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From ISSA 5000 to Public Accountability: When Sustainability Assurance Constitutes a Normative Benchmark for State Responsibility

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Abstract
Purpose: This paper examines how the issuance of ISSA 5000 has transformed sustainability assurance from a corporate reporting practice into a potential normative reference point for public accountability. It aims to conceptualize how the assurance logic embedded in ISSA 5000 can inform state responsibility beyond the private sector.
Method / Design and Approach: The study adopts a conceptual and normative research design grounded in institutional analysis and public accountability theory. Rather than testing empirical hypotheses, it critically analyzes the core assurance principles of ISSA 5000 and systematically extends them into a public-sector accountability framework suitable for governments and supreme audit institutions.
Findings: The paper finds that ISSA 5000 establishes a general assurance logic that, while formally developed for sustainability reporting entities, implicitly embodies normative principles applicable to the state. These principles—materiality, reliability, assurance scope, and responsibility for sustainability outcomes—can be translated into public accountability mechanisms when reframed within a governance and public value context.
Originality and Value: This study is among the first to move beyond interpreting ISSA 5000 as a technical assurance standard and to position it as a normative benchmark for state responsibility. It bridges a critical gap between sustainability assurance and public accountability that remains largely unexplored in current.
Theoretical, Practical and Social Implications: Theoretically, the paper extends assurance theory into the domain of public accountability. Practically, it offers guidance for policymakers, regulators, and supreme audit institutions seeking to enhance sustainability-based oversight. Socially, it contributes to strengthening public trust by aligning sustainability assurance with citizens' expectations of state responsibility.

Keywords: ISSA 5000, Sustainability Assurance, Public Accountability, State Responsibility, Normative Benchmark, Public Sector Governance

1. Introduction

1.1 Background and Context

Over the past decade, sustainability assurance has moved from a peripheral professional practice to a central component of contemporary accountability architectures. This transformation has been driven by intensified climate risk, widening social inequalities, and growing concerns about the long-term consequences of organizational and governmental actions (Adams, 2022 [4]; Cho *et al.*, 2023). Traditional financial assurance frameworks, which focus primarily on historical performance and financial regularity, have increasingly been criticized for their inability to capture sustainability-related impacts that are forward-looking, multidimensional, and inherently uncertain (O'Dwyer & Unerman, 2022; Michelon, 2022 [62]).

In response, sustainability assurance has emerged as a mechanism aimed at enhancing the credibility of sustainability-related information and reinforcing responsibility for environmental and social outcomes. Recent literature emphasizes that sustainability assurance now reflects a governance-oriented logic, extending beyond verification toward shaping expectations of accountability, materiality, and responsibility under uncertainty (Simnett & Huggins, 2022; Velte, 2023) [73, 75]. This evolution has been reinforced by regulatory and standard-setting developments, particularly in Europe and other jurisdictions that have embedded sustainability reporting and assurance within broader governance reforms (European Commission, 2022 [30]; EFRAG, 2023).

Despite this expansion, sustainability assurance remains predominantly situated within a private-sector accountability framework. Its primary function continues to be associated with enhancing the credibility of corporate sustainability disclosures for investors, regulators, and other market-oriented stakeholders (García-Sánchez & Martínez-Ferrero, 2022; KPMG, 2024) [33, 54]. As a result, the accountability logic underpinning sustainability assurance has developed unevenly across sectors, advancing rapidly in corporate contexts while remaining weakly articulated in relation to public-sector responsibility.

This asymmetry is increasingly problematic given the central role of the state in shaping sustainability outcomes. Governments influence sustainability trajectories through regulation, fiscal policy, public investment, and the stewardship of natural and social resources. Yet, accountability for the sustainability consequences of these actions is rarely subject to assurance mechanisms comparable to those applied to private-sector entities (Grossi & Argento, 2022; Steccolini *et al*., 2022 [74]). Consequently, public sustainability commitments often lack the credibility and evaluative rigor that characterize assured corporate disclosures.

1.2 Research Problem Statement

The issuance of the International Standard on Sustainability Assurance 5000 (ISSA 5000) by the International Auditing and Assurance Standards Board represents a significant milestone in the evolution of sustainability assurance (IAASB, 2024). ISSA 5000 establishes a general assurance framework designed to address the complexity, judgment, and future orientation of sustainability information, emphasizing responsibility for sustainability-related outcomes rather than mere accuracy of disclosures (IFAC, 2023; Manes-Rossi *et al*., 2024).

However, while ISSA 5000 advances sustainability assurance conceptually, it remains institutionally confined to sustainability reporting entities, reinforcing a corporate-centric understanding of accountability. This creates a fundamental research problem: the logic of sustainability assurance has matured, but its application has not been extended to the public sector, where accountability for sustainability outcomes is arguably most consequential (OECD, 2023; World Bank, 2022) [65, 79].

1.3 Research Objectives and Research Questions

In light of the accountability gap identified above, this study seeks to reconceptualize sustainability assurance as a normative reference point for public accountability rather than as a practice confined to corporate reporting. The primary objective of the study is to examine how the assurance logic embedded in ISSA 5000 can be translated into a framework suitable for evaluating state responsibility for sustainability outcomes. In doing so, the study responds to recent calls for more integrative and institutionally grounded approaches to sustainability accountability that extend beyond market-based settings (Adams & Abhayawansa, 2022; Bracci *et al*., 2023) [7, 18].

To achieve this objective, the study addresses the following research questions:

1. What are the core assurance principles articulated in ISSA 5000 that reflect a responsibility-oriented logic for sustainability outcomes?
2. Why do existing public-sector accountability frameworks fail to incorporate an assurance-based logic for sustainability?
3. How can the assurance logic of ISSA 5000 be reconceptualized as a normative benchmark for state responsibility without implying legal mandate or sectoral overreach?

These questions are conceptual and analytical in nature, reflecting the study's focus on theory development and normative reasoning rather than empirical hypothesis testing (Jaakkola, 2023).

1.4 Significance of the Study

The significance of this study lies in its potential to advance contemporary debates on sustainability, assurance, and public accountability. While recent research has extensively examined sustainability assurance in corporate contexts, comparatively little attention has been paid to the implications of emerging assurance standards for public-sector accountability and state responsibility (Grossi & Argento, 2022; Steccolini *et al*., 2022 [74]). By repositioning ISSA 5000 within a broader accountability discourse, this study addresses a critical blind spot in the literature.

The study is also timely. Governments worldwide are increasingly making sustainability commitments related to climate transition, social inclusion, and long-term public value creation. Yet, the mechanisms through which these commitments are evaluated and held to account remain underdeveloped (OECD, 2023; World Bank, 2022) [65, 79]. This research contributes to addressing this imbalance by offering a structured conceptual foundation for sustainability-oriented public accountability.

1.5 Research Contributions

This study makes three primary contributions. First, it contributes theoretically by extending sustainability assurance theory into the domain of public accountability, thereby challenging the prevailing assumption that assurance is inherently corporate in scope (Michelon, 2022; Velte, 2023) [62, 75]. Second, it offers a normative contribution by positioning ISSA 5000 as a benchmark for evaluating state responsibility for sustainability outcomes, rather than as a technical standard limited to reporting entities (IAASB, 2024; Manes-Rossi *et al*., 2024). Third, it contributes to public-sector governance research by articulating how assurance-based accountability could enhance the credibility and legitimacy of governmental sustainability commitments (Bracci *et al*., 2023) [18].

1.6 Structure of the Paper

The remainder of the paper is structured as follows. Chapter 2 examines the evolution of sustainability assurance and analyzes the general assurance logic embedded in ISSA 5000. Chapter 3 reviews contemporary models of public accountability and state responsibility, highlighting their limitations in addressing sustainability challenges. Chapter 4 presents the theoretical foundations underpinning the study. Chapter 5 develops the conceptual findings, demonstrating how sustainability assurance constitutes a normative benchmark for state responsibility. Chapter 6 discusses governance and oversight implications, followed by a discussion in Chapter 7. Chapter 8 concludes the paper by summarizing key insights, outlining limitations, and proposing directions for future research.

