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ECONOMIC SOCIAL RESPONSIBILITY DISCLOSURE AND WASTE RECYCLING OF LISTED INDUSTRIAL GOODS FIRMS IN NIGERIA

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ABSTRACT

This study ascertained the effect of economic social responsibility disclosure and waste recycling of listed industrial goods firms in Nigeria. Thirteen (13) listed industrial goods firms constituted the sample size of this study between 2011 and 2024. Ex-Post facto research design and content analysis were adopted while secondary data were extracted from the annual reports and accounts of the sampled firms and were analysed using E-Views 10.0 statistical software. The study employed inferential statistics using Pearson correlation and Binary Probit regression analysis. The hypothesis was formulated and statistically tested at 5 per cent level of significance using regression analysis. Findings from the empirical analysis showed that economic social responsibility disclosure has a significant and positive effect on waste recycling (β_1 = 0.012671; p-value = 0.0000<0.05). The study concludes that the components of economic social responsibility disclosure considered in this study is an important variable in influencing waste recycling of listed industrial goods firms in Nigeria. It was recommended that firms should get more involved in economic social responsibility activities, since cost on economic social responsibility is more committed in improving organizational performance

Key words: *Economic Social Responsibility, Performance, Social responsibility, Waste Recycling.*

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INTRODUCTION

Corporate social responsibility is a growing issue in the business world along with increasing awareness that social responsibility is an integral part of business practice. Social responsibility (SR) has to do with certain factors namely: employees, ethics, natural environment, and society, to form and compose an important part of the company`s responsible behavior, which can change the company reputation to a better level (Sylvanus, Okoye, Amahalu & Mbonu, 2024). Additionally, it can improve the confidence of investors, customers, shareholder, and stakeholder as a whole, and it can increase the employee's ability to work and spend more effortand dedication (Aruna, Orji-Okafor & Amahalu, 2024). In

recent days, corporations have started disclosing their economic, environment, employee's relation, community involvement, product, and other CSR related information in annual reports. Companies that are active in carrying out and reporting on their social responsibility activities experience sales growth and increases in stock prices and company value because the company is considered to be concerned with its social responsibility. These conditions motivate companies to compete actively to carry out and report on their social responsibility activities because they will increase company value in the eyes of stakeholders. The problem arises when companies that actively engage in social responsibility are also involved in financial scandals, such as Enron and Xerox which, before their financial scandal was revealed, were known as active companies and had received awards in the field of social responsibility. The same paradox also occurs in developing countries such as in Indonesia, with PT. Asian Agri and PT. Kaltim Prima Coal which are active and were extended awards in disclosing social responsibility, but were involved in tax evasion scandals. The paradox shows that companies that actively carry out social responsibility disclosures are not necessarily companies that carry out ethical responsibilities in their business practices.
Managers can use social responsibility activities as a tool to cover corporate financial fraud (Enudi, Ekwueme, Amahalu, 2024). The existence of companies that actively carry out social responsibility and at the same time carry out financial manipulation shows that motivation to do and report social responsibility activities is not always based on ethical considerations. The values contained in corporate social responsibility do not necessarily become ethical values that are integrated in the company, but can be an opportunistic behavior of managers to obtain personal benefits.

It is against this backdrop, that this study sought to ascertain the effect of economic social responsibility disclosure on waste recycling of listed industrial goods firms in Nigeria

LITERATURE REVIEW

Social Responsibility Disclosure

Corporate social responsibility (CSR) disclosure is the information provided by corporations in association to their policies, aspirations, and activities toward community, customers, environment, and employees (Amahalu, Aruna & Orji-Okafor, 2024). CSR disclosure is the process of communicating the social and environmental impacts of the economic activities of the company on society, that means that a company that has good environmental and social performances will get positive responses from the investors through the increasing stock price (Agweda, Okoye, Amahalu & Egolum, 2024). Ndu, Ifurueze and Amahalu (2024) posit that

corporate social responsibility (CSR) reporting/disclosure refers to a company's systematic disclosure of information on its social performance. The term social performance refers to social, environmental, and governance issues that are typically not covered by financial performance metrics. Corporate social responsibility disclosure is very important to company's stakeholder because the disclosure shows what the company plan to do and have done for the welfare of the society (Agweda, Okoye, Amahalu, Egolum & Obi, 2024).

