



Climate-Related Financial Disclosure and Greenwashing Control in African Capital Markets: A Comparative Analysis of Regulatory Readiness

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ABSTRACT

This study examined regulatory readiness for climate-related financial disclosure and greenwashing control in Nigeria, South Africa, Kenya, Morocco and Ghana. It adopted comparative doctrinal and institutional research designs and reviewed securities legislation, listing requirements, sustainability guidelines, green-bond rules, governance codes, IFRS S1 and IFRS S2 adoption roadmaps, assurance arrangements, enforcement mechanisms and investor-redress procedures available up to 31 July 2026. Regulatory readiness was assessed using an equal-weighted 12-criterion index with explicit 0–2 scoring rules covering legal status of disclosure, entity coverage, greenhouse-gas reporting, materiality, climate-transition disclosure, scenario analysis, Scope 3 emissions, assurance, green-product labelling, supervision, penalties and investor redress. The findings showed substantial regulatory development but uneven legal force and implementation. Nigeria, Kenya and Ghana had established pathways towards ISSB alignment, although general mandatory application remained largely future-dated. South Africa combined voluntary corporate climate guidance with stronger binding requirements for sustainability-labelled debt, while Morocco maintained mandatory ESG reporting but less complete climate-specific coverage. Green-bond regulation was generally more developed than controls over broad sustainability claims and ESG product labels. All five jurisdictions were classified as Developing, with readiness scores ranging from 54.2% to 66.7%. Ghana and Kenya recorded the joint-highest scores. The study concludes that effective greenwashing control requires enforceable disclosure, claim substantiation, independent assurance, active supervision, proportionate sanctions and accessible investor remedies.

Keywords: climate-related financial disclosure; greenwashing; regulatory readiness; African capital markets; IFRS S1 and IFRS S2; sustainable finance.

INTRODUCTION

Background to the Study

Climate-related risks increasingly affect corporate assets, cash flows, financing conditions and investment decisions, while growth in sustainable finance has increased exposure to greenwashing through selective disclosure, unsupported labels and weakly substantiated environmental claims (Dempere et al., 2024).

Climate-related financial disclosure seeks to reduce information asymmetry by connecting material climate risks and opportunities to governance, strategy, risk management, metrics and targets. IFRS S1 and IFRS S2 established a global investor-focused baseline for sustainability- and climate-related financial disclosure, while IOSCO's endorsement strengthened their capital-market relevance (IFRS Foundation, 2023a, 2023b; IOSCO, 2023).

Technical alignment, however, does not itself create enforceability. Domestic legal incorporation, entity coverage, effective dates, assurance, supervision, sanctions and investor remedies determine regulatory effectiveness, particularly where environmental claims remain voluntary or weakly substantiated (Steuer & Tröger, 2022).



This distinction is important in African capital markets, where sustainability regulation combines legislation, listing requirements, governance codes, green-bond rules, voluntary guidance and ISSB adoption roadmaps. The study therefore compares Nigeria, South Africa, Kenya, Morocco and Ghana to determine whether their frameworks provide an enforceable regulatory chain connecting climate disclosure, verification, supervision, sanctions and investor protection.

Research Problem and Identified Gaps

The central problem is the gap between expanding climate and sustainability claims in African capital markets and the completeness and enforceability of the frameworks governing them. Although the selected jurisdictions have developed sustainability-disclosure rules, green-bond frameworks and ISSB implementation pathways, these measures differ materially in legal force, coverage and effective application.

Technical alignment with IFRS S1 and IFRS S2 therefore cannot be equated with regulatory readiness. Voluntary guidance, future-dated roadmaps and binding requirements create different compliance consequences, while disclosure alone may inadequately constrain greenwashing where claim substantiation, assurance, supervision and investor remedies remain weak (Steuer & Tröger, 2022; Dempere et al., 2024).

Existing literature largely examines disclosure, assurance, greenwashing or individual jurisdictions separately. This study addresses the resulting comparative gap by applying a common 12-criterion framework to Nigeria, South Africa, Kenya, Morocco and Ghana and distinguishing technical alignment from operative legal enforceability and institutional readiness.

Research Questions

The study addressed four questions:

1. What climate-related financial-disclosure requirements applied in the selected African capital markets?
2. To what extent were the frameworks aligned with IFRS S1 and IFRS S2?
3. How adequately did they regulate sustainability claims, green-product labelling and assurance?
4. What supervisory, enforcement, penalty and investor-redress mechanisms supported greenwashing control?

Research Objectives

The study compared regulatory readiness for climate-related financial disclosure and greenwashing control in selected African capital markets. Specifically, it:

1. examined applicable climate-disclosure and sustainable-finance regulatory instruments;
2. evaluated their alignment with IFRS S1 and IFRS S2;
3. assessed controls over sustainability claims, green products and assurance; and
4. compared supervisory enforcement, penalties and investor-redress mechanisms.

Significance and Contribution of the Study

The study contributes to climate-finance regulation by integrating disclosure, claim substantiation, assurance, supervision, sanctions and investor redress within a single comparative framework. Applying identical criteria across five African capital markets distinguishes formal sustainability initiatives from operative and enforceable regulatory readiness. The resulting evidence also provides a basis for the proposed African Greenwashing-Control Framework.



LITERATURE REVIEW

Conceptual Review

Climate-Related Financial Disclosure

Climate-related financial disclosure refers to the reporting of material information on how climate change affects an entity's financial position, performance, cash flows, strategy and prospects. It covers physical risks, including floods, droughts, extreme heat and asset damage, and transition risks arising from regulatory change, technological shifts, litigation, carbon pricing and changing market preferences.

IFRS S2 provides the principal international benchmark for climate-related financial reporting. It organises disclosure around four connected areas: governance, strategy, risk management, and metrics and targets (IFRS Foundation, 2023b). Governance disclosures identify board and management responsibility for climate-related matters, while strategy disclosures explain how identified risks and opportunities affect the entity's business model, decision-making and financial prospects. Risk-management disclosures describe how climate risks are identified, assessed, prioritised and integrated into enterprise risk management.

Metrics and targets provide the quantitative foundation for evaluating performance. Relevant disclosures include Scope 1 emissions from controlled operations, Scope 2 emissions associated with purchased energy and material Scope 3 emissions arising throughout the value chain. IFRS S2 also requires information on transition plans, climate targets, resilience and scenario analysis, together with current and anticipated financial effects of climate-related risks and opportunities (IFRS Foundation, 2023a, 2023b).

These requirements move climate reporting away from general environmental narratives towards investor-focused and financially connected information. Their effectiveness, however, depends on legal incorporation, consistent measurement, verification and enforcement.

