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Integrating reporting on the financial and sustainability performance of entities: Leveraging digitalization

Note by the UNCTAD secretariat

Summary

An overview of developments and the present status of financial and sustainability reporting requirements and related elements in the integration and digitalization of reporting are presented in this note. These interrelated elements are discussed from a practical implementation angle, particularly from the perspective of developing countries. The benefits that digital reporting can provide in the implementation of global standards for financial and sustainability reporting in an integrated manner are discussed and the potential of developments in information technology are explored, such as extensible business reporting language (XBRL) and related taxonomies, to provide developing economies and, in particular, small and medium-sized enterprises involved in the supply chains of larger multinational enterprises, with the necessary tools for accelerating the transition to the digital era of financial and sustainability reporting. Finally, a series of issues are presented that delegates at the forty-first session may wish to consider for further deliberation.



I. Introduction

1. The United Nations has long recognized the essential role of entities in the private sector in the attainment of economic and social development goals. Over the years, policymakers have endeavoured to adopt regulatory frameworks conducive to supporting the growth of enterprises. Firms that provide meaningful, reliable and comparable reports on performance and financial position stand a better chance of attracting investment from domestic and foreign sources. The continued integration of capital markets has made it imperative for enterprises worldwide to provide globally comparable financial and sustainability-related disclosures.

2. Member States of the United Nations established the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting four decades ago, with a view to promoting reliable and comparable reporting by enterprises. Over the years, the Intergovernmental Working Group of Experts has made significant contributions to this objective. Its sessions serve as an open platform for deliberating and building consensus on a variety of topics pertaining to the harmonization of disclosure requirements on the financial and sustainability performance of enterprises. Good practices have been identified from the practical experiences of member States and widely shared, to facilitate the implementation of frameworks, standards and codes developed at the global level.

3. Since the adoption of the Sustainable Development Goals, the Intergovernmental Working Group of Experts has been making significant contributions to assist member States in implementing sustainability reporting requirements, including through the UNCTAD *Guidance on Core Indicators for Entity Reporting on Contribution towards Implementation of the Sustainable Development Goals*, issued in 2019 and revised in 2022; an accompanying training manual and an online training course; and *Tackling the Sustainability Reporting Challenge: A Policy Guide*, published in 2023. UNCTAD has been implementing a series of technical cooperation projects aimed at promoting high-quality sustainability reporting by enterprises in developing countries, and has supported the launch of regional partnerships in Africa, Asia and Latin America that have been working to support this objective, including by facilitating the sharing of experiences at the regional level.¹ The Intergovernmental Working Group of Experts has been highlighting the spillover effects of global sustainability reporting standards for small and medium-sized enterprises based in developing countries. Recent developments in standard-setting and information technology have the potential to accelerate the implementation of global standards in developing countries.

4. In concluding deliberations at the fortieth session of the Intergovernmental Working Group of Experts, delegates proposed, as a second main agenda item, integrating reporting on the financial and sustainability performance of entities: Leveraging digitalization. Accordingly, the UNCTAD secretariat has prepared this background document to facilitate deliberations on the agenda item. Developments in global standard-setting and the present status of financial and sustainability reporting requirements and related elements in the integration and digitalization of reporting are detailed in chapter II, along with challenges arising in the practical implementation process. The benefits of digitalization and work being undertaken on developing taxonomies for standardizing digitalization, practical implementation challenges and emerging good practices are discussed in chapter III. A series of issues are presented in chapter IV that delegates at the forty-first session may wish to consider for further deliberation.

¹ The regional partnerships were launched by UNCTAD to promote mutual support among countries in the same region in efforts to achieve the development of national strategies and policies in order to establish and/or strengthen the national infrastructure to prepare high-quality sustainability reports by companies; increase the number of high-quality sustainability reports by companies; measure the contribution of the private sector to the implementation of the Goals; and promote sustainable enterprise development.

Note: Mention of any firm or licenced process does not imply the endorsement of the United Nations.

II. Trends in standard-setting and the application of integrated reporting

A. Standard-setting developments

5. The global financial reporting landscape was transformed in 2000 when the International Organization of Securities Commissions endorsed the international accounting standards issued by the International Accounting Standards Committee for the international listing of securities. In 2001, the International Financial Reporting Standards Foundation was formed and the Committee was superseded by the International Accounting Standards Board. In 2002, the European Union promulgated a regulation requiring the preparation of consolidated financial statements for listed companies to be prepared in accordance with the International Financial Reporting Standards issued by the International Accounting Standards Board and endorsed by the European Union. According to the International Financial Reporting Standards Foundation, at present, there are 168 jurisdictions that require or permit the use of International Financial Reporting Standards. In 2010, the International Accounting Standards Board issued a practice statement on management commentary, to provide a framework for preparing management commentary that complements financial statements prepared in accordance with International Financial Reporting Standards (also known as a management discussion and analysis or operating and financial review or strategic report, among other variations). The practice statement requires the discussion of principal risks and opportunities, along with potential impacts on future performance. In June 2024, the International Accounting Standards Board stated that it was finalizing a revised version of the practice statement.²

6. Since 2000, the Global Reporting Initiative has been issuing guidelines and standards on sustainability reporting that entities have been applying on a voluntary basis. Over the past few years, significant developments have accelerated the movement towards harmonizing frameworks and standards on sustainability reporting. In 2021, the International Financial Reporting Standards Foundation announced the decision to establish the International Sustainability Standards Board. In June 2023, the Board issued two sustainability disclosure standards, namely, general requirements for the disclosure of sustainability-related financial information; and climate-related disclosures. In July 2023, the European Commission adopted the European Sustainability Reporting Standards, applicable to all companies subject to the corporate sustainability reporting directive. In March 2024, the Securities and Exchange Commission of the United States of America issued a rule to enhance and standardize climate-related disclosures.

