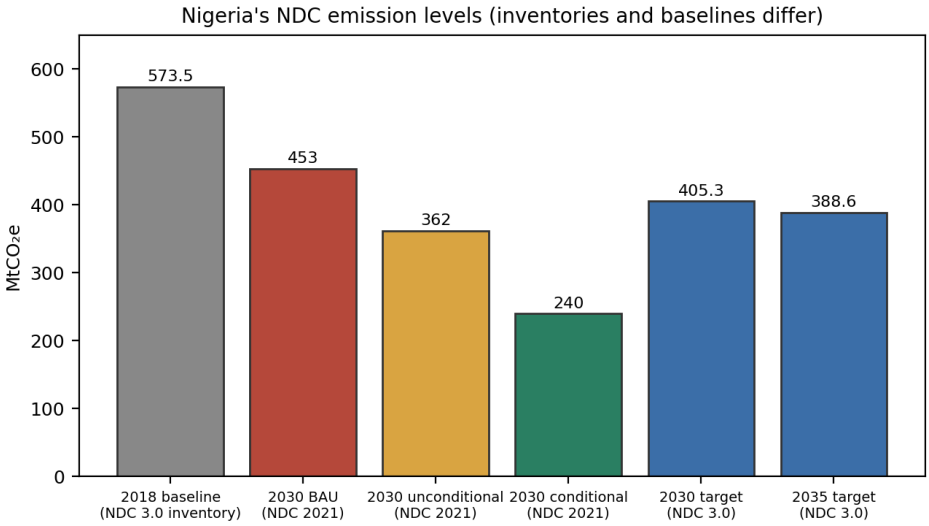
5.2 National Climate Change Policy 2021–2030

Approved in June 2021, the revised National Climate Change Policy and its associated programmes set out mitigation and adaptation measures, enabling conditions and means of implementation for the decade to 2030 (Federal Government of Nigeria, 2021b; Climate Action Tracker, 2023). It is the main vehicle for linking sectoral planning to climate objectives and the closest national document to an adaptation framework.

5.3 Nationally Determined Contributions

The July 2021 NDC update kept the unconditional target of 20% below business-as-usual (BAU) by 2030 and raised the conditional target from 45% to 47%, with a recalculated 2030 BAU of 453 $MtCO_2e$, roughly half the figure in the first NDC (Federal Government of Nigeria, 2021a; Climate Action Tracker, 2021). Full implementation of the conditional target was costed at about US$177 billion for 2021–2030 (Climate Action Tracker, 2021). In September 2025 Nigeria submitted NDC 3.0, which changes the metric from a BAU-relative target to absolute reductions of 168.2 $MtCO_2e$ in 2030 (29%) and 184.9 $MtCO_2e$ in 2035 (32%) against a 2018 baseline of 573.5 $MtCO_2e$ (Enerdata, 2025; Federal Republic of Nigeria, 2025). The plan estimates a financing need of US$337 billion for 2026–2035 (Redkar-Palepu, 2025). Figure 3 sets these targets side by side, and Table 2 summarises the key instruments.

Figure 3. Emission levels implied by Nigeria's NDC targets ($MtCO_2e$)



Note. 2018 baseline, 2021 BAU and targets from Enerdata (2025) and Federal Government of Nigeria (2021a). NDC 3.0 levels are derived by subtracting the stated absolute reductions (168.2 and 184.9 $MtCO_2e$) from the 573.5 $MtCO_2e$ baseline. NDC 2021 (BAU-relative) and NDC 3.0 (absolute) use different baselines and inventory boundaries, so bars are indicative and not strictly comparable.