Sustainability Claims and Greenwashing

Sustainability claims are representations that an entity, activity or financial product contributes to specified environmental or social objectives. Greenwashing occurs when such representations exaggerate, distort, selectively report or conceal actual environmental performance. Common forms include vague sustainability language, unsupported carbon-neutrality or net-zero claims, selective emissions reporting, misleading product labels and omission of material environmental risks.

A company may, for instance, report reductions in direct emissions while excluding substantial value-chain emissions. Likewise, a financial product marketed as "green" may finance carbon-intensive activities where eligibility, exclusion or impact criteria are unclear. Greenwashing therefore concerns the gap between environmental representation and verifiable performance rather than the simple absence of disclosure (Mateo-Márquez et al., 2022).

The problem becomes more significant where taxonomies, measurement methods and materiality thresholds differ. Terms such as "green," "sustainable," "responsible" and "climate-friendly" may be used with considerable discretion unless regulators prescribe clear definitions and substantiation requirements. Effective control therefore requires comparable metrics, credible classifications, evidence supporting material environmental claims and sanctions where representations are misleading.

External Assurance and Verification

External assurance strengthens confidence in sustainability information by subjecting reported data and claims to independent examination. Limited assurance generally relies on enquiries, analytical procedures and selected tests and provides a lower level of confidence. Reasonable assurance involves more extensive evidence gathering and supports a stronger conclusion regarding whether the reported information complies with the applicable criteria.



Verification may also focus on specific matters such as greenhouse-gas emissions, allocation of green-bond proceeds or progress against sustainability targets. Its reliability depends on the independence, competence and professional standards of the assurance provider, together with the scope and quality of evidence examined.

Although sustainability assurance has expanded internationally, much of it has remained limited in scope and has often excluded forward-looking claims, transition plans and value-chain emissions (IFAC et al., 2025). Assurance should therefore be assessed as part of a broader regulatory structure rather than treated as conclusive evidence that greenwashing has been controlled.

Green Financial Products and Labelling

Green financial products seek to channel capital towards environmentally beneficial activities. Green bonds typically finance or refinance specified eligible projects and require mechanisms for identifying, tracking and reporting the use of proceeds. Sustainability-linked securities differ because their financial terms depend on the issuer's performance against predetermined sustainability targets.

Climate and ESG funds select assets according to stated environmental or sustainability criteria. These labels can become misleading where investment-screening methodologies are unclear, ratings are inconsistent or portfolios continue to contain activities that conflict with the product's stated environmental objectives.

Credible product regulation therefore requires defined investment objectives, transparent eligibility criteria, portfolio consistency, measurable performance indicators and periodic reporting. Green bonds additionally require reliable use-of-proceeds controls and, where appropriate, pre- and post-issuance external review. Environmental integrity cannot be established by a product name alone.

Regulatory Readiness

Regulatory readiness refers to the legal and institutional capacity of a jurisdiction to convert sustainability objectives into enforceable capital-market requirements. It includes the ability to prescribe decision-useful disclosures, define covered entities and products, verify environmental representations, supervise continuing compliance, investigate suspected misconduct, impose proportionate sanctions and provide remedies for investors.

This concept is broader than publication of voluntary guidelines or announcement of future IFRS S1 and IFRS S2 adoption. Effective readiness also requires competent supervisory institutions, clear statutory mandates, suitable data and reporting systems, trained personnel and coordination among securities regulators, stock exchanges, reporting authorities and other relevant institutions.

A jurisdiction may therefore demonstrate substantial formal alignment with international standards while remaining operationally weak where assurance, supervision, sanctions or investor remedies are incomplete. The distinction between **rule adoption and implementation capacity** forms the central basis of the present comparison.

Conceptual Relationship

The study conceptualised greenwashing control as the outcome of an interconnected regulatory chain. Climate-disclosure requirements generate information about material risks, emissions and transition strategies. Verification and assurance test the credibility of that information. Regulatory supervision increases the likelihood that misleading statements or omissions will be detected, while sanctions raise the cost of non-compliance. Investor complaint and redress mechanisms provide correction or compensation where misleading environmental claims cause loss.

Weakness in any part of the chain reduces overall effectiveness. Disclosure without verification may legitimise unsupported claims, while assurance without regulatory follow-up may identify deficiencies without producing

correction. Regulatory readiness therefore depends on the combined effectiveness of disclosure, substantiation, assurance, supervision, sanctions and investor redress.

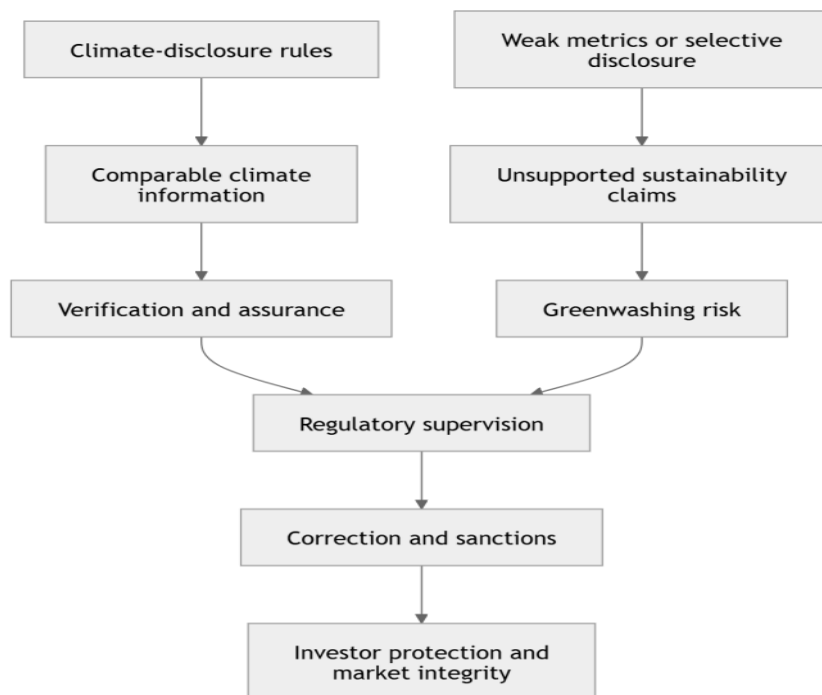


Figure 1. Analytical pathway connecting climate-related financial disclosure with greenwashing control.

Source: Authors' conceptualisation based on IFRS Foundation (2023a, 2023b), IOSCO (2023), Steuer and Tröger (2022), and Free et al. (2024).

Theoretical Review

The study draws on Legitimacy Theory and Institutional Theory. Legitimacy Theory explains why firms disclose sustainability information to maintain acceptance among investors, regulators and society. It is relevant to greenwashing because reputational and financing incentives may encourage symbolic environmental communication through selective metrics, ambitious targets or weakly verified claims.

