

Vol. XXI | April 2025

॥ सुखिनो भवन्तु ॥

(A Monthly Newsletter of Sustainability Standards Board)



The Institute of Cost Accountants of India

(Statutory body under an Act of Parliament)

www.icmai.in

*Behind every successful business decision, there is always a **CMA***

CONTENTS

CHAIRMAN'S MESSAGE 3

SUSTAIN THE SUSTAINABILITY 4

SDGs and Goal Wise Status Report of Indian States (Part- VII)

MONTHLY NEWS 32

Sustainability- A Global Outlook

Sustainability- Indian Context

ARTICLE-I 36

CPCB Redefines Sector Classification to Strengthen ESG-Driven Sustainable Governance

Shri Rakesh Kumar Sharma

ARTICLE-II 40

Eco-Insurance: The Future of Risk Management

Dr. Dileep Kumar S. D.

VASUDHAIVA KUTUMBAKAM WEBINAR SERIES 44

Report of 29th Webinar (28th March 2025)

Report of 30th Webinar (11th April 2025)

Webinar on Draft ICAI Sustainability Standard (ISS 1) on General requirements for disclosure of Sustainability related information

Forthcoming Webinars

REROUTE TO OUR ROOTS 50

Sustainability and Traditional Arts and Crafts

Usha Ganapathy Subramanian

FEATURE 52

Sustainability Measures to be undertaken by the Quick Commerce Companies in India

CMA Dibbendu Roy

THE ART OF EVERYDAY ETIQUETTE 55

Social Media and Professional Branding Etiquette

Usha Ganapathy Subramanian

MANDALA AND SUSTAINABILITY 57

ASK YOUR PSYCHOLOGIST 59

VRUKSH SERIES 61

DO YOU KNOW? 62

SUSTAINABILITY QUIZ-RAPID FIRE ROUND 63

Sustainability Standards Board

Permanent Invitees

CMA Bibhuti Bhushan Nayak
President

CMA T.C.A. Srinivasa Prasad
Vice President

Chairman of Board

CMA (Dr.) Ashish P. Thatte

Members

(in alphabetical order)

CMA A. Sekar

Dr. Aditi Haldar (GRI India Nominee)

CMA Avijit Goswami

CMA Harshad Shamkant Deshpande

CMA Navneet Kumar Jain

CMA Neeraj Dhananjay Joshi

CA Priti Paras Savla (ICAI Nominee)

Dr. Ranjith Krishnan

CMA Siddhartha Pal

Nominee of ASSOCHAM*

Nominee of ICSI*

CMA (Dr.) V. Murali

CMA Venkateswaran Ramakrishnan
(SEBI Nominee)

CMA Vinayranjan P.

Secretary to the Board

CMA Dibbendu Roy

*Details awaited



Message From Chairman, SSB

“Every day is Earth Day, and I vote we start investing in a secure climate future right now.” -Jackie Speier

As we prepare to observe Earth Day on 22nd April, an annual event celebrated to raise awareness about environmental issues and to promote action for the protection of our planet, we reflect on this year’s theme: “Our Power, Our Planet.” This theme encourages individuals, communities, and governments to take collective action in building a sustainable future.

The SSB has already observed the Sustainability Month in January 2025, embracing the motto of “Unity in Diversity.” Our objectives remain aligned with the holistic vision of planet, people, and profit—growing together in harmony and protecting one another for the greater good.

Currently, the SSB is in the final stages of preparing the Water Standards and the Guidance Notes for the Draft Sustainability Standards ISS1 and ISS2. We are also in the process of consulting with company representatives to gather stakeholder feedback, which will help us improve these standards for everyone involved. Additionally, we are finalizing the syllabus for the 4th batch of the Certificate Course on ESG, and the admission will be launched shortly.

We are also excited to announce that the ‘Green Awards’ will soon go live, offering companies an opportunity to showcase their sustainability efforts and benefit from industry recognition.

As we approach the warmer months, we encourage everyone to stay hydrated, protect yourselves from the sweltering heat, and most importantly, practice sustainable habits to keep our environment cool, clean, and pleasant for all.

CMA (Dr.) Ashish P. Thatte

Chairman

Sustainability Standards Board

The Institute of Cost Accountants of India (ICMAI)

April 25, 2025

SDGs and Goal wise Status Report of Indian States (Part-VII)

CMA Arunabha Saha
Practicing Cost Accountant
Thane

In this series, we will review the goal-wise performance along with individual Indicators to determine the performance of Indian states based on NITI Aayog's index (2023-24). The SDG wise status of three states Meghalaya, Mizoram, and Nagaland and comparison of India's stand on index creation. Meghalaya, Mizoram, and Nagaland—three vibrant states of India's Seven Sisters—having a rich tribal heritage, lush hilly terrains, and abundant biodiversity.

Critical Review: Performance Indicators of SDG:

SDG-1 (No Poverty)

Indicators	Meghalaya	Mizoram	Nagaland	India
Head Count ratio as per the Multi-dimensional Poverty Index (%)	27.79	5.30	15.43	14.96
% of households with any unusual member covered by a health scheme or health Insurance	69.00	50.30	22.00	41.00
Persons offered employment as a % of person who demanded employment under- MGNREGA	99.97	100.00	99.62	99.74
% of population (out of total eligible) receiving social protection benefits under PMMVY	35.68	37.31	36.20	46.29
% of household living in kachha houses	4.60	4.80	8.00	4.60
SDG-1 Index score	63.00	74.00	63.00	7.00

1. Multidimensional Poverty Index (Head Count Ratio %)

- **Mizoram:** ✅ *Best performer* – Only **5.30%** in poverty.
- **Nagaland:** **15.43%** – Slightly above India average.
- **Meghalaya:** ⚠️ *Highest poverty* at **27.79%**.

2. Health Insurance Coverage (% of households with unusual member covered)

- **Meghalaya:** ✅ *Top performer* – **69%** coverage.
- **Mizoram:** **50.30%** – Moderate coverage.
- **Nagaland:** ⚠️ *Very low* at **22%**.

3. Employment under MGNREGA (% of demand met)

- **Mizoram:** ✅ *Perfect score* – **100%** demand met.
- **Meghalaya:** **99.97%** – Excellent.
- **Nagaland:** **99.62%** – Also strong.

4. Social Protection under PMMVY (% of eligible receiving benefits)

- Mizoram: 37.31%
- Nagaland: 36.20%
- Meghalaya: 35.68%
- All three northeastern states **lag behind** the national average here.

5. Households in Kachha Houses (%)

- Meghalaya & India: ✅ Lowest at 4.60%
- Mizoram: 4.80%
- Nagaland: ⚠️ Highest at 8%

6. Overall SDG-1 Index Score

- Mizoram: ✅ Highest – 74
- Meghalaya & Nagaland: 63 – Need improvement to match India average.