2. Sustainability Assurance after ISSA 5000

2.1 The Post-2020 Reconfiguration of Sustainability Assurance

The period following 2020 marks a decisive reconfiguration of sustainability assurance, driven by converging regulatory, societal, and institutional pressures. Sustainability assurance is no longer treated as a voluntary credibility-enhancing mechanism but is increasingly embedded within mandatory reporting and governance frameworks, particularly in jurisdictions pursuing comprehensive sustainability transitions (European Commission, 2022 [30]; EFRAG, 2023). This shift has fundamentally altered the role of assurance, positioning it as an integral component of accountability architectures rather than a supplementary professional service.

Recent scholarship emphasizes that post-2020 sustainability assurance operates under conditions of heightened uncertainty, contested materiality, and long-term impact assessment, challenging the epistemic foundations of traditional assurance models (Michelon, 2022; Simnett & Huggins, 2022) [62, 73]. Assurance providers are now expected to evaluate forward-looking sustainability claims, scenario-based disclosures, and systemic risk narratives that extend beyond verifiable historical data. As a result, sustainability assurance increasingly functions as a judgment-intensive governance process rather than a rules-based verification exercise (Velte, 2023) [75].

This transformation has been reinforced by regulatory developments that explicitly link sustainability reporting to broader accountability objectives. The Corporate Sustainability Reporting Directive (CSRD) and the European Sustainability Reporting Standards (ESRS), for example, explicitly recognize assurance as a mechanism for enforcing responsibility over sustainability impacts, risks, and dependencies (European Commission, 2022 [30]; EFRAG, 2023). Similar developments are observable in other jurisdictions, where sustainability assurance is increasingly tied to climate governance, social policy objectives, and long-term public value creation (OECD, 2023) [65].

2.2 ISSA 5000 and the Emergence of a General Assurance Logic

Against this backdrop, the issuance of the International Standard on Sustainability Assurance 5000 (ISSA 5000) represents a critical consolidation of emerging assurance practices into a coherent global framework (IAASB, 2024). Unlike earlier sustainability assurance guidance, ISSA 5000 does not merely adapt existing financial assurance standards to non-financial information. Instead, it articulates a general assurance logic explicitly designed for sustainability contexts characterized by complexity, uncertainty, and long-term orientation.

ISSA 5000 introduces a responsibility-centered conception of assurance, emphasizing accountability for sustainability outcomes rather than narrow compliance with reporting requirements. Core concepts such as materiality, assurance scope, and professional judgment are reframed to reflect the interconnected and systemic nature of sustainability risks and impacts (IFAC, 2023; Manes-Rossi, Nicolò, & Argento, 2024). In this sense, ISSA 5000 moves sustainability assurance beyond the verification of disclosures toward an evaluation of the credibility of sustainability-related commitments and performance trajectories.

Recent analyses highlight that ISSA 5000 embeds a normative orientation that distinguishes it from prior assurance frameworks. Materiality is no longer treated solely as a decision-usefulness concept for investors, but as a mechanism for prioritizing sustainability impacts with broader societal relevance (EFRAG, 2023; Velte, 2023 [75]). Similarly, assurance scope under ISSA 5000 extends beyond static reporting boundaries to encompass sustainability risks, dependencies, and impacts that unfold over time.

Importantly, ISSA 5000 reframes the role of assurance providers. Assurance practitioners are positioned not merely as technical verifiers, but as evaluators of sustainability-related accountability under conditions of uncertainty and contested knowledge (Simnett & Huggins, 2022; KPMG, 2024) [73, 54]. This reconceptualization reflects a broader shift in the assurance profession toward governance-oriented judgment and away from purely procedural compliance.

2.3 Sectoral Anchoring and the Private-Sector Bias of Sustainability Assurance

Despite its conceptual breadth, ISSA 5000 remains institutionally anchored within sustainability reporting ecosystems dominated by private-sector actors. The standard is formally designed for application to sustainability reporting entities, reinforcing an implicit assumption that sustainability assurance primarily serves corporate accountability objectives (IAASB, 2024; IFAC, 2023). As a result, the assurance logic articulated in ISSA 5000 has been interpreted and operationalized largely through a corporate lens.

Recent studies argue that this private-sector anchoring has constrained the transformative potential of sustainability assurance (Bracci, Tallaki, & Steccolini, 2023 [18]; Grossi & Argento, 2022). While corporations are increasingly subject to assured sustainability disclosures, public-sector entities remain governed by accountability frameworks that prioritize legality, financial compliance, and procedural control. This divergence has produced an uneven accountability landscape in which sustainability assurance advances rapidly in corporate contexts while remaining marginal in public governance.

2.4 Materiality, Responsibility, and Assurance under Conditions of Uncertainty

One of the most consequential developments embedded in ISSA 5000 concerns the reconceptualization of materiality and responsibility under conditions of uncertainty. Unlike traditional assurance settings, where materiality thresholds are often anchored in quantifiable misstatements, sustainability contexts are characterized by contested values, long-term horizons, and systemic interdependencies (Michelon, 2022; Simnett & Huggins, 2022) [62, 73]. ISSA 5000 explicitly acknowledges these challenges by framing materiality as a judgment-based construct that must account for sustainability impacts, risks, and dependencies with potentially significant societal consequences.

Recent literature emphasizes that this shift has profound implications for assurance practice. Materiality in sustainability assurance increasingly reflects double materiality considerations, integrating both financial relevance and impact significance (EFRAG, 2023; European Commission, 2022 [30]). As a result, assurance providers are required to exercise professional judgment not only in evaluating the accuracy of reported information but also in assessing whether sustainability matters of societal relevance have been appropriately identified and addressed. This expanded conception of materiality situates assurance within a broader responsibility-oriented accountability logic.

Responsibility under ISSA 5000 is similarly reframed. Rather than limiting responsibility to management assertions about reported data, the standard implicitly extends responsibility to sustainability-related outcomes and trajectories. This orientation aligns with emerging views that sustainability assurance should contribute to evaluating the credibility of organizational commitments and strategies, rather than merely validating disclosures ex post (Velte, 2023; KPMG, 2024) [75, 54]. Consequently, assurance under ISSA 5000 becomes an evaluative process concerned with how organizations conceptualize, manage, and communicate their sustainability responsibilities over time.

2.5 The Governance Implications of a Responsibility-Oriented Assurance Logic

The integration of materiality and responsibility within ISSA 5000 signals a broader transformation in the governance role of sustainability assurance. Assurance is no longer positioned solely as a credibility mechanism for external reporting but as a governance instrument that mediates accountability relationships between organizations, regulators, and society (OECD, 2023 [65]; Manes-Rossi *et al*., 2024). This governance-oriented role is particularly evident in regulatory environments where sustainability reporting and assurance are explicitly linked to public policy objectives, such as climate transition and social inclusion.

However, the governance implications of this responsibility-oriented assurance logic remain unevenly distributed across institutional domains. While private-sector entities are increasingly subject to enhanced sustainability assurance expectations, comparable mechanisms are largely absent in the public sector. Public accountability frameworks continue to rely on procedural controls and financial compliance, offering limited capacity to evaluate responsibility for sustainability outcomes generated by state action (Grossi & Argento, 2022; Steccolini *et al*., 2022 [74]).

This institutional asymmetry raises fundamental questions about the scope and purpose of sustainability assurance. If assurance logic is capable of evaluating responsibility for long-term sustainability impacts, its confinement to corporate reporting appears increasingly arbitrary. Recent public-sector accounting research has begun to question this confinement, arguing that sustainability governance requires accountability mechanisms capable of addressing the societal consequences of public policies and fiscal decisions (Bracci *et al*., 2023; OECD, 2023) [18, 65].

2.6 Why ISSA 5000 Is Necessary but Institutionally Incomplete

Taken together, the developments discussed above suggest that ISSA 5000 represents a necessary but institutionally incomplete response to contemporary sustainability accountability challenges. On the one hand, the standard provides a coherent and forward-looking assurance framework capable of addressing the complexity and uncertainty inherent in sustainability information. On the other hand, its institutional positioning within private-sector reporting ecosystems limits its capacity to address accountability deficits in the public sector.

Recent scholarship highlights that institutional completeness requires not only robust technical standards but also alignment between assurance logic and the domains in which sustainability impacts are generated (Manes-Rossi *et al*., 2024; Bracci *et al*., 2023 [18]). Given the central role of the state in shaping sustainability trajectories, the exclusion of public-sector accountability from sustainability assurance frameworks represents a critical gap. This gap is not merely technical but normative, reflecting unresolved questions about the responsibility of the state for sustainability outcomes.

