
**CLIMATE RELATED FINANCIAL LOSSES AND REPORTING CHALLENGES IN
NIGERIA'S OIL AND GAS SECTOR: IMPAIRMENT, PROVISIONS, CONTINGENT
LIABILITIES, AND SUSTAINABILITY DISCLOSURE**

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ABSTRACT

Climate related financial risk is increasingly relevant to oil dependent economies because it can affect asset valuation, future cash flows, impairment testing, provisions, contingent liabilities, and broader corporate reporting quality. In Nigeria, where the oil and gas sector remains central to public revenue and foreign exchange earnings, the growing exposure to physical climate stress and transition pressure has intensified concern about how climate related losses are recognized and disclosed in financial statements. This review examines the relationship between climate risk, financial loss recognition, and disclosure practices in Nigeria's oil and gas industry, with particular attention to impairment, provisions, contingent liabilities, and regulatory readiness. A structured literature search covering 2021 to 2026 was conducted to identify recent studies on climate related reporting, gas flaring, sustainability disclosure, and financial reporting implications in the Nigerian and broader oil and gas context. The reviewed literature indicates that while climate related disclosures in financial reports have increased, the depth, consistency, and decision usefulness of those disclosures remain uneven. Several studies show that firms in the oil and gas sector continue to provide limited sustainability information, with climate change and pollution effects often reported in a superficial or fragmented manner. This weak disclosure environment reduces transparency for investors, regulators, and other stakeholders who need to understand the financial consequences of climate exposure. The review also highlights the materiality of gas flaring as both an environmental and economic burden, with recent evidence showing substantial cumulative emissions and large direct revenue losses, thereby reinforcing the financial significance of climate related harm in the sector. In addition, the broader literature suggests that carbon sustainability reporting is increasingly tied to the transition toward net zero and to corporate accountability in high emitting industries. Overall, the review demonstrates that a major gap persists between the economic reality of climate related losses and the way these losses are reflected in financial reporting practice. Strengthening recognition, measurement, disclosure, and enforcement mechanisms is therefore essential for improving reporting quality, supporting informed decision making, and enhancing regulatory credibility in Nigeria's oil and gas industry.

Keywords: Climate related financial losses; Financial reporting; Oil and gas sector; Nigeria; Impairment; Provisions; Contingent liabilities; Sustainability disclosure; Gas flaring

SECTION 1. INTRODUCTION

Climate related risk is now widely recognized as a financial reporting concern because it can affect asset useful lives, fair values, future cash flows, impairment indicators, and the measurement of provisions and contingent liabilities, particularly in sectors where transition

pressure and physical climate stress operate at the same time (Megeid, 2024). In Nigeria's oil and gas context, recent research shows that climate related disclosures in financial statements have increased, but the quality remains uneven and often inconsistent, making it difficult for users to understand how climate pressure is reflected in the numbers reported by firms (Borghei *et al.*, 2024). This challenge is even more evident in the oil and gas industry, where sustainability disclosure has been found to be very limited, with only a small proportion of firms reporting climate change and pollution effects in a meaningful way despite operating in an environmentally sensitive sector (Nwobu *et al.*, 2021). The issue is urgent in Nigeria because, although the country's climate response is becoming more visible through policy measures such as the Climate Change Act 2021, recent evidence still describes Nigeria as highly exposed due to its large population, coastal vulnerability, infrastructure deficit, and governance constraints, all of which intensify climate and energy transition pressures on the economy (Okafor *et al.*, 2025). Gas flaring further demonstrates the scale of the problem, as it remains a major source of both environmental damage and economic loss in Nigeria, with recent evidence estimating cumulative flaring emissions of 714.62 million tonnes of CO₂e and direct revenue losses of US\$56.75 billion, showing that climate loss in the sector is not theoretical but measurable and financially material (Okwilagwe & Olubusoye, 2025). More broadly, a recent systematic review of carbon sustainability reporting in the oil and gas industry concludes that such reporting is central to the transition toward net zero, reinforcing the need for sector specific disclosure practices that go beyond general sustainability language (Sharaf-Addin, 2024). Despite these developments, the main gap remains the weak alignment between climate related economic reality and the way losses are recognized, measured, and disclosed in practice; accordingly, this review synthesizes evidence on impairment, provisions, contingent liabilities, and disclosure challenges in Nigeria's oil sector, while examining how recognition, measurement, disclosure, and regulatory readiness can be strengthened in a high risk environment. Recent Nigerian evidence also suggests that climate change disclosure is already being associated with firm performance outcomes in quoted oil and gas companies, making stronger and more faithful reporting even more important for investors, regulators, and policy makers (Agbo & Egbunike, 2024).

