



ESG Blueprint





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EXECUTIVE SUMMARY

Environmental, social and governance (ESG) reporting is increasingly necessary and formalized for the marine and offshore sectors. As a result, many organizations are integrating and incorporating ESG criteria into their operations and disclosing their performance to the public and their stakeholders. ESG alignment requires an organization's leadership to commit to aligning ESG criteria with the core of its business activity.

The European Commission adopted the Corporate Sustainability Reporting Directive (EU CSRD) in December 2022, extending the scope of the Non-Financial Reporting Directive (EU NFRD) to more companies (approximately 50,000 from 11,000) and incorporating new ESG requirements. These include the concept of double materiality, 84 disclosures requirements, reporting of Scope 3 greenhouse gas (GHG) emissions if found material, digitalized and integrated annual report and limited third party assurance.

Following the example of the European Union (EU), the United States (U.S.) Securities and Exchange Commission (SEC) is in the process of preparing guidelines to provide consistent standards for ESG disclosures and enable investors to make well-founded investment decisions based on these non-financial metrics. On March 21, 2022, the SEC published a proposed rule that would have required U.S.-listed companies to disclose their climate-related risk and GHG emissions, similar to ESG frameworks such as Task Force on Climate-Related Financial Disclosures (TCFD), Sustainable Accounting Standards Board (SASB) and calculation methodologies such as the GHG protocol.

The SEC rule will provide a safe harbor for liability from Scope 3 emissions disclosures and exemption from Scope 3 emissions disclosure requirements for smaller reporting companies¹. Previously expected in the fourth quarter of 2022, publishing of the final rule was delayed due to the number of public comments received. However, after the final rule is published, the phasing of reporting requirements will occur. If the rule currently has a fiscal year (FY) 2023 requirement and is published in 2023, the requirements will change one fiscal year to FY 2024.



Similarly, in the United Kingdom (U.K.), a listing rule requires large companies with a premium listing on the London Stock Exchange to provide climate-related risks and opportunities disclosures. From April 6, 2022, over 1,300 of the largest U.K.-registered private companies and financial institutions with over 500 employees and £500 million in turnover are required to disclose climate-related financial information based on the TCFD recommendations.

Larger companies are increasingly demanding ESG criteria compliance from their supply chain partners while a growing number of financial institutions are adopting sustainability financing strategies, leading small- and medium-sized enterprises (SMEs)² to align with ESG criteria. Furthermore, ESG credit rating agencies are playing a very important role by increasing awareness through ESG benchmarks.

This paper provides a blueprint for the marine and offshore industry and demystifies the complexities of ESG reporting. It investigates market and institutional ESG drivers, provides an overview of current and upcoming ESG reporting regulatory requirements, and covers market best practices for the marine and offshore sectors. Understanding these drivers and best practices will assist marine and offshore decision-makers with navigating the complex, dynamic world of ESG.

¹ In the U.S. a company qualifies as a “smaller reporting company” if: (a) it has public float of less than \$250 million or (b) it has less than \$100 million in annual revenues and no public float or public float of less than \$700 million.

² Different criteria may be used for the classification of enterprises according to their size; the most common is number of people employed (Large ≥ 250 , Medium-sized < 250 , Small < 50). In EU for example, in addition to the number of employees the Turnover (Large $> \text{€}50\text{M}$, Medium-sized $\leq \text{€}50\text{M}$, Small $\leq \text{€}10\text{M}$) or the Balance sheet total (Large $> \text{€}43\text{M}$, Medium-sized $\leq \text{€}43\text{M}$, Small $\leq \text{€}10\text{M}$) are also considered in the classification characterization.

1. INTRODUCTION



The concept of sustainable development was first defined in 1987 by the Our Common Future [1] report, which emphasized the objective to meet the needs of present generations without compromising the ability of future generations to meet their own needs. The Rio Earth Summit further committed the world to sustainable development five years later when it recognized that economic growth, social well-being and environmental protection are interdependent and mutually reinforcing. Over the past 40 years, the concept of sustainability has been constantly reshaping business-as-usual, changing the way businesses operate with society, economy and the environment.

Responsibility as a concept is associated with voluntary (i.e., beyond legal requirements), long-term efforts to reduce environmental and social impact and create positive sustainability effects. The integration, monitoring and communication of environmental, social and governance (ESG) metrics – resulting from a deep diagnosis of the significant ESG aspects and a thorough materiality assessment survey that involves both internal and external key stakeholders – provides numerous benefits to businesses. These include improved operational efficiency, long term cost savings, customer loyalty, innovation, sales and marketing, business risk mitigation, supplier relations, and stakeholder engagement.

Corporate economic efficiency can no longer be viewed in isolation from the impact of business activities on the environment and society. Today, it is widely recognized that corporations must consider environmental and social factors in their decision-making processes. In fact, there is growing evidence that companies which prioritize sustainability and social responsibility tend to perform better economically in the long run. (see Figure 3). By considering the environmental and social returns of their actions, businesses can create a successful cycle of sustainable growth, generating economic value while also contributing to a better world for all.

Marine and offshore companies are driven to incorporate ESG principles by regulatory compliance, by internal or external stakeholders, or a combination of those. There is an international trend toward regulating ESG disclosures by incorporating existing or new ESG standards into new legislative frameworks as, for example, the upcoming United States (U.S.) Securities and Exchange Commission (SEC) ESG Rule and the European Commission Corporate Sustainability Reporting Directive (EU CSRD) that is already in force.

Larger companies are increasingly demanding ESG criteria compliance from their supply chain partners while a growing number of financial institutions are adopting sustainability financing strategies, leading small-and medium-sized enterprises (SMEs) [2] to align with ESG criteria. Furthermore, ESG credit rating agencies are playing a very important role by increasing awareness through ESG benchmarks.

To combat climate change, regulatory bodies are making bold decisions and setting ambitious targets for decarbonization. The ESG-alignment that emerged recently, through pressure from the market and financial institutions, is now a regulatory requirement in various countries and is becoming a dominant standard. Businesses are pressured to assess and communicate relevant material-matters disclosures covering a wide range of ESG criteria within their direct control throughout the value chain and across the life-cycle stages of their activities. In that context, life-cycle assessment (LCA) methodologies are becoming an essential tool for developing a deep understanding of environmental and social impacts. Furthermore, sustainable procurement ESG criteria and sustainable taxonomy frameworks are driving sustainability performance in the value chain.

Achieving ESG excellence requires an in-depth assessment of all direct and indirect environmental and social aspects, incorporation of governance values in the company business model and total leadership commitment to continuous improvement of sustainability performance. A fundamental starting point is the appropriate stakeholder mapping – a challenging task for international businesses – and the materiality assessment through which the ESG reporting boundaries are defined.

Marine and offshore companies will need to adapt to the pressing effects of climate change by assessing vulnerability and investing in resilience. They can do this by focusing on:

- Continuously increasing their sustainability performance in mitigating environmental impacts arising from their business activities, such as climate crisis, biodiversity risks, overexploitation of natural resources and uncontrolled pollution.
- Adopting social responsibility strategies, covering the internal and the external corporate environment, such as crew welfare, wellbeing, health and safety.
- Adopting the highest values of corporate governance to ensure a practical sustainability transition.

The ABS ESG Blueprint is intended to provide an overview of the main drivers behind ESG – from market drivers to regulatory drivers – and provide ESG best practices for the marine and offshore industries. Understanding these drivers and best practices will assist industry decision-makers with navigating the complex, dynamic world of ESG.



2. ESG DRIVERS



Within the constantly changing institutional environment, marine and offshore businesses are called upon to develop reflexes that protect their financial performance while still satisfying institutional requirements. Today, many shareholders and investors demand transparency and accuracy on environmental, social and governance (ESG) corporate disclosures. At the same time, market funds and public financing mechanisms require ESG criteria compliance to unlock funding.

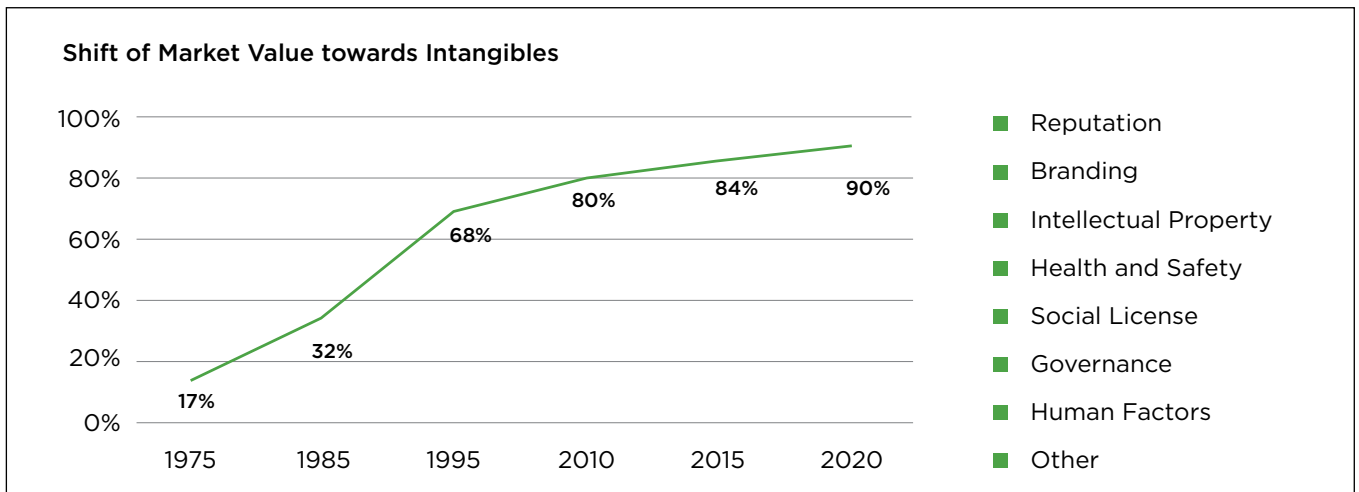
Corporate ESG-alignment and reporting have both implicit and explicit benefits as shown in Figure 1. It enhances transparency, increases accountability and contributes to the comparability and quality of reported information at all levels.



Figure 1: Sustainability drivers of financial performance and competitive advantage.

As stakeholders' expectations shift towards more sustainable development, businesses must fully embrace this paradigm shift to create value. By embracing sustainability at a strategic and operational level, companies can obtain greater long-term business value.

As corporate market value shifts towards intangible assets over time, values such as reputation, branding, intellectual property, health and safety, social license, governance and human factors become increasingly important components of market capitalization. A recent study [2] that examined the components of the S&P 500 market value and the role of intangible assets across a range of global indexes, as presented in Figure 2, showed a gradual shift towards intangible assets from a meager 17 percent in 1975 to 90 percent in 2020. This clearly shows that intangibles do have a quantifiable effect on market capitalization.

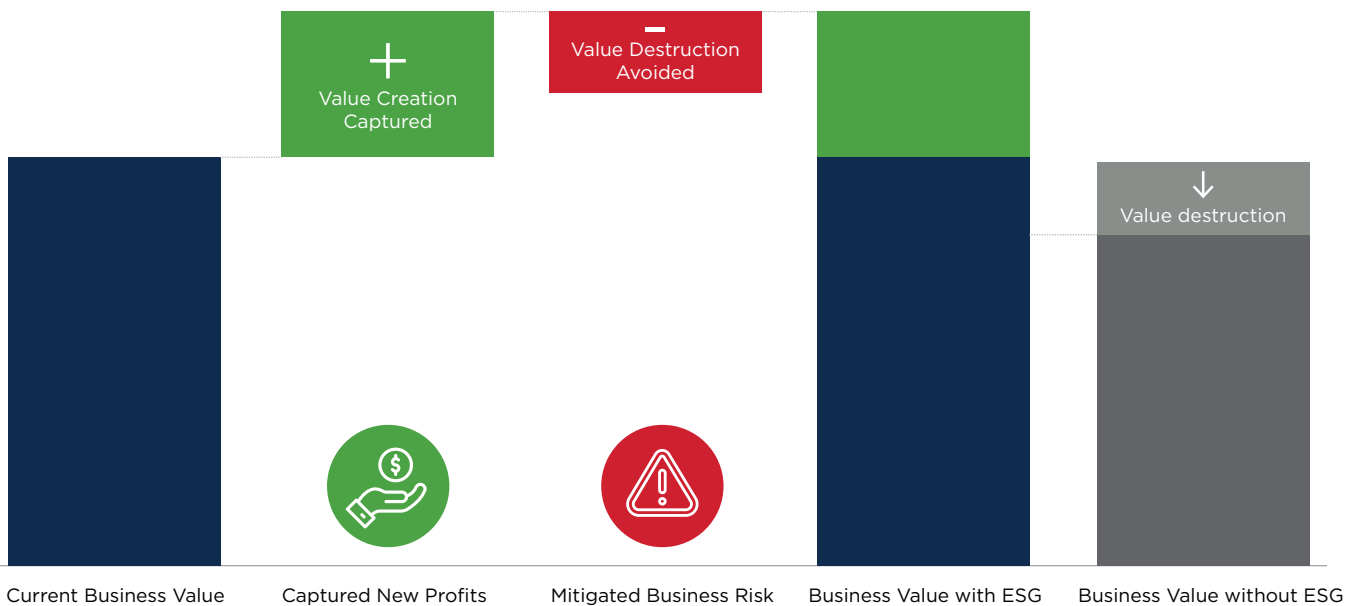


Source: Ocean Tomo, A part of J.S. Held, Intangible Asset Market Value Study, 2020

Figure 2: Components of S&P 500 market value. [2]

The dynamically changing macroeconomic and regulatory environment indicates that corporations already reporting on ESG metrics will need to adapt as well to the increasing number of institutional ESG requirements. ESG-readiness requires the design and development of a well-defined ESG program and sufficient time to mature. The corporate ESG-alignment connects with business value creation, increases competitiveness, mitigates current and future risks and enables access to lower cost of capital.

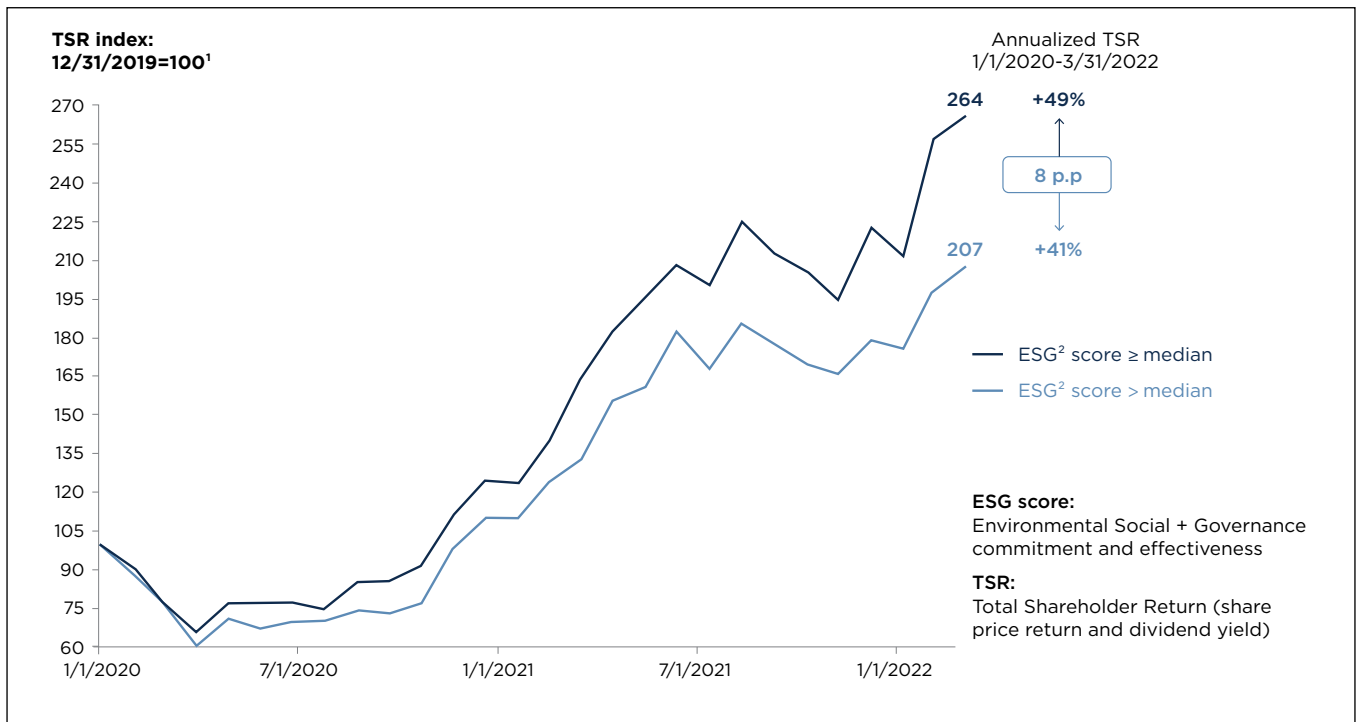
As indicated in Figure 3, there seems to be a link between corporate ESG-alignment and improved business and financial performance.



Source: ESG Playbook for Shipping, Boston Consulting Group and Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping, February 2023

Figure 3: Value of ESG. [3]

Additionally, a recent quantitative study (see Figure 4) illustrates the relationship between robust ESG strategies and shareholder returns in the marine industry. This was based on the median rebalanced monthly total return of a set of 40 marine transport players and their ESG corporate scoring on environmental (e.g., toxic waste and emissions, carbon emissions), social (e.g., health and safety) and governance (e.g., corporate governance, corporate behavior) performance, commitment and effectiveness. The study showed that Shipping companies with robust ESG strategies deliver better shareholder returns. While correlation is not causation, it is very likely that strong internal managerial controls and external stakeholder management, as required by ESG programs, do lead to good financial performance.