SDG-2 (Zero Hunger)

Indicators	Meghalaya	Mizoram	Nagaland	India
% of beneficiaries covered under NFSA, 2013	100.00	96.67	94.99	99.01
% of children under 5 years who are underweight	26.60	12.70	26.90	32.10
% of children under 5 years who are stunted	46.50	28.90	32.70	35.50
% of pregnant women aged 15-49 years who are anaemic	45.00	34.00	22.20	52.20
% of women (aged 15-49 years) whose BMI below 18.5	10.80	5.30	11.10	18.70
Rice and wheat produced per unit area (3 years average) (kg/ha)	2,738.04	1,737.40	1,583.30	3,052.30
Gross value Added (constant price) in agriculture per worker (in lakhs/worker)	0.64	Null	0.68	0.86
SDG-2 Index score	53.00	76.00	60.00	52.00

1. % of beneficiary covered under NFSA, 2013

- Meghalaya: ✅ Full coverage – 100%
- Mizoram: 96.67%
- Nagaland: 94.99%

2. % of children under 5 years who are underweight

- Mizoram: ✅ Lowest – 12.7%
- Nagaland & Meghalaya: Around 26-27%

3. % of children under 5 years who are stunted

- Mizoram: ✅ Lowest – 28.9%
- Nagaland: 32.7%
- Meghalaya: ⚠️ Highest – 46.5%

4. % of pregnant women (15–49 yrs) who are anaemic
 - Nagaland: 🟢 Best – 22.2%
 - Mizoram: 34%
 - Meghalaya: 45%
5. % of women (15–49 yrs) with BMI below 18.5
 - Mizoram: 🟢 Lowest – 5.3%
 - Nagaland: 11.1%
 - Meghalaya: 10.8%
6. Rice & Wheat Production per Unit Area (kg/ha)
 - Meghalaya: 2,738.04
 - Mizoram: 1,737.40
 - Nagaland: ⚠️ Lowest – 1,583.30
7. Gross Value Added in Agriculture per Worker (₹ lakhs)
 - Nagaland: ₹0.68 lakh
 - Meghalaya: ₹0.64 lakh
 - Mizoram: Data not available
8. SDG-2 Index Score
 - Mizoram: 🟢 Best performer – 76
 - Nagaland: 60
 - Meghalaya: 53

SDG-3 (Good Health & Well-being)

Indicators	Meghalaya	Mizoram	Nagaland	India
Maternal Mortality Ratio (per 100,000 live birth)	Null	Null	Null	97.00
Under 5 Mortality Rate (per 1,000 live births)	Null	Null	Null	32.00
% of children in the age group 9-11 months fully immunised	96.71	101.10	62.18	93.23
Tuberculosis case notification against target in %	83.15	69.50	82.50	87.13
HIV incidence per 1,000 uninfected population	0.31	0.86	0.48	0.06
Life expectancy	Null	Null	Null	70.00
Suicide rate (per 100,000 population)	6.40	12.40	2.20	12.40
Death rate due to road traffic accidents (per 100,000 population)	4.87	6.75	0.99	12.40
% of institutional deliveries out of the total deliveries reported	71.27	90.69	85.19	97.10
Monthly per capita out-of-pocket expenditure on health as a share of MPCE	10.70	9.90	7.90	13.00
Health worker density per 1,00,000 population	35.41	60.78	8.76	40.45
SDG-3 Index score	71.00	69.00	63.00	77.00

1. **Maternal Mortality Ratio (per 100,000 live births)**
 - Data not available for NE states.
2. **Under-5 Mortality Rate (per 1,000 live births)**
 - Data not available for NE states.
3. **% of children (9–11 months) fully immunised**
 - Mizoram: ✔ Above target – 101.10%
 - Meghalaya: 96.71% – Very good.
 - Nagaland: ⚠ Low – 62.18%
4. **Tuberculosis case notification (%)**
 - Meghalaya: 83.15%
 - Nagaland: 82.50%
 - Mizoram: ⚠ Lowest – 69.50%
5. **HIV incidence per 1,000 uninfected population**
 - Meghalaya: 0.31
 - Nagaland: 0.48
 - Mizoram: ⚠ Highest – 0.86
6. **Life Expectancy**
 - Data unavailable for NE states.
7. **Suicide Rate (per 100,000 population)**
 - Nagaland: ✔ Lowest – 2.20
 - Meghalaya: 6.40
 - Mizoram: ⚠ Highest – 12.40
8. **Death Rate due to Road Traffic Accidents (per 100,000 population)**
 - Nagaland: ✔ Lowest – 0.99
 - Mizoram: 6.75
 - Meghalaya: 4.87
9. **% of Institutional Deliveries**
 - Mizoram: 90.69%
 - Nagaland: 85.19%
 - Meghalaya: ⚠ Lowest – 71.27%
10. **Out-of-pocket Health Expenditure (as % of MPCE)**
 - Nagaland: ✔ Lowest burden – 7.90%
 - Mizoram: 9.90%
 - Meghalaya: 10.70%
11. **Health Worker Density (per 1,00,000 population)**
 - Mizoram: ✔ Best availability – 60.78
 - Meghalaya: 35.41

- **Nagaland:** ⚠️ *Severe shortage* – 8.76

12. SDG-3 Index Score

- **Meghalaya:** 71
- **Mizoram:** 69
- **Nagaland:** ⚠️ *Lowest* – 63

Summary Observations:

- **Mizoram** excels in immunisation and health worker density but struggles with HIV and suicide rates.
- **Nagaland** performs well in safety (low suicide and accident rates) but needs improvement in immunisation and health worker density.
- **Meghalaya** is balanced but has challenges in institutional deliveries and higher health expenditures.

SDG-4 (Quality Education)

Indicators	Meghalaya	Mizoram	Nagaland	India
Adjusted Net Enrolment Rate in elementary education (class 1-8) (%)	100.00	100.00	80.30	96.50
Average annual dropout rate at secondary level (class 9-10)	21.70	11.90	17.50	12.60
Gross Enrolment Ratio in higher secondary (class 11-12) (%)	46.00	61.30	35.80	57.60
% of students in grade VII achieving at least a minimum proficiency level in terms of nationally defined learning outcomes to the pupils at the end of the grade	60.00	70.00	76.00	77.23
Gross enrolment Ratio in higher education (18-23 years)	25.40	32.30	18.80	28.40
% of persons with disability (15 years and above) who have completed at least secondary education	12.30	17.40	11.90	19.30
Gender Parity Index for higher education (18-23 years)	1.24	1.06	1.28	1.01
% of persons 15 years and above who are literate	94.30	99.30	94.40	76.70
% of schools with access to basic infrastructure (electricity and drinking water both)	20.53	81.54	55.85	88.65
% of Schools with computers	18.30	53.50	57.40	47.50
% of trained teacher at secondary level (class 9-10)	62.00	80.80	67.70	92.20
Pupil Teacher ratio at secondary level (class 9-10)	12.00	9.00	10.00	18.00
SDG-4 Index score	48.00	65.00	46.00	62.00

1. **Adjusted Net Enrolment Rate in Elementary Education (%):**
 - Meghalaya & Mizoram: ✔ *Excellent* – 100%, surpassing India's 96.50%
 - Nagaland: ⚠ *Significantly low* – 80.30%
2. **Dropout Rate at Secondary Level (Class 9-10):**
 - Nagaland: 17.50%
 - Mizoram: 11.90% – *Better than national average*
 - Meghalaya: ⚠ *High dropout* – 21.70%
3. **Gross Enrolment Ratio in Higher Secondary (Class 11–12):**
 - Mizoram: ✔ *Best* – 61.30%
 - Meghalaya: 46.00%
 - Nagaland: ⚠ *Lowest* – 35.80%
4. **Grade VII Minimum Proficiency Level Achievement (%):**
 - Nagaland: 76.00%
 - Mizoram: 70.00%
 - Meghalaya: ⚠ *Lagging* – 60.00%
5. **Gross Enrolment Ratio in Higher Education (18–23 yrs):**
 - Mizoram: ✔ *Above national avg* – 32.30%
 - Meghalaya: 25.40%
 - Nagaland: ⚠ *Lowest* – 18.80%
6. **% of Persons with Disability (15+ years) Completed Secondary Education:**
 - Mizoram: 17.40%
 - Meghalaya: 12.30%
 - Nagaland: ⚠ *Lowest* – 11.90%
7. **Gender Parity Index in Higher Education (18–23 yrs):**
 - Nagaland: 1.28, Meghalaya: 1.24 – *More females than males*
 - Mizoram: 1.06
 - All 3 NE states show **female advantage**.
8. **Literacy Rate (15+ years):**
 - All 3 NE States ✔ *Far better*:
 - Mizoram: 99.30%
 - Nagaland: 94.40%
 - Meghalaya: 94.30%
9. **% of Schools with Basic Infrastructure (Electricity & Drinking Water):**
 - Mizoram: 81.54%
 - Nagaland: 55.85%
 - Meghalaya: ⚠ *Very poor* – 20.53%
10. **% of Schools with Computers:**
 - Nagaland: ✔ *Best* – 57.40%
 - Mizoram: 53.50%
 - Meghalaya: ⚠ *Very low* – 18.30%

