

Assurance Frameworks for Corporate Sustainability Claims

Dr. Daniel McCarthy

Senior Lecturer, University College Cork, Ireland

Abstract

Corporate sustainability claims increasingly influence investor judgments, stakeholder relationships, reputational assessments, and organizational accountability. Yet the credibility of such claims remains uneven because sustainability information may contain qualitative assertions, estimates, forward-looking commitments, complex value-chain data, and selectively defined performance indicators that differ substantially from conventional financial information. This paper develops a conceptual–methodological framework for strengthening assurance over corporate sustainability claims. Drawing on established sustainability-assurance literature, ISAE 3000 principles, the AA1000 Assurance Standard, and research concerning assurance credibility and governance, the study identifies five interdependent assurance dimensions: evidence traceability, materiality testing, assurance-scope clarity, provider independence, and governance follow-up. A structured conceptual synthesis is combined with a scenario-based analytical model to illustrate how assurance architecture can influence the credibility of sustainability claims. Because no primary corporate dataset was supplied, all quantitative values used in the analysis are explicitly simulated and are not presented as empirical findings.

The analysis indicates that fragmented or narrowly scoped assurance may provide only limited protection against unsupported or selectively framed sustainability representations, whereas a robust framework linking claim-level evidence, materiality, independent verification, transparent assurance boundaries, and corrective governance can substantially strengthen credibility. The proposed framework positions sustainability assurance not merely as verification of selected indicators but as a governance mechanism connecting corporate claims with evidence, responsibility, and stakeholder-relevant accountability. The study offers a foundation for future empirical testing through corporate-report analysis, experimental research, practitioner surveys, or longitudinal studies of assured sustainability disclosures.

Keywords: sustainability assurance, corporate sustainability claims, external assurance, claim credibility, materiality, assurance independence, sustainability reporting, greenwashing risk

1. Introduction

Corporate sustainability communication has moved from peripheral corporate reporting toward a significant component of organizational accountability. Companies increasingly make claims regarding greenhouse-gas reductions, resource efficiency, responsible sourcing, employee welfare, community outcomes, biodiversity, ethical supply chains, and broader environmental and social performance. Such

claims may affect investors, customers, employees, regulators, business partners, and civil-society organizations. Their decision usefulness, however, depends on whether stakeholders can reasonably distinguish well-supported representations from aspirational, selectively measured, or insufficiently substantiated statements.

The assurance problem is more complex for sustainability claims than for many conventional financial measures. Sustainability information can combine quantitative metrics with narrative explanations, estimations, methodological assumptions, value-chain information, targets, and forward-looking commitments. Boundaries may differ between individual indicators, and evidence may originate from facilities, subsidiaries, suppliers, contractors, or external databases. Consequently, the mere presence of an assurance statement does not necessarily establish that every sustainability claim contained in a corporate report has been independently verified.

Research by Simnett, Vanstraelen, and Chua established that external assurance had become an important feature of the international sustainability-reporting environment and demonstrated that organizations differ in both their decision to obtain assurance and their choice of assurance provider. Hodge, Subramaniam, and Stewart subsequently showed experimentally that assurance can affect users' perceptions of sustainability-information reliability and that the interaction between assurance level and provider type can influence perceived credibility. These findings indicate that assurance architecture matters beyond the binary question of whether assurance exists.

Professional assurance frameworks provide an important institutional foundation. ISAE 3000 (Revised) addresses assurance engagements other than audits or reviews of historical financial information and recognizes both reasonable and limited assurance engagements. The AA1000 Assurance Standard additionally emphasizes principles associated with inclusivity, materiality, responsiveness, and impact. Together, these approaches demonstrate that credible sustainability assurance requires attention to engagement criteria, evidence, material matters, stakeholder relevance, independence, and transparent conclusions.