SECTION 2. METHODS AND REVIEW FRAMING

2.1 Search Strategy of the Review

The review was planned around a 2021 to 2026 publication window, because that period captures the shift from broad sustainability reporting debates to the newer ISSB era of climate linked financial disclosure. Searches were organised across academic databases and publisher platforms, with the keywords combined in different ways to capture climate risk, impairment, provisions, contingent liabilities, carbon accounting, sustainability reporting quality, assurance, and Nigeria specific reporting reform. The literature search was complemented by recent peer reviewed studies on Nigerian reporting practice, which show that sustainability disclosure in the country is not driven by a single factor, but by a cluster of governance and firm characteristics that are especially relevant in listed firms and oil and gas companies (Erin *et al.*, 2021; Ikpor *et al.*, 2022; Elaigwu *et al.*, 2024).

Table 1 lists the databases, official sources, and document types used in the review. It presents the range of sources that shaped the evidence base.

Table 1. Search databases, official sources, and document types consulted

Search source family	What was consulted	Purpose in the review	Citation(s)
Academic databases and publisher platforms	Scopus, Web of Science, Google Scholar, ScienceDirect, Emerald, Wiley, Taylor & Francis, MDPI, and journal archive pages	To retrieve peer reviewed studies on climate risk, sustainability reporting, and accounting consequences	(Erin <i>et al.</i> , 2021)
Nigeria focused and sector focused literature	Nigerian listed firms, oil and gas companies, and extractive sector studies	To keep the review anchored in the Nigerian reporting environment	(Ikpor <i>et al.</i> , 2022)
Document types	Empirical journal articles, conceptual reviews, systematic reviews, and recent methodological papers	To combine evidence on practice, theory, and implementation gaps	(Elaigwu <i>et al.</i> , 2024)

This table presents the sources reviewed for the study, including academic databases, publisher platforms, Nigerian focused literature, and document types.

Table 2 presents the main search terms and Boolean combinations used to collect the literature. It captures how the review search was structured and organized.

Table 2. Core search terms and Boolean combinations used in the review

Keyword cluster	Example Boolean combination	Why it was used	Citation(s)
Climate risk cluster	"climate risk" OR "transition risk" OR "physical risk"	To capture climate pressure as a financial reporting issue	(Erin <i>et al.</i> , 2021)
Accounting cluster	"impairment" OR "provision" OR "contingent liability" OR "decommissioning"	To locate studies on recognition and measurement effects	(Ikpor <i>et al.</i> , 2022)
Disclosure cluster	"sustainability reporting" OR "climate disclosure" OR "assurance" OR "ESG reporting"	To capture note disclosure, narrative reporting, and assurance work	(Elaigwu <i>et al.</i> , 2024)
Nigeria and sector cluster	Nigeria AND "oil and gas" OR "extractive sector" OR "listed firms"	To keep the review sector specific and context specific	(Erin <i>et al.</i> , 2021; Ikpor <i>et al.</i> , 2022; Elaigwu <i>et al.</i> , 2024)

This table presents the keyword clusters and Boolean combinations used to locate the literature.

2.2 Regulatory and Conceptual Basis for Climate Related Loss Accounting

The conceptual basis of this review rests on a simple but important idea: climate risk is not only an operational challenge, it is also a measurement challenge. Recent accounting literature treats IFRS S1 and IFRS S2 as the bridge between sustainability risk and general purpose financial reporting, while Nigerian scholarship on the 2026 roadmap frames the move as a transition from informal CSR style narration toward clearer, more decision useful reporting with defined timelines and readiness expectations. In that sense, the standards are not merely disclosure templates. They are part of a broader shift in how climate exposure is translated into financial statements and sustainability reports (Adebayo & Ackers, 2025; Castillo Delgadillo & Díaz-Peña, 2025; Fan *et al.*, 2026).

Table 3 explains how IFRS S1, IFRS S2, and Nigeria's sustainability roadmap relate to climate related accounting issues. It connects the standards with disclosure and measurement questions.

Table 3. Mapping of accounting standards to climate related loss, impairment, provision, and disclosure issues

Accounting standard or framework	Climate related accounting question	Relevance to oil and gas reporting	Citation(s)
IFRS S1	What sustainability information is material to capital providers?	Helps entities explain climate risk, strategy, and resilience in general purpose reports	(Castillo Delgadillo & Díaz-Peña, 2025)
IFRS S2	How should climate risks and opportunities be governed, measured, and disclosed?	Requires structured climate disclosure on governance, strategy, risk management, metrics, and targets	(Adebayo & Ackers, 2025)
Nigeria's 2026 sustainability roadmap context	How will global sustainability standards be operationalised locally?	Shows how Nigerian reporting is moving toward more formalised sustainability disclosure	(Fan <i>et al.</i> , 2026)

This table shows the key accounting standards and frameworks that shape climate related reporting and loss recognition. Abbreviations: IFRS = International Financial Reporting Standards; S1 = General Requirements for Disclosure of Sustainability related Financial Information; S2 = Climate related Disclosures.

