A Diagnostic Framework for Evaluating Ethical Conflicts Between Corporate Purpose Declarations and Ecological Realities

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Abstract

Corporate purpose declarations increasingly position ecological stewardship as a core organizational commitment, yet a persistent gap exists between proclaimed intent and measurable environmental performance. This study addresses the absence of a validated, multi-dimensional diagnostic instrument capable of systematically evaluating the coherence between corporate purpose statements and ecological realities. Drawing on performative purpose alignment theory and a four-factor conceptualization of environmental misrepresentation, the research develops and validates the Purpose–Ecology Diagnostic Framework (PEDF) through a mixed-methods design combining content analysis of 312 corporate purpose declarations with ecological performance indicators across five sectors. The framework integrates semantic alignment scoring, disclosure–performance gap analysis, and temporal coherence assessment. Results demonstrate that the PEDF achieves 89.4% classification accuracy in identifying high-risk purpose–ecology divergence, significantly outperforming conventional ESG rating approaches (72.1%). Temporal coherence emerges as the strongest predictor of substantive ecological commitment ($\beta = 0.47$, $p < .001$), surpassing both claim specificity and disclosure volume. The study concludes that purpose declarations function as binding discursive commitments whose credibility is contingent upon alignment with verifiable ecological

outcomes. The framework offers practitioners a replicable diagnostic tool and provides policymakers with a evidence-based mechanism for evaluating corporate sustainability communication integrity.

Keywords: corporate purpose, ecological accountability, diagnostic framework, greenwashing, sustainability governance

1. Introduction

1.1 Background

Corporate purpose has emerged as a central construct in contemporary sustainability governance, with organizations increasingly issuing formal declarations that position environmental stewardship alongside financial performance as constitutive organizational commitments . These declarations are not merely descriptive; they function as performative speech acts that bind firms to evaluative scrutiny by stakeholders, regulators, and civil society actors . The proliferation of such commitments reflects mounting institutional pressure for corporations to articulate their societal contributions explicitly, particularly following the widespread adoption of the Sustainable Development Goals as a reference framework for corporate sustainability communication .

Simultaneously, scholarship on corporate environmental misrepresentation has advanced considerably, with recent work developing validated instruments for measuring greenwashing across multiple dimensions including misleading claims, selective disclosure, and ESG metric manipulation . This body of research demonstrates that the gap between environmental communication and ecological performance is not merely a peripheral concern but a systemic feature of contemporary corporate sustainability practice, undermining trust in market mechanisms and weakening regulatory effectiveness . The convergence of these two literatures—corporate purpose and environmental misrepresentation—creates an urgent analytical imperative: if purpose declarations are to function as meaningful governance mechanisms rather than symbolic gestures, they must be evaluated against ecological realities with diagnostic precision.

1.2 Problem Statement

Despite growing scholarly attention to both corporate purpose articulation and greenwashing detection, no validated framework exists that specifically evaluates the ethical coherence between purpose declarations and ecological performance. Existing approaches to sustainability assessment suffer from three interrelated limitations. First, conventional ESG rating systems aggregate environmental, social, and governance indicators into composite scores that obscure the specific relationship between declared purpose and ecological outcomes, treating purpose as one input among many rather than as a binding commitment whose fulfillment can be assessed . Second, greenwashing measurement instruments, while increasingly sophisticated in detecting

misleading claims, focus primarily on disclosure content rather than on the coherence between stated purpose and verifiable ecological action . Third, performative theories of corporate purpose have theorized how declarations create reputational exposure but have not developed operational metrics for evaluating whether specific declarations are substantively honored or symbolically exploited .

The consequence of this gap is that stakeholders—investors, regulators, consumers, and civil society—lack a systematic means of distinguishing between purpose declarations that function as genuine governance commitments and those that operate as reputational insurance against ecological scrutiny. The unsolved issue, therefore, is the absence of a diagnostic instrument that can reliably classify purpose–ecology coherence, identify the specific dimensions along which divergence occurs, and predict which declarations are most likely to mask substantive ecological underperformance.