7. Standard setters in sustainability reporting require sustainability reports prepared on the basis of their respective standards to be presented with financial reports in an integrated manner, to provide users with a holistic view. For example, the sustainability reporting standards issued by the International Sustainability Standards Board are linked to the financial reporting framework of the International Accounting Standards Board. International Financial Reporting Standard 1 requires sustainability reports to be issued at the same time as the corresponding general-purpose financial statements. European Sustainability Reporting Standard 1 states that the reporting period covered by the sustainability report of an entity shall be consistent with that of its financial statements. Global Reporting Initiative standards have similar requirements. In 2010, the International Integrated Reporting Council was established, with the objective of creating a globally accepted framework for integrated reporting, to facilitate reporting by companies about value creation over time.³ In 2013, the Council issued such a framework, and a revised version was issued in 2021.⁴ In the context of the present note, integrated reporting is used in a broader sense, referring to the presentation of financial and sustainability performance reports in an integrated manner, including by applying the integrated reporting framework.

² See <https://www.ifrs.org/projects/work-plan/management-commentary/>.

³ See <https://integratedreporting.ifrs.org/10-years/10-years-summary/>.

⁴ See <https://integratedreporting.ifrs.org/resource/international-ir-framework/>.

8. Standard-setting bodies in financial and sustainability reporting have recognized the benefits of digitalization in facilitating the access and use of reports prepared under their respective standards. To facilitate and standardize this process, they have issued taxonomies to accompany their standards; for example, the International Accounting Standards Board issued its first International Financial Reporting Standards taxonomy in 2004 and the International Sustainability Standards Board did the same in 2024. In February 2024, the European Financial Reporting Advisory Group issued for consultation taxonomies to accompany the European Sustainability Reporting Standards.⁵ In the context of the present note, digitalization goes beyond the production of reports in an electronic format, such as in portable document format. Individual financial and sustainability disclosure items, in both numeric and text form, are digitally tagged in accordance with their respective taxonomies, to become machine readable and retrievable. The most commonly used global framework for digitally exchanging business information is XBRL, an open and freely licenced digital standard maintained by XBRL International. Reporting entities use XBRL in coding reports in accordance with applicable taxonomies developed by the respective standard setters, relying on an ecosystem of XBRL-compliant software and services that facilitate the encoding or tagging of relevant facts in a report or, in some instances, use a template or web-based form provided by a regulator, exchange or business registrar. There are over 200 such digital mandates worldwide, in which millions of companies provide regulators with machine-readable business reports prepared in compliance with one or more XBRL specifications.⁶

B. Experiences in the application of integrated reporting

9. The presentation of financial and sustainability reports in an integrated manner has become prevalent in different regions. Under the integrated reporting framework, the main purpose of an integrated report is to explain to providers of financial capital how an organization creates, preserves or erodes value over time and the underlying rationale is that “the cycle of integrated reporting and thinking, resulting in efficient and productive capital allocation, will act as a force for financial stability and sustainable development”.⁷ Integrated reporting has gained traction among companies in various sectors and regions. Over 2,500 businesses in over 70 countries have adopted integrated reporting and over 40 stock exchanges refer to its guidance.⁸ According to one study, the share of the world’s 250 largest companies that labelled annual reports as “integrated” rose from 14 to 22 per cent in 2017–2020 and, in 2020–2022, there had been an increase in the number of companies applying the integrated reporting framework, as follows: Latin America, from 16 to 28 per cent; Asia and the Pacific, from 25 to 30 per cent; Europe, from 14 to 15 per cent; and the Middle East and Africa, from 43 to 55 per cent.⁹

10. South Africa was the first country to adopt integrated reporting as a mainstream component of corporate governance, in 2010. Companies listed on the Johannesburg Stock Exchange are required to issue integrated reports, complying with the King Report on Corporate Governance.¹⁰

11. Countries in Africa are increasingly adopting integrated reporting as a means of enhancing transparency, attracting investment and improving corporate governance. The Africa Integrated Reporting Committee was established in 2017 and each member State has agreed to establish a national integrated reporting committee. The members are Botswana, Kenya, Mauritius, Morocco, Namibia, Nigeria, South Africa and Zimbabwe.

⁵ See <https://www.efrag.org/en/projects/esrs-xbrl-taxonomy/exposure-draft-consultation>.

⁶ See <https://www.xbrl.org/the-standard/why/xbrl-project-directory/>.

⁷ See https://integratedreporting.ifrs.org/wp-content/uploads/2022/08/IntegratedReportingFramework_081922.pdf.

⁸ See <https://integratedreporting.ifrs.org/news/the-growing-momentum-for-integrated-reporting-part-1/>.

⁹ See <https://kpmg.com/xx/en/home/insights/2022/09/survey-of-sustainability-reporting-2022.html>.

¹⁰ See <https://www.iodsa.co.za/page/king-iv>.