Figure 1 illustrates how climate risk exposure progresses through physical and transition shocks into pressure on cash flows, asset lives, and obligations. It then shows how these effects inform

impairment testing, provisioning, contingent liability assessment, and ultimately financial statement notes and sustainability disclosure.

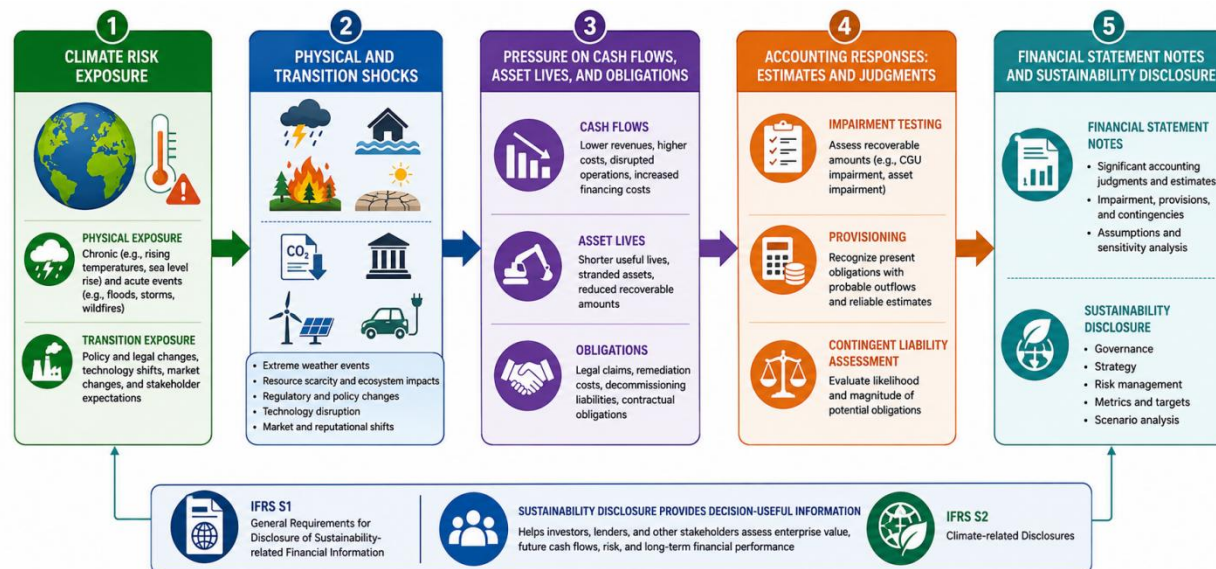


Figure 1. Conceptual pathway linking climate risk exposure to accounting judgments and sustainability disclosure under IFRS S1 and IFRS S2 (Adebayo & Ackers, 2025; Castillo Delgadillo & Díaz-Peña, 2025; Fan *et al.*, 2026).

The diagram summarizes the decision-useful reporting pathway by which climate-related events are translated into accounting estimates, judgments, and disclosure requirements. Abbreviations: IFRS = International Financial Reporting Standards; S1 = General Requirements for Disclosure of Sustainability-related Financial Information; S2 = Climate-related Disclosures; CGU = Cash-Generating Unit; CO₂ = Carbon Dioxide.

2.3 Climate Related Loss Channels in Nigeria's Oil and Gas Value Chain

Climate pressure creates losses in oil and gas through more than one route at the same time. The most visible route is physical damage, such as floods, erosion, storm disruption, heat stress, or infrastructure degradation. The second route is transition pressure, where carbon intensive assets face lower demand, tighter regulation, or earlier retirement. The third is reputational and market pressure, where investors and lenders price climate exposure into valuation and financing decisions. Recent studies show that climate risk and opportunity exposure have measurable effects on firm value, that transition risk can be visible in both explicit and implicit board level exposure, and that carbon accounting is increasingly used to translate net zero goals into operating decisions rather than leaving them as distant policy slogans (Li *et al.*, 2024; Mazzarano *et al.*, 2024; Carrión Moneo *et al.*, 2025).

Table 4 Outlines the main climate related loss channels across upstream, midstream, and downstream operations. It highlights the different ways climate pressure affects the oil and gas value chain.