Economic Social Responsibility Disclosure

Economic social responsibility refers to the practice of making financial decisions based on a commitment to doing good. Some common examples of economic responsibility include investing in alternative energy sources, putting more money into education programs and funding local charities as a way of bolstering their mission (Amahalu, Ezechukwu & Obi, 2017; Amahalu, Okoye & Obi, 2018). Economic social responsibility is the practice of a firm backing all of its financial decisions in its commitment to do good. The end goal is not just to maximize profits, but also to make sure the business operations positively impact the environment, people, and society (Egolum, Amahalu & Obi, 2019). Economic responsibility is also the expectation that business profits are a resultant of positive economic performance in the form of goods and services for consumers, and jobs and compensation for employees. The economic model of social responsibility focuses only on how the business can introduce or initiate the production of profitable products that society requires for its benefit. It also emphasizes on the manufacturing of products which are also called profitable goods for society (Ezeokafor and Amahalu, 2019). Some examples of economic responsibility include investing in local communities by contributing to economic development initiatives, supporting small and local businesses by sourcing products and services locally, donating to charitable organizations (Ndubuisi & Okudo, 2023)

Waste Recycling

Wastes are unwanted or unusable materials that are any substance which is discarded after primary use, or is worthless, defective and of no use. These are everything that no longer has a use or purpose and needs to be disposed of. A waste product may become a by-product, joint product or resource through an invention that raises a waste product's value above zero (Nzekwe, Okoye & Amahalu, 2021). Recycling are the collection of waste materials, their processing or manufacture into new products, and the purchase of those products, which may then themselves be recycled that means recycling is the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products

hereby helping to protect the environment, reduce the need for extracting, refining and processing raw materials all of which create substantial air, reduce greenhouse gas emissions, which helps to tackle climate change and water pollution (Amahalu, Ezechukwu & Obi, 2017; Ezeokafor & Amahalu, 2019).

Waste recycling is defined as any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes (Oshiole, Elamah, & Amahalu, 2020). Waste recycling, recovery and reprocessing are the collection of waste materials, their processing or manufacture into new products, and the purchase of those products, which may then themselves be recycled (Okudo & Ndubuisi, 2021; Ekweozor, Ogbodo & Amahalu, 2022).

Ho_1: Economic social responsibility disclosure has significant effect on waste recycling of listed industrial goods firms in Nigeria.

Economic Social Responsibility Disclosure and Sustainability Development

Survival and continuity are important objectives every organization strives to accomplish. The accomplishment of these two key objectives centers on how well organizations adapt to their host environment. The adaption of organizations to their environment exemplifies a symbiotic relationship between both parties, in which the benefits flows from and to each other (Okafor, Egbunike & Amahalu, 2022; Amahalu & Okudo, 2023). It is expected of organizations to intervene in any crises prevailing in their host communities. Environmental crisis poses great threat consciously and unconsciously to the performance of organizations (Amahalu & Moedu, 2023). Environmental crisis such as global warming, poor health care services, poverty, water deficit, food insecurity, population explosion, technological advancement, loss of biodiversity, air pollution, extreme weather conditions, noise and disrespect for the protection of immediate and future environment results in decline in the quality and quantity of environmental resources, which consequently translates to social and economic instability (Udo, Oraka & Amahalu, 2022). A large number of research studies have been conducted in the context of sustainability reporting and its impact on financial performance and divergent views were upheld. For example, Modozie & Amahalu (2022) reported a negative relationship between economic reporting and financial performance. On the other hand, Amahalu, Okoye, Obi, (2018); Mbonu and Amahalu (2023) found a positive relationship between economic reporting and financial performance, while Mbonu and

Amahalu (2022); Amahalu and Okudo, (2023) documented a negative relationship between economic reporting and financial performance.