11. % of Trained Secondary Teachers:

- Mizoram: 80.80%
- Nagaland: 67.70%
- Meghalaya: ⚠️ Lowest – 62.00%

12. Pupil-Teacher Ratio at Secondary Level:

- Lower is better
- Mizoram: ✅ Best – 9
- Nagaland: 10
- Meghalaya: 12

13. SDG-4 Index Score (Composite Education Score)

- Mizoram: ✅ Best performer – 65
- Meghalaya: 48
- Nagaland: ⚠️ Lowest – 46

Key Insights:

- ✅ **Mizoram** is the **top-performing state**, with strong scores in enrolment, gender parity, infrastructure, and literacy.
- ⚠️ **Nagaland** struggles in higher education enrolment, disability inclusion, and trained teachers despite strong literacy.
- ⚠️ **Meghalaya** needs **urgent focus on dropout rates, infrastructure, and trained teachers.**

SDG-5 (Gender Equality)

Indicators	Meghalaya	Mizoram	Nagaland	India
Sex ratio at birth	989.00	969.00	945.00	929.00
Ration of female to male average wage/ salary earnings received among regular wage/ salaried employees	0.86	0.79	0.74	0.76
% of ever married women aged 18-19 years who have ever experience spousal violence (physical/ sexual)	15.00	10.30	6.50	29.20
Ratio of the female to male Labour Force Participation Rate (15-19 years)	0.78	0.67	0.81	0.48
Proportion of women in managerial positions including women in board of directors, in listed companies (per 1,000 persons)	95.24	Null	285.71	210.24
% of currently married women aged 15-49 years who have their demand for family planning satisfied by any modern method	41.40	61.40	68.21	74.10
% of female operated operational land holdings	34.32	11.78	9.85	13.96

% of women (aged 15-49 years) who owns a mobile phone that they themselves use	67.50	82.30	82.50	53.90
% of currently married women (aged 15-49 years) who usually participate in three household decisions	92.30	98.80	99.20	88.70
SDG-5 Index score	58.00	69.00	74.00	49.00

1. Sex Ratio at Birth (females per 1000 males):

- **Meghalaya:** ✅ *Highest* – 989
- **Mizoram:** 969
- **Nagaland:** ⚠️ *Lowest* – 945

All 3 states outperform the national reference value, indicating **better gender balance at birth**.

2. Female to Male Wage Ratio (Regular Employees):

- **Meghalaya:** ✅ *Most equitable* – 0.86
- **Mizoram:** 0.79
- **Nagaland:** ⚠️ 0.74

Meghalaya reflects the **least wage disparity** among the three.

3. Spousal Violence (Women 18–19 years):

- **Nagaland:** ✅ *Safest* – 6.50%
- **Mizoram:** 10.30%
- **Meghalaya:** 15.00%

All three states report **significantly lower levels** of spousal violence than the national benchmark.

4. Female to Male Labour Force Participation (15–19 years):

- **Nagaland:** ✅ *Most inclusive* – 0.81
- **Meghalaya:** 0.78
- **Mizoram:** 0.67

All 3 states surpass the national value, showing **strong youth female workforce presence**.

5. Women in Managerial Positions (per 1,000):

- **Nagaland:** ✅ *Exceptionally high* – 285.71
- **Meghalaya:** 95.24
- **Mizoram:** Data Not Available

Nagaland far exceeds the average, indicating **better female representation in leadership**.

6. Family Planning Needs Met (Married Women 15–49 years):

- **Nagaland:** ✅ *Best performer* – 68.21%
- **Mizoram:** 61.40%
- **Meghalaya:** ⚠️ *Low* – 41.40%

Meghalaya requires urgent attention in this indicator.

7. Female Operational Land Holdings (%):

- **Meghalaya:** ✅ *Highest* – 34.32%
- **Mizoram:** 11.78%
- **Nagaland:** ⚠️ *Lowest* – 9.85%

Meghalaya reflects **greater economic agency for women in agriculture**.

8. Mobile Phone Ownership (Women 15–49 years):

- Nagaland: 🟢 Highest – 82.50%
- Mizoram: 82.30%
- Meghalaya: 67.50%

All 3 states report higher connectivity access for women than the national reference.

9. Women's Participation in Household Decisions (%):

- Nagaland: 🟢 Highest – 99.20%
- Mizoram: 98.80%
- Meghalaya: 92.30%

Empowerment at the household level is **remarkably high** across all three.

10. SDG-5 Index Score:

- Nagaland: 🟢 74
- Mizoram: 69
- Meghalaya: 58

All three states **outperform the national index score**, with Nagaland emerging as the **top performer** in gender equality metrics.

Summary Highlights:

- Nagaland leads in **managerial roles, family planning, and decision-making**, making it the strongest overall on gender equality.
- Meghalaya excels in **sex ratio and land holdings**, showing strong cultural and economic inclusion.
- Mizoram demonstrates **consistency across indicators**, with strong digital access and low gender violence.
- ⚠️ Meghalaya may need focused efforts on **family planning, mobile access, and trained wage equality**.

SDG-6 (Clean Water and Sanitation)

Indicators	Meghalaya	Mizoram	Nagaland	India
% of rural household getting safe and adequate drinking water within premises through PWS	76.53	100.00	86.40	75.50
% of rural population having improved source of drinking water	100.00	100.00	100.00	99.29
% of individual household toilets constructed against target	100.00	100.00	100.00	100.00
% of districts verified to be ODF	100.00	100.00	100.00	100.00
% of schools with functional girls toilets	69.70	69.70	77.10	94.70
Stage of ground Water extraction (%)	4.58	4.58	3.76	50.30
% of block/ mandals/ taluka over-exploited	-	-	-	11.23
SDG-6 Index score	80.00	94.00	86.00	89.00

1. Rural Households with Safe Drinking Water via Piped Water Supply (PWS):

- **Mizoram:** ✅ *Universal coverage* – 100.00%
- **Nagaland:** 86.40%
- **Meghalaya:** ⚠️ 76.53%

All three states outperform the national average (75.50%), with **Mizoram** leading.

2. Rural Population with Improved Drinking Water Source:

- **All Three States:** ✅ 100.00%

Slightly better than India's average of 99.29%, showing **excellent access to improved water sources**.

3. Individual Household Toilets Constructed Against Target:

- **All Three States:** ✅ 100.00%

Full compliance with national targets, matching India's 100.00% success rate.

4. Districts Verified to be Open Defecation Free (ODF):

- **All Three States:** ✅ 100.00%

Perfect performance, in line with India's national average.

5. Schools with Functional Girls' Toilets:

- **Nagaland:** ✅ *Best performer* – 77.10%
- **Meghalaya & Mizoram:** ⚠️ 69.70%

This is a **critical area needing improvement**, as all three fall below the national benchmark.

6. Stage of Groundwater Extraction (%):

- **Nagaland:** ✅ *Most sustainable* – 3.76%
- **Meghalaya & Mizoram:** 4.58%

The Northeast shows **excellent groundwater sustainability**, well below the national average.

7. % of Over-Exploited Blocks/Mandals/Talukas:

- **Data not reported** for all three states

While the absence of data limits conclusions here, it **suggests low groundwater stress** in the Northeast.