Table 4. Climate related loss channels across upstream, midstream, and downstream operations

Value chain segment	Main climate related loss channel	Accounting implication	Citation(s)
Upstream	Physical asset damage, production interruption, reserve uncertainty, and transition risk	Lower recoverable amounts, shorter useful lives, and higher impairment risk	(Li <i>et al.</i> , 2024)
Midstream	Pipeline disruption, emissions compliance pressure, logistics delays, and asset obsolescence	Higher estimation uncertainty and stronger sensitivity to climate scenarios	(Mazzarano <i>et al.</i> , 2024)
Downstream	Demand shifts, pricing pressure, carbon cost pass through limits, and reputation effects	Margin compression, valuation stress, and stronger disclosure pressure	(Carrión Moneo <i>et al.</i> , 2025)

This table outlines the main climate related loss channels affecting upstream, midstream, and downstream operations.

2.4 Impairment and Provisioning in High Risk Extractive Operations

Climate stress makes impairment and provisioning more judgement intensive because the accounting estimates themselves become less stable. Recoverable amount calculations depend on future cash flows, discount rates, timing assumptions, and asset useful lives, all of which can shift under climate pressure. Recent research on climate related matters in financial instrument reporting shows that climate issues already affect how information is presented in annual reports, while extractive sector work on IFRS S2 shows that governance, strategy, risk management, and metrics and targets have to be treated as connected reporting elements rather than isolated checklist items. Transition plan research also shows that the world is converging on a common structure for climate planning, even if the details still vary widely. Taken together, these studies suggest that the more carbon intensive the operation, the greater the need for conservative estimates, clear judgement, and sensitivity analysis (Brouwer & ter Hoeven, 2024; Nicolajsen *et al.*, 2025; Legaspi, 2026).

Table 5 Maps how climate stress affects impairment, provisions, and contingent liabilities. It compares the main accounting effects that arise under climate pressure.

Table 5. Accounting treatment matrix for impairment, provisions, and contingent liabilities under climate stress

Accounting issue	Recognition test under climate stress	Measurement focus	Disclosure consequence	Citation(s)
Impairment	Whether climate pressure indicates that carrying amount may exceed recoverable amount	Cash flow forecasts, discount rates, and useful lives	More sensitivity analysis and more explanation of assumptions	(Brouwer & ter Hoeven, 2024)
Provisions	Whether a present obligation has emerged from cleanup, remediation, or decommissioning commitments	Best estimate of outflow and timing	More detail on estimation uncertainty and expected settlement timing	(Legaspi, 2026)
Contingent liabilities	Whether the obligation is possible, but not yet sufficiently probable or measurable	Probability, exposure, and outcome range	Stronger note disclosure when recognition is not yet appropriate	(Nicolajsen <i>et al.</i> , 2025)

This table compares the accounting treatment of impairment, provisions, and contingent liabilities under climate stress.

2.5 Disclosure Architecture and Nigeria's Reporting Context

Nigeria's disclosure architecture is now being shaped by three overlapping pressures: global sustainability standard setting, the demand for credible assurance, and the need to improve the quality of local reporting practice. Recent Nigerian scholarship describes sustainability reporting and ESG assurance as an institutional change project, not merely a technical exercise, because implementation depends on regulation, governance, internal capacity, and stakeholder trust. The same literature also shows that governance quality matters in practice: stronger corporate governance, better board processes, and better audit committee oversight tend to be linked with stronger sustainability reporting quality (Oyerogba *et al.*, 2024; Al-Hajaya *et al.*, 2025; Monye-Emina & Umanah, 2026).

In practical terms, the Nigerian context is moving from disclosure as reputation management toward disclosure as evidence based accountability. That shift matters because sustainability reports prepared without clear governance, assurance, or board level ownership can become repetitive, polished, and still uninformative. The emerging Nigerian literature therefore points in the same direction as the broader ISSB literature: disclosure quality improves when firms connect the sustainability report to the financial reporting system, define responsibility clearly, and subject the report to independent checking (Oyerogba *et al.*, 2024; Al-Hajaya *et al.*, 2025; Monye-Emina & Umanah, 2026).

SECTION 3. RESULTS AND DISCUSSION

3.1 Climate Related Financial Loss Evidence in Nigeria's Oil Sector

Recent Nigerian studies suggest that climate related loss in the oil and gas sector is usually felt first through weaker profitability, thinner margins, and lower capital efficiency rather than through a single clearly labeled "climate loss" line in the accounts. In practice, the literature shows that when firms disclose more sustainability information, the effects are quickly reflected in familiar accounting outcomes such as return on assets, return on equity, earnings per share, and return on capital employed. One Nigerian study found that sustainability reporting had a significant impact on financial performance, with environmental, social, and economic sustainability disclosure each showing meaningful links with return on equity and return on assets (Kabir Ibrahim *et al.*, 2021). Another study, however, found that economic and social sustainability reporting had a negative significant effect on return on capital employed, and concluded that the overall effect was negative and insignificant in the sample period (Ogah *et al.*, 2024). A third Nigerian study reported a positive and significant relationship between climate change related disclosure and return on assets, which suggests that firms that communicate climate management more credibly may recover some of the financial pressure created by environmental exposure (Popoola & Onmonya, 2024).