1.3 Objectives of the Study

General objective: To develop and validate a diagnostic framework for evaluating the ethical coherence between corporate purpose declarations and ecological realities.

Specific objectives:

1. To identify the dimensions along which purpose declarations diverge from ecological performance across sectors and organizational contexts.
2. To design a multi-component diagnostic framework integrating semantic, disclosure–performance, and temporal coherence assessments.
3. To validate the framework against established ESG rating benchmarks using classification accuracy and predictive validity criteria.

1.4 Research Questions

1. What combination of purpose declaration characteristics and ecological performance indicators most accurately predicts purpose–ecology divergence?
2. How does the proposed diagnostic framework compare to conventional ESG rating approaches in classification accuracy and predictive validity?
3. Which dimensions of purpose–ecology coherence are most strongly associated with substantive versus symbolic environmental commitment?

1.5 Significance of the Study

For practitioners and administrators: The framework provides a replicable diagnostic instrument that sustainability officers, board committees, and internal audit functions can deploy to assess whether their organization's purpose declaration is substantively honored or at risk of

performative divergence. The 89.4% classification accuracy establishes a benchmark against which internal assessments can be calibrated.

For policymakers and regulators: The study offers an evidence-based mechanism for evaluating corporate sustainability communication integrity, with potential applications in disclosure regulation, greenwashing enforcement, and purpose-washing deterrence. The framework's emphasis on temporal coherence provides a specific, actionable criterion for regulatory scrutiny.

For academic literature: The research extends performative purpose alignment theory by operationalizing its core propositions into measurable constructs, bridging the gap between discursive theories of corporate purpose and empirical assessment of ecological outcomes . It also contributes to greenwashing measurement scholarship by introducing purpose-specific diagnostic dimensions not captured in existing instruments .

For future researchers: The framework establishes a foundation for longitudinal studies of purpose–ecology coherence, cross-jurisdictional comparisons, and the development of predictive models for purpose-washing risk.

1.6 Scope and Limitations

This study examines corporate purpose declarations issued by publicly listed firms across five sectors (energy, financial services, consumer goods, technology, and industrials) in Nigeria, Kenya, and South Africa, covering the period 2018–2024. The geographic focus reflects the theoretical diagnostic value of African listed-firm contexts, where visible development claims coexist with heterogeneous governance capacities and uneven disclosure infrastructures . The study excludes privately held firms, state-owned enterprises, and organizations below a minimum revenue threshold. Key limitations include reliance on publicly available ecological performance data, which varies in granularity across jurisdictions; the treatment of purpose declarations as textual artifacts amenable to semantic analysis, which may underrepresent multimodal communicative elements; and the cross-sectional design's inability to establish causal direction in purpose–ecology relationships.

2. Literature Review

2.1 Conceptual Review

Corporate Purpose Declarations. Corporate purpose declarations are formal organizational statements that articulate the firm's fundamental reason for existence beyond profit maximization, typically encompassing commitments to stakeholders, societal contributions, and increasingly, ecological stewardship . Unlike mission or vision statements, purpose declarations function as governance mechanisms insofar as they create evaluative expectations against which organizational behavior can be assessed. Recent theorization positions purpose communication

as performative: declarations do not merely describe commitments but enact them discursively, binding firms to subsequent scrutiny .

Ecological Realities. Ecological realities refer to measurable environmental performance indicators including greenhouse gas emissions intensity, resource consumption, waste generation, biodiversity impacts, and verifiable progress against stated environmental targets. The construct emphasizes verifiability and comparability, distinguishing ecological performance from environmental communication.

Ethical Conflict. In this context, ethical conflict denotes the substantive inconsistency between what a firm declares about its ecological commitments and what its measurable environmental performance reveals. This is distinct from mere disclosure incompleteness; ethical conflict arises when purpose declarations assert commitments that ecological indicators contradict or fail to substantiate.

Diagnostic Framework. A diagnostic framework is a structured assessment instrument comprising defined dimensions, measurement protocols, and classification criteria that enable systematic evaluation of a phenomenon against specified standards. In sustainability governance, diagnostic frameworks differ from rating systems in their emphasis on identifying specific failure modes rather than producing composite scores.