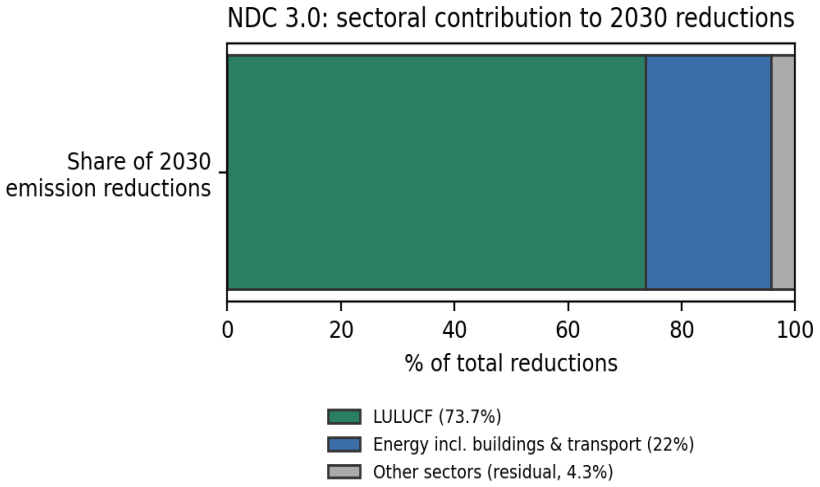
Table 2. Key national instruments relevant to SDG 13

Instrument	Year	Core provisions relevant to SDG 13	Principal source
Climate Change Act	2021	Net-zero objective (2050–2070); National Council on Climate Change; Climate Change Fund; carbon budget; duties on larger private entities	Climate Change Laws of the World (2021)
National Climate Change Policy and Programmes 2021–2030	2021	Mitigation and adaptation measures; enabling conditions; means of implementation	Federal Government of Nigeria (2021b)
NDC update	2021	20% unconditional and 47% conditional reduction below BAU by 2030; costed at about US$177 billion	Federal Government of Nigeria (2021a); CAT (2021)
Energy Transition Plan	2022	Pathway toward the 2060 net-zero ambition	Climate Action Tracker (2023)
NDC 3.0	2025	Absolute reductions of 29% (2030) and 32% (2035) vs 2018; flood management across 12 river basins; US$337 billion need	Federal Republic of Nigeria (2025); Redkar-Palepu (2025)

Note. CAT = Climate Action Tracker.

A notable feature of NDC 3.0 is its sectoral weighting. Land use, land-use change and forestry (LULUCF) is expected to deliver 73.7% of 2030 reductions, primarily through reduced deforestation and lower fuelwood use, while energy (including buildings and transport) contributes about 22% (Enerdata, 2025). Figure 4 illustrates the split. For the South-South zone this matters because the forest component maps onto Cross River far more clearly than the oil-and-gas emissions concentrated in the delta states.

Figure 4. Sectoral contribution to 2030 emission reductions under NDC 3.0



Note. LULUCF and energy shares from Enerdata (2025); the 4.3% residual is calculated here and should not be read as a reported figure.

VI. State-Level Instruments in South-South Nigeria

A desktop mapping of subnational climate instruments, reported by The Guardian (Nigeria) (n.d.), found that only seven Nigerian states had a climate policy document that could be located online, of which three are in the South-South: Cross River, Delta and Rivers. Rivers was reported to have upgraded its policy to a climate change law. Table 3 combines that mapping with other documented state actions.

Table 3. Documented state-level climate action in South-South Nigeria

State	Documented action	Instrument located online?	Source
Akwa Ibom	Technical Committee on Climate Change inaugurated in 2020 to develop a strategic framework aligned with the NDC; stakeholders have since called for a state climate policy	No	Vanguard (2020); The Guardian (Nigeria) (n.d.)
Bayelsa	Governor's public statements on climate exposure and the energy transition following COP26; no state policy document located	No	Gazette Nigeria (2022); The Guardian (Nigeria) (n.d.)
Cross River	National REDD+ pilot; state REDD+ strategy; State Council on Climate Change and Green Economy Commission established under state law	Yes	UN-REDD Programme (n.d.); The Guardian (Nigeria) (n.d.)
Delta	State climate change policy produced by the Ministry of Environment (Climate Change Department)	Yes	Delta State Government (2013)
Edo	No dedicated state climate instrument located in the sources consulted	No	The Guardian (Nigeria) (n.d.)
Rivers	Climate policy reported as upgraded to a climate change law	Yes	The Guardian (Nigeria) (n.d.)