Source: ESG Playbook for Shipping, Boston Consulting Group and Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping, February 2023

Note: 1. Median rebalanced monthly total return of a set of 40 Marine Transport players; 2. ESG score measure a company's relative material Environmental (e.g., Toxic Waste & Emissions, Carbon Emissions), Social (e.g., Health & Safety) and Governance (e.g., Corporate Governance, Corporate Behavior) performance, commitment and effectiveness

Figure 4: Shipping companies that choose to lead on ESG capture superior value. [3]

Figure 5 summarizes some pros and cons of a good ESG program.



Figure 5: Pros and cons of a good ESG program.

Additional details regarding regulatory developments that drive the mandatory non-financial reporting are presented and discussed in Annex II; market-based drivers, such as the opportunities from sustainable financing, are presented and discussed in Annex III; additional investor pressure drivers are found in Annex IV.

3. ESG REPORTING STEP-BY-STEP



The first year of reporting is typically a very challenging task for companies. A fundamental starting point is to define the reporting scope and the reporting standard(s) that will be adopted for ESG reporting purposes. The reporting standard defines the reporting requirements and the relevant disclosures that need to be addressed, as well as provides guidance and recommendations. Companies that report on mandatory basis (i.e., those subject to the EU CSRD or other regulations) must follow specific reporting standards and methods and comply with all the relevant legal requirements. For a company, a good starting point is to understand their baseline data reporting systems and processes; hence, conducting a gap analysis is an important exercise and is highly recommended. Once a company understands the gaps in their systems and processes, it will lay a path for closing the gaps and preparing the organization for an inaugural sustainability report.

While regulatory reporting is prescriptive in nature, voluntary reporting allows for more flexibility in defining the reporting methodological approach, considering best market practices.

The key sustainability reporting standards, which cover the ESG reporting landscape, are presented and discussed in Annex I. These standards support both voluntary and mandatory-institutional disclosures, regardless of geographical region or sector; however, some standards have developed industry-specific requirements. Additionally, Annex V presents other frameworks such as rating and labeling schemes that are supportive to the ESG journey of the marine and offshore sectors.

3.1 MATERIALITY ASSESSMENT

An important task that companies need to undertake in the context of ESG reporting is the materiality assessment (i.e., the identification of the non-financial topics that are considered important (material) to a company and its stakeholders). Mandatory material topics – if any, depending on the scope of reporting, regulatory framework, etc. – together with material topics identified during the materiality assessment process, define the reporting boundaries (i.e., the relevant ESG topics and metrics that will be included in the report). The reporting frameworks have different materiality definition approaches, depending on their scope and target-group focus.

The various reporting frameworks have different materiality definition approaches, depending on their scope and target-group focus.

The Impact Materiality, a concept formally known by the Global Reporting Initiative (GRI) standards, addresses a broader audience and is focused on the identification of the most significant impacts that a company has on sustainability-matters. These include environmental, social, employee matters and human rights (inside-out perspective).

The investor-focused, non-financial reporting frameworks of the International Sustainability Standards Board (ISSB), Sustainable Accounting Standards Board (SASB) and the Task Force on Climate-Related Financial Disclosures (TCFD), require the identification of how sustainability matters (i.e. environmental, social and employee and human rights) affect the business development, performance and position of the company – financial materiality (outside-in perspective).

The context of double materiality, which was formally proposed in 2019 by the EU in Guidelines on non-financial reporting: Supplement on reporting climate-related information, is a more holistic approach that requires both impact and financial value to be considered, recognizing that a company can impact and be impacted by ESG aspects (e.g., CSRD and EU Sustainability Reporting Standards [ESRS]). Figure 6 further defines materiality according to specific sustainability frameworks.

Materiality Assessment
<ul style="list-style-type: none"> • Identification of the non-financial topics that are considered important (“material”) to a company and its stakeholders.
Impact Materiality
<ul style="list-style-type: none"> • GRI⁴: “The organization prioritizes reporting on those topics that reflect its most significant impacts on the economy, environment and people, including impacts on human rights.”
Financial Materiality
<ul style="list-style-type: none"> • ISSB⁵: “Information is material if omitting, misstating or obscuring it could reasonably be expected to influence investor decisions.” • TCFD⁶: “Companies should determine materiality for climate-related issues consistent with how they determine the materiality of other information included in their financial filings.” • SASB⁷: “Information is financially material if omitting, misstating or obscuring it could reasonably be expected to influence investment or lending decisions that users make on the basis of their assessments of short, medium, and long-term financial performance and enterprise value.” • U.S SEC⁸: “A topic is material if there is substantial likelihood that a reasonable investor would consider it important when determining whether to buy or sell securities or how to vote.”
Double Materiality
<ul style="list-style-type: none"> • EFRAG⁹: “Impact materiality and financial materiality assessments are inter-related and the interdependencies between these two dimensions shall be considered. In general, the starting point is the assessment of impacts. A sustainability impact may be financially material from inception or become financially material when it becomes investor relevant, including its present or likely effects on cash flows, development, performance and position in the short, medium and long-term time horizons. Irrespective of their being financially material, impacts are captured by the impact materiality perspective.”

Figure 6: Definitions of materiality.

The materiality assessment is not just a tool for reporting; it is a major instrument that helps define the reporting boundaries of non-financial topics. Note that accuracy and consistency are foundational concepts to ensure substantial reporting in accordance with recognized reporting standards. It provides an integrated and quantitative view into material topics, supporting companies on targeted strategic decision-making and helps them to compare themselves to peers and industry standards.

Some of the latest standards, like the CSRD/ESRS, require mandatory reporting on some general disclosures. For example, ESRS 2 includes topics such as the role of management on sustainability matters, how materiality was assessed and how impacts, risks and opportunities are identified and assessed. All other sustainability-matters are subject to materiality.

An overview of the Double Materiality process is shown in Figure 7.

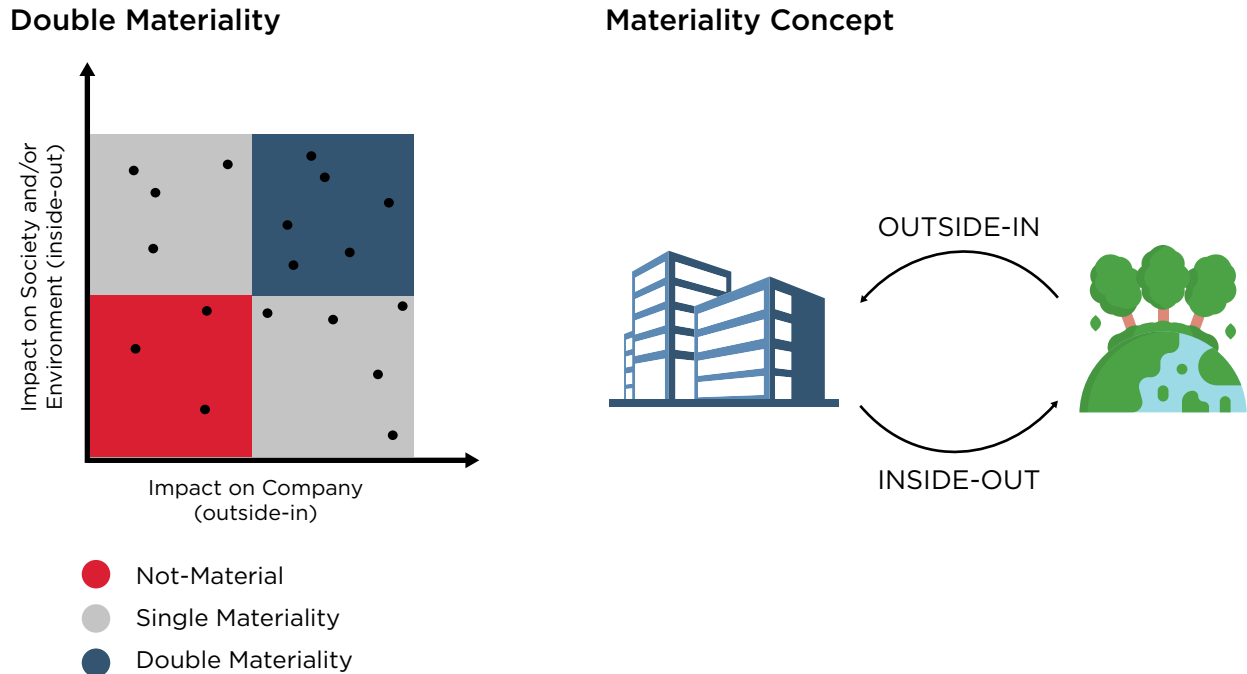


Figure 7. Double Materiality process.

Basic components of the materiality assessment process include a peer review, stakeholder mapping, management interviews, stakeholder digital surveys, analysis and the preparation of a materiality matrix chart.

3.1.1 METHODOLOGY

The first step of the materiality assessment is the preparation of a screening list with relevant topics to be considered by both internal and external stakeholders. A preliminary stakeholder mapping is crucial to identifying the most relevant external stakeholders. These external stakeholder groups include, but are not limited to:

- Charterers/Brokers
- Financial Institutions
- Suppliers/Business Partners
- Classification Societies
- Flag States
- Port Authorities
- International/Industry Organizations
- Insurers/P&I Clubs
- Shipyards
- Manning Agents
- Academic Institutions
- Other

Most advisors and practitioners perform stakeholder digital surveys and management interviews from all levels of the organization with appropriate customized questionnaires. Management interviews and prioritization are an important part of the materiality assessment process which allows for aligning company long-term strategy to the outcomes of the materiality.

Suggested by existing standards, incorporating both internal and external stakeholders in the materiality assessment process is a best practice. Quality and constructive stakeholder participation helps businesses address stakeholder expectations and obtain approval for their sustainability results and reporting process.

Table 1 summarizes the criteria for assessing the significance of issues to stakeholders. Table 2 summarizes the criteria for assessing the significance of issues to the company.

Table 1: Criteria for assessing significance of issues to stakeholders.

Significance to Stakeholders	Impact on Environment or Society	Level of Stakeholder Concern	Contribution to Sustainability
Higher	Known to directly cause extensive or severe damage or harm	Widely acknowledged as a major issue or unacceptable situation	An opportunity with the potential to generate lasting improvement and development
Medium	Known contributor to declining state of ecosystems or socioeconomic conditions	Perceived as important in several locations or by some groups	Opportunities for localized improvement or support for wider initiatives
Lower	Known to have measurable but limited effects	Isolated or indirect criticism	Can provide minor but measurable improvement

Table 2: Criteria for assessing significance of issues to the company.

Significance to Stakeholders	Societal License to Operate	Media, Public or Political Impact	Impact on Business Strategy
Higher	Global, regional or irreversible loss in societal license to operate	Strong criticism or anger expressed at an international level	Fundamental business change, including new opportunities
Medium	Substantive enforcement, fines or regulatory action	Prolonged coverage or local criticism (e.g., national)	Alteration to stated intentions or commitments
Lower	Minor non-compliance without penalties	Short-term coverage or local complaints	Modifications to positions or systems

The key process steps for the identification of material aspects are presented in Figure 8:

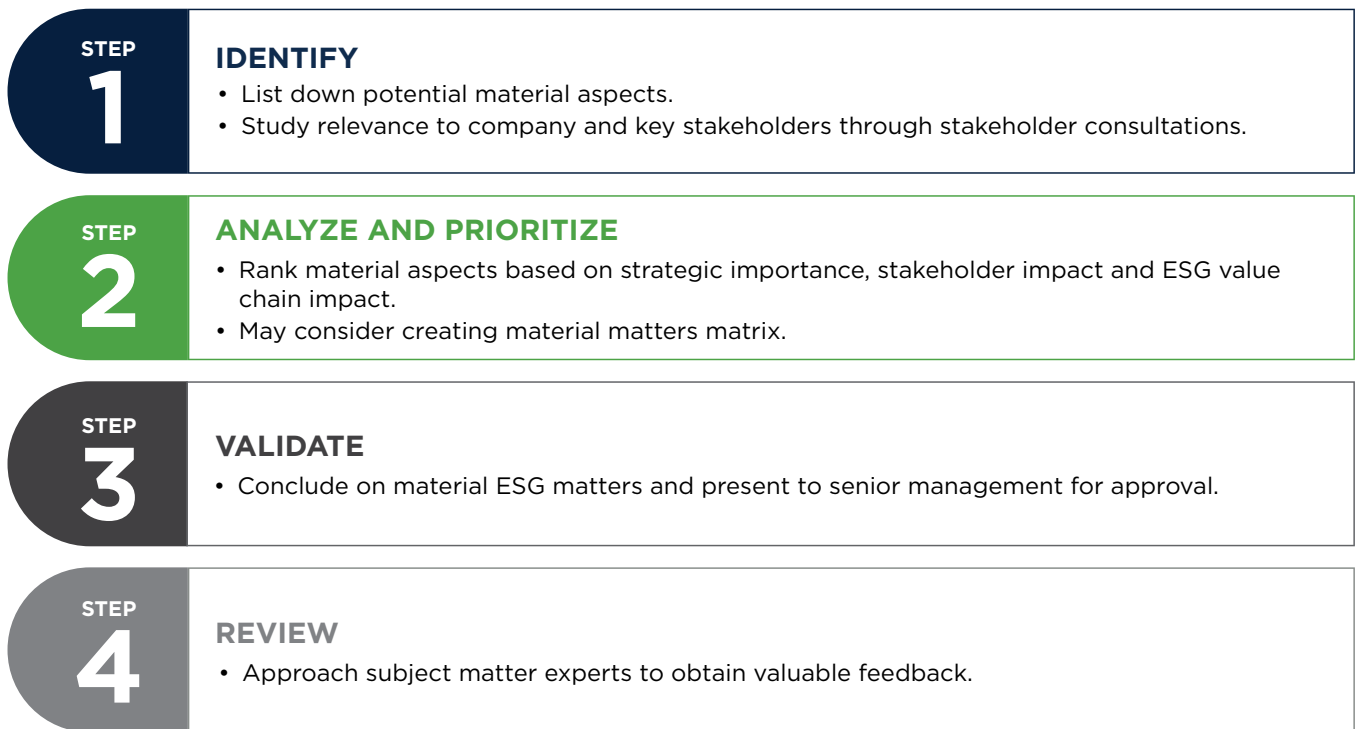


Figure 8 Process steps for the identification of material aspects.

The materiality assessment is presented in an illustrative matrix (see Figure 9) that indicates how different topics are ranked by correlating two parameters (e.g., influence, significance of impact, etc.). The outcome of the materiality assessment indicates the ESG-matters' topics that are going to be reported.

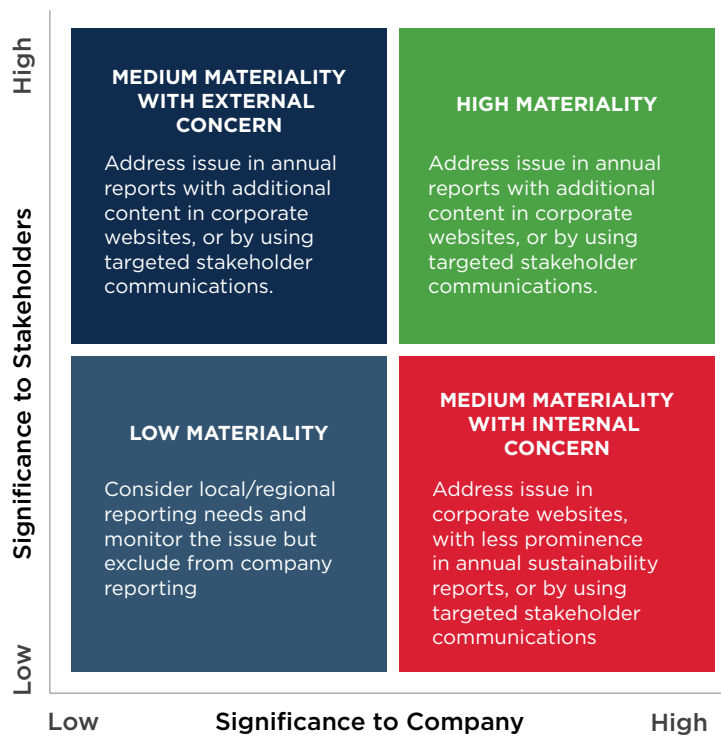


Figure 9: Example materiality matrix.

3.2 KEY MATERIAL ESG TOPICS FOR THE MARINE AND OFFSHORE SECTORS

It is an important aspect of sustainability reporting processes to identify relevant ESG topics for reporting purposes. Figure 10 presents a glimpse of some commonly repeated ESG topics in the marine and offshore sectors. Some commonly reported ESG topics include:

- E** GHG emissions, decarbonization efforts, air pollution prevention, ballast water and marine biosafety, solid waste and wastewater management. Other topics may also be addressed such as marine plastic litter, underwater noise pollution, wildlife collisions, oil spills and biodiversity impacts and shipbreaking impacts.
- S** Community engagement, data privacy, work health and safety (including insurance policy), protection of human and labor rights (considering the whole supply chain), responsible procurement, access to medical care, clean water and sanitation, protection of human wellbeing, appropriate working conditions, protection of mental health and access to education.
- G** Anti-bribery policy, business ethics and governances related to environmental sustainability, human rights and safety management, risk management, transparency and accountability.