Purpose–Ecology Divergence. The central construct of this study, purpose–ecology divergence, refers to the degree of misalignment between the ecological commitments articulated in corporate purpose declarations and the firm's verifiable ecological performance. Divergence may be semantic (declarations are vague or unmeasurable), substantive (specific commitments are not met), or temporal (commitments are abandoned or diluted over time).

2.2 Theoretical Framework

Performative Purpose Alignment Theory (PPAT). This study is grounded in performative purpose alignment theory, which conceptualizes corporate purpose communication as a series of patterned discursive acts that bind firms to evaluative scrutiny rather than as a single declarative statement . PPAT proposes three linked dimensions through which purpose narratives invite or undermine stakeholder inference: semantic alignment (what is claimed), tonal configuration (how evaluative force is expressed), and narrative architecture across reporting periods (whether commitments remain coherent over time) . The theory's central proposition—that specific, affect-laden, and temporally sustained commitments create "discursive costliness" that is harder to fabricate than generic sustainability language—provides the conceptual foundation for the framework developed in this study. The diagnostic framework operationalizes PPAT's three dimensions into measurable constructs: semantic alignment scoring, disclosure–performance gap analysis, and temporal coherence assessment.

Prospect Theory. Prospect theory provides complementary explanatory logic for why firms may issue ambitious ecological purpose declarations while simultaneously engaging in ecological

underperformance. The theory's core insight—that decision-makers are more sensitive to potential losses than equivalent gains—suggests that purpose declarations function as reputational hedges against anticipated ecological scrutiny. Firms facing high environmental exposure may issue stronger purpose commitments as a form of insurance, creating conditions for divergence when the costs of substantive alignment exceed the reputational benefits of symbolic commitment. This theoretical lens helps explain the puzzling coexistence of ambitious purpose language and weak ecological performance observed in prior research.

2.3 Empirical Review

Okeke and Ugbebor (2026) developed performative purpose alignment theory through analysis of sustainability discourse among African listed firms, demonstrating that purpose communication functions as a governance mechanism through three dimensions: semantic alignment, tonal configuration, and narrative architecture . The study established that specific and temporally sustained commitments create greater reputational exposure and are therefore more credible signals of substantive intent. However, the research did not develop operational metrics for evaluating whether specific declarations are substantively honored or assess ecological performance against purpose claims.

Okeke (2026) developed and validated a multidimensional instrument for measuring corporate environmental misrepresentation, identifying four dimensions: Misleading Environmental Claims, Strategic Disclosure Practices, ESG Metric Manipulation, and Green Trust . The instrument demonstrated predictive validity in linking greenwashing perceptions to stakeholder evaluations of reputation and investment propensity. While this work substantially advanced greenwashing measurement, its focus on disclosure content rather than purpose–performance coherence leaves unaddressed the specific diagnostic question of whether declared ecological purpose is substantively enacted.

Wilson, Shallangwa, and Mela (2026) developed an AI-based framework for detecting greenwashing in UK ESG and green finance projects, achieving 86.34% accuracy through NLP-based textual analysis combined with financial–ESG divergence assessment . The study demonstrated that firm size, governance structure, and financial constraints predict greenwashing behavior, but its reliance on disclosure content without reference to explicit purpose commitments limits its applicability to purpose-specific diagnostics.

Research on corporate purpose implementation has examined how organizations translate purpose into operational practice through cultural mechanisms, governance structures, and HR systems . This work reveals that firms vary substantially in whether purpose operates at normative or merely instrumental levels, with some organizations integrating purpose into core decision-making while others deploy purpose as brand communication. However, this literature has not developed diagnostic instruments for assessing the ecological coherence of purpose claims.

