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Controlling in the Light of the European Sustainability Reporting Standards

SUMMARY

The European Sustainability Reporting Standards introduce a unified conceptual and methodological framework into corporate governance, and with the advent of mandatory sustainability reporting and environmental, social and governance disclosure they also reshape the role of management accounting and controlling. This study applies qualitative content analysis to the official texts of the general standards and the environmental topical standards from the perspective of the six tasks of green controlling. The general standards set double materiality, information quality principles, reporting architecture and financial reconciliation rules, while the topical standards define objective and action expectations and topicspecific metrics. The standards therefore constitute not merely a disclosure minimum but an operational governance framework through which green controlling can support decisionmaking in a measurable, financially reconciled and verifiable way.

Keywords: sustainability standards, green controlling, European Sustainability Reporting Standards

JEL-codes: M14, M41, M48, Q56

INTRODUCTION

Sustainability expectations have become directly embedded in corporate governance. Following the European Green Deal, European Union and domestic rules have, from the 2024 financial year, gradually made sustainability reporting and environmental, social and governance disclosure mandatory and standardised, which requires a reorganisation of reporting practices and of controlling tasks (Veit, Böcskei, 2025).

Regulation and rising transparency demand set information and governance requirements that make the measurement and evaluation of environmental performance part of decisionmaking. Traditional controlling systems do not cover this alone; systematic integration of environmental dimensions is needed, in line with a modern understanding of controlling that steers corporate value creation along multiple dimensions (Horváth, Gleich, Seiter, 2025).

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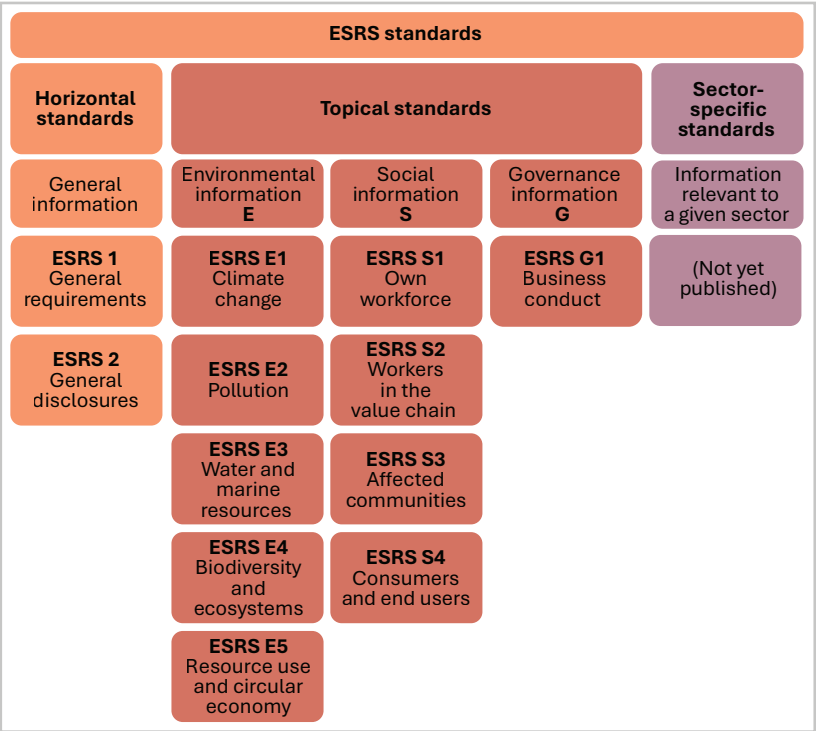


Figure 1. Grouping of ESRS standards

Source: based on ESRS 1 General Requirements, authors' compilation

The literature refers to green controlling as a key supporting instrument of the operational and strategic management of sustainability (Horváth, Schulze, 2012). Its remit is broad, ranging from relevance analysis, identification of environmental opportunities and risks and support for strategy formulation to integration into planning and decision processes (ICV, 2014). Its toolkit includes the development of environmental performance indicators and measures, environmentoriented benchmarking, environmentfocused competitor analysis and the design and use of green key performance indicator packages (Isensee, Michel, 2011). Controlling instruments for sustainability also comprise the ecological balanced scorecard, lifecycle assessment, environmental cost accounting, sustainability investment appraisal and the use of material and energy balances (Schaltegger, Bennett, Burritt, 2007). These tools underpin environmentoriented corporate decisions, improve resource efficiency and support the corporatelevel integration of sustainability objectives.