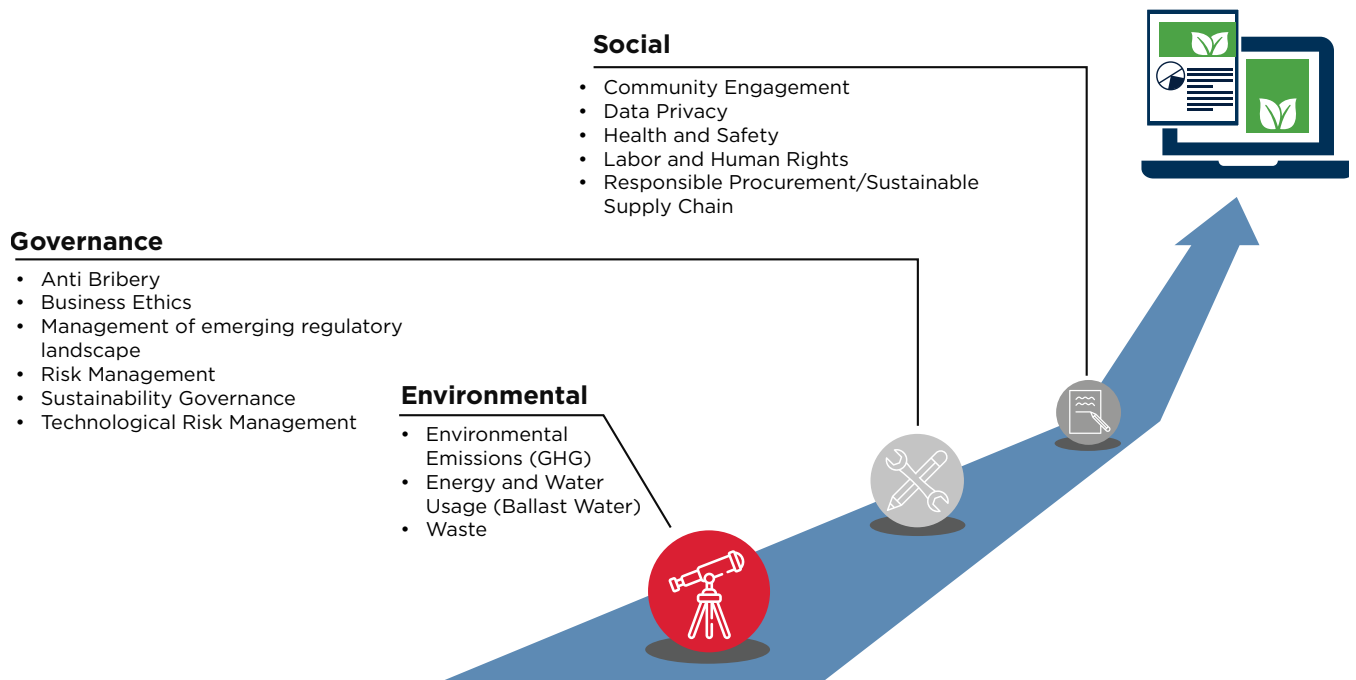


Figure 10: Indicative material topics.

Key material ESG topics based on the EU CSRD and the 12 topical ESRS drafts – which is considered the most inclusive ESG reporting framework at present – are listed in Table 3.



Table 3: Key aspects covered under the topical ESRS latest drafts.

Environment	
E1 Climate Change	<ul style="list-style-type: none"> • Climate change mitigation • Climate change adaptation • Energy consumption • Decarbonization targets aligned to the Paris Agreement (Scope 1,2,3) • Transitional risks
E2 Pollution	<ul style="list-style-type: none"> • Air pollution • Water pollution • Soil pollution • Living organisms • Food resources • Use of substances of concern • Microplastics • Operational pollution
E3 Water and Marine Resources	<ul style="list-style-type: none"> • Water consumption • Withdrawal • Discharge from and into water (ground and surface water) • Marine resources
E4 Biodiversity and Ecosystems	<ul style="list-style-type: none"> • Impact on species • Biodiversity Loss • Impacts and dependencies on ecosystems
E5 Circular Economy	<ul style="list-style-type: none"> • Resource inflows • Resource outflows • Waste • Resource optimization • Transitional risks towards circular economy
Social	
S1 Own Workforce	<ul style="list-style-type: none"> • Freedom of association • Working conditions • Access to equal opportunities • Other work-related rights
S2 Workers in the Value Chain	<ul style="list-style-type: none"> • Same as ESRS S1, for workers in the company's value chain
S3 Affected Communities	<ul style="list-style-type: none"> • Impact of a company's own operations and value chain • Impact on indigenous rights • Impact on civil rights • Impact on social and economic rights
S4 Consumers and End-users	<ul style="list-style-type: none"> • Access to quality information • Privacy and the protection of children
Governance	
G1 Business Conduct	<ul style="list-style-type: none"> • Anti-corruption practices • Anti-bribery practices • Protection of whistleblowers • Political lobbying and the management of relationships with suppliers (including payment practices)

3.3 DATA COLLECTION BEST PRACTICES

Data collection is one of the most important elements of sustainability reporting. Companies must comply with and be aware of the laws and regulations that are linked with data collection at a regional and international level. Furthermore, data should be accurate, consistent, repeatable and standardized. To collect appropriate data for the required material topics, as identified in the materiality assessment, a gap analysis should be performed. Since each company has different data entry systems, the gaps between the required input data and the available raw data should be identified. Data collection, in some cases, can be a very challenging task, since it presupposes a consistent collaboration between internal departments, suppliers, collaborators and other stakeholders. Data collection could also be challenging based on the availability of data and lack of appropriate recording systems, the absence of relevant standardized data collection procedures, the periodicity of data collection and other quality characteristics such as data uncertainty.

Since annual ESG reporting needs to be consistent in terms of data collection and associated data treatment methods, especially for these data points, procedure manuals could be added in the existing quality system manuals to increase accuracy, consistency and repeatability of the process.

The data collection process is a structured process that involves the following steps:

1. Set up a data collection plan.
2. Standardize internal procedures.
3. Identify responsible persons for different tasks in the company.
4. Prepare detailed data collection templates, including examples, units, quality characteristics, etc.
5. Collect information in a systematic way.
6. Regular checks on the data collection progress, including resolving data gaps and quality issues.

Digitalized tools, available in the market, could effectively support the data collection process, although integrations with the internal corporate systems and automation capabilities must be customized and critically reviewed by third-party experts to mitigate miscalculation risks.



3.4 ESG REPORTING ASSURANCE

Assurance of ESG reports involves seeking an expert to give an independent opinion of the report, including checking on the general process flow, data used and treated, materiality assessment, disclosures made and so on. As illustrated in Table 4, the different levels of assurance are based on the robustness of the verification process and are categorized as limited or reasonable assurance.

Receiving assurance is crucial because it increases the credibility of the report, and it may be required for various stakeholders such as banks and lenders. In the context of CSRD, limited assurance is mandatory and in the years to come, the requirement might change to a reasonable level of assurance.

Table 4: Types of ESG reporting assurance.

	Reasonable Assurance	Limited Assurance
Type of Assurance Obtained	<ul style="list-style-type: none"> Achieved when the risk of a material misstatement of the subject matter has been reduced to a low level. Assurance provider must conduct extensive procedures. The assurance provider obtains sufficient evidence to confirm whether the subject conforms to the criteria. <p>Same type of assurance as is required in an audit of financial statements.</p>	<ul style="list-style-type: none"> Achieved when the risk of a material misstatement of the subject matter has been reduced through the collection of evidence, but not to the low level required by reasonable assurance. Assurance provider performs different or fewer tests than those required for reasonable assurance or uses smaller sample sizes for the tests performed. The assurance provider's conclusion provides comfort over whether the subject is plausible against the criteria.
Conclusion	<ul style="list-style-type: none"> Reasonable assurance conclusions are framed in a positive manner. <p>For example, <i>“based on the procedures performed, in our opinion, the management assertion on [subject matter] is properly prepared.”</i></p>	<ul style="list-style-type: none"> Limited assurance conclusions are framed in a negative manner. <p>For example, <i>“based on the testing performed, nothing has come to our attention to indicate that the management assertion on [subject matter] was not properly prepared.”</i></p> <p>This form of reporting requires a double negative which is intended to alert the reader to the lower level of assurance being provided.</p>

It is worth noting that the International Auditing and Assurance Standards Board (IAASB) has issued a proposed International Standard on Sustainability Assurance – the ISSA 5000 “General Requirements for Sustainability Assurance Engagements” – that remained under public consultation up to 1 December and is expected to be issued before the end of 2024. It's expected to be the dominant market standard for the ESG reporting assurance. ISSA 5000 is suitable for the assurance of any sustainability information prepared according to any reporting framework and covering any sustainability topic.

4. ABS APPROACH



Based on extensive experience, ABS follows a three-step approach for the development of a Sustainability Report:

- **Phase 1** – Includes materiality assessment. This is carried out primarily through peer benchmarking, stakeholder surveys and senior management interviews.
- **Phase 2** – Involves capacity building by providing training/information on relevant frameworks and data collection by sharing relevant data collection templates.
- **Phase 3** – Includes the development of the actual sustainability report, including quantitative analysis and qualitative narratives.

As illustrated in Figure 11, the key elements and flow of developing a sustainability report start with the stakeholder mapping. It then moves into materiality topics, addressing the vision and strategy and setting the necessary policies, initiatives and activities that the company must have in place. Crucial elements include setting key performance indicators (KPIs) and targets before proceeding with any disclosures.

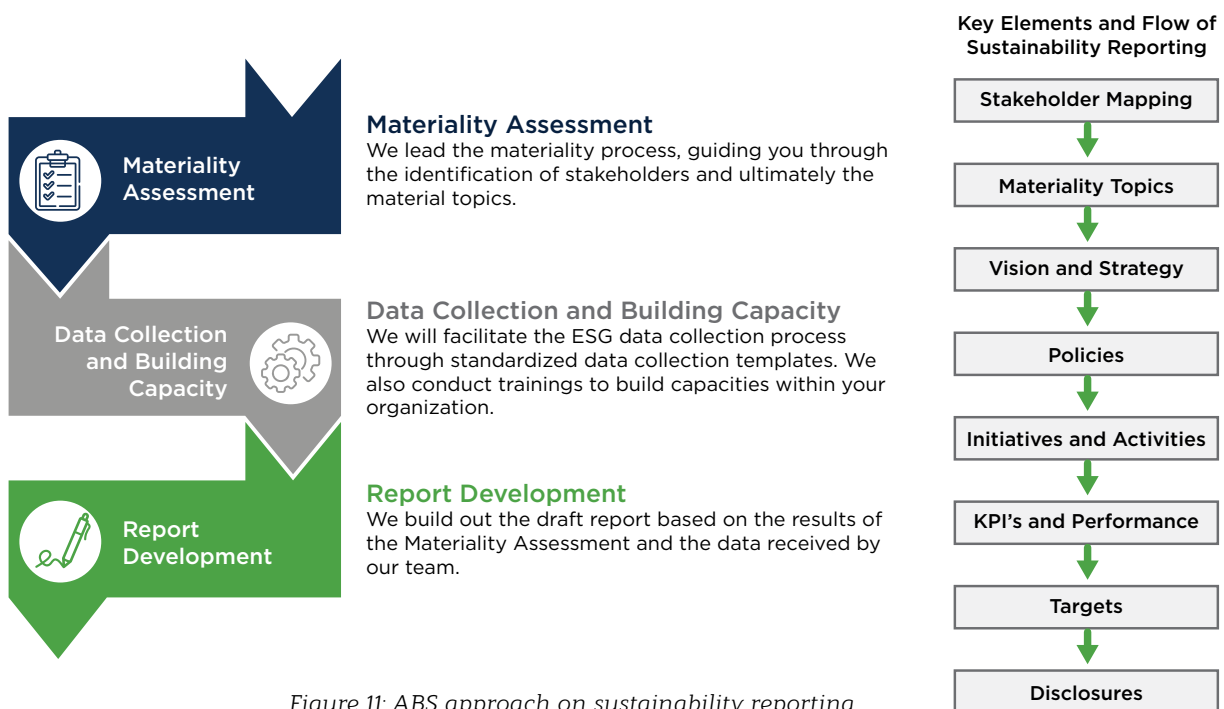


Figure 11: ABS approach on sustainability reporting.

ABS supports clients in establishing the governance and framework for sustainability reporting by incorporating key elements from industry requirements and local regulations.

An important step of the ABS ESG reporting process is performance management. ABS assists in developing an effective sustainability performance management process that the client can implement to continuously monitor progress toward meeting objectives set in the sustainability program. Development of an effective sustainability performance management process entails the definition of material KPIs and sustainability performance targets (SPTs), along with the establishment of data collection and management processes to support the continuous monitoring and improvement of sustainability performance. All along this process, we guide and provide recommendations on establishing the appropriate sustainability committee, policies and targets.

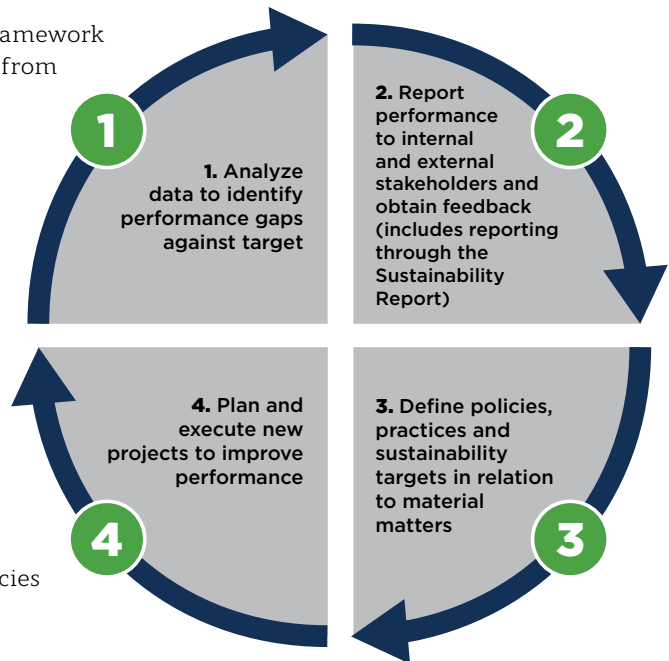


Figure 12: Performance management process example.

Figure 12 illustrates an example of performance management process.

ABS is well positioned to offer the provision of assurance services to clients, providing independent, third-party ESG reporting assurance against global standards and internationally recognized assurance frameworks.

The verification process simply starts with planning and risk assessment, which helps set assurance boundary and testing strategies. This is followed by execution, which involves verifying the underlying information and its consistency. As a key and final step, the process ends with management presentation, recommendations and the assurance report. Figure 13 shows the ABS approach on ESG reporting assurance.



Figure 13: ABS' approach on ESG reporting assurance at a glance.

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ANNEXES

ANNEX I: ESG REPORTING STANDARDS, FRAMEWORKS AND GUIDELINES

Key ESG reporting standards, which form the ESG reporting landscape, are presented below. These standards support both voluntary and mandatory-institutional disclosures, regardless of geographical region or sector. However, some standards have developed industry-specific requirements.

GLOBAL REPORTING INITIATIVE (GRI) [1]

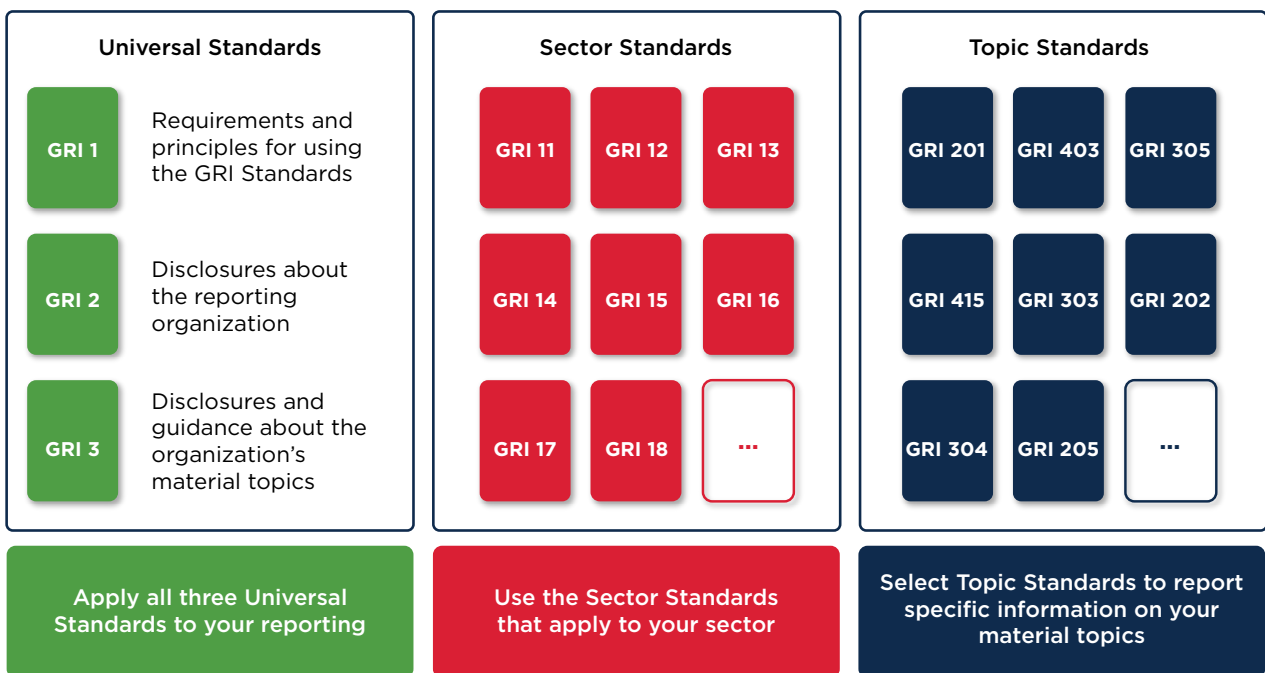
GRI was founded in 1997 in the U.S. (Boston) and is now headquartered in Amsterdam. The GRI Sustainability Reporting Standards were the first global sustainability reporting framework worldwide, and today, it is considered the most well adopted in the market. According to the GRI, over 90 percent of the largest companies disclose sustainability information. The standards include reporting framework on economic, environmental and social impacts. It is based on international standards and guidance documents from the United Nations' (U.N.) Guiding Principles of Business and Human Rights and Global Compact and the Organization for Economic Co-operation and Development's (OECD) Guidelines for Multinational Enterprises.

GRI suggests the impact materiality approach and disclosures, including a wide list of indicators covering climate change, human rights, governance, social well-being etc., as well as provides information about an organization's positive or negative contributions to sustainable development.