The Pan African Federation of Accountants has a leading role in achieving the objectives of the Africa Integrated Reporting Committee.¹¹

12. In Nigeria, as highlighted in a study in 2022, of a sample of the top 100 global companies by revenue in Nigeria, 55 per cent included environmental, social and governance-related sustainability information in annual reports; 25 per cent sought assurance on disclosed information; 22 per cent recognized the loss of biodiversity and/or nature as a risk to the business; and 30 per cent reported on carbon reduction targets.¹² The report also highlighted that integrated reporting rates in Nigeria were low, with only 4 per cent of the top 100 global companies by revenue in Nigeria stating that they followed the international integrated reporting framework; that governance of environmental, social and governance-related pillars was inadequate, with few companies undertaking assurance; and that improvement was needed across all three pillars. Voluntary sustainability reporting was encouraged for listed companies. The Financial Reporting Council of Nigeria has implemented a road map for adopting the two sustainability disclosure standards of the International Sustainability Standards Board, set to become fully mandatory by 2028.¹³

13. A significant portion of integrated reports in Asia and the Pacific originates from companies in Japan. Integrated reporting has been widely adopted in Japan since 2015, following the introduction of the Corporate Governance Code, which recognized the integrated reporting framework as suitable for meeting the requirements of the Code. In 2020, an analysis of integrated reporting in the market in Japan highlighted that Japan had the highest number of integrated reports worldwide, yet improvements were needed, and noted that companies in Japan should go beyond statute-required compliance disclosures to explain the value brought to all stakeholders and society.¹⁴ In addition, one study showed that, in 2022, 12 per cent of companies in Singapore included in the study presented integrated reports.¹⁵

14. In Europe, the use of integrated reporting is growing steadily, yet integrated reports remain rarely used in a few member States. In 2013–2017, the number of integrated reports in individual countries remained at a similar level. One study showed that, in 2013–2017, there was an increase in the number of reports, with the greatest increase in France (103 reports), followed by Germany (53), Italy (41), Sweden (41) and Denmark (38); the number of reports decreased in Austria, Belgium, Hungary, Poland and Portugal.¹⁶

15. In Latin America, the number of integrated reports issued by the largest companies in Argentina, Brazil and Mexico grew in 2019–2022.¹⁷ In Brazil, the proportion of companies sampled that prepared integrated reports rose from 36 to 60 per cent, partly due to the resolution that made it mandatory for listed companies that opted for issuing sustainability reports linked to financial statements to use the integrated reporting framework as a basis and provide limited assurance.

C. Practical implementation challenges

16. The holistic nature of integrated reporting can pose several practical challenges for reporting entities. It may be difficult to ensure that multiple stakeholders understand the framework, the complexity of the concepts and the potential for value creation.

¹¹ See <https://www.ifac.org/knowledge-gateway/discussion/it-time-africa-accelerate-implementation-integrated-thinking-and-reporting>.

¹² See <https://assets.kpmg.com/content/dam/kpmg/ng/pdf/2022-survey-of-sustainability-reporting-in-nigeria.pdf>.

¹³ See <https://www.mondaq.com/nigeria/securities/1384500/esg-reporting-and-disclosure-obligations-legal-requirements-and-best-practices>.

¹⁴ See <https://assets.kpmg.com/content/dam/kpmg/jp/pdf/2021/jp-integrated-reporting2020.pdf>.

¹⁵ See <https://www.ifac.org/knowledge-gateway/audit-assurance/publications/state-play-sustainability-disclosure-assurance-2019-2022-trends-analysis>.

¹⁶ See <https://www.businessperspectives.org/journals/problems-and-perspectives-in-management/issue-359/analysis-of-the-integrated-reporting-use-in-eu-countries>.

¹⁷ See <https://www.ifac.org/knowledge-gateway/audit-assurance/publications/state-play-sustainability-disclosure-assurance-2019-2022-trends-analysis>.

An understanding of materiality, sustainability standards and regulatory expectations is necessary and training, education and organizational change need to be considered. Board and senior management training may be required. Data availability, quality and costs are additional factors for consideration.

1. Complexity

17. An integrated reporting framework involves complex concepts such as connectivity, materiality and value creation, which can be difficult for organizations to understand and implement fully.¹⁸ Many companies may also lack the necessary culture for full transparency, including due to competitiveness considerations. Integrating financial and sustainability data also poses technical and conceptual challenges. Companies need to develop methodologies for quantifying the impact of sustainability initiatives on financial performance and vice versa. To fully align with the integrated reporting vision, powerful digital consolidation tools may be needed, to automate and streamline the process of combining, summarizing and transforming data from multiple departments, business units or subsidiaries. Multiple reporting frameworks and standards can also create confusion for reporting entities. Choosing the most appropriate framework and aligning reporting practices with evolving standards can be challenging, particularly among multinational organizations operating in multiple jurisdictions. However, growing consistency in reporting that is expected to occur in various jurisdictions can help solve this problem.

2. Human capacities and organizational change

18. Implementing integrated reporting can require cultural and organizational changes and, often, training and education. Companies may encounter resistance from internal stakeholders accustomed to traditional reporting and risk practices or a lack of awareness of the importance of sustainability issues and regulatory expectations. There may be conflicting views of the place of environmental risks and opportunities in reporting, and existing infrastructure and reporting tools may not be able to be tailored to new reporting requirements. Ensuring that all responsible staff understand and can effectively contribute to the production of integrated reports requires training and education efforts, as well as strong support by leadership and cross-organizational engagement.

