

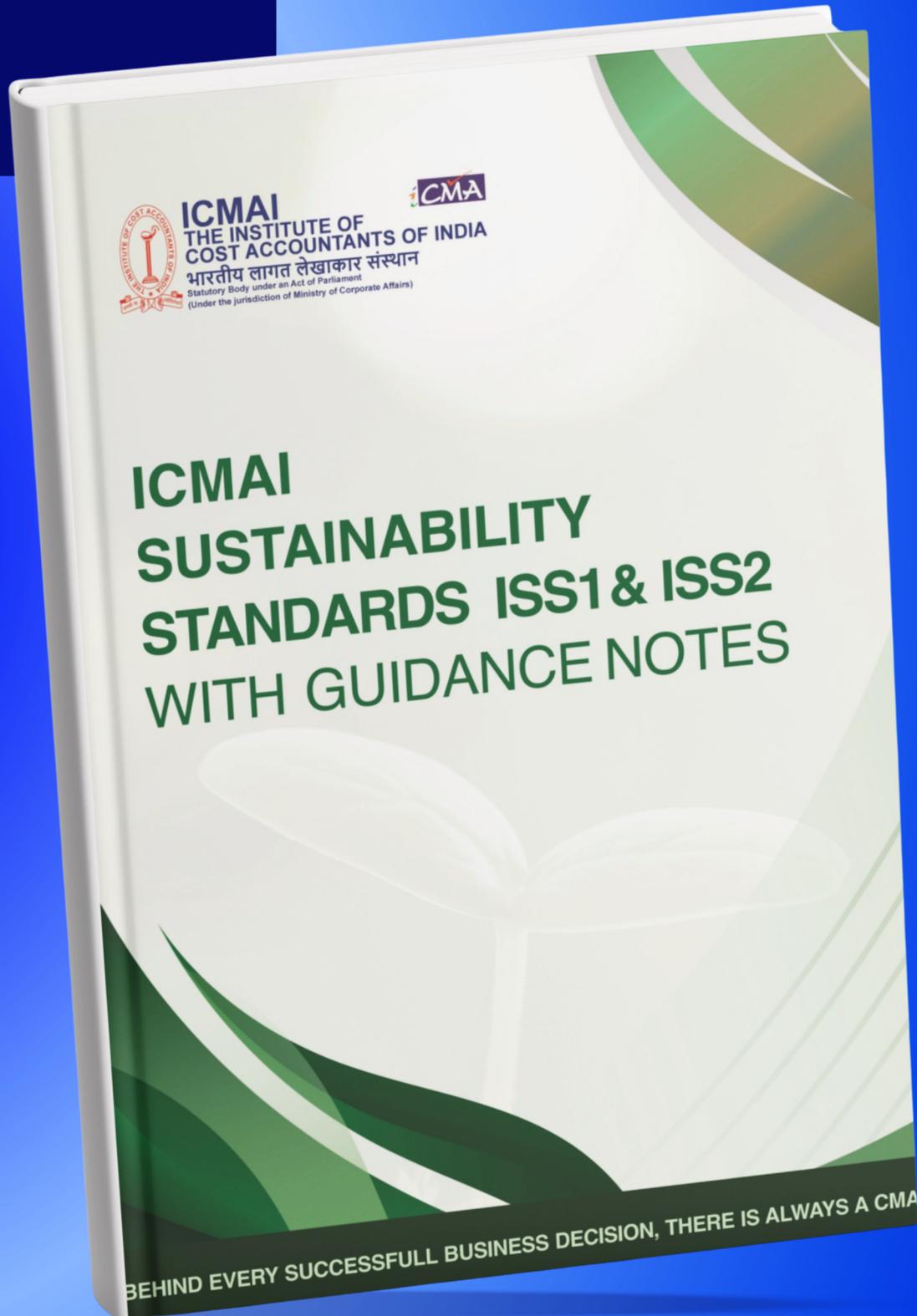


॥ सुखिनी भवन्तु ॥



SSB

Publication





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Message

from the Chairman



"A healthy ecology is the basis for a healthy economy." — Claudine Schneider

It gives me immense pleasure to connect with you through the March 2026 issue of *Sukhinobhavantu*. As we continue to navigate an increasingly complex global landscape, sustainability remains at the core of resilient growth, responsible governance, and long-term value creation. The global uncertainty and volatility have made us realize that the only panacea for all our problems is to believe that sustainability can heal and aid in our mission of resolving all differences and distances.

The month of March 2026 has been particularly significant for the Sustainability Standards Board (SSB), ICMAI, as we undertook a series of impactful initiatives aimed at strengthening awareness, capacity building, and professional engagement in the domain of sustainability.

On International Women's Day on March 8, 2026 the SSB successfully organized a special webinar titled "Nari Prabha – Her Power: Women and Work". The session brought together distinguished women CMA leaders who shared valuable insights on gender inclusivity, leadership challenges, and the critical role of women in driving sustainable organizations. The deliberations highlighted how diversity and inclusion are integral to building balanced ecosystems and fostering ethical, forward-looking enterprises.

In addition, the Board continued its efforts to promote global perspectives on sustainability through knowledge-sharing platforms and thought leadership sessions. We had a very good physical program on March 16, 2026 at NSE Auditorium on the topic of IFSC enabled Global Platform for Indian Enterprise - Direct Listing and Sustainable finance of Sustainability Standards Board, ICMAI in association with WIRC, ICMAI. Shri Pradeep Ramakrishnan, Executive Director, IFSCA was the guest of honour along with experts from NSEIX, SEBI, NSE Sustainability Ratings and Analytics Ltd and domain experts on this critical topic. We had good audience from CMAs working in Industry and from practise. We have the 6th batch of the Certificate Course on ESG started from 21st March, 2026. We also have outreach programmes at Pune, Indore and in many cities in association with Regional Councils and Chapters on our capacity building events on ICMAI ISS1 and ISS2. These engagements focused on emerging themes such as ESG integration, sustainable finance, green technologies, and evolving regulatory frameworks. Through such initiatives, SSB aims to equip professionals with the necessary competencies in sustainability standards to contribute effectively to sustainability reporting, assurance, and strategic decision-making.

Sustainability today transcends environmental considerations and encompasses social equity, economic resilience, and robust governance practices. The increasing emphasis on ESG disclosures, climate risk management, and responsible business conduct underscores the pivotal role that professionals, especially cost and management accountants, can play in guiding organizations towards sustainable transformation. We would bring out various publications on BRSR and other areas pivotal for the members to understand in this huge area of public interest.

As we move forward, the SSB remains committed to fostering a culture of sustainability by encouraging research, developing guidance frameworks, and facilitating meaningful dialogue among stakeholders. We believe that collective action, informed decision-making, and ethical leadership are essential to achieving the broader goal of "Vasudhaiva Kutumbakam" — the world as one family.

We would be soon starting the ICMAI Green Awards for the year 2024-25 and hope all organizations of repute in all categories will apply in these prestigious awards which we started since January 2026. I extend my sincere appreciation to all contributors, speakers, and participants who have supported the Board's initiatives for the fiscal year 2025-26. I also encourage our members and readers to actively engage with sustainability practices and contribute towards building a greener, more inclusive, and sustainable future.

I wish to all members, students and stakeholders on the auspicious occasions of Id-ul-Fitr, Gudi Padava, Ugadi, Cheti Chand, Ram Navami & Mahavir Jayanti hoping these occasions bring bonhomie and harmony to our lives and intertwine us with love and inspiration.

Warm regards,

CMA (Dr.) Ashish P. Thatte

Chairman

Sustainability Standards Board, ICMAI

March 25, 2026

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SUSTAINABILITY QUIZ- RAPID FIRE ROUND

This Month Cover Page Picture Courtesy

Name- Master Reyansh **Class-** Year 1 (equivalent to Senior KG) **Place-** Kingdom of Bahrain



Kalpana Chawla

A Global Inspiration for Science and Sustainability



Among the many inspiring personalities born in the month of March, one name that shines across the world is Kalpana Chawla, the first woman of Indian origin to travel into space. She was born on March 17, 1962, in Karnal, Haryana, India. From a small town in India, she rose to become a respected astronaut and scientist, inspiring millions of people around the globe.

From her childhood, Kalpana Chawla was fascinated by the sky and airplanes. She pursued engineering studies in India and later moved to the United States to specialize in aerospace engineering. Her dedication and passion for science led her to join NASA, where she became an astronaut and contributed to important scientific research.

In 1997, she made history by flying on the Space Shuttle Columbia. During the mission, she participated in several experiments related to microgravity, material science, and atmospheric research. These experiments helped scientists understand how various systems work in space and how such knowledge can benefit life on Earth.

Kalpana Chawla's work is closely connected with the idea of sustainability. Space research plays an important role in understanding our planet. Satellites and space missions help scientists monitor climate change, study weather patterns, track deforestation, and observe oceans and natural resources. The data collected from space helps humanity take better decisions to protect the Earth and use resources responsibly.

Her life also represents sustainable inspiration. She proved that determination, education, and hard work can break barriers of geography, gender, and nationality. Her journey encourages young people, especially students interested in science and technology, to work toward innovations that can help build a more sustainable and better future for the planet.

Although Kalpana Chawla tragically lost her life in the Space Shuttle Columbia disaster in 2003, her legacy continues to live on. Many institutions, scholarships, and educational programs have been established in her name to inspire future generations.

Kalpana Chawla's story reminds us that exploring space is not only about reaching new frontiers but also about understanding and protecting our own planet. Her life continues to inspire the world to pursue knowledge, innovation, and sustainability for the benefit of humanity.

Sustainability -Global Context



MONTHLY NEWS

1. South Korea moves toward mandatory ISSB-Aligned Climate Disclosures for large KOSPI firms

The Korean Financial Services Commission (FSC) has launched a consultation on a national roadmap that would introduce mandatory sustainability reporting for major listed companies, aligning the country's disclosure framework with global standards developed by the International Sustainability Standards Board

[READ MORE](#)

2. EU narrows Corporate Sustainability Due Diligence Rules after industry pressure

European Union member states have given final approval to scale back landmark corporate sustainability rules, narrowing the scope of supply chain due diligence and reporting obligations after sustained pressure from industry groups and foreign governments.

[READ MORE](#)

3. EU approves \$283 million Belgian aid for Air Liquide, BASF Carbon Capture Project

The European Commission has approved \$283 million (€260 million) in Belgian state aid to support a large-scale carbon capture and storage project designed to decarbonize heavy industry in Antwerp, one of Europe's most concentrated industrial clusters.

[READ MORE](#)

4. UK Launches Net Zero Carbon Buildings Standard to define credible climate claims across property sector

A new cross industry framework designed to define what constitutes a genuine net zero carbon building has formally launched in the UK, offering the property sector its first unified benchmark for verifying climate claims. The UK Net Zero Carbon

Buildings Standard establishes a detailed methodology for assessing both operational emissions and embodied carbon across a building's full lifecycle. The framework was developed collaboratively by major industry bodies including the UK Green Building Council (UKGBC), the Royal Institution of Chartered Surveyors (RICS), the Chartered Institution of Building Services Engineers (CIBSE), and BRE.

[READ MORE](#)

5. FAB Misr launches solar powered green schools initiative in Egypt

First Abu Dhabi Bank Misr (FABMISR) has launched the "Green Schools for a Sustainable Future" initiative, a public school sustainability pilot developed with Egypt's Ministry of Education and Technical Education and Ain El Bee'ah Association for Environmental, Agricultural Services and Sustainable Development.

[READ MORE](#)

6. EU Chief calls Europe's Nuclear Phase-Down a strategic mistake

Europe's retreat from nuclear energy over the past three decades was a "strategic mistake," European Commission President said arguing that the shift has left the region vulnerable to volatile fossil fuel markets at a time of rising geopolitical tension.

[READ MORE](#)

7. EIB commits \$1.1 billion to expand renewable power access across Sub-Saharan Africa

The European Investment Bank has pledged more than €1 billion (\$1.1 billion) to expand renewable energy infrastructure across Sub-Saharan Africa, strengthening international financing behind Mission 300, a global initiative aimed at connecting 300 million people to electricity by 2030.

[READ MORE](#)



8. Egypt mandates carbon disclosure, 20% offsets for Non-Bank Financial Institutions

Egypt's Financial Regulatory Authority (FRA) has mandated carbon disclosure and offsetting requirements for non-bank financial institutions, marking a significant shift in how environmental risk is integrated into financial oversight. Decision No. 36 of 2026, announced on 15 February, requires firms above a defined capital threshold to measure emissions, disclose their carbon footprint annually, and offset a portion through regulated market mechanisms.

[READ MORE](#)

9. UN issues first Paris Agreement Carbon Credits under Article 6.4

The UN carbon market established under the Paris Agreement has approved its first issuance of credits, formally shifting the long-negotiated Article 6.4 mechanism from rulemaking into live operation. The inaugural activity is a clean-cooking project in Myanmar that distributes efficient cookstoves designed to reduce household air pollution and curb deforestation. The issuance follows years of negotiations over environmental integrity, accounting rules and safeguards, areas that have defined the credibility debate around international carbon markets since the Kyoto era.

[READ MORE](#)

10. Germany moves to double data centres, quadruple AI capacity by 2030

Germany is preparing a major expansion of its digital backbone, aiming to double domestic data centre

capacity and increase artificial intelligence processing power at least fourfold by the end of the decade. The initiative, led by digital minister is expected to be approved by cabinet and is designed to close a widening gap with the United States and China, where hyperscale infrastructure continues to scale rapidly.

[READ MORE](#)

11. AI washing becomes the new greenwashing: the \$1.5 billion collapse of Builder.ai

As artificial intelligence becomes increasingly integrated into corporate operations and investment strategies, the collapse of Builder.ai offers a cautionary lesson for investors and business leaders alike. In the frothy years of artificial-intelligence exuberance, investors poured billions into companies promising to automate the future. One of the most celebrated was Builder.ai, a London-based startup that claimed its AI platform could build custom software applications with minimal human intervention.

[READ MORE](#)

12. Brazil's president defends oil exploration near Amazon River

Brazil's president said that a controversial offshore oil exploration plan near the mouth of the Amazon River was a key priority for the country's growth, and they want everything to be legal, respecting the environment.

[READ MORE](#)

Sustainability - Indian Context



MONTHLY NEWS

1. India to mandate locally made solar ingots, wafers for clean energy projects from June 2028

India is proposing that clean energy firms use only locally made solar ingots and wafers from June 2028, the country's renewable energy ministry said on Wednesday, in a move aimed at curbing Chinese imports. With this, the South Asian country is looking to ensure the usage of domestically made components across the entire solar panel manufacturing chain.

[READ MORE](#)

2. India gains favour with global investors on returns, ESG momentum

India is maturing as a market in which foreign investors who take into account environmental, social and governance (ESG) factors are confident in dedicating more of their portfolio to, according to fund managers at the Indian Venture and Alternate Capital Association conclave in Mumbai, who cite the economy's scale, improving return outlook and advancing ESG standards as key differentiators. India's market regulator SEBI has been expanding the scope of ESG-related regulations for over a decade, making detailed Business and Sustainability Report disclosures mandatory for the country's top 1000 listed companies since 2023.

[READ MORE](#)

3. Climate Fund Managers backs India Waste-To-Biogas Plant With \$32.2M Investment

Climate Fund Managers has committed \$32.2 million to finance the construction of a commercial-scale waste-to-biogas facility in northern India, targeting one of the country's most persistent environmental challenges: agricultural residue burning.

[READ MORE](#)

4. India may ease renewable power penalties after industry concerns

India may soften renewable grid rules and related penalties after developers warned the framework could raise compliance costs and slow clean energy investment. The proposed rules, issued by the Central Electricity Regulatory Commission, aim to tighten grid supply commitments for renewable energy producers. They seek to reduce the gap between scheduled and actual generation from solar and wind projects.

[READ MORE](#)

5. India files 1st Nagoya Protocol Implementation Report with UN Body

India submitted its first national report on Nagoya Protocol implementation, detailing approvals, payouts and governance measures tied to genetic resources. The Ministry of Environment, Forest and Climate Change and the National Biodiversity Authority filed the report with the Secretariat of the Convention on Biological Diversity.

[READ MORE](#)

6. Fashion Supply Chain Decarbonization needs \$1.04 trillion investment by 2050

The global fashion industry needs about \$1.04 trillion in investment to drive fashion supply chain decarbonization and cut fashion industry emissions to net zero by 2050.

[READ MORE](#)

7. MeitY launches 30 kw integrated drive system to boost EV supply chain

India launched a 30-kilowatt wide band gap-based integrated drive system for electric vehicles, aiming to reduce import dependence and strengthen the



India EV supply chain. The system integrates the electric motor and inverter into a single compact, high power-density unit, replacing conventional separated motor-drive configurations in EVs.

[READ MORE](#)

8. India Lifts Gender Spending 12% in FY27 as Share of Total Outlay Climbs to 9.37%

India allocated ₹5.01 lakh crore (\$60.4 billion) under the gender budget FY 2026-27, marking an 11.55 percent increase from the previous fiscal year, according to a government statement. The gender budget statement tracks allocations across ministries for schemes that benefit women and girls, either exclusively or through defined spending shares.

[READ MORE](#)

9. India gains favour with global investors on returns, ESG momentum

India is maturing as a market in which foreign investors who take into account environmental, social and governance (ESG) factors are confident in dedicating more of their portfolio to, according to fund managers at the Indian Venture and Alternate

Capital Association conclave in Mumbai, who cite the economy's scale, improving return outlook and advancing ESG standards as key differentiators.

[READ MORE](#)

10. India's semiconductor market to reach \$300bn by 2035 photo

India's semiconductor market is projected to nearly triple to \$120 billion by 2030 and reach \$300 billion by 2035, driven by the exponential adoption of Artificial Intelligence (AI), automotive growth, and data centre expansion, according to a report by Deloitte.

[READ MORE](#)

11. India to start carbon credit trading after four months

Carbon credit trading will start in India after four months, as said by the Power Minister. The government has already stated the detailed process for compliance and voluntary carbon markets under the carbon credit trading scheme.