2.4 Research Gap

No validated diagnostic framework exists that specifically evaluates the ethical coherence between corporate purpose declarations and verifiable ecological realities. Existing instruments measure either corporate purpose articulation or environmental misrepresentation, but not the relationship between the two. Greenwashing measurement tools focus on disclosure content without reference to declared purpose commitments . Performative purpose theory theorizes how declarations create reputational exposure but does not operationalize the assessment of whether those exposures are substantively honored . AI-based detection approaches achieve impressive accuracy in identifying greenwashing patterns but lack the purpose-specific conceptual architecture necessary for evaluating whether firms are meeting their own declared ecological commitments .

This study fills this gap by developing a diagnostic framework that operationalizes the dimensions of performative purpose alignment theory into measurable constructs, integrates ecological performance indicators into the assessment, and validates the framework against established ESG benchmarks. The framework's distinctive contribution lies in treating purpose declarations as binding commitments whose ethical status can be assessed through systematic comparison with ecological realities.

3. Methodology

3.1 Research Design

This study employs a mixed-methods design combining retrospective content analysis of corporate purpose declarations with quantitative assessment of ecological performance indicators, followed by framework development and validation. The design proceeds in three phases: (1) construct development and instrument design, drawing on performative purpose alignment theory and existing greenwashing measurement scholarship; (2) content analysis of purpose declarations to generate semantic and temporal coherence scores; and (3) predictive validation against ecological performance outcomes and comparison with ESG rating benchmarks. This design is appropriate because the research question requires both interpretive analysis of textual purpose declarations and quantitative assessment of their relationship to verifiable ecological indicators.

3.2 Study Area and Population

The study population comprises publicly listed firms across five sectors (energy, financial services, consumer goods, technology, and industrials) in three African jurisdictions: Nigeria, Kenya, and South Africa. This population was selected because these contexts exhibit the combination of visible corporate purpose claims, heterogeneous governance capacities, and

uneven disclosure infrastructures that make purpose–ecology divergence particularly consequential and diagnostically tractable . The sampling frame was constructed from firms listed on the Nigerian Exchange, Nairobi Securities Exchange, and Johannesburg Stock Exchange with publicly available purpose declarations and sustainability reports for the 2018–2024 period.

3.3 Sample Size and Sampling Technique

From an initial population of 487 listed firms, 312 firms met inclusion criteria: (1) publication of a formal corporate purpose declaration between 2018 and 2024, (2) availability of ecological performance data for at least three consecutive years, and (3) sector classification within the five target sectors. Stratified random sampling was employed to ensure proportional representation across sectors and jurisdictions, with strata defined by sector and country. The final sample comprises 312 firms (Nigeria: 94; Kenya: 78; South Africa: 140), with sector distribution as follows: energy (58), financial services (72), consumer goods (64), technology (51), and industrials (67). Sample size was determined through power analysis for logistic regression with 12 predictors, assuming a medium effect size (OR = 1.5) and $\alpha = .05$, yielding a minimum required sample of 280.

3.4 Data Collection Methods

Data were collected from three sources. First, corporate purpose declarations were extracted from annual reports, sustainability reports, and standalone purpose statements published on corporate websites. Declarations were defined as explicit statements articulating the firm's fundamental reason for existence beyond financial returns, typically introduced by phrases such as "our purpose," "our mission," or "why we exist." Second, ecological performance indicators were collected from sustainability reports, CDP disclosures where available, and regulatory environmental filings. Indicators included: Scope 1 and 2 greenhouse gas emissions intensity, renewable energy proportion, water withdrawal intensity, waste diversion rate, and verifiable progress against stated environmental targets. Third, conventional ESG ratings were obtained from publicly available MSCI and Sustainalytics scores for benchmark comparison.

Temporal data coverage spans 2018–2024, with purpose declarations coded for each year in which a declaration was published or materially revised. Where ecological performance data were unavailable for specific indicators and years, multiple imputation was employed using chained equations ($m = 20$). All data were de-identified and publicly available; no confidential or proprietary information was accessed.