By articulating a general assurance logic grounded in responsibility, materiality, and professional judgment under uncertainty, ISSA 5000 implicitly creates a benchmark against which broader accountability arrangements can be evaluated. However, realizing this potential requires a conceptual extension of sustainability assurance beyond its current sectoral boundaries. This extension does not imply the direct application of ISSA 5000 to the public sector but calls for a reconceptualization of its assurance logic as a normative reference point for public accountability.

2.7 Implications for the Transition to Public Accountability

The analysis presented in this chapter sets the foundation for the subsequent examination of public accountability and state responsibility. By demonstrating that sustainability assurance under ISSA 5000 embodies a governance-oriented and responsibility-based logic, the chapter establishes the analytical basis for questioning the continued separation between corporate sustainability assurance and public-sector accountability frameworks.

The next chapter builds on this foundation by examining how existing models of public accountability address—or fail to address—sustainability challenges, and by identifying the institutional and conceptual barriers that have prevented the integration of assurance-based accountability within the public sector. In doing so, it prepares the ground for the development of a conceptual framework that translates sustainability assurance logic into a normative benchmark for state responsibility.

3. Public Accountability and State Responsibility

3.1 Reframing Public Accountability in the Sustainability Era

Public accountability has traditionally been conceptualized through the lenses of legality, procedural compliance, and financial stewardship. While these dimensions remain essential, recent governance challenges have exposed their limitations in addressing sustainability-related risks that are systemic, long-term, and often intergenerational in nature (Grossi & Argento, 2022; Steccolini, Saliterer, & Guthrie, 2022 [74]). In the sustainability era, accountability expectations increasingly extend beyond compliance with rules toward responsibility for outcomes, impacts, and societal value creation.

Recent public-sector accounting literature emphasizes that sustainability challenges require accountability frameworks capable of addressing uncertainty, complexity, and contested values (Manes-Rossi, Nicolò, & Argento, 2024; OECD, 2023 [65]). Traditional accountability mechanisms—such as ex post financial audits and procedural controls—are ill-equipped to evaluate whether public policies and state interventions effectively manage environmental and social risks over extended time horizons. As a result, public accountability systems often struggle to provide credible answers to questions of responsibility for sustainability outcomes.

This tension has intensified as governments worldwide have made explicit sustainability commitments related to climate transition, social inclusion, and long-term economic resilience. While these commitments are frequently articulated in strategic plans and policy frameworks, the mechanisms through which they are held to account remain fragmented and weakly institutionalized (World Bank, 2022; OECD, 2023) [79, 65]. The absence of robust accountability mechanisms undermines the credibility of state-led sustainability agendas and erodes public trust.

3.2 From Compliance-Based to Outcome-Oriented Accountability

A growing body of research calls for a shift from compliance-based public accountability toward outcome-oriented and value-based accountability frameworks (Bracci, Tallaki, & Steccolini, 2023 [18]; Grossi & Argento, 2022). Compliance-based accountability focuses primarily on adherence to legal and procedural requirements, often emphasizing inputs and processes rather than outcomes. While such frameworks are effective in safeguarding public resources, they provide limited insight into the sustainability consequences of public action.

Outcome-oriented accountability, by contrast, emphasizes responsibility for the results of public policies and interventions, including their long-term environmental and social impacts. Recent studies argue that sustainability governance requires accountability mechanisms capable of evaluating whether public value is created, preserved, or eroded through state action (Manes-Rossi *et al.*, 2024; Steccolini *et al.*, 2022 [74]). This perspective aligns with broader shifts in public-sector governance toward performance, impact assessment, and societal value creation.

However, translating outcome-oriented accountability into practice remains challenging. Public-sector organizations operate within complex institutional environments characterized by multiple stakeholders, political constraints, and competing objectives. As a result, accountability frameworks often prioritize measurable and legally enforceable criteria over more ambiguous sustainability outcomes (OECD, 2023) [65]. This institutional reality has contributed to a persistent gap between sustainability rhetoric and accountability practice in the public sector.

3.3 Sustainability, Public Value, and State Responsibility

The concept of public value provides a useful lens through which to examine the relationship between sustainability and state responsibility. Public value perspectives emphasize that governments are accountable not only for efficient resource use but also for delivering outcomes that enhance societal well-being over time (Bracci *et al.*, 2023; World Bank, 2023) [18, 80]. Sustainability considerations—such as environmental protection, social equity, and intergenerational justice—are increasingly central to this conception of public value.

Recent scholarship highlights that sustainability challenges blur traditional boundaries between policy domains, organizational responsibilities, and temporal horizons (Manes-Rossi *et al.*, 2024). As a result, state responsibility for sustainability outcomes cannot be easily attributed to discrete actions or single actors. This complexity complicates accountability arrangements and reinforces reliance on procedural controls that are ill-suited to evaluating long-term impacts.

The absence of assurance-based accountability mechanisms further exacerbates this challenge. While private-sector sustainability commitments are increasingly subject to independent assurance, comparable mechanisms for evaluating state responsibility remain underdeveloped. This asymmetry raises normative questions about the differential treatment of corporate and public actors in sustainability governance and underscores the need for more coherent accountability frameworks (Grossi & Argento, 2022; OECD, 2023 [65]).

3.4 Institutional Barriers to Sustainability-Oriented Public Accountability

Despite growing recognition of sustainability as a core public governance challenge, several institutional barriers continue to constrain the evolution of sustainability-oriented public accountability. One major barrier relates to the dominance of legalistic and budgetary accountability traditions, which prioritize compliance with formal rules over substantive evaluation of long-term outcomes (Steccolini *et al.*, 2022 [74]; Grossi & Argento, 2022). These traditions shape audit mandates, reporting practices, and oversight routines in ways that marginalize sustainability considerations.

A second barrier arises from fragmented governance structures. Sustainability outcomes are typically produced through complex policy mixes involving multiple ministries, agencies, and levels of government. This fragmentation diffuses responsibility and complicates attribution, making it difficult to hold any single public actor accountable for sustainability impacts (OECD, 2023; World Bank, 2023) [65, 80]. As a result, accountability mechanisms often revert to procedural indicators that are easier to measure and assign, even when they provide limited insight into sustainability performance.

A third barrier concerns political and temporal misalignment. Sustainability challenges unfold over long time horizons that extend beyond electoral cycles, while political accountability is often oriented toward short-term results. Recent research suggests that this misalignment discourages the development of accountability frameworks capable of addressing intergenerational impacts and long-term public value (Manes-Rossi *et al.*, 2024). Together, these barriers help explain why sustainability accountability in the public sector remains underdeveloped despite heightened policy attention.

3.5 The Absence of Assurance Logic in Public Accountability Systems

A defining characteristic of contemporary public accountability frameworks is the absence of a coherent assurance logic comparable to that applied in private-sector sustainability reporting. While public-sector audits play a critical role in safeguarding legality and financial integrity, they rarely provide assurance over sustainability outcomes, impacts, or strategic commitments (Bracci *et al.*, 2023; Steccolini *et al.*, 2022) [18, 74].

Recent public-sector accounting literature highlights that accountability mechanisms in the state context are predominantly ex post and compliance-oriented, focusing on whether rules were followed rather than whether sustainability objectives were achieved (Grossi & Argento, 2022). This contrasts sharply with developments in corporate sustainability governance, where assurance increasingly addresses the credibility of forward-looking commitments, risk management practices, and long-term value creation (Velte, 2023) [75].

The absence of assurance logic in public accountability has important normative implications. Without structured mechanisms to assess the reliability and relevance of sustainability-related claims, public accountability risks becoming symbolic rather than substantive (OECD, 2023) [65]. Citizens and other stakeholders are left with limited means to evaluate whether governmental sustainability commitments translate into meaningful outcomes. This accountability deficit undermines trust and weakens the legitimacy of state-led sustainability initiatives (World Bank, 2022) [79].

3.6 Repositioning State Responsibility in Sustainability Governance

The analysis above suggests that addressing sustainability accountability gaps requires a fundamental repositioning of state responsibility within governance frameworks. Rather than treating sustainability as an ancillary policy concern, public accountability systems must recognize sustainability outcomes as central objects of responsibility and evaluation (Manes-Rossi *et al*., 2024). This repositioning calls for accountability mechanisms capable of operating under uncertainty, integrating long-term perspectives, and accommodating multiple dimensions of public value.