3. Data availability and quality

19. In comparison with financial reporting, due to the diversity of reporting elements that fall under the sustainability reporting category, collecting accurate and reliable sustainability data can be challenging. Ensuring the consistency and comparability of sustainability data across reporting periods and against industry benchmarks can also be difficult. In addition, data often exists in silos within organizations, making it difficult to integrate and present a cohesive narrative in an integrated report.

III. Leveraging digitalization for integrated reporting

20. The use of digital business reporting is increasing. The European Single Electronic Format reporting framework developed by the European Securities and Markets Authority has been requesting digital reports for two years and around 5,000 companies in Europe have been preparing annual reports under its guidelines. The format effectively mandates that all consolidated financial statements conforming to the International Financial Reporting Standards should be rendered machine readable in order that key information can be readily analysed by key stakeholders. Enabling data tagging using XBRL and embedding these in a hypertext markup language document provides significant benefits. Data can be read in any browser and the process of manually analysing large amounts of corporate financial information can be removed. Digital tagging also helps place content and data into perspective and to develop interactive infographics.

¹⁸ See <https://integratedreporting.ifrs.org/resource/mazars-integrated-reporting-towards-a-global-adoption/>.

21. For example, in India, digitalization has been leveraged by reporting entities. The business responsibility and sustainability reporting regulation of the Securities and Exchange Board mandates the disclosure of sustainability data by the top 1,000 listed companies in the country by market capitalization. Companies are required to submit the report in XBRL alongside a portable document format version, enabling analysis using readily available software tools. Each disclosure contains about 1,600 data points, directly supplied and verified by companies, making them valuable sources of data for many stakeholders, and the format is aligned with global reporting standards.¹⁹ Analysis of such data has the potential to generate insights that can assist key stakeholders in making critical decisions.

A. Benefits of digital reporting

22. Digital reporting enables real-time or near real-time access to data, allowing reporting entities to produce timely reports and to respond quickly to changing circumstances. By eliminating paper-based processes and continuous manual interventions, digital reporting can reduce the costs associated with the printing, distribution and storage of reports. The use of XBRL can benefit both preparers and users in creating, analysing and disclosing financial and sustainability information, and can lead to cost savings, greater efficiency and the improved accuracy and reliability of information communicated to stakeholders. XBRL tagging of financial statements may be viewed as barcodes for financial reporting (see paragraph 8). Digital reporting provides significant benefits to Governments, regulators, reporting entities, investors and other users. The ability of software and data provider systems to leverage inline XBRL, to provide full data provenance or traceability, is of particular and increasing relevance to investors, since users may navigate directly to the part of the original report from which a figure or narrative text originated.

1. Reporting entities

23. In addition to XBRL, there are various digital tools that can be used in preparing sustainability reports. The growth of digital-first sustainability-related data tools, platforms and offerings has made it easier for companies to report on environmental impacts. Such tools can assist businesses in tracking carbon footprints and managing climate-related impacts. For example, the Carbon Trust offers calculation tools and services that help companies measure and manage carbon emissions and calculate carbon footprints across operations, supply chains and product life cycles. In addition, the Greenhouse Gas Protocol provides standards and guidelines for companies in measuring and reporting on greenhouse gas emissions, with online tools that help companies calculate and report on emissions according to internationally recognized protocols.

24. Small and medium-sized enterprises can make progress by using available accounting records to estimate emissions. For example, they could use financial records related to energy consumption, transportation and production processes in order to estimate carbon footprints. Such an approach may not be as accurate as more comprehensive data collection methods but allows for the tracking of environmental impacts and the identification of opportunities for improvement. Carbon accounting software provided by various vendors could help companies manage efforts to measure, manage and reduce carbon emissions and shift towards more sustainable production activities. Digital reporting platforms and corresponding taxonomies could facilitate reporting by small and medium-sized enterprises based in developing countries that are part of the supply chains of larger multinational companies. Cost savings and other benefits can also be achieved after implementation, including a reduction in manual processes and time spent consolidating reports. Fewer errors are likely to occur as entities become more familiar with digital reporting. However, it may take several years for the related benefits to be gained.

¹⁹ See https://public.tableau.com/app/profile/revathy6435/viz/BRSR_analytics_published/BRSRReportOverview.

2. Governments and regulators

25. Digitalization can benefit Governments and regulators in many ways. A digitalized and streamlined reporting process can enhance transparency, accountability and compliance with international agreements such as the Paris Agreement and could be used in tracking funding towards achieving the Sustainable Development Goals. In addition, digital reporting systems can generate standardized reports, making it easier for Governments to analyse trends, set targets and develop policies in order to mitigate climate change effectively. Some important considerations in this regard include the need to ensure the protection of data provided by reporting entities and to make provisions for data recovery plans in case of accidental data loss. One challenge for policymakers is how to best leverage the benefits of digital reporting that can be achieved in the corporate reporting sphere and adapt them to the public sector, enhancing the comparability and utility of the financial and sustainability disclosures of municipalities, provinces and State-owned enterprises, to both improve accountability and attract investment, for example, through municipal green bonds. Digital reporting and tagging can facilitate the adoption and enforcement of standardized reporting frameworks and formats, improving the consistency and comparability of reported information, and can support the automation of data collection and compliance monitoring, which can, in turn, support regulatory oversight and enforcement. Countries may also use such data in reporting on progress towards the achievement of the Sustainable Development Goals. For example, information on indicator 12.6.1 (number of companies publishing sustainability reports) could be obtained from such digital reporting platforms. Digitalization could enable more accurate and up-to-date information on the activities and performance of regulated entities. Given such benefits, the role of regulators can shift to more sophisticated monitoring, including identifying trends, patterns and abnormalities in reported data.