Institutional Theory provides the principal regulatory explanation. It attributes organisational and regulatory convergence to coercive, normative and mimetic pressures arising from legislation, professional standards and imitation of peer jurisdictions. The increasing adoption of IFRS S1 and IFRS S2 illustrates such convergence, although differences in legal mandates, institutional capacity and implementation arrangements can produce uneven enforcement.

Together, the theories suggest that greenwashing risk is greatest where incentives to display environmental legitimacy are strong but verification, supervision and sanctions remain weak.

Empirical Review

Empirical evidence generally shows that sustainability disclosure improves transparency but does not necessarily prevent symbolic reporting or greenwashing. Studies have identified selective disclosure, vague environmental claims, weak accountability and differences between reported sustainability performance and underlying environmental outcomes (de Freitas Netto et al., 2020; Mateo-Márquez et al., 2022; Montgomery et al., 2023).

Assurance can improve reporting credibility, although its effectiveness depends on independence, scope, professional competence and regulatory consequences. Recent evidence similarly shows that governance



structures, certifications and sustainability committees do not consistently prevent symbolic reporting where measurement and verification remain weak (Pratama et al., 2025; Sari et al., 2026).

African evidence indicates similar implementation gaps. Nigerian research shows that sustainability-reporting quality matters more than disclosure volume, while studies in South Africa and Morocco identify weaknesses in standardisation, climate metrics and enforcement despite increasing alignment with international reporting expectations (Nwaigwe et al., 2022; Adardour et al., 2025).

The literature therefore establishes that effective greenwashing control requires more than formal reporting standards. Disclosure quality, assurance, product classification, supervision and sanctions interact in determining regulatory effectiveness. However, existing African studies remain largely jurisdiction-specific, firm-focused or perception-based. Few apply identical legal and institutional criteria across multiple African capital markets or integrate IFRS alignment, product labelling, assurance, enforcement and investor redress within one comparative framework.

This study addresses that gap through a common 12-criterion assessment of Nigeria, South Africa, Kenya, Morocco and Ghana.

METHODS

Research Design

The study adopted a comparative doctrinal and institutional design to examine climate-related financial disclosure and greenwashing control in Nigeria, South Africa, Kenya, Morocco and Ghana. The doctrinal analysis assessed the legal status, scope and enforceability of relevant legislation, listing requirements, reporting standards, guidelines and green-finance instruments. The institutional analysis examined supervisory authority, assurance, enforcement, penalties and investor-redress mechanisms.

The same functional criteria were applied across jurisdictions to compare regulatory substance and institutional readiness rather than document titles alone.

Study Population and Unit of Analysis

The study covered climate- and sustainability-related capital-market instruments and their supervising institutions in the five jurisdictions. Sources included securities legislation, listing rules, disclosure guidelines, green-bond frameworks, governance codes, enforcement arrangements and investor-complaint procedures. Each legal or institutional requirement constituted the unit of analysis, while each jurisdiction constituted the unit of comparison. IFRS S1, IFRS S2 and IOSCO materials provided the international benchmark

Sample and Sampling Technique

Purposive jurisdictional and documentary sampling was used. Nigeria, South Africa, Kenya, Morocco and Ghana were selected to capture variation in market development, regulatory architecture, sustainable-finance activity and ISSB implementation. Documents were included where they addressed at least one RRI criterion and originated from an authoritative source. The documentary cut-off date was 31 July 2026.

Data Sources and Search Strategy

Primary materials were obtained from official repositories of securities regulators, governments, stock exchanges, financial-reporting authorities, the IFRS Foundation and IOSCO. Secondary literature was drawn principally from Scopus, Web of Science and SSRN, supplemented by relevant institutional publications.

Search terms combined climate disclosure, greenwashing, IFRS S1, IFRS S2, assurance, green bonds, ESG claims, securities regulation, enforcement and investor protection with the name of each jurisdiction. The latest



operative version of each instrument at 31 July 2026 was used. Primary legal and regulatory sources established legal status and enforceability, while secondary sources supported interpretation and triangulation.

Inclusion and Exclusion Criteria

Materials were included where they addressed climate disclosure, sustainability claims, green financial products, assurance, enforcement or investor protection and constituted official legal or regulatory instruments, authoritative institutional publications or peer-reviewed research. Secondary literature was generally limited to 2020–31 July 2026, while older operative legal instruments were retained. Duplicated, superseded, promotional, anonymous or non-capital-market materials were excluded. Future-dated reforms were recorded as transitional rather than operative requirements.

Regulatory Readiness Index

A 12-criterion Regulatory Readiness Index (RRI) was developed to compare legal and institutional readiness across the five jurisdictions. The criteria covered: legal status of disclosure, entity coverage, greenhouse-gas reporting, materiality, climate-transition disclosure, scenario analysis, Scope 3 emissions, assurance, green-product labelling, supervisory enforcement, penalties and investor redress.

Each criterion was scored 0–2. A score of 0 indicated no identified applicable requirement or mechanism; 1 indicated partial, voluntary, transitional or narrowly applicable readiness; and 2 indicated an operative and sufficiently developed requirement or institutional mechanism supported by identifiable regulatory consequences.

All criteria were equally weighted because no validated basis existed for assigning differential weights. The maximum score was therefore 24:

$$\text{RRI (\%)} = (\text{Total score} / 24) \times 100$$

Scores were classified as Nascent (0–24.9%), Emerging (25–49.9%), Developing (50–74.9%) and Advanced (75–100%). These bands were analytical rather than externally validated benchmarks.

Primary legal and regulatory evidence determined legal force and enforceability. Future-dated measures were coded as transitional, and technical ISSB alignment was distinguished from current legal application. Table 3.1 provides the operational definitions, scoring rules and evidential requirements.

Table 3.1. Operationalisation, Scoring and Evidence Requirements for the Regulatory Readiness Index

Criterion	Operational meaning	Score 0	Score 1	Score 2	Minimum acceptable evidence
1. Legal status of climate-related disclosure	Extent to which capital-market entities are subject to an operative obligation to provide climate- or sustainability-related financial disclosure	No applicable framework identified	Voluntary guidance, comply-or-explain framework, transitional arrangement or future-dated mandatory requirement	Operative mandatory disclosure requirement with identifiable regulatory or listing consequences	Legislation, regulation, binding listing rule, regulatory directive, operative reporting standard or official adoption instrument
2. Scope of covered entities	Clarity and breadth of entities legally or	No defined entity coverage	Limited, unclear, sector-specific or transitional coverage	Clearly defined and materially broad coverage of listed entities, public-	Provision identifying entity classes, thresholds, sectors, market