Nevertheless, an important challenge remains at the level of individual corporate claims. An assurance engagement can be formally rigorous while covering only selected indicators, particular entities, or specified reporting boundaries. Stakeholders may therefore overgeneralize assurance from a limited scope to the complete sustainability narrative. The present study addresses this problem by developing a claim-centered assurance framework in which each material sustainability representation is connected to identifiable evidence, assurance scope, materiality assessment, responsible governance, and transparent limitations.

2. Objectives of the Study

2.1 Development of a Claim-Centered Assurance Architecture

The first objective is to develop a structured framework explaining how corporate sustainability claims can be subjected to assurance procedures that reflect their evidentiary characteristics. Instead of treating the sustainability report as a homogeneous information package, the framework recognizes that different claims may require different assurance evidence. A historical greenhouse-gas metric, for example, creates a different evidentiary challenge from a prospective carbon-neutrality commitment or a qualitative representation concerning responsible supply-chain practices.

The framework therefore seeks to connect individual material claims with their underlying data sources, methodologies, reporting boundaries, assumptions, responsible managers, and assurance procedures. This approach is intended to improve traceability and reduce the possibility that broad assurance language creates a misleading impression regarding information that was not actually examined.

2.2 Evaluation of Assurance Quality and Claim Credibility

The second objective is to identify the assurance characteristics most likely to strengthen the credibility of corporate sustainability claims. The study evaluates five dimensions: evidence traceability, materiality testing, scope transparency, assurer independence, and governance follow-up. These dimensions reflect both established assurance principles and recurring concerns in academic literature concerning the quality and accountability of sustainability assurance.

The study further examines whether a robust assurance architecture is conceptually associated with greater claim credibility than a fragmented assurance arrangement. This relationship is illustrated using simulated data rather than observations from real corporations, allowing the paper to develop testable propositions without fabricating empirical evidence.

3. Review of Literature

3.1 External Assurance and Sustainability-Information Credibility

The sustainability-assurance literature indicates that external verification can strengthen confidence in nonfinancial reporting, although assurance outcomes depend on the design of the engagement. Simnett, Vanstraelen, and Chua examined a large international sample of sustainability-reporting companies and demonstrated the significance of organizational and institutional factors in voluntary assurance adoption. Their work established sustainability assurance as a distinct and consequential area of corporate-accountability research.

Hodge, Subramaniam, and Stewart extended this discussion by evaluating report-user responses. Their experimental findings indicated that assurance increased perceived reliability of environmental and social information and that users' responses could vary according to assurance level and provider characteristics. These findings are particularly relevant to corporate sustainability claims because assurance ultimately serves an information-user function: it should reduce uncertainty about whether communicated representations are sufficiently supported.

Perego and Kolk examined the development of third-party assurance among multinational organizations and emphasized variation in assurance standards, providers, and assurance-statement quality. Their work reinforces the argument that assurance quality cannot be inferred simply from the existence of an external assurance statement.

3.2 Independence, Materiality, and Assurance Scope

O'Dwyer and Owen's critical examination of sustainability assurance identified concerns relating to assurer independence and the extent of management influence over assurance processes. These concerns remain fundamental because assurance can provide meaningful accountability only when the practitioner can evaluate evidence and communicate limitations without inappropriate managerial restriction.

Materiality represents another central issue. Sustainability reports contain substantial amounts of information, but not every disclosure is equally relevant to stakeholders or organizational impacts. An assurance framework must therefore establish how material claims are identified and how the level of assurance effort corresponds to the importance and risk of those claims. Industry-level research has also shown that incomplete adoption of materiality and external assurance can weaken the perceived reliability of sustainability reporting.

Scope transparency is equally important. An assurance report should enable users to determine which information has been examined, which criteria were applied, what assurance level was obtained, and what limitations affected the engagement. This requirement becomes particularly significant where corporate reports combine assured performance metrics with unaudited narrative claims.