Theoretical Framework

Stakeholders Theory

Stakeholder theory was first described by Dr. F. Edward Freeman, a professor at the University of Virginia, in his landmark book, "Strategic Management: A Stakeholder Approach." In 1984. It suggests that shareholders are merely one of many stakeholders in a company. The stakeholder ecosystem, this theory says, involves anyone invested and involved in, or affected by, the company: employees, environmentalists near the company's plants, vendors, governmental agencies, and more. Freeman's theory suggests that a company's real success lies in satisfying all its stakeholders, not just those who might profit from its stock. Stakeholder Theory is a view of capitalism that stresses the interconnected relationships between a business and its customers, suppliers, employees, investors, communities and others who have a stake in the organization. The theory argues that a firm should create value for all stakeholders, not just shareholders.

Empirical Review

Mohd, Mohd, Yee, Mohd, Majid and Jambol. (2025) assessed the effect of environmental disclosure on financial performance. Sample of 428 public listed firms in Bursa Malaysia in year 2016 were used in the study. All data were collected from annual report and Osiris databased. The regression statistical evidenced to conclude environmental disclosure has non-significant relationship with financial performance in term of economic value added (EVA), market value added (MVA), return on equity (ROE) and return on assets (ROA).

Yahaya (2025) examined the relationship between institutional ownership and environmental reporting, aimed to explore how the presence of institutional investors influences the quality and extent of ecological disclosures by publicly traded companies in Nigeria. Using a quantitative research approach, the study analyzed panel data from 152 publicly listed firms across ten years (2014-2023), employing a random effects model (REM) regression to assess the impact of institutional ownership on environmental reporting scores derived from content analysis of annual and sustainability reports. The findings revealed a positive and statistically significant association, indicating that higher levels of institutional ownership are linked to more comprehensive environmental reporting.

Umar and Dahiru (2025) investigated the effect of sustainability reporting on the share price of listed oil and gas firms in Nigeria. The purpose of this study is to explore the effect of economic, environmental and social performance disclosure on the market share value of Nigeria's listed oil and gas companies using an ex post facto research design. The sample population of twelve (12) oil and gas firms listed on the floor of the Nigeria's stock exchange was selected using the purposive sampling method. Data were collected from an audited annual financial statement of sampled firms. The period of the study was nine (9) years (2012–2020). The hypotheses were tested using a linear multiple regression analysis technique. The study found that disclosures on economic performance, environmental performance, and social performance have a significant and positive effect on the market share price of listed Nigeria's oil and gas firms.

MATERIAL AND METHODS

The research design that was employed in this study is *ex-post facto* research design. The population and sample size of this study consist of all the thirteen (13) industrial goods firms listed on the floor of the Nigerian Exchange (NGX) Group as at 31st December, 2024. They are Austin Laz & Company Plc; Berger Paints Plc; Beta Glass Plc; Bua Cement Plc; CAP Plc; Dangote Cement Plc; Cutix Plc; Greif Nigeria Plc; Lafarge Africa Plc; Meyer Plc; Notore Chemical Ind Plc; Premier Paints Plc; and Tripple Gee and Co Plc. Primarily, this study relied on secondary data which were sourced from the annual reports and statements of account, stand alone reports of the sample listed industrial goods firms.

Table 1: Variable Measurement

Variable	**Acronym**	**Measurement**
Independent Variable		
Economic Social Responsibility Disclosure	ECSRD	Total Economic Social Responsibility Disclosure Index / Maximum Social Responsibility Disclosure Index of a firm
Dependent Variable		
Waste Recycling	WR	Assign 0 = if the item is not disclosure Assign 1= if the item is disclosure

This stud adapted the model of Ekweozor, Ogbodo and Amahalu (2022) model:

NPM = $\beta_0 + \beta_1 ETHSR_{it} + \mu_{it}$……Eqn 1.

Where:

NPM = Net Profit Margin

ETHSR = Ethical Social Responsibility

Following the adapted model, the following model was constructed:

WR = $\beta_0 + \beta_1 ECSRD_{it} + \mu_{it}$ ……Eqn 2.