	institutionally covered by the disclosure framework			interest entities or other relevant capital-market participants	segments or reporting entities
3.Greenhouse-gas reporting	Requirement to report quantified greenhouse-gas emissions using identifiable measurement principles	No GHG reporting provision identified	GHG reporting encouraged, voluntary, partial, transitional or confined to limited emissions categories	Operative requirement for quantified material GHG emissions under defined measurement rules	Reporting standard, regulation, listing requirement or regulatory guideline specifying emissions reporting
4.Materiality standard	Existence of a defined basis for determining which sustainability or climate information must be reported	No identifiable materiality standard	General, unclear or voluntary materiality approach, or approach not clearly investor-focused	Clear operative materiality requirement consistent with decision-useful information for investors or other specified report users	Legal/regulatory text or incorporated reporting standard defining materiality
5. Climate-transition disclosure	Requirement to disclose climate-transition strategy, targets, actions, resources or transition-plan information where applicable	No transition-related disclosure identified	Transition information encouraged, voluntary, incomplete, transitional or future-dated	Operative requirement to disclose material transition-related strategy and, where applicable, transition-plan information	Reporting standard, listing rule or other binding instrument addressing climate transition strategy, targets, actions or plans
6. Scenario analysis and climate resilience	Requirement to assess and disclose the resilience of strategy to climate-related changes using scenario analysis or an equivalent technique	No scenario/resilience provision identified	Voluntary, recommended, transitional or materially incomplete requirement	Operative requirement for climate-resilience assessment using scenario analysis or a recognised equivalent	Climate-reporting standard or rule expressly addressing scenario analysis or resilience assessment
7. Value-chain/Scope 3 emissions	Extent to which material indirect emissions arising throughout the entity's value chain are covered	No Scope 3/value-chain provision identified	Voluntary, transitional, subject to implementation relief, materially restricted or incomplete coverage	Operative requirement to disclose material Scope 3/value-chain emissions, subject only to defined regulatory relief	Provision expressly addressing Scope 3 or value-chain GHG emissions
8. External assurance and verification	Requirement for independent	No relevant assurance/verification arrangement	Voluntary, future-dated, limited to certain products or	Operative mandatory independent assurance/verification	Reporting/assurance regulation, listing requirement, green-



	examination of sustainability information, emissions information or environmental claims	identified	otherwise partial	requirement covering material climate/sustainability information	product rule or official assurance standard incorporated into the regime
9. Green-product labelling and claim substantiation	Controls ensuring that green, sustainable, transition or equivalent product labels are defined and supported by verifiable eligibility and reporting requirements	No identifiable labelling or substantiation controls	Voluntary taxonomy, limited product coverage, partial criteria or non-binding guidance	Binding product eligibility/labelling requirements supported by substantiation, use-of-proceeds or continuing reporting controls	Green-bond rules, taxonomy, fund-labelling regulation, listing rules or sustainable-finance regulations
10. Supervisory enforcement	Capacity and demonstrated arrangements for regulators or exchanges to review compliance, seek information, investigate and require correction	No identifiable supervisory authority	Statutory authority exists but climate/sustainability application or operational evidence is limited	Clear authority accompanied by documented supervisory review, monitoring, investigation or corrective mechanisms applicable to the assessed requirements	Statute plus supervisory report, review procedure, enforcement notice, market-surveillance evidence or equivalent official record
11. Penalties and corrective measures	Availability of proportionate consequences for failure to comply or for materially misleading sustainability representations	No applicable sanction identified	General securities/listing sanctions potentially applicable but climate/sustainability application is indirect or uncertain	Clearly applicable sanctions or corrective measures, including fines, directions, restatement, withdrawal of labels, suspension or equivalent consequences	Statutory sanction provision, listing rule, regulatory penalty provision or official enforcement procedure
12. Investor complaints and redress	Accessibility of mechanisms through which investors may complain, obtain correction, seek compensation or pursue adjudicatory remedies	No identifiable investor complaint/redress mechanism	General complaint or dispute mechanism exists but climate/sustainability application is indirect or untested	Accessible formal mechanism capable of receiving misleading-sustainability claims and providing regulatory, adjudicatory or compensatory remedies	Regulator complaint procedure, tribunal mechanism, statutory civil remedy, administrative hearing process or investor-protection procedure

Source: Authors' construction based on IFRS S1, IFRS S2, IOSCO (2023) and the comparative doctrinal and institutional framework of the study.



Five coding rules guided application of the index. First, only requirements operative by 31 July 2026 were treated as currently mandatory; future-dated reforms were coded as transitional. Second, instruments were classified according to their actual legal effect rather than their titles. Third, technical alignment with IFRS S1 and IFRS S2 was distinguished from legal enforceability. Fourth, statutory enforcement authority was distinguished from evidence of actual supervisory activity. Fifth, where authoritative evidence was insufficient, the item was recorded as unresolved pending further verification rather than automatically treated as absent.

Table 3.2. Classification of Regulatory Instruments by Legal and Regulatory Effect

Instrument category	Treatment in the study	Typical scoring implication
Primary legislation	Binding where operative and applicable to the assessed entities or conduct	Eligible for score 2 where the relevant substantive requirement and enforcement basis are sufficiently complete
Subsidiary regulation/regulatory rule	Binding within the authority delegated to the regulator	Eligible for score 2 where operative and enforceable
Binding stock-exchange listing requirement	Mandatory for securities or issuers within the relevant listing segment	Eligible for score 2 within its defined scope
Mandatory reporting/financial-reporting standard incorporated domestically	Binding on specified reporting entities from its effective domestic application date	Eligible for score 2
Comply-or-explain provision	Regulatory obligation to disclose compliance or explain deviation, but not equivalent to unconditional substantive compliance	Normally score 1 unless the specific criterion independently imposes a binding substantive requirement
Corporate-governance code	Classified according to its domestic legal or listing effect, rather than its title	Score 1 or 2 depending on actual enforceability
Regulatory guideline/guidance	Binding only where the issuing framework expressly gives it obligatory effect; otherwise treated as guidance	Normally score 1 where substantive but voluntary
Adoption roadmap	Evidence of regulatory commitment and scheduled future implementation; not treated as current mandatory law before its effective date	Score 1 for the relevant prospective criterion
Voluntary professional guidance	Evidence of technical development or expected good practice, but not legal compulsion	Score 1 where sufficiently substantive
Consultation paper/draft proposal	Prospective evidence only; not an operative regulatory requirement	Not scored as an operative requirement
Policy strategy/action plan	Evidence of governmental or regulatory direction, unless independently given binding legal force	Normally contextual evidence rather than score 2
Voluntary taxonomy	Technical classification framework without compulsory application	Normally score 1 for product classification where



		sufficiently developed
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Source: Authors' doctrinal classification framework.

Regulatory instruments were classified according to their actual legal effect: legislation, subsidiary rules and binding listing requirements were treated as mandatory where enforceable; comply-or-explain provisions were treated as intermediate; and voluntary guidance, roadmaps, policy strategies and taxonomies were treated as partial or transitional unless independently given binding force

The index was expressed as:

Regulatory Readiness Index (RRI)

$$RRI_j = \left(\frac{\sum_{k=1}^{12} S_{jk}}{24} \right) \times 100$$

- RRI_j = Regulatory Readiness Index for jurisdiction j ;
- S_{jk} = score assigned to jurisdiction j for criterion k ;
- $k=1, \dots, 12$ = the twelve assessment criteria; and
- 24 = the maximum possible score.