[READ MORE](#)

Corporate Sustainability Reporting in South Asia: Diverse Uptake, SDG Mapping and Role of Cost and Management Accountants

Episode 8



CMA (Dr.) Aditi Dasgupta
 Joint Director
 The Institute of Cost Accountants of India
 Kolkata

Abstract

South Asia presents a heterogeneous yet evolving landscape of corporate sustainability reporting. India has moved toward a structured, regulation-backed model through its Business Responsibility and Sustainability Reporting (BRSR) framework aligned with global standards, while Bangladesh demonstrates sector-driven ESG integration, particularly in the garments industry with strong emphasis on labour and gender-linked Sustainable Development Goals (SDGs). Sri Lanka and Pakistan continue to adopt primarily voluntary Global Reporting Initiative (GRI)-based disclosures supported by emerging sustainability indices. The region reflects asymmetric institutional maturity, where regulatory compulsion, export competitiveness, investor expectations, and climate vulnerability collectively shape sustainability uptake. Cost and Management Accountants play a critical role in this transition by integrating ESG metrics into enterprise performance systems, enabling SDG-linked cost measurement, sustainability assurance, and strategic value creation.

South Asia’s corporate sustainability reporting landscape reflects the region’s economic diversity, regulatory asymmetry, and evolving engagement with global ESG standards. While the region shares common development challenges—resource constraints, climate vulnerability, labour-intensive industries, and export dependence—the institutional responses to sustainability reporting vary considerably. At one end of the spectrum, India has institutionalised a mandatory, capital market-driven ESG framework. At the other, Bangladesh, Sri Lanka, and Pakistan advance sustainability disclosure through sector-specific initiatives or voluntary alignment with international standards.

Despite these differences, the region demonstrates increasing convergence around key Sustainable Development Goals (SDGs), particularly SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action). Sustainability reporting in South Asia is therefore not fragmented; rather, it is developmentally differentiated.

India – Regulatory Consolidation and Structured ESG Governance

India represents the most institutionally mature sustainability reporting regime in South Asia. The introduction of the Business Responsibility and Sustainability Reporting (BRSR) framework by the Securities and Exchange Board of India transformed ESG disclosure from a voluntary exercise into a structured regulatory mandate for leading listed entities beginning FY 2022–23. With the evolution toward BRSR Core and enhanced assurance requirements, ESG reporting is increasingly embedded within financial reporting, risk governance, and strategic management.

India’s BRSR is interoperable with global standards such as GRI, SASB, ISSB, and TCFD, ensuring compatibility with international investor expectations. The Ministry of Corporate Affairs’ National Guidelines on Responsible Business Conduct provide the normative backbone for this system. As a result, sustainability reporting in India is characterised by sector-agnostic key performance

Corporate Sustainability Reporting in South Asia:

Diverse Uptake, SDG Mapping, and the Role of Cost Accountants

India - BRSR and Strengthening ESG Governance

Business Responsibility and Sustainability Reporting (BRSR) framework, mandated by SEBI for top listed companies since FY 2022-23, aligned with GRI, SASB, and TCFD standards through MCA ESG guidelines, emphasizing SDG 7 (affordable & clean energy), SDG 12 (responsible consumption & production), and SDG 13 (climate action).

Sri Lanka & Pakistan - Voluntary GRI-Based & Sustainability Indices

Both Sri Lanka and Pakistan employ voluntary ESG reporting aligned with GRI standards and sustainability indices like the CSE Sustainability Index in Sri Lanka and the PSX ESG Index in Pakistan. Their SDG focuses link to sustainable innovation (SDG 9) and sustainable cities (SDG 11), driven by emerging cooperation amid lower enforcement capacity.

Bangladesh - Garment Sector Centric ESG Commitment

Bangladesh prioritizes sector-specific ESG within its Ready-Made Garments (RMG) sector using BGMEA guidelines and SDGs 5 (gender equality) & 8 (decent work & economic growth) amid intense export pressures.

Cost & Management Accountants: Enhancing ESG Reporting

Integrating ESG into Financial Planning

Cost Accounting for Waste & Energy

Assurance and SDG Mapping

Inches-a E, mill-tamability gaps

Cost and Management Accountants (CMAs) are pivotal in embedding ESG into financial decisions across South, Asia, ensuring credible, measurable, and strategically valuable sustainability reporting through cost accounting, SDG Intage, and support for SMEs.

Maturity Comparison		SDG Focus Areas	
India	High (Mandatory)	7, 12, 13	Comprehensive BRSR assurance
Bangladesh	Emerging (Sectoral)	5, 8	Garment export compliance.
Sri Lanka	Low-Emerging	3, 11	Post-crisis voluntary indices
Pakistan	Low-Emerging	8, 13	Indices amid economic volatility

Source: Conceptualised & designed by the author using AI tools

indicators, digital disclosures, increasing third-party assurance, and integration with enterprise value creation.

SDG mapping within India is particularly visible in areas such as energy transition (SDG 7), responsible production (SDG 12), climate resilience (SDG 13), infrastructure and innovation (SDG 9), and inclusive growth (SDG 8). ESG has thus transitioned from compliance reporting to strategic capital market infrastructure.

Bangladesh – Export-Driven and Sector-Centric Sustainability

In Bangladesh, sustainability reporting is deeply intertwined with the Ready-Made Garments (RMG) sector, which dominates export earnings and employs millions, particularly women. ESG integration has been driven primarily by global buyer requirements, supply-chain transparency demands, and labour compliance obligations. Consequently, SDG 5 (Gender Equality) and SDG 8 (Decent Work) are central to the country’s reporting narrative.

Rather than broad mandatory frameworks, Bangladesh’s ESG uptake reflects competitiveness imperatives. Following the Rana Plaza tragedy, international scrutiny accelerated transparency practices and adoption of GRI standards within the garment industry. Sustainability reporting functions as a mechanism to secure export market access, demonstrate workplace safety, enhance renewable

energy use, and promote circular production practices. The framework remains sectoral but increasingly structured through industry associations and regulatory encouragement.

Sri Lanka and Pakistan – Voluntary Alignment and Market Signalling

Sri Lanka and Pakistan represent emerging ESG ecosystems where sustainability reporting remains largely voluntary. Companies predominantly align disclosures with GRI Standards, while stock exchange initiatives—such as sustainability indices—encourage greater transparency and investor signalling.

In Sri Lanka, growing alignment with SDG 12 (Responsible Consumption and Production) and SDG 15 (Life on Land) reflects environmental sensitivities and biodiversity considerations. Movement toward IFRS-aligned sustainability standards suggests a gradual shift toward formalisation. In Pakistan, adoption of GRI-based disclosures has expanded over recent years, though the percentage of reporting firms remains modest. Positive correlations between environmental, social, and economic disclosures indicate incremental but encouraging institutional maturity.

In both jurisdictions, ESG reporting remains capacity-building oriented, shaped by economic volatility and regulatory evolution rather than comprehensive mandates.

Comparative Institutional Maturity

The diversity of uptake across South Asia becomes clearer when viewed comparatively:

Country	Framework Maturity	SDG Focus Areas	Key Diversities
India	High (Mandatory)	7, 12, 13	Comprehensive BRSR assurance and regulatory integration
Bangladesh	Emerging (Sectoral)	5, 8	Garment export compliance and labour focus
Sri Lanka	Low-Emerging (Voluntary)	12, 15	GRI-based voluntary indices and gradual IFRS alignment
Pakistan	Low-Emerging (Voluntary)	8, 13	Sustainability indices amid economic volatility

This variation reflects differences in GDP scale, capital market depth, enforcement capacity, and industrial composition—textiles and export manufacturing in Bangladesh and Pakistan versus diversified sectors in India.

Role of Cost and Management Accountants in South Asia's ESG Transition

Across South Asia's heterogeneous reporting landscape, Cost and Management Accountants (CMAs) serve as a critical integrating force between sustainability ambition and financial discipline. As ESG reporting shifts from narrative disclosure to data-driven accountability, CMAs translate environmental and social commitments into quantifiable economic impacts.

In India's BRSR regime, CMAs support internal control systems, ESG data validation, carbon accounting, waste reduction cost measurement, and integration of sustainability metrics into financial statements. Their expertise strengthens assurance processes, particularly under BRSR Core's verified metrics. In Bangladesh's labour-intensive garment sector, CMAs evaluate compliance costs, workplace safety investments, renewable energy adoption, and supply-chain traceability expenditures—ensuring that sustainability initiatives enhance efficiency rather than erode competitiveness.

In Sri Lanka and Pakistan, where reporting remains voluntary, CMAs facilitate credibility by designing lifecycle costing models, activity-based carbon accounting systems, and SDG-linked performance dashboards. They conduct scenario analysis aligned with climate risk frameworks and help organisations prepare for future mandatory standards. Their role is especially significant in value-chain reporting and Scope 3 emissions readiness, given South Asia's integration into global supply chains.

Beyond large corporates, CMAs play a developmental role in supporting SMEs—building capacity, implementing proportionate ESG measurement systems, and strengthening investor trust in emerging markets.

South Asia's sustainability reporting ecosystem is not uniform, yet it is progressively consolidating. India sets a regulatory benchmark through BRSR-driven institutionalisation. Bangladesh demonstrates how export competitiveness can accelerate ESG integration at the sectoral level. Sri Lanka and Pakistan illustrate steady, voluntary advancement toward international alignment.

The region's shared trajectory is clear: sustainability reporting is becoming embedded within governance, capital markets, and industrial strategy. At the centre of this transition stand Cost and Management Accountants, whose analytical rigour ensures that ESG reporting strengthens operational efficiency, enhances resilience, and contributes meaningfully to long-term value creation and SDG achievement across South Asia.



In the pursuit of exploring the continent-wide corporate sustainability reporting framework, we would be moving to Southeast Asia in the next episode and we'll look into the ASEAN sustainability momentum. 

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SUSTAIN THE SUSTAINABILITY

Sustainable Finance Instruments – The overall landscape and overview of ESG debt securities

Part II

Usha Ganapathy Subramanian
Practicing Company Secretary
Chennai

Abstract

While the corporates have received a clear signal from the markets and regulators that their strategies must align with sustainability, fully transitioning to a sustainable business model requires funding. A growing range of financial instruments, from green bonds to sustainability-linked loans, have emerged to translate sustainability goals into business impact.

A bird's eye-view of the sustainable finance scenario in India

Sustainable finance could take several forms of funding like debt funding, equity funding, government spending, grants and other means. Debt funding could take the form of low-cost debt funding or market-rate debt funding, project-level debt funding or balance-sheet level debt funding. Similarly, equity funding may also be balance-sheet level (for an entity as a whole) or project-level. Further, we may roughly classify sustainable finance into green finance, which mainly pertains to climate finance and other aspects of environmental conservation, and other kinds of sustainable finance (that is, apart from green finance).

The Climate Policy Initiative has published a report called the “Landscape of Green Finance in India” in December 2024 studying the flow of green finance in India for fiscal years 2021/22. It tracks the sources and intermediaries of funding and the instruments through which the funding flows and the sectors to which it moves.

The infographic presented in Figure 1 as taken from the report shows that commercial financial institutions are the major funders and they mainly fund through balance-sheet debt financing (as opposed to project-level debt) while some portion flows through project-level equity and project-level market-rate debt (Climate Policy Initiative, 2024).¹ Expenditure of the Union and State Governments and that of public sector undertakings also seems to be a sizable portion. Residential, commercial and institutional investors are also found in the ecosystem funding mostly through balance-sheet equity funding (Climate Policy Initiative, 2024). Further, the sectors that seem to receive the most funding are clean energy, clean transportation and energy efficiency (Climate Policy Initiative, 2024).

The report notes that while India requires INR 11 trillion annually to achieve its Nationally-Determined Contributions under the Paris Agreement (agreed emission reductions to achieve net zero by 2070), the tracked green finance towards mitigation is only 30% of the requirement (Climate Policy Initiative, 2024)².

It is to be noted that the report covers only green finance and does not cover other forms of sustainable finance. However, this provides us a good generic view of how the sustainable finance ecosystem looks like in general for a preliminary understanding. The intention here is to underline the broad nature of the ecosystem.

Green Bonds and other ESG Debt Securities

As we have discussed above, debt funding forms an important part of sustainable finance. In India, green

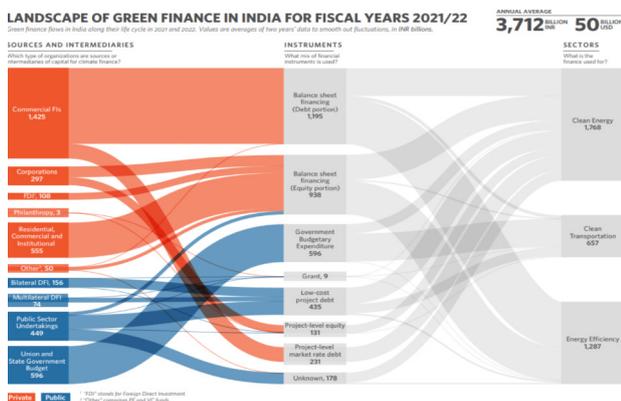


Figure 1: Source: CPI 2024. Landscape of Green Finance in India. Available online: [climatepolicyinitiative.org/ \(page V, https://www.climatepolicyinitiative.org/wp-content/uploads/2024/12/Landscape-of-Green-Finance-in-India-2024.pdf\)](https://www.climatepolicyinitiative.org/page/V/https://www.climatepolicyinitiative.org/wp-content/uploads/2024/12/Landscape-of-Green-Finance-in-India-2024.pdf)

¹ <https://www.climatepolicyinitiative.org/wp-content/uploads/2024/12/Landscape-of-Green-Finance-in-India-2024.pdf>
² <https://www.climatepolicyinitiative.org/wp-content/uploads/2024/12/Landscape-of-Green-Finance-in-India-2024.pdf>

bonds and ESG debt securities are popular terms. Green Bonds are debt securities issued to raise funds exclusively for environment conservation projects or environmentally-friendly projects, such as renewable energy, sustainable transportation, energy efficiency, pollution control, water management, green buildings, climate resilience or even biodiversity conservation. ESG Debt Securities is the broad term given to cover any sustainability-based bonds like green bonds, sustainability bonds, sustainability-linked bonds or social bonds. What distinguishes them from traditional bonds or debentures is that the proceeds can only be used for the sustainability-related purposes mentioned in the offer document. While ESG Debt Securities is primarily the term used in the Indian regulatory context, globally, the term GSS+ bonds are used to signify green, social, sustainable and sustainability-linked bonds.

When it comes to the size of the green bond market, the global cumulative issuances of green bonds reached approximately USD 3.5 trillion by Q3 2025 (LSEG, 2025)³. As per Climate Bonds Initiative, 2025, the combined GSS+ bond universe has cumulative issuances of about USD 5.9 trillion by Q1 2025.⁴ In India, the combined GSS+ cumulative issuances is about USD 55.9 billion by end of 2024 (Climate Bonds Initiative, 2025).⁵ It ranks fourth in the emerging market economies after China, South Korea and Chile (Climate Bonds Initiative, 2025).

In fact, one of the biggest green issuances in India is by the Indian Government by issuing multiple tranches of Sovereign Green Bonds (SGrBs). The proceeds of these are intended to finance public-sector projects that reduce carbon intensity, support climate mitigation/adaptation, and help meet Nationally Determined Contributions (NDCs) under the Paris Agreement.⁶ Sovereign green bonds alone totalled about Rs. 477 billion across eight tranches since January 2023 till end of 2024 (Climate Bonds Initiative, 2025).⁷

In this universe, one may also note green masala bonds. Masala Bonds are rupee-denominated bonds issued outside India by Indian entities to avoid currency risk for the issuer while tapping global investor). Several have specifically funded sustainability/renewable energy projects and are listed abroad (primarily London Stock Exchange – LSE) or can now leverage International Financial Services Centre (IFSC - GIFT City) frameworks. For example, NTPC Limited issued green masala bonds

approximating Rs. 2,000 crores in 2016 that have been listed on LSE (London Stock Exchange, 2016).⁸

The Regulatory Ecosystem

In India, SEBI, the market regulator, has incorporated a framework for issuance and listing of ESG debt securities including green bonds under the non-convertible securities regulations. Under a separate circular, SEBI provides for a framework for green bonds for tracking of usage of proceeds, annual reporting on project allocation, impact reporting and third-party reviews.⁹ SEBI also issued “Dos and Don’ts” guidance in 2023 to curb greenwashing.¹⁰ SEBI further issued a separate ESG Debt Securities Framework other than green bonds in 2025 that covers social/sustainability/sustainability-linked bonds.¹¹

The IFSC has a separate regulatory framework under its regulator IFSCA for issuances of securities including green bonds. In IFSC, ESG-focused instruments accounted for almost 40% of total issuances during 2024-25 (IFSCA, 2025)¹². It is to be noted that these are denominated in the USD. While green bonds in IFSCs have been mainly issued by renewable energy businesses, social bonds were issued by non-banking financial companies.

Takeaways

The sustainable finance ecosystem is a vast and varied landscape with many players, instruments and end uses. In this article, we have seen an overview of the green finance ecosystem, debt funding – primarily in the form of green bonds and other ESG debt securities, and a brief outline of the regulatory ecosystem. While the landscape is rich and evolving, one needs to be wary of possible greenwashing (attempts to appear “green” while not actually being environmentally-friendly, a sort of window-dressing in the green finance world). The regulatory mechanism to deal with greenwashing needs to be robust, alert and dynamic, in order that the precious financial resources are not misused and diverted to unsustainable or unscrupulous activities.

We will explore some measures in place to prevent greenwashing, equity funding, institutional finance and sustainability-linked loans in the future editions of the series. 

Reproduced with suitable modifications from the personal writings and posts of Ms. Usha Ganapathy Subramanian.

³ LSEG, 2025, <https://www.lseg.com/en/insights/green-debt-market-passes-3-trillion-milestone>

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⁵ <https://www.climatebonds.net/data-insights/publications/india-sustainable-debt-state-market-2024>

⁶ https://dea.gov.in/files/inline-documents/Framework_for_Sovereign_Green_Bonds.pdf

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Vertical Farming and Controlled Environment Agriculture A Sustainable Path for Future Food Systems & the Role of Cost & Management Accountants

Insight
XI



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Abstract

Vertical Farming and Controlled Environment Agriculture present a transformative solution to global food challenges by enabling sustainable, resource-efficient, and year-round crop production within urban spaces. These systems significantly reduce water usage, land dependency, carbon emissions, and reliance on chemical pesticides, thereby supporting resilient and eco-friendly food systems. Cost and Management Accountants play a crucial role in ensuring economic viability through cost optimisation, financial planning, and sustainability measurement, making vertical farming both environmentally and financially sustainable.