26. For example, in Colombia, in 2023, the Ministry of Environment, in collaboration with UNCTAD, initiated the development of a digital platform, to allow businesses to report carbon emissions annually and obtain the necessary certifications, supporting the national commitment to the objectives in the Paris Agreement. The platform, to be launched by end-2024, integrates a user-friendly emissions calculator and complies with standards set by the Intergovernmental Panel on Climate Change, to ensure that it is both comprehensive and accessible for companies required to report emissions, and is designed to prepare Colombia for upcoming global carbon pricing and tax measures, including the European Union carbon border adjustment mechanism. Future additions may include online services for environmental impact assessment certificates; a digital registry for green business certificates, to enable companies to evaluate environmental practices against regional standards and qualify for green business status; and the ability to link to corporate accounting tools, to calculate emissions by expenditure item.²⁰

27. There is a growing trend to include biodiversity and nature-related metrics in integrated reports, reflecting a broader approach to sustainability beyond simply environmental factors. The Task Force on Nature-Related Financial Disclosures has developed recommendations on disclosing nature-related risks and opportunities in financial filings. The Task Force aims to promote better understanding of the dependencies and impacts of businesses on biodiversity and nature, encouraging organizations to integrate such information into reporting. As digitalization transforms how data are collected, processed and reported on, integration with the Task Force can significantly enhance the effectiveness and implementation of nature-related financial disclosures. For example, remote-sensing and satellite imagery can be leveraged to monitor ecosystems, providing real-time data on biodiversity, deforestation and land use changes, and Internet of things sensors can monitor environmental parameters such as air and water quality, soil health and wildlife movement, offering granular data for assessing nature-related risks.

28. Developments in sustainability reporting and digital technology can help support the assurance and credibility of sustainability reports, namely, by influencing the internal processes of producing, aggregating and analysing sustainability data; and by shaping how

²⁰ See <https://unctad.org/news/un-digital-government-awards-celebrate-excellence-online-public-services>.

companies communicate sustainability strategies to external audiences. In the European Union, the corporate sustainability reporting directive requires assurance on the sustainability information that companies report and gives audit committees an important mandatory role, to supervise the internal process of compiling reliable sustainability information, as well as monitoring the assurance process.

3. Investors

29. Advanced analytics tools allow investors to analyse large volumes of sustainable investment data quickly and efficiently, identifying investment opportunities and risks more effectively. Such digital sustainability information can be integrated into sustainable investment strategies, to provide insights and inform research, screening and other analysis. In addition, such data sets and analytical tools can be used to inform the issuance of green bonds and other sustainable finance instruments.²¹ To facilitate investment flows to their countries, regulators could consider designing digital reporting platforms to be accessible by potential investors. As noted in one study, sustainability disclosure regulation can improve the information environment and has beneficial capital market effects.²² The increase in investment-grade digitalized sustainability data can also enable better informed investment decisions and reduce information asymmetry. Market integrity can be maintained, and environmental, social and climate-related risks and opportunities can be integrated.

4. Other stakeholders

30. Digitalization can help improve access to information by other sustainability stakeholders such as non-governmental organizations, civil society and academia, enabling them to monitor and evaluate the social and environmental impacts of companies. For example, one study leveraged sustainability data from over 1,000 listed companies in India, to provide valuable insights for investors, rating agencies, policymakers, regulators, corporations and industry bodies.²³ Transparent and accountable reporting practices foster trust and accountability among stakeholders, empowering them to hold companies and regulators accountable for their actions and performance. Digital technologies have the potential to increase inclusive and sustainable growth by creating feedback loops and greater transparency. In addition, integrated reporting prompts organizations to engage with a wide range of stakeholders, including local communities, civil society organizations and government agencies. Digital tools enable more inclusive and participatory communications and consultation processes, empowering stakeholders to contribute to decision-making and to hold organizations accountable for social and environmental impacts. Finally, digitalized reporting facilitates the consolidation of microeconomic data for macroeconomic-level reporting and analysis.

B. Standardization of digital reporting

31. The standardization of taxonomies or “digital dictionaries” for digital reporting in financial and sustainability reporting is essential in enhancing consistency, comparability and transparency across jurisdictions. The International Accounting Standards Board taxonomy is a digital representation of its standards, allowing companies to tag financial data in reports using XBRL, which facilitates automated data exchange and analysis. The Securities and Exchange Commission of the United States mandates the use of XBRL for financial reporting by public companies listed in the country, allowing investors and regulators to access and analyse financial data more efficiently, and the accounting taxonomy is developed and maintained by the Financial Accounting Standards Board.

²¹ See <https://developers.lseg.com/en/article-catalog/article/how-integrate-esg-data-investment-decisions>.

²² Krueger P, Sautner Z, Tang DY and Zhong R, 2024, The effects of mandatory [environmental, social and governance-related] disclosure around the world, *Journal of Accounting Research*.

²³ XBRL International, 2024, White paper, available at <https://www.xbrl.org/unlocking-the-potential-of-esg-disclosures-in-india-a-must-read-analysis/>.