Taken together, these findings imply that climate change, methane leakage, gas flaring, operational disruption, and transition pressure do not always appear as separate accounting items in Nigerian oil and gas reports. Instead, they are often absorbed into broader performance indicators, where they show up as lower operating efficiency, higher compliance costs, weaker capital productivity, or more cautious investor sentiment. The pattern is important because it means the financial effect of climate pressure is real even when the financial statements do not label it explicitly as a climate loss. The literature therefore supports a practical reading of climate related loss: a firm may continue to report profit, yet still suffer hidden value leakage through extra reporting costs, pressure to change operations, and the drag created by environmental criticism or transition uncertainty (Kabir Ibrahim *et al.*, 2021; Ogah *et al.*, 2024; Popoola & Onmonya, 2024).

Table 6 Summarizes the main empirical findings on climate related loss drivers in Nigeria's oil sector. It brings out the evidence on how climate pressure appears in performance outcomes.

Table 6. Empirical evidence on climate related loss drivers in Nigeria's oil sector

Loss driver in the literature	What the studies show	Citation(s)
Broad sustainability reporting burden	Disclosure can improve value creation and risk management, but it also reveals that climate pressure is already being priced into performance measures.	(Kabir Ibrahim <i>et al.</i> , 2021)
Economic and social reporting pressure	Economic and social sustainability reporting was linked with a negative significant effect on return on capital employed in one Nigerian sample.	(Ogah <i>et al.</i> , 2024)
Climate change disclosure	More credible climate change disclosure	(Popoola & Onmonya,

quality was associated with better return on 2024)
assets, suggesting that better reporting
can partially offset loss pressure.

This table summarizes the empirical findings on climate related loss drivers in Nigeria's oil sector.

3.2 Impairment of Oil and Gas Assets under IAS 36

IAS 36 becomes especially relevant in the oil sector because climate related risk can reduce the recoverable amount of assets long before the physical asset reaches the end of its technical life. In a climate pressured market, future cash flows may fall because demand weakens, operating restrictions become tighter, production costs rise, or facilities require expensive modifications to remain compliant. The practical consequence is that oil and gas assets that once looked fully recoverable may become vulnerable to impairment once management updates cash flow forecasts, useful lives, or assumptions about residual value. In the Nigerian context, the environmental disclosure literature already indicates that climate related communication can influence return on assets and earnings based measures, showing that the financial impact of environmental pressure is not abstract but measurable (Agbo & Egbunike, 2024). This is why impairment testing under IAS 36 should not be treated as a routine year end exercise. It is the point at which climate exposure is translated into accounting judgment about whether the carrying amount of an asset is still defensible (Agbo & Egbunike, 2024).

The wider financial reporting literature reinforces the same message. A study of FTSE 100 firms found that climate related risks and opportunities are increasingly appearing in financial statements, but the level of detail varies substantially across firms and across accounting areas (Brouwer & ter Hoeven, 2024). A separate study from Egypt reported that only a small fraction of companies referred to climate related matters in their financial statements, and many did not provide scenario analysis or meaningful commentary on the assumptions behind the numbers (Bellinvia *et al.*, 2025). That finding matters for IAS 36 because the standard depends on the quality of management assumptions. If climate effects are hidden in general language, impairment testing can become too optimistic. The better approach is to make climate effects visible in the assumptions themselves: forecasted production volumes, carbon costs, decommissioning timing, discount rates, and the expected remaining life of the cash generating unit. This is especially important for upstream assets that face transition pressure, because a small change in forecasted cash inflows can materially alter recoverable amount and trigger an impairment loss (Brouwer & ter Hoeven, 2024; Bellinvia *et al.*, 2025).

Table 7 highlights the key impairment indicators and measurement issues under IAS 36 for climate exposed oil assets. It points to the assumptions that can shift impairment outcomes.

Table 7. IAS 36 impairment indicators and measurement issues identified in the reviewed literature

IAS 36 issue	Measurement challenge in a climate exposed oil asset	Citation(s)
Cash flow forecasts	Climate regulation, carbon pricing, and reduced demand can lower expected	(Agbo & Egbunike, 2024; Brouwer & ter Hoeven,

	inflows and make earlier impairment more likely.	2024; Bellinvia <i>et al.</i> , 2025)
Discount rates	Climate uncertainty can affect the risk profile of a cash generating unit, but firms often fail to explain how this enters valuation judgments.	(Brouwer & ter Hoeven, 2024; Bellinvia <i>et al.</i> , 2025)
Reserve assumptions and useful lives	If reserves become harder to monetize or assets are retired earlier, useful life assumptions must be revised downward.	(Bellinvia <i>et al.</i> , 2025)

This table presents the main impairment indicators and measurement issues discussed under IAS 36. Abbreviations: IAS 36 = International Accounting Standard 36; CGU = Cash Generating Unit.