3.5 Research Instruments and Framework Design

The Purpose–Ecology Diagnostic Framework (PEDF) comprises three integrated components corresponding to the dimensions of performative purpose alignment theory :

Semantic Alignment Scoring (SAS). Purpose declarations were coded for ecological specificity using a structured protocol adapted from prior semantic analysis methods . Coding dimensions included: (1) ecological claim specificity (whether declarations articulate measurable ecological commitments versus vague aspirational language), (2) temporal boundedness (presence of specific deadlines or milestones), (3) accountability attribution (whether responsibility for ecological commitments is assigned to named organizational roles), and (4) verifiability language (whether declarations reference external standards or verification mechanisms). Each dimension was scored on a 0–3 scale, yielding a composite SAS score ranging from 0 to 12. Two independent coders coded all declarations; disagreements were resolved through discussion, with inter-rater reliability reported in Section 3.6.

Disclosure–Performance Gap Analysis (DPGA). This component quantifies the discrepancy between ecological commitments articulated in purpose declarations and verifiable ecological outcomes. For each firm-year, stated ecological targets or commitments were identified from purpose declarations and sustainability reports. Performance against these commitments was assessed using the following metric:

$$DPGA_{it} = \frac{1}{K}\sum_{k=1}^{K}\left|\frac{Target_{ikt} - Actual_{ikt}}{Target_{ikt}}\right|$$

where $K$is the number of quantifiable ecological commitments for firm $i$in year t. Higher DPGA values indicate greater divergence between declared commitments and ecological performance.

Temporal Coherence Assessment (TCA). Temporal coherence captures whether ecological commitments are sustained, strengthened, or abandoned across reporting periods. Following PPAT's emphasis on narrative architecture across time , TCA was operationalized as a three-level categorical variable: (1) *sustained coherence* (commitments maintained or strengthened across all observed years), (2) *diluted coherence* (commitments weakened or made more vague over time), and (3) *abandoned coherence* (commitments explicitly dropped or replaced with different claims). An ordinal coding scheme (1 = abandoned, 2 = diluted, 3 = sustained) was used for quantitative analysis.

Data preprocessing and analysis were conducted in Python 3.11 using pandas, scikit-learn, and statsmodels libraries. Natural language processing for semantic scoring employed spaCy with custom rule-based extraction for temporal and accountability markers. All coding protocols and framework components are available in the supplementary materials.

3.6 Validity and Reliability

Content validity: The framework dimensions were derived from established theoretical constructs in performative purpose alignment theory and greenwashing measurement scholarship

. An expert panel of five sustainability governance scholars reviewed the coding protocol and confirmed that the dimensions adequately capture the purpose–ecology coherence construct.

Predictive validity: The framework's predictive validity was assessed through classification accuracy in identifying firms subsequently subject to environmental regulatory action or civil society greenwashing allegations within 18 months of assessment. This criterion was selected because purpose–ecology divergence should manifest in external accountability events if the framework is capturing substantive ethical conflict.

Inter-rater reliability: Two independent coders analyzed all 312 purpose declarations. Cohen's κ for SAS composite scores was .84 (95% CI [.79, .89]), indicating strong agreement. For TCA categorization, $\kappa = .81$ (95% CI [.74, .87]). Disagreements were resolved through consensus coding with a third adjudicator.

3.7 Data Analysis Techniques

Three analytical approaches were employed. First, descriptive statistics characterized purpose declaration characteristics and ecological performance across sectors and jurisdictions. Second, logistic regression models assessed the predictive relationship between PEDF components and the binary outcome of external accountability event occurrence. Model specification included SAS, DPGA, TCA, firm size (log revenue), sector fixed effects, and country fixed effects. Third, classification performance was evaluated using area under the receiver operating characteristic curve (AUC-ROC), accuracy, precision, recall, and F1 score, with 5-fold stratified cross-validation to prevent overfitting. The PEDF classification performance was compared against a benchmark model using conventional ESG ratings as predictors. Statistical significance was assessed at $\alpha = .05$, with Bonferroni correction for multiple comparisons where appropriate.

3.8 Ethical Considerations

All data used in this study were de-identified and publicly available. No confidential corporate information, personally identifiable information, or proprietary data were accessed. The study analyzes organizational-level disclosures and does not involve human subjects research. Institutional Review Board exemption was granted under category 4 (research involving the collection or study of existing data, documents, and records that are publicly available). The research was conducted in accordance with the Declaration of Helsinki principles for research integrity.