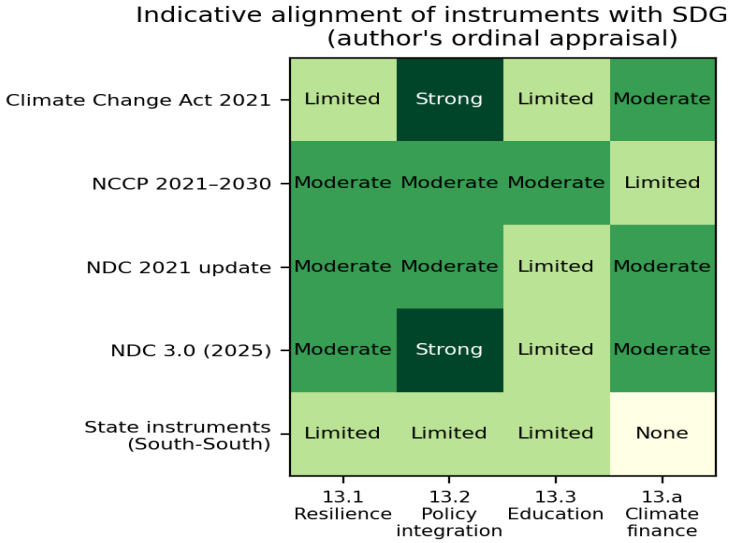
Note. 'Located online' reflects the cited desktop mapping and this review's searches. Absence of a document does not prove that no instrument exists.

Two patterns stand out. First, the states with the most developed instruments are not the ones with the highest climate exposure by any obvious measure; Cross River's strength comes from the external stimulus of REDD+ rather than from flood or coastal risk, and Delta's policy dates from 2013, well before the 2021 national reset. Second, even where documents exist, evidence on budgets, staffing and implementation is thin. The 2011 NEMA workshop's call for state climate offices and emergency agencies (NEMA, 2011) remains a useful benchmark, and the lack of dedicated instruments in several delta states suggests that it has not been fully met.

7. Alignment with SDG 13 Targets

Figure 5 and Table 4 summarise the appraisal of instruments against the four applicable targets. The scores are interpretive and are offered to structure discussion, not as a quantitative index.

Figure 5. Indicative alignment of national and state instruments with SDG 13 targets



Note. Ordinal appraisal by the author (none, limited, moderate, strong); not independently coded. Interpret as a structured judgement, not a measurement.

Table 4. Summary of findings by SDG 13 target

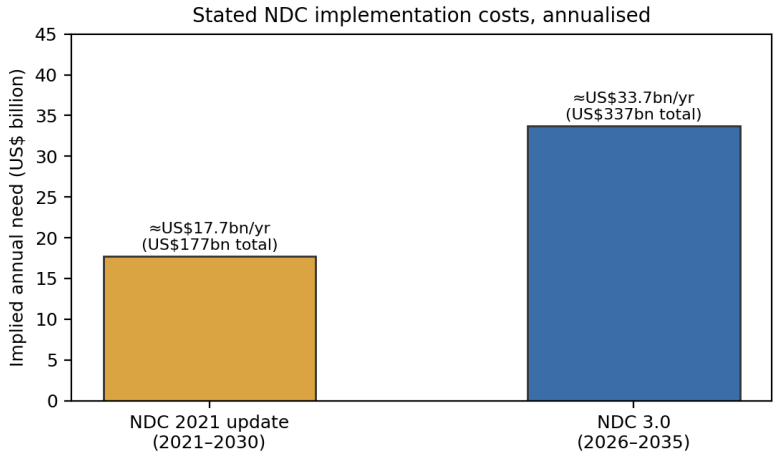
Target	Main national strengths	Main gaps for South-South Nigeria
13.1 Resilience and adaptive capacity	Flood management in 12 river basins and climate-resilient agriculture named in NDC 3.0; adaptation measures in the National Climate Change Policy	No documented zone-specific adaptation plan for the deltaic coast; state adaptation capacity weakly evidenced; flood response still largely reactive after 2012
13.2 Policy integration	Statutory duty under the Climate Change Act; carbon budget and Action Plan; NDC 3.0 anchored in the Act	Overlapping federal mandates; limited domestication in states; oil-and-gas emissions underweighted in mitigation accounting relative to LULUCF
13.3 Education and capacity	Capacity building acknowledged in NDC and policy documents	Little region-specific evidence of climate education, local early-warning literacy or institutional training in delta states
13.a Climate finance	Climate Change Fund; costed NDCs (about US$177 billion, then US$337 billion)	Stated needs exceed identifiable domestic allocations; no clear mechanism for routing finance to delta states and communities