3.3 Provisions, Decommissioning, Remediation, and Climate Linked Obligations

The literature on decommissioning and climate related obligations shows that the most obvious provisions in the oil sector are not always the most visible in practice. The reason is that decommissioning and remediation costs often arise late in the asset life cycle, when management is already trying to protect cash flow, preserve solvency, or manage divestment pressure. A 2024 study on decommissioning liabilities argued that these obligations matter not only for individual firms but also for the broader financial system, because they can become sizable when energy transition accelerates and firms must shut down or clean up stranded infrastructure (Romano *et al.*, 2025). In Nigeria, a legal review of oil and gas decommissioning concluded that the regulatory framework exists but still faces implementation challenges that may hinder effective decommissioning processes (Oruç Erdoğan *et al.*, 2026). This is important for IAS 37 because provisions should not be postponed simply because the liability is operationally difficult to measure. If a present obligation exists and an outflow is probable and measurable, the accounting answer should follow the economics, not the convenience of management (Romano *et al.*, 2025; Oruç Erdoğan *et al.*, 2026).

Climate linked obligations also extend beyond physical cleanup. They include remediation of polluted sites, restoration of degraded land, pipeline and platform removal, waste management, and, in some cases, commitments connected with emissions reduction or offsetting. The Nigerian IFRS S1 and S2 adoption discussion is useful here because it shows that sustainability commitments are no longer treated as loose corporate promises; they are being pushed into a structured reporting environment that expects better governance, clearer timelines, and more disciplined readiness testing (Benhayoun *et al.*, 2025). That shift matters for provisions because once commitments become specific, public, and operationally binding, they may start to resemble constructive obligations rather than aspirational statements. The accounting challenge is to separate ordinary corporate rhetoric from commitments that create a valid expectation and therefore raise recognition questions. In the oil sector, this distinction is especially relevant for site restoration, abandonment, pollution cleanup, and emissions related remediation spending (Benhayoun *et al.*, 2025).

Table 8 sets out the main climate related provision categories and why they are difficult to recognize. It focuses on the recognition challenges linked to climate obligations.

Table 8. Climate related provision categories and their recognition challenges

Provision category	Why recognition becomes difficult	Citation(s)
Decommissioning and asset retirement	Costs arise late, estimates are uncertain, and firms may understate the timing of the cleanup obligation. Environmental damage may be	(Romano <i>et al.</i> , 2025; Oruç Erdoğan <i>et al.</i> , 2026)
Site restoration and remediation	broad, long term, and spread across multiple sites, which complicates measurement.	(Romano <i>et al.</i> , 2025)
Emissions commitments and offsets	Public sustainability statements may create expectations, but recognition depends on whether they create a present obligation in substance.	(Benhayoun <i>et al.</i> , 2025)

This table sets out the major climate related provision categories and the recognition challenges attached to them.

3.4 Disclosure Quality, Comparability, and Compliance Gaps

The recent literature on ISSB adoption shows that the disclosure problem is no longer about whether firms should disclose climate information, but about whether they can do so with enough consistency, comparability, and credibility to be decision useful. A study on implementation readiness in emerging markets found that adoption requires a multi dimensional assessment of preparedness, which includes systems, skills, governance, and data quality rather than simple policy declaration (Fianko *et al.*, 2025). Another study on ISSB adoption in emerging markets found that organizational readiness varies sharply and is shaped by internal barriers such as limited resources, complexity of the reporting task, and uneven technical capacity (Beredugo, 2026). For Nigeria's oil sector, this means that compliance with IFRS S1 and S2 will probably not be uniform in the early years. Some firms may publish polished narratives, while others may struggle to supply the underlying numbers, assumptions, and controls needed for dependable reporting (Fianko *et al.*, 2025; Beredugo, 2026).

The evidence from financial statement studies reinforces that warning. In Egypt, only a small proportion of surveyed firms referred to climate related matters in the financial statements, and many did not provide scenario analysis, operational detail, or meaningful commentary on the assumptions behind climate outcomes (Ogunbode *et al.*, 2026). That pattern is highly relevant to Nigeria because it shows how climate disclosure can become selective, descriptive, and disconnected from the actual accounting numbers. The risk is not only weak disclosure, but uneven disclosure: one company may discuss transition plans in detail while another says almost nothing; one may disclose carbon strategy in the narrative section but leave the impairment note unchanged; another may refer to net zero commitment without explaining how it affects useful life, reserves, or decommissioning estimates. The result is a reporting environment where comparability is poor and users cannot easily compare firms, periods, or assumptions (Ogunbode *et al.*, 2026).