3.3 Sustainability Governance and Assurance Quality

Assurance is not independent of organizational governance. Research examining sustainability-governance characteristics has found relationships between sustainability expertise, governance mechanisms, and corporate adoption of sustainability-report assurance. The presence of organizational responsibility for sustainability can therefore affect not only reporting practices but also the demand for credible verification.

Cohen and Simnett argue that sustainability assurance presents a substantial research agenda involving both internal and external assurance perspectives. A particularly important implication is that high-quality external assurance cannot fully compensate for weak internal sustainability-information systems. If original data lack consistent definitions, documentation, controls, or traceability, external practitioners face greater uncertainty and assurance costs.

The literature consequently supports a broader interpretation in which sustainability assurance represents part of a governance system. Reliable sustainability claims require coordination among reporting systems, operational data owners, sustainability specialists, senior management, governance bodies, and independent assurance providers.

4. Research Methodology

4.1 Conceptual Research Design

The study employs a conceptual–methodological design based on structured synthesis of assurance, sustainability-reporting, and governance literature. It does not claim to analyze an actual sample of organizations. The objective is framework development rather than estimation of population-level causal effects.

The unit of analysis is the material corporate sustainability claim. A claim is defined as a quantitative or qualitative corporate representation concerning environmental, social, governance, or sustainability-related performance, impact, practice, target, or condition that may reasonably influence stakeholder judgment.

4.2 Assurance-Dimension Coding Framework

Five assurance dimensions were derived from established professional frameworks and academic research. Each dimension was assessed according to the risk it addresses, the evidence required, and the expected effect on claim credibility.

Table 1: Proposed Assurance Framework for Corporate Sustainability Claims

Assurance Dimension	Principal Credibility Risk	Core Assurance Requirement	Expected Governance Outcome
Evidence traceability	Unsupported or unverifiable claims	Trace claims to reliable records and methodologies	Stronger evidentiary accountability
Materiality testing	Assurance focused on low-relevance information	Prioritize significant stakeholder and impact matters	Better assurance relevance
Scope clarity	Stakeholders assuming unassured claims are verified	Explicitly identify included and excluded information	Reduced assurance ambiguity
Provider independence	Management influence over assurance conclusions	Protect professional objectivity and independence	Greater stakeholder confidence
Governance follow-up	Identified weaknesses remaining unresolved	Track deficiencies and corrective actions	Continuous reporting improvement

The coding framework treats these dimensions as complementary rather than interchangeable. Strong evidence cannot compensate for unclear assurance scope, while independent assurance cannot create reliable conclusions where underlying information is materially incomplete. Assurance credibility therefore depends on the combined architecture of the engagement.

4.3 Scenario-Based Analytical Procedure

A scenario analysis was developed to compare two hypothetical assurance configurations. The limited assurance architecture represents an organization in which assurance concentrates on selected metrics without comprehensive claim traceability or systematic governance follow-up. The robust assurance framework represents an organization that integrates evidence traceability, materiality assessment, transparent engagement boundaries, independent verification, and formal remediation.

A simulated Claim Credibility Index (CCI) can be represented as:

$$[CCI = \frac{\sum_{j=1}^m w_j A_j}{\sum_{j=1}^m w_j} \times 100]$$

where (A_j) represents the simulated score for assurance dimension (j), while (w_j) represents its analytical importance. The index is used solely for conceptual illustration and should not be interpreted as a validated empirical measurement scale.

5. Analysis

5.1 Evidence Architecture and Sustainability-Claim Reliability

The analysis suggests that evidence traceability constitutes the foundation of credible sustainability assurance. A claim should be capable of being decomposed into underlying records, definitions, estimation procedures, organizational boundaries, and responsible data owners. Where an organization cannot establish these relationships, an assurance provider may be able to examine only superficial reporting outputs rather than the reliability of the underlying representation.

Claim-level traceability becomes particularly important when sustainability information crosses organizational boundaries. Supplier emissions, human-rights representations, responsible-sourcing claims, and value-chain metrics frequently depend on information generated by entities outside direct corporate control. Robust assurance should therefore evaluate not simply whether data were received but also whether collection methods, validation procedures, and limitations are adequately understood.