4. Results

4.1 Data Presentation

Table 1 presents descriptive statistics for the key PEDF components and ecological performance indicators across the full sample and by sector.

Table 1. Descriptive Statistics by Sector (2018–2024)

Indicator	Energy (n=58)	Financial (n=72)	Consumer (n=64)	Technology (n=51)	Industrials (n=67)
SAS composite (0–12), M (SD)	6.42 (2.31)	4.87 (1.94)	5.63 (2.12)	5.01 (1.87)	5.94 (2.08)
DPGA, M (SD)	0.47 (0.23)	0.31 (0.18)	0.39 (0.21)	0.28 (0.16)	0.42 (0.22)
TCA sustained, %	34.5	48.6	40.6	52.9	37.3
GHG intensity (tCO_2e/$M), M (SD)	412.3 (187.4)	18.7 (9.2)	84.2 (41.6)	12.4 (6.8)	156.8 (72.3)
External accountability event, %	29.3	12.5	18.8	9.8	22.4

Note. SAS = Semantic Alignment Score; DPGA = Disclosure–Performance Gap Analysis; TCA = Temporal Coherence Assessment. Higher DPGA indicates greater divergence.

Table 1 reveals substantial sectoral variation. Energy firms exhibit the highest semantic alignment scores (M = 6.42) but also the highest disclosure–performance gaps (M = 0.47) and the highest rate of external accountability events (29.3%). Technology firms show the lowest DPGA (M = 0.28) and the highest proportion of sustained temporal coherence (52.9%), alongside the lowest accountability event rate (9.8%). Financial services firms occupy an intermediate position on most indicators but exhibit the second-lowest accountability event rate (12.5%) despite moderate SAS scores.

Table 2 presents the correlation matrix for primary study variables.

Table 2. Correlations Among Primary Variables

Variable	1	2	3	4	5
1. SAS	—				
2. DPGA	.42**	—			
3. TCA	.31**	-.38**	—		
4. Firm size (log revenue)	.24*	-.08	.19	—	
5. Accountability event	.18	.51**	-.44**	.12	—

Note. SAS = Semantic Alignment Score; DPGA = Disclosure–Performance Gap; TCA = Temporal Coherence. *p < .05, **p < .01.

The correlation pattern indicates that higher semantic alignment scores are positively associated with disclosure–performance gaps (r = .42, p < .01), suggesting that firms making more specific ecological claims are also more likely to exhibit divergence from those claims. Temporal coherence is negatively associated with DPGA (r = -.38, p < .01) and with accountability events (r = -.44, p < .01), indicating that sustained commitments are less likely to mask ecological underperformance.

4.2 Analysis of Results

Model Performance. The full PEDF model, incorporating SAS, DPGA, TCA, and control variables, achieved 89.4% classification accuracy (AUC = .92, 95% CI [.89, .95]) in predicting external accountability events within 18 months. In comparison, the benchmark model using conventional ESG ratings achieved 72.1% accuracy (AUC = .74, 95% CI [.68, .80]). The improvement in AUC of .18 was statistically significant (DeLong test, z = 4.87, p < .001).

Table 3 presents the full logistic regression results.

Table 3. Logistic Regression Predicting External Accountability Events

Predictor	β	SE	OR	95% CI	p
SAS	0.14	0.07	1.15	[1.00, 1.32]	.048
DPGA	1.87	0.41	6.49	[2.91, 14.48]	< .001
TCA (sustained vs. abandoned)	-1.42	0.38	0.24	[0.11, 0.51]	< .001
Firm size	0.09	0.12	1.09	[0.86, 1.38]	.472
Energy sector (ref: Technology)	0.87	0.42	2.39	[1.05, 5.44]	.038
Financial sector	-0.31	0.44	0.73	[0.31, 1.73]	.481
Consumer sector	0.28	0.41	1.32	[0.59, 2.96]	.495
Industrials sector	0.52	0.40	1.68	[0.77, 3.67]	.194

Note. SAS = Semantic Alignment Score; DPGA = Disclosure–Performance Gap; TCA = Temporal Coherence. Reference categories: TCA = abandoned; sector = technology. Model $\chi^2(8) = 187.4$, $p < .001$; Nagelkerke $R^2 = .41$.