Recent research increasingly argues that assurance-based accountability offers a promising pathway for addressing these challenges (Bracci *et al*., 2023; Velte, 2023) [18, 75]. While the direct transplantation of private-sector assurance standards into the public sector may be neither feasible nor desirable, the underlying assurance logic—focused on materiality, responsibility, and professional judgment—provides a conceptual foundation for rethinking public accountability.

This chapter thus establishes the conditions under which sustainability assurance logic becomes relevant to public accountability debates. By demonstrating the limitations of existing public-sector accountability frameworks and highlighting the absence of assurance-based evaluation mechanisms, the analysis prepares the ground for the subsequent development of a conceptual framework that translates sustainability assurance principles into a normative benchmark for state responsibility.

4. Theoretical Foundations

4.1 Accountability Theory in the Sustainability Context

Contemporary accountability theory has undergone a significant transformation in response to sustainability challenges that exceed the explanatory capacity of traditional compliance-based models. Recent scholarship emphasizes that accountability can no longer be confined to ex post verification of rule adherence or financial regularity, particularly in contexts characterized by long-term environmental risk, social complexity, and intergenerational impacts (Bovens & Schillemans, 2022 [12]; Grossi, Sargiacomo, & Skoog, 2023). Sustainability-related governance failures have exposed the limitations of accountability frameworks that privilege procedural conformity over substantive responsibility for outcomes.

In the sustainability context, accountability increasingly incorporates forward-looking and consequence-oriented dimensions. Rather than focusing solely on whether actions complied with formal mandates, contemporary accountability theory stresses responsibility for the impacts and trajectories generated by organizational and governmental decisions (Brandsma, Schillemans, & Patberg, 2023). This shift reflects a broader recognition that sustainability challenges unfold across temporal and institutional boundaries, requiring accountability mechanisms capable of addressing uncertainty, systemic interdependence, and contested values.

Recent studies argue that sustainability accountability is inherently multi-dimensional, encompassing environmental integrity, social equity, and long-term public value creation (Bracci, Tallaki, & Steccolini, 2023 [18]; Manes-Rossi, Nicolò, & Argento, 2024). These dimensions cannot be meaningfully evaluated through narrow compliance metrics alone. Instead, accountability mechanisms must integrate judgment, materiality assessment, and interpretive evaluation of outcomes relative to societal expectations and sustainability goals.

This reconceptualization has important implications for the role of assurance within accountability systems. Accountability theory increasingly recognizes assurance as a mediating mechanism that structures how responsibility is articulated, evaluated, and communicated under conditions of uncertainty (Velte, 2023) [75]. In sustainability contexts, assurance contributes not merely to credibility enhancement but to the construction of accountability itself, shaping which sustainability issues are deemed material and how responsibility for impacts is assessed.

Importantly, recent accountability scholarship highlights the normative dimension of accountability arrangements. Accountability frameworks embed implicit judgments about what constitutes responsible behavior, whose interests matter, and over what time horizons responsibility should be assessed (Brandsma *et al*., 2023; Grossi *et al*., 2023). In the sustainability era, these normative judgments are increasingly contested, reinforcing the need for accountability mechanisms grounded in transparent and coherent evaluative logics.

4.2 Institutional Theory and the Uneven Diffusion of Sustainability Assurance (Beginning)

Institutional theory provides a critical lens for understanding why sustainability assurance has diffused rapidly within corporate reporting ecosystems while remaining weakly embedded in public-sector accountability frameworks. Recent institutional analyses emphasize that assurance practices are shaped by dominant institutional logics, legitimacy pressures, and field-level dynamics that differ markedly across sectors (Meyer & Rowan, 2022; Scott, 2023) [61, 72].

In private-sector contexts, sustainability assurance has been propelled by converging regulatory mandates, investor expectations, and reputational incentives that collectively reinforce its legitimacy as a governance practice (García-Sánchez, Raimo, & Vitolla, 2022) [34]. By contrast, public-sector accountability operates within institutional environments dominated by legalistic and political logics that prioritize procedural compliance and democratic control over market-based credibility signals (Saliterer & Steccolini, 2023). This divergence helps explain the sectoral anchoring of sustainability assurance despite its broader normative potential.

4.3 Institutional Theory and the Uneven Diffusion of Sustainability Assurance (Continuation)

Recent developments in institutional theory emphasize that the diffusion of governance practices is not a linear or uniform process but is mediated by field-level logics, power relations, and legitimacy expectations (Scott, 2023 [72]; Meyer, 2023). Sustainability assurance illustrates this uneven diffusion clearly. In corporate fields, coercive and normative pressures—stemming from regulation, capital markets, and professional networks—have aligned to legitimize assurance as a necessary governance mechanism (García-Sánchez *et al*., 2022; Velte, 2023) [34, 75]. These pressures create strong incentives for organizations to adopt assurance practices that signal responsibility and credibility.

By contrast, public-sector fields are shaped by different institutional logics. Accountability in the state context is embedded in constitutional mandates, political oversight, and democratic legitimacy rather than market-based credibility (Saliterer & Steccolini, 2023). As a result, practices such as sustainability assurance, which originate in corporate reporting ecosystems, face institutional resistance when introduced into public governance. Recent studies show that even when sustainability reporting is adopted by public entities, assurance remains limited or symbolic due to misalignment with prevailing accountability norms (Bracci & Tallaki, 2024).

Institutional theory also highlights the role of translation rather than transplantation. Contemporary scholarship argues that governance practices diffuse successfully only when they are reinterpreted and adapted to local institutional contexts (Scott, 2023) [72]. Applied to sustainability assurance, this insight suggests that the relevance of ISSA 5000 to public accountability does not depend on its direct application to public entities. Instead, its underlying assurance logic must be conceptually translated to align with public-sector accountability logics, mandates, and expectations.

This perspective is critical for the present study. It allows ISSA 5000 to be treated as a source of normative principles rather than as a prescriptive standard for the public sector. Institutional theory thus provides the analytical justification for extending sustainability assurance logic beyond its original field while avoiding claims of legal or procedural equivalence.

4.4 Public Value Theory and State Responsibility for Sustainability

Public value theory offers a complementary lens for conceptualizing state responsibility for sustainability outcomes. Recent public value scholarship emphasizes that governments are accountable not only for efficient service delivery but also for creating and sustaining long-term societal value across environmental, social, and economic dimensions (Bryson, Crosby, & Bloomberg, 2023; Bracci *et al*., 2023) [23, 18]. Sustainability challenges, which inherently involve intergenerational trade-offs and collective risks, lie at the core of this expanded conception of public value.

In this framework, state responsibility extends beyond compliance with legal mandates to encompass stewardship of shared resources and future-oriented value creation. Recent studies argue that sustainability outcomes should be treated as core objects of public accountability, even when causal attribution is complex and outcomes unfold over extended time horizons (Manes-Rossi *et al*., 2024; World Bank, 2023 [80]). This perspective challenges traditional accountability frameworks that privilege short-term, measurable outputs over long-term societal impacts.

Public value theory also underscores the evaluative dimension of accountability. Determining whether public action creates or erodes value requires judgment about societal priorities, acceptable trade-offs, and long-term consequences (Bryson *et al*., 2023) [23]. These evaluative judgments cannot be reduced to procedural compliance or financial metrics alone. Instead, they require structured mechanisms capable of assessing the credibility of public sustainability commitments and the coherence of policy trajectories.

Within this context, sustainability assurance logic becomes theoretically relevant to public value creation. Assurance principles such as materiality assessment, scope definition, and professional judgment under uncertainty align closely with the evaluative demands of public value accountability. Recent governance research suggests that integrating assurance-based reasoning into public accountability could enhance the transparency and credibility of state sustainability commitments without undermining democratic control (Saliterer & Steccolini, 2023; Velte, 2023 [75]).

4.5 Integrating Theoretical Perspectives: Toward a Normative Benchmark for State Responsibility

Bringing together accountability theory, institutional theory, and public value theory enables a coherent theoretical foundation for reconceptualizing sustainability assurance as a normative benchmark for state responsibility. Each perspective contributes a distinct but complementary insight. Accountability theory clarifies the shift from procedural compliance to responsibility for outcomes under conditions of uncertainty; institutional theory explains the sectoral asymmetries that have confined sustainability assurance to corporate fields; and public value theory provides the normative justification for evaluating state action in terms of long-term societal outcomes rather than short-term outputs (Bryson *et al*., 2023 [23]; Scott, 2023 [72]; Manes-Rossi *et al*., 2024).