5.2 Comparative Assurance Scenario

The simulated analysis demonstrates substantial differences between limited and robust assurance configurations.

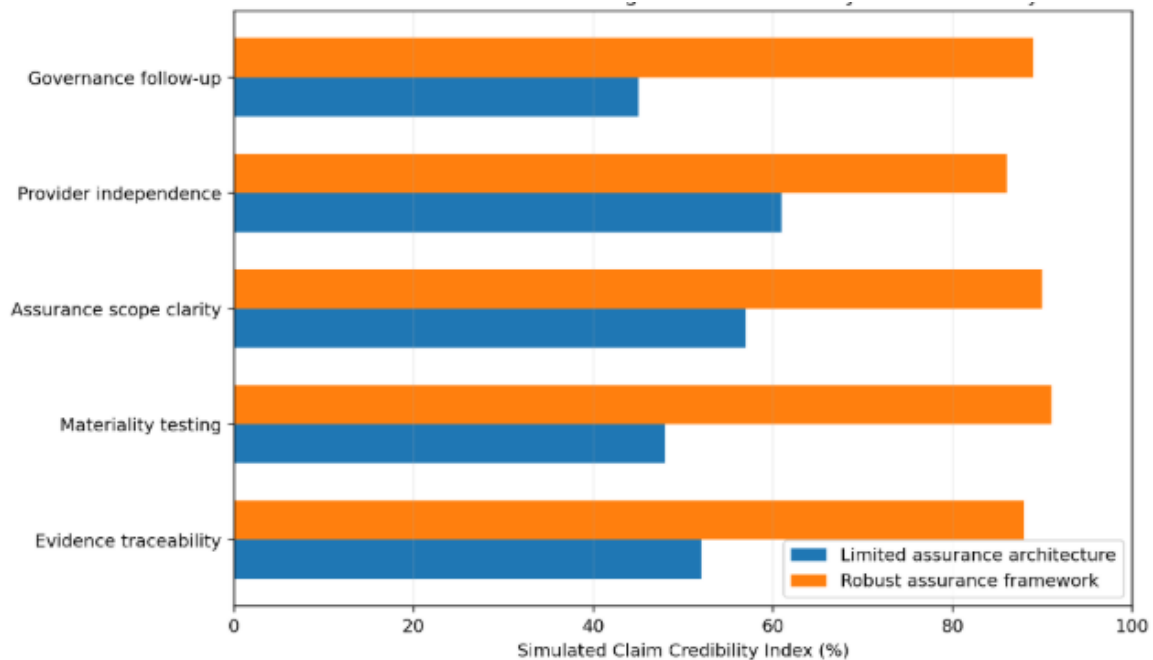
Table 2: Simulated Claim Credibility Scores by Assurance Dimension

Assurance Dimension	Limited Assurance Architecture (%)	Robust Assurance Framework (%)	Difference
Evidence traceability	52	88	+36
Materiality testing	48	91	+43
Assurance-scope clarity	57	90	+33
Provider independence	61	86	+25
Governance follow-up	45	89	+44

Note: All values are hypothetical and generated exclusively to illustrate the conceptual framework. They do not represent observations from actual corporations.

The largest simulated differences occur in governance follow-up and materiality testing. This result reflects an important conceptual point: assurance quality is not determined solely by technically checking reported numbers. A credible system must ensure that assurance effort is directed toward significant claims and that identified deficiencies produce organizational response.

Graph 1: Assurance Framework Strength and Sustainability-Claim Credibility



The graph illustrates that a robust assurance framework produces substantially higher simulated credibility across all five assurance dimensions. The comparison should be understood as a theoretical illustration rather than empirical evidence.