Introduction

Feeding the growing global population while protecting the environment has become one of the most pressing challenges of the 21st century. Rapid urbanization, shrinking agricultural land, unpredictable climate conditions, and water scarcity are forcing scientists and policymakers to search for innovative and sustainable agricultural systems. Traditional farming methods depend heavily on land, water, favourable weather conditions, and extensive transportation networks. These factors often lead to environmental degradation, excessive water consumption, and high carbon emissions.

One promising scientific advancement that addresses these challenges is Vertical Farming and Controlled Environment Agriculture (CEA). Vertical farming refers to the practice of growing crops in vertically stacked layers, usually inside controlled indoor environments such as warehouses, shipping containers, or specially designed buildings. Instead of relying on sunlight and soil, these systems use LED lighting, hydroponic or aeroponic nutrient solutions, and advanced climate control technologies.

This modern approach to agriculture has the potential to revolutionize food production in cities while significantly improving sustainability. It uses far less water, requires minimal land, and eliminates the need for chemical pesticides. Alongside technological innovations, professionals such as Cost and Management Accountants (CMAs) play a vital role in ensuring that such sustainable systems remain economically viable and efficiently managed.

Understanding Vertical Farming and Controlled Environment Agriculture

Vertical farming is a form of Controlled Environment Agriculture where crops are grown indoors under precisely managed environmental conditions. In these systems, plants are arranged in stacked layers or vertical towers, allowing farmers to produce more crops in a limited space.

Unlike conventional agriculture, vertical farms do not depend on natural weather conditions. Instead, several technologies are used to create optimal growing conditions:

LED Lighting: Specially designed LED lights provide the exact wavelengths required for plant growth. This allows plants to grow efficiently without relying on sunlight.

Hydroponics: Plants grow in water enriched with nutrients instead of soil. The nutrient solution circulates continuously, ensuring plants receive balanced nutrition.

Aeroponics: In this advanced technique, plant roots are suspended in air and sprayed with nutrient-rich mist, reducing water consumption even further.

Climate Control Systems: Temperature, humidity, carbon dioxide levels, and airflow are carefully monitored using sensors and automated systems.

By integrating these technologies, vertical farming creates an efficient, controlled environment where plants can grow throughout the year regardless of climate or season.



Sustainability Benefits of Vertical Farming

One of the most remarkable aspects of vertical farming is its strong contribution to environmental sustainability.

1. Significant Reduction in Water Consumption

Water scarcity is becoming a major global concern. Traditional agriculture consumes nearly 70 percent of the world's freshwater resources. Vertical farming systems, however, can reduce water consumption by up to 90 percent.

In hydroponic systems, water is recycled continuously, and only small amounts are lost through evaporation and plant absorption. This efficient use of water makes vertical farming particularly valuable in regions suffering from drought or water shortages.

2. Minimal Land Requirement

Agricultural land is shrinking due to urban expansion, soil degradation, and deforestation. Vertical farming addresses this problem by producing crops in vertically stacked layers within buildings. A small urban warehouse can produce the same quantity of vegetables that would otherwise require several acres of farmland.

This approach helps preserve forests and natural ecosystems by reducing the pressure to convert additional land into agricultural use.

3. Reduced Use of Chemical Pesticides

In traditional farming, crops are exposed to insects, diseases, and unpredictable weather conditions. To protect crops, farmers often rely on chemical pesticides and herbicides, which can contaminate soil and water sources.

Vertical farming operates in closed and controlled environments, significantly reducing the risk of pests and diseases. As a result, crops can be grown with little or no pesticide use, leading to healthier food and a cleaner environment.

4. Lower Carbon Footprint and Local Food Production

Most vegetables and fruits consumed in urban areas are transported from distant rural farms. Transportation requires fuel, refrigeration, and packaging, which contribute to greenhouse gas emissions.

Vertical farms can be established within cities, enabling food to be grown close to consumers. This reduces transportation distances, lowers fuel consumption, and minimizes food spoilage during transit.

5. Year-Round Crop Production

Weather conditions often affect traditional agriculture. Floods, droughts, or extreme temperatures can reduce crop yields and create food shortages.

Controlled Environment Agriculture ensures consistent year-round production. Crops grow under stable conditions regardless of external weather patterns, improving food security and supply stability.

Contribution to Sustainable Urban Food Systems

Urban populations are increasing rapidly around the world. Cities require a steady supply of fresh vegetables and nutritious food, but transporting food from distant rural areas creates logistical challenges and environmental costs.

Vertical farming provides an opportunity to integrate agriculture directly into urban infrastructure. Rooftop farms, indoor warehouses, and even underground facilities can produce vegetables within city boundaries.

Such systems support local food production, reduced transportation costs, improved food freshness, and greater resilience in urban food supply chains.

In addition, vertical farming can create employment opportunities in urban areas, including roles in agricultural technology, environmental monitoring, and supply chain management.



Economic Challenges in Vertical Farming

Despite its environmental advantages, vertical farming also faces economic challenges.

Setting up a vertical farm requires substantial investment in infrastructure, including:

- LED lighting systems
- Automated climate control equipment
- Water circulation and nutrient management systems
- Sensors and monitoring technologies
- Building space and structural modifications

Electricity consumption, particularly for lighting and climate control, can also be significant. Therefore, careful financial planning and cost management are essential to ensure the long-term sustainability of vertical farming operations.

This is where the expertise of Cost and Management Accountants (CMAs) becomes extremely valuable.

Role of Cost and Management Accountants in Vertical Farming

Cost and Management Accountants play a crucial role in ensuring that vertical farming projects remain economically sustainable while achieving environmental goals.

1. Cost Determination and Product Costing

Vertical farming involves several cost components such as electricity, nutrients, water recycling systems, labour, maintenance, and depreciation of equipment. CMAs help determine the actual cost of producing each crop or product.

Through proper cost allocation and cost centre accounting, they can identify the cost per unit of production, enabling management to price products competitively while maintaining profitability.

2. Cost Control and Efficiency Improvement

Electricity consumption for lighting and climate control represents a significant operational cost. CMAs analyse these costs and suggest measures to improve efficiency.

For example, they may evaluate:

- Energy-efficient LED lighting systems
- Optimal operating hours
- Integration of renewable energy sources such as solar power

Such measures can significantly reduce operational expenses while improving environmental sustainability.

3. Budgeting and Financial Planning

Before establishing a vertical farming facility, a detailed financial feasibility study is necessary. CMAs assist in preparing capital budgets, operating budgets, and projected financial statements.

They evaluate whether the expected revenue from crop production can justify the initial investment and ongoing operational costs.

This financial planning ensures that vertical farming ventures remain economically viable.

4. Investment Appraisal

Vertical farming projects often require high capital investment. CMAs apply financial evaluation techniques such as Net Present Value (NPV), Internal

Rate of Return (IRR), and Payback Period to assess the profitability of these investments.

Such analysis helps investors and entrepreneurs make informed decisions before committing financial resources.

5. Sustainability Reporting and ESG Measurement

Modern businesses increasingly focus on Environmental, Social, and Governance (ESG) performance. Vertical farming contributes significantly to environmental sustainability through water conservation, reduced carbon emissions, and pesticide-free production.

CMAs play an important role in measuring and reporting sustainability indicators, including:

- Water usage efficiency
- Energy consumption per unit of production
- Carbon emission reduction
- Waste recycling efficiency

These sustainability metrics help organizations demonstrate their environmental responsibility to regulators, investors, and society.

6. Supply Chain Optimization

Vertical farming supply chains are relatively short because production occurs close to consumers. However, efficient logistics are still necessary for packaging, distribution, and retail supply.

CMAs analyse supply chain costs and recommend efficient distribution strategies that minimize costs while ensuring product freshness.

7. Benchmarking and Performance Evaluation

Cost accountants can develop performance benchmarks for vertical farms by comparing productivity levels, energy consumption, and operational efficiency across different facilities.

Benchmarking helps management identify areas where improvements are needed and ensures continuous performance enhancement.

Future Prospects of Vertical Farming

As technology advances and energy-efficient systems become more affordable, vertical farming is expected to expand rapidly across the world. Governments and research institutions are increasingly supporting these systems as part of sustainable food security strategies.

Future developments may include:

- Integration with renewable energy sources
- Artificial intelligence for crop monitoring

- Automated harvesting systems
- Smart nutrient management technologies

These innovations will further improve productivity and reduce operational costs.

Cities of the future may include integrated agricultural systems within buildings, allowing urban residents to access fresh, locally produced vegetables throughout the year.



Conclusion

Vertical Farming and Controlled Environment Agriculture represent a significant scientific innovation in sustainable food production. By using stacked growing systems, LED lighting, and hydroponic nutrient solutions, these technologies dramatically reduce water consumption, land requirements, and pesticide use.

Beyond environmental benefits, vertical farming supports local food production, enhances urban food security, and reduces carbon emissions associated with long-distance transportation.

However, the long-term success of vertical farming depends not only on technological innovation but also on sound financial management and cost efficiency. Cost and Management Accountants play a vital role in this process by determining production costs, improving operational efficiency, evaluating investments, and measuring sustainability performance.

Through the integration of scientific innovation and professional cost management, vertical farming can become a powerful tool for building a sustainable and resilient global food system.

In the coming decades, such interdisciplinary collaboration between agriculture, technology, and financial management will be essential to ensure that economic development and environmental sustainability move forward together. SSA

Sustainability, ESGs and Gen-Z



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Abstract

This article explores the growing importance of ESG (Environmental, Social, and Governance) and sustainability in today's business environment, especially from a Gen-Z perspective. It highlights how awareness among students and future managers is increasing through discussions on CSR and responsible business practices. ESG is explained through its three pillars—environmental responsibility, social accountability, and ethical governance—and how these shape long-term business success beyond profit maximization. The article also reflects on current challenges in India's work culture, including employee rights and profit-driven practices, while comparing global standards. It emphasizes that sustainability is not just a marketing tool but a strategic necessity for balancing profit with responsibility. As future entrepreneurs and managers, today's youth must integrate sustainable development into decision-making to build ethical organizations and contribute meaningfully to society's progress toward a more responsible and developed future.

In today's era, if we ask most classmates about ESG and sustainability, many would know very little about it. However, the nature of our generation is such that we tend to speak our minds, stay aware of what is happening around us, and be more conscious of the society we live in. Recently, in our Business Environment class, we had an engaging debate on Corporate Social Responsibility (CSR) and whether it should be mandatory for businesses. It was a fun yet insightful discussion that helped us understand what we expect as future employees and employers. Both sides presented strong and logical arguments.

As we move towards a more developed society and nation, it becomes essential to be responsible about how we manage our work-life environment. Many Gen-Z individuals aspire to become entrepreneurs rather than work under someone else. In a time when social media is widespread and highly influential among Gen-Z, awareness about sustainability and ESG is growing, and it can significantly impact our future careers and organizational goals.

Let us first understand what ESG is and how it impacts us as management students entering this field.

ESG stands for Environmental, Social, and Governance. It is a framework used to evaluate a company's sustainability and ethical impact beyond

financial performance. ESG helps investors and stakeholders assess long-term risks and opportunities related to the planet, people, and business practices.

The Three Pillars of ESG

Environmental (E)

Focuses on a company's impact on the natural environment, including climate change, carbon emissions, energy efficiency, waste management, pollution control, resource depletion, and biodiversity conservation.

Social (S)

Examines a company's relationship with employees, customers, and society. This includes labor standards, workplace safety, diversity and inclusion, human rights, community engagement, customer satisfaction, and data privacy.

Governance (G)

Relates to how a company is managed and governed, including board structure and diversity, executive compensation, business ethics, transparency, anti-corruption measures, shareholder rights, and risk management.

Environmental factors include the pollution or environmental harm caused by a company and the



steps taken to reduce or prevent it. The social aspect includes CSR, employee welfare, and giving back to society. Governance focuses on organizational structure, policy implementation, and transparency between management and shareholders. Together, these ensure sustainable development along with profit maximization.

Sustainability

Sustainability focuses on implementing ESG principles while conserving resources and using them efficiently. It emphasizes long-term thinking over short-term gains.

Sustainability in management is a strategic approach that integrates environmental, social, and economic factors into business decisions to ensure long-term success while balancing profitability and ethical responsibility.

Key Aspects of Sustainability

- Triple Bottom Line: People, Planet, Profit
- ESG Integration into strategy and reporting
- Long-term focus on resilience and resource availability
- Systemic approach considering broader societal and environmental impacts

Common Practices

- Efficient resource management
- Ethical and transparent supply chains
- Stakeholder engagement
- ESG reporting and transparency
- Climate action initiatives

Why Sustainability Matters

- Reduces risks related to climate change and regulations

- Enhances competitiveness and brand value
- Encourages innovation
- Ensures long-term business viability

Despite growing awareness, many people believe that welfare is solely the government's responsibility. Sometimes private firms adopt CSR only as a marketing strategy, leading to corruption and minimal real impact. Since profit maximization is often the primary objective, employee rights violations and overuse of natural resources are common.

In India, employees often work long hours without fair compensation. Compared to countries like the USA and Japan, where employee-friendly policies and fair pay are common, India still has scope for improvement. Happy employees are more productive, and a positive work culture significantly improves efficiency. This is one reason many young people consider working abroad.

Companies should reflect on how they utilize resources and how they can give back to society. As a Gen-Z individual, I believe our generation is more conscious about environmental protection, governance, and social responsibility. With awareness and action, India can truly become a 'Viksit Bharat'.

Resources are limited, while human wants are unlimited. Therefore, growth must align with sustainable development and structured work culture.

WE ARE ALL HERE TO HELP EACH OTHER.

SO LET US DO THE SAME! 🇮🇳

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National Responsibility in the ESG Era: Lessons from the Responsible Nations Index



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Abstract

Contemporary measures of national progress increasingly transcend GDP to incorporate sustainability, ethics, and inclusive governance. This paper examines the Responsible Nations Index (RNI) 2026 as a holistic framework assessing national performance across ethical governance, social inclusion, environmental responsibility, economic sustainability, and institutional transparency. By aligning with global benchmarks such as the SDGs and ESG principles, the RNI offers a value-based alternative to growth-centric indices. Further, the study highlights India's 16th global ranking, emphasizing its progress toward responsible development in line with the vision of *Viksit Bharat @2047*, while also identifying key implementation challenges and policy implications.

Introduction

In the contemporary global landscape, the parameters of national progress are undergoing an important transformation. Economic growth measured solely through Gross Domestic Product (GDP) is no longer considered an adequate indicator of a nation's true development. Mounting concerns related to environmental degradation, social inequality, governance failures, and ethical lapses have prompted policymakers, global institutions, and stakeholders to seek broader, more inclusive measures of national performance. This shift has led to the emergence of responsibility-driven governance models that emphasize sustainability, accountability, transparency, and inclusive growth.

Against this evolving background, the Responsible Nations Index (RNI) has emerged as a pioneering framework designed to assess and rank nations based on their commitment to responsible governance. Unlike conventional indices that focus narrowly on economic indicators, the RNI adopts a holistic approach by integrating ethical governance, social well-being, environmental stewardship, institutional integrity, and long-term sustainability. It reflects a paradigm shift from growth-centric development to value-based nation-building, where prosperity is balanced with purpose. Similarly, the Responsible Nations Index, 2026 gains particular

significance as countries worldwide confront complex challenges such as climate change, digital transformation, widening socio-economic disparities, corporate accountability issues, and declining public trust in institutions. The index serves not only as a benchmarking tool but also as a strategic roadmap guiding nations toward responsible policy formulation, transparent governance, and sustainable development practices. By aligning national priorities with global frameworks such as the United Nations Sustainable Development Goals (SDGs), ESG principles, and ethical governance standards, RNI 2026 seeks to foster long-term resilience and inclusive growth.

In the Indian context, the relevance of the Responsible Nations Index is especially pronounced. As India advances towards its vision of *Viksit Bharat @2047*, the emphasis on good governance, accountability, sustainability, and institutional effectiveness has become central to national policy discourse. Initiatives such as ESG reporting, Business Responsibility and Sustainability Reporting (BRSR), digital governance reforms, and corporate accountability frameworks reflect India's commitment to responsible development. RNI 2026 provides a comprehensive lens through which India's progress can be evaluated, strengthened, and globally benchmarked.

Responsible Nations Index: A Conceptual Overview

The Responsible Nations Index (RNI) 2026 exemplifies a significant evolution in the assessment of national development and governance. Traditionally, a nation's progress was measured primarily through Gross Domestic Product (GDP), which reflected economic output but failed to capture social well-being, environmental sustainability, or ethical governance. Recognizing these limitations, broader indices such as the Human Development Index (HDI) incorporated health, education, and income parameters, while Environmental, Social, and Governance (ESG) frameworks brought sustainability and ethical considerations into organizational and investment analysis. However, these models often functioned in isolation and lacked a comprehensive, nation-centric perspective. The RNI bridges this gap by offering an integrated framework that evaluates national performance through the lens of responsibility, sustainability, and governance. However, the conceptual foundation of the RNI is built on five interrelated pillars that collectively reflect a nation's commitment to balanced and responsible development. However, these pillars are shown in (Figure 1) and followed by a brief description of the same.

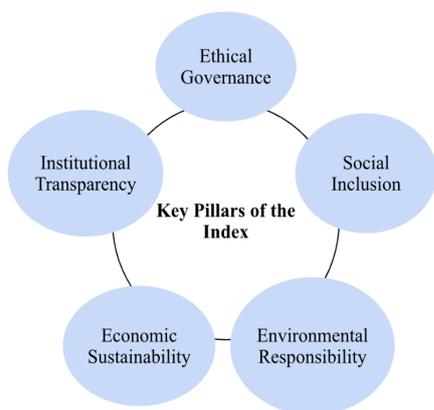


Figure 1: Key pillars of the Index

(1) Ethical Governance

Forms the cornerstone of the index, emphasizing transparency, accountability, rule of law, anti-corruption mechanisms, and integrity in public administration. It recognizes that sustainable development cannot be achieved without trust in institutions and ethical leadership.

(2) Social Inclusion

Constitutes the second pillar, focusing on equitable access to education, healthcare, employment, gender equality, social justice, and the inclusion of marginalized communities. This pillar highlights the importance of inclusive growth that benefits all sections of society.

(3) Environmental Responsibility

Addresses the growing urgency of climate change and ecological degradation. It evaluates a nation's commitment to sustainable resource management, renewable energy adoption, carbon emission reduction, biodiversity conservation, and environmental policy enforcement. This pillar aligns development objectives with long-term ecological balance.