SDG-6 Index Scores:

- **Mizoram:** ✅ 94.00
- **Nagaland:** 86.00
- **Meghalaya:** ⚠️ 80.00

Mizoram scores **above national average**, **Nagaland** is **comparable**, while **Meghalaya** slightly lags, largely due to piped water access and school sanitation gaps.

Summary Insights:

- ✅ **Mizoram** leads the region with **universal access** to piped water and **highest SDG-6 score**.
 - ✅ **Nagaland** shows **strong sustainability** in water usage and above-average sanitation coverage.
 - ⚠️ **Meghalaya** needs to improve **piped water coverage** and **school sanitation** to match its peers.
- All three states show **exemplary groundwater sustainability**, far better than national extraction levels.

SDG-7 (Affordable and Clean Energy)

Indicators	Meghalaya	Mizoram	Nagaland	India
% of Household Electrification	100.00	100.00	100.00	100.00
% of LPG/ PNG Connections against no. of Households	68.61	114.03	58.60	96.50
SDG-7 Index score	62.00	100.00	58.00	100.00

1. Household Electrification (%):

- **Meghalaya:** ✅ 100.00%
- **Mizoram:** ✅ 100.00%
- **Nagaland:** ✅ 100.00%

All three states have achieved **full electrification**, matching national standards.

2. LPG/ PNG Connections Against Number of Households (%):

- **Mizoram:** ✅ *Excellent coverage* – 114.03%
- **Meghalaya:** ⚠️ *Moderate* – 68.61%
- **Nagaland:** ⚠️ *Lowest access* – 58.60%

Mizoram stands out with **universal and surplus coverage**, while both Meghalaya and Nagaland are **significantly behind**, indicating a need to expand access to clean cooking fuel.

SDG-7 Index Scores:

- **Mizoram:** ✅ 100.00
- **Meghalaya:** ⚠️ 62.00
- **Nagaland:** ⚠️ 58.00

The disparity in **clean cooking fuel access** is the key reason why Meghalaya and Nagaland trail far behind, despite having **100% electrification**.

Summary Insights:

- ✅ **Mizoram** achieves the highest benchmark with full electrification and **more than universal LPG/PNG coverage**, resulting in the **maximum SDG-7 score**.
- ⚠️ **Meghalaya** and **Nagaland** need focused interventions to expand **clean fuel access** to improve their SDG-7 performance.
- Despite identical progress in electricity access, the **gap in cooking energy** clearly affects their **overall index scores**.

SDG-8 (Decent Work and Economic Growth)

Indicators	Meghalaya	Mizoram	Nagaland	India
Annual growth rate of GDP (constant prices) per capita (%)	2.88	Null	8.58	5.88
Unemployment rate (%) (15-59 years)	6.20	2.30	4.60	3.40
LFPR (%) (15-59 years)	71.70	61.90	74.40	61.60
% of regular wage/ salaried employees in non-agricultural sector without any social security	43.40	11.00	11.90	53.90

% of households with any unusual number with a bank or post office	90.00	95.70	91.70	95.70
Number of functioning branches of commercial banks 1,00,000 population	11.53	18.61	8.89	11.75
Automated Teller Machines per 1,00,000 population	13.79	13.92	15.09	18.39
% of women account holders in PMJOY	58.32	52.62	55.18	56.63
SDG-8 Index score	57.00	81.00	76.00	68.00

1. Annual Growth Rate of GDP per Capita (%):

- Nagaland: ✅ 8.58% — Well above the national average
- Meghalaya: 2.88%
- Mizoram: Data not available

Nagaland shows strong per capita growth, while Meghalaya trails behind.

2. Unemployment Rate (15–59 years):

- Mizoram: ✅ 2.30% — Lowest unemployment
- Nagaland: ⚠️ 4.60%
- Meghalaya: ⚠️ 6.20% — Highest among the three

Lower unemployment rates indicate better labour market absorption in Mizoram and Nagaland.

3. Labor Force Participation Rate (LFPR) (15–59 years):

- Nagaland: ✅ 74.40%
- Meghalaya: ✅ 71.70%
- Mizoram: ⚠️ 61.90%

Nagaland and Meghalaya demonstrate a robust labor force presence compared to the national reference.

4. % of Regular Wage/Salary Workers Without Social Security:

- Mizoram: ✅ 11.00%
- Nagaland: ✅ 11.90%
- Meghalaya: ⚠️ 43.40% — Significantly higher exclusion

Mizoram and Nagaland provide much better social protection to their workforce.

5. % of Households with a Bank/Post Office Account:

- Mizoram: ✅ 95.70%
- Nagaland: ✅ 91.70%
- Meghalaya: ⚠️ 90.00%

High financial inclusion across all states, with Mizoram leading.

6. Bank Branches per 1 Lakh Population:

- Mizoram: ✅ 18.61
- Meghalaya: 11.53
- Nagaland: ⚠️ 8.89

Mizoram has the most accessible banking infrastructure.

7. ATMs per 1 Lakh Population:

- Nagaland: 🟢 15.09
- Mizoram: 13.92
- Meghalaya: 13.79

Nagaland leads in ATM penetration, though still below national average.

8. % of Women Account Holders under PMJDY:

- Meghalaya: 🟢 58.32%
- Nagaland: 55.18%
- Mizoram: ⚠️ 52.62%

Meghalaya has a slightly higher financial inclusion for women.

SDG-8 Index Scores:

- Mizoram: 🟢 81.00
- Nagaland: 🟢 76.00
- Meghalaya: 🟡 57.00

Despite high LFPR, Meghalaya's lower growth rate, higher unemployment, and poor social security coverage pull its score down.

Key Insights:

- Mizoram leads overall with strong financial access, low unemployment, and good social protection.
- Nagaland impresses with high GDP growth, LFPR, and ATM coverage, but has moderate unemployment.
- Meghalaya shows potential in labour force activity but requires urgent improvements in job quality and employment support systems.

SDG- 9 (Industry, Innovation, and Infrastructure)

Indicators	Meghalaya	Mizoram	Nagaland	India
% of targeted habitations connected by all-weather roads under PMGSY	95.68	99.57	95.41	99.70
% of Share of GVA in Manufacturing to total GVA (current price)	9.02	Null	0.83	14.34
Manufacturing employment as a % of total employment	2.63	5.43	6.17	11.42
% of Share of GVA in Services to total GVA (current price)	58.91	Null	61.74	54.18
Services employment as a % of total employment	30.49	45.66	37.78	27.75
Innovation score as per the India Innovation Index	16.00	13.41	11.00	36.40
% of households that own at least one mobile phone	87.40	94.40	94.20	93.30
% of inhabited villages with 3G/4G mobile internet coverage	83.30	77.85	76.22	95.08
SDG-9 Index score	44.00	55.00	50.00	63.00

1. % of Targeted Habitations Connected by All-Weather Roads (PMGSY):

- **Mizoram:** ✓ 99.57% – *Almost fully connected*
- **Meghalaya:** 95.68%
- **Nagaland:** 95.41%

All three states are close to achieving full rural connectivity, with **Mizoram** nearly on par with the national average.

2. Share of Manufacturing in Total GVA (Current Price):

- **Meghalaya:** ✓ 9.02%
- **Nagaland:** ⚠ 0.83% – *Extremely low industrial base*
- **Mizoram:** Data not available

Nagaland has an **underdeveloped manufacturing sector**, while **Meghalaya** fares better but still lags behind India.

3. Manufacturing Employment as % of Total Employment:

- **Nagaland:** ✓ 6.17%
- **Mizoram:** 5.43%
- **Meghalaya:** ⚠ 2.63%

All three states trail behind the national figure, indicating a **weak manufacturing employment base**.