Note. Targets follow United Nations (2015). Findings are drawn from the instruments cited in Sections 5 and 6.

VII. Financing the Agenda

Both NDC cycles carry large price tags. Annualised, the 2021 NDC update implied roughly US$17.7 billion per year over 2021–2030, while NDC 3.0 implies about US$33.7 billion per year over 2026–2035 (Figure 6). The near doubling of the annual need reflects wider scope and higher ambition, but it also raises the question of who pays. The Climate Change Act envisages a Climate Change Fund drawing on appropriations, international finance, carbon tax and emissions trading revenues, and penalties (Financial Nigeria, 2022). Climate Action Tracker (2023) records that the Act requires a carbon tax and carbon trading framework, with the National Council on Climate Change having announced plans for the former. How much of this will reach the South-South states, and through which channel, is not yet specified in the documents reviewed.

Figure 6. Implied annual cost of NDC implementation



Note. Totals from Climate Action Tracker (2021) and Redkar-Palepu (2025); annual figures are simple averages calculated here over ten years and do not represent planned disbursement schedules.

VIII. Discussion

9.1 A fast-moving national framework with a thin regional layer

The most encouraging finding is how quickly Nigeria has built a legal and policy framework since 2021. For target 13.2 the Climate Change Act is a real structural advance, and NDC 3.0's shift to absolute targets gives clearer accountability than the earlier BAU-relative formulation. The weakness lies one level down. National documents speak to the country as a whole, whereas the people most exposed to rising water and polluted air live in a few identifiable places. Without state and local instruments that translate national targets into drainage, relocation, coastal protection and early-warning programmes, SDG 13 will be achieved on paper in Abuja and missed in the delta.

9.2 Mitigation weighting and the oil-and-gas question

NDC 3.0 relies on land-use accounting for almost three-quarters of 2030 reductions (Enerdata, 2025). This has a rationale, since forest and fuelwood measures can be cost-effective, but it also means the emissions most directly tied to South-South oil production are not carrying the weight one might expect. The literature on flaring in the Niger Delta emphasises both its climate effects and its harm to local people (Uchegbulam et al., 2022). A policy mix that delivers headline reductions mostly through forests risks leaving delta communities facing the same flares and spills while the national figures improve. A credible South-South strategy would pair forest-carbon programmes in Cross River with explicit, monitored flaring and methane commitments in the oil-producing states, and would make the local air-quality and health co-benefits visible.

9.3 Adaptation is the missing piece

Compared with mitigation, adaptation is under-specified for the region. The 2012 floods demonstrated that the costs of poor preparedness are measured in billions of dollars and millions of displaced people (Federal Government of Nigeria, 2013; GFDRR, n.d.), and the vulnerability assessment of Musa et al. (2014) shows how large the exposed share of the delta is. Yet no zone-specific adaptation framework for the deltaic coast was found among the instruments reviewed. NDC 3.0's commitment to flood management across twelve river basins (Redkar-Palepu, 2025) is welcome, but its translation into state budgets and community-level measures is the test.