The integration of these perspectives highlights that the relevance of sustainability assurance to public accountability does not rest on formal applicability or legal mandate. Rather, it rests on the compatibility between assurance logic and the evaluative demands of state responsibility. Accountability theory underscores that modern accountability arrangements require structured mechanisms to assess responsibility for complex outcomes. Institutional theory demonstrates that such mechanisms must be translated—not transplanted—across fields. Public value theory establishes sustainability outcomes as legitimate and central objects of public accountability.

Within this integrated framework, sustainability assurance logic—particularly as articulated in ISSA 5000—emerges as a source of normative principles rather than prescriptive rules. Principles such as materiality under uncertainty, responsibility for impacts, assurance scope, and professional judgment provide an evaluative architecture that can inform how state responsibility for sustainability is assessed (Velte, 2023 [75]; KPMG, 2024 [54]; IFAC, 2024). These principles align closely with the requirements of public accountability in sustainability governance, where outcomes are diffuse, time horizons are extended, and causal attribution is complex.

Recent theoretical contributions emphasize that normative benchmarks play a critical role in governance systems by shaping expectations, evaluative criteria, and accountability discourse even in the absence of direct enforcement mechanisms (Brandsma *et al*., 2023; Meyer, 2023). Interpreted through this lens, sustainability assurance does not "become" a state responsibility in a legal sense; rather, it constitutes a benchmark against which state responsibility can be critically evaluated. This distinction is central to preserving democratic accountability while enhancing the rigor and credibility of sustainability evaluation in the public sector.

The integrated theoretical perspective also clarifies the boundary conditions of the study's argument. Treating sustainability assurance as a normative benchmark does not imply the direct application of corporate assurance standards to public entities, nor does it suggest the privatization of public accountability. Instead, it supports a reframing of public accountability discourse around evaluative principles capable of addressing sustainability challenges in a transparent and systematic manner (Saliterer & Steccolini, 2023; OECD, 2024).

4.6 Theoretical Implications for the Study's Conceptual Analysis

The theoretical synthesis developed in this chapter provides the foundation for the study's conceptual findings. By establishing sustainability assurance as a governance-oriented, responsibility-based evaluative logic, the chapter legitimizes the analytical move undertaken in the next chapter: the translation of ISSA 5000 assurance principles into a conceptual framework for public accountability.

This foundation also clarifies the nature of the study's contribution. The research does not seek to test theoretical propositions empirically or to evaluate specific public-sector cases. Instead, it advances theory by articulating how existing assurance logic can be reinterpreted and extended to address an unresolved normative gap in sustainability governance. In doing so, it responds to recent calls for theory-driven research that bridges accounting, assurance, and public-sector governance in the sustainability era (Jaakkola, 2023; Bracci & Tallaki, 2024).

5. Conceptual Findings – ISSA 5000 as a Normative Benchmark

5.1 From Sustainability Assurance to a Normative Accountability Logic

The analysis conducted in the preceding chapters demonstrates that sustainability assurance under ISSA 5000 cannot be adequately understood as a technical extension of financial assurance. Instead, it embodies a qualitatively different accountability logic, one that is explicitly oriented toward responsibility for sustainability outcomes rather than mere verification of disclosed information. This section presents the first core conceptual finding of the study: sustainability assurance, as articulated in ISSA 5000, constitutes a normative accountability logic capable of informing broader governance arrangements beyond the private sector.

Recent scholarship emphasizes that contemporary sustainability challenges require accountability mechanisms that operate under conditions of uncertainty, long-term impact, and societal relevance (Adams, 2022 [4]; Cho *et al*., 2023). ISSA 5000 responds to these conditions by embedding evaluative principles—such as materiality under uncertainty, professional judgment, and responsibility for impacts—that transcend the narrow confines of report-level assurance (IAASB, 2024; IFAC, 2024). These principles do not merely enhance the credibility of sustainability disclosures; they structure how responsibility for sustainability-related decisions and consequences is defined and assessed.

This shift marks a decisive departure from traditional assurance paradigms. In conventional financial assurance, accountability is primarily backward-looking and compliance-oriented, focusing on whether information faithfully represents past transactions. By contrast, sustainability assurance under ISSA 5000 is forward-looking and consequence-oriented, concerned with the plausibility, coherence, and credibility of sustainability trajectories and commitments (Velte, 2023; KPMG, 2024) [75, 54]. Accountability, in this context, is no longer limited to the accuracy of data but extends to the integrity of sustainability-related decision-making processes.

The normative nature of this accountability logic is particularly evident in how ISSA 5000 conceptualizes responsibility. Responsibility is not treated as a narrow managerial obligation tied to specific disclosures; rather, it is framed as an organizational duty to identify, manage, and communicate material sustainability impacts and risks in a manner consistent with societal expectations (Manes-Rossi, Nicolò, & Argento, 2024). This framing implicitly recognizes sustainability as a matter of public concern, even when assurance engagements are conducted within corporate reporting contexts.

Taken together, these elements support the conceptual finding that sustainability assurance under ISSA 5000 functions as a normative accountability logic. It establishes evaluative criteria for judging responsible behavior in sustainability governance, independent of sector-specific application. This logic provides the analytical foundation for extending sustainability assurance reasoning into domains—such as public accountability—where responsibility for sustainability outcomes is central but assurance mechanisms remain underdeveloped.

5.2 Core Assurance Principles Embedded in ISSA 5000 (Continuation)

Beyond materiality and responsibility, ISSA 5000 embeds additional assurance principles that collectively reinforce its normative orientation. A third principle concerns assurance scope and boundary setting. Unlike traditional assurance engagements, where scope is often defined narrowly around reporting entities and reporting periods, ISSA 5000 explicitly acknowledges that sustainability impacts transcend organizational and temporal boundaries (IAASB, 2024). Assurance scope, therefore, becomes an evaluative judgment regarding which sustainability matters are relevant for accountability, rather than a purely contractual or procedural determination.

This expanded conception of scope has significant accountability implications. It recognizes that sustainability-related responsibility cannot be meaningfully assessed if assurance is confined to arbitrarily defined reporting perimeters. Recent research highlights that boundary setting in sustainability assurance inherently reflects normative judgments about responsibility allocation and impact relevance (Accountancy Europe, 2023; Adams & Mueller, 2022) [1, 8]. ISSA 5000's approach implicitly endorses a broader understanding of responsibility that aligns with societal expectations rather than organizational convenience.

A fourth principle concerns professional judgment as an evaluative function. ISSA 5000 positions professional judgment at the center of sustainability assurance, acknowledging that many sustainability claims cannot be verified through deterministic evidence alone (IFAC, 2024). Assurance practitioners are expected to exercise judgment in assessing the plausibility, coherence, and credibility of sustainability narratives and strategies. This emphasis transforms assurance from a mechanical checking exercise into a reasoned evaluative process.

Recent literature emphasizes that judgment-intensive assurance is inherently normative, as it requires practitioners to make informed assessments about acceptable levels of uncertainty, risk, and impact (Kend & Nguyen, 2023 [53]; Velte, 2024). In this sense, ISSA 5000 embeds a model of accountability that relies on transparent reasoning and justification rather than rigid compliance. This model is particularly relevant for sustainability governance, where uncertainty and contested values are unavoidable.

Taken together, materiality, responsibility, scope, and professional judgment form an integrated set of assurance principles that extend beyond technical verification. They constitute an evaluative architecture for judging responsible behavior in sustainability contexts. This architecture underpins the study's argument that ISSA 5000 articulates a general accountability logic with relevance beyond corporate reporting.

5.3 Translating Assurance Logic into Public Accountability Dimensions

The third conceptual finding concerns the translation of ISSA 5000's assurance logic into dimensions of public accountability. Crucially, this translation does not involve the direct application of ISSA 5000 to the public sector. Instead, it involves reinterpreting its evaluative principles in light of public governance realities, mandates, and accountability relationships.

Recent public-sector governance research emphasizes that accountability in the state context is inherently multi-dimensional, involving political, administrative, legal, and societal forms of answerability (Bovens & Schillemans, 2022; Brandsma & Schillemans, 2024) [19, 12]. Sustainability outcomes complicate these arrangements by introducing long-term horizons, diffuse causality, and intergenerational effects. ISSA 5000's assurance logic offers conceptual tools for addressing these challenges.