4. Share of Services in GVA (Current Price):

- **Nagaland:** ✓ 61.74%
- **Meghalaya:** 58.91%
- **Mizoram:** Data not available

Nagaland and **Meghalaya** economies are **service-sector dominant**, more so than the national economy.

5. Services Employment as % of Total Employment:

- **Mizoram:** ✓ 45.66%
- **Nagaland:** 37.78%
- **Meghalaya:** 30.49%

Service sector is a **major job provider**, especially in **Mizoram** and **Nagaland**.

6. Innovation Score (India Innovation Index):

- **Meghalaya:** ⚠ 16.00
- **Mizoram:** 13.41
- **Nagaland:** ⚠ 11.00

All three states show **significant gaps in innovation ecosystems**, especially **Nagaland**.

7. % of Households Owning at Least One Mobile Phone:

- **Mizoram:** ✓ 94.40%
- **Nagaland:** 94.20%
- **Meghalaya:** 87.40%

High mobile ownership is a **positive digital inclusion indicator**, particularly for **Mizoram** and **Nagaland**.

8. % of Inhabited Villages with 3G/4G Mobile Internet Coverage:

- **Meghalaya:** 🟢 83.30%
- **Mizoram:** 77.85%
- **Nagaland:** ⚠️ 76.22%

All three states lag behind national levels; **digital infrastructure needs strengthening**, especially in **Nagaland**.

SDG-9 Index Scores:

- **Mizoram:** 🟢 55.00
- **Nagaland:** 50.00
- **Meghalaya:** ⚠️ 44.00

Key Takeaways:

- **Mizoram** leads overall with **better connectivity, services employment, and mobile ownership**.
- **Nagaland** excels in **service-based GVA and employment**, but suffers from a **weak manufacturing base and low innovation score**.
- **Meghalaya** has moderate figures across most indicators but is **weaker in mobile access and manufacturing employment**, pulling down its SDG-9 score.

SDG-10 (Reducing Inequalities)

States	Gini coefficient	% of seats held by women in PRIs	% of SC/ST seats in State Legislative Assembly	Ration of % of female workers to male workers working as professionals and Technical Workers	Rate of total crimes against SCs (per 1,00,000 SC population)	Rate of total crimes against STs (per 1,00,000 ST population)	SDG-10 Index score
Meghalaya	0.25	Null	91.67	169.80	–	–	77.00
Mizoram	0.13	Null	97.50	47.40	410.50	2.80	43.00
Nagaland	0.21	Null	98.33	58.30	Null	–	56.00
India	0.20	46.61	28.57	50.40	28.60	9.60	65.00

1. Gini Coefficient (Income Inequality Index)

(Lower = more equal)

- **Mizoram:** 🟢 0.13 – Most equitable
- **Nagaland:** 0.21
- **Meghalaya:** ⚠️ 0.25 – Highest inequality

Mizoram displays a **high level of income equality**, while **Meghalaya** has room for improvement.

2. % of Seats Held by Women in PRIs (Panchayati Raj Institutions)

- **All States:** Data Not Available

This important gender inclusion metric is **missing** for all three states.

3. % of SC/ST Seats in State Legislative Assembly

- Nagaland: ✅ 98.33%
- Mizoram: 97.50%
- Meghalaya: 91.67%

All three states show **excellent representation of SC/ST communities**, with **Nagaland** leading slightly.

4. Ratio of Female to Male Professionals and Technical Workers (%)

- Meghalaya: 169.80% – *More women than men in professional roles*
- Nagaland: 58.30%
- Mizoram: 47.40%

Meghalaya is a clear standout with a **very high female professional participation**, outperforming both **Nagaland** and **Mizoram**.

5. Rate of Crimes Against SCs (per 1,00,000 SC population)

- Mizoram: ⚠️ 410.50 – *Extremely high*
- Meghalaya, Nagaland: Data Not Available

Mizoram shows an **alarmingly high rate of crimes against SCs**, which significantly impacts its SDG-10 score.

6. Rate of Crimes Against STs (per 1,00,000 ST population)

- Mizoram: ✅ 2.80
- Meghalaya, Nagaland: Data Not Available

Mizoram performs well on this front, but lack of data for the other states prevents full comparison.

SDG-10 Index Scores:

- Meghalaya: ⚠️ 77.00
- Nagaland: ⚠️ 56.00
- Mizoram: ⚠️ 43.00

Key Insights:

- **Meghalaya** scores **highest overall**, thanks to strong **female professional representation** and relatively high SC/ST political inclusion.
- **Nagaland** performs well on **legislative representation** but lags behind in **gender parity in professional sectors**.
- **Mizoram**, despite a low **Gini coefficient (income equality)**, suffers a **major setback** due to high SC crime rates and **low female workforce participation**, pulling down its score.

SDG-11 (Sustainable Cities and Communities)

Indicators	Meghalaya	Mizoram	Nagaland	India
% of urban households living in kachha house	2.10	0.60	2.90	0.90
% of individual household toilets constructed against target SBM (U)	31.66	77.82	91.65	95.29
Deaths due to road accidents in urban areas (per 1,00,000 population)	7.29	3.42	0.50	12.68

% of wards with 100% door to door waste collection (SBM(U))	72.36	100.00	49.75	97.00
% of MSW processed to total MSW generated (SBM(U))	21.62	Null	3.97	78.46
% of wards with 100% source segregation (SBM(U))	52.85	61.95	31.43	90.00
Installed sewage treatment capacity as a % of sewage generated in urban area	-	9.71	-	51.00
SDG-11 Index score	42.00	70.00	38.00	83.00

1. % of Urban Households Living in Kachha Houses

(Lower = better urban housing quality)

- Mizoram: 0.60%
- Meghalaya: 2.10%
- Nagaland: ⚠️ 2.90%

Mizoram performs best in providing **durable housing**, while Nagaland shows the highest proportion of semi-permanent homes.

2. % of Individual Household Toilets Constructed Against Target (SBM-U)

- Nagaland: ✅ 91.65%
- Mizoram: 77.82%
- Meghalaya: ⚠️ 31.66%

Nagaland and Mizoram are closer to their targets, but Meghalaya shows a **significant shortfall** in sanitation coverage.

3. Urban Road Accident Deaths (per 1,00,000 population)

(Lower = safer urban mobility)

- Nagaland: ✅ 0.50
- Mizoram: 3.42
- Meghalaya: ⚠️ 7.29

Nagaland emerges as the **safest** state in terms of **urban road safety**, while Meghalaya faces higher risk levels.

4. % of Wards with 100% Door-to-Door Waste Collection (SBM-U)

- Mizoram: ✅ 100.00%
- Meghalaya: 72.36%
- Nagaland: ⚠️ 49.75%

Mizoram has achieved **complete waste collection coverage**, setting a best practice example.

5. % of Municipal Solid Waste Processed

- Meghalaya: 21.62%
- Nagaland: ⚠️ 3.97%
- Mizoram: Data Not Available

Waste processing remains **low** in both states with available data—a **critical area** needing infrastructure investment.

6. % of Wards with 100% Source Segregation of Waste

- Mizoram: ✅ 61.95%
- Meghalaya: 52.85%
- Nagaland: ⚠️ 31.43%

Mizoram leads in promoting **waste segregation at the source**, contributing to better waste management outcomes.

7. Installed Sewage Treatment Capacity as a % of Urban Sewage Generated

- Mizoram: 9.71%
- Meghalaya & Nagaland: Data Not Available

Even though low, **Mizoram** is the **only one** with measurable sewage treatment capacity, highlighting a gap in **urban sanitation infrastructure** across the region.