9.4 Institutional overlap and domestication

Two institutional problems recur. The first is federal overlap between the Department of Climate Change and the new National Council on Climate Change (Financial Nigeria, 2022). The second is the persistent gap between national policy and state action, first flagged in the South-South context in 2011 (NEMA, 2011). Both are fixable, but neither is solved by new documents alone; they need clear mandates, predictable funding and routine reporting.

IX. Policy Recommendations

Drawing on the findings, six priorities are proposed for federal, state and development-partner actors.

1. **Adopt a South-South coastal and deltaic adaptation framework.** Develop a zone-level plan, co-owned by the six states and the National Council on Climate Change, that prioritises flood-prone and subsiding areas identified in vulnerability assessments and links to the flood-management commitments in NDC 3.0.
2. **Require and support state climate instruments.** Encourage every South-South state to adopt and publish a climate policy or law with a named lead agency, a budget line and annual reporting, building on the examples of Cross River, Delta and Rivers and following the 2011 recommendation for dedicated state offices (NEMA, 2011).
3. **Clarify federal mandates.** Publish a short operating protocol that divides responsibilities between the Council and the Department of Climate Change, to reduce duplication and give states a single point of contact.
4. **Rebalance mitigation attention toward oil-and-gas sources.** Set measurable, publicly reported flaring and fugitive-emission milestones for the producing states, alongside forest measures, and report local air-quality indicators.
5. **Route climate finance to the places most exposed.** Define a transparent mechanism, for example a window within the Climate Change Fund, for subnational adaptation projects in high-vulnerability states, with community participation requirements.
6. **Invest in climate literacy and early warning.** Fund local-language climate education, community early-warning systems and training for state and local officials to address target 13.3.

X. Limitations and Future Research

This review is limited by its reliance on documents. It does not evaluate outcomes, it could not retrieve every subnational instrument, and its target-alignment scores are the author's interpretive judgement. Some figures, notably the annualised costs and derived emission levels, are simple calculations from published totals and are labelled as such. Future work should combine documentary analysis with key-informant interviews in the six state governments, trace actual climate budget lines, and test the appraisal framework with independent coders. Household-level studies of adaptation in flood-prone delta communities would also help show whether policy is reaching the people it is meant to protect.

XI. Conclusion

Nigeria has moved from a scattered climate policy base to a statutory and strategic framework in a few years, and on target 13.2 the progress is real. For South-South Nigeria, however, SDG 13 will be decided by what happens in the flood plains, creeks, forests and flare-affected towns of six states, and the documentary record shows that this subnational layer is the weakest link. The region needs an explicit adaptation framework, stronger and better-funded state instruments, clearer federal mandates, a mitigation mix that addresses oil-and-gas sources, and a finance route that reaches exposed communities. These are practical steps rather than distant ideals, and they would turn a promising national architecture into measurable progress where the need is greatest.