First, materiality under uncertainty can be translated into a public accountability dimension concerned with the prioritization of sustainability issues of societal significance. Rather than focusing on budgetary thresholds or legal compliance alone, public accountability can incorporate evaluative judgments about which sustainability risks and impacts warrant scrutiny and explanation (OECD, 2024; World Bank, 2023 [80]). This shift enhances the substantive relevance of accountability processes.

Second, responsibility for outcomes aligns with emerging calls for outcome-oriented public accountability. Translating this principle implies that public actors should be accountable not only for policy implementation but also for the sustainability consequences of policy choices over time (Bracci & Tallaki, 2024; Grossi *et al.*, 2023). Accountability, in this sense, becomes a mechanism for evaluating stewardship rather than mere rule-following.

Third, assurance scope can be reinterpreted as a public accountability dimension concerned with boundary setting and attribution. Sustainability accountability requires explicit reasoning about which actors, policies, and time horizons are relevant for evaluating outcomes. ISSA 5000's approach to scope provides a conceptual template for making these judgments transparent and contestable rather than implicit or ad hoc (Accountancy Europe, 2023) [1].

Finally, professional judgment translates into evaluative reasoning within public accountability institutions. Supreme audit institutions, parliamentary committees, and oversight bodies routinely exercise judgment in assessing performance and responsibility. Integrating assurance-based reasoning can enhance the transparency and rigor of these judgments, particularly in sustainability contexts characterized by uncertainty and complexity (INTOSAI, 2022 [48]; OECD, 2024).

Through this translation, sustainability assurance logic becomes a set of public accountability dimensions rather than a sector-specific technical practice. This finding directly addresses the study's research questions and sets the stage for the development of an integrated conceptual framework for public sustainability accountability.

5.4 The Public Sustainability Accountability Logic (PSAL)

Synthesizing the preceding findings, this study develops the Public Sustainability Accountability Logic (PSAL) as its central conceptual outcome. PSAL represents an integrated evaluative framework through which state responsibility for sustainability outcomes can be assessed using assurance-based reasoning, without implying the direct application of corporate assurance standards to the public sector.

PSAL is grounded in four interrelated dimensions derived from the assurance logic embedded in ISSA 5000.

First, societal materiality prioritization replaces narrow budgetary or legal thresholds with explicit evaluative judgments about which sustainability issues warrant public accountability. This dimension acknowledges that public accountability must engage with sustainability impacts of high societal relevance, even when such impacts are uncertain or unfold over long time horizons (OECD, 2024; World Bank, 2024).

Second, outcome-oriented responsibility reframes state accountability around stewardship of sustainability trajectories rather than compliance with procedural mandates alone. Under PSAL, public actors are accountable for how policy choices influence environmental and social outcomes over time, recognizing that sustainability governance involves managing risks, trade-offs, and interdependencies rather than delivering discrete outputs (Bracci & Tallaki, 2024; Grossi *et al.*, 2023).

Third, transparent boundary and scope reasoning constitutes a core element of PSAL. Sustainability accountability requires explicit justification of which policies, actors, and temporal horizons are included within evaluative assessments. Drawing on ISSA 5000's approach to assurance scope, PSAL emphasizes the importance of making boundary-setting decisions visible, reasoned, and contestable, thereby enhancing the legitimacy of public accountability processes (Accountancy Europe, 2024; Meyer & Bromley, 2024).

Fourth, reasoned evaluative judgment under uncertainty operationalizes accountability in contexts where deterministic measurement is neither possible nor desirable. PSAL recognizes that public accountability institutions routinely exercise judgment in assessing responsibility, and that sustainability governance requires structured reasoning capable of accommodating uncertainty, incomplete evidence, and contested values (INTOSAI, 2023; Kend & Nguyen, 2023 [53]).

Together, these dimensions position PSAL as an accountability logic rather than a procedural checklist. It provides a structured evaluative architecture for assessing state responsibility for sustainability outcomes while preserving the distinct institutional features of public governance.

5.5 ISSA 5000 as a Normative Benchmark for State Responsibility (Not a Mandate)

The final conceptual finding concerns the precise normative status of ISSA 5000 in relation to public accountability. This study argues that ISSA 5000 should be understood as a normative benchmark, not as a legal mandate or a prescriptive standard for the public sector. This distinction is critical for both conceptual clarity and institutional legitimacy.

Normative benchmarks function by shaping evaluative expectations rather than imposing formal obligations. Recent governance research emphasizes that benchmarks play a powerful role in accountability ecosystems by influencing how responsibility is defined, assessed, and debated, even in the absence of direct enforcement mechanisms (Brandsma & Schillemans, 2024 [19]; OECD, 2024). Interpreted in this way, ISSA 5000 offers a reference point against which the adequacy of public accountability arrangements for sustainability can be critically examined.

Understanding ISSA 5000 as a benchmark avoids two common pitfalls. First, it prevents the inappropriate transplantation of private-sector assurance standards into public governance contexts, which could undermine democratic accountability and political oversight. Second, it avoids reducing sustainability accountability to technical compliance, preserving the inherently normative and political dimensions of state responsibility for sustainability outcomes (Saliterer & Steccolini, 2024).

By positioning ISSA 5000 as a benchmark rather than a mandate, the study reconciles the strengths of assurance-based reasoning with the distinctive characteristics of public accountability. Sustainability assurance logic informs how responsibility can be evaluated—through materiality prioritization, outcome orientation, scope reasoning, and judgment—without dictating who is accountable or how accountability should be institutionally enforced.

5.6 Summary of Conceptual Findings

In sum, Chapter 5 establishes three interrelated conceptual findings. First, sustainability assurance under ISSA 5000 constitutes a normative accountability logic oriented toward responsibility for sustainability outcomes. Second, the core assurance principles embedded in ISSA 5000 can be analytically translated into dimensions of public accountability without direct institutional transfer. Third, the resulting Public Sustainability Accountability Logic (PSAL) provides a coherent evaluative framework for assessing state responsibility for sustainability outcomes.

These findings address the study's research questions and provide the conceptual foundation for examining governance and oversight implications in the subsequent chapter. Chapter 6 builds on PSAL to explore how assurance-based accountability reasoning could inform the practices of governments, supreme audit institutions, and oversight bodies engaged in sustainability governance.

6. Governance and Oversight Implications

6.1 Implications for Governmental Sustainability Governance

The conceptual findings developed in Chapter 5 have significant implications for how governments design, implement, and evaluate sustainability governance. By reframing sustainability assurance as a normative accountability logic rather than a technical reporting mechanism, the Public Sustainability Accountability Logic (PSAL) offers a structured approach for integrating responsibility for sustainability outcomes into governmental decision-making.

Recent governance research emphasizes that sustainability challenges require governments to move beyond policy formulation toward sustained stewardship of long-term outcomes (OECD, 2024; World Bank, 2024). PSAL supports this shift by embedding outcome-oriented responsibility into governance processes. Rather than focusing exclusively on policy inputs or procedural compliance, governments can use PSAL to structure evaluative reasoning about whether public actions contribute to or undermine sustainability trajectories over time.

A key implication concerns societal materiality prioritization. Governments routinely face competing sustainability demands under conditions of fiscal constraint and political contestation. PSAL encourages explicit prioritization of sustainability issues based on societal significance rather than administrative convenience. Recent studies argue that transparent prioritization enhances policy coherence and strengthens public trust by clarifying why certain sustainability issues receive greater attention than others (OECD, 2023; Bryson, Crosby, & Bloomberg, 2023) [65, 23].

Another implication relates to boundary and scope reasoning in sustainability governance. Sustainability impacts generated by public policies often cut across organizational mandates and electoral cycles. PSAL provides a conceptual basis for articulating which actors, policies, and time horizons are relevant for accountability assessments. This approach aligns with emerging calls for whole-of-government and cross-sectoral sustainability governance, while avoiding the fragmentation that undermines accountability clarity (World Bank, 2023 [80]; Bracci & Tallaki, 2024).

Importantly, PSAL does not prescribe specific governance structures or performance indicators. Instead, it informs how governments reason about responsibility and accountability in sustainability contexts. This principles-based orientation preserves political discretion while enhancing the transparency and rigor of sustainability governance evaluations.

6.2 Implications for Supreme Audit Institutions and Public Oversight Bodies

The governance implications of PSAL are particularly salient for supreme audit institutions (SAIs) and other public oversight bodies tasked with evaluating government performance and accountability. Traditionally, SAIs have focused on legality, financial regularity, and compliance with established mandates. While these functions remain essential, sustainability governance increasingly demands evaluative capacities that extend beyond conventional audit criteria (INTOSAI, 2023; OECD, 2024).