The International Sustainability Standards Board has finalized its first digital reporting taxonomy, accompanied by an explanatory document, aimed at facilitating digital reporting in collaboration with entities such as the European Financial Reporting Advisory Group, XBRL International and the Net-Zero Data Public Utility. The digital taxonomy is not mandatory under International Sustainability Standards Board standards, as the implementation of digital reporting is the prerogative of national securities regulators, yet stakeholders such as investors, preparers and regulators stand to benefit from its adoption. For example, Deloitte Australia has projected significant economic savings if large businesses embrace digital financial reporting.²⁴ Requests for capacity-building need to be addressed, particularly in providing guidance on proportionality, materiality, greenhouse gas emissions accounting and assurance. The International Financial Reporting Standards Foundation capacity-building team is compiling resources to address such needs and has undertaken regional awareness-raising and information-gathering events in Africa, Asia and Latin America.²⁵ The Global Reporting Initiative has issued an updated version of its standards; developed sector-specific reporting guidelines, to address the unique sustainability challenges in different industries; and, through a taxonomy project, aims to develop a digital taxonomy for reporting sustainability information in a structured and standardized format, facilitating integration with financial reporting. Finally, the Task Force on Nature-Related Financial Disclosures knowledge hub offers guidance on taxonomy development for climate-related disclosures.

C. Practical implementation challenges and good practices

32. In considering the policy in a jurisdiction on the adoption of sustainability reporting requirements, it is essential to consider the starting point, including the state of readiness of the applicable corporate reporting platform. The pace of adoption of International Sustainability Standards Board standards and accompanying digital taxonomies can differ based on various factors. In some cases, a jurisdiction may possess a well-defined regulatory and policy framework with clear governance and statutory arrangements. Market participants may also have enough experience in sustainability-related reporting that enables them to adopt the standards in a simple and streamlined manner. In many cases, countries have yet to develop applicable regulations, supporting institutions and the necessary human capacities. The digitalization of reporting is likely to be a new element for consideration in many emerging markets and developing economies, as is the importance of sustainability disclosures in terms of competitiveness, supply chain retention and emerging trade regulations. The accountability and transparency components of integrated reporting can assist countries in aligning policies and activities with the Sustainable Development Goals and tracking progress towards their achievement. Access to capital is essential in sustainable development, particularly in developing countries. Integrated reporting, facilitated by digital tools, can help organizations communicate sustainability efforts and long-term value creation potential to investors in a consistent and comparable manner. This could enhance the ability to attract investment and secure financing for growth and development projects. There are, however, practical challenges for both reporting entities and regulators to consider in the evolution of digital reporting. Notwithstanding the overall benefits that digital reporting can bring to economies, key challenges for policymakers and individual companies include, for reporting entities, the cost of software, staff training and maintenance; and, for regulators, the establishment and administration of a digital reporting platform. There are also cross-cutting data integration challenges that encompass the integration of financial and sustainability data, data standardization, technical complexity, data security and privacy, as well as change management. All of these need to be dealt with by regulators and policymakers as they consider their modernization paths.

²⁴ See <https://www.deloitte.com/au/en/services/audit-assurance/perspectives/embracing-the-power-of-digital-corporate-reporting.html>.

²⁵ See <https://www.ifrs.org/content/dam/ifrs/meetings/2022/october/ac/ap08-capacity-building.pdf>.

1. Reporting entities

33. Depending on the size of a reporting entity and the complexity of needs, upfront software costs may be high, including licencing fees, subscriptions and customization expenses. However, this may be resolved by using various budget-friendly options. There are indications that a large and competitive market exists for XBRL software or templates. For example, initial emissions estimates can be calculated using spreadsheets and related emissions formula factors. In addition, open-source or cloud-based platforms offer cost-effective solutions, and many large software providers are introducing new modules to meet evolving regulatory demands. Shifting towards digitalization necessitates training staff in the use of new software tools, reporting standards and data management protocols. Challenges may arise due to a lack of expertise and resistance to change among employees, hindering the adoption and effective utilization of digital reporting systems. Training initiatives to enhance digital literacy and proficiency with reporting software can help support the shift towards digitalization. Engaging employees in the initial phases of a transformation programme can also assist in the change management process. Costs may be significantly reduced after the initial implementation phase. In addition, the efforts exerted by multinational companies may trickle down to suppliers. For example, the measurement of data on scope 3 greenhouse gas emissions, which account for approximately 80 per cent of corporate carbon footprints, can be difficult since it involves company activities that occur in value chains; specialist technology companies can provide solutions that enable companies to calculate scope 3 emissions and, through support for transparency in multinational supply chains, worldwide suppliers in such supply chains can benefit from decarbonization programmes.²⁶

2. Regulators

34. Establishing digital infrastructure and reporting platforms presents regulators with challenges, necessitating substantial time, resources and technical expertise. Developing a user-friendly interface, implementing data validation checks and seamlessly integrating with existing regulatory systems are complex tasks that regulators must navigate. In developing a digital reporting platform, regulators may consider collaborating with technology and data partners or engaging external consultants, to help design and develop a platform. Thorough testing and user feedback are essential, to refine platform functionality and usability before deployment. In addition, regulators need to ensure that staff are adequately trained in using the platform, understanding reporting standards and interpreting digital data submissions. Limited internal capacity and competing priorities may hinder staff training initiatives. To overcome this hurdle, regulators may consider developing comprehensive training programmes tailored to different user roles in the regulatory agency. In addition, providing ongoing support and resources to staff, such as through manuals, help desks and peer learning opportunities, can enhance proficiency in digital reporting processes. Maintaining data confidentiality and security is a critical aspect of a digital reporting platform. Therefore, regulators may need to consider establishing strong measures for data protection, encryption protocols and access controls, to prevent unauthorized access and data breaches in a fair and impartial manner. Finally, implementing industry-standard cybersecurity protocols, such as encryption, firewalls and intrusion detection systems, is necessary to ensure the safety of sensitive information.