The index converts the total score obtained across the 12 criteria into a percentage of the maximum score of 24.

The twelve criteria were:

1. mandatory or voluntary disclosure;
2. scope of covered entities;
3. greenhouse-gas reporting;
4. materiality standard;
5. climate-transition disclosure;
6. scenario analysis;
7. value-chain emissions;
8. external assurance;
9. green-product labelling;



10. supervisory enforcement;
11. penalties; and
12. investor complaints and redress.

Each criterion received equal weighting to maintain transparency and avoid unsupported assumptions about relative importance.

Aggregate results were interpreted as follows:

RRI score	Readiness classification
0–24	Nascent
25–49	Emerging
50–74	Developing
75–100	Advanced

A score of 2 was awarded only where a meaningful obligation existed and was supported by a credible enforcement mechanism. Mere reference to a regulatory subject was insufficient. Where a rule existed without clear evidence of practical supervision, its legal presence was recorded with an implementation qualification. The index therefore summarised regulatory completeness without equating formal adoption with effective enforcement.

Method of Analysis

Analysis proceeded through doctrinal interpretation, criterion-level coding and cross-country comparison. Each instrument was assessed for authority, legal status, scope, substantive requirements and enforcement consequences, then coded against the 12 RRI criteria. Regulatory authority, supervisory activity and actual enforcement were recorded separately. Domestic provisions were also mapped against IFRS S1 and IFRS S2 before criterion scores were aggregated into jurisdictional readiness percentages. Unresolved evidence was subjected to further verification rather than automatically treated as regulatory absence.

Reliability and Analytical Integrity

A standardised extraction and scoring template was applied across jurisdictions. Each score was linked to an identifiable legal provision, regulatory instrument or authoritative institutional source, with primary legal materials taking precedence over secondary interpretation. Overlapping instruments were assessed collectively but not double-counted. Ambiguous evidence was rechecked against original sources, and where uncertainty remained, the lower defensible score was applied. A final cross-jurisdiction consistency check ensured that comparable evidential conditions attracted comparable scores.

RESULTS AND DISCUSSION

Comparative Regulatory Instruments

Table 4.1 shows that the five jurisdictions had developed significant sustainability-related capital-market frameworks, but through different combinations of binding rules, listing requirements, guidance and transitional ISSB roadmaps. Nigeria, Kenya and Ghana remained largely transitional for general IFRS S1/S2 application at the study cut-off, while maintaining stronger product-level controls for green bonds. South Africa similarly combined voluntary corporate climate guidance with binding sustainability-labelled debt requirements. Morocco differed by already requiring ESG reporting by public issuers, although its climate-specific disclosure content remained less complete.



The comparative evidence therefore shows that legal force, scope and implementation status are more informative than the mere existence of sustainability instruments.

Table 4.1. Comparative Legal and Institutional Characteristics of Principal Climate-Disclosure and Greenwashing-Control Instruments

Country	Principal legislation/regulatory instrument	Effective date/status at 31 July 2026	Principal entities/products covered	Legal status	Enforcement authority and consequences	Assurance/verification	Investor complaints/redress
Nigeria	FRC Roadmap for Adoption of IFRS Sustainability Disclosure Standards, as amended in 2026, and Sustainability Reporting Guideline 1 (SRG 1) 2026	Amended Roadmap and SRG 1 approved/released in February 2026; voluntary adoption operated during 2024–2027; mandatory application for public-interest entities scheduled from 2028 and qualifying SMEs from 2030	Public-interest entities, voluntary adopters and subsequently qualifying SMEs	Transitional adoption framework; IFRS S1/S2 application not generally mandatory at cut-off	FRC has statutory financial-reporting, inspection and regulatory powers; sustainability-specific mandatory enforcement largely prospective at cut-off	Phased pathway from sustainability assurance towards limited and subsequently reasonable assurance	General regulatory and securities-law complaint/remedial mechanisms; no dedicated climate-disclosure compensation mechanism identified
Nigeria	SEC Rules on Green Bonds	Operative from 2018	Corporate, governmental and other issuers seeking registration of green bonds	Binding regulatory rule	SEC approval, continuing reporting and general securities-law enforcement powers; failure may engage applicable SEC regulatory consequences	Independent assessment/certification required; annual follow-up assessment of financed projects and environmental benefits	General SEC investor-complaint and securities-law remedies; no separate green-bond compensation scheme identified
Nigeria	SEC Sustainable Financial Principles and reporting arrangements	Operative during study period	SEC-regulated capital-market entities	Regulatory principles/guidance applicable to	SEC supervisory framework applies; climate-specific	No uniform mandatory entity-wide climate assurance requirement	General SEC investor-protection and complaint



				regulated entities	sanction provisions are not separately prescribed for every principle	arising solely from the principles	architecture
South Africa	JSE Sustainability Disclosure Guidance and Climate Disclosure Guidance	Launched in June 2022 and operative throughout study period	JSE-listed companies and other entities choosing to apply the guidance	Voluntary guidance for general corporate sustainability/climate reporting	Non-application does not itself attract a sustainability-guidance penalty; general JSE listing and securities-law duties remain applicable	No general mandatory assurance requirement created by the voluntary guidance	JSE/FSCA and other applicable financial-consumer complaint mechanisms
South Africa	JSE Debt Listings Requirements and Sustainability/Transition Segment requirements	Sustainability-segment requirements operative from 2020, with subsequent amendments	Issuers seeking listing of green, sustainability-linked or transition debt securities	Binding listing requirements within applicable debt segments	JSE issuer-regulation and listing powers, including corrective action and consequences for non-compliance	Independent external review required for relevant sustainability-labelled debt instruments	JSE and FSCA regulatory channels; general investor and financial-sector dispute mechanisms remain available
South Africa	South African Green Finance Taxonomy	First edition, March 2022; updated work continued during study period	Financial institutions, issuers, investors and users classifying environmentally sustainable activities	Principally voluntary classification framework	No direct sanction merely for non-use; general laws remain applicable to misleading representations	No general mandatory assurance requirement solely from taxonomy use	General financial-market and consumer-redress mechanisms
Kenya	ICPAK Roadmap for Adoption of IFRS Sustainability Disclosure Standards	Issued November 2024; voluntary application from 1 January 2024; mandatory application scheduled for	Public-interest entities, including listed entities; subsequently large enterprises and SMEs	Transitional national adoption framework; voluntary at study cut-off	ICPAK standard-setting/professional oversight combined with regulatory supervision by relevant sector	Phased assurance: limited assurance for PIEs from 2028, progressing to reasonable assurance; later dates apply to other entity classes	CMA complaint, investigation and administrative-enforcement mechanisms available for capital-market