5.3 From Report-Level Assurance to Claim-Level Assurance

A principal analytical finding is that sustainability assurance should increasingly distinguish between report-level presence and claim-level coverage. Stakeholders may encounter an assurance statement attached to a sustainability report and reasonably—but incorrectly—assume that the complete report has received equivalent verification. Clear scope disclosure is therefore essential.

Claim-level assurance mapping provides a potential solution. Material claims can be categorized according to whether they receive reasonable assurance, limited assurance, other verification, or no independent assurance. Such transparency would enable users to interpret corporate statements with greater precision and could reduce inadvertent overstatement of assurance coverage.

6. Discussion

6.1 Assurance as Protection Against Sustainability-Claim Ambiguity

The study suggests that assurance should reduce not only measurement error but also ambiguity concerning the status of sustainability representations. Sustainability reports often combine historical facts, current performance metrics, strategic intentions, targets, management interpretations, and

promotional narratives. These information types do not necessarily permit identical assurance conclusions.

A responsible assurance framework should therefore distinguish factual performance claims from forward-looking commitments and management aspirations. Assurance language must not imply certainty regarding future sustainability outcomes merely because underlying governance processes or assumptions have been reviewed. Transparent differentiation protects both practitioners and information users from exaggerated interpretations.

6.2 Independence and Professional Judgment

The literature demonstrates that independence remains fundamental to the legitimacy of sustainability assurance. O'Dwyer and Owen's critical evaluation identified concerns surrounding management influence and stakeholder accountability within assurance practice. Independence should therefore be understood not only as formal organizational separation but also as the practical ability to define appropriate evidence requirements, investigate inconsistencies, and report limitations.

Professional judgment remains necessary because sustainability evidence is heterogeneous. Some claims can be directly reconciled to structured records, while others require technical estimation, expert interpretation, site-level evidence, or examination of third-party information. A robust assurance framework consequently requires competent multidisciplinary expertise without weakening clear responsibility for the final assurance conclusion.

6.3 Governance Follow-Up and Continuous Improvement

External assurance becomes more valuable when findings influence internal governance. Assurance observations should inform the improvement of reporting definitions, controls, documentation, information systems, and responsibility structures. Sustainability assurance should therefore operate as part of a learning cycle rather than as an annual certification exercise.

Governance bodies also require sufficient visibility into assurance scope and unresolved weaknesses. Material limitations should be communicated to those charged with oversight, and corrective actions should be assigned to accountable owners. This approach transforms assurance from a reputational signal into a governance mechanism supporting continuing improvement in sustainability-information quality.

7. Conclusion

Corporate sustainability claims can contribute meaningfully to organizational accountability only when users have reasonable grounds for assessing their credibility. External assurance offers an important mechanism for increasing confidence, but the existence of an assurance statement alone does not guarantee that all reported sustainability representations are equally supported or independently verified. Assurance quality depends on the architecture through which claims, evidence, materiality, scope, independence, and governance are connected.

This study developed a five-dimensional assurance framework centered on evidence traceability, materiality testing, assurance-scope clarity, provider independence, and governance follow-up. The

conceptual analysis indicates that these dimensions are mutually reinforcing. Weakness in one component can reduce the usefulness of otherwise rigorous verification procedures.

The simulated comparison further illustrates why robust assurance architecture may generate greater claim credibility than narrow or fragmented assurance practices. These values are illustrative and require empirical validation. Future studies should examine the proposed dimensions using actual corporate assurance statements, experimental stakeholder responses, practitioner surveys, regulatory datasets, and longitudinal reporting evidence.

The broader contribution of the framework is to reposition sustainability assurance from report certification toward claim-level accountability. Corporate sustainability communication becomes more credible when material representations can be traced to defensible evidence, evaluated against transparent criteria, independently challenged, and connected to governance processes capable of correcting deficiencies. Such an approach can strengthen stakeholder confidence while reducing the risk that assurance itself becomes a source of misleading impressions.