3. Information aggregators, distributors and other actors

35. There is a market need for investment-grade financial and sustainability data for investment and capital allocation purposes. An ecosystem exists of information distributors that collate company financial and sustainability information and streamline, normalize and distribute it through paid services. These include exchanges and market data providers such as Bloomberg and the London Stock Exchange Group. In addition to data-scraping, companies use human resources to review and standardize information. Data quality and integration challenges can be significant, and information gaps and slowdowns often exist in terms of delivering fundamental data about enterprises in emerging and frontier markets.

²⁶ See <https://www.esgtoday.com/cbre-signs-deal-to-collect-emissions-data-from-supply-chain/>.

4. Data quality and integration

36. The integration of financial and sustainability data from various sources can be a challenge, particularly when dealing with diverse formats, systems and data quality concerns. Ensuring consistency and comparability in reporting may pose difficulties if reporting entities do not apply standardized data definitions, taxonomies and reporting frameworks tailored for digital and/or integrated reporting. Upfront mapping may be an additional step in an already complex external reporting function but the use of standardized reporting frameworks and taxonomies promotes the consistent and comparable reporting of integrated information. Regulatory enforcement, quality assurance and independent reviews or audits may still be needed with digital reporting, since the reliability and consistency of raw data can be an ongoing concern. Employing cloud-based reporting solutions provides scalability, flexibility and cost-effectiveness, enabling access to advanced reporting functionalities without substantial upfront infrastructure investment. Setting up robust data governance and security protocols, encompassing encryption, access controls and regular audits, can help mitigate data security risks and ensure compliance with privacy regulations. Transitioning from traditional reporting practices to digitalized processes may also necessitate cultural and organizational shifts, entailing training, stakeholder engagement and the garnering of support from internal and external stakeholders. Talent realignment may need to be considered in relation to the increasing role of data management. Collaborating with industry partners and technology providers is helpful in navigating digitalization complexities and staying informed about best practices and emerging solutions.

37. By addressing such practical implementation challenges, both reporting entities and regulators can overcome barriers to adopting digital reporting systems and reap the benefits of enhanced efficiency, transparency and data-driven decision-making. Digital disclosures can help support the visibility of reporting entities and ultimately enhance investment flows to companies that seek capital to both grow and deal with transition risks.

D. Implementation experiences and considerations in policymaking

38. Many jurisdictions worldwide, including developing economies, have or are in the process of implementing digital reporting systems for capital market and for prudential regulation purposes.²⁷ For example, a study indicates that among developing economies, Brazil, Chile, China, Colombia, India, Indonesia, Kuwait, Mauritius, Mexico, Peru, Qatar, the Russian Federation, Saudi Arabia, Türkiye, the United Arab Emirates and Uruguay have implemented XBRL-based reporting. In economies that have implemented digital reporting, regular monitoring, evaluation and feedback mechanisms are critical in identifying and addressing implementation challenges. Phased implementation and gradual transition periods are also important, to enable reporting entities and regulators to adapt to new digital reporting requirements. Examples are provided in this section.

39. In Malaysia, the Companies Commission has developed an automated online business reporting and submission system that is XBRL compliant, aimed at streamlining the preparation and submission of annual returns and financial statements, transitioning from manual processes to the automated system. Issues faced by early adopters, particularly small and medium-sized enterprises, involved limited accounting tools and software, limited resource capabilities, the readiness of enterprises and XBRL data quality assurance. Facilitating progress requires integrating accounting software with the XBRL taxonomy; providing incentives to encourage submissions through the system; inclusive training for enterprises; and a greater focus on XBRL data quality assurance.²⁸

40. In Mauritius, the Corporate and Business Registration Department has been using XBRL since 2016, to collect annual financial statements from registered businesses.

²⁷ Borgi H and Tawiah V, 2022, Determinants of extensible business reporting language adoption: An institutional perspective, *International Journal of Accounting and Information Management*, 30(3):352–371.

²⁸ See <https://www.at-mia.my/2021/08/23/xbrl-adoption-in-malaysia-a-way-forward-for-smpls/>.

The Department has partnered with Mauritius Network Services, which administers a template-based instance document generator for use by filers. Once the data has been validated, the system generates a file ready to be uploaded to the Department. The data are also validated when filed with the Department and companies can therefore generate their own XBRL files for submission. The Department has been engaging with stakeholders; experience has shown that doing so is critical in successful implementation. This is the second XBRL initiative in Mauritius; in 2014, the Central Bank began to automate the data collection, management and processing system.²⁹

41. Countries in Latin America, including Colombia, Chile, Mexico, Panama and Peru, have leveraged XBRL in advancing on the implementation of International Financial Reporting Standards in their jurisdictions. For example, in Peru, the Superintendence of Securities Market has been requiring regulated entities to submit reports using XBRL since 2012 and, in 2016, over 1,000 XBRL files were submitted to the regulatory authority.³⁰

42. Capacity-building in developing countries is particularly important in enhancing the competencies and proficiency of organizations, regulators and professionals, and provides opportunities to learn about best practices, tools and technologies. In this context, the regional partnerships launched with the support of UNCTAD in Africa, Asia and Latin America could have a facilitating role in identifying and sharing good practices in digital sustainability reporting. For example, task forces could be formed to identify general and sector-specific good practices. The provision of training programmes, technical support and educational resources, to facilitate the adoption and integration of best practices, may be courses of action for policymakers to consider.