Where:

β_0 = constant term

$\beta_1 - \beta_3$ = slopes to be estimated of firm *i* in period *t*.

$\mu_{i,t}$= error term of firm *i* in period *t*

WR_{it} = Waste Recycling of firm í in period t

$ECSRD_{it}$ = Economic Social Responsibility Disclosure of firm í in period t

í = individual firms (1,2,3...13)

t = time periods (2011, 2012 ... 2024)

Content analysis was also used to code the data quantitatively such as counting the number of words, using a CSR activities checklist to measure CSR index. The CSR disclosure index (CSRDI) will be used to measure CSR activities, and this index is developed based on Global Reporting Initiatives (GRI) G4 framework. GRI index is most widely used around the world in determining the activities of CSR in various dimensions. This research used content analysis method in order to identify whether firm has disclosed its CSR activities under each GRI G4 category. GRI G4 framework includes six main dimensions which are: economic performance with 9 items, environmental performance with 30 items, human rights performance with 9 items, employees practices performance with 14 items, product performance with 9 items, and society performance with 8 items (GRI guidelines, 2021). In total, there are 79 items reported under GRI are provided in Appendix A.

Accordingly, the CSR disclosure index (CSRDI) is calculated as follows:

CSRDI =TDP/MP

Where;

CSRDI = Corporate Social Responsibility Disclosure Index

TDP = Total Disclosure Points of a Firm

MP = Maximum Points for a Firm

RESULT AND DISCUSSIONS

Test of Hypothesis

H_o: Economic social responsibility disclosure has no significant effect on waste recycling of listed industrial goods firms in Nigeria.

H_1: Economic social responsibility disclosure has significant effect on waste recycling of listed industrial goods firms in Nigeria.

Table 2 Binary Probit Regression Analysis between Economic Social Responsibility Disclosure and Waste Recycling

Dependent Variable: WR

Method: ML - Binary Probit (Newton-Raphson / Marquardt steps)

Date: 05/06/25 Time: 03:42

Sample: 2011 2024

Included observations: 182

Convergence achieved after 3 iterations

Coefficient covariance computed using observed Hessian

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.636457	0.148110	4.297189	0.0000
ECSRD	0.012671	0.002423	5.228423	0.0000

McFadden R-squared	0.311139	Mean dependent var	0.785714
S.D. dependent var	0.411458	S.E. of regression	0.411454
Akaike info criterion	1.049563	Sum squared resid	30.47298
Schwarz criterion	1.084772	Log likelihood	-93.51021
Hannan-Quinn criter.	1.063836	Deviance	187.0204
Restr. deviance	189.1271	Restr. log likelihood	-94.56353
LR statistic	27.33641	Avg. log likelihood	-0.513792
Prob(LR statistic)	0.000000		

Obs with Dep=0	39	Total obs	182
Obs with Dep=1	143		

Source: E-Views 10.0, Regression Output 2025

From the analysed regression result in table 2; the regression equation signifies that:

WR = 0.636457 + 0.012671ECSRD + μ

Using the coefficient of variation from the model presented table 2, it is observed that ECSRD (β_1) is positive at 0.012671; when all other variables are held constant. Consequently, a unit change in ECSRD will lead to a positive change of about 1.27%, increase in WR provided all other variables are held constant. From the McFadden R-squared of 0.311139, the regression co-efficient indicates that about 31.11% of the changes in the dependent variable (WR) is explained by the changes in the independent variable (ECSRD). The tool of LR statistic helps in determining the overall joint significant of the explanatory (independent) variable on the dependent or explained variable. At 5% level of significance, the probability of LR statistic = 0.000000 is less than the critical p-value at 0.05.

Decision

The null hypothesis is rejected since the Prob(LR statistic) at 0.000000 is less than the critical value of 5% (0.05). This implies that economic social responsibility disclosure has an effect on waste recycling of listed industrial goods firms in Nigeria at 5% level of significance.

CONCLUSION AND RECOMMENDATIONS

Firms should get more involved in economic social responsibility activities, since cost on economic social responsibility is more committed in improving organizational performance

REFERENCES

Agweda, F.E., Okoye, E.I., Amahalu, N.N. & Egolum, P.U. (2024). Effluent disclosure and market value added of listed industrial goods firms in Nigeria, *Journal of Global Accounting*, 10(3), 444 - 453.