(4) Economic Sustainability

The fourth pillar, goes beyond short-term economic expansion to assess resilience, innovation, responsible industrialization, fiscal stability, and employment generation. It underscores the need for economic growth that is both stable and socially responsible.

(5) Institutional Transparency

Examines the effectiveness of public institutions, regulatory quality, digital governance, ease of doing business, and access to information, all of which are essential for fostering public trust and efficient governance.

To operationalize these pillars, the RNI employs a comprehensive set of quantitative and qualitative indicators. These include governance indices, environmental performance scores, social development indicators, sustainability disclosures, regulatory effectiveness measures, and transparency benchmarks. However, data is drawn from credible national and international sources to ensure reliability, comparability, and objectivity. The index enables cross-country comparisons while also allowing policymakers to identify gaps and areas for improvement. In this concern, a defining strength of the RNI lies in its strong alignment with global governance frameworks, particularly the United Nations Sustainable Development Goals (SDGs). Each pillar of the RNI corresponds with multiple SDGs, such as SDG -16 (Peace, Justice and Strong Institutions), SDG -13 (Climate Action), SDG -8 (Decent Work and Economic Growth), and SDG -10 (Reduced Inequalities). Additionally, the index resonates with OECD governance principles, ESG standards, and international accountability norms, thereby enhancing its global relevance and credibility.

Measurement Methodology and its Scope

The methodology behind the RCI incorporates both quantitative data from international bodies (like the World Bank, UN agencies, and specialized treaty organizations) and qualitative assessments derived from expert panels and civil society feedback. The index employs normalization techniques to account for differences in national capacity and size, ensuring that smaller nations are not unfairly

penalized for resource limitations while holding larger economies to higher standards commensurate with their global influence. The preliminary scope of the index includes all 193 UN member states, with data aggregated annually for comparative analysis.

India Rise as a Responsible Global Economy and RNI Ranking

India has been ranked 16th out of 154 countries in the Responsible Nations Index (RNI) marks a significant milestone in its journey toward responsible, inclusive, and sustainable development. This position reflects India's growing global recognition not merely as a fast-growing economy, but as a nation striving to balance economic progress with ethical governance, social equity, environmental responsibility, and institutional transparency. In an era where national performance is increasingly judged on quality rather than quantity of growth, this ranking holds substantial importance for India's economic future. Further, the Responsible Nations Index evaluates countries through a multidimensional framework encompassing ethical governance, social inclusion, environmental sustainability, economic resilience, and institutional effectiveness. India's strong placement demonstrates the impact of recent reforms in digital governance, financial inclusion, infrastructure development, climate action, and regulatory transparency. Moreover, initiatives such as Digital India, Make in India, ESG-linked disclosures, renewable energy expansion, and improved ease of doing business have contributed significantly to strengthening India's global standing.

From an economic perspective, this ranking is crucial as it enhances India's credibility in the global arena. International investors, development agencies, and multinational corporations increasingly rely on such indices to assess long-term stability, governance quality, and risk exposure. India's position among the top 20 responsible nations signals policy consistency, institutional maturity, and a commitment to sustainable growth factors that directly influence foreign direct investment, capital inflows, and global partnerships. In addition, the ranking also emphasizes India's progress in aligning economic development with social and environmental priorities. As the country faces challenges such as climate vulnerability, income inequality, and regional disparities, the Responsible Nations Index provides a benchmark for measuring how effectively growth translates into inclusive prosperity. It reinforces the need for responsible industrialization, green growth strategies, transparent governance, and stronger social infrastructure.

Furthermore, India's position in the RNI aligns closely with its long-term national vision of *Viksit*

Bharat @2047. The index serves as a policy compass, guiding reforms toward ethical governance, institutional accountability, and sustainable economic practices. It also complements global commitments such as the United Nations Sustainable Development Goals (SDGs) and ESG-driven development models. In this regard, India's 16th rank in the Responsible Nations Index is not merely a statistical achievement but a reflection of its evolving economic maturity and governance capability. It highlights India's growing role as a responsible global economy and highlights the importance of sustaining reforms that promote transparency, inclusiveness, and environmental stewardship. Strengthening performance under the RNI framework will be instrumental in ensuring that India's economic growth remains resilient, equitable, and globally competitive in the decades ahead.



Implementing the RNI Framework: A Few Challenges/Concerns

Despite the strategic relevance of the Responsible Nations Index (RNI) in promoting ethical, inclusive, and sustainable development, its effective implementation faces several practical and structural challenges. Addressing these challenges is essential for realizing the full potential of the RNI framework.

- i. One of the primary challenges in implementing the RNI framework is the limited awareness among policymakers, institutions, and stakeholders regarding its objectives and measurement parameters. In the absence of standardized and universally accepted benchmarks, interpretation

and implementation often vary across sectors and regions.

- ii. The regulatory landscape in India is characterized by multiple authorities, overlapping compliance requirements, and frequent policy updates. Aligning RNI principles with existing regulatory frameworks such as corporate laws, ESG guidelines, and sector-specific regulations poses significant challenges. The lack of regulatory convergence can create compliance burdens for organizations and slow down the adoption of responsible governance practices envisioned under the RNI.
- iii. Reliable and comparable data form the backbone of any performance index. However, the implementation of the RNI is often constrained by inadequate data availability, inconsistent reporting standards, and gaps in data accuracy. Many organizations, particularly in the MSME sector, lack robust data collection and reporting systems, which affects the credibility and effectiveness of RNI-based assessments.
- iv. Institutional resistance to change remains a major barrier. Organizations accustomed to traditional compliance-based approaches may view RNI-driven reforms as complex or resource-intensive. Resistance may also stem from concerns over increased transparency, accountability, and performance scrutiny, which can slow down the adoption of responsible governance practices.
- v. The successful implementation of the RNI framework requires skilled professionals, technological infrastructure, and strategic leadership. However, many organizations face limitations in terms of trained manpower, financial resources, and technical expertise. The lack of capacity in areas such as ESG reporting, sustainability management, and data governance restricts effective alignment with RNI objectives.

Conclusion

The Responsible Nations Index (RNI), 2026 represents a transformative shift in evaluating national progress by integrating economic growth with ethical governance, social inclusion, environmental responsibility, and institutional transparency. India's strong performance in the RNI give emphasis to its growing commitment to responsible development and reflects the effectiveness of reforms in governance, sustainability, and digital transformation. The Index not only validates India's developmental trajectory but also serves as a strategic tool to align national priorities with global sustainability standards. Furthermore, the successful implementation of the RNI framework will depend on strengthening institutional capacity, improving data quality, enhancing regulatory coherence, and fostering a culture of transparency and accountability. Besides, continuous professional development, policy harmonization, and stakeholder collaboration will be

essential. By embracing the RNI as a governance compass, India can accelerate its journey toward Viksit Bharat @2047, ensuring growth that is not only rapid but also responsible, inclusive, and sustainable.▲

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The Invisible Economy: Quantifying Women's Unpaid Domestic and Care Work



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Abstract

Unpaid domestic and care work constitutes one of the largest yet least recognized components of economic activity. Globally, women perform the majority of this work, which sustains households, supports labour markets, and contributes to human capital formation. However, because such activities occur outside formal markets, they remain excluded from conventional measures of economic output such as Gross Domestic Product (GDP). This article examines whether unpaid care work should be quantified, explores debates about redefining labour, and estimates the potential economic contribution of unpaid domestic work to both global and Indian GDP. Drawing on research from international institutions such as the United Nations, International Labour Organization, World Bank, International Monetary Fund, and Oxfam, the paper highlights the magnitude of women's invisible contribution and discusses policy implications for gender equality and economic measurement.

Introduction

Economic statistics shape how societies understand productivity, labour, and growth. The most widely used indicator of economic performance, Gross Domestic Product (GDP), measures the monetary value of goods and services produced in an economy within a given period. However, GDP captures only activities that occur within the market economy or have an observable monetary value. A vast amount of work carried out within households—particularly unpaid domestic and care work—remains excluded from these measurements.

Across the world, women perform the majority of unpaid domestic and caregiving tasks, including cooking, cleaning, childcare, elder care, and household management. These activities are essential for sustaining families, supporting labour markets, and maintaining social well-being. Yet, because they do not involve direct monetary exchange, they remain largely invisible in conventional economic accounts.

This raises important questions for economists and policymakers:

- Should unpaid domestic and care work be quantified?

- Is it time to reconsider the traditional definition of labour that excludes work performed out of natural affection?
- If quantified, how much would women's unpaid work contribute to national and global economic output?

Addressing these questions is critical not only for improving economic measurement but also for recognizing the hidden contribution of women to economic development.

Rethinking the Definition of Labour

Traditional economic theory has often defined labour as paid work undertaken in the market economy. Activities carried out within households—such as cooking meals for family members or caring for children—are typically categorized as “non-economic” because they do not generate market transactions.

This definition has increasingly been challenged by scholars and international institutions, including the United Nations and the International Labour Organization. These institutions recognize that care work, although unpaid, requires time, effort, skills, and opportunity costs. If the same tasks were performed by paid domestic workers, caregivers, or

service providers, they would clearly be classified as economic activities.

The argument that work performed out of “love and affection” cannot be considered labour is therefore increasingly viewed as problematic. Caregiving often combines emotional motivation with substantial physical and cognitive effort. The presence of affection does not negate the economic value of the activity. Recognizing this dual nature of care work is essential for developing a more inclusive understanding of labour.

The Scale of Unpaid Care Work Worldwide

Globally, women perform the overwhelming majority of unpaid domestic and care work. Studies indicate that women carry out around three-quarters of the world’s unpaid care work, spending significantly more time on household responsibilities than men.

International estimates suggest that women and girls collectively perform more than 12.5 billion hours of unpaid care work every day. If this work were valued at even a modest wage rate, it would represent an enormous contribution to the global economy. Estimates suggest that the monetary value of unpaid care work exceeds \$10 trillion annually, a figure larger than the GDP of many major economies.

These findings highlight the existence of what economists sometimes refer to as the “invisible economy”—a vast domain of productive activity that sustains societies but remains outside conventional economic accounting.

Conceptualizing Unpaid Care Work

Unpaid care work refers to non-market activities performed within households to maintain and sustain family members. These include:

- Childcare
- Elder care
- Cooking and food preparation
- Cleaning and household maintenance
- Emotional and psychological support

International organizations recognize that these activities contribute significantly to economic and social well-being. The International Labour Organization estimates that 16.4 billion hours of unpaid care work are performed every day worldwide, equivalent to about 2 billion people working full-time without pay. Moreover, women perform around 76% of global unpaid care work, highlighting a significant gender imbalance in household labour.

The framework demonstrates how unpaid care work indirectly supports economic growth by maintaining

human capital and enabling labour market participation.

Conceptual Framework of Care Economy



Source: Conceptualised & designed by the author using AI tools

Valuing Unpaid Domestic and Care Work

Economists have developed several methods to estimate the value of unpaid work. Two of the most widely used approaches are:

Replacement Cost Method

This method values unpaid work based on the cost of hiring someone in the market to perform the same task. For example, the time spent cooking, cleaning, or caring for children can be valued using the wages of domestic workers, cooks, or childcare providers.

Opportunity Cost Method

This approach values unpaid work according to the income individuals forgo by not participating in paid employment. For instance, a woman who leaves the labour force to care for family members sacrifices potential earnings that could have been generated in the labour market.

Both methods produce different estimates but consistently demonstrate that unpaid care work represents a substantial share of economic activity.

Global Contribution to GDP

When unpaid domestic and care work is valued using these methodologies, studies indicate that it could represent between 10% and 39% of GDP across different countries, depending on valuation techniques and wage assumptions.

WOMEN'S DAY SPECIAL ARTICLE

In some analyses conducted by international organizations, the value of unpaid care work has been estimated to reach 15% to more than 50% of GDP in certain contexts. These figures suggest that conventional economic statistics significantly underestimate the true scale of productive activity in societies.

The implication is clear: the global economy depends heavily on unpaid labour that remains largely unrecognized in official national accounts.

The Hidden Contribution of Women in India

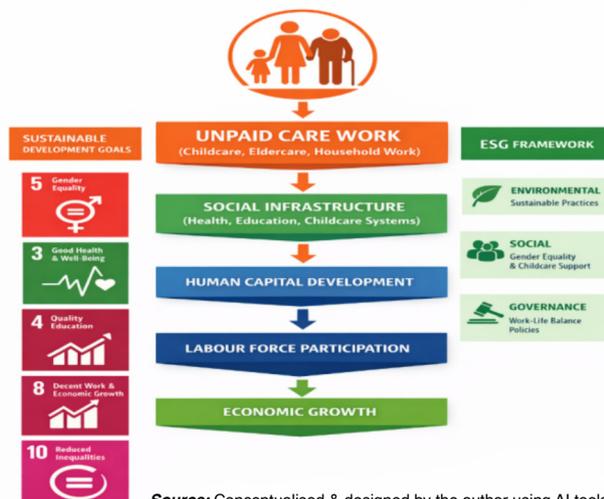
The invisibility of unpaid care work is particularly pronounced in developing economies, including India. Social norms, gender roles, and labour market structures often result in women undertaking a disproportionate share of household responsibilities.

Evidence from the ****National Statistical Office's **Time Use Survey 2019** demonstrates that Indian women spend significantly more hours per day on unpaid domestic and care activities compared with men. On average, women devote several hours daily to household work, while men spend comparatively little time on such activities.

If these activities were monetized, the estimated value of women's unpaid work in India would be substantial. Several policy studies suggest that unpaid domestic and care work could contribute approximately 15–17% of India's GDP if measured using replacement wage methods.

In monetary terms, this contribution has been estimated to exceed ₹30–34 lakh crore annually, placing it on par with or even exceeding many formal sectors of the Indian economy. This hidden contribution underscores the extent to which the functioning of the formal economy relies on unpaid labour performed within households.

Care Economy – SDG – ESG Policy Integration Model



Source: Conceptualised & designed by the author using AI tools

Policy Model: Linking Unpaid Care Work with SDGs and ESG Governance

Below is a conceptual policy model that connects unpaid care work with sustainability frameworks and corporate governance.

Link with Sustainable Development Goals

Unpaid care work directly connects with several SDGs established by the United Nations.

SDG	Relevance
SDG 5 – Gender Equality	Recognition and redistribution of unpaid care work
SDG 3 – Good Health	Care work improves family health outcomes
SDG 4 – Quality Education	Care work supports child development
SDG 8 – Decent Work	Reducing unpaid burdens increases labour participation
SDG 10 – Reduced Inequalities	Addresses gender labour disparities

ESG Governance Link

Within ESG frameworks used by companies and investors, unpaid care work mainly falls under the Social (S) pillar.

ESG Policy Model

ESG Pillar	Policy Link to Care Economy
Environmental	Sustainable household consumption practices
Social	Gender equality, parental leave, childcare support
Governance	Corporate policies supporting work–life balance

Companies increasingly integrate care-economy considerations through:

- parental leave policies
- childcare support programs
- flexible work arrangements
- gender equality initiatives

These practices align with ESG reporting frameworks promoted by organizations such as the World Bank, International Monetary Fund, and International Labour Organization.

Integrated Policy Insight

Recognizing unpaid care work can generate three major macroeconomic outcomes:

1. Higher female labour force participation
2. Improved human capital formation
3. More inclusive and sustainable economic growth

Thus, the care economy forms a foundational layer beneath both SDG implementation and ESG governance frameworks.

Why Quantification Matters?

Quantifying unpaid domestic and care work has important implications for economic policy and gender equality.



WOMAN POWER

Recognition of Women's Economic Contribution

Measuring unpaid work highlights the critical role women play in sustaining households and supporting economic productivity. Recognition can help challenge the perception that women who perform domestic work are “economically inactive.”

Improved Economic Measurement

Including satellite accounts for household production can provide a more comprehensive picture of national productivity. Such accounts do not alter the core GDP measure but complement it by capturing previously unmeasured activities.

Better Public Policy

Quantifying unpaid care work can inform policies such as:

- public childcare and early education programs
- eldercare support systems
- parental leave policies
- social protection measures for caregivers

These policies can reduce the disproportionate burden of unpaid work on women and facilitate greater participation in the labour market.

Gender-Responsive Budgeting

Understanding the scale of unpaid work allows governments to design gender-responsive fiscal policies, ensuring that public spending addresses structural inequalities in care responsibilities.

Should the Definition of Labour Change?

The debate about redefining labour reflects broader shifts in economic thinking. While GDP will likely remain focused on market transactions for practical reasons, economists increasingly acknowledge that economic productivity extends beyond formal markets.

Rather than completely redefining labour, many experts advocate supplementary measurement

frameworks, such as household satellite accounts and regular time-use surveys. These tools allow policymakers to recognize unpaid work without fundamentally altering the structure of national income accounting.

Such an approach balances the need for statistical consistency with the growing recognition that care work is essential to economic and social well-being.

Conclusion

Unpaid domestic and care work constitutes one of the largest yet least visible components of economic activity. Women perform the majority of this labour, sustaining households, enabling labour markets, and supporting broader economic productivity. Yet traditional economic indicators such as GDP fail to capture this contribution.

If quantified, unpaid care work could represent a substantial share of global economic output and approximately one-sixth of India's GDP. Recognizing this hidden contribution is not merely a matter of statistical accuracy; it is a crucial step toward acknowledging the economic value of caregiving and promoting gender equality.

As economies evolve and societies increasingly recognize the importance of care, the challenge for policymakers and economists is to develop measurement systems that reflect the true foundations of economic activity—both within markets and within households. [▲](#)

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VK Webinar Series of the Sustainability Standards Board

52nd Webinar

Making Corporate Boards Sustainable

Friday February 27, 2026 | 4pm- 5:15pm



CMA Arunabha Saha



Ms. Rashida Adenwala



CMA Dibbendu Roy



CMA (Dr.) Aditi Dasgupta

The Sustainability Standards Board, ICAI successfully organized the 52nd edition of the *Vasudhaiva Kutumbakam* Series on 27th February 2026 from 4:00 pm to 5:15 pm, on the theme “Making Corporate Boards Sustainable.” The speaker for the session was Ms. Rashida Adenwala, Practising Company Secretary. The webinar commenced with opening remarks by CMA Arunabha Saha, Coordinator, who set the context for the deliberations. CMA (Dr.) Aditi Dasgupta, Joint Director, ICAI, introduced the theme and highlighted its contemporary relevance before inviting the speaker to deliver his address.