Transparent presentation of sustainability performance and disclosure requirements are defined by the European Sustainability Reporting Standards (European Commission, 2023). Tightening obligations reflect regulatory change and stronger demand for corporate transparency. The standards specify in detail what information companies must disclose on

sustainability impacts, risks and opportunities, transforming a formerly voluntary practice into a mandatory reporting regime. Figure 1 shows that ESRS disclosures fall into three categories (horizontal, topical and sectorspecific) (Farkas, Tangl, 2025), thereby providing a unified structure for corporate sustainability information (Reizingerné Ducsa, Hajdu, 2024).

ESRS requirements necessitate rethinking corporate operations, management reporting and controlling processes. Sustainability performance measures must be embedded in management accounting, planning, reporting and decision-support systems. Meeting disclosure requirements therefore implies deeper structural adjustment in corporate governance. The paper examines, through qualitative content analysis, how the theoretical and practical elements of green controlling can be aligned with ESRS disclosure requirements (European Commission, 2023).

METHOD

The study uses qualitative content analysis to identify, systematise and interpret, in the official ESRS texts, data needs relevant from a greencontrolling perspective. The six interlinked tasks of green controlling are shown in Figure 2: ensuring relevance and transparency, identifying environmental opportunities and risks, supporting goalsetting and strategy, embedding sustainability into planning and decision processes, operating continuous measurement and goaloriented management, and integrating control and reporting (ICV, 2014; Horváth, Gleich, Seiter, 2025). The documents analysed are ESRS 1–2 (general requirements and disclosures) and the final, official versions of topical standards E1–E5 (European Commission, 2023).



Figure 2. Tasks of green controlling
Source: ICV, 2014; Horváth, Gleich, Seiter, 2025;
authors' compilation

RESULTS

The requirements of ESRS 1–2 and ESRS E1–E5 are analysed against the tasks of green controlling, following the methodological framework. In the ESRS system, the general standards provide the conceptual, methodological and structural base upon which the environmental topical standards build. A greencontrollingoriented summary of the standards follows.

ESRS 1 General Requirements defines the conceptual and methodological framework of sustainability reporting and the general preparation and presentation requirements. It sets out the ESRS structure and core concepts and ensures that disclosures focus on material environmental, social and governance impacts, risks and opportunities (European Commission, 2023; ESRS 1 Objective).

ESRS 2 General Disclosures sets sectoragnostic disclosure requirements applicable to all companies and provides a consistent structure for sustainability reporting. It requires that information under the topical standards reflect the outcome of the materiality assessment and align with expectations for identifying and assessing impacts, risks and opportunities (European Commission, 2023; ESRS 2 Objective).

ESRS E1 Climate Change requires disclosures that enable users to understand the company's climate impacts, its efforts to mitigate greenhouse gas emissions and to adapt, and the related risks, opportunities and financial effects (European Commission, 2023; ESRS E1 Objective).

ESRS E2 Pollution prescribes disclosures on impacts, actions and results regarding air, water and soil pollution. Its aim is to show how the company manages pollutionrelated risks and opportunities, how it aligns strategy and business model with prevention, control and phaseout, and what short, medium and longterm financial effects are expected; it also covers substances of concern and of very high concern (European Commission, 2023; ESRS E2 Objective).