Agweda, F.E., Okoye, E.I., Amahalu, N.N., Egolum, P.U. & Obi, J.C. (2024). Environmental disclosure and market value added of listed industrial goods firms in Nigeria, *Journal of Global Accounting*, 10(4), 69 – 84

Amahalu, N.N., & Moedu, V.O. (2023). Triple bottom line reporting and financial performance of quoted oil and gas firms in Nigeria. *International Journal of Research Publication and Reviews*, *4*(4), 1172-1180.

Amahalu, N.N., & Okudo, C.C. (2023). Environmental cost disclosure and productivity of quoted oil and gas firms in Nigeria. *International Journal of Multidisciplinary Research and Growth Evaluation*, *4*(3), 684-690.

Amahalu, N.N., & Okudo, C.L. (2023). Effect of corporate social responsibility on financial performance of quoted oil and gas firms in Nigeria. *Research Journal of Management Practice*, *3*(3), 25-38.

Amahalu, N.N., Aruna, F.E. & Orji-Okafor, T.G. (2024). Debt financing and environmental research and development disclosure of listed Oil and Gas firms in Nigeria, *Journal of Global Accounting*, 10(1), 144 – 155

Amahalu, N.N., Ezechukwu, B. O., & Obi, J.C. (2017).Corporate social responsibility and financial performance of quoted deposit money banks in Nigeria. *Asian Journal of Science and Technology, 08*(12), 7183-7191.

Amahalu, N.N., Ezechukwu, B. O., & Obi, J.C. (2017).Corporate social responsibility and financial performance of quoted deposit money banks in Nigeria. *Asian Journal of Science and Technology, 08*(12), 7183-7191.

Amahalu, N.N., Okoye, P.V., & Obi, J.C. (2018). Effect of sustainability reporting on economic value added of quoted brewery firms in Nigeria. *Journal of Accounting, 7*(1), 1-20

Aruna, F.E., Orji-Okafor, T.G. & Amahalu, N.N. (2024). Debt financing and environmental sustainability disclosure of listed Oil and Gas firms in Nigeria, *Journal of Global Accounting*, 10(2), 1 - 15.

Egolum, P.U., Amahalu, N.N., & Obi, J.C. (2019). Effect of firm characteristics on environmental performance of quoted industrial goods firms in Nigeria. *International Journal of Research in Business, Economics and Management 3*(6), 1-13

Ekweozor, M.A., Ogbodo, O.C., & Amahalu, N.N. (2022). Effect of corporate social responsibility on financial performance of listed oil and gas firms in Nigeria. *International Journal of Trend in Scientific Research and Development (IJTSRD)6* (2), .282-289.

Enudi, C.P., Ekwueme, C.M., Amahalu, N.N. (2024). Environmental disclosure and productivity of listed oil and gas firms in Nigeria.*International Journal of Research Publication and Reviews, 5*(1), 1955-1962.

Ezeokafor, F.C. and Amahalu, N.N. (2019). Effect of sustainability reporting on corporate performance of quoted oil and gas firms in Nigeria. *Journal of Global Accounting, 6*, 1-21.

Ezeokafor, F.C., & Amahalu, N.N. (2019). Effect of sustainability reporting on corporate performance of quoted oil and gas firms in Nigeria. *Journal of Global Accounting, 6*, 1-21.

Mbonu, C.M. & Amahalu, N.N. (2022). Effect of corporate social responsibility costs on financial performance of listed deposit money banks in Nigeria. *Journal of Global Accounting, 8*(1), 40 – 52.

Mbonu, C.M., & Amahalu, N.N. (2023). Strategic management and environmental disclosure of listed consumer goods companies in Nigeria. *International Journal of Research Publication and Reviews, 4*(6), 2658-2668.