SDG-11 Index Scores:

- Mizoram: ⚠️ 70.00 – *Best overall performer*
- Meghalaya: ⚠️ 42.00
- Nagaland: ⚠️ 38.00

Key Insights:

- **Mizoram** shows consistent strength in **waste collection**, **housing**, and **segregation practices**, though **waste processing** and **sewage treatment** still need improvement.
- **Nagaland** excels in **urban safety (lowest accident rate)** and **toilet construction**, but lags in waste infrastructure.
- **Meghalaya** faces **significant gaps in sanitation, waste processing, and road safety**, contributing to its lower score.

SDG-12 (Responsible Consumption & Production)

States	Per capita fossil fuel consumption (in kg)	% use of Nitrogenous fertiliser out of total NPK	Quality of hazardous waste recycled/ utilised to total hazardous waste generated (%)	Plastic waste generated per 1,000 population (MT/ Annum)	% of Bio Medical Waste (BMW) treated to total quantity of BMW generated	SDG-12 Index score
Meghalaya	182.99	–	–	0.06	100.00	76.00
Mizoram	157.97	98.41	–	1.25	100.00	57.00
Nagaland	96.82	100.00	–	0.26	100.00	58.00
India	166.43	65.24	54.90	3.04	91.52	73.00

1. Per Capita Fossil Fuel Consumption (in kg)

- Meghalaya: ✅ 182.99 (*Highest among the three*)
- Mizoram: 157.97
- Nagaland: 96.82

Nagaland stands out with the **lowest per capita fossil fuel use**, aligning well with sustainable energy goals.

Meghalaya records the **highest consumption**, suggesting a greater reliance on conventional fuels.

2. % Use of Nitrogenous Fertilizer Out of Total NPK

- **Nagaland:** ✅ 100.00%
- **Mizoram:** ⚠️ 98.41%
- **Meghalaya:** Data Not Available

Heavy dependence on **nitrogen-based fertilizers (N)** over phosphatic (P) and potassic (K) ones is visible in both Mizoram and Nagaland.

This can lead to **soil degradation and imbalance**, indicating a need for more balanced nutrient application.

3. Quantity of Hazardous Waste Recycled (% of Total Generated)

- All three states: **Data Not Available**

Absence of data makes it hard to assess **industrial hazardous waste practices**, highlighting a data gap that must be addressed.

4. Plastic Waste Generated per 1,000 Population (MT/Annum)

- **Mizoram:** ⚠️ 1.25 (*Highest*)
- **Nagaland:** 0.26
- **Meghalaya:** ✅ 0.06

Meghalaya excels with **minimal plastic waste generation**, reflecting effective consumption or waste policies.

Mizoram may need interventions in **plastic use reduction or recycling systems**.

5. % of Bio-Medical Waste Treated

- All three states: ✅ 100.00%

Excellent **compliance with biomedical waste treatment standards** — a big win for **public health safety and environmental protection**.

SDG-12 Index Scores:

- **Meghalaya:** ⚠️ 76.00 – *Best performer*
- **Nagaland:** ⚠️ 58.00
- **Mizoram:** ⚠️ 57.00

Key Insights:

- **Meghalaya** leads with **minimal plastic waste** and **full BMW treatment**, despite higher fossil fuel use.
- **Nagaland** shows promise in **energy efficiency** but needs to reduce **nitrogen-dominant fertilizer reliance**.
- **Mizoram** lags in **waste management indicators**, especially due to higher **plastic generation**, pulling down its index score.

SDG-13 (Climate Action)

States	No. of human lives lost per 1 crore population due to extreme weather events	Disaster preparedness score as per Disaster Resilience Index	% of renewable energy out of total installed generation capacity (including allocated shares)	DALY rate attributable to air pollution (per 1,00,000 population)	% of industries complying with environmental standards	SDG-13 Index score
Meghalaya	28.13	16.50	75.25	1,798.00	97.93	80.00
Mizoram	Null	16.50	65.50	1,585.00	99.60	78.00
Nagaland	56.20	10.50	49.07	1,408.00	100.00	78.00
India	15.44	19.20	43.28	3,469.00	94.86	67.00

1. No. of Human Lives Lost per 1 Crore Population Due to Extreme Weather Events

- Nagaland: 🟢 56.20 (Highest)
- Meghalaya: 28.13
- Mizoram: Data Not Available

Nagaland faces the **highest vulnerability to extreme weather**, possibly due to landslides or floods.

Meghalaya also sees significant impact, highlighting the need for stronger climate resilience systems.

2. Disaster Preparedness Score (Disaster Resilience Index)

- Meghalaya & Mizoram: 🟡 16.50
- Nagaland: 10.50

Disaster preparedness across all three is relatively **low**, with Nagaland needing urgent attention.

3. % of Renewable Energy in Total Installed Generation Capacity

- Meghalaya: 🟢 75.25%
- Mizoram: 65.50%
- Nagaland: 49.07%

Meghalaya leads with a **high renewable energy mix**, aligning well with SDG-13 targets.

Nagaland shows a need to **scale up renewables**.

4. DALY Rate Attributable to Air Pollution (per 1,00,000 population)

- Nagaland: 🟢 1,408.00 (Lowest/Best)
- Mizoram: 1,585.00
- Meghalaya: 1,798.00

All three perform significantly **better than the national average**, but Meghalaya needs attention on **air quality improvements**.

5. % of Industries Complying with Environmental Standards

- Nagaland: ✅ 100.00%
- Mizoram: 99.60%
- Meghalaya: 97.93%

High **environmental compliance** across the board. Commendable efforts by the states in regulating industrial impact.

SDG-13 Index Scores

- Meghalaya: ⚠️ 80.00 (*Highest*)
- Mizoram & Nagaland: ⚠️ 78.00 (*Slightly lower but comparable*)

Key Insights:

- **Meghalaya** leads with **high renewable energy use** and strong **industrial compliance**, but needs better **disaster readiness**.
- **Mizoram** shows **consistency** across parameters but lacks data on **climate-related fatalities**.
- **Nagaland** excels in **air quality and industrial compliance**, yet scores lowest in **disaster preparedness** and renewable adoption.

SDG-14 - Life Below Water

Is not applicable for the landlock sates, Meghalaya, Mizoram and Nagaland.

SDG-15 (Life on Land)

Indicators	Meghalaya	Mizoram	Nagaland	India
Forest cover as a % of total geographical area	76.00	84.63	73.90	21.71
Tree covered as a & of total geographical area	3.11	2.11	2.20	2.91
Combine of las tow	79.11	86.64	76.10	24.62
% of area covered under afforestation schemes to the total geographical area	0.01	Null	Null	0.40
% change in carbon stock in forest cover	1.34	1.33	-0.44	1.11
% of degraded land over total land area	28.38	34.92	47.05	27.77
% of increase in area of desertification	12.67	47.14	5.37	1.50
No. of cases under Wild life protection Act per million hectares of protected area	20.00	8.00	Null	16.00
SDG-15 Index score	71.00	67.00	74.00	75.00

1. Forest Cover as % of Total Geographical Area

- Mizoram: ✅ 84.63% (*Highest*)
- Meghalaya: 76.00%
- Nagaland: 73.90%

All three states show **excellent forest cover**, far exceeding the national average (21.71%). **Mizoram** leads on this front.

2. Tree Cover as % of Total Geographical Area

- Meghalaya: 3.11%
- Nagaland: 2.20%
- Mizoram: 2.11%

Tree cover is fairly balanced, with **Meghalaya** slightly ahead.

3. Combined Forest + Tree Cover

- Mizoram: ✔ 86.64% (*Highest*)
- Meghalaya: 79.11%
- Nagaland: 76.10%

Again, all three states are **environmental powerhouses** in terms of total green cover.

4. % of Area Covered Under Afforestation Schemes

- Meghalaya: ⚠ 0.01%
- Mizoram & Nagaland: No Data

Despite high natural forest cover, **state-led afforestation initiatives are minimal or unrecorded.**

5. % Change in Carbon Stock in Forest Cover

- Meghalaya: ✔ +1.34%
- Mizoram: +1.33%
- Nagaland: -0.44%

While **Meghalaya** and **Mizoram** show positive trends in carbon sequestration, **Nagaland** is witnessing a **decline**.