The GRI standards are regularly reviewed to ensure they reflect the latest global best practices for sustainability reporting, while helping organizations respond to emerging information demands from stakeholders and regulators. As illustrated in Figure 1, there are three series of Standards:

1. The GRI Universal Standards: applies to all organizations.
2. The GRI Sector Standards: applies to specific sectors.
3. The GRI Topic Standards: each listing disclosures relevant to a particular topic.

GRI STANDARDS



Source: GRI 1: Foundation (2021)

Figure 1: GRI standards: universal, sector and topic standards. [1]

The current list of GRI standards include:

- GRI 1: Foundation (2021).
- GRI 2: General Disclosures (2021).
- GRI 3: Material Topics (2021).
- GRI 11: Oil and Gas Sector (2021).
- GRI 12: Coal Sector (2022).
- GRI 13: Agriculture, Aquaculture and Fishing Sectors (2022).
- GRI 201: Economic Performance (2016).
- GRI 202: Market Presence (2016).
- GRI 203: Indirect Economic Impacts (2016).
- GRI 204: Procurement Practices (2016).
- GRI 205: Anti-corruption (2016).
- GRI 206: Anti-competitive Behavior (2016).
- GRI 207: Tax (2019).
- GRI 301: Materials (2016).
- GRI 302: Energy (2016).
- GRI 303: Water and Effluents (2018).
- GRI 304: Biodiversity (2016).
- GRI 305: Emissions (2016).
- GRI 306: Effluents and Waste (2016).
- GRI 306: Waste (2020).
- GRI 308: Supplier Environmental Assessment (2016).
- GRI 401: Employment (2016).
- GRI 402: Labor/Management Relations (2016).
- GRI 403: Occupational Health and Safety (2018).
- GRI 404: Training and Education (2016).
- GRI 405: Diversity and Equal Opportunity (2016).
- GRI 406: Non-discrimination (2016).
- GRI 407: Freedom of Association and Collective Bargaining (2016).
- GRI 408: Child Labor (2016).
- GRI 409: Forced or Compulsory Labor (2016).
- GRI 410: Security Practices (2016).
- GRI 411: Rights of Indigenous Peoples (2016).
- GRI 413: Local Communities (2016).
- GRI 414: Supplier Social Assessment (2016).
- GRI 415: Public Policy (2016).
- GRI 416: Customer Health and Safety (2016).
- GRI 417: Marketing and Labeling (2016).
- GRI 418: Customer Privacy (2016).

IFRS FOUNDATION STANDARDS [2]

SASB [3] was established in the U.S. in 2011 as an independent, private sector and standard-setting organization. SASB today is under the umbrella of the International Financial Reporting Standards (IFRS) Foundation and is a voluntary industry-based set of standards that supports the sustainability reporting of financial-material sustainability information by companies to their investors. Currently, SASB covers 77 industries and topics, including environment, social and human capital, governance and business model, to name a few.

Each SASB standard describes the industry covered, including any assumptions about the predominant business model and industry segments that are included. SASB standards include:

- **Disclosure Topics** – a minimum set of industry-specific disclosure topics reasonably likely to constitute material.
- **Information** – includes a brief description of how management or mismanagement of each topic may affect value creation.
- **Accounting Metrics** – a set of quantitative and/or qualitative accounting metrics intended to measure performance on each topic.
- **Technical Protocols** – each accounting metric is accompanied by a technical protocol that provides guidance on definitions, scope, implementation, compilation and presentation, all of which are intended to constitute suitable criteria for third-party assurance.
- **Activity Metrics** – a set of metrics that quantify the scale of a company's business and are intended for use in conjunction with accounting metrics to normalize data and facilitate comparison.

Furthermore, the SASB Standards Application Guidance establishes guidance applicable to the use of all industry standards and is considered part of the standards. Unless otherwise specified in the technical protocols contained in the industry standards, the guidance in the SASB Standards Application Guidance applies to the definitions, scope, implementation, compilation and presentation of the metrics in the industry standards.

The SASB Conceptual Framework sets out the basic concepts, principles, definitions and objectives that guide the Standards Board in its approach to setting standards for sustainability accounting. The SASB Rules of Procedure is focused on the governance processes and practices for standards setting.

For example, the SASB Marine Transportation Sustainability Accounting Standard supports the sustainability reporting of the marine sector. The standard's sustainability disclosure topics and accounting metrics are presented below in Table 1a and the relevant Activity Metrics on Table 2a. Respectfully, the SASB O&G Sustainability Accounting Standard supports the sustainability reporting of O&G services sector, applicable for offshore O&G service activities. The standard's sustainability disclosure topics and accounting metrics are presented below in Table 1b and the relevant Activity Metrics on Table 2b. Additionally, for the offshore industries other standards might found applicable like the SASB Wind Technology & Project Developers Accounting Standard that supports the sustainability reporting of the offshore wind project developers. The standard's sustainability disclosure topics and accounting metrics are presented below in Table 1c and the relevant Activity Metrics on Table 2c.



Table 1a: Sustainability disclosure topics and metrics of the SASB marine transportation sustainability accounting standard.

Topic	Accounting Metric	Category	Unit of Measure	Code
Greenhouse Gas Emissions	Gross global Scope 1 emissions	Quantitative	Metric tons (t) CO ₂ -e	TR-MT-110a.1
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and Analysis	n/a	TR-MT-110a.2
	(1) Total energy consumed, (2) percentage heavy fuel oil, (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	TR-MT-110a.3
	Average Energy Efficiency Design Index (EEDI)	Quantitative	Grams of CO ₂ per ton-nautical mile	TR-MT-110a.4
Air Quality	Air emissions of the following pollutants: (1) NO _x (excluding N ₂), (2) SO _x , and (3) particulate matter (PM ₁₀)	Quantitative	Metric tons (t)	TR-MT-120a.1
Ecological Impacts	Shipping duration in marine protected areas or areas of protected conservation status	Quantitative	Number of travel days	TR-MT-160a.1
	Percentage of fleet implementing ballast water (1) exchange and (2) treatment	Quantitative	Percentage (%)	TR-MT-160a.2
	(1) Number and (2) aggregate volume of spills and releases to the environment	Quantitative	Number, Cubic meters (m ³)	TR-MT-160a.3
Employee Health and Safety	Lost time incident rate (LTIR)	Quantitative	Rate	TR-MT-320a.1
Business Ethics	Number of calls at ports in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	Quantitative	Number	TR-MT-510a.1
	Total amount of monetary losses as a result of legal proceedings associated with bribery or corruption ²	Quantitative	Reporting Currency	TR-MT-510a.2
Accident and Safety Management	Number of marine casualties, percentage classified as very serious ³	Quantitative	Number, Percentag (%)	TR-MT-540a.1
	Number of Conditions of Class or Recommendations	Quantitative	Number	TR-MT-540a.2
	Number of Port State Control (1) deficiencies and (2) detentions	Quantitative	Number	TR-MT-540a.3

Source: SASB Marine Transportation Sustainability Accounting Standard

² Note to TR-MT-510a.2- The entity shall briefly describe the nature, context, and any corrective actions taken as a result of the monetary losses.

³ Note to TR-MT-540a.1- Disclosure shall include a description of marine casualties and very serious marine casualties, outcomes, and corrective actions implemented in response.

Table 1b: Sustainability disclosure topics and metrics of the SASB O&G Services sustainability accounting standard

Topic	Accounting Metric	Category	Unit of Measure	Code
Emissions Reduction Services and Fuels Management	Total fuel consumed, percentage renewable, percentage used in: (1) on-road equipment and vehicles and (2) off-road equipment	Quantitative	Gigajoules (GJ), Percentage (%)	EM-SV-110a.1
	Discussion of strategy or plans to address air emissions-related risks, opportunities and impacts.	Discussion and Analysis	n/a	EM-SV-110a.2
	Percentage of engines in service that meet Tier 4 compliance for non-road diesel engine emissions	Quantitative	Percentage (%)	EM-SV-110a.3
Water Management Services	(1) Total volume of fresh water handled in operations, (2) percentage recycled	Quantitative	Thousand cubic meters (m ³), Percentage (%)	EM-SV-150a.1
	Discussion of strategy or plans to address water consumption and disposal-related risks, opportunities and impacts	Discussion and Analysis	n/a	EM-SV-150a.2
Chemicals Management	Volume of hydraulic fracturing fluid used, percentage hazardous	Quantitative	Thousand cubic meters (m ³), Percentage (%)	EM-SV-160a.1
	Discussion of strategy or plans to address chemical-related risks, opportunities and impacts	Discussion and Analysis	n/a	EM-SV-160a.2
Business Ethics and Payments Transparency	Amount of net revenue in countries that have the 20 lowest rankings in Transparency international's Corruption Perception Index	Quantitative	Thousand cubic meters (m ³), Percentage (%)	EM-SV-510a.1
	Description of the management system for prevention of corruption and bribery throughout the value chain	Discussion and Analysis	n/a	EM-SV-510a.2
Management of the Legal and Regulatory Environment	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	Discussion and Analysis	n/a	EM-SV-530a.1
Critical Incident Risk Management	Description of management systems used to identify and mitigate catastrophic and tail-end risks	Discussion and Analysis	n/a	EM-SV-540a.1

Source: SASB Marine Transportation Sustainability Accounting Standard

Table 1c. Sustainability disclosure topics and metrics of the SASB Wind Technology & Project Developers sustainability accounting standard

Topic	Metric	Category	Unit of Measure	Code
Workforce Health and Safety	(1) Total recordable incident rate (TIR) and (2) fatality rate for (a) direct employees and (b) contract employees	Quantitative	Rate	RR-WT-320a.1
Ecological Impacts of Project Development	Average A-weighted sound power level of wind turbines, by wind turbine class	Quantitative	dB(A)	RR-WT-410a.1
	Backlog cancellations associated with community or ecological impacts	Quantitative	Presentation currency	RR-WT-410a.2
	Description of efforts to address ecological and community impacts of wind energy production through turbine design	Discussion and Analysis	N/A	RR-WT-410a.3
Materials Sourcing	Description of the management risks associated with the use of critical material	Discussion and Analysis	N/A	RR-WT-440a.1
Materials Efficiency	Top five materials consumed	Quantitative	Metric tons (t)	RR-WT-440b.1
	Average top head mass per turbine capacity, by wind turbine class	Quantitative	Metric tons per megawatts (t/MW)	RR-WT-440b.2
	Description of approach to optimize materials efficiency of wind turbine design	Discussion and Analysis	N/A	RR-WT-440b.3

Table 2a. Relevant activity metrics of the SASB marine transportation sustainability accounting standard

Accounting Metric	Category	Unit of Measure	Code
Number of shipboard employees ⁴	Quantitative	Number	TR-MT-000.A
Total distance traveled by vessels	Quantitative	Nautical Miles (nm)	TR-MT-000.B
Operating days ⁵	Quantitative	Days	TR-MT-000.C
Deadweight tonnage ⁶	Quantitative	Thousand deadweight tons	TR-MT-000.D
Number of vessels in total shipping fleet	Quantitative	Number	TR-MT-000.E
Number of vessel port calls	Quantitative	Number	TR-MT-000.F
Twenty-foot equivalent unit (TEU) capacity	Quantitative	TEU	TR-MT-000.G

Source: SASB Marine Transportation Sustainability Accounting Standard

⁴ Note to TR-MT-000.A - Shipboard employees are those employees who work aboard the entity's vessels (including direct and contract employees) during the reporting period.

⁵ Note to TR-MT-000.C - Operating days are calculated as the number of available days in a reporting period minus the aggregate number of days that the vessels are off-hire due to unforeseen circumstances (i.e., a measure of days in a reporting period during which vessels actually generate revenue).

⁶ Note to TR-MT-000.D - Deadweight tonnage is the sum, for all of the entity's vessels, of the difference in displacement in deadweight tons between the light displacement and the actual loaded displacement.

Table 2b. Relevant activity metrics of the SASB O&G services sustainability accounting standard.

Accounting Metric	Category	Unit of Measure	Code
Number of active rig sites ²	Quantitative	Number	EV-SV-000.A
Number of active well sites ³	Quantitative	Number	EV-SV-000.B
Total amount of drilling performed	Quantitative	Meters (m)	EV-SV-000.C
Total number of hours worked by all employees	Quantitative	Hours	EV-SV-000.D

Source: SASB Marine Transportation Sustainability Accounting Standard

² Note to EM-SV-000.A - Rigs that are on location and involved in drilling, completions, cementing, fracturing, decommissioning etc., are considered active. Rigs that are in transit from one location to another, or are otherwise idled, are inactive.

³ Note to EM-SV-000.B - The number of well sites for which the entity has provided or is providing (on an ongoing basis) drilling, completion, fracturing, and/or decommissioning services.

Table 2c. Relevant activity metrics of the SASB Wind Technology & Project Developers sustainability accounting standard

Accounting Metric	Category	Unit of Measure	Code
Number of delivered wind turbines, by wind turbine class ¹	Quantitative	Number	RT-WT-000.A
Aggregate capacity of delivered wind turbines, by wind turbine class ²	Quantitative	Number	RT-WT-000.B
Amount of turbine backlog ³	Quantitative	Presentation currency	RT-WT-000.C
Aggregate capacity of turbine backlog ⁴	Quantitative	Megawatts (MW)	RT-WT-000.D

² Note to RR-WT-000.A - Wind turbine class is defined by the International Electrotechnical Commission's IEC 61400-1, Edition 3.0 Design requirements. Wind turbine class shall be determined by the rating of the turbine.

³ Note to RR-WT-000.B - Wind turbine class is defined by the International Electrotechnical Commission's IEC 61400-1, Edition 3.0 Design requirements. Wind turbine class shall be determined by the rating of the turbine.

³ Note to RR-WT-000.C - Turbine backlog is defined by the entity, consistent with its existing public disclosure of order backlog. Turbine backlog excludes any backlog amounts resulting from operating and maintenance agreements or other service agreements.

³ Note to RR-WT-000.D - Turbine backlog is defined by the entity, consistent with its existing public disclosure of order backlog. Turbine backlog excludes any backlog amounts resulting from operating and maintenance agreements or other service agreements.

Effective August 1, 2022, the Value Reporting Foundation – home to the SASB Standards – was consolidated into the IFRS Foundation, which established the first ISSB. The ISSB will build upon the SASB Standards and embed SASB's industry-based standards development approach into the ISSB's standards development process.

Another standard of the Value Reporting Foundation that is going to be merged under the ISSB is the International Integrated Reporting Council (IIRC) [4], which is a coalition of regulators, investors, companies, accountants, academia and non-governmental organizations (NGOs) aiming to evolve corporate reporting, aligned with the goals of financial stability and sustainable development.

Furthermore, the Corporate Reporting Dialogue (CRD) [5] is under the umbrella of the IFRS Foundation. It is an initiative, convened by the IIRC, and is designed to respond to market calls for greater coherence, consistency and comparability between corporate reporting frameworks, standards and related requirements. The CRD is a set of eight corporate reporting standards providers (financial and non-financial reporting), aiming to express a common voice on areas of mutual interest and communicate about the direction, content and ongoing development of reporting frameworks, standards and related requirements.

The formation of the ISSB [6] was announced on November 3, 2021 at COP26 in Glasgow. On June 2023, the first two IFRS on sustainability developed by the ISSB were launched as follows:

- IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information (S1).
- IFRS S2 Climate-related Disclosures (S2).

ISSB allows sustainability reporting to be on par with financial reporting, consolidating the main existing ESG standards. The ISSB builds on the work of market-led, investor-focused reporting initiatives such as the GRI, Task Force for Climate-related Financial Disclosures (TCFD), the Value Reporting Foundation's Integrated Reporting Framework (IR) and the industry-based SASB Standards, among others. Some companies have raised concerns on whether the IFRS S1 and S2 standards can be harmonized with the European ESRS because they will be subject to both in the near future.

Although the effective date for companies in-scope of the ISSB and ESRS standards starts in 2024 – with the first reports published in 2025 – the scope of ISSB intends to use terminology suitable for profit-oriented entities, including the public-sector business entities. Additionally, ISSB is intended to address the needs of investors, creditors and lenders. On the other hand, ESRS applies to a broader group of stakeholders, including additional customers, suppliers, employees, local communities and regulators. Currently, the IFRS S1 and S2 standards only cover general requirements and climate disclosure provisions while the 12 ESRS standards cover the full range of ESG topics.

The European Financial Reporting Advisory Group (EFRAG) and ISSB worked closely together, building their standards on the same existing international frameworks i.e. the TCFD and the GRI, to ensure the closest possible alignment and to facilitate integration for companies that are already using existing international standards.

Although the ISSB and ESRS are aligned in key concepts, they have some fundamental differences, most notably the definition of materiality. The ESRS requires double materiality assessment (impact and financial materiality) while the ISSB only requires financial materiality. Furthermore, in contrast to the ISSB where all disclosures are subject to the outcome of materiality assessment, ESRS has a list of mandatory disclosures to be applied irrespective of the outcome of materiality. The rest are subject to double materiality.

It is worth noting that the ISSB standards have no regulatory power by themselves since they were developed by an international organization, however, ESRS are enforceable by the laws of EU-member States and interconnected with other European laws. It is likely that, in the future, companies that must report under both standards will have to perform one full exercise based on one of these standards, and a second separate exercise focused on the major differences to avoid duplication of work.

CDP [3]

The CDP is a not-for-profit organization that was founded in 2000 under the name of "Carbon Disclosure Project" (changed in 2013 to CDP). It operates the largest global disclosure platform (annual rankings) and measures environmental impacts (with specific focus on climate, water, and forests) for investors, companies, cities, states and regions. Additionally, it is actively used by analysts within the financial industry.