Modozie, E.C., & Amahalu, N.N. (2022). Effect of board structure on sustainability reporting of listed industrial goods firms in Nigeria. *International Journal of Management Studies and Social Science Research, 4*(1), 204-215

Mohd, W., Mohd, R., Yee, .G.Y., Mohd, F.B., Majid, R.A., & Jambol, J.A. (2025). The effect of environmental disclosure practices on firm performance of Malaysian listed firms. *Pakistan Journal of Life and Social Science, 23*(1), 1047-1070.

Ndu, B.C., Ifurueze, M.S. & Amahalu, N.N. (2024). Firm attributes and cash holdings of listed pharmaceutical firms in Nigeria, *Journal of Global Accounting*, 10(3), 273 - 304.

Ndubuisi, N.A., & Okudo, C.C. (2023). Environmental cost disclosure and productivity of quoted oil and gas firms in Nigeria. *International Journal of Multidisciplinary Research and Growth Evaluation, 4*(3), 684-690.

Nzekwe, O.G., Okoye, P.V.C., & Amahalu, N.N. (2021). Effect of sustainability reporting on financial performance of quoted industrial goods companies in Nigeria. *International Journal of Management Studies and Social Science Research, 3*(5), 265-280

Okafor, O.O., Egbunike, P.A., & Amahalu, N.N. (2022). Determinants of environmental disclosure of quoted oil and gas firms in Nigeria. *International Journal of Management Studies and Social Science Research, 4*(1), 77-88.

Okudo, A.G., & Ndubuisi, N.A. (2021). Corporate governance and carbon disclosure practices of quoted manufacturing firms in Nigeria. *International Journal of Contemporary Research and Review, 12* (07), 20420-20433.

Oshiole, S., Elamah, A.F., & Amahalu, N.N. (2020). Effect of environmental cost disclosure on profitability of listed oil and gas firms in Nigeria. *International Journal of Academic Research in Accounting, Finance and Management Sciences 10*(2), 157-170.

Oshiole, S., Elamah, A.F., & Amahalu, N.N. (2020). Effect of environmental cost disclosure on profitability of listed oil and gas firms in Nigeria. *International Journal of Academic Research in Accounting, Finance and Management Sciences 10*(2), 157-170.

Sylvanus, A.N., Okoye, P.V.C., Amahalu, N.N. & Mbonu, C. (2024). Intellectual capital and financial performance of manufacturing firms in Nigeria, *Journal of Global Accounting*, 10(2), 480 - 497.

Udo, C.U., Oraka, A.O., & Amahalu, N.N. (2022). Female directors and corporate sustainability of quoted conglomerates in Nigeria. *International Journal of Management Studies and Social Science Research, 4*(1), 131 – 143.

Umar, S., & Dahiru, M.T. (2025). Impact of sustainability reporting on share price of listed oil and gas firms in Nigeria. Universal Journal of Accounting and Finance, 13(2), 61 – 68.

Yahya, M. (2021). The impact of corporate social responsibility disclosure (CSRD) on the financial performance. *Journal of Business Ethics, 127*(3), 565-577.

Appendix

Indicator Protocol Corporate Social Disclosure Based on Global Reporting Initiative Standard version 4.0

Economic Performance Indicators
Aspect: Economic Performance
EC1: Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments
EC2: Financial implications and other risks and opportunities for the organization's activities due to climate change.
EC3: Coverage of the organization's defined benefit plan obligations.
EC4: Significant financial assistance received from government. Aspect: Market Presence
EC5: Range of ratios of standard entry level wage compared to local minimum wage
EC6: Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.
EC7: Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.
Aspect: Indirect Economic Impacts
EC8: Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.
EC9: Understanding and describing significant indirect economic impacts, including the extent of impacts.
Environment Performance Indicators
Aspect: Materials
EN1: Materials used by weight or volume
EN2: Percentage of materials used that are recycled input materials.
Aspect: Energy
EN3: Direct energy consumption by primary energy source.
EN4: Indirect energy consumption by primary source.
EN5: Energy saved due to conservation and efficiency improvements.
EN6: Initiatives to provide energy-efficient or renewable energy-based products and services, and reductions in energy requirements as a result of these initiatives
EN7: Initiatives to reduce indirect energy consumption and reductions achieved.
Aspect: Water
EN8: Total water withdrawal by source