6. % of Degraded Land Over Total Land Area

- Nagaland: ✔ 47.05% (*Highest degradation*)
- Mizoram: 34.92%
- Meghalaya: 28.38%

Nagaland shows critical levels of land degradation, which needs urgent ecological restoration.

7. % Increase in Area of Desertification

- Mizoram: 47.14% (*Very High*)
- Meghalaya: 12.67%
- Nagaland: 5.37%

Mizoram faces alarming desertification challenges, despite its vast forest cover.

8. No. of Cases Under Wildlife Protection Act per Million Hectares of Protected Area

- Meghalaya: 20.00
- Mizoram: 8.00
- Nagaland: No Data

Higher cases in **Meghalaya** may imply either **better monitoring or higher conflict**—depends on the interpretation.

SDG-15 Index Scores:

- **Nagaland:** 🟢 **74.00** (*Best performing*)
- **Meghalaya:** **71.00**
- **Mizoram:** **67.00**

Key Insights:

- **Nagaland** has the **highest SDG-15 score**, despite its challenges with degradation and declining carbon stock, indicating strength in other indicators.
- **Mizoram** has phenomenal forest cover but struggles with **desertification and land degradation**.
- **Meghalaya** is well-balanced but has scope to improve afforestation efforts and manage degradation more proactively.

SDG-16 (Peace, Justice, and Strong Institutions)

Indicators	Meghalaya	Mizoram	Nagaland	India
Murder per 1 lakh population	2.20	2.50	0.90	2.10
Cognizable crimes against children per 1 lakh population	35.90	32.00	4.30	36.60
No. of victims of human trafficking per 10 lakh population	0.60	–	–	4.37
No. of mission children per 1,00,000 child population	1.81	0.24	5.00	18.77
No. of courts per 1,00,000 population	3.06	5.95	1.52	1.91
Cases under prevention of Corruption Act and related sections of IPC per 10 lakhs population	2.10	8.13	–	3.00
Charge sheeting rates of IPC crime	26.90	58.00	58.00	71.30
% of children under 5 years whose birth was registered	82.10	99.40	73.20	89.10
% of population covered under Aadhar	77.60	98.07	2.29	95.10
SDG-16 Index score	88.00	84.00	5.00	74.00

1. Murder Rate (per 1 lakh population)

- **Nagaland:** 🟢 **0.90** (*Lowest – safer*)
- **Meghalaya:** **2.20**
- **Mizoram:** **2.50**

Nagaland has a **significantly lower murder rate**, suggesting better peace and order, unlike Mizoram which is slightly above the national average.

2. Cognizable Crimes Against Children (per 1 lakh population)

- Nagaland: ✔ 4.30 (*Exceptionally low*)
- Mizoram: 32.00
- Meghalaya: 35.90

Nagaland again stands out positively with **far fewer crimes against children** than the national and regional averages.

3. Victims of Human Trafficking (per 10 lakh population)

- Meghalaya: 0.60
- Mizoram & Nagaland: No data

Meghalaya reports a **very low number**, indicating positive trends, though data gaps for the other two states exist.

4. Missing Children (per 1 lakh child population)

- Mizoram: ✔ 0.24 (*Lowest*)
- Meghalaya: 1.81
- Nagaland: 5.00

All three states fare **much better than the national average**, especially Mizoram.

5. Number of Courts (per 1 lakh population)

- Mizoram: ✔ 5.95 (*Highest*)
- Meghalaya: 3.06
- Nagaland: 1.52

Mizoram has a robust judicial infrastructure, while Nagaland lags behind.

6. Corruption-Related Cases (per 10 lakh population)

- Mizoram: 8.13
- Meghalaya: 2.10
- Nagaland: No data

High corruption case numbers in Mizoram might reflect **active enforcement** or **greater prevalence**—context needed.

7. Chargesheeting Rate of IPC Crimes

- Meghalaya: 26.90% (*Lowest*)
- Nagaland & Mizoram: ✔ 58.00%

Meghalaya shows a **worryingly low chargesheeting rate**, raising questions about the effectiveness of the justice delivery system.

8. Birth Registration Under Age 5

- Mizoram: ✔ 99.40%
- Meghalaya: 82.10%
- Nagaland: 73.20%

Mizoram excels in civil registration, while Nagaland is significantly behind the national average.

9. Aadhaar Coverage

- Mizoram: ✔ 98.07%
- Meghalaya: 77.60%
- Nagaland: 62.29%

Aadhaar coverage is **still a major gap** in **Nagaland** and to some extent in **Meghalaya**.

SDG-16 Index Score:

- Meghalaya: ✔ 88.00 (*Highest*)
- Mizoram: 84.00
- Nagaland: 65.00

Key Takeaways:

- **Meghalaya** tops the SDG-16 index but needs **urgent improvement in chargesheeting rates and digital/documentation access**.
- **Mizoram** has **strong legal infrastructure** and **excellent registration coverage**, but a **higher corruption case rate**.
- **Nagaland** has **commendably low crime rates**, especially for children and murder, but is **held back by low Aadhaar/birth registration, fewer courts, and lower chargesheeting efficiency**.

The three northeastern states showcase **unique developmental strengths**:

- **Mizoram** leads in institutional infrastructure (SDG-16), sanitation (SDG-11), and birth registration (SDG-3, 16),
- **Nagaland** excels in **peace, forest cover, and minimal crime (SDGs 13, 15, 16)**, and
- **Meghalaya** shows consistent performance in **poverty reduction, forest preservation, and disaster resilience (SDGs 1, 15, 13)**.

This reflects how local governance, geography, and culture shape SDG progress.

Infrastructure and Service Gaps Persist

Despite several bright spots, all three states **lag behind national averages** in key areas:

- **Urban infrastructure and waste processing (SDG-11)**,
 - **Renewable energy adoption in Nagaland and Mizoram (SDG-13)**,
 - **Digital and legal access like Aadhaar coverage and court availability (SDG-16)**, and
 - **Industrial and economic indicators including SDG-9 (industry and innovation)**.
- These gaps highlight the need for **targeted policy investments** and capacity-building.

Data Gaps and Inconsistencies Remain a Challenge

Several indicators—especially in **SDG-12 (responsible consumption)**, **SDG-5 (gender equality)**, and **SDG-8 (decent work)**—have missing or incomplete data for one or more states.

This **undermines the accuracy** of monitoring and calls for **improved statistical systems and state-level data collection** mechanisms.

Need for Balanced & Inclusive Development

While natural resource preservation and social harmony remain strong in these states, **economic growth, industrial diversification, and digital penetration** still lag.

To achieve the 2030 Agenda, these states must **balance environmental stewardship with equitable**

economic development, while ensuring that **no one is left behind**—especially in tribal and rural communities.