ESRS E3 Water and Marine Resources defines disclosures on impacts, actions and results related to water and marine resources. It requires explanation of risk and opportunity management, strategic alignment and expected financial effects; the standard covers water use and withdrawal, discharges and water body status, as well as extraction and use of marine resources (European Commission, 2023; ESRS E3 Objective).

ESRS E4 Biodiversity and Ecosystems specifies disclosures on material biodiversity and ecosystem impacts, preventive and restorative actions and their results, and related risks and opportunities. It requires information on ecosystem state and services, species status and dependencies, and associated financial effects (European Commission, 2023; ESRS E4 Objective).

ESRS E5 Resource Use and Circular Economy sets disclosures on resource use and contribution to circularity: impacts on inflows and outflows along product and service life cycles and on waste generation, actions for resource efficiency and circularity and their results and financial effects; dependencies and short, medium and longterm impacts must be addressed (European Commission, 2023; ESRS E5 Objective).

In what follows, the standards are interpreted along the six tasks of green controlling as defined in the Methods section. The accompanying figures outline the ESRS references for each topic, providing quick legal anchors alongside the textual analysis.

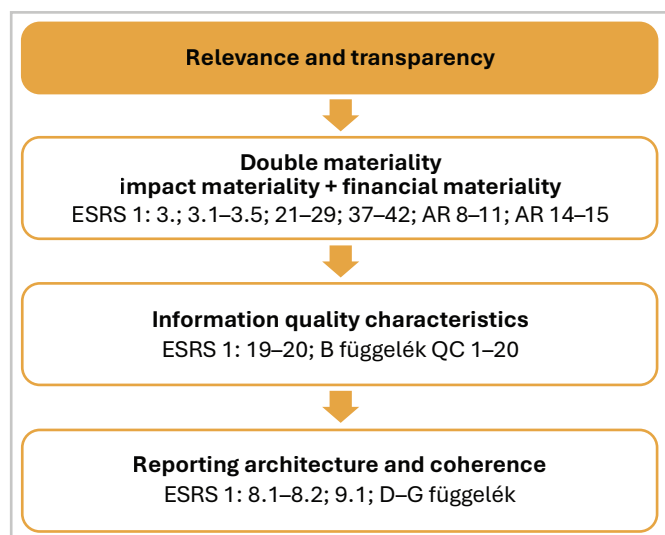


Figure 3. Relevance and transparency in ESRS
Source: European Commission, 2023; authors' compilation