Table 9. Disclosure gaps and recurring weaknesses in climate related reporting

Disclosure gap	Recurring weakness in the literature	Citation(s)
Governance and strategy	Firms often describe climate ambitions but do not connect them clearly to board oversight or financial planning.	(Fianko <i>et al.</i> , 2025; Beredugo, 2026)
Metrics and targets	Emissions and transition metrics are often partial, inconsistent, or difficult to verify across firms.	(Fianko <i>et al.</i> , 2025)
Scenario analysis and sensitivity disclosure	Many firms still avoid meaningful scenario analysis, which weakens the usefulness of climate assumptions.	(Ogunbode <i>et al.</i> , 2026)
Consistency between sustainability and financial reports	Narrative claims are often more advanced than the related accounting estimates in the financial statements.	(Ogunbode <i>et al.</i> , 2026)

This table captures the recurring weaknesses seen in climate related disclosure practices. No abbreviations are used in the table.

Figure 2 shows how climate exposure and transition pressure create uncertainty in cash flows, reserves, asset lives, and cleanup obligations, leading to cautious estimates and weak reporting outcomes. It also illustrates how poor linkage between sustainability narratives and financial statement notes produces boilerplate disclosures, limited comparability, and reduced confidence among investors, auditors, and regulators.

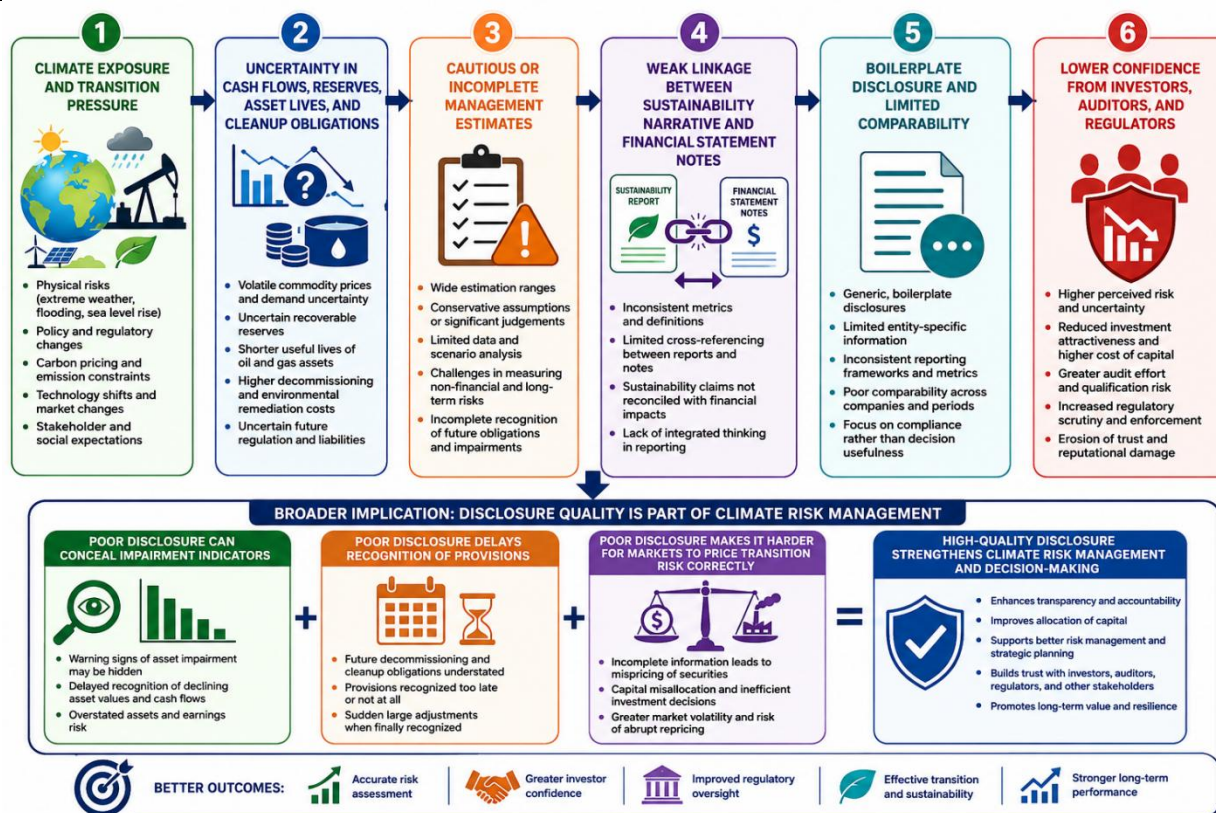


Figure 2. Disclosure gap pathway from climate exposure to weak reporting outcomes in Nigeria's oil sector (Fianko *et al.*, 2025; Beredugo, 2026; Ogunbode *et al.*, 2026).