She presented the theme and the legal framework under the relevant sections of the Companies Act and the SEBI (LODR) Regulations, 2015 regarding the mandatory constitution of Board Committees as well as other well-governed committees. She discussed key committees such as the Audit Committee, Nomination and Remuneration Committee (NRC), Stakeholders Relationship Committee (SRC) and the Corporate Social Responsibility (CSR) Committee, and elaborated on their major responsibilities. These included oversight functions, management of whistleblower mechanisms, strengthening internal controls and risk management, approval of related party transactions, and other governance responsibilities. She emphasized that sustainability compliance should move from merely conducting the minimum number of meetings to ensuring meaningful engagement. This can be achieved through the use of data analytics, risk-based agenda setting, outcome-driven minutes, and effective action tracking. She also highlighted various strategies for committees to make board governance more sustainable, including having diverse committee membership, ensuring transparency, defining clear KPIs, assessing risks effectively, and fostering sustainable and ethical practices within the organization. Further, she explained the principle of “substance over form” and discussed several case studies such as the Satyam, Enron, Wirecard and Gautam Singhania cases, highlighting the governance lapses and key shortcomings observed in these instances. She concluded her presentation by outlining best practices for building sustainable committees and emphasized the need for committees to move beyond mere compliance toward greater strategic relevance and value creation.

The webinar witnessed an engaging question-and-answer session, during which participants gained valuable insights from the speaker’s reflections. The session concluded with vote of thanks delivered by CMA Dibbendu Roy, Additional Director and Secretary of the Sustainability Standards Board, marking end of a highly involved session.



VK Webinar Series of the Sustainability Standards Board

53rd Webinar

Women in leadership & Sustainability

Friday March 13, 2026 | 4pm- 5:15pm



CMA Arunabha Saha



Ms. Sangeetha Flora



CMA (Dr.) Aditi Dasgupta

The Sustainability Standards Board, ICAI organized the 53rd edition of the *Vasudhaiva Kutumbakam* Series on 13th March 2026 from 4:00 pm to 5:15 pm, on the theme “Women in leadership and Sustainability”. The distinguished speaker for the session was Ms. Sangeetha Flora, Director, TLC Cornerstone. The webinar commenced with the opening remarks by CMA Arunabha Saha, Coordinator, who stated the significance of the leadership skills of a woman and the impact it creates in the society. CMA (Dr.) Aditi Dasgupta, Joint Director, ICAI, lead the session and provided various anecdotes and inputs to make the session lively and engaging.

The speaker commenced her presentation with a series of polling questions and based on the responses received, highlighted statistical evidence indicating that organizations tend to perform better when women are represented in leadership positions. She emphasized that a balanced ecosystem and lower attrition rates are often observed in organizations where women hold significant leadership roles. She further discussed the various challenges faced by women in society and the workplace, particularly the issues of stereotyping and double standards. The speaker pointed out the persistent biases and disparities in pay, as well as the disconnect between the roles and responsibilities undertaken by women and the recognition they receive within organizations. Despite their contributions, women are frequently overlooked and sidelined in the corporate hierarchy. The session also addressed the concept of imposter syndrome, where women often doubt their own abilities and experience a lack of confidence, leading them to question their competence and rely excessively on external validation in navigating workplace challenges. She noted that such pressures, coupled with workplace stress, can adversely affect performance, as women often have limited energy to cope with these persistent challenges. The speaker emphasized that these issues could have long-term implications for organizational sustainability. She therefore highlighted the need for leaders to take proactive measures such as conducting training programs, promoting advocacy, and fostering a culture of respect and inclusivity in the workplace. In conclusion, she encouraged individuals and organizations alike to take conscious steps to create a supportive environment that empowers women, improves their workplace experience, and promotes greater participation of women in leadership roles.

The webinar witnessed an engaging question-and-answer session, during which participants gained valuable insights from the speaker’s reflections. The session concluded with a heartfelt vote of thanks delivered by CMA (Dr.) Aditi Dasgupta, marking the closure of a very engaging session.

International Women's Day Special Webinar

Nari Prabha- Her Power, Women and Work

Sunday March 8, 2026 | 4pm- 5:30pm



CMA Renjini R.



CMA Shilpa Joshi



CMA (Dr.) Aditi Dasgupta



CMA (Dr.) Ashish P. Thatte



CMA Arunabha Saha



Ms. Poojanka Gurav



CMA Dibbendu Roy

The Sustainability Standards Board (SSB), ICAI organized a special webinar on the occasion of International Women's Day on the theme "Nari Prabha – Her Power, Women and Work" on 8th March 2026 from 4:00 pm to 5:30 pm. The distinguished speakers for the session were CMA Renjini R., Head – Finance, Kochi Water Metro Ltd., CMA Shilpa Joshi, Whole Time Director and Chief Financial Officer, Novartis and CMA (Dr.) Aditi Dasgupta, Joint Director, ICAI. Ms. Poojanka Gurav, Research Associate, WIRC of ICAI, anchored the event. The webinar commenced with opening remarks by CMA Arunabha Saha, Coordinator, who introduced the theme and set the tone for the session. CMA (Dr.) Ashish P. Thatte, Chairman, SSB, ICAI, delivered the Chairman's address. He spoke about the significant impact women have had in both his professional and personal life and appreciated their remarkable ability to balance work and personal responsibilities with excellence. He also commended the achievements of women despite prevailing gender stereotypes.

CMA Renjini R. shared her professional journey, highlighting the challenges she encountered and how she overcame them with confidence and determination. Through insightful anecdotes, she emphasized the pivotal role women play as a strong pillar in both families and organizations. She underscored the importance of self-reliance, financial independence, and the power of making informed choices for women's growth and empowerment. CMA Shilpa Joshi spoke about her career progression and the hurdles she faced while climbing the corporate ladder. She addressed the issue of gender bias in corporate boardrooms and emphasized that perseverance, hard work, and strong willpower are essential drivers of sustained success. She also highlighted the critical role women play in building resilient organizations and contributing meaningfully to economic development. CMA (Dr.) Aditi Dasgupta delivered an insightful address, drawing references from the Bhagavad Gita and ancient scriptures to explain the essence and virtues of womanhood. She elaborated on the seven divine qualities and emphasized that women embody strength, resilience, and virtue. She provided historical and mythological perspectives on the role of women and discussed the evolution of International Women's Day, including its recognition by the United Nations and its relevance in advocating equal opportunities. She further highlighted that gender diversity enhances workplace productivity and that societal progress is closely linked to women's economic independence. Referring to the United Nations Sustainable Development Goals (SDGs), she emphasized gender equality as a cornerstone of sustainable development. She enriched her address with practical case studies and personal experiences, including her own journey of overcoming health challenges and adversity through resilience, family support, and an unwavering commitment to excellence.

The webinar witnessed an engaging question-and-answer session, during which participants gained valuable insights from the speakers' experiences and perspectives. The session concluded with a heartfelt vote of thanks delivered by CMA Anuradha Dhavalikar, Member, SSB, ICAI, bringing the enriching and inspiring session to a close.

Forthcoming VASUDHAIVA KUTUMBAKAM Series

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4 PM - 5:15 PM
Friday | May 8, 2026

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Program on "IFSC enabled Global Platform for Indian Enterprise – Direct Listing and Sustainable Finance" organised by Sustainability Standards Board, ICMAI jointly with ICMAI-WIRC

Held on 16th March, 2026 at NSE Auditorium, BKC, Mumbai

The Sustainability Standards Board (SSB), ICMAI, in association with the Western India Regional Council (WIRC), ICMAI, organized a programme on "IFSC Enabled Global Platform for Indian Enterprise – Direct Listing and Sustainable Finance." The programme brought together eminent speakers and industry experts to deliberate on emerging opportunities in global finance, startup ecosystems, ESG frameworks, and sustainable finance. The session commenced with the ceremonial lighting of the lamp followed by the Institute Anthem, setting a formal and auspicious tone for the event.



Inaugural Session



The programme began with welcome and opening remarks by CMA (Dr.) Ashish P. Thatte, Chairman, Sustainability Standards Board, ICMAI. He highlighted the importance of sustainability in global financial integration and the role of IFSC in enabling Indian enterprises to access international markets.

This was followed by deliberations from CMA Neeraj D. Joshi, Vice-President, ICMAI, and CMA T.C.A. Srinivasa Prasad, President, ICMAI, who emphasized the Institute's commitment to promoting sustainability, transparency, and global competitiveness among professionals and enterprises.

The Keynote Address was delivered by Shri Pradeep Ramakrishnan, Executive Director, IFSCA, who was the Guest of Honour and provided deep insights into the regulatory framework and opportunities available through IFSC for direct listing and sustainable finance. He elaborated on how IFSC acts as a gateway for Indian companies to integrate with global financial markets.



The inaugural session concluded with a vote of thanks by CMA Mihir Vyas, Chairman, WIRC, ICMAI.

Technical Sessions

The first technical session on “Overview of Startup Ecosystem – Professional Perspectives” was delivered by CS Makarand Lele, Past President, ICSI and Member, SSB. He provided a comprehensive understanding of the startup landscape in India, highlighting regulatory frameworks, growth opportunities, and the evolving role of professionals in supporting startups.



The post-lunch session began with a session on “Direct Listing” by Ms. Hetal Kotak, Head Listing, NSE IX, who explained the concept, benefits, and procedural aspects of direct listing in international financial markets. She emphasized how direct listing can be a strategic route for companies seeking global capital access.

This was followed by a session on “ESG

Rating” by Ms. Vineeta Shetty, Managing Director, NSE Sustainability Ratings and Analytics Ltd. She discussed the growing importance of ESG ratings, methodologies involved, and their impact on investor decision-making and corporate reputation.



Panel Discussion on Sustainable Finance

A key highlight of the programme was the panel discussion on “Sustainable Finance”, featuring distinguished panelists:



- CMA Yatrik Vin, Former Executive President, Group CFO and Head of Corporate Affairs, NSE Ltd.
- Ms. Nishtha Tewari, AGM, SEBI
- Shri Gaurav Yadav, Deputy Manager – Sustainability and PSD (Power & Carbon Markets), NSE Ltd.
- CMA Arunabha Saha, Moderator

The panel deliberated on critical aspects of sustainable finance, including ESG integration, regulatory developments, carbon markets, and the future of green financing in India. The discussion provided valuable perspectives on aligning financial systems with sustainability goals.



Glimpses of Program on "IFSC enabled Global Platform for Indian Enterprise - Direct Listing and Sustainable Finance"



SSB ACTIVITIES REPORT

Seminar on Emerging Professional Opportunities in Sustainability for CMAs organized by Pune Chapter, ICMAI in association with SSB, ICMAI held on Saturday March 21, 2026

The Pune Chapter of ICMAI in association with the SSB, ICMAI organized a Seminar on “Emerging Professional Opportunities in Sustainability for CMAs”. The speakers were CMA A. Sekar, Practising Company Secretary and CMA Anuradha Dhawalikar, Practising Cost Accountant and members of SSB, ICMAI.

CMA A Sekar delivered a presentation covering in brief the conceptual framework of Sustainability, which was followed by an insightful coverage of the global reporting framework of Sustainability with focus on developments in EU. He also covered the framework of India’s BRSR and BRSR Core, highlighting the distinction between Assessment and Assurance. He rounded up his presentation explaining the salient features of ICMAI ISS1 and ISS2 as well as how these standards have been carved out from IFRS S1 and S2 to cater to BRSR Sustainability Reporting in India and also how the Cost and Management Accounting dimension has been introduced in ISS1 and ISS2.



CMA Anuradha Dhawalikar delivered an presentation on Opportunities for CMA professionals in the Sustainability space. In the first part of her presentation, she dealt with the subject of sustainability in the existing CMA roles. She explained the distinct requirements of CMA skillsets in different sectors such as Resource Intensive sectors (eg. Energy), Socially Intensive sectors (e.g. Agriculture) and Knowledge & Service

sectors (eg. IT and ITES) illustrating the varying degrees of risks and opportunities. In the later part of her presentation, she dealt with Carbon Credit Trading System (CCTS) and Green Credit Programme (GCP) as also the role of CMAs in Impact financing, GIFT city related financial services and Social Stock Exchange.

Both the speakers answered the questions of the participants and their sessions were interactive.

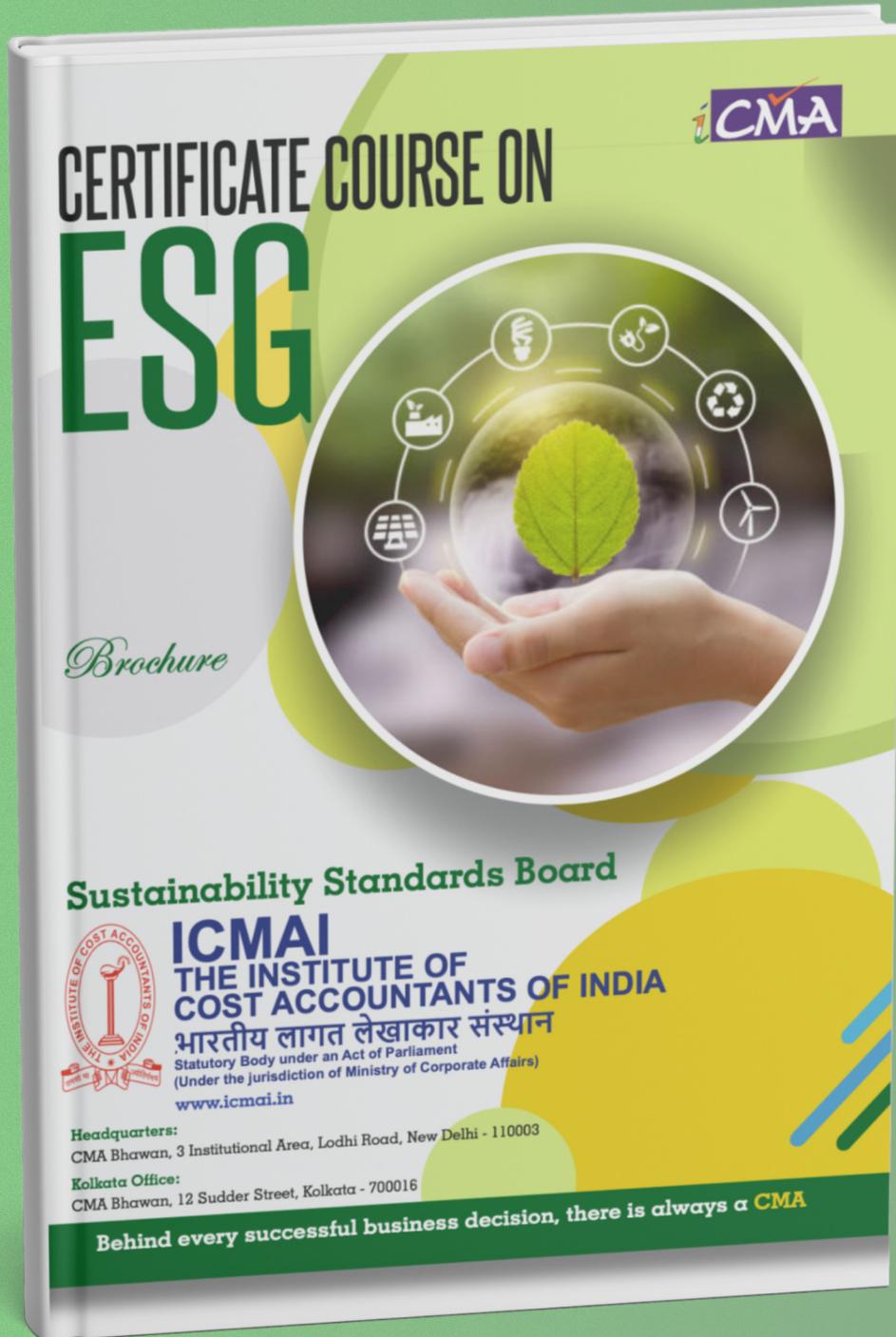


CMA (Dr.) Ashish P. Thatte, Chairman, SSB, ICMAI spoke briefly about the introduction of ICMAI Sustainability Standards – ISS1 and ISS2 and the released of the guidance note on the same in January 29, 2026 at the Sustainability Summit 2.0. He urged the members to popularise the use and application of these standards in practice.

Summing up, he appreciated the contribution in this regard by the two speakers.



Brochure of the Certificate course on ESG



BROCHURE OF THE CERTIFICATE COURSE ON ESG

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Sustainable Hygiene and the Sustainable Development Goals: A Pathway to Responsible Clean Living



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Abstract

Sustainable hygiene integrates cleanliness with environmental responsibility and social well-being. Conventional hygiene practices often depend on chemical cleaners, disposable materials, and high water consumption, which can harm ecosystems and deplete natural resources. Sustainable hygiene promotes resource-efficient practices such as water conservation, waste reduction, eco-friendly products, and energy-efficient sanitation systems. These practices support global sustainability priorities, particularly Sustainable Development Goal 6 (Clean Water and Sanitation), Sustainable Development Goal 3 (Good Health and Well-Being), and Sustainable Development Goal 12 (Responsible Consumption and Production) adopted by the United Nations. This article examines the concept of sustainable hygiene and highlights the role of Cost and Management Accountants in supporting these practices through environmental cost analysis, resource efficiency, and sustainability reporting, thereby promoting healthier environments and long-term economic sustainability.

Introduction

Hygiene is widely recognized as a fundamental pillar of public health. Practices such as handwashing, sanitation, safe waste disposal, and maintaining clean living environments play a crucial role in preventing infectious diseases and improving overall quality of life. However, many conventional hygiene practices depend heavily on chemical-based cleaning agents, disposable materials, and large quantities of water and energy. While these methods often achieve immediate cleanliness, they may also produce unintended environmental consequences, including water pollution, plastic waste accumulation, and increased carbon emissions.

In response to these challenges, the concept of sustainable hygiene has emerged as a holistic approach that integrates public health protection with environmental responsibility and social equity. Sustainable hygiene promotes cleanliness and disease prevention while minimizing environmental harm, conserving natural resources, and ensuring equitable access to sanitation facilities. This approach emphasizes the use of biodegradable

hygiene products, water-efficient sanitation technologies, responsible waste management, and behavioral changes that support long-term ecological balance.