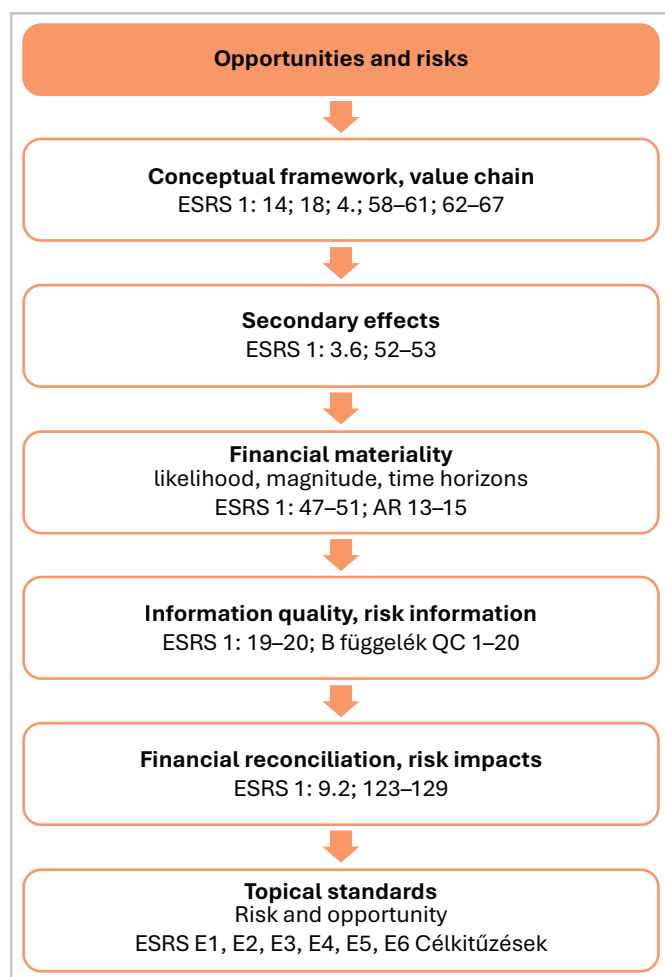


Figure 4. Opportunities and risks in ESRS
Source: European Commission, 2023; authors' compilation

Relevance and transparency

ESRS builds on double materiality: companies must assess the material impacts of their activities on people and the environment and the financial consequences thereof. Information quality characteristics ensure transparency: disclosures must be relevant and faithfully represented, comparable over time and across companies, verifiable and under-

standable. These principles also govern internal management reports, since sustainability information supports decision-making. Reporting architecture requires the sustainability statement to be a distinct, human and machine-readable part of the management report, linked by crossreferences to other sections and to the financial statements. Figure 3 shows the ESRS anchors for this task.

Opportunities and risks

ESRS applies a unified framework for impacts, risks and opportunities and requires continuous due diligence across the entire value chain (own operations, upstream and downstream). Unintended, secondary effects of interventions must also be identified and managed. Financial materiality combines likelihood and magnitude across short, medium and long time horizons, considering dependencies on natural and social resources. For green controlling this means a structured opportunities and risks map, which the topical standards specify for climate, pollution, water and marine resources, biodiversity and ecosystems, and resource use and circularity. Figure 4 summarises the references.

Goals and strategy

ESRS organises the linkage between goals and strategy into a clear reporting order. Companies must show how material topics fit the business model and strategy and who is responsible for execution. Time horizons are unified and a base year is mandatory. Goals must be quantified, timebound and objectively assessable. Topical standards name concrete goal areas: climate (emission reduction and adaptation), pollution

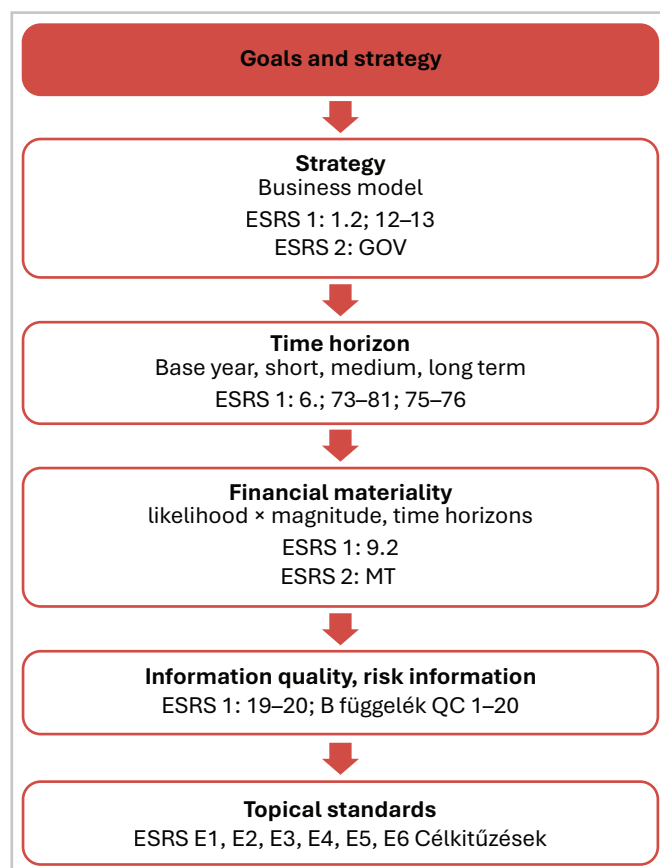


Figure 5. Goals and strategy in ESRS
Source: European Commission, 2023; authors' compilation