DPGA emerges as the strongest predictor of accountability events (OR = 6.49, $p < .001$), indicating that each unit increase in disclosure–performance gap multiplies the odds of subsequent external scrutiny by approximately 6.5. Temporal coherence is the second strongest predictor, with sustained commitments associated with a 76% reduction in accountability event odds compared to abandoned commitments (OR = 0.24, $p < .001$). SAS is marginally significant (OR = 1.15, $p = .048$), suggesting that specific claims increase scrutiny exposure independently of performance.

Feature Importance. Relative importance analysis using standardized coefficients confirms DPGA as the dominant predictor ($\beta_std = .47$), followed by TCA ($\beta_std = -.34$) and SAS ($\beta_std = .12$). This ordering indicates that substantive performance gaps matter more than declaration characteristics in determining whether purpose–ecology divergence triggers external accountability.

Classification Performance by Threshold. At the optimal classification threshold (Youden's J = 0.62), the PEDF achieved 89.4% accuracy, 84.2% precision, 78.6% recall, and 81.3% F1 score. The benchmark ESG model achieved 72.1% accuracy, 61.5% precision, 52.4% recall, and 56.6% F1 score.

5. Discussion

5.1 Interpretation

The findings yield three principal interpretations. First, the strong predictive dominance of disclosure–performance gap analysis (DPGA) indicates that purpose–ecology divergence is primarily a substantive phenomenon rather than a communicative one. Firms that declare specific ecological commitments and then fail to meet them face elevated scrutiny exposure regardless of how those commitments are framed. This finding aligns with and extends performative purpose alignment theory's proposition that specific commitments create "discursive costliness" : the costliness arises not from the declaration itself but from the verifiable gap between declaration and performance. The 89.4% classification accuracy demonstrates that this gap can be measured with sufficient precision to support diagnostic classification.

Second, the finding that semantic alignment scores are positively correlated with disclosure–performance gaps ($r = .42$) but only marginally predictive of accountability events suggests a non-obvious dynamic: firms that make more specific ecological claims are also more likely to exhibit larger gaps between claims and performance, yet the claims themselves add relatively little predictive power once performance gaps are accounted for. This pattern is consistent with a strategic interpretation in which firms facing high ecological exposure issue more specific purpose commitments as reputational insurance, while simultaneously engaging in ecological underperformance that those commitments cannot mask. This interpretation receives support from prospect theory's loss aversion logic: firms with high environmental risk profiles may over-invest in symbolic commitment while under-investing in substantive performance.

Third, temporal coherence emerges as a robust protective factor ($OR = 0.24$, $p < .001$), indicating that firms maintaining or strengthening ecological commitments over time are substantially less likely to face external accountability events. This finding provides empirical validation for PPAT's emphasis on narrative architecture across reporting periods and suggests that the credibility of purpose declarations is fundamentally a longitudinal property. A single-year declaration, however specific, provides weaker assurance of substantive commitment than a commitment pattern that persists and deepens across multiple reporting cycles. The framework's integration of temporal coherence thus addresses a dimension largely absent from existing greenwashing measurement instruments .

The comparison with conventional ESG ratings (72.1% accuracy vs. 89.4%) indicates that purpose-specific diagnostic assessment substantially outperforms aggregate sustainability scores in identifying ethically problematic purpose–performance relationships. This finding has implications for the ongoing debate about the informational value of ESG ratings: while aggregate ratings may capture general sustainability orientation, they appear to miss the specific coherence between declared purpose and ecological action that the PEDF is designed to assess.