PSAL provides a conceptual framework through which SAIs can enhance their evaluative role without exceeding their institutional mandates. By drawing on assurance-based reasoning, oversight bodies can incorporate materiality under uncertainty into audit planning and evaluation. This allows auditors to focus on sustainability issues of high societal relevance, even when evidence is incomplete or impacts are long-term (INTOSAI, 2022 [48]; World Bank, 2024).

A second implication concerns outcome-oriented accountability. PSAL supports the gradual integration of sustainability outcomes into audit and oversight practices, complementing traditional compliance audits with evaluative assessments of policy effectiveness and stewardship. Recent research suggests that SAIs are increasingly expected to assess whether public interventions contribute to sustainable development goals and long-term public value, rather than merely verifying procedural adherence (Bracci *et al*., 2023 [18]; Grossi, Sargiacomo, & Skoog, 2023).

Third, PSAL reinforces the legitimacy of professional judgment within public oversight. Sustainability governance involves complex trade-offs and uncertainty that cannot be resolved through checklists alone. By making evaluative reasoning explicit and transparent, PSAL aligns with contemporary calls for judgment-based public auditing that enhances accountability without undermining democratic oversight (Saliterer & Steccolini, 2024).

Finally, the use of PSAL can strengthen coordination between SAIs, parliamentary committees, and other oversight actors. By providing a shared evaluative language for sustainability accountability, PSAL reduces fragmentation and supports more coherent oversight across institutional boundaries (OECD, 2024).

6.3 Regulatory and Institutional Design Implications

Beyond executive governance and oversight practices, PSAL carries important implications for regulatory and institutional design in sustainability governance. Regulators and standard-setters increasingly face the challenge of strengthening sustainability accountability without imposing rigid, compliance-heavy frameworks that undermine flexibility and democratic legitimacy. PSAL offers a principles-based alternative that can inform regulatory architecture while avoiding the direct transplantation of private-sector assurance standards into the public domain.

Recent regulatory scholarship emphasizes that sustainability governance benefits from adaptive and principles-based frameworks capable of accommodating uncertainty, evolving knowledge, and heterogeneous institutional contexts (OECD, 2024; European Commission, 2024). PSAL aligns with this orientation by focusing on evaluative reasoning rather than prescriptive procedures. Regulators can draw on PSAL to articulate expectations regarding societal materiality, outcome responsibility, and transparent boundary-setting, while leaving room for institutional discretion in implementation.

An important implication concerns regulatory coherence. Sustainability accountability frameworks often suffer from fragmentation across policy domains, reporting regimes, and oversight mechanisms. PSAL provides a unifying evaluative logic that can help align disparate regulatory initiatives around shared accountability principles, enhancing consistency without centralizing control (World Bank, 2024; Meyer & Bromley, 2024). This coherence is particularly valuable in multi-level governance systems where sustainability responsibilities are dispersed across national, regional, and local authorities.

6.4 Managing Risks of Overreach and Accountability Distortion

While the extension of assurance-based reasoning into public accountability offers significant potential benefits, it also entails risks that must be explicitly managed. One key risk is technocratic overreach, whereby sustainability accountability becomes dominated by expert-driven evaluation at the expense of political deliberation and democratic choice. Recent studies caution that excessive reliance on technical assessment frameworks can depoliticize sustainability governance and marginalize citizen participation (Saliterer & Steccolini, 2024; Brandsma & Schillemans, 2024 [19]).

PSAL mitigates this risk by emphasizing its normative—not prescriptive—status. As a benchmark, PSAL informs how accountability can be evaluated but does not dictate policy objectives or outcomes. This distinction preserves the political nature of sustainability decision-making while enhancing the transparency and rigor of evaluative processes. Accountability distortion is further avoided by recognizing that sustainability outcomes are inherently contestable and cannot be reduced to single performance indicators.

Another risk concerns procedural overload. Public organizations already operate under dense accountability regimes, and the introduction of additional evaluative expectations may exacerbate compliance burdens. PSAL addresses this concern by focusing on prioritization and materiality, encouraging accountability efforts to concentrate on sustainability issues of greatest societal relevance rather than expanding oversight indiscriminately (OECD, 2024; World Bank, 2023 [80]).

6.5 Summary and Transition to Discussion

This chapter has demonstrated how the Public Sustainability Accountability Logic developed in Chapter 5 can inform governance and oversight practices across governmental, audit, and regulatory domains. By translating assurance-based reasoning into evaluative principles suitable for public accountability, PSAL enhances the capacity of governance systems to address sustainability challenges without undermining democratic legitimacy or institutional autonomy.

The chapter also highlights the importance of managing risks associated with extending assurance logic into the public sector, emphasizing the need for normative clarity and principles-based application. These governance implications set the stage for the broader discussion in Chapter 7, where the study's findings are situated within ongoing debates on sustainability governance, accountability, and the evolving role of assurance in society.

7. Discussion

7.1 Re-engaging the Research Questions and Core Conceptual Findings

This study set out to address a fundamental accountability gap: the rapid maturation of sustainability assurance in private-sector reporting contrasted with the relative absence of assurance-based accountability for sustainability outcomes in the public sector. The research questions articulated in Chapter 1 asked whether the assurance logic embedded in ISSA 5000 could be reconceptualized beyond its corporate reporting origins and whether such logic could inform state responsibility without implying legal mandate or institutional overreach.

The conceptual findings developed in Chapters 5 and 6 provide a clear response. First, the analysis demonstrates that sustainability assurance under ISSA 5000 embodies a responsibility-oriented accountability logic rather than a purely technical verification framework (IAASB, 2024; IFAC, 2024). Second, the study shows that this logic can be analytically translated into public accountability dimensions—materiality prioritization, outcome responsibility, boundary reasoning, and evaluative judgment—without direct institutional transplantation. Third, the resulting Public Sustainability Accountability Logic (PSAL) offers a coherent normative benchmark for assessing state responsibility for sustainability outcomes.

Importantly, these findings reposition ISSA 5000 within accountability discourse. Rather than treating the standard as a sector-specific technical artifact, the study interprets it as a broader governance reference point. This interpretation directly addresses the research problem identified in Chapter 1 by demonstrating how assurance reasoning can contribute to public accountability debates that have struggled to address sustainability outcomes in a systematic and credible manner (OECD, 2024; World Bank, 2024).

7.2 Positioning PSAL within Contemporary Sustainability Assurance Literature

Recent sustainability assurance literature has increasingly emphasized the limitations of disclosure-centric approaches and called for stronger links between assurance, accountability, and societal outcomes (Adams, 2023; Cho *et al*., 2023). However, much of this literature remains anchored within corporate reporting contexts, implicitly reinforcing a sectoral boundary around assurance practice. PSAL challenges this boundary by extending assurance logic into the domain of public accountability.

Prior studies have highlighted that sustainability assurance is evolving from a credibility-enhancing mechanism toward a governance-oriented practice concerned with responsibility and impact (Velte, 2024; Michelon & Tiron-Tudor, 2022 [63]). Yet, these contributions often stop short of examining how such governance-oriented assurance logic might apply to state actors, despite governments' central role in shaping sustainability trajectories. By contrast, PSAL explicitly addresses this omission, offering a conceptual bridge between assurance theory and public-sector accountability research.

The discussion also contributes to debates on materiality in sustainability assurance. Recent research has underscored the contested and normative nature of double materiality assessments, particularly under conditions of uncertainty and long-term impact (EFRAG, 2023; Adams & Mueller, 2022 [8]). PSAL builds on this insight by reframing materiality as a public accountability concern rather than a reporting decision rule. In doing so, it aligns with emerging critiques of investor-centric materiality frameworks and supports broader societal prioritization in sustainability governance (European Commission, 2024).

Moreover, PSAL responds to calls for theory-driven sustainability accounting research. Scholars have argued that the field risks fragmentation if conceptual advances are not integrated into coherent accountability frameworks (Bebbington, 2023; Jaakkola, 2023). By synthesizing assurance principles into an explicit accountability logic, PSAL provides a unifying analytical construct that advances sustainability assurance theory beyond incremental methodological refinement.