		PIEs from 2027, large non-PIEs from 2028 and SMEs from 2029			authorities; mandatory enforcement largely future-dated at cut-off		matters
Kenya	CMA Policy Guidance Note on Green Bonds and related NSE listing provisions	Green-bond regulatory framework launched February 2019	Listed and unlisted green-bond issuers	Regulatory guidance combined with binding applicable listing/regulatory requirements	CMA and NSE may apply regulatory/listing consequences for breach of applicable green-bond requirements	Independent verifier required for green-bond eligibility; continuing disclosure and verification arrangements apply	CMA complaints procedure, investigation, administrative sanctions and, where applicable, prosecution mechanisms
Morocco	AMMC Circular No. 03/19 on financial operations and information, including mandatory ESG reporting	Circular dated 20 February 2019 and formally approved in May 2019; in force during study period	Public issuers and other entities falling within the Circular's scope	Binding regulatory circular	AMMC reviews issuer disclosures and possesses supervisory, investigation and sanction powers under the applicable capital-market framework	Financial statements are subject to statutory audit; the ESG report itself is not subject to a uniform standalone sustainability-assurance requirement equivalent to ISSA 5000	Formal AMMC complaint procedure; investor complaints may be investigated and applicable compensation mechanisms exist for specified market-intermediary failures
Morocco	AMMC Green Bond/Sustainable Bond Guidelines	Operative during study period	Issuers of green and sustainability-labelled bonds	Regulatory guidance operating within securities-approval framework	AMMC supervises issuance documentation and continuing disclosure within its securities-market mandate	External review is embedded in the sustainable-bond framework	General AMMC complaint, investigation and judicial/regulatory remedies
Ghana	ICAG IFRS Sustainability Disclosure Adoption Roadmap	Approved 28 March 2024; voluntary adoption 2024–	Listed entities, regulated non-listed entities, public companies	National adoption roadmap; voluntary at 31 July 2026 for entities not otherwise	ICAG standard-setting authority; relevant securities and sector	General sustainability-assurance arrangements were still developing at cut-off	General SEC complaint and Administrative Hearings



		2026; mandatory adoption for Significant Public Interest Entities from 1 January 2027 and other mandatory adopters from 2028	and specified carbon-intensive sectors; other companies phased subsequently	specifically directed	regulators retain statutory enforcement powers		Committee mechanisms apply to capital-market disputes
Ghana	Securities Industry (Green Bond) Guidelines 2024	Issued 7 March 2024 and effective immediately	Public companies, external companies, supranational institutions, local government authorities and statutory corporations issuing green bonds	Binding SEC Guidelines issued under the Securities Industry Act			



Source: Authors' documentary review of official regulatory instruments and institutional materials available up to 31 July 2026.

The comparison demonstrates that regulatory instruments with similar sustainability objectives differed substantially in legal force and institutional effect. Binding legislation, regulatory rules and listing requirements created direct compliance consequences, whereas voluntary guidance, taxonomies and future-dated adoption roadmaps primarily established technical expectations or transitional pathways. Regulatory readiness was therefore assessed according to the operative legal and institutional effect of each measure at 31 July 2026 rather than the existence, title or announced ambition of the instrument. This distinction was particularly important where technically advanced IFRS S1- and IFRS S2-aligned frameworks had not yet entered mandatory application.

IFRS Alignment and Greenwashing-Control Gaps

Table 4.2 shows that Nigeria, Kenya and Ghana had adopted full ISSB alignment as their intended regulatory destination but remained transitional at 31 July 2026. South Africa demonstrated substantial technical alignment through voluntary JSE guidance, while Morocco imposed mandatory ESG reporting without comprehensive IFRS S2-equivalent climate requirements.

Across the five markets, greenwashing controls were stronger for labelled debt than for general corporate sustainability claims. Green-bond frameworks more commonly prescribed eligibility, use-of-proceeds controls, external review and continuing reporting, whereas ESG fund names, net-zero claims and broad sustainability marketing remained less consistently regulated.

The evidence therefore confirms that technical alignment and legal enforceability are distinct, and that disclosure architecture alone does not fully control misleading environmental claims.

Table 4.2. Comparative IFRS S1 and IFRS S2 Alignment

Country	Alignment assessment	Position
Nigeria	Full alignment as adopted target	Voluntary at cut-off; mandatory application scheduled later
South Africa	Partial alignment	JSE guidance reflects international architecture but is not national mandatory IFRS S1/S2 adoption
Kenya	Full alignment as adopted target	Voluntary at cut-off; phased mandatory application begins in 2027
Morocco	No express alignment	Mandatory ESG reporting exists but does not fully incorporate IFRS S1 and IFRS S2
Ghana	Full alignment as adopted target	Voluntary at cut-off; mandatory application begins in 2027

Source: Authors' assessment.

The comparison showed a clear distinction between **technical alignment and current legal enforceability**. Nigeria, Kenya and Ghana had selected full ISSB adoption as their intended destination but had not yet generally compelled reporting at the cut-off. South Africa had substantial technical alignment through voluntary guidance, while Morocco had binding ESG reporting but less complete climate content.

Regulatory readiness could therefore not be inferred merely from a jurisdiction's stated relationship with IFRS S1 and IFRS S2.

Assurance, Enforcement and Investor Redress

Table 4.3 indicates uneven assurance arrangements across the five markets. Nigeria and Kenya had structured



transition pathways, Ghana remained transitional, while South Africa and Morocco relied more heavily on external review for sustainability-labelled securities.

All five jurisdictions possessed general supervisory and sanctioning powers, but published climate-specific enforcement remained limited. Morocco showed the clearest evidence of routine ESG-report review, while specialised climate-related investor-redress mechanisms remained underdeveloped across the sample.

Table 4.3. Comparative Assurance, Enforcement and Redress

Country	Assurance position	Enforcement and redress	Published climate-greenwashing enforcement
Nigeria	Phased pathway from voluntary to limited and reasonable assurance; external review for green bonds	FRC and SEC possess reporting, inspection, sanction and complaint powers	None identified by cut-off
South Africa	No general mandatory corporate climate assurance; external review required for labelled JSE debt	JSE and FSCA possess listing, market-conduct and corrective powers	None identified by cut-off
Kenya	Voluntary limited assurance moving towards mandatory limited and reasonable assurance	CMA supervision, sanctions and complaint arrangements	None identified by cut-off
Morocco	External review for sustainable securities; no uniform assurance requirement for all ESG reports	AMMC document review, inspection, sanctions, complaints and judicial referral	No climate-specific action identified
Ghana	Corporate sustainability assurance unresolved; green-bond verification and auditor reporting required	SEC investigative powers, administrative penalties and formal hearings	None identified by cut-off

The evidence revealed a consistent distinction between **authority, supervisory activity and actual enforcement**. All five jurisdictions possessed general enforcement powers, but those powers had rarely resulted in published climate-greenwashing decisions. Morocco demonstrated the clearest evidence of routine ESG-report review, while none of the five markets had established a developed body of public climate-greenwashing enforcement decisions.