The importance of sustainable hygiene becomes particularly significant within the broader global development agenda. The Sustainable Development Goals (SDGs) adopted by the United Nations in 2015 highlight the interconnectedness of environmental sustainability, social well-being, and economic development. Sustainable hygiene directly contributes to SDG 6: Clean Water and Sanitation, which seeks universal access to safe water and sanitation services. Effective hygiene practices also reduce the spread of infectious diseases, thereby supporting SDG 3: Good Health and Well-Being. Furthermore, sustainable hygiene encourages responsible consumption patterns and waste reduction, contributing to SDG 12: Responsible Consumption and Production.

Beyond its environmental and health dimensions, sustainable hygiene also has important economic implications. Businesses, institutions, and



households that adopt sustainable hygiene practices can reduce operational costs through the efficient use of water, energy, and cleaning materials. In this context, Cost and Management Accountants (CMAs) play an essential role by measuring environmental costs, evaluating sustainable investments, and integrating sustainability metrics into organizational decision-making processes. Their expertise helps organizations align hygiene practices with sustainability goals while ensuring financial viability and regulatory compliance.

Concept and Dimensions of Sustainable Hygiene

Sustainable hygiene represents a forward-looking approach to cleanliness that protects both human health and the environment. In an era characterized by climate change, resource scarcity, and growing public health challenges, hygiene practices must move beyond traditional methods that rely heavily on chemicals, disposable materials, and excessive resource consumption. Instead, sustainable hygiene integrates environmental responsibility, social inclusivity, and economic efficiency to ensure that present health needs are met without compromising the well-being of future generations.

At its core, hygiene refers to practices that maintain health and prevent disease through cleanliness, sanitation, and safe waste management. Sustainability, on the other hand, emphasizes the responsible use of resources in order to preserve ecological balance and long-term human welfare. Sustainable hygiene emerges at the intersection of these two principles, combining effective health protection with environmentally responsible practices.

Key components of sustainable hygiene include water conservation, eco-friendly cleaning products,

responsible waste disposal, energy-efficient sanitation systems, and behavioral changes toward mindful consumption. For example, replacing disposable cleaning materials with reusable alternatives, using biodegradable soaps and detergents, and installing water-efficient fixtures can significantly reduce environmental footprints while maintaining high hygiene standards. Similarly, proper segregation and treatment of hygiene-related waste—such as sanitary products, wipes, and packaging—help prevent contamination of landfills and water bodies.

Linkages with the Sustainable Development Goals

Sustainable hygiene is closely aligned with the global sustainability agenda, particularly the United Nations Sustainable Development Goals (SDGs). Its practices directly contribute to several interconnected goals.

Most notably, sustainable hygiene supports SDG 6: Clean Water and Sanitation, which aims to ensure universal access to safe and affordable drinking water, sanitation, and hygiene services. Efficient water use, improved wastewater treatment, and sustainable sanitation infrastructure are essential elements in achieving this goal.

Sustainable hygiene also contributes significantly to SDG 3: Good Health and Well-Being, as improved hygiene practices reduce the transmission of infectious diseases and enhance overall public health outcomes. The promotion of proper sanitation and hand hygiene remains one of the most effective preventive health measures worldwide.

In addition, sustainable hygiene advances SDG 12: Responsible Consumption and Production by encouraging environmentally responsible

SUSTAINABILITY MUSING!

consumption patterns and reducing waste. The use of eco-friendly hygiene products, recyclable packaging, and circular economy approaches in sanitation systems helps minimize environmental degradation.

Furthermore, the adoption of energy-efficient sanitation technologies and reduced chemical usage contributes indirectly to SDG 13: Climate Action, as these practices lower greenhouse gas emissions associated with water treatment, waste management, and industrial manufacturing processes.

Through these interconnected contributions, sustainable hygiene serves as an important pathway toward achieving broader global sustainability objectives.

Role of Cost and Management Accountants

Cost and Management Accountants play a crucial role in promoting sustainable hygiene practices within organizations and communities. Their expertise in cost analysis, performance measurement, and strategic decision-making enables them to integrate sustainability considerations into operational and financial management.

First, management accountants can measure and analyze the costs associated with resource consumption, including water, energy, and cleaning materials. By applying tools such as environmental cost accounting and life-cycle costing, they can identify inefficiencies and recommend sustainable alternatives that reduce both environmental impact and operational expenses.

Second, they contribute to sustainability reporting and ESG (Environmental, Social, and Governance) performance measurement. By developing indicators related to water usage, waste generation, and energy consumption in sanitation operations, accountants help organizations monitor their progress toward sustainability targets aligned with the SDGs.

Third, cost and management accountants assist in evaluating investments in sustainable technologies, such as water-efficient sanitation systems, biodegradable cleaning products, and waste recycling infrastructure. Through cost-benefit analysis and long-term financial planning, they ensure that sustainability initiatives remain economically viable and strategically beneficial.

Finally, management accountants contribute to corporate governance and responsible business practices by integrating sustainability considerations into budgeting, internal controls, and strategic

planning. In doing so, they help organizations transition toward sustainable hygiene systems that benefit both society and the environment.

Conclusion

Sustainable hygiene represents a progressive approach to cleanliness that balances public health priorities with environmental protection and responsible resource management. By promoting water conservation, eco-friendly products, efficient sanitation systems, and responsible waste management, sustainable hygiene reduces environmental degradation while maintaining high standards of hygiene and disease prevention.

Its strong alignment with the Sustainable Development Goals highlights its importance in achieving global objectives related to clean water, public health, responsible consumption, and climate action. However, the transition toward sustainable hygiene requires coordinated efforts from individuals, organizations, governments, and professional institutions.

In this context, Cost and Management Accountants play a strategic role in advancing sustainable hygiene by measuring environmental costs, evaluating long-term economic benefits, and supporting sustainability reporting and decision-making processes. Through effective resource management and accountability mechanisms, they help organizations adopt hygiene practices that are both environmentally responsible and economically sustainable.

Ultimately, sustainable hygiene is not merely about maintaining cleanliness; it is about fostering a culture of responsible living that safeguards the health of both people and the planet. By integrating sustainability principles into everyday hygiene practices, societies can move toward healthier communities, resilient ecosystems, and a more sustainable future for generations to come. 🌱

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ANNOUNCEMENT

Launch of a New Series

Over the past seven months, readers have journeyed with us through a reflective and thought-provoking series on spiritual governance and sustainability. The series invited us to examine the inner foundations of ethical leadership, the moral compass of institutions, and the spiritual dimensions of responsible enterprise. Above all, it reaffirmed a simple yet powerful truth: sustainable governance begins with character.

With the February issue, this reflective series reaches its conclusion. As we turn the page, the dialogue now moves from reflection to operationalization.

We are pleased to announce the launch of a new series titled “From Inner Governance to Institutional Governance: Operationalizing ESG – An India Global Dialogue.”

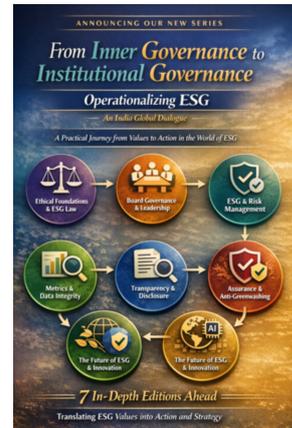
This new series represents a natural progression in our intellectual journey. If the earlier series explored why sustainability must be rooted in values, the forthcoming series will examine how those values are translated into practice—through regulatory architecture, corporate strategy, enterprise risk management systems, reporting frameworks, and assurance mechanisms.

Across seven editions, the series will explore key dimensions of ESG implementation:

- The ethical foundations of ESG and their codification into law
- Board-level stewardship and governance structures
- ESG as an enterprise risk architecture
- Measurement, materiality, and data integrity
- Disclosure, transparency, and capital market implications
- Assurance frameworks and safeguards against greenwashing
- The future of ESG, including artificial intelligence, climate finance, and regulatory convergence

Through this series, we aim to deepen the dialogue on how values-driven governance can evolve into robust institutional systems that guide responsible business in India and across the global landscape.

CMA Arunabha Saha
Editor, *Sukhinobhavantu* Newsletter



Source: Conceptualised & designed by the author

From Conscience to Codification: Ethical Foundations of ESG



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Abstract

Environmental, Social and Governance (ESG) frameworks represent the institutionalisation of ethics within contemporary market economies. This article traces the evolution of ESG from philosophical and moral foundations—such as Gandhian trusteeship—to their codification into formal regulatory structures. By placing India’s legislated CSR and reporting ecosystem with global shifts toward mandatory sustainability due diligence, it argues that ESG reflects a transition from voluntary morality to structured governance. The article concludes by highlighting the strategic role of Cost and Management Accountants in embedding ethical considerations into cost audits, risk management, and integrated reporting.

Introduction: From Values to Structured Governance

Ethics has historically guided responsible business behaviour. Yet modern capital markets increasingly require formal systems that translate moral expectations into measurable standards of accountability. ESG frameworks have emerged precisely at this intersection. They do not replace conscience; rather, they codify it into institutional mechanisms through disclosures, metrics and governance processes.

The growing urgency of climate change, widening inequality, and global supply chain complexity has made it clear that ethical responsibility cannot remain a purely voluntary commitment. Instead, it must be embedded within the regulatory and governance architecture of corporations. ESG therefore represents a structural shift in corporate governance—where ethical intent is transformed into measurable performance and enforceable responsibility.

Conceptual Foundation: From Moral Philosophy to Governance Architecture

Ethical governance begins not in boardrooms but in the human conscience. Long before ESG entered

the vocabulary of global finance, philosophical traditions across cultures recognised that economic activity must remain aligned with moral responsibility.

Within the Indian intellectual tradition, the idea of dharma-guided enterprise has deep roots. Economic activity was historically understood as part of a broader ethical order where wealth creation carried responsibilities toward society. Gandhian trusteeship articulated this principle with remarkable clarity, arguing that wealth creators should consider themselves trustees of resources held on behalf of society.

Similar ethical arguments appear in modern economic thought. Economist Amartya Sen emphasised that development must be evaluated not merely through economic output but through the expansion of human capabilities and social justice. This broader understanding of welfare provides an intellectual foundation for the social dimension of ESG.

Within management scholarship, stakeholder theory articulated a comparable shift. Management theorist R. Edward Freeman argued that corporations operate within a network of stakeholders—including employees, communities, suppliers and the environment—and that sustainable success requires



Source: Conceptualised & designed by the author using AI tools

balancing these interests rather than prioritising shareholders alone.

The environmental dimension of ESG was further strengthened through the concept of the triple bottom line, introduced by sustainability thinker John Elkington. The framework proposed that corporate performance should be evaluated across three dimensions—people, planet and profit—thereby integrating social and ecological accountability into traditional financial evaluation.

Together, these intellectual contributions helped shape the contemporary ESG paradigm. Environmental stewardship, social responsibility and governance integrity now function as structured pillars through which corporate conduct is assessed.

ESG therefore represents the institutionalisation of ethical values within modern market systems, translating philosophical ideas about responsibility and justice into measurable standards of corporate accountability.

Indian Regulatory and Institutional Context

India represents one of the most structured regulatory environments for embedding corporate responsibility within law and governance. The country’s approach reflects a distinctive

convergence between philosophical traditions, constitutional principles, and regulatory innovation.

Constitutional Ethos and Ethical Governance

The ethical orientation of India’s governance architecture can be traced to constitutional principles that emphasise social justice, environmental protection and equitable resource distribution. Directive Principles of State Policy articulate the idea that economic development must serve broader societal welfare. This moral foundation provides an important backdrop to India’s modern ESG architecture.

CSR Mandate under the Companies Act, 2013

India became the first country in the world to mandate corporate social responsibility spending through Section 135 of the Companies Act, 2013. The provision requires qualifying companies to allocate at least two percent of their average net profits toward CSR activities aligned with national development priorities. It also mandates the constitution of CSR committees at the board level and requires detailed disclosures in annual reports.

By legislating CSR spending, India effectively translated the philosophical idea of trusteeship into corporate law. The framework institutionalises the expectation that profitable enterprises contribute actively to societal development rather than treating philanthropy as discretionary charity.

SEBI’s Sustainability Disclosure Framework

Alongside CSR mandates, sustainability reporting has also evolved significantly within Indian capital markets. The Securities and Exchange Board of India introduced the Business Responsibility Report framework and later expanded it into the Business Responsibility and Sustainability Report (BRSR). This framework, applicable to the top 1,000 listed companies, requires comprehensive disclosures across environmental, social and governance dimensions.

The introduction of BRSR Core has further strengthened the framework by emphasising measurable indicators and assurance mechanisms. Through these developments, sustainability reporting has gradually transitioned from narrative disclosures toward structured ESG metrics that investors can evaluate more rigorously.

Institutionalisation of Responsible Business

India’s ESG ecosystem is further supported by policy frameworks such as the National Guidelines for Responsible Business Conduct (NGRBC), which articulate nine principles of responsible business behaviour. Together, these developments create a regulatory architecture that embeds ethical responsibility within corporate governance processes.

FROM INNER GOVERNANCE TO INSTITUTIONAL GOVERNANCE — OPERATIONALISING ESG: AN INDIA-GLOBAL DIALOGUE



The major milestones in India’s ESG institutionalisation can be summarised as follows:

Key Indian Milestone	Ethical Link	Institutional Impact
Companies Act Section 135 (2013)	Legislated trusteeship	Mandatory 2% CSR spending
SEBI BRSR (2021 onwards)	Governance disclosure	ESG metrics for listed companies
BRSR Core (2023)	Accountability and assurance	Standardised ESG performance indicators
Constitutional Principles	Social justice and environmental duty	Moral foundation for ESG governance

Global Comparative Perspective

Globally, ESG governance has evolved through diverse institutional pathways. While the ethical foundations remain broadly shared, the regulatory responses differ across jurisdictions.

Stakeholder Capitalism Debates

In the United States, the debate between shareholder primacy and stakeholder capitalism has shaped ESG discourse. Influential developments such as the Business Roundtable’s 2019 statement on corporate purpose signalled a shift toward recognising broader stakeholder responsibilities. However, the regulatory framework in the United States continues to rely heavily on market-driven disclosures rather than extensive legislative mandates.

European Union’s Mandatory Sustainability Governance

The European Union has adopted one of the most comprehensive ESG regulatory regimes in the world. Initiatives such as the Corporate Sustainability Reporting Directive (CSRD), the Sustainable Finance Disclosure Regulation (SFDR), and the Corporate Sustainability Due Diligence Directive (CSDDD) require companies to identify and manage environmental and human rights risks across their

value chains. These regulations signal a decisive transition from voluntary sustainability commitments toward mandatory governance obligations.

The Global Influence of the UN Sustainable Development Goals

At the global level, the United Nations Sustainable Development Goals (SDGs) have provided a universal framework linking business activities to broader social and environmental outcomes. Many corporate ESG strategies now align with SDG targets, enabling organisations to position their sustainability initiatives within a global development agenda.

The contrast between India’s early legislative approach and evolving global frameworks is illustrated below:

ESG Governance Dimension	India	US / Europe	Influence of UN SDGs
Timeline of Formalisation	CSR mandate in 2013	Major ESG regulations emerging post-2020	Global framework since 2015
Primary Focus	Trusteeship and development spending	Disclosure and due diligence	17 global sustainability goals
Enforcement Approach	Regulatory oversight by MCA and SEBI	Litigation, investor pressure, regulatory penalties	Voluntary alignment

This comparative perspective highlights how ESG governance represents a global transition toward institutionalised ethical responsibility.

Role of Cost and Management Accountants

For Cost and Management Accountants, the rise of ESG governance represents a significant expansion in the scope of professional practice. Traditionally associated with cost efficiency, financial reporting and performance management, the discipline is

increasingly being called upon to integrate sustainability considerations into corporate decision-making.

The analytical expertise of CMA professionals places them at the intersection of financial accountability and sustainability measurement. As organisations begin to quantify environmental and social impacts, cost accounting methodologies must evolve to incorporate concepts such as lifecycle costing, carbon accounting and sustainability-linked performance metrics. ESG considerations therefore extend naturally into areas such as resource efficiency, risk assessment and strategic planning.

In practice, this means that CMAs are uniquely positioned to translate ethical commitments into measurable outcomes. Through cost audits and management reporting, they can evaluate the economic implications of sustainability initiatives, assess ESG-related risks within supply chains, and integrate environmental and social metrics into enterprise performance frameworks. Their role increasingly extends beyond compliance toward strategic advisory functions that align financial performance with responsible value creation.

As ESG reporting frameworks become more sophisticated, the profession will also play a crucial role in assurance and verification. By strengthening transparency and measurement credibility, CMA professionals can help ensure that ESG disclosures reflect genuine organisational commitment rather than symbolic compliance.

Way Forward: Codifying Conscience through Integrated Reporting

The future of ESG governance lies in the integration of ethical intent with institutional accountability. One of the most promising mechanisms for achieving this integration is the adoption of integrated reporting frameworks that combine financial performance with broader sustainability metrics.

Integrated reporting encourages organisations to view value creation through multiple forms of capital, including financial, manufactured, human, social, natural and intellectual capital. This broader perspective aligns corporate strategy with long-term sustainability while providing investors with a more comprehensive understanding of organisational performance.

For India, the challenge ahead lies not merely in strengthening ESG disclosures but in deepening the ethical foundations that underpin them. Regulatory frameworks can create structures of accountability, but the effectiveness of these structures ultimately depends on the internalisation of ethical responsibility within corporate leadership and professional practice.

The evolution of ESG—from philosophical ideals to codified regulatory frameworks—reflects a profound transformation in the relationship between markets and morality. India’s governance architecture, rooted in ethical traditions and reinforced through legislative innovation, offers a distinctive model for integrating conscience with institutional accountability.

In this evolving landscape, Cost and Management Accountants play a pivotal role. By embedding sustainability metrics within financial systems and governance processes, they help ensure that ESG becomes not merely a reporting requirement but a strategic framework for responsible value creation.

This article initiates the broader exploration undertaken in this series: understanding how inner ethical governance gradually evolves into institutional systems of accountability, and how ESG can be operationalised within modern economic systems. 

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Tracing the journey from Sustainability as Philanthropy to Strategy

Part II



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The Voluntary Philanthropic Approach

A decade and a half earlier, the words ‘sustainability’ or even ‘corporate social responsibility’ used to be niche jargons that did not enter the mainstream boardroom discussions. Yes, we certainly had businesses, rather businessmen, who were committed to philanthropy and who believed in causes like environmental conservation and societal upliftment. However, these were more of promoters’ own initiatives born out of their personal commitment to give back to the society rather than as part of corporate accountability. A major part of it used to be from the promoters’ pockets and not from the companies’ coffers. Hence, philanthropy of this kind was often separate from corporate strategy and financial decisions.