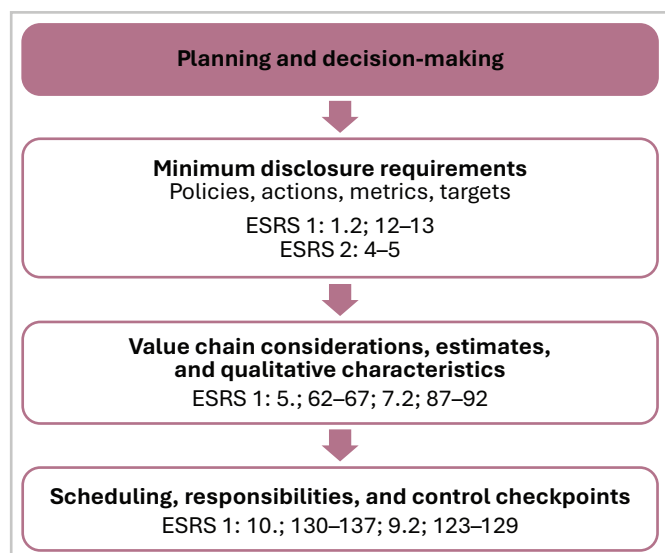


Figure 6. Planning and decisionmaking in ESRS
Source: European Commission, 2023; authors' compilation

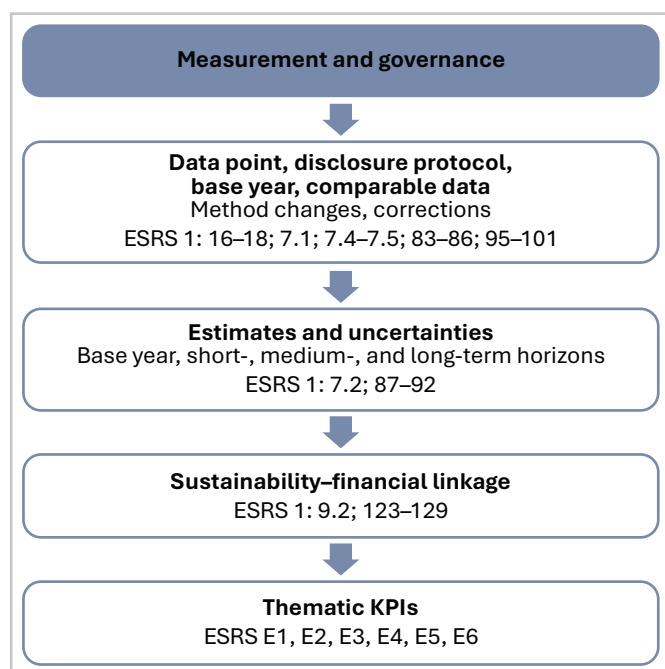


Figure 7. Measurement and management in ESRS
Source: European Commission, 2023; authors' compilation

(prevention and phaseout), water (sustainable use and aquatic ecosystems), biodiversity (protection and restoration), circular economy (resource efficiency and material circularity). These anchor annual and midterm planning in green controlling. Figure 5 provides references.

Planning and decisionmaking

ESRS requires companies to translate material topics into policies, action programmes, metrics and targets, presented consistently. Minimum content covers policy purpose and scope, timing and resource needs of actions, related metrics and target values. Planning must extend beyond organisational boundaries: valuechain exposures and interventions (upstream and downstream) form part of the planning base. Where direct data are unavailable, substantiated sectoral estimates may be used in line with quality principles. Implementation can be

phased; transitional provisions specify where and for how long simplifications or qualitative descriptions are acceptable. For green controlling this defines concrete inputs to the plan–actual system. Figure 6 shows the references.