This enforcement deficit remained one of the strongest common weaknesses in the comparative analysis.

Comparative Regulatory Readiness

The RRI classified all five jurisdictions as Developing, with scores ranging from 54.2% to 66.7%. Ghana and Kenya recorded the joint-highest score of 66.7%, followed by South Africa at 62.5%, Nigeria at 58.3% and Morocco at 54.2%.

The results show that similar aggregate scores arose from different regulatory strengths. Ghana and Kenya benefited from stronger green-product controls and enforcement mechanisms; South Africa from binding sustainability-labelled debt requirements; Nigeria from its ISSB and assurance pathway combined with green-bond regulation; and Morocco from mandatory ESG reporting and supervisory review. The RRI therefore measures documentary regulatory completeness rather than actual enforcement performance.

Table 4.4. Revised Comparative Regulatory Readiness Index

Assessment criterion	Nigeria	South Africa	Kenya	Morocco	Ghana
1. Legal status of climate-related	1	1	1	2	1

disclosure					
2. Scope of covered entities	1	1	1	2	1
3. Greenhouse-gas reporting	1	1	1	1	1
4. Materiality standard	1	1	1	1	1
5. Climate-transition disclosure	1	1	1	0	1
6. Scenario analysis and climate resilience	1	1	1	0	1
7. Value-chain/Scope 3 emissions	1	1	1	0	1
8. External assurance and verification	1	1	1	1	1
9. Green-product labelling and claim substantiation	2	2	2	1	2
10. Supervisory enforcement	1	2	2	2	2
11. Penalties and corrective measures	1	2	2	2	2
12. Investor complaints and redress	2	1	2	1	2
Total score	14	15	16	13	16
RRI percentage	58.30%	62.50%	66.70%	54.20%	66.70%
Classification	Developing	Developing	Developing	Developing	Developing

Source: Authors' regulatory-readiness assessment based on official legal, regulatory and institutional materials available up to 31 July 2026.

All five jurisdictions remained within the Developing readiness category, with scores ranging from 54.2% to 66.7%. Ghana and Kenya recorded the joint-highest score of 66.7%, followed by South Africa at 62.5%, Nigeria at 58.3% and Morocco at 54.2%. The relatively narrow range indicated convergence in regulatory direction but substantial differences in the sources of readiness.

Ghana's position reflected the combination of a structured ISSB adoption pathway with comparatively detailed and enforceable green-bond requirements, including independent review, continuing disclosure, supervision and penalties. Kenya similarly benefited from explicit green-bond controls under which green labels may be withdrawn where eligibility requirements are breached or greenwashing occurs, together with established capital-market investigation and enforcement mechanisms. Neither score implied that general corporate IFRS S2 reporting was already fully mandatory at the study cut-off.

South Africa's score reflected strong regulatory controls over sustainability-labelled debt, including external review, continuing obligations and enforceable listing consequences, while general corporate climate-disclosure guidance remained voluntary. Nigeria combined an advanced ISSB adoption and assurance roadmap with binding green-bond regulation, but general mandatory sustainability reporting remained future-dated. Morocco presented the inverse pattern: ESG reporting by public issuers was already mandatory and subject to supervisory review, but its substantive climate requirements remained less complete in relation to Scope 3 emissions, transition disclosure and scenario analysis.

The results therefore demonstrate that regulatory readiness was multidimensional. A higher aggregate score could arise from stronger product-level controls, disclosure requirements, assurance arrangements or supervisory mechanisms and did not establish superior regulatory performance in every dimension. The RRI should consequently be interpreted as a structured measure of regulatory completeness at the documentary cut-off rather than a ranking of actual enforcement outcomes.

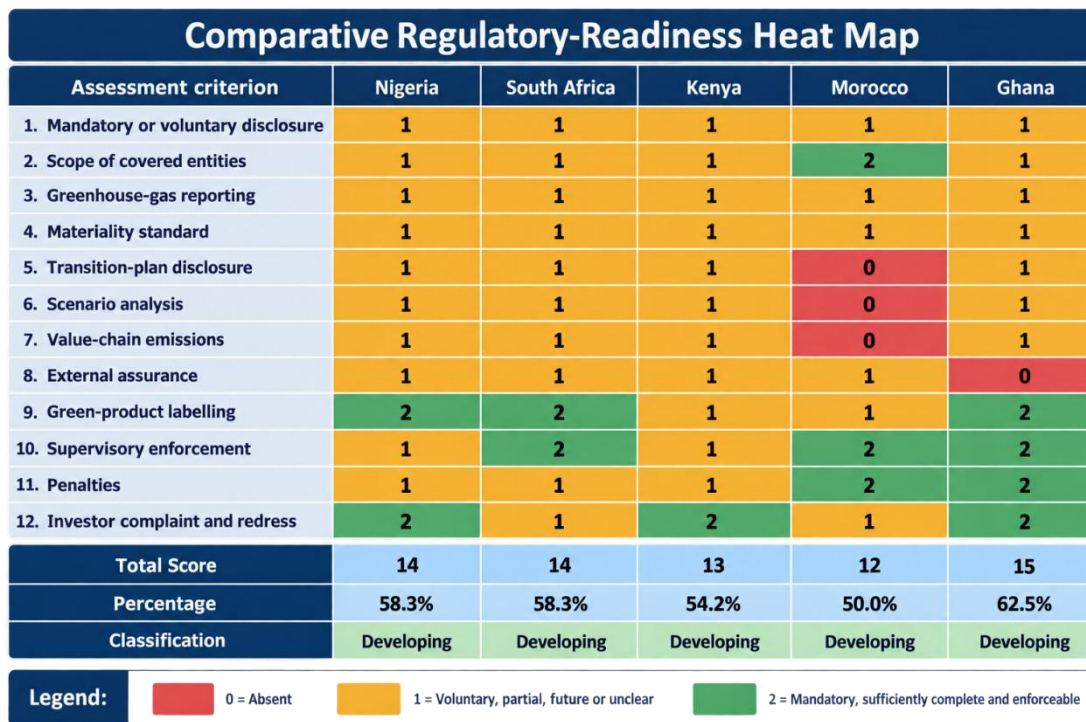


Figure 2. Comparative heat map of climate-disclosure and greenwashing-control readiness in selected African capital markets.

Source: Authors' construction from the Regulatory Readiness Index.