In 2022, a total of 746 investors with more than \$136 trillion in assets were requested to disclose more than 18,700 companies through CDP. Furthermore, in 2022, more than 280 CDP Supply Chain members, major buyers with \$6.4 trillion in procurement spending, requested thousands of their suppliers to report through CDP. Companies that disclose to CDP can demonstrate:

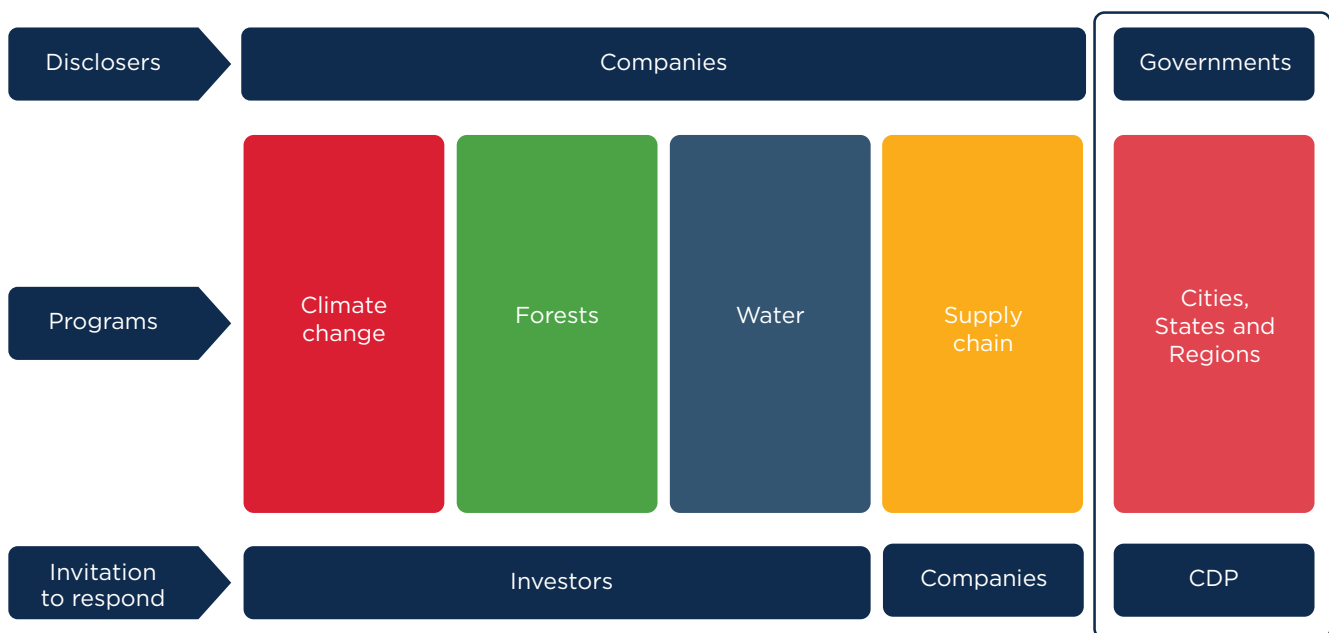
- Increased awareness.
- Business leadership.
- How opportunities are created.
- Future-proof strategies.

CDP uses the scoring methodologies to incentivize companies to measure and manage environmental impacts through participation in their climate change, forests and water security questionnaires. The following questionnaires, which are available in the CDP platform, are updated annually:

- Climate change questionnaire for companies.
- Forests questionnaire for companies.
- Water security questionnaire for companies.
- SME questionnaire.

Each of CDP's questionnaires have an individual scoring methodology. For all CDP corporate questionnaires, there are two versions: full and minimum. The full version contains all questions relevant to a company, including sector-specific questions and data points. The minimum version contains fewer company related questions and removes the sector-specific questions or data points.

The below Figure 2 illustrates the different CDP programs and how stakeholders are linked in the GDP context. As showed in the figure, the invitation to companies for completing the CDP questionnaire could come from investor-focused stakeholders, from other value chain companies or both.



Source: CDP

Figure 2: CDP programs and stakeholder.

To obtain the option of completing the minimum version of the scoring questionnaires, companies must respond to a customer request who has less than EUR/USD 250 million annual revenue. Additionally, they need to disclose requests received from a customer (i.e., CDP supply chain members), CDP banks program members, the RE100 initiative or the NZAM initiative. If organizations disclose requests from an investor, they will not be eligible to complete the minimum version questionnaire.

Table 3 below presents the modules that are covered by the CDP questionnaires for companies and SMEs.

Table 3: Modules covered by the CDP questionnaires for companies and SMEs.

Climate Change Questionnaire (for companies)	Forests Questionnaire (for companies)	Water Security Questionnaire (for companies)	Small- and Medium-sized Enterprises (SMEs) Questionnaire
<ul style="list-style-type: none"> • Risks and opportunities • Business strategy • Targets and performance • Emissions methodology • Emissions data • Energy • Additional metrics • Verification • Carbon pricing • Engagement • Biodiversity 	<ul style="list-style-type: none"> • Current state • Procedures • Risks and opportunities • Governance • Business strategy • Implementation • Verification • Barriers and challenges 	<ul style="list-style-type: none"> • Corporate water accounting metrics • Value chain engagement activities • Business impacts • Risk assessment procedures • Risks, opportunities and responses to them • Facility water accounting metrics • Water governance and business strategy • Targets • Verification • Plastics 	<ul style="list-style-type: none"> • Reported emissions and targets • Governance, risks and strategy • Water security • Forests

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD) [4]

TCFD was founded in 2015 by M. Bloomberg at the request of G20 finance ministers and central bank governors who comprise the Financial Stability Board (FSB). TCFD published its final recommendations on June 29, 2017, and it represents a set of voluntary disclosures designed to provide insight into climate-related risks and opportunities for organizations, supporting lenders, insurers and investors in sustainability related decision making. Today, TCFD is the international reference point for both the financial community and governments in terms of climate risk reporting. TCFD focuses on governance, strategy, risk management, metrics and targets which have their own specific processes as listed below:

- Governance: Board oversight and management role in managing climate risk and opportunities.
- Strategy: Risk and opportunities identified in short-, medium- and long-terms. Climate scenario analysis.
- Risk management: Identify and manage overall risk management.
- Metrics and targets: Scope emissions and long-term targets.

The TCFD recommends 11 disclosure items as presented in Figure 3, and it covers transition risks, physical risks and opportunities.

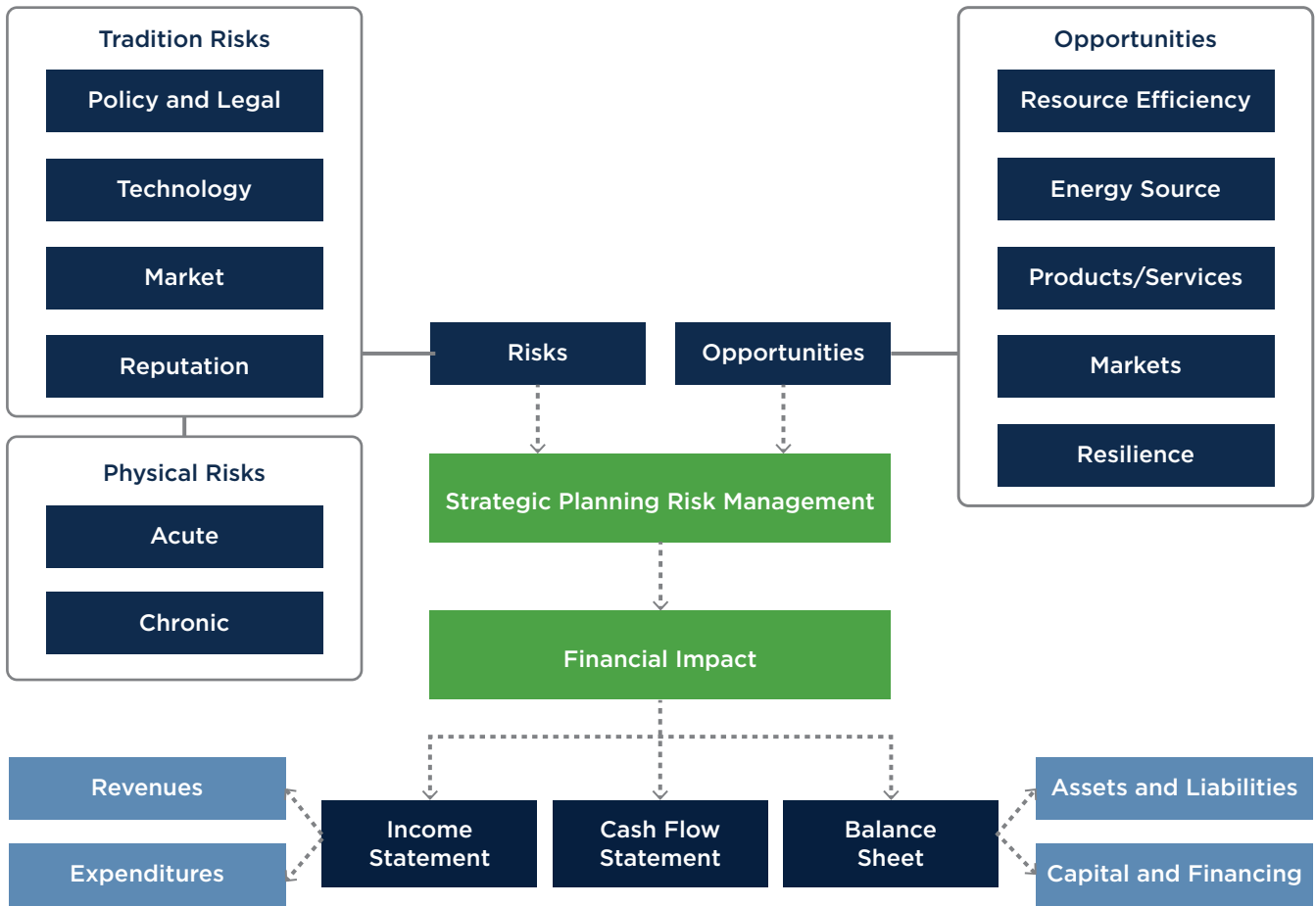
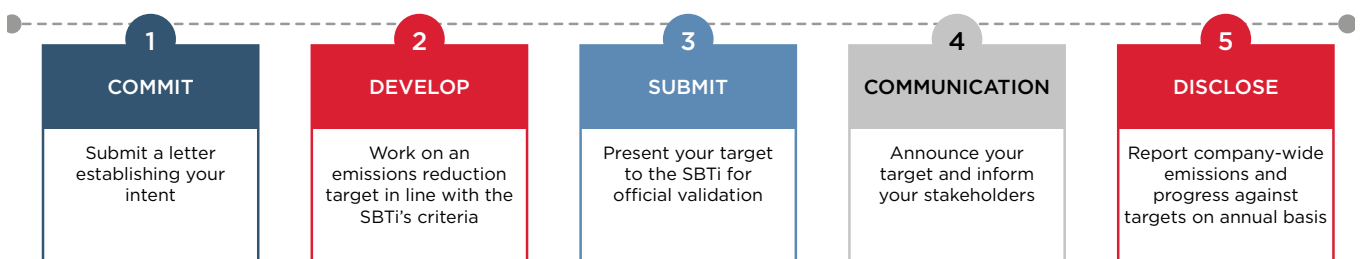


Figure 3: Climate-related risks, opportunities and financial impact.

SCIENCE BASED TARGETS INITIATIVE [5]

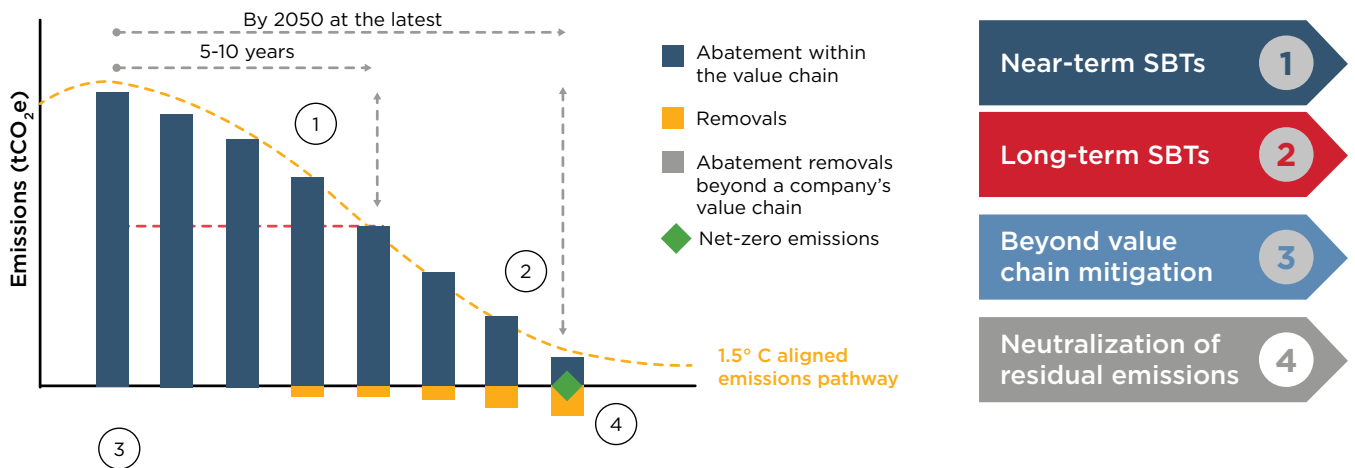
CDP, United Nations Global Compact, World Resources (WRI) Institute and Worldwide Fund for Nature (WWF) joined their forces and created the Science Based Targets Initiative (SBTi). They also introduced the science-based targets concept to show organizations how much and how quickly they need to reduce their GHG emissions to prevent the worst effects of climate change. The SBTi defines and promotes best practices in science-based target setting. Offering a range of target-setting resources and guidance, the SBTi independently assesses and approves companies' targets in line with its strict criteria. As of the end of May 2023, 2,731 companies have committed with science-based targets and 1,822 companies committed with net-zero targets.

Figures 4 and 5 provide a summary of the general approach of the SBTi and for the target setting.



Source: SBTi

Figure 4: Target setting process.



Source: SBTi

Figure 5: General approach of the SBTi.

On December 6, 2022, SBTi launched the “Science Based Target Setting Guidance for the Maritime Transport Sector,” the world’s first guidance to enable maritime transport companies to set near-and long-term science-based emission reductions targets from their own operations that’s in line with 1.5° C.

For the maritime sector, a long-term target means reducing emissions to a residual level in line with 1.5° C by 2040 the latest. This is in line with sector-specific recommendations from science and academia (cut emissions by 45 percent by 2030 and reach net zero by 2040).

It is worth noting that the SBTi is in the process of developing sectoral guidance for the O&G sector and is unable to accept commitments or validate targets for companies in the O&G or fossil fuel sectors prior to the publication of the guidance.

Companies with any level of direct involvement in exploration, extraction, mining and/or production of oil, natural gas, coal or other fossil fuels, irrespective of percentage revenue generated by these activities, i.e., including, but not limited to, integrated oil and gas companies, integrated gas companies, exploration and production pure players, refining and marketing pure players, oil products distributors, gas distributors and retailers and traditional oil and gas service companies.

Based on the SBTi, the following companies are eligible to join the SBTi and are going to be evaluated in a case-by-case basis:

- Companies that derive less than 50 percent of revenue from a) sale, transmission and distribution of fossil fuels, or b) providing equipment or services to fossil fuel companies.
- Companies with less than 5 percent revenue from fossil fuel assets (e.g., coal mine, lignite mine, etc.) for extraction activities with commercial purposes.
- Electric utilities that mine coal for their own power generation.
- Subsidiaries of fossil fuel companies may join the SBTi if the subsidiary itself is not considered a fossil fuel company.

OTHER SUSTAINABILITY REPORTING GUIDANCE FOR THE OIL & GAS INDUSTRY (IPIECA, AP I& IOGP) [10]

The initiative of the leading associations for the Oil & Gas industry is aspiring to set standards for sustainability reporting in the sector. The American Petroleum Institute (API), the Association for Environmental and Social Issues of the Oil & Gas (IPIECA), and the International Association of Oil & Gas Producers (IOGP) collaborated in defining the process for identifying material topics, collecting data, monitoring performance and disclosing environmental, social and governance topics from an oil and gas industry perspective. The guide provides a platform for the companies of the sector to voluntarily disclose their ESG performance on a common denominator and foster continuous improvement.

REFERENCES ANNEX I

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ANNEX II: REGULATORY ENVIRONMENT

1. UNITED NATIONS (UN)

The Paris Agreement and the adoption of the U.N.'s 2030 Agenda for Sustainable Development are considered key drivers for sustainability and climate action worldwide.

UN PARIS AGREEMENT [1]

The first universal, legally binding global agreement on climate change was achieved under the Paris Agreement which was first adopted by 196 parties at the COP21 on December 12, 2015. The Paris Agreement aimed to limit global warming to below 2° C and to work towards limiting it to 1.5° C while simultaneously strengthening countries' ability to manage the impacts of climate change. In that context, countries committed to submit their national determined contributions (NDCs) every five years with an optional choice of contributing long-term low greenhouse gas (GHG) emission development strategies (LT-LEDs).

UN AGENDA 2030 AND SUSTAINABLE DEVELOPMENT GOALS [2]

The U.N.'s 2030 Agenda for Sustainable Development was launched in September 2015. It aimed at ending poverty in all its forms and to create a life of dignity and opportunity for all within the boundaries of the planet. The agenda committed all 193 member States of the U.N. to common action and endeavor across 17 sustainable development goals (SDGs) with 169 integrated and indivisible associated targets to be achieved by 2030.

There is increased concern about the achievement of the goals given the constant changing macroeconomic environment coupled with the approaching deadline (less than seven years remain).

However, the 17 SDGs are:

1. End poverty in all its forms everywhere.
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
3. Ensure healthy lives and promote wellbeing for all ages.
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
5. Achieve gender equality and empower all women and girls.
6. Ensure availability and sustainable management of water and sanitation for all. Ensure access to affordable, reliable, sustainable and modern energy for all.
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
10. Reduce inequality within and among countries.
11. Make cities and human settlements inclusive, safe, resilient and sustainable.
12. Ensure sustainable consumption and production patterns.
13. Take urgent action to combat climate change and its impacts.
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development.
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss.
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
17. Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Although SDGs are not a reporting framework, many corporations include references on disclosure alignments with the SDGs in their sustainability reports.