43. Governments have a critical role in establishing foundational infrastructure, including digital infrastructure such as broadband connectivity, data centres and information and communications technology facilities. Access to dependable and affordable digital infrastructure is essential in effectively utilizing digital tools for reporting and decision-making purposes. In addition, Governments can facilitate multi-stakeholder dialogue and collaboration, to advance integrated reporting and digitalization efforts. This entails engaging with businesses, civil society organizations, development partners and other stakeholders, to heighten awareness, exchange knowledge and cultivate partnerships conducive to sustainable development.

44. Development partners can extend financial assistance to organizations operating in developing countries, to embrace digital tools and integrate reporting practices. Such support may encompass funding earmarked for capacity-building, technology investment and project execution. Technical support and expertise to bolster organizations in developing countries as they embark on the journey towards integrated reporting and digitalization may be considered. Such assistance could encompass the provision of advisory services, consultancy aid and knowledge dissemination about best practices, standards and digital platforms. In addition, development partners could serve as facilitators in knowledge-sharing and networking opportunities aimed at equipping organizations in developing countries with insights and experiences garnered globally. Such initiatives may entail organizing workshops, conferences and peer-learning platforms dedicated to integrated reporting and digitalization.

IV. Conclusion and issues for further discussion

45. International efforts are focusing on creating global sustainability reporting standards and taxonomies, to improve the consistency and comparability of sustainability-related financial disclosures and facilitate better assessments of climate-related economic implications. Digitalization is the next critical step in advancing integrated reporting. Digitalization enables reporting entities and regulators to identify, assess and manage risks and opportunities more effectively, thereby improving regulatory compliance and operational resilience.

²⁹ See <https://www.xbrl.org/news/mauritius-launches-xbrl-data-collection/>.

³⁰ See <https://www.xbrl.org/news/south-american-xbrl-update/>.

46. The opportunity to adopt a digital taxonomy alongside corresponding sustainability reporting standards, such as those of the International Sustainability Standards Board, has the potential to offer significant benefits with regard to enhancing transparency and accountability in capital markets. Capital can be allocated more efficiently, to help achieve the Sustainable Development Goals and transition to a net-zero economy. Digital platforms can provide significant benefits, such as real-time data collection, analysis and dissemination. This can aid policymakers in making informed decisions by allowing for comparisons of data across different sectors and regions. Such an approach could facilitate long-term policy development, to address sustainability challenges and opportunities.

47. Disclosures on the sustainability performance of enterprises are becoming increasingly important to investors, financial institutions and supply chains. By integrating digitalized sustainability reporting, large enterprises and small and medium-sized enterprises in developing countries may be in a more favourable position to transition towards integrated reporting and to attract investment flows that target enterprises that are engaged in sustainable production practices.

48. Many jurisdictions globally are adopting or planning to adopt global sustainability reporting requirements, which will mandate or encourage more rigorous climate-related disclosures and standardize reporting across different regions and sectors. Despite the advancements, there are practical challenges in digital reporting, such as the costs of digital tools, the need for staff training and the need to adapt reporting entities and regulators to new systems. These challenges necessitate phased implementations, stakeholder engagement and capacity-building, to ensure the successful integration and utilization of digital tagging and digital reporting platforms.

49. In addition to the issues presented in this note, delegates at the forty-first session of the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting may wish to consider the following questions:

(a) Regulatory considerations:

- What existing regulations or frameworks are in place that can be adapted to include digital sustainability reporting?
- Should current corporate reporting regulations be revised to facilitate the implementation of digital sustainability reporting requirements?
- What new strategies and regulations or policies need to be developed to support the adoption of digital sustainability reporting?
- What are the potential costs and benefits of mandating digital sustainability reporting for businesses in developing countries?
- What legal frameworks are necessary to enforce compliance with digital sustainability reporting requirements?
- How can digital sustainability reporting be integrated into broader regional and national sustainability and development strategies?
- How can digital reporting platforms or mechanisms facilitate the measurement of progress in the achievement of the Sustainable Development Goals and reporting on indicators, such as indicator 12.6.1 (number of companies preparing sustainability reports)?

(b) Support for digitalized reporting:

- How can Governments support businesses, particularly small and medium-sized enterprises, in the process of digitalization?
- How can awareness be raised about the importance and benefits of digital sustainability reporting among businesses and the general public?
- What support mechanisms can be provided to help businesses transition to digital sustainability reporting?
- What does the road map of transitioning to digital reporting entail?

- How can development partners support developing countries in developing a transition strategy, including priorities, sequences, partnerships and resources?
 - How can South–South exchanges of experiences be promoted to facilitate the transition to digital sustainability reporting?
 - How can public–private partnerships be leveraged to facilitate the implementation of digital sustainability reporting systems?
 - What level of technological infrastructure is required to support digital sustainability reporting?
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