Often, the philanthropic approach was informal, ad-hoc, unstructured, and not subject to intense audits or external reviews. These also augmented the brand equity of corporates without undergoing much public scrutiny.

CSR – A Mandatory Social Responsibility – Elevating social responsibility to boardroom discussions

Later, with the introduction of the Companies Act, 2013 (the Act), in India, corporate social responsibility (CSR) was introduced as a measure to ensure that companies shouldered some social responsibility or explain why it was not done. Later, CSR spending was made a mandatory requirement subject to penalties for non-compliance. This can be called as a precursor to the ESG and sustainability movement in India, for this is when the larger social and environmental context entered board-level discussions and active budget allocations by the CFO. What used to be voluntary now impinges liquidity and profitability too as it is a charge against profits and not an appropriation of profits. However,

government’s relentless approach meant most businesses have got used to this by now.

Though the Act brought a level of seriousness to the CSR discussions, under the Act, CSR has a different and somewhat narrower meaning than its general connotation. CSR under the Act is limited to the activities listed under Schedule VII to the Act, which though quite comprehensive, does not expressly attempt to link CSR with corporate strategy. In fact, it goes to the extent of saying that the activity should not be something done in the ordinary course of business or something that exclusively benefits employees or their families. Though the intent is laudatory, this has resulted in CSR becoming more of a compliance tick-box, receiving the board’s attention only briefly.

It is very much possible that corporates could have robust CSR programmes, but the strategic decisions, business model and the operating environment could still support unsustainable activities. While CSR did bring sustainability indirectly to the boardroom discussions, it did not fundamentally alter how the businesses functioned. Hence, intent alone cannot change the economic systems. But money can. Investors can.

Sustainability enters capital markets, and boards take notice

Right around the time the world began to take sustainability seriously, around the early-2010s, sustainability began to influence how investors perceived risks. ESG risks or sustainability risks became part of investors’ lexicon, and were deemed an essential aspect of risk management for the boards to oversee.

Climate risks, transition risks, social and demographic risks, governance risks have become mainstream investment conversations with trillions of dollars chasing high ESG-score businesses.

Conversely, investors and lenders have begun to be wary of businesses that have significant exposure to ESG risks, because this directly impacts the expected cash flows. Further, the more the uncertainty, the more the ESG or sustainability risks, and the higher the return expected by investors and lenders. This translates to higher cost of capital for businesses.

And this is where it profoundly impacts the boardroom conversations. When money begins to speak, the entire business sector turns around to listen. It is not enough for businesses to do peripheral CSR spending and tick the necessary legal and regulatory governance checkboxes to appear responsible; it becomes necessary that they actively monitor ESG risks and identify ESG opportunities and make them a part of their corporate strategy and risk management systems.



Regulatory push for sustainability reporting

The demand by investors for sustainability reports to be circulated along with annual reports made the push more real. Now sustainability should not just remain a policy but must be reflected in measures and practices that yielded measurable results. This demand was acknowledged by the regulators too; for instance, SEBI brought in the concept of Business Responsibility Report since 2012, which took the shape of the present Business Responsibility and Sustainability Report (BRSR), that the top 1,000 companies by market capitalization must present as part of the annual reports. The concept of BRSR Core for value chain partners emphasizes the necessity to extend the ESG practices throughout the value chain. This ensures that corporates who cannot visibly continue unsustainable practices do not outsource them to

their suppliers or contractors. The BRSR emphasizes board-level policies supported by procedures and an accountability mechanism as well.

This is how the market forces combined with regulatory policies forces businesses have managed to move sustainability from the margins of philanthropy into the core of business strategy and financial and operational decision-making.

Linking Sustainability with Corporate Strategy and Operations

The corporate strategy should now respond to investor expectations by integrating sustainability from grassroots of operations to the highest levels of stakeholder reporting and disclosure.

The Boards and the management must set the strategic direction of the business after fully incorporating the ESG risks and opportunities, while ensuring that the strategy is financially sound as well. Together, they must identify ESG risks and ways to manage them, identify ESG opportunities and the ways to harness them, weave them into corporate strategy and operations, predict long-term cashflows and asset values based on these, and may perhaps, redefine the mission, vision and policies of the business.

This would change strategic decisions like: how diversification and expansion are pursued, how project proposals and acquisition targets are evaluated, which sources of funding are pursued.

This also impacts tactical and operational decisions like: how emissions are monitored, how hiring decisions are made to ensure inclusion, how compensation is structured to ensure fair pay, how employee morale is measured and kept high, and even how transactions are recorded at the grassroots level

They must in fact redefine the very way in which business success is defined and measured.

What next...

In order to truly reflect sustainability in the corporate strategy, the governance mechanisms should also undergo a change. And especially the way the board is composed and board processes are designed hold much significance. Furthermore, the way the executive compensations are structured and whether they are linked to long-term sustainability is a tell-tale sign of true sustainability. We will discuss these in the subsequent editions of the "Beyond the Balance Sheet" section. 

Reproduced with suitable modifications from the personal writings and posts of Ms. Usha Ganapathy Subramanian.

Tata Group: A Sustainable Partner in Nation Building Remembering Jamsetji Nusserwanji Tata on His Birth Anniversary



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Abstract

The article highlights the visionary leadership of Jamsetji Tata and the evolution of the Tata Group as a model of purpose-driven and responsible industrialization. It emphasizes the group’s commitment to nation-building, inclusive growth, sustainability, and community welfare through initiatives in education, environment, and social development. The concept of “compassionate capitalism” reflects how the Tata legacy continues to balance economic success with ethical governance and societal impact.

Every year in March, India remembers Jamsetji Nusserwanji Tata (1839–1904), the visionary industrialist widely regarded as the Father of Indian Industry. Jamsetji Tata believed that business should serve a purpose far greater than profit. His philosophy was simple yet powerful: industries should strengthen the nation, uplift communities, and create opportunities for future generations.

In 1868, at the age of just 29, Jamsetji Tata founded a trading firm that eventually evolved into the Tata Group, today one of the most respected global business conglomerates. Operating in more than 100 countries across six continents, the group spans sectors ranging from steel, automobiles, power, chemicals, hospitality, and aviation to software and consumer products. It is often described as a “salt-to-software” enterprise.

However, the real strength of the Tata Group lies not only in its industrial achievements but also in its values, sustainability commitments, and deep-rooted social responsibility, which have remained central to the organization for more than a century.

Industry with a National Vision

Jamsetji Tata’s vision was to build institutions that would make India self-reliant. Several landmark initiatives emerged from his foresight:

- **Tata Steel**, which helped build the backbone of India’s industrial infrastructure.

- **Tata Power**, a pioneer in hydroelectric power generation in India.
- **The Taj Mahal Palace Hotel in Mumbai**, symbolizing Indian excellence in hospitality.

Equally important was his belief in education and knowledge development. In 1892, he established the JN Tata Endowment for Higher Education, enabling Indian students to pursue advanced studies abroad.

What makes the Tata Group unique even today is its ownership structure. Nearly 66% of Tata Sons, the holding company, is owned by charitable trusts. This ensures that a large portion of corporate wealth flows back into society through philanthropic initiatives.

Human Values at the Heart of Industry

The Tata philosophy places people at the center of business. A remarkable example is the story behind the Tata Sumo, one of India’s most popular multi-utility vehicles introduced in 1994.

The vehicle was named in honour of Sumant Moolgaokar, the legendary Managing Director of Tata Motors who built the company’s engineering excellence.

The name SUMO comes from:

- “Su” – Sumant
- “Mo” – Moolgaokar



While many assumed the name referred to the Japanese wrestling sport due to the vehicle's rugged appearance, it was actually a tribute to a visionary leader. The Tata Sumo went on to become one of India's most widely used vehicles across both urban and rural regions.

Inclusive Growth: Empowering Workers

Another powerful example of Tata's people-centric approach can be seen in the Munnar tea plantations in Kerala.

For decades, Tata Tea managed the scenic plantations of Munnar. In 2005, the company transferred majority ownership to Kannan Devan Hills Plantations (KDHP), a company largely owned by plantation workers themselves.

This unique model allowed workers to become stakeholders in the enterprise, ensuring dignity, ownership, and long-term livelihood security. Tea from these estates continues to be marketed under the Kannan Devan brand.

Women Power in Manufacturing

The Tata Group has also taken pioneering steps toward gender inclusion in manufacturing.

At the Tata Motors plant in Pimpri-Chinchwad, Pune, Harrier and Safari SUVs are produced by an all-women production team.

Key highlights include:

- A 1,500-member all-women workforce in the Trim-Chassis-Final assembly shop
- Production of 200–240 vehicles per day across three shifts
- Ergonomically designed workstations and specialized equipment
- The Earn and Learn program, allowing women employees to pursue engineering diplomas while working

This initiative represents one of the world's rare automobile assembly lines operated entirely by women, demonstrating the group's commitment to inclusive industrial growth.



Sustainability and Environmental Stewardship

Environmental responsibility is deeply embedded in the Tata philosophy. Across its companies, the group runs several initiatives focused on biodiversity conservation, ecosystem restoration, and climate action.

Notable environmental initiatives include:

- Mithapur Botanical Reserve (Gujarat) by Tata Chemicals, protecting rare plant and bird species.
- Tata Motors Wetland Habitat in Pune, a 245-acre ecological sanctuary supporting migratory birds.
- Mahseer Fish Conservation Project by Tata Power, aimed at protecting the endangered Mahseer species in Indian rivers.
- Coral reef restoration programs supported by Tata hospitality initiatives in coastal regions.

The group is also involved in wildlife and endangered species conservation, working on ecological restoration projects that help revive threatened ecosystems and protect biodiversity.

Sustainability as a Strategic Commitment

The Tata Group integrates sustainability directly into business strategy through initiatives such as Project Aalingana, which focuses on long-term environmental responsibility.

Key sustainability goals include:

- Carbon Net Zero before 2045
- Water Neutrality before 2030
- Zero Waste to Landfill before 2030
- No Net Loss of Biodiversity before 2030

These ambitious goals reflect the group's commitment to aligning economic growth with planetary well-being.

Community Development and Social Impact

Beyond business operations, Tata companies actively contribute to healthcare, education, and rural development.

Some major initiatives include:

- Tata Medical Center in Kolkata, providing advanced cancer treatment and research.
- Tata STRIVE, a national skill development program preparing youth for employment.
- Internet Saathi, which has trained millions of rural women in digital literacy.
- Okhai, a social enterprise empowering rural women artisans.
- Tata Water Mission, promoting safe drinking water and water conservation.

Through these programs, the Tata Group contributes significantly to human capital development and inclusive growth.

Compassionate Capitalism

The Tata Group is often described as practicing “compassionate capitalism.” Unlike many corporations driven purely by financial returns, the group believes that business success must benefit society.

Its guiding values include:

- Ethical governance
- Environmental responsibility
- Social inclusion
- Community development

These principles have earned the Tata name immense trust and credibility over generations.

A Legacy that Continues to Inspire

More than a century after Jamsetji Tata's passing in 1904, his vision continues to guide the organization. Successive leaders—from Sir Dorabji Tata and Sir Ratan Tata to modern leadership—have expanded the group globally while preserving its ethical foundations.

Today, the Tata Group stands not only as a global industrial powerhouse but also as a model for responsible and sustainable business.

Jamsetji Tata once said:

“In a free enterprise, the community is not just another stakeholder in business, but in fact the very purpose of its existence.”

This philosophy continues to make the Tata Group a trusted partner in building a sustainable and inclusive future for India and the world. 

Temple Ecosystems as Sustainable Community Centres



CMA (Dr.) Aditi Dasgupta

Joint Director

The Institute of Cost Accountants of India
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Abstract

Ancient Indian temples functioned as integrated socio-ecological institutions that combined spirituality with sustainable community design. Beyond worship, they operated as decentralised water management systems, food security networks, and cultural-economic hubs. Temple tanks and stepwells harvested rainwater, regulated microclimates, and recharged groundwater, embedding hydrological stewardship within sacred practice. Institutionalised food distribution through annadanam and prasada systems ensured equitable nourishment while sustaining local agricultural cycles. Temple administrations supported artisans, scholars, performers, and traders, generating circular economic activity anchored in ethical redistribution. Examples such as the Brihadeeswara Temple, Meenakshi Amman Temple, Jagannath Temple, Padmanabhaswamy Temple, Golden Temple, and Sri Ranganathaswamy Temple illustrate how sacred architecture fostered water security, food equity, livelihood generation, and cultural continuity. These temple ecosystems demonstrate early models of circular economy and community resilience, offering valuable insights for contemporary sustainability discourse.

Ancient Indian temples evolved as living ecosystems where environmental engineering, social welfare, and economic vitality converged. Their design integrated water systems, kitchens, gardens, educational spaces, and artisan quarters into cohesive community frameworks.

Water management formed a foundational pillar of temple sustainability. Temple tanks (pushkarinis), stepwells, canals, and stone aqueducts harvested monsoon rains, prevented flooding, and recharged aquifers. Sacred association ensured collective maintenance of these water bodies, transforming hydrological infrastructure into a civic and spiritual responsibility. The Brihadeeswara Temple in Thanjavur and the Meenakshi Amman Temple in Madurai exemplify how temple-centred water systems supported urban stability and agricultural continuity.

Food security was institutionalised through annadanam and prasada distribution. Large temple

kitchens developed structured systems of grain storage, local procurement, fuel efficiency, and waste recycling. The Jagannath Temple in Puri sustains one of the largest ritual food distribution systems in the world, while the Golden Temple in Amritsar continues to serve thousands daily through its langar, embodying principles of food equity and shared nourishment. At Sri Ranganathaswamy Temple in Srirangam, organised community kitchens and agricultural endowments historically reinforced local agrarian cycles.

Temples also functioned as economic anchors. Land grants supported farming communities, while ritual demand sustained sculptors, dancers, metalworkers, weavers, and traders. Festivals generated cyclical commerce, hospitality networks, and artisanal production. Temple inscriptions from the Chola and Vijayanagara periods record wage systems, grain banks, and guild structures, reflecting organised economic governance embedded within sacred institutions.

Temple Ecosystems as Sustainable Community Centres

Ancient Indian temples were not just places of worship, but comprehensive community hubs where spirituality, ecological balance, and socio-economic vitality converged.

Water Management



Temple tanks and stepwells harvested rainwater and regulated

Stone aqueducts distributed water for agriculture and daily needs

Food Security



Prasada & annadanam ensured equitable food distribution

Temple kitchens developed efficient grain storage systems

Cultural & Economic Hub



Festivals stimulated trade and crafts, strengthening local economy

Land grants and ritual demand sustained communities

- Temple tanks recharged aquifers and supported agriculture
- Community kitchens provided free meals from local harvest
- Rituals and festivals created ecosystems of trade and arts


Brihadeeswara Temple
Thanjavur


Jagannath Temple
Puri


Meenakshi Temple
Madurai


Golden Temple
Amritsar


Padmanabhaswamy
Thirunibanapuram

Integrated socio-ecological institutions rooted in sustainability and cultural wisdom.

Source: Conceptualised & designed by the author using AI tools

Culturally, temples housed centres of learning in music, mathematics, astronomy, architecture, and philosophy. Libraries, performance halls, and educational patronage preserved and transmitted knowledge systems across generations. The Padmanabhaswamy Temple in Kerala and the coastal Sun Temple at Konark illustrate how temple institutions shaped regional identity, navigation, craft traditions, and environmental stewardship.

Taken together, temple ecosystems reveal a civilisational model where spirituality, sustainability, and social organisation operated within a unified framework. Resource extraction was balanced by regeneration, wealth by redistribution, and infrastructure by ethical responsibility. In contemporary sustainability discourse, these temples stand as early prototypes of decentralised, community-led development rooted in ecological reciprocity and cultural continuity. ▲

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Coral Reefs and Coastal Protection: Nature's Living Breakwaters

Series
IV



CMA Arunabha Saha
Practicing Cost Accountant
Thane

Abstract

Coral reefs, often called the “rainforests of the sea,” serve as vital natural coastal defense systems by dissipating wave energy, stabilizing sediments, and reducing the impact of storms and erosion. Despite occupying less than 1% of the ocean floor, they support immense biodiversity and provide significant economic and environmental benefits, including fisheries, tourism, and shoreline protection. However, climate change and human activities threaten their survival, making conservation and restoration essential for sustaining coastal resilience and marine ecosystems.

Coral reefs are among the most fascinating and productive ecosystems on Earth. Often referred to as the “rainforests of the sea,” coral reefs occupy less than 1% of the ocean floor but support nearly 25% of all marine species. Beyond their biodiversity value, coral reefs perform an extraordinary environmental service — they act as natural coastal defense systems, protecting shorelines from erosion, storm surges, and powerful ocean waves.

In many tropical and subtropical regions of the world, coral reefs form a biological barrier between the open ocean and coastal land. Their complex structures dissipate wave energy, making them essential for safeguarding coastal ecosystems, infrastructure, and communities.

The Biological Structure of Coral Reefs

Coral reefs are built by tiny marine animals called coral polyps, which belong to the phylum Cnidaria. These polyps secrete calcium carbonate (CaCO_3) skeletons that accumulate over centuries to form massive reef structures. Through a symbiotic relationship with microscopic algae called zooxanthellae, corals obtain nutrients and energy via photosynthesis.

This biological partnership allows coral reefs to grow and maintain complex limestone frameworks. Over thousands of years, these structures develop into large reef formations such as fringing reefs, barrier reefs, and atolls.

The physical complexity of coral reefs — with ridges, branches, and porous surfaces — plays a key role in reducing wave energy before it reaches the shoreline.

Coral Reefs as Natural Coastal Protection Systems

One of the most important scientific roles of coral reefs is their ability to function as natural breakwaters. When ocean waves travel across open water, they accumulate significant energy. If these waves directly reach the shoreline, they can cause coastal erosion, flooding, and structural damage.