The diagram explains the disclosure gap pathway and its broader implication that disclosure quality is part of climate risk management, because weak disclosure can conceal impairment indicators and delay recognition of provisions. Abbreviations: No abbreviations are used in the figure; all terms are written in full, including sustainability report, financial statement notes, investors, auditors, and regulators.

3.5 Policy, Governance, and Research Implications

The policy literature suggests that Nigeria has reached a stage where climate accounting can no longer be treated as a voluntary reputational exercise. A review of climate change initiatives in Nigeria found that institutional measures, legal support, and fiscal support are central to resilience, yet research on these areas remains relatively thin compared with agricultural adaptation literature (Okafor *et al.*, 2024). Another review showed that climate change mitigation and adaptation research in Nigeria has expanded rapidly, but that much of the work is still concentrated in a few sectors, with fewer studies addressing the legal and institutional mechanisms needed for actual implementation (Olujobi *et al.*, 2022). For accounting and reporting, the message is straightforward: regulators need clearer sector specific guidance, firms need stronger internal systems, and researchers need to connect climate science more closely to measurement, valuation, and disclosure outcomes (Olujobi *et al.*, 2022; Okafor *et al.*, 2024).

The gas flaring literature points to the same conclusion. The legal framework review on Nigeria argues for stricter enforcement of anti flaring laws, more advanced technology, and stronger penalties for defaulting firms, while also showing that gas flaring has already caused large economic losses and serious environmental harm (Omotuyi, 2023). In governance terms, this means boards should treat flaring reduction and emissions management as capital allocation decisions, not only environmental programs. For auditors, it means climate assumptions should be challenged in impairment testing, provision measurement, and going concern discussions. For investors, it means a company's sustainability report should be read together with the carrying amount of assets, the size of decommissioning obligations, and the credibility of transition plans. For future research, the most useful next step is probably not another descriptive disclosure study, but stronger empirical work on climate adjusted cash flow forecasting, reserve uncertainty, carbon cost sensitivity, decommissioning estimation, and the link between environmental performance and impairment losses (Omotuyi, 2023).

Table 10 describes the main accounting, assurance, and regulatory implications for different stakeholder groups. It sets out the practical response expected from each group.

Table 10. Policy and governance implications for accounting, assurance, and regulation

Stakeholder	Main implication	Citation(s)
Regulators	Issue sector specific rules on impairment, provisions, emissions, and decommissioning disclosure, backed by credible enforcement.	(Olujobi <i>et al.</i> , 2022; Omotuyi, 2023; Okafor <i>et al.</i> , 2024)
Auditors	Strengthen challenge of climate assumptions in cash flow forecasts, useful lives, and cleanup estimates.	(Olujobi <i>et al.</i> , 2022; Omotuyi, 2023)
Boards and investors	Treat climate risk as a valuation issue that affects capital spending, transition planning, and financial resilience.	(Olujobi <i>et al.</i> , 2022; Omotuyi, 2023)
Researchers	Move from descriptive disclosure studies to measurement based research on impairment, provisions, and carbon adjusted value creation.	(Olujobi <i>et al.</i> , 2022; Omotuyi, 2023; Okafor <i>et al.</i> , 2024)

This table shows the main accounting, assurance, and regulatory implications for key stakeholder groups.

CONCLUSION

This review establishes that climate related risks are increasingly material to the financial position, asset values, and reporting responsibilities of Nigeria's oil and gas sector.

The evidence shows that climate related losses often remain embedded within impairment, operating costs, provisions, contingent liabilities, and broader financial performance rather than being clearly identified in reported accounts. Gas flaring, environmental degradation, transition

pressures, and regulatory uncertainty further demonstrate that climate exposure can translate directly into measurable economic losses. The review also reveals persistent weaknesses in the depth, consistency, comparability, and credibility of climate and sustainability disclosures among oil and gas companies. Greater alignment between financial reporting and emerging sustainability standards is therefore necessary to ensure that climate risks are properly recognized, measured, and communicated. Oil and gas companies should strengthen internal systems for identifying climate risks, improve the quality of financial assumptions, and provide clearer disclosures on impairment, provisions, decommissioning obligations, and contingent liabilities.

Regulators should support this transition through stronger sector specific guidance, effective monitoring, consistent enforcement, and practical implementation support for IFRS S1 and IFRS S2 requirements. Auditors and boards should subject climate related assumptions to greater scrutiny and ensure that reported information reflects the underlying economic realities facing each company. Future research should move beyond descriptive disclosure assessments toward empirical studies that quantify climate adjusted cash flows, asset impairment, environmental obligations, and the financial effects of transition risks. Ultimately, stronger climate related financial reporting will improve transparency, protect stakeholder interests, strengthen corporate accountability, and support a more resilient and sustainable Nigerian oil and gas industry.

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