References

[1]. Climate Action Tracker. (2021). Climate target update tracker: Nigeria. https://climateactiontracker.org/climate-target-update-tracker/nigeria/
[2]. Climate Action Tracker. (2023, July 13). Nigeria: Policies and action. https://climateactiontracker.org/countries/nigeria/2023-07-13/policies-action/
[3]. Climate Change Laws of the World. (2021). Nigeria's Climate Change Act [Policy summary]. Grantham Research Institute on Climate Change and the Environment. https://www.climate-laws.org/geographies/nigeria/laws/nigeria-s-climate-change-act
[4]. Delta State Government. (2013). Delta State climate change policy. Delta State Ministry of Environment (Climate Change Department).
[5]. Enerdata. (2025). Nigeria's updated NDC targets 32% GHG emissions cut by 2035 compared to 2018. https://www.enerdata.net/publications/daily-energy-news/nigerias-updated-ndc-targets-32-ghg-emissions-cut-2035-compared-2018.html
[6]. Federal Government of Nigeria. (2013). Nigeria: Post-disaster needs assessment 2012 floods. Global Facility for Disaster Reduction and Recovery. https://www.gfdrr.org/sites/default/files/publication/pda-2012-nigeria.pdf
[7]. Federal Government of Nigeria. (2021a). Nigeria's first nationally determined contribution: 2021 update. https://climatechange.gov.ng/wp-content/uploads/2021/08/NDC_File-Amended-_11222.pdf
[8]. Federal Government of Nigeria. (2021b). National climate change policy for Nigeria 2021–2030. Department of Climate Change. https://climatechange.gov.ng/wp-content/uploads/2021/08/NCCP_NIGERIA_REVISED_2-JUNE-2021.pdf
[9]. Federal Republic of Nigeria. (2025). Nigeria's third nationally determined contribution (NDC 3.0). United Nations Framework Convention on Climate Change. https://unfccc.int/sites/default/files/2025-09/Nigeria%20NDC%203.0%20-%20Transimission%20Version%202.pdf
[10]. Financial Nigeria. (2022). A review of Nigeria's Climate Change Act, 2021. https://financialnigeria.com/a-review-of-nigeria-s-climate-change-act-2021-feature-459.html
[11]. Gazette Nigeria. (2022, January 14). Bayelsa most affected state in Nigeria by climate change: Gov. Diri. https://gazettengr.com/bayelsa-most-affected-state-in-nigeria-by-climate-change-gov-diri/

[12]. Global Facility for Disaster Reduction and Recovery. (n.d.). Assessing post-disaster needs in Nigeria [Stories of impact]. World Bank. https://www.gfdrr.org/sites/default/files/Nigeria%20SOI.pdf
[13]. Intergovernmental Panel on Climate Change. (2022). Climate change 2022: Impacts, adaptation and vulnerability. Contribution of Working Group II to the Sixth Assessment Report. Cambridge University Press. https://doi.org/10.1017/9781009325844
[14]. Musa, Z. N., Popescu, I., & Mynett, A. (2014). The Niger Delta's vulnerability to river floods due to sea level rise. Natural Hazards and Earth System Sciences, 14(12), 3317–3329. https://doi.org/10.5194/nhess-14-3317-2014
[15]. National Emergency Management Agency. (2011). Communiqué: South-South regional workshop on climate change adaptation and disaster risk management in Nigeria, Asaba, Delta State, 19–21 July 2011. PreventionWeb. https://preventionweb.net/quick/34639
[16]. Redkar-Palepu, V. (2025, October 15). Nigeria unveils its NDC climate action 3.0 at UNGA: The real work begins. United Nations Development Programme, Nigeria. https://www.undp.org/nigeria/blog/nigeria-unveils-its-ndc-climate-action-30-unga-real-work-begins
[17]. The Guardian (Nigeria). (n.d.). Eight states allocate funds for climate change, 24 others without policy. https://guardian.ng/property/eight-states-allocate-funds-for-climate-change-24-others-without-policy/
[18]. Uchegbulam, I., Aliyuda, A., & John, Y. M. (2022). Sustainable environment: A comprehensive evaluation of the effects of gas flaring in the Niger Delta, Nigeria. Journal of Applied Sciences and Environmental Management, 26(5). https://doi.org/10.4314/jasem.v26i5.21
[19]. UN-REDD Programme. (n.d.). Cross River State REDD+ strategy. https://un-redd.org/sites/default/files/2021-10/CRS%20REDD%2B%20Strategy%20FINAL%202%20MB%20%28722175%29.pdf
[20]. United Nations. (2015). Transforming our world: The 2030 Agenda for Sustainable Development (A/RES/70/1). https://sdgs.un.org/2030agenda
[21]. Vanguard. (2020, February). Akwa Ibom moves to mitigate climate change, inaugurates technical c'ttee. https://www.vanguardngr.com/2020/02/akwa-ibom-moves-to-mitigate-climate-change-inaugurates-technical-cttee/