5.2 Implications

Academic Implications. The study makes three contributions to theory. First, it operationalizes performative purpose alignment theory's core constructs into measurable dimensions, demonstrating that the theory's propositions about semantic alignment, tonal configuration, and narrative architecture are empirically tractable . Second, it extends greenwashing measurement scholarship by introducing purpose-specific diagnostic dimensions—particularly temporal coherence—not captured in existing instruments . Third, it provides evidence that purpose declarations function as binding commitments whose ethical status can be assessed through systematic comparison with ecological outcomes, thereby bridging the gap between discursive theories of corporate purpose and empirical sustainability assessment.

Practical Implications. For administrators, the framework offers a replicable diagnostic protocol that can be implemented using publicly available data. The finding that DPGA and TCA are the dominant predictors of external scrutiny suggests that internal monitoring should prioritize: (1) quarterly tracking of performance against specific ecological commitments articulated in purpose declarations, with gap thresholds triggering escalation to board-level review; and (2) multi-year assessment of commitment trajectory, with dilution or abandonment of prior ecological commitments treated as a leading indicator of purpose-washing risk. The 18-month prediction horizon suggests that diagnostic assessments provide sufficient lead time for corrective action before external accountability events materialize.

For policymakers, the framework provides a basis for regulatory scrutiny of corporate purpose communication that is more targeted than aggregate ESG disclosure requirements. Regulators could require firms to report against the specific dimensions the PEDF identifies as diagnostic—particularly the verifiable gap between stated ecological commitments and measured performance—rather than relying on composite ratings that may obscure purpose-specific divergence.

5.3 Limitations

1. **Sample scope and generalizability.** The sample is limited to listed firms in three African jurisdictions, which, while theoretically diagnostic, may not generalize to other institutional contexts. Purpose–ecology dynamics in jurisdictions with stronger environmental enforcement or more mature sustainability reporting infrastructures may differ systematically.

2. **Reliance on publicly available ecological data.** Ecological performance indicators vary in granularity and verification across firms and jurisdictions. While multiple imputation addressed missing data, the framework's accuracy may be attenuated where ecological disclosure is sparse or unverified.
3. **Cross-sectional design and causal inference.** The study establishes predictive associations between framework components and accountability events but cannot establish causal direction. Firms may issue specific purpose commitments because they anticipate scrutiny, rather than scrutiny following from commitment–performance gaps.
4. **Textual focus and multimodal omission.** The analysis treats purpose declarations as textual artifacts, excluding visual and multimodal elements that may contribute to purpose communication and credibility assessment .

5.4 Future Research Directions

1. Extension of the framework to additional jurisdictional contexts, particularly comparative analysis between African and European or North American firms to assess institutional contingency in purpose–ecology dynamics.
2. Longitudinal design examining whether administrators' decision-making changes following diagnostic assessment, and whether such changes reduce subsequent accountability event risk.
3. Integration of multimodal analysis incorporating visual and design elements of purpose communication, addressing the limitation noted above.
4. Development of predictive machine learning models incorporating additional data sources, such as social media discourse and civil society monitoring data, to enhance early-warning capabilities.

6. Conclusion

This study developed and validated the Purpose–Ecology Diagnostic Framework, demonstrating that purpose–ecology divergence can be classified with 89.4% accuracy through integrated assessment of semantic alignment, disclosure–performance gaps, and temporal coherence. The framework substantially outperforms conventional ESG ratings (72.1% accuracy) in identifying firms at risk of external accountability events, establishing purpose-specific diagnostics as a more precise instrument for sustainability governance than aggregate sustainability scores. The principal contribution is a replicable diagnostic protocol that treats corporate purpose declarations as binding commitments whose ethical coherence with ecological realities can be systematically evaluated. For administrators, the framework provides actionable metrics—particularly the disclosure–performance gap and temporal commitment trajectory—that can be

monitored to identify divergence risk with an 18-month lead time. As corporate purpose declarations proliferate globally, the capacity to distinguish substantive commitment from performative gesture becomes increasingly consequential; the framework developed here offers a foundation for that distinction, and future research should extend its application across institutional contexts and integrate multimodal communicative elements to enhance its diagnostic precision.

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