Coral reefs mitigate this risk through several physical processes:

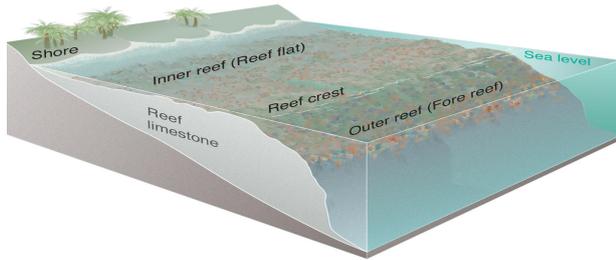
1. Wave Energy Dissipation

Scientific studies indicate that coral reefs can reduce up to 97% of wave energy before waves reach the shore. This occurs because waves break on the reef crest, the shallowest part of the reef. The reef structure forces waves to lose momentum and height.

The dissipation occurs due to:

- Friction between moving water and the reef surface
- Wave breaking over the reef crest
- Energy scattering through the reef's irregular structure

As a result, only small, weakened waves reach the coastline.



2. Coastal Sediment Stabilization

Coral reefs contribute to the formation of coral sand and sediments. As coral fragments break down through biological and mechanical processes, they produce fine carbonate sand that accumulates on beaches.

This continuous sediment supply helps maintain stable beaches and islands, particularly in tropical regions. Without coral-derived sediments, many low-lying islands would gradually disappear due to erosion.

3. Protection Against Storm Surges and Cyclones

During extreme weather events such as cyclones, hurricanes, and typhoons, coral reefs act as a first line of defense. The reef barrier absorbs much of the incoming storm energy.

Research conducted in coastal regions has shown that areas protected by healthy coral reefs experience:

- Lower wave heights
- Reduced coastal flooding
- Less shoreline erosion

For many island nations, coral reefs are as critical as engineered coastal defenses.

Economic and Environmental Value

The protective services provided by coral reefs have immense economic value. According to environmental studies, coral reefs globally provide billions of dollars annually in coastal protection benefits.

If these natural barriers were lost, governments would need to invest heavily in artificial structures such as:

- Sea walls
- Breakwaters
- Coastal barriers

However, engineered structures often cost far more and do not provide the ecological benefits that coral reefs offer.

In addition to coastal protection, coral reefs support:

- Fisheries and food security
- Tourism industries
- Marine biodiversity conservation

For coastal economies, reefs represent a combination of ecological infrastructure and natural capital.

Threats to Coral Reef Systems

Despite their importance, coral reefs are currently under severe stress due to human activities and climate change.

Major threats include:

- Ocean warming, which causes coral bleaching
- Ocean acidification, reducing coral calcification rates
- Pollution and sediment runoff from coastal development
- Overfishing and destructive fishing practices

When coral reefs degrade, their structural complexity declines, reducing their ability to absorb wave energy. This makes coastlines increasingly vulnerable to erosion and storms.

Restoration and Conservation Efforts

Scientists and environmental organizations are now developing innovative strategies to restore and protect coral reef ecosystems. Some of the promising methods include:

- Coral farming and transplantation
- Artificial reef structures
- Marine protected areas
- Selective breeding of heat-resistant corals

These efforts aim to maintain reef resilience in the face of climate change while preserving their protective function for coastal communities.

Conclusion

Coral reefs are not merely beautiful underwater landscapes; they are vital natural infrastructure that protect coastlines and sustain marine biodiversity. Through their complex biological structures, coral reefs dissipate wave energy, stabilize sediments, and reduce the impact of storms.

From a scientific perspective, coral reefs represent a remarkable example of how living ecosystems can perform critical environmental engineering functions. Protecting and restoring these ecosystems is therefore not only an ecological priority but also a crucial strategy for coastal resilience and climate adaptation.

Safeguarding coral reefs means safeguarding our coasts, our oceans, and the communities that depend upon them.

How Mandalas Regulate Brain Waves: A Bridge Between Vedic Wisdom and Modern Neuroscience



Geeta Joshi Brahme
 Founder Sun N Soul
 Certified Mandala Therapist

Abstract

In the modern world, stress is often seen as an emotional or psychological issue. But neuroscience shows us something deeper: stress is primarily a state of the brain. It is the result of the brain being trapped in certain electrical rhythms—called brain waves—for too long. Healing, therefore, is not just about changing thoughts; it is about changing the rhythms of the brain itself. Thousands of years before EEG machines existed, ancient Indian sages understood this intuitively. They developed tools such as mantra, breath, yantra, and mandala to regulate the mind, stabilize awareness, and restore harmony. Today, neuroscience is beginning to confirm what Vedic wisdom always knew: when brain waves are balanced, the mind and body heal naturally.

Understanding Brain Waves

The human brain produces electrical activity in the form of waves. These waves are measured in hertz (Hz), or cycles per second, and they reflect our state of consciousness.

There are five main types of brain waves

Beta waves (13–30 Hz) are associated with active thinking, problem-solving, decision-making, worry, and stress. When we are rushing, multitasking, feeling anxious, or emotionally overwhelmed, our brain is in high Beta. Modern life keeps most people—especially women juggling emotional, professional, and family responsibilities—in this state for most of the day. High Beta keeps the nervous system in “fight or flight” mode, raising cortisol and disturbing hormonal balance.

Alpha waves (8–12 Hz) are the brain’s healing frequency. Alpha is present when we feel calm, safe, present, and lightly focused. In Alpha, blood pressure lowers, digestion improves, breathing slows, and emotional regulation becomes easier. This is the state we enter during gentle creativity, meditation, mindful walking, or mandala drawing.

Theta waves (4–8 Hz) are the gateway to the subconscious mind. This is where deep emotional memories, intuition, trauma, and creativity live. Theta is activated during deep meditation, hypnosis, and expressive art. Emotional healing happens here.

Delta waves (0.5–4 Hz) dominate in deep sleep and physical repair. This is when cells regenerate, the immune system strengthens, and hormones reset.

Gamma waves (30+ Hz) are linked to insight, learning, compassion, and higher awareness. Long-term meditators and creative practitioners often show increased Gamma activity.

Health depends not on staying in one wave, but on moving fluidly between them. Stress occurs when the brain gets stuck in high Beta and loses access to Alpha and Theta.

The Vedic Understanding of Mind and Rhythm

In the Vedic tradition, the mind is not separate from energy. The word chitta refers to the field of consciousness that holds thought, memory, and emotion. The sages understood that the mind naturally seeks harmony when given the right pattern or rhythm.

This is why ancient healing practices use:

- Mantra (repetition of sound)
- Pranayama (rhythmic breathing)
- Yantra and mandala (sacred geometric forms)

The mandala is not art. It is a visual mantra—a rhythmic pattern that entrains the mind back into balance.

The central dot of the mandala is called the Bindu. In Vedic cosmology, the Bindu represents the source of all creation, the still point from which everything arises. When the eyes and mind focus on the center of a mandala, attention moves inward. This inward movement shifts consciousness from outer stimulation (Beta) to inner awareness (Alpha and Theta).

The sages did not have EEGs, but they understood that repetition, symmetry, and circular movement calm the mind and awaken inner coherence.

What Neuroscience Says About Mandalas

Modern brain imaging confirms that mandala drawing creates a state of focused relaxation. When a person draws slow, repetitive, symmetrical patterns:

1. The visual cortex becomes rhythmically engaged
The eyes follow predictable patterns, which signals safety to the brain.
2. The amygdala (fear center) quiets down
Symmetry and repetition reduce threat perception.
3. Alpha waves increase
The brain moves from stress mode into relaxed alertness.
4. Theta waves gently activate emotional processing and subconscious release begin.
5. The prefrontal cortex stabilizes

This improves emotional regulation and decision-making.

This is why people often report feeling calmer, clearer, and emotionally lighter after even five minutes of mandala drawing.

Why Mandalas Are Especially Healing for Women

The female nervous system is highly sensitive to emotional, hormonal, and relational signals. During perimenopause, menopause, and chronic stress, women often experience:

- High Beta (anxiety, overthinking)
- Low Alpha (lack of calm)
- Low Theta (blocked emotional release)
- Disturbed Delta (poor sleep)

Mandala practice gently reverses this.

The slow, circular, repetitive movement of mandala drawing naturally increases Alpha waves, creating a feeling of safety. As safety grows, Theta waves begin to activate, allowing emotions and stored stress to release without re-traumatization. Over time, this restores emotional balance, improves sleep, and supports hormonal regulation.

Unlike forced meditation, mandalas are embodied and visual, making them ideal for people who struggle to sit still or quiet their mind.



Source: Conceptualised & designed by the author

Mandalas as Neuroplasticity Tools

Neuroplasticity means the brain changes based on what we repeatedly do. When a woman draws mandalas daily, she is training her nervous system to associate:

- Stillness with safety
- Focus with pleasure
- Repetition with calm

This slowly rewires stress-based neural pathways into healing-based ones.

Over weeks, the brain becomes better at entering Alpha and Theta states even outside the practice. This is why people often notice improved mood, emotional resilience, and clearer thinking after consistent mandala work.

A Bridge Between Science and Spirit

What Vedic sages called prana flow, neuroscience calls neural coherence.

What they called dhyana, science calls alpha-theta synchronization.

What they symbolized with mandalas, science measures as brain-wave regulation.

Mandalas sit beautifully at the meeting point of ancient wisdom and modern science. They do not require belief. They work through the body, eyes, and nervous system.

When the brain's rhythms return to harmony, the body follows.

When the nervous system feels safe, emotions soften.

When awareness becomes steady, healing unfolds and leads to sustainability in every action and decisions.

Mandala drawing is not about making something beautiful.

It is about teaching the brain to remember peace. 

Uttara Phalguni



Purvi Dalal
Industrial Designer

Today's Nakshatra is 12th in the order and its Uttara Phalguni.

Each Set of 9 nakshatras represent a set of Characteristics belonging to Dev, Manushya and Rakshash Gana. Here is a table to reflects that

NAKSHATRA AND GANAS			
S.No.	Set 1	Set 2	Set 3
1	Ashwini	Bharani	Kritika
2	Punarvasu	Rohini	Ashlesha
3	Hasta	Ardra	Magha
4	Pushya	Purva Phalguni	Chitra
5	Anuradha	Uttar Phalguni	Vishakha
6	Shravana	Purva Ashadha	Jyeshtha
7	Revati	Uttar Ashadha	Mula
8	Mrigashira	Purva Bhadrapad	Dhanishta
9	Swati	Uttar Bhadrapad	Satabhisha
	DEV GANA	MANUSHYA GANA	RAKSHASH GANA

Those belonging to the Dev Gana are generally gentle in nature, they prefer harmony over conflicts and their lesson to learn is know their boundaries before letting everyone into their lives.

They are energetic and can heal but may allow people to take advantage of them.

Those belonging to Manushya Gana have decided to learn their lessons through Human experience and do not care to learn from others mistakes or teachings. They are hardworking and can raise themselves without too much help. They may be mostly self made.

Those belonging to Rakshash Gana may have many toxic traits and they thrive on energies of people from other Ganas. They may be highly egoistic and may not care much about other people's emotions. Can also be narcissistic in nature and require a lot of effort to come out of these patterns. So Beware and keep working on yourself.

To come to today's Nakshatra - Here are a few characteristics of Uttara Phalguni Nakshatra.

Belonging to Manushya Gana and the Nakshatra lord is Sun (King of all Planets). Such people are generally born confident, have a lot of clarity in their thinking and methods of executing their plans.

As mentioned earlier they may be self made and will not be deterred by opinions or mistakes of others.

Uttara Phalguni 1st Pada: belongs to Sagittarius Navamsa whose lord is Jupiter. A combine of qualities of Sun and Jupiter indicates Clarity as well as wisdom, expansion and can mentor with clarity and can be good as well as powerful leaders.

Uttara Phalguni 2nd Pada: belongs to Capricorn Navamsa whose lord is Saturn. Reflects the qualities of Sun and Saturn. A leader who has clarity but also a disciplinarian but may experience some inner conflict due to two opposite energies.

Uttara Phalguni 3rd Pada: belongs to Aquarius Navamsa whose lord is Saturn. These have slightly different qualities than the 2nd Pada. These people are very creative in their pursuits and will approach everything in life based on the talents they carry.

Uttara Phalguni 4th Pada: belongs to Pisces Navamsa whose lord is Jupiter. The characteristics of the 4th Pada is that they are very spiritual and they belong to the last sign where all transformations in life or organizations become a must!

What will strengthen the people belonging to Uttara Phalguni Nakshatra

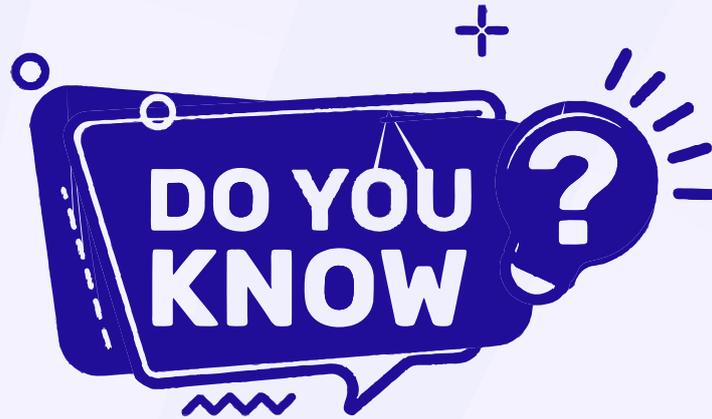
Grow a tree belonging to this Nakshatra in your immediate vicinity of PIPAL (Ficus Religiosa)

Pipal tree has a typical characteristic and that is it can grow in any condition. This is one resilient tree and can store a lot of moisture from land around.

This is also called as one of the *Dev Vruksha* and it is also prayed to in many auspicious occasions.

You will instantly energised just sitting under a Pipal tree. Pipal is an energy giving tree to anyone sitting near it.

Many times it is used as a means to feel grounded and the energy settles within is very calming. 🌳



Do You Know?

Switching from **Arial** to Century Gothic can save up to **30% ink!**

Arial Font	Century Gothic Font
The quick brown fox jumps over the lazy dog.	The quick brown fox jumps over the lazy dog.
Higher Ink Usage	Lower Ink Usage

Century Gothic's thinner letters use less ink during printing.

- Thousands of Pages Printed
- Reduced Printing Costs
- Lower Environmental Impact

A simple font change can make a big difference for sustainability!

Source: Conceptualised & designed by the author using AI tools

A simple change in typography can make a surprising environmental difference. Studies have shown that switching the default document font from Arial to Century Gothic can reduce printer ink consumption by up to 30%. This happens because Century Gothic uses thinner strokes and less dense letterforms, which require less ink during printing. When multiplied across thousands of pages printed in offices, institutions, and educational organizations, this small design choice can significantly reduce ink usage, printing costs, and environmental impact. A simple font change can therefore become a small but meaningful step toward sustainable resource use.

We are in pursuit of improvement and are keen to know your views. Please write to us at ssb.newsletters@icmai.in

5 Questions on Sustainability

1. It is estimated that _____ in economic value tied to nature heightens financial risk exposure for companies failing to act on alignment of land-sector standards with GHG protocol standards
2. Google has reported up to _____ recycled material use in select devices, with 48% recycled plastic across 2025 hardware production
3. FedEx Corp. has introduced a reusable packaging system for B2B logistics, targeting lower _____ across closed-loop shipping networks,
4. Foxconn sustainability roadmap targets ___ percent renewable energy, supplier audits and stronger labour standards across operations
5. It is estimated that nearly ___% of India's ECBs are now routed through GIFT City.

The names of first 5 participants giving correct responses will be declared in the ensuing newsletter. The responses may be sent to ssb.newsletters@icmai.in

CORRECT ANSWERS OF FEBRUARY QUIZ

1	ISO 14092:2026
2	40%
3	European Commission
4	Management Accounting
5	India AI

LAST MONTH WINNER

No winner for last month

Call for articles

Sukhinobhavantu is inviting articles on the theme ESG/ Sustainability or related themes for publishing in April 2026 edition. The articles should be relevant and original. The article should clearly cover/depict the scope, opportunity and potential for cost accountants. It should not exceed 2200 words and references/ sources are to be given wherever required. It should reach us latest by April 14, 2026, by email to ssb.newsletters@icmai.in. In The right for selection of articles vests with SSB. Decision of SSB will be final and binding.

Your talent our pride!

GREAT NEWS FOR CHILDREN!

Your Drawing Can Be Featured in

Sukhinobhavantu

Hello Little Artists! We are happy to invite children aged 6 to 12 years to share their creativity for the Newsletter Sukhinobhavantu.

What Can You Draw?

Children may create drawings based on any of the following ideas:

-  Nature
-  Kindness
-  Family
-  Peace
- 
-  Love
-  Harmony
-  Patriotism
-  Friendship
- 
-  Anything that makes the world a joyful place 
- 

Drawing Instructions (Very Important)

- Use an A4 size page
- Keep a 20 mm header & 20 mm footer
- Stay within the central area
- Do NOT draw in the header or footer

Review & Decision:

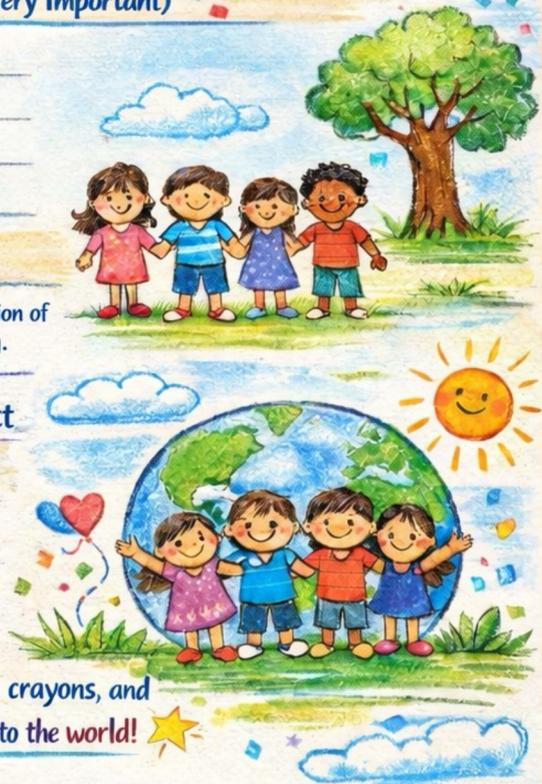
The artwork will be reviewed collectively, and the decision of the Reviewing Authority shall be final and binding.

Please feel free to contact

Aditi Didi

 ssb.newsletters@icmai.in

Pick up your colours, pencils, and crayons, and
Let your imagination bring joy to the world! 





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