In January 2020, the International Federation of Accountants (IFAC) joined with other global accountancy bodies such as the International Integrated Reporting Council (IIRC) and the World Benchmarking Alliance to release the Sustainable Development Goals Disclosure (SDGD) Recommendations. The SDGD offers a new approach for businesses and other organizations to address sustainable development issues aligned to the three most influential and popular reporting frameworks. They attempt to establish a best practice for corporate reporting on the SDGs and enable more effective and standardized reporting and transparency on social, climate change and other environmental impacts.

The SDGD recommendations call on organizations to consider sustainable development risks and opportunities relevant to their long-term value creation strategy and communicate the actual or potential impacts on achievement of the SDGs. This will require material disclosures about the factors that influence long-term value creation (or destruction) for the organization and society or that have an impact (positive or negative) on the achievement of the SDGs in the annual report.

As defined in the SDGD Recommendations, the material sustainable development information is “any information that is reasonably capable of making a difference to the conclusions drawn by stakeholders concerning the positive and negative impacts of the organization on global achievement of the SDGs, and providers of finance concerning the ability of the organization to create long term value for the organization and society.”

UN PRINCIPLES FOR RESPONSIBLE INVESTMENT (PRI) [3]

PRI, launched in April 2006 at the New York Exchange, is one of the world's leading proponents of responsible investment. Today, PRI has more than 3,700 investor signatories forming the foundation for a substantial proportion of voluntary ESG reporting from global financial organizations. The six principles of the PRI include commitment towards:

1. Incorporating ESG issues into investment analysis and decision-making processes.
2. Being an active owner and incorporating ESG issues into ownership policies and practices.
3. Seeking appropriate disclosure on ESG issues by the entities being invested in.
4. Promoting acceptance and implementation of the principles within the investment industry.
5. Working together to enhance our effectiveness in implementing the principles.
6. Reporting on our activities and progress towards implementing the principles.

UNITED NATIONS ENVIRONMENT PROGRAM FINANCE INITIATIVE (UNEP FI) [4]

UNEP FI is a unique partnership between the United Nations Environment Program (UNEP) and the global financial sector. UNEP FI works closely with over 200 financial institutions that are signatories to the UNEP FI Statement on Sustainable Development and a range of partner organizations to develop and promote linkages between sustainability and financial performance. Through peer-to-peer networks, research and training, UNEP FI carries out its mission to identify, promote and realize the adoption of best environmental and sustainability practice at all levels of financial institution operations.

UN'S GLOBAL COMPACT [5]

The U.N.'s Global Compact is a call to companies everywhere to align their operations and strategies with ten universally accepted principles in the areas of human rights, labor, environment and anti-corruption. Additionally, it's a call to act in support of U.N. goals and issues embodied in the SDGs. The U.N. Global Compact is a leadership platform for developing, implementing and disclosing responsible corporate practices. Launched in 2000, it is the largest corporate sustainability initiative in the world with more than 8,800 companies and 4,000 non-business signatories, based in over 160 countries and has more than 80 local networks.

2. EUROPEAN UNION (EU)

EU GREEN DEAL [6]

Following the climate targets set in the Paris Agreement, the EU aims to make Europe the first climate neutral continent by 2050 through the EU Green Deal introduced on December 12, 2019. In this context, the European Commission proposed an initial set of targets to be met by 2030. On July 14, 2021, they also adopted "Fit for 55", a set of policy proposals preparing the implementation of the EU Green Deal. The Fit for 55 set the GHG reduction target of at least 55 percent by 2030 compared to 1990 levels.

For each EU Green Deal policy priority (see Figure 1), the European Commission adopts regulations, strategies, sub-targets and special financial instruments.

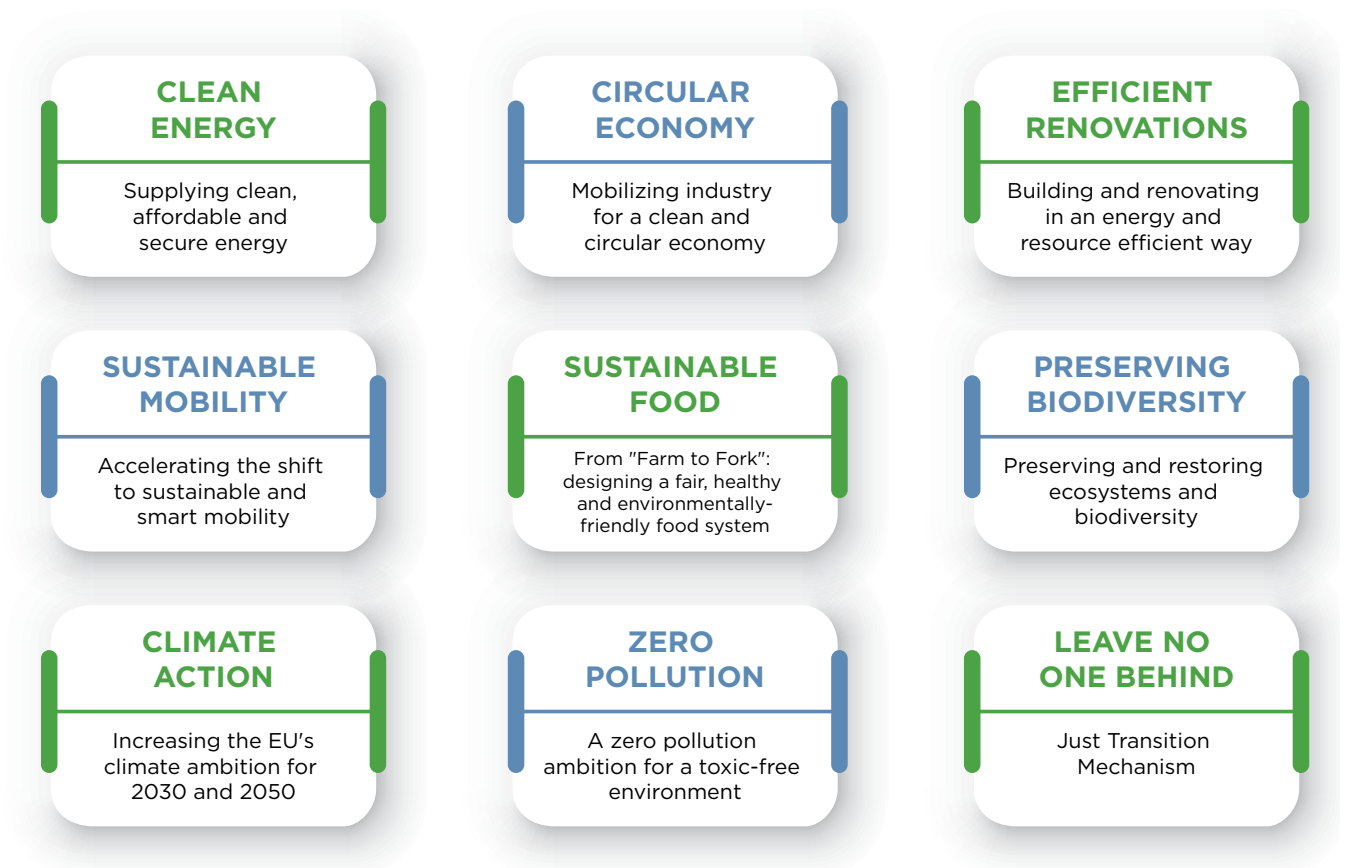


Figure 1: EU green deal priorities (European Commission, green deal, 2019).

FIT FOR 55 [7]

The Fit for 55 focuses on crucial topics towards the climate neutrality targets and offers a preparatory path to meet the EU Green Deal targets (see Figure 2).

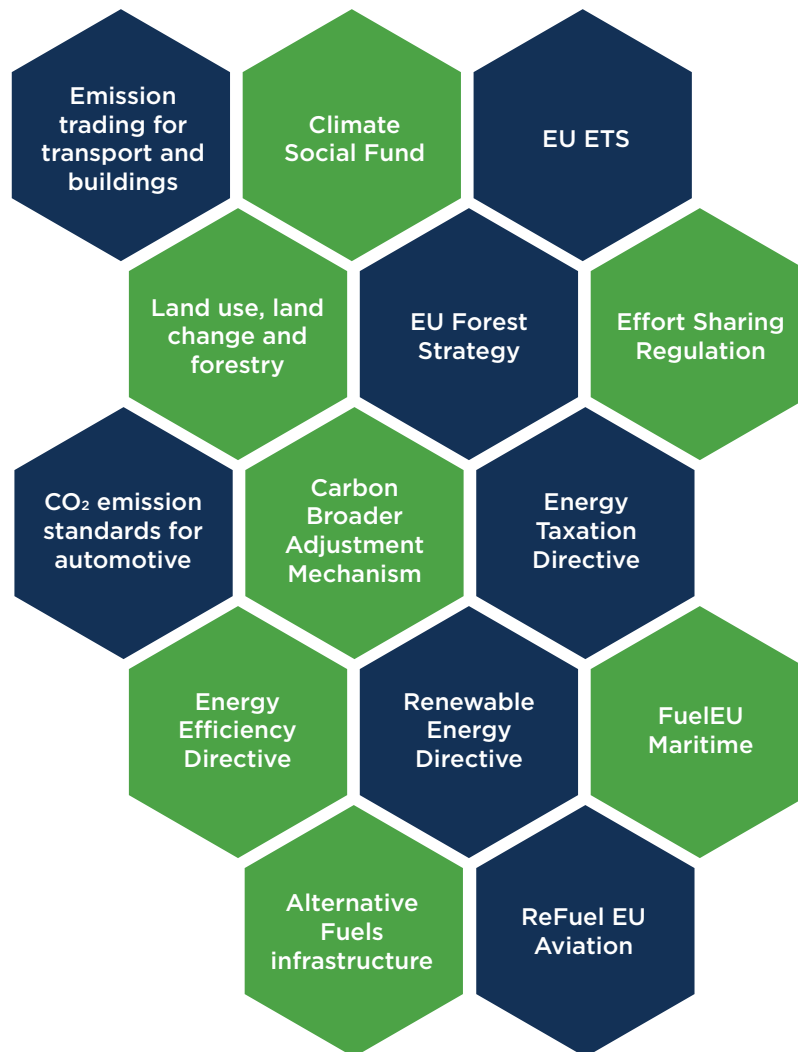


Figure 2: Climate actions 2030 (European Commission, Fit for 55, 2021).

NFRD [8]

European Commission, aiming to strengthen the Corporate Social Responsibility and increase corporate transparency in the EU was adopted on December 5, 2014. As a result, the Non-Financial Reporting Directive (NFRD) 2014/95/EU regarding disclosure of non-financial and diversity information by certain large undertakings was drafted to amend the previous directive on annual financial statements.

The NFRD has the following two primary objectives:

1. Provide stakeholders, investors and consumers with non-financial information to assess the value creation and risks regarding sustainability of a company.
2. Encourage the social, environmental and governance responsibility of European companies.

In that context, undertakings which are subject to the NFRD, should prepare a non-financial statement report containing information relating to environmental matters, social, employee-related matters, respect for human rights, anti-corruption and bribery matter. Policies, outcomes and risks related to those matters, together with information on the due diligence processes implemented, should be included in the non-financial statement report as part of the annual corporate management reports (integrated or as an annex).

Further details of the relevant basic disclosures under the NFRD are:

- **Environmental Matters** – details of the current and foreseeable impacts of the undertaking's operations on the environment and, as appropriate, on health and safety, the use of renewable and/or non-renewable energy, GHG emissions, water use and air pollution.
- **Social and Employee-related Matters** – the actions taken to ensure gender equality, implementation of fundamental conventions of the International Labour Organization, working conditions, social dialogue, respect for the right of workers to be informed and consulted, respect for trade union rights, health and safety at work and the dialogue with local communities and/or the actions taken to ensure the protection and the development of those communities.
- **Human Rights** – anti-corruption and bribery, information on the prevention of human rights abuses and/or on instruments in place to fight corruption and bribery.

Under the NFRD scope are public interest entities, listed companies and bank and insurance companies meeting at least two of the following criteria:

- Having more than 500 employees.
- Having a balance sheet total of more than \$17 million EUR.
- Having a net turnover of more than \$34 million EUR.

Subsidiary companies are exempt from including a non-financial statement in the management report if that undertaking and its subsidiary undertakings are included in the report or is a part of a separate report of another parent company. In that context, there may be some indirect impact of NFRD outside the EU, for example, in the case of a non-EU parent company that has subsidiaries in the EU.

The first year of application of the NFRD was 2018 for non-financial information relating to the previous year. EU-member States impose specific "non-compliance to the NFRD" penalties.

SFDR [9]

In 2018, the European Commission adopted the Sustainable Finance Action Plan (SFAP), a major policy objective which aims to promote sustainable investment across the EU-27.

The main objectives of SFAP are:

- Reorienting capital flows towards a more sustainable economy:
 - Establishing a clear and detailed EU taxonomy, a classification system for sustainable activities.
 - Creating an EU Green Bond Standard and labels for green financial products.
 - Fostering investment in sustainable projects.
 - Incorporating sustainability in financial advice.
 - Developing sustainability benchmarks.
- Mainstreaming sustainability into risk management:
 - Better integrating sustainability in ratings and market research.
 - Clarifying asset managers' and institutional investors' duties regarding sustainability.
 - Introducing a "green supporting factor" in the EU prudential rules for banks and insurance companies.
- Fostering transparency and long-termism:
 - Strengthening sustainability disclosure and accounting rulemaking.
 - Fostering sustainable corporate governance and attenuating short-termism in capital markets.

As part of the package legislative framework arising from SFAP, on December 19, 2019, the European Commission adopted the Sustainable Finance Disclosure Regulation (SFDR), 2019/2088/EU on sustainability-related disclosures in the financial services sector. Financial Market Participants (FMPs), subject to the SFDR, are obliged to disclose several ESG information from March 10, 2021 (Level 1), and from January 1, 2022, they are obligated to disclose more detailed requirements relating to disclosures in periodic reports of ESG-focused products, which includes the "principal adverse sustainability impacts statement."

SFDR requires asset managers to provide transparent, prescript and standardized disclosures on how several ESG criteria are integrated at both entity and product level. The aim is to provide a bounded field to MFPs and financial advisers in relation to sustainability risks, potential investment-related sustainability impacts and sustainability-related information with respect to financial products.

SFDR requires asset managers to provide transparent, prescript and standardized disclosures on how several ESG criteria are integrated at both entity and product level. It aims to provide an equal opportunity arena to MFPs and financial advisers in relation to sustainability risks, potential investment-related sustainability impacts and sustainability-related information with respect to financial products.

EU TAXONOMY [10]

On April 21, 2021, the European Commission adopted the Sustainable Finance Package – an ambitious, comprehensive package of measures that aims to help monitor capital flows towards sustainable activities across the EU. The EU Taxonomy Regulation EU 2020/852, an elementary part of this package and establishes performance thresholds (“technical screening criteria”) for economic activities, sector by sector and subsector by subsector.

EU Taxonomy is a classification system for “sustainable” economic activities and does not necessarily include financial instruments and funding mechanisms. Once it is implemented, any investment or lending for a recognized activity counts as sustainable, whether it is a loan, a green bond or project financing.

The EU’s taxonomy is notable for its level of precision in defining each subsector. To qualify as green, activities must make a significant contribution to at least one of six environmental objectives: climate-change mitigation, adaptation to climate change, sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control and protection and restoration of biodiversity and ecosystems. A condition of their inclusion is that they also must explicitly avoid harming any of the other six environmental objectives based on the “Do No Significant Harm (DNSH)” approach. In addition, minimum social standards fulfilment is required (e.g., OECD Principles, U.N. Guiding Principles on Human Rights, ILO Labor Standards, etc.).

It is noted that all companies in scope of the EU CSRD are required to disclose taxonomy alignment in their management report.

CSRD [11]

On December 14, 2022, the European Commission adopted the Corporate Sustainability Reporting Directive (EU CSRD) as corporate sustainability reporting, which amends the previous applicable Non-Financial Reporting Directive (EU NFRD), the audit regulation and other associated directives (accounting, transparency, audit). This directive is also part of the EU Sustainable Finance Package, which aims to enhance the flow of money to sustainable activities.

EU CSRD entered into force on January 5, 2023 and makes it mandatory for SMEs and some non-EU enterprises to disclose non-financial information on ESG impacts and activities in a clear, identifiable section of their management reports as defined in article 19a of the directive. Companies are required to adhere to the European Sustainability Reporting Standards (ESRS) developed by the European Financial Reporting Advisory Group (EFRAG). After three rounds of open consultation that took place in April 2022, in November 2022 and in June and July 2023, the final ESRS were adopted by European Commission as a delicated act on July 31, 2023. On June 2024, EFRAG is expected to release sector-specific standards, as well as standards proportionate to SMEs and non-European undertakings.

CSRD amends the previously applicable NFRD, the audit regulation and other directives (associated with accounting, transparency, audit). CSRD makes it mandatory for large and medium companies to disclose non-financial information on ESG impacts and activities in a clear identifiable section of their management reports.

Over the following years, CSRD will expand its scope progressively to include more companies and capturing, as well non-EU parent companies with substantial activity and a presence in the EU. Based on the present provisions and if no objections are raised by the EU Parliament, starting from January 1, 2024, companies operating within the EU will have to comply with the CSRD.

Timeline

- From January 1, 2024 for large public-interest companies (with over 500 employees) already subject to the non-financial reporting directive, with reports due in 2025.
- From January 1, 2025 for large companies that are not presently subject to the non-financial reporting directive (with more than 250 employees and/or €40 million in turnover and/or €20 million in total assets), with reports due in 2026.
- From January 1, 2026 for listed SMEs and other undertakings, with reports due in 2027. SMEs can opt-out until 2028.