DISCUSSION OF FINDINGS

The findings demonstrate that regulatory readiness cannot be inferred from formal ISSB alignment alone. Nigeria, Kenya and Ghana had advanced adoption pathways, yet general mandatory application remained largely future-dated, while Morocco already imposed ESG reporting without equivalent climate-specific depth. This supports the distinction between technical convergence and operative enforceability.

A second pattern is the stronger development of product-level regulation relative to general corporate sustainability claims. Green-bond frameworks more consistently required eligibility criteria, external review and continuing disclosure, whereas broader claims such as “net zero,” “green” and “sustainable” remained less uniformly defined or substantiated. This confirms that greenwashing control depends on verifiable links between environmental representations and underlying activities.

The results also reveal a persistent enforcement gap. General supervisory powers existed across all five markets, but climate-specific enforcement remained limited. Institutional Theory explains the convergence around international reporting architecture, while Legitimacy Theory helps explain continued incentives for symbolic sustainability communication where verification and sanctions remain weak. The common Developing classification therefore reflects meaningful regulatory progress without a fully integrated chain of disclosure, assurance, supervision, sanctions and investor redress.

African Greenwashing-Control Framework

The comparative findings support a six-pillar framework for strengthening greenwashing control in African capital markets:

Mandatory and proportionate disclosure: progressively require IFRS S1- and IFRS S2-aligned reporting for listed, public-interest and materially climate-exposed entities.

Standardised metrics and classification: require consistent emissions, transition and resilience information and credible green-product taxonomies or eligibility criteria.

Claim substantiation: require material environmental claims to be supported by identifiable methodologies, baselines, targets and performance evidence.

Independent assurance: progressively require recognised assurance or verification for material climate and sustainability information.

Risk-based supervision and sanctions: empower regulators to demand evidence, require correction, withdraw misleading labels and impose proportionate penalties.

Investor complaints and redress: provide accessible complaint, adjudicatory and compensatory mechanisms for misleading sustainability claims.

The framework consolidates the twelve RRI criteria into an integrated regulatory sequence linking disclosure, verification, supervision, sanctions and investor protection.

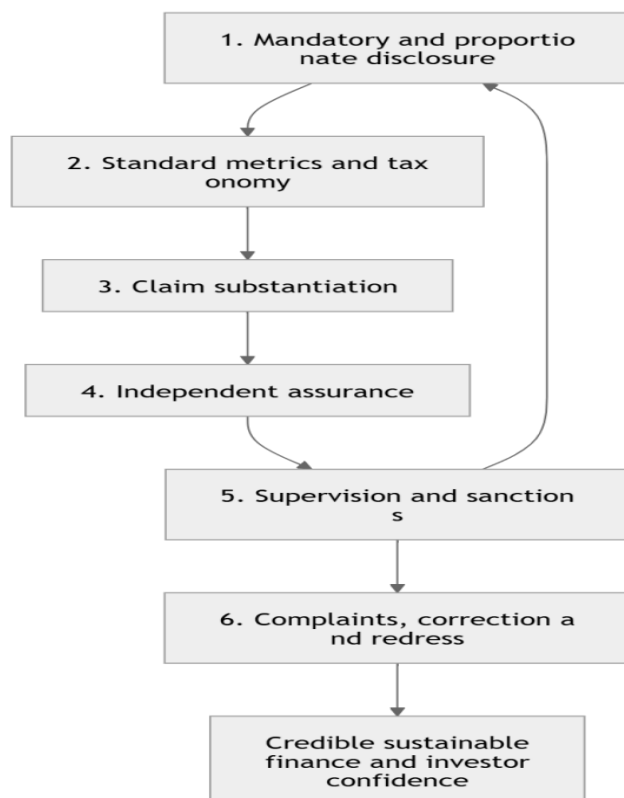


Figure 3. African Greenwashing-Control Framework derived from the Regulatory Readiness Index

Source: Authors' construction based on the comparative doctrinal, institutional and Regulatory Readiness Index findings.

The proposed framework treats disclosure as the beginning rather than the end of regulatory control. Climate information becomes effective for investor protection only where claims can be substantiated, independently examined, challenged by regulators, corrected where necessary and sanctioned where materially misleading.

SUMMARY, RECOMMENDATIONS AND CONCLUSION

Summary

The study compared regulatory readiness for climate-related financial disclosure and greenwashing control in Nigeria, South Africa, Kenya, Morocco and Ghana using a 12-criterion legal and institutional index.



All five markets showed meaningful regulatory development but differed in legal force, climate-specific coverage, assurance and enforcement. General ISSB implementation remained largely transitional in Nigeria, Kenya and Ghana; South Africa combined voluntary corporate guidance with stronger labelled-debt regulation; and Morocco maintained mandatory ESG reporting with less complete IFRS S2-equivalent coverage. Green-bond controls were generally stronger than regulation of broader sustainability claims.

All five jurisdictions were classified as Developing. Ghana and Kenya recorded 66.7%, South Africa 62.5%, Nigeria 58.3% and Morocco 54.2%. The scores indicate regulatory completeness at the documentary cut-off rather than actual enforcement performance.

Recommendations

Five reforms emerge from the comparative findings.

1. **Make climate disclosure progressively mandatory.** Securities regulators should phase IFRS S1- and IFRS S2-aligned requirements across listed, public-interest and materially climate-exposed entities, with proportionate and time-bound transitional relief.
2. **Regulate sustainability claims and green products more directly.** Environmental claims, ESG product names and transition commitments should be supported by defined methodologies, eligibility criteria, measurable targets and continuing evidence. Misleading labels should be corrected, withdrawn or sanctioned.
3. **Strengthen assurance and internal reporting controls.** Material climate information should progressively become subject to recognised independent assurance, while issuers should maintain board-approved controls and documentary support for sustainability representations.
4. **Connect supervision to enforceable consequences and redress.** Regulators and exchanges should apply risk-based review, corrective disclosure, financial penalties and other proportionate measures, while investors should have accessible complaint and compensation pathways for materially misleading claims.
5. **Improve regulatory compatibility across African markets.** Regional institutions should promote interoperable disclosure, taxonomy, assurance and product-labelling principles and support shared technical capacity and cross-border enforcement cooperation.

Conclusion

The study found substantial progress in climate-disclosure and greenwashing-control regulation across the five African capital markets, but no jurisdiction had developed a fully integrated system of mandatory disclosure, claim substantiation, assurance, supervision, sanctions and investor redress by 31 July 2026.

The common Developing classification reflects this mixed position. Regulatory strengths differed across jurisdictions, while green-bond controls were generally more mature than requirements governing broad corporate sustainability claims and ESG-labelled products.

The study concludes that formal ISSB alignment alone is insufficient for regulatory readiness. Effective greenwashing control requires operative disclosure obligations, verifiable environmental claims, independent assurance, active supervision, proportionate sanctions and accessible investor remedies functioning as a coherent regulatory system.

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