Measurement and management

ESRS builds the measurement and management basis on a precise understanding of the “data point”. It distinguishes mandatory and voluntary disclosures, and requires comparability and consistency: fixed base year, methodological stability, priorperiod comparatives, and retrospective restatement with justification upon method change. Where estimates are used, sources, assumptions and sensitivities must be shown consistently. A core principle is linking sustainability metrics to financial statements through direct references or reconciliation. The topical standards define topicspecific metric packages. Green controlling must set definitions, scope, method, frequency and responsibilities, and ensure financial linkage consistently. Figure 7 summarises the anchors.

Control and reporting

ESRS requires the sustainability disclosure to be a separate, human and machinereadable part of the management report and to be coherent with other corporate reporting. Coherence means identical consolidation scope, aligned methodological bases and, where appropriate, incorporation by reference. At group level, materiality must cover the full consolidation perimeter; where necessary, information must be broken down by geography, site or subsidiary to avoid masking material differences. Reporting integrity is protected by governed disclosure of errors, events after the reporting period and methodological changes, with traceable documentation. For green controlling this implies a unified reporting calendar, responsibility matrix and internal control framework that also covers sustainability data. Topically, this means information under E1–E5

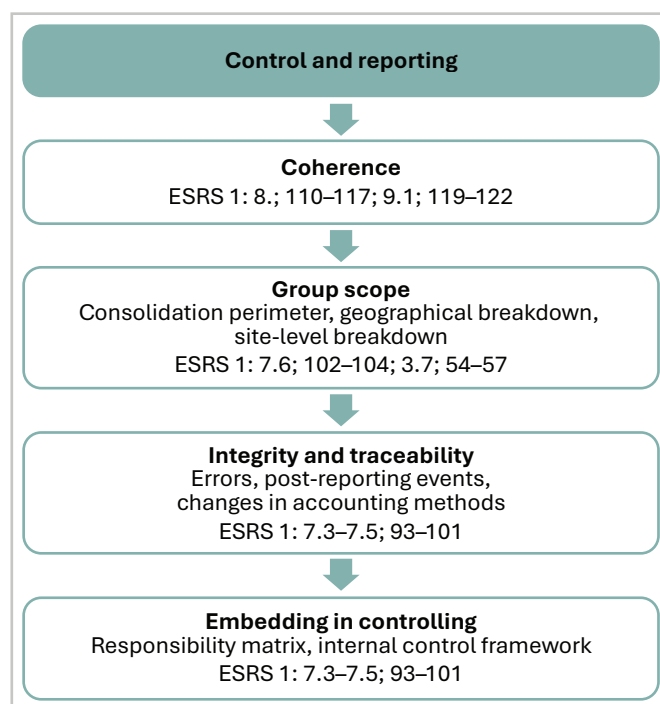


Figure 8. Control and reporting in ESRS
Source: European Commission, 2023; authors' compilation

appears in management reports and external statements on a consistent conceptual and methodological basis and, where relevant, is linked to concrete financial line items. Figure 8 provides references.

Taken together, the conceptual, quality and structural principles of ESRS 1–2 and the topical requirements of E1–E5 constitute an integrated reporting architecture that, at system level, supports all six tasks of green controlling. As a result, sustainability information can serve managerial decisions in a measurable, financially reconciled and governanceembedded manner, while meeting legal compliance and assurance requirements.

CONCLUSIONS

The general principles of the European Sustainability Reporting Standards (ESRS 1–2) and the environmental topical requirements (ESRS E1–E5) form not merely a disclosure minimum but an operational corporategovernance framework that renders sustainability information measurable, financially reconciled and embedable into governance for green controlling. This framework ensures that the six tasks of green controlling connect within a coherent logic, providing reliable guidance for managerial decisions and legal compliance. A limitation is the still incomplete coverage of sectorspecific standards; firmspecific operationalisation and dataquality improvements are therefore essential. As these gaps close, the standards can strengthen not only compliance but also sustainabilityperformancebased, consistent and financially grounded corporate governance.

Summary statement: sustainability standards create durable value when green controlling translates legal requirements into a unified, financially reconciled and verifiable decisionsupport system.

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