EN9: Water sources significantly affected by withdrawal of water
EN10: Percentage and total volume of water recycled and reused. Aspect: Biodiversity
EN11: Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.
EN12: Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.
EN13: Habitats protected or restored
EN14: Strategies, current actions, and future plans for managing impacts on biodiversity.
EN15: Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.
Aspect: Emissions, Effluents, and Waste
EN16: Total direct and indirect greenhouse gas emissions by weight.
EN17: Other relevant indirect greenhouse gas emissions by weight.
EN18: Initiatives to reduce greenhouse gas emissions and reductions achieved.
EN19: Emissions of ozone-depleting substances by weight.
EN20: NOx, SOx, and other significant air emissions by type and weight.
EN21: Total water discharge
EN22: Total weight of waste by type and disposal method.
EN23: Total number and volume of significant spills
EN24: Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.
EN25: Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff
Aspect: Products and Services
EN26: Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.
EN27: Percentage of products sold and their packaging materials that are reclaimed by category.
EN28: Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations.
Aspect: Transport
EN29: Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.

Aspect: Overall
EN30: Total environmental protection expenditures and investments by type.
Human Rights Performance Indicators
Aspect: Investment and Procurement Practices
HR1: Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.
HR2: Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.
HR3: Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.
Aspect: Non – discrimination
HR4: Total number of incidents of discrimination and actions taken.
Aspect: Freedom of Association and Collective Bargaining
HR5: Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights
Aspect: Child Labor
HR6: Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor.
Aspect: Forced and Compulsory Labor
HR7: Operations identified as having significant risk for incidents of forced or compulsory labor, and measures taken to contribute to the elimination of forced or compulsory labor.
Aspect: Security Practices
HR8: Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.
Aspect: Indigenous Rights
HR9: Total number of incidents of violations involving rights of indigenous people and actions taken.
Labor Practices and Decent Work Performance Indicators
Aspect: Employment
LA1: Total workforce by employment type, employment contract, and region.
LA2: Total number and rate of employee turnover by age group, gender, and region.
LA3: Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.
Aspect: Labor/Management Relations
LA4: Percentage of employees covered by collective bargaining agreements.

LA5 regarding significant operational changes, including: Minimum notice period(s) Whether it is specified in collective agreements.
Aspect: Occupational Health and Safety
LA6: Percentage of total workforce represented in formal joint management-worker Health and safety committees that help monitor and advice on occupational health and safety programs.
LA7: Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities by region.
LA8: Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.
LA9: Health and safety topics covered in formal agreements with trade unions.
Aspect: Training and Education
LA10: Average hours of training per year per employee by employee category.
LA10: Average hours of training per year per employee by employee category.
LA11: Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.
LA12: Percentage of employees receiving regular performance and career development reviews.
Aspect: Diversity and Equal Opportunity
LA13: Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.
LA14: Ratio of basic salary of men to women by employee category.
Product Responsibility Performance Indicators
Aspect: Customer Health and Safety
PR1: Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.
PR2: Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services, by type of outcomes.
Aspect: Product and Service Labeling
PR3: Type of product and service information required by procedures and percentage of significant products and services subject to such information requirements.
PR4: Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.

PR5: Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.
PR6: Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.
PR7: Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes.
Aspect: Customer Privacy
PR8: Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.
Aspect: Compliance
PR9: Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services
Society Performance Indicators
Aspect: Community
SO1: Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.
Aspect: Corruption
SO2: Percentage and total number of business units analyzed for risks related to corruption.
SO3: Percentage of employees trained in organization's anti-corruption policies and procedures.
SO4: Actions taken in response to incidents of corruption. Aspect: Public Policy
SO5: Public policy positions and participation in public policy development and lobbying.
SO6: Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.
Aspect: Anti-Competitive Behavior
SO7: Total number of legal actions for anticompetitive behaviour, anti-trust, and monopoly practices and their outcomes.
Aspect: Compliance
SO8: Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations.

Source: GRI G4 Sustainability Reporting Guidelines, 2025