Applicability

The CSRD applies to large companies based in the EU or with an annual turnover of above €150 million (which could be based outside the EU).

Companies meeting at least two of the following three conditions will have to comply with the CSRD:

- €40 million in net turnover.
- €20 million in assets.
- 250 or more employees.

Starting from January 2025, large firms will have to report on ESG factors while SMEs under the scope of CSRD will begin 2027. All the reported sustainability information must be digitalized in the appropriate format in accordance with the European Single Electronic Format (ESEF) regulation. Additionally, they must be digitally tagged according to the digital categorization system in alignment to the Digital Finance Strategy of the EU, which aims to enhance access to data and use of data within the financial sector. CSRD integrated ESRS and EU taxonomy requiring companies within the scope of the CSRD to disclose taxonomy alignment in their management report.

In the future, it is expected to integrate with the proposed Corporate Sustainability Due Diligence Directive (CSDDD) when it enters into force, which intends to enforce social responsibility in supply chains such as child labor, slavery, inadequate workplace conditions pollution, ecosystem degradation and aligning with Paris agreement climate targets. In the context of CSRD, a limited assurance of the ESG report by an external accredited independent auditor is required to validate the accuracy and consistency of the reported information.

Administrative sanctions and various associated penalties are expected for companies not in compliance with CSRD directions. Specific penalties will be defined based on in each EU country jurisdictions which include:

1. Public denunciation.
2. An order to change conduct.
3. Financial punishments.

The CSRD will boost resilience and alignment with the EU climate strategy and the global net-zero objectives. This framework provides opportunities and benefits for businesses, access to Green Deal public funding and enables access to green and sustainable bonds, as well as ESG funds. Furthermore, it will assist in maintaining and strengthening the corporation's reputation to the public, investors, financial market participants and financial advisers. The CSRD was designed to improve the consistency, reliability and comparability of non-financial information on material ESG risks and opportunities, aiming to strengthen investments in sustainable activities.

The framework is designed to help corporations manage physical and transitional risks as well as maintain their assets. Based on the ESRS documents, companies can diagnose and better understand their ESG performance, data availability and identify risks and opportunities. In this regard, the double-materiality assessment supports sustainability strategic decision-making on mitigation of the impact on society (impact materiality) and the mitigation of ESG factors impact on enterprise value (financial materiality). CSRD is likely to influence the ESG reporting regulatory trends worldwide. It is expected that the market pressure will lead organizations, even those not subject to the CSRD, to follow the ESRS.

New reporting requirements of EU CSRD include the following:

- Concept of double materiality.
- 84 disclosures requirements (Note that sector-specific requirements are under development).
- Mandatory reporting of Scope 3 GHG emissions (if found material).
- Digitalized and integrated annual report.
- Corporate Sustainability Due Diligence (if/when the CSDDD adopted).
- Limited third party assurance.
- Disclosures on taxonomy alignment.

The ESRS are well defined documents with very detailed appendices which set the background of the sustainability reporting under the CSRD.

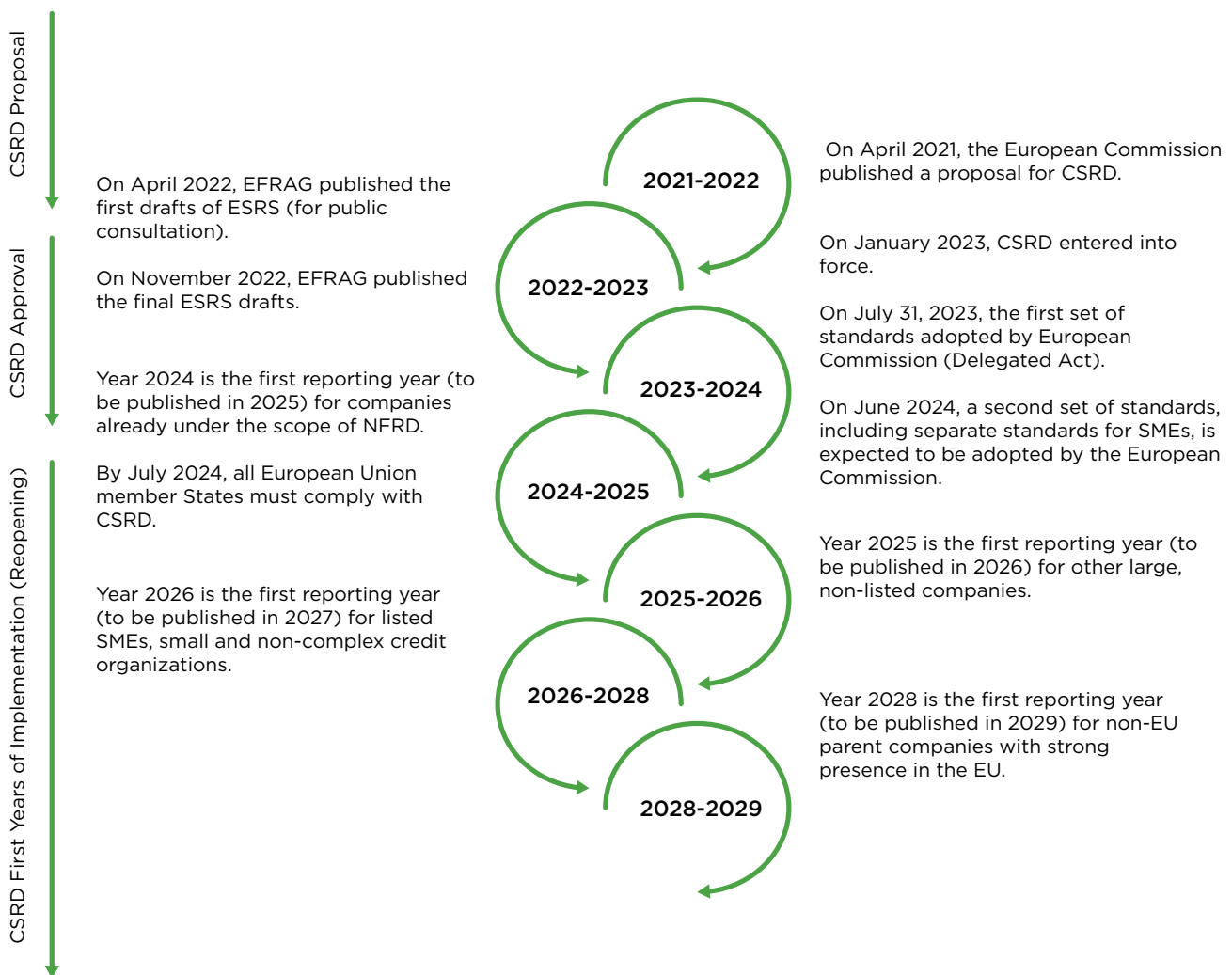


Figure 3: CSRD implementation timeline.

In developing the ESRS, the objective was to build on existing international standards (e.g., GRI, ISSB, TCFD, SBTi, CDP, GHG protocol, etc.) and remain consistent with the ambition of the EU Green Deal, EU Taxonomy and other relevant regulations. The commission will review the standards every three years after the directive has been applied.

The topical ESRS standards are:

1. Cross-cutting Standards:
 - ESRS 1 General requirements.
 - ESRS 2 General disclosures.
2. Environmental Standards:
 - ESRS E1 Climate change.
 - ESRS E2 Pollution.
 - ESRS E3 Water and marine resources.
 - ESRS E4 Biodiversity and ecosystems.
 - ESRS E5 Resource use and circular economy.
3. Social Standards:
 - ESRS S1 Own workforce.
 - ESRS S2 Workers in the value chain.
 - ESRS S3 Affected communities.
 - ESRS S4 Consumer and end-users.
4. Governance Standards:
 - ESRS G1 Business conduct.

In the adopted ESRS the ESRS 2 “Generisclosures” are mandatory for all companies under the CSRD scope, while all other disclosures (E1-E5, S1-S4 & G1) are subject to materiality assessment. In that respect, the materiality assessment, a sensitive and often time-consuming process, becomes the major instrument for the definition of the reporting boundaries and its execution needs to be accurate and consistent.

Within the adopted ESRS, an additional phase-in relief is given for all the affected companies for disclosures of environmental financial implications. Companies with less than 750 employees will not be required to provide the disclosures within the first year. Within the first two years of implementation, companies will not be required to provide disclosures in ESRS S2 workers in the value chain, ESRS S3 affected communities, ESRS S4 consumers and end-users and ESRS E4 biodiversity and ecosystems.

However, some concerns were raised by various stakeholders about the connectivity with existing international standards. In the adopted ESRS, various modifications have been made to improve alignment and interoperability with existing international standards and alignment with other European legislations.

PROPOSAL – EU CORPORATE SUSTAINABILITY DUE DILIGENCE DIRECTIVE (CSDDD) [12]

The Corporate Sustainability Due Diligence Directive (CSDDD) got the green light from the European Parliament in early June 2023 and intends to enforce social responsibility in supply chains with criteria such as child labor, slavery, inadequate workplace conditions, pollution, ecosystem degradation while aligning with the Paris Agreement's climate targets. It is expected that CSDDD will be mandatory around 2025–2026.

According to the proposal, the CSDDD applies to:

- EU companies with >500 employees and a net worldwide turnover of >150M €.
- EU companies with >250 employees and a net worldwide turnover of >40M €, provided at least 50 percent of this turnover was generated in a high impact sector.
- Non-EU companies generate a net turnover of >150 M € in the EU.
- Non-EU companies that generate a net turnover of >40 M € in the EU, provided at least 50 percent of worldwide turnover was generated in a high impact sector.
- It is estimated that approximately 13.000 European companies and 4.000 non-European will be impacted by the CSDDD.

In the context of CSDDD, companies' management teams within the scope must draw and oversee the appropriate due diligence process plan which is integrated with the corporate strategy and aligns with the 1.5° C reduction pathway under the Paris Agreement. This way, organizations will be able to better manage environmental and social risk, adapt more efficiently and communicate transparently to stakeholders.

EU LOW CARBON BENCHMARK REGULATION [13]

On December 10, 2019, the Low Carbon Benchmark Regulation came into effect, amending the Benchmarks regulation (EU 2016/1011). The new regulation aims to increase transparency and consistency, allow a significant level of comparability and prevent greenwashing in the use of low carbon indicators. It introduces two new categories of benchmark: EU Climate Transition Benchmarks and Paris-Aligned Benchmarks. The aim is to support decision makers and investors in the comparison of low carbon methods by obliging benchmark providers to make relevant methodological disclosures. Furthermore, they must indicate for every benchmark (except interest rate and currency benchmarks) of their portfolio whether the indicator follows ESG objectives and other ESG measures.

According to the regulation:

- An “EU Climate Transition Benchmark” means “a benchmark that is labeled as an EU Climate Transition Benchmark where the underlying assets are selected, weighted or excluded in such a manner that the resulting benchmark portfolio is on a decarbonization trajectory and is also constructed in accordance with the minimum standards laid down in the delegated acts.”
- An “EU Paris-aligned Benchmark” means a “benchmark that is labelled as an EU Paris-aligned Benchmark where the underlying assets are selected in such a manner that the resulting benchmark portfolio's GHG emissions are aligned with the long-term global warming target of the Paris Climate Agreement and is also constructed in accordance with the minimum standards laid down in the delegated acts.”

PROPOSAL - REGULATING ESG RATINGS PROVIDERS [14]

On June 13, 2023, the European Commission put forward a new proposal to regulate ESG rating providers. According to this draft legislation, to avoid potential conflicts of interests, ESG rating providers must stop providing consulting services to investors, the sale of credit ratings and the development of benchmarks. In addition, the proposal will require ESG rating providers to offer services to investors and companies in the EU that will be authorized and supervised by the European Securities and Markets Authority (ESMA).

The key objective of this legislation is to improve the quality and transparency of ESG ratings to enable investors and rated companies to take better informed decisions while managing ESG risks and the impacts of their investments or operations by regulating ESG rating providers.

3. UNITED KINGDOM (UK)

UK GREEN TAXONOMY (UNDER DEVELOPMENT) [15]

In October 2021, the U.K. government published the “Greening Finance: A roadmap to Sustainable Investing” which outlines the government’s long-term ambition to create a cleaner and more sustainable financial system and align it with the U.K.’s net-zero commitment.

To identify the sustainable economic activities, as indicated in the roadmap, the U.K. Green Taxonomy classification system has proposed and covers the same six environmental objectives as the EU Taxonomy Regulation: climate-change mitigation, sustainable use of water and marine resources, transition to a circular economy, pollution prevention and control as well as protection of biodiversity and ecosystems.

To be taxonomy-aligned, a substantial contribution to the above objectives must be proved through technical screening criteria. Furthermore, there are special provisions outlined for activities that enable substantial contributions to environmental objectives in other sectors. An example of this would be to indirectly support the energy transition.

Under the scope of the U.K. Green Taxonomy is the Financial Conduct Authority (FCA) made up of regulated firms that are obliged to the U.K. Sustainable Disclosure Requirements (e.g., corporates, asset managers and owners, investment programs managers etc.) which requires companies to disclose or evaluate financially climate-related risks and opportunities based on the TCFD recommendations.

The proposed timeline for the U.K. Green Taxonomy has been delayed and the final implementation is expected to be published within 2023.

UK SUSTAINABLE DISCLOSURE REQUIREMENTS (SDR) (UNDER DEVELOPMENT)

In the context of “Greening Finance: A roadmap to Sustainable Investing”, the U.K. government also proposed the Sustainable Disclosure Requirements (SDR) to broaden the non-financial reporting requirements for both financial and non-financial organizations, provide asset owners with a granular insight into ESG criteria of organization in their portfolios and combat greenwashing. In the context of SDR, sustainable investment labeling, corporate and product-level disclosures requirements are outlined.

The SDR is designed based on the TCFD recommendations. It requires a double materiality assessment and incorporates not only climate change impacts and risks disclosures, but also disclosures on other environmental and social aspects as well. In the future, SDR will also consider the ISSB standards when adopted.

Under the scope of SDR, companies with more than £50 billion assets under management will be expected to make entity-level disclosures 24 months after the SDR policy statement in June 2025. All other in-scope firms, with more than £5 billion assets under management, will be expected to make entity-level disclosures 36 months after the SDR policy statement in June 2026.

However, the timelines of implementation are not clear now since the FCA announced delays in the finalization of the timeframes.

It is worth noting that as of April 2022, FCA requires listed firms to disclose diversity targets within their annual financial reports. The corporation’s board members should consist of a minimum of 40 percent women and a minimum of one woman should hold a senior board position (Chair, CEO, CFO or Senior Independent Director). Additionally, the board should consist of one or more individuals from an ethnic minority background, excluding white ethnic groups.

4. UNITED STATES OF AMERICA (USA)

US CLIMATE DISCLOSURE RULES OF SECURITIES EXCHANGE COMMISSION (SEC) [16]

The U.S. Securities and Exchange Commission (SEC) is in the process of preparing guidelines to provide consistent standards for ESG disclosures and enable investors to better compare products. On March 21, 2022, SEC published a proposal requiring U.S.-listed companies to disclose their climate-related risk and GHG emissions (in accordance with the TCFD and GHG protocol). Based on the proposal, Scopes 1-3 GHG emissions (from the GHG Protocol) must be disclosed together with the material climate-related risks and impacts on the company. A limited and reasonable assurance over time is required for Scopes 1 and 2. While the final rule is expected to be published in mid-2023, the first year of reporting based on the current draft is 2023 with the report to be published in 2024.

Based on the SEC proposal, the rule requires the following:

- Potential risks and the material impacts on companies, their business strategy and subsequent outlook caused by climate change, generally in line with the TCFD.
- Scopes 1-3 GHG emissions, where Scope 3 targets are material or if the organization in question has set a GHG emissions reduction target that includes supply-chain related emissions.
- Qualitative and quantitative disclosures relating to climate risk, including the financial impacts of both physical and transition risks online items of the financial statements.
- Information about climate targets, goals and transition plans where these exist.
- Governance of climate-related risks, both physical and transition, and related processes.

5. ASIA-PACIFIC (APAC REGION)

APAC countries are diversified in terms of economic and social prosperity, level of development, geography, etcetera, and due to the lack of a centralized regulatory body, individual efforts are made towards regulating ESG criteria for sustainable taxonomies and funding.

The introduction of sustainable taxonomies and ESG fund requirements seems to be on governmental agendas due to market pressures, especially from the financial sector, for the “globalization of ESG.” Presented below are some recent steps taken from Singapore, Hong Kong and China:



CHINA [17]

Since 2020, several regulations on disclosure of ESG information have been announced by the financial regulatory bodies in China such as:

- The “Guideline No. 2 on the Application of Self-Regulation Rules for Listed Companies on Shanghai Stock Exchange STAR Market – Voluntary Information Disclosure”.
- The “Green Bond Endorsed Project Catalogue”.
- The “Revised Guidelines on Format of Annual and Half-Year Reports for Listed Companies”.
- It’s worth noting that, since China is holding the lions share in the green bond market worldwide, any new regulatory developments regarding the greenwashing combat is expected to have significant impact globally.

SINGAPORE [18]

In July 2022, the Monetary Authority of Singapore (MAS) published the “CFC 02/2022 Disclosure and Reporting Guidelines for Retail ESG Funds” to mitigate the greenwashing risk in investment products through ESG-labeled fund requirements as of January 2023. Furthermore, in 2021, the Singapore Exchange (SGX), following the initial “Sustainability Reporting Guide” published in 2016, published a consultation paper listing 27 ESG metrics spread across 15 material ESG topics for SGX-listed companies. The mandatory reporting obligations, based on SGX announcements, will start in 2023 on a comply or explain basis for the financial, energy, agriculture, food and forest product sectors. In 2024, companies operating in materials, building and transportation sectors are expected to follow.

The Green Finance Industry Taskforce (GFIT), convened by the MAS, proposes taxonomy for Singapore-based financial institutions by identifying activities that can be considered green or transitioning towards green. The proposed taxonomy is based on the “Association of Southeast Asian Nations (ASEAN) Taxonomy for Sustainable Finance” principles.