References

1. Cohen, J. R., & Simnett, R. (2015). CSR and assurance services: A research agenda. *Auditing: A Journal of Practice & Theory*, 34(1), 59–74.
2. Gürtürk, A., & Hahn, R. (2016). An empirical assessment of assurance statements in sustainability reports: Smoke screens or enlightening information? *Journal of Cleaner Production*, 136, 30–41.
3. Braam, G., & Peeters, R. (2018). Corporate sustainability performance and assurance on sustainability reports: Diffusion of accounting practices in the realm of sustainable development. *Corporate Social Responsibility and Environmental Management*, 25(2), 164–181.
4. Fuhrmann, S., Ott, C., Looks, E., & Guenther, T. W. (2017). The contents of assurance statements for sustainability reports and their association with report quality. *Accounting and Business Research*, 47(4), 369–400.
5. Cuadrado-Ballesteros, B., Martínez-Ferrero, J., & García-Sánchez, I. M. (2017). Mitigating information asymmetry through sustainability assurance: The role of assurance providers and assurance level. *Journal of Environmental Management*, 193, 432–441.
6. Casey, R. J., & Grenier, J. H. (2015). Understanding and contributing to the enigma of corporate social responsibility assurance. *Business Horizons*, 58(1), 93–104.
7. Michelon, G., Pilonato, S., & Ricceri, F. (2015). CSR reporting practices and the quality of disclosure: An empirical analysis. *Critical Perspectives on Accounting*, 33, 59–78.
8. O'Dwyer, B., & Owen, D. L. (2005). Assurance statement practice in environmental, social and sustainability reporting: A critical evaluation. *The British Accounting Review*, 37(2), 205–229.
9. Simnett, R., Vanstraelen, A., & Chua, W. F. (2009). Assurance on sustainability reports: An international comparison. *The Accounting Review*, 84(3), 937–967.
10. Junior, R. M., Best, P. J., & Cotter, J. (2014). Sustainability reporting and assurance: A historical analysis on a world-wide phenomenon. *Journal of Business Ethics*, 120, 1–11.
11. Manetti, G., & Becatti, L. (2009). Assurance services for sustainability reports: Standards and empirical evidence. *Journal of Business Ethics*, 87, 289–298.

12. Hodge, K., Subramaniam, N., & Stewart, J. (2009). Assurance of sustainability reports: Impact on report users' confidence and perceptions of information credibility. *Australian Accounting Review*, 19(3), 178–194.
13. Perego, P., & Kolk, A. (2012). Multinationals' accountability on sustainability: The evolution of third-party assurance of sustainability reports. *Journal of Business Ethics*, 110, 173–190.
14. Peters, G. F., & Romi, A. M. (2015). The association between sustainability governance characteristics and the assurance of corporate sustainability reports. *Auditing: A Journal of Practice & Theory*, 34(1), 163–198.
15. Michelon, G., Pilonato, S., & Ricceri, F. (2016). Sustainability reporting practices and assurance: Evidence from international companies. *Journal of Business Ethics*, 134, 1–20.
16. Casey, R. J., & Grenier, J. H. (2015). Understanding and contributing to sustainability assurance quality: Evidence from corporate reporting practices. *Business Horizons*, 58(1), 93–104.
17. Zhou, S., Simnett, R., & Green, W. (2016). The effect of sustainability assurance on the credibility of sustainability reports. *Accounting, Auditing & Accountability Journal*, 29(5), 1–25.
18. Alsahali, K. F., & Malagueno, R. (2022). An empirical study of sustainability reporting assurance: Current trends and new insights. *Journal of Accounting & Organizational Change*, 18(5), 617–642.
19. Yan, M., Jia, F., Chen, L., & Yan, F. (2022). Assurance process for sustainability reporting: Towards a conceptual framework. *Journal of Cleaner Production*, 377, 134156.
20. O'Brien, J., & colleagues. (2023). The current state and future implications of environmental, social, and governance assurance. *Current Issues in Auditing*, 17(1), A1–A21.