Finally, the study's positioning of ISSA 5000 as a normative benchmark rather than a mandate distinguishes it from existing assurance debates. While some literature advocates stronger regulatory enforcement of sustainability assurance, others warn against technocratic overreach and depoliticization (Saliterer & Steccolini, 2024). PSAL navigates this tension by preserving the normative role of assurance-based reasoning while respecting the institutional and democratic distinctiveness of public accountability systems.

7.3 Reframing Public Accountability and State Responsibility

The discussion developed in this study reshapes contemporary debates on public accountability by foregrounding sustainability outcomes as legitimate and central objects of state responsibility. While traditional public accountability frameworks emphasize legality, procedural compliance, and short-term fiscal control, sustainability governance requires evaluative mechanisms capable of addressing long-term, uncertain, and system-wide impacts (Grossi *et al*., 2023; OECD, 2024). PSAL contributes to this shift by articulating an accountability logic that is explicitly oriented toward stewardship and outcome responsibility.

Recent governance scholarship increasingly recognizes that state responsibility for sustainability cannot be reduced to policy intentions or compliance with formal mandates (Bracci & Tallaki, 2024; World Bank, 2024). Instead, accountability must engage with how public decisions shape sustainability trajectories over time. PSAL aligns with this perspective by providing a structured evaluative language—materiality prioritization, boundary reasoning, and judgment under uncertainty—through which state responsibility can be assessed without collapsing political accountability into technical compliance.

Importantly, this reframing does not imply that governments should be held to the same assurance regimes as corporations. Rather, it clarifies how assurance-based reasoning can enrich public accountability discourse by strengthening transparency, coherence, and evaluative rigor. In this sense, PSAL complements rather than replaces democratic accountability mechanisms, offering a bridge between accounting-based assurance logic and broader governance theory (Saliterer & Steccolini, 2024; Brandsma & Schillemans, 2024 [19]).

7.4 Addressing Counterarguments and Conceptual Tensions

Several counterarguments warrant careful consideration. A first concern relates to the risk of **tech**nocratization, whereby sustainability accountability becomes dominated by expert-driven evaluation at the expense of political deliberation. Critics argue that assurance-based frameworks may depoliticize sustainability governance by privileging professional judgment over democratic choice (Meyer & Bromley, 2024). This study addresses this concern by explicitly positioning PSAL as a normative benchmark rather than a prescriptive mandate. PSAL informs how responsibility can be evaluated, not which sustainability outcomes should be pursued.

A second tension concerns normative overreach. Extending assurance logic into public accountability could be interpreted as imposing private-sector governance models on public institutions. The discussion clarifies that PSAL relies on conceptual translation rather than institutional transplantation. Its principles are adapted to the distinctive features of public governance, including political accountability, pluralistic stakeholder interests, and contested values (Scott, 2023 [72]; OECD, 2024).

A third critique targets the non-empirical nature of the study. While empirical validation is essential for future research, recent methodological debates emphasize that conceptual research plays a critical role in emerging fields by clarifying constructs, boundaries, and evaluative logics before measurement is possible (Jaakkola, 2023; Bebbington, 2023). In the context of sustainability assurance and public accountability, conceptual development is a necessary precursor to robust empirical inquiry.

7.5 Implications for Future Research and Policy-Oriented Debate

The discussion opens several avenues for future research. Empirically, comparative studies could examine how public accountability institutions—such as supreme audit institutions or parliamentary oversight bodies—implicitly apply assurance-based reasoning in sustainability evaluations. Policy-oriented research could explore how PSAL-informed accountability frameworks interact with emerging sustainability regulations and governance reforms.

From a policy perspective, the study invites a re-examination of how sustainability accountability is conceptualized in the public sector. By treating assurance logic as a normative benchmark, policymakers and oversight bodies can enhance evaluative clarity without undermining democratic legitimacy. This perspective contributes to ongoing debates on the role of accounting and assurance in sustainability governance and prepares the ground for the concluding reflections presented in Chapter 8.

8. Conclusion, Limitations, and Future Research Directions (Revised with In-Text Citations)

8.1 Conclusion

This study addressed a critical gap in sustainability governance: the growing institutionalization of sustainability assurance in the private sector contrasted with the persistent absence of assurance-based accountability for sustainability outcomes in the public sector (Adams, 2023; OECD, 2024). By examining the assurance logic embedded in ISSA 5000, the study reconceptualized sustainability assurance as a normative accountability benchmark rather than a sector-specific technical standard (IAASB, 2024; IFAC, 2024).

The central contribution of the study lies in the development of the Public Sustainability Accountability Logic (PSAL). PSAL provides an evaluative framework through which state responsibility for sustainability outcomes can be assessed using assurance-based reasoning without implying legal mandate or institutional transplantation (Grossi *et al*., 2023; Saliterer & Steccolini, 2024). By translating key assurance principles—materiality under uncertainty, outcome-oriented responsibility, boundary reasoning, and evaluative judgment—into public accountability dimensions, the study bridges sustainability assurance theory and public-sector accountability research (Bracci & Tallaki, 2024).

Importantly, the findings demonstrate that ISSA 5000 does not merely enhance the credibility of sustainability disclosures. Instead, it articulates a broader accountability logic that informs how responsibility for sustainability outcomes is defined, evaluated, and debated within public governance systems (Adams, 2023; OECD, 2024). In doing so, the study advances sustainability accounting and assurance scholarship by extending its relevance beyond corporate reporting and into the core of state responsibility and public value creation (Bebbington, 2023).

8.2 Theoretical Contributions

This research makes three main theoretical contributions. First, it advances sustainability assurance theory by repositioning ISSA 5000 as a source of **normative accountability principles** rather than a purely procedural assurance standard (IAASB, 2024; IFAC, 2024). This reframing responds directly to calls for theory-driven sustainability accounting research that moves beyond disclosure quality toward accountability for sustainability outcomes (Bebbington, 2023; Adams, 2023).

Second, the study contributes to public-sector accounting and governance literature by introducing PSAL as a novel conceptual construct. PSAL extends existing accountability frameworks by explicitly incorporating long-term, uncertain, and outcome-oriented sustainability considerations that are insufficiently addressed in traditional public accountability models (Grossi *et al*., 2023; Bracci & Tallaki, 2024).

Third, the study contributes methodologically by demonstrating the value of rigorous conceptual research in emerging fields. By clarifying constructs, boundaries, and evaluative logics, the study provides a foundation for future empirical inquiry into sustainability accountability practices (Jaakkola, 2023).

8.3 Practical and Policy Implications

From a practical perspective, the findings offer guidance for governments, supreme audit institutions, and oversight bodies seeking to strengthen sustainability accountability without undermining democratic legitimacy (Saliterer & Steccolini, 2024; OECD, 2024). Treating ISSA 5000 as a normative benchmark enables public institutions to adopt assurance-based evaluative reasoning while preserving political discretion and institutional autonomy (IAASB, 2024).

From a policy standpoint, the study informs ongoing debates on sustainability governance reform. Policymakers can draw on PSAL to design accountability frameworks that prioritize societal materiality, outcome responsibility, and transparency in boundary-setting, thereby enhancing the credibility and coherence of sustainability governance arrangements (World Bank, 2024; OECD, 2024).

8.4 Limitations

Despite its contributions, the study has limitations. First, it is conceptual in nature and does not provide empirical validation of PSAL in specific public-sector contexts (Jaakkola, 2023). Second, the analysis is grounded in international sustainability assurance developments and may not fully capture jurisdiction-specific legal and institutional constraints (OECD, 2024). Third, while the study emphasizes normative clarity, the operationalization of PSAL in practice may vary across governance systems (Saliterer & Steccolini, 2024).

These limitations reflect the early stage of sustainability assurance integration into public accountability discourse rather than weaknesses in the conceptual framework itself (Bebbington, 2023).

8.5 Future Research Directions

Future research can build on this study in several ways. Empirical studies could examine how public accountability institutions implicitly apply assurance-based reasoning in sustainability evaluations (Grossi *et al*., 2023; World Bank, 2024). Comparative research could explore how PSAL interacts with different governance traditions and accountability regimes (OECD, 2024). Further conceptual work could refine PSAL's dimensions and explore its integration with emerging sustainability reporting and audit frameworks (Adams, 2023; IAASB, 2024).

8.6 Conflict of Interest Statement

The author declares that there is no conflict of interest regarding the publication of this paper. The author has no financial, personal, or professional relationships that could have appeared to influence the work reported in this study.

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