HONG KONG [19]

In 2019, the Hong Kong Stock Exchange published guidelines around the mandatory disclosure of ESG reporting, and in 2021, they published Guidance on Climate Disclosures to comply and align to the TCFD. Also in 2021, the Hong Kong Securities and Futures Commission, following a relevant consultation period on the management and disclosure of climate-related risks by fund managers, published a list of verified ESG funds, to prevent greenwashing.

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ANNEX III: MARKET-BASED OPPORTUNITIES FROM SUSTAINABLE FINANCING

“A sustainable financial system is one that creates, values and transacts financial assets in ways that shape real wealth to serve the long-term needs of an inclusive, environmentally sustainable economy.” [1] Corporate ESG-readiness unlocks access to capital through sustainable financing mechanisms (e.g., green funds, sustainability-linked loans and bonds).

As the financial sector increasingly considers the dimension of ESG performance disclosures, the marine and offshore industries, which are under pressure to decarbonize and constantly seek affordable capital, should adopt ESG reporting excellence practices and be committed to the continuous improvement of their ESG performance. Asset managers today are trending toward the direction of capital to lower carbon projects to minimize risks from negative climate related impacts. Corporate ESG reports and ESG disclosures are requested from financial institutions, in the context of a wide range of ESG-linked financial products and services.

As decarbonization of the marine and offshore industries move towards becoming a top priority, financial institutions will play a critical role by using sustainable finance to fund the reduction of emissions and in adapting to the impacts of climate change.

For example, given that maritime transportation supports a wide range of different sectors, including trade, fishing, offshore, naval operations, passenger transport and tourism, financing their transition to sustainability will be a complex task. More than 50,000 merchant ships operate globally, transporting a diverse range of cargo. This fleet is registered in more than 150 countries and manned by at least a million seafarers.



The increasing impetus to decarbonize comes from many sources, including: the U.N.'s Paris Agreement (COP21 through NDC's, state and industry regulators such as the IMO, financial institutions (Poseidon Principles), prominent cargo owners (Sea Cargo Charter) and individual companies' Scope 3 emission targets, which impact their entire supply chains.

An estimation in 2021 concluded [2] that \$2.4 trillion in funding will be needed for the maritime shipping industry to achieve net-zero emissions by 2050, and approximately 70.8 percent of this amount will go toward alternative or future fuels.

Sustainable debt is one of the fastest-growing asset classes in finance. Within that broad category, there are many different types of debt instruments, some of which are attracting more attention than others.

Sustainable finance has been rapidly gaining popularity, both in its broadest sense and in relation to its subtypes such as green or climate finance. Its growth can be measured in many ways, from the amount of sustainable assets under management to the proliferation of specific financial instruments.

Given the growing awareness of sustainability, some financial firms have been inclined to label their offerings or practices as sustainable without harmonizing definitions. Industry standards and oversight have evolved organically and because of regulatory action.

Additionally, there is growing agreement on how to incorporate ESG factors into lending and investing practices, specifically in the form of portfolio scores and metrics. The use of specific sustainable financial instruments, such as green bonds, has also grown in popularity.

The trend in sustainable finance transactions, products and offerings is being driven by many parts of the financial system, including mainstream banks, insurers, asset managers and owners, stock exchanges, rating agencies, etc. – some of which create dedicated sustainability divisions. There also has been an increase in the number of smaller, pure-play green or ESG financial firms.

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ANNEX IV: INVESTOR PRESSURE, RATINGS AND BENCHMARKS

Financial institutions, banks and assurance companies are integrating ESG factors in their risk and credit procedures since the absence of ESG factors in the strategy of asset managers may have legal ramifications. This fact is driving financial market participants, companies and other value chain entities to comply with the relevant ESG criteria and market thresholds.

Furthermore, in the context of sustainable procurement, entities in the value chain have their own value chain sustainability thresholds and criteria. Towards this direction, platforms like the EcoVadis, Sedex and others support sustainable procurement decision-making through transparent, business-to-business communication of various sustainability value chain criteria, ratings and metrics.

At the same time, investors, lenders and other stakeholders are constantly looking for valid ESG ratings (publicly available or private) to support decision-making. Although ESG reporting regulations drive corporations to disclose validated, quantitative and comparable ESG information, the role of third-party, credit-rating organizations is crucial since they provide specialized ratings and benchmarks with added credibility. There are numerous and different ESG rating organizations with different modeling approaches, as well as different target group focuses. Although quantitative-based ratings from different credit-rating organizations provide similar rating results, qualitative-based ratings could vary significantly.

Listed below are some of the third-party rating organizations that are well adopted in the market:

BLOOMBERG [1]

Bloomberg distributes ESG data to more than 11,000 public companies. The ESG scores are comprised of an overall rating that breaks down into underlying pillar and theme exposures and scores. The pillars and themes are built on over 300 individual indicator assessments that are applied to each company's unique circumstances. The ESG ratings are available in the Bloomberg Intelligence ESG Dashboard (BI ESG). The used ESG input data is mainly sourced from publicly available content. This data, based on modeling methodologies are analyzed with considerations to the financial profile and the equities of each firm. Bloomberg provides numerous raw datasets on collected corporate ESG information.

MSCI ESG [2]

MSCI provides a variety of ESG ratings for companies, measuring their financially relevant ESG risks and opportunities, that are most material to a GICS® sub-industry or sector. Based on a rule-based methodology, MSCI identifies industry leaders and laggards according to their exposure to ESG risks and how well they manage those risks relative to peers. MSCI ESG ratings range from leader (AAA, AA), average (A, BBB, BB) to laggard (B, CCC). As of October 2020, MSCI provides ESG ratings for 8,500 companies (14,000 issuers including subsidiaries) and more than 680,000 equity and fixed income securities globally.

MSCI ESG rating classification includes:

- **LAGGARD A** – A company lagging its industry based on its high exposure and failure to manage significant ESG risks.
- **AVERAGE** – A company with a mixed or unexceptional track record of managing the most significant ESG risks and opportunities relative to industry peers.
- **LEADER** – A company leading its industry in managing the most significant ESG risks and opportunities.

SUSTAINALYTICS [3]

The investment research organization, sustainalytics, provides ESG ratings and benchmarking that covers more than 20,000 companies worldwide. Additionally, it helps more than 1,000 investor clients in integrating ESG analysis into their valuations. Sustainalytics collect ESG data from publicly available information, corporate websites and other sources and interprets that data to provide ratings and commentaries by utilizing their in-house methodologies and more than 800 research analysts.

ISS [4]

ISS Governance offers ESG ratings on companies, countries and green bonds, providing investors with in-depth insights to support investment decision making. ISS ESG's rating places a clear, sector-specific focus on the materiality of non-financial information. It is constantly reviewed and developed to cover all relevant ESG related topics.



THOMSON REUTERS [5]

Thomson Reuters provides a rich source of ESG research data, providing performance information for in-depth, responsible investment analysis, helping asset managers meet the sustainable investment mandates of their clients and identify risks in their portfolios. Eikon desktop financial solution integrates financial and ESG data. Thomson Reuters ESG data is extracted and standardized from publicly available sources (e.g., annual reports, NGO websites and Corporate Social Responsibility reports). Over 150 content analysts collect ESG data using their industry experience to consistently interpret and extract relevant, comparable and up-to-date information.

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ANNEX V: OTHER FRAMEWORKS, RATING AND LABELING SCHEMES THAT ARE SUPPORTIVE TO THE ESG JOURNEY OF THE MARINE AND OFFSHORE SECTOR

ICGN - INTERNATIONAL CORPORATE GOVERNANCE NETWORK [1]

The International Corporate Governance Network (ICGN) is led by investors responsible for assets worth approximately \$70 trillion. The ICGN platform promotes standards (e.g., Global Governance Principles and ICGN Global Stewardship Principles) of corporate governance and investor stewardship to advance efficient markets, long-term value creation and sustainable economies, societies and the environment worldwide.

POSEIDON PRINCIPLES (PP) [2]

Currently, 30 financial institutions joined together to establish the Poseidon Principles, a framework for assessing and disclosing the climate alignment of ship finance portfolios. The financial institutions represent approximately \$200 billion in shipping finance and 70 percent of the global ship finance portfolio. They came together to commit towards improving the role of maritime finance in addressing global environmental issues. Additionally, they are consistent with the climate policies and ambitions of the IMO, including the reduction target of shipping's total annual GHG emissions by at least 50 percent by 2050.

More information on the Poseidon Principles is presented in Table 1.

Table 1: Poseidon Principles (PP) in a glimpse. [2]

Applies To	What Are They?	Objectives	Scope
<ul style="list-style-type: none">• Lenders• Relevant Lessors• Financial Guarantors• Export Credit Agencies• Apply globally to all credit products, from signatories, secured by vessels• Fall under the purview of the IMO	<ul style="list-style-type: none">• Framework for assessing and disclosing the climate alignment of ship finance portfolios• Key principles:• Assessment of climate alignment• Accountability• Enforcement• Transparency	<ul style="list-style-type: none">• Organize a group of financial institutions to integrate climate considerations into lending decisions• This group become signatories and committed to PP• To be voluntary, practical, verifiable, fact-based and effective• Intended to evolve over time	<ul style="list-style-type: none">• Climate alignment is currently the only environmental factor considered• Ongoing compliance with the PP is contractually required and must be applied by all signatories

Table 2 presents the information flow steps options of the Poseidon Principles Framework that are determined by signatories. They are also included in a covenant clause in contract issued to shipowner.

Table 2. Information flow steps options of the Poseidon Principles framework.

Information Flow Step	Options at Each Information Flow Step					
	Preferred Pathways Track			Allowed Pathways Track		
1. Source IMO DCS Data and SoC	RO			Shipowner		
2. AER Calculation and Vessel Alignment Calculation	RO			Internal	RO	3rd Party
3. Portfolio Alignment Calculation	Internal	RO	3rd Party	Internal	RO	3rd Party
4. Disclosure	Internal			Internal		

To meet Poseidon Principles requirements, shipowners are requested to provide the IMO DCS data to the bank. The IMO DCS data enables the calculation of a carbon intensity metric known as the Average Efficiency Ratio (AER) and uses the parameters of fuel consumption, distance traveled and design deadweight tonnage (dwt). AER is reported in unit grams of carbon dioxide (CO₂) per tonne-mile (gCO₂/dwt-nm). Respectfully, the banks/lending companies are required to disclose climate alignment scores and supporting documentation to the Poseidon Principles secretariat no later than November 30th, the year after signing. Furthermore, they are required to disclose climate alignment scores in relevant institutional reports.

There is wide recognition of the necessity to engage classification societies and the IMO recognized organizations to secure accountability. Classification societies support the Poseidon Principles framework by providing an IMO DCS data statement on compliance to banks (if a permissible pathways track is chosen), by performing AER calculation and vessel alignment calculation (if a preferred pathways track is chosen) and by performing alignment calculation.

SEA CARGO CHARTERER [3]

The Sea Cargo Charter launched in 2020 by leading cargo owners and provides a global framework for aligning chartering activities with responsible environmental behavior to promote international shipping's decarbonization. The Sea Cargo Charter is applicable to bulk ship charterers and aims to enable cargo-owners and shipowners to align their chartering activities with responsible environmental behavior and incentivize international shipping's decarbonization to shape a better future for maritime shipping and society. To be consistent with the climate policies, ambitions and decarbonization trajectories of the IMO, Sea Cargo Charterer signatories are obligated to measure, on an annual basis, its GHG emission intensity and total GHG emissions of their chartering activities. Sea Cargo Charterer framework must be applied by signatories in bulk ship chartering activities that are:

- On time and voyage charters, including contracts of affreightment and parceling with a mechanism to allocate emissions from ballast voyages.
- For voyages carried out by dry bulk carriers, chemical tankers, oil (crude and product) tankers and liquefied gas carriers.
- Where a vessel(s) is engaged in international trade (excluding inland waterway trade).
- Currently, 36 charterers are signatories to the Sea Cargo Charter such as bulk cargo owners from a variety of segments - including grains and agricultural products, chemicals, energy, metals and mining - and commodity traders and shipowners who have an interest in advancing good environmental stewardship through their business activities.

CLEAN CARGO WORKING GROUP [4]

The Clean Cargo Working Group (CCWG) is a global, business-to-business membership initiative of cargo carriers, shippers and forwarders. It is dedicated to environmental performance improvement in marine container transport through measurement, evaluation and reporting. CCWG focuses on tracking and reducing GHG emissions from container shipping and sharing ocean container freight decarbonization best practices. In 2022, Clean Cargo, which was established in 2003 as Business for Social Responsibility (BSR), was integrated into the Smart Freight Center, a globally active non-profit organization for climate action in the freight sector. From 2022 onward, it will be the management body of Clean Cargo. Through Clean Cargo, the Smart Freight Center provides methods and tools that generate high quality, useful containership GHG emission performance information for Clean Cargo carriers, shippers and forwarders.

TASKFORCE ON NATURE-RELATED FINANCIAL DISCLOSURES (TNFD) [5]

The TNFD was announced in July 2020 and consists of 40 individual members representing financial institutions, corporates and market service providers with over 20 trillion USD in assets. It has a dedicated mission to develop and deliver a risk management and disclosure framework for organizations to report and act on evolving nature-related risks. The goal is to support a shift in global financial flows away from nature-negative outcomes and toward nature-positive outcomes.

In March 2023, the TNFD released its fourth and final beta framework for nature-related risk management and disclosure. Following a consultation process, the TNFD's final recommendations based on final feedback and pilot testing (v1.0) will be published in September 2023.

CLEAN SHIPPING INDEX (CSI) [6]

The Clean Shipping Index (CSI) launched in 2007 in the context of the Clean Shipping Project, a non-profit project driven by public authorities in Sweden with financial support from the EU Structural Fund. CSI is an independent and holistic labeling system of vessels' environmental performance; a practical tool for differentiating port and fairway fees or choosing more sustainable shipping alternatives. In January 2021, IVL, the Swedish Environmental Research Institute, took over the management of the CSI. The CSI provides key stakeholders within the maritime value chain with the information needed to make environmentally sound decisions. CSI's environmental labeling system also allows for eco-friendly shipowners to differentiate themselves among their competitors as well as take advantage of ports who provide incentives for vessels with lower emissions. CSI provides key players within the maritime supply chain with the information needed to make decisions that are environmentally responsible. Shipowners register their vessels in the CSI database by completing the CSI's environmental performance questionnaire which is free of charge. Once a vessel is registered in the CSI database, it receives a CSI Class of 1-5 based on environmental performance parameters outlined by CSI.

GREEN AWARD [7]

Green Award foundation is an international independent, non-profit organization that was established in 1994 and provides a voluntary quality assessment certification scheme that inspects and certifies sea and inland ships. A Green Award certificate, which can be obtained by ships that go above and beyond the industry standards in terms of safety, quality and environmental performance, acts as a quality mark and brings benefits to its holders. The certificate holders are top-notch ship management companies with at least one ship that can meet the Green Award requirements (e.g., quality and safety standards, environmental performance etc.) as confirmed after audits. Green Award certified companies and vessels are entitled to various incentives to encourage their socially responsible behavior.

Furthermore, ports, organizations and maritime products and service suppliers are encouraged to be incentive providers to support and enhance the environmental and safety performance of ships and to promote highest quality standards by offering various financial and non-financial incentives to Green Award certified ships. At present, there are over 1,000 ships certified (inland and sea) and over 145 incentive providers, which include ports and maritime service providers participates.

GREEN MARINE [8]

Green Marine is a non-profit organization founded in 2017 and provides a voluntary environmental certification program for the North American marine industry. In 2019, Green Marine collaborated with Surfrider Foundation Europe to export the environmental certification program to France to give birth to Green Marine Europe in 2020. The Green Marine Europe environmental certification program operates on the same proven model as the North American program. Based on 15 performance indicators, this comprehensive program addresses prioritized environmental issues.

Participants must demonstrate continual and measurable improvement, year after year, and respect all elements of the certification process such as the annual self-evaluation, external verification and publication of results.

RIGHTSHIP GHG EMISSIONS RATING [9]

RightShip was founded in October 2011 with the mission to drive operational improvements in the global shipping industry. Today, RightShip is the world's leading ESG focused digital maritime platform, providing expertise in global safety, sustainability and social responsibility practices. RightShip has developed several solutions for shipowners, charterers, ports and terminals and financiers, including a GHG emissions rating. The GHG emissions rating tool developed by RightShip and Carbon War Room allows charterers to compare a ship's design efficiency against its peer group's vessels using a simple A-G scale, increasing demand for more efficient vessels by making the potential for fuel savings transparent. It's important to note that RightShip's Existing Vessel Design Index (EVDI™) is the core measure used to calculate the RightShip GHG Emissions Rating and is comparable across all vessels in RightShip's Ship Vetting Information System (SVIS™) database.

ENVIRONMENTAL SHIP INDEX (ESI) [10]

The Environmental Ship Index (ESI) is one of the projects of the World Port Sustainability Program (WPSP) of the International Association of Ports and Harbors (IAPH) that started in 2011. It identifies seagoing ships that go beyond the current emission standards of the IMO.

The ESI evaluates the amount of nitrogen oxide (NOX) and sulfur oxide (SOX) that is released by a ship and includes a reporting scheme on the GHG emission of the ship. The ESI is a good indication of the environmental performance of ocean-going vessels and will assist in identifying cleaner ships in a general way. All stakeholders in maritime transport can use the ESI to improve their environmental performance and as an instrument to reach their sustainability goals. The ESI Initiative commenced on January 1, 2011 onward. its database under the administration of IAPH has grown exponentially in both number of ships and incentive providers. As of January



2023, the administration and management of the ESI program passed to the Green Award foundation. With over 8,000 registered vessels, ESI has become the standard tool used by the world's ports to reward and incentivize shipowners meeting and exceeding IMO emissions standards. As of April 1, 2023, it has 6,577 registered vessels with valid scores.

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