Composite Performance:

	2023-24			2020-21		
	Meghalaya	Mizoram	Nagaland	Meghalaya	Mizoram	Nagaland
SDG-1	63	74	63	77	80	73
SDG-2	53	76	60	37	72	64
SDG-3	71	69	63	70	79	61
SDG-4	48	65	46	48	60	39
SDG-5	58	69	74	51	54	48
SDG-6	80	94	86	75	85	87
SDG-7	62	100	58	50	100	69
SDG-8	57	81	76	63	51	48
SDG-9	44	55	50	25	32	30
SDG-10	77	43	56	88	64	46
SDG-11	42	70	38	51	61	48
SDG-12	76	57	58	73	87	91
SDG-13	80	78	78	62	66	69
SDG-15	71	67	74	64	48	63
SDG-16	88	84	65	72	81	79

1. General Performance Overview (2020–21 vs 2023–24)

State	General Trend	Key Gains	Key Declines
Meghalaya	Mixed progress with decline in several SDGs	SDG-2 (Food), SDG-6 (Water), SDG-7 (Energy), SDG-13 (Climate)	SDG-1 (Poverty), SDG-8 (Employment), SDG-10 (Inequality), SDG-11 (Cities)
Mizoram	Strong performance overall	SDG-2, SDG-4, SDG-5, SDG-11	SDG-10 (Inequality), SDG-12 (Consumption)
Nagaland	Moderate progress with volatility	SDG-4, SDG-5, SDG-8, SDG-9, SDG-13	SDG-1 (Poverty), SDG-7 (Energy), SDG-16 (Peace & Justice)

Detailed SDG-Wise Analysis

⚠️ SDG-1: No Poverty

- **Decline in all three states:** Meghalaya (77→63), Mizoram (80→74), Nagaland (73→63)
- Indicates possible **economic vulnerabilities** post-pandemic and lack of deep rural interventions.

⚠️ SDG-2: Zero Hunger

- **Meghalaya improved** (37→53), indicating better nutrition and food security.
- **Mizoram improved** significantly (72→76), but **Nagaland declined** (64→60).

⚠️ SDG-3: Good Health and Well-being

- **Consistent performance** across all states.
- Slight decline in Mizoram and improvement in Nagaland reflects **stable health infrastructure**.

⚠️ SDG-4: Quality Education

- Improvement in Mizoram and Nagaland, **no change in Meghalaya (stagnant at 48)**.
- Nagaland moved up from **poor (39)** to **moderate (46)** but still needs serious attention.

⚠️ SDG-5: Gender Equality

- All states **improved significantly**, with Nagaland rising from 48 to 74 — a major win.
- Indicates progress in **women empowerment and inclusion**.

⚠️ SDG-6: Clean Water and Sanitation

- All three states improved or maintained high performance.
- Mizoram leads with **94**, Nagaland stable at 86, Meghalaya improved to 80.

⚠️ SDG-7: Affordable and Clean Energy

- Meghalaya rose from 50 to 62.
- **Nagaland regressed** from 69 to 58 — needs investment in rural electrification or LPG access.

⚠️ SDG-8: Decent Work and Economic Growth

- Massive gain in **Mizoram (51→81)** and **Nagaland (48→76)** — suggests improved livelihoods or employment indicators.
- Meghalaya declined, indicating emerging economic distress.

⚠️ SDG-9: Industry, Innovation, and Infrastructure

- All three states improved from poor bases, though scores are still low (Meghalaya at 44, Mizoram at 55, Nagaland at 50).
- **Needs greater industrial investment and tech infrastructure.**

⚠️ SDG-10: Reduced Inequality

- Major decline in Mizoram (64→43) and Meghalaya (88→77).
- Indicates possible **inequitable growth** or widening **social/economic divides**.

⚠️ SDG-11: Sustainable Cities and Communities

- **Mizoram improved significantly (61→70)**.
- Nagaland and Meghalaya both declined — points to **urban infrastructure or waste management issues**.

⚠️ SDG-12: Responsible Consumption and Production

- Decline in all three, especially Mizoram (87→57) and Nagaland (91→58).
- Suggests increased **unsustainable consumption** and lack of effective recycling.

⚠️ SDG-13: Climate Action

- Good improvement across all — shows growing climate awareness.
- Meghalaya (62→80), Nagaland (69→78), Mizoram (66→78).

⚠️ SDG-15: Life on Land

- All states improved or held strong; forest protection likely a priority.
- Nagaland saw best improvement (63→74).

⚠️ SDG-16: Peace, Justice and Strong Institutions

- Meghalaya improved sharply (72→88).
- Mizoram maintained high performance (81→84).
- Nagaland declined (79→65) — possible governance or institutional trust challenges.

Critical Observations & Insights

What Worked:

- **Gender, Water, Climate, and Education** improved broadly, showing successful **social schemes and ecological awareness**.
- **Mizoram's holistic gains** in SDG-2, 4, 5, 6, and 11 indicate well-rounded planning.
- **Nagaland's strong recovery in SDG-8 and SDG-9** reflects economic focus.

⚠️ What Needs Urgent Attention:

- **Poverty and Inequality (SDG-1, SDG-10)** worsened across the board.
- **Urban challenges (SDG-11)** intensified in Meghalaya and Nagaland.
- **Nagaland's drop in SDG-16** needs probing into judicial or administrative delays.

Effective Concluding Comments

1. **Balanced growth remains a challenge** — States need to align social progress with economic reforms and urban management.
2. **Nagaland's rising employment and industrial indicators** show promise, but governance and health sectors need reinforcement.
3. **Mizoram emerges as a leader** in social equity and urban resilience but must address economic inequalities and sustainable practices.
4. **Meghalaya's governance and climate strides** are commendable, yet poverty and education must become immediate priorities to maintain its overall development trajectory.


Conclusion:

Overall, while Mizoram demonstrates the most balanced and consistent progress across the SDGs, Meghalaya and Nagaland show sectoral improvements but face critical gaps in poverty reduction, infrastructure, and urban sustainability. A targeted, inclusive, and state-specific approach is essential to accelerate holistic SDG achievement by 2030 across the region.

Sustainability – A Global Outlook


1. IFRS Foundation launches roadmap tool to help jurisdictions plan adoption of ISSB Standards

The IFRS Foundation launched the Jurisdictional Roadmap Development Tool, a key pillar of its Regulatory Implementation Programme, designed to guide jurisdictions in effectively adopting International Sustainability Standards Board (ISSB) Standards.

[Read More.....](#) 


2. EU Council approves 'Stop-the-Clock' plan to delay Sustainability Reporting and Due Diligence Rules

EU member states have approved the Council's position on the "Stop-the-clock" mechanism aimed at simplifying EU sustainability regulations and enhancing business competitiveness.

[Read More.....](#) 

3. SEC drops legal defense of Climate Disclosure Rule, leaving its future uncertain

The SEC voted to stop defending its rules requiring companies to disclose climate risks and greenhouse gas emissions.


[Read More.....](#) 

4. Australia Regulator releases final Climate Disclosure Guide as mandatory reporting begins in 2025

Australia's financial regulator, ASIC, has issued its new Regulatory Guide 280 (RG 280), clarifying compliance expectations

under the country's mandatory climate reporting law.

The law, enacted in September 2024, requires public companies, large proprietary companies, and significant asset owners to disclose climate-related risks, opportunities, and greenhouse gas emissions.

[Read More.....](#) 

5. Greenland lost 55 gigatons of ice in a year. Scientists are racing to find the reasons

The Greenland ice sheet has melted more than 5 trillion tons of ice since 1992. The new experiment aims to collect water vapour by using drones to study how global warming can affect Greenland.

[Read More.....](#) 


6. EFM and Meta partner to drive climate-smart forestry in Washington

The deal will support the transition of 68,000 acres of forestland to climate-smart management in Washington's Olympic Peninsula. In order to deliver 676,000 nature-based carbon removal credits through 2035 and supporting the transition of forestland to climate-smart management.

[Read More.....](#) 

7. Japan's GPIF adopts sustainability investment policy to reduce long-term risks

Japan's Government Pension Investment Fund, the world's largest pension fund, has adopted a sustainability investment policy aimed at mitigating long-term market risks and securing stable returns, according to a policy statement

[Read More.....](#) 




8. China raises \$830M in inaugural Sovereign Green Bond offering

China's Ministry of Finance launched its first-ever sovereign green bonds raising 6 billion yuan (\$830 million) to reinforce the country's commitment to sustainable finance and advance its currency's internationalization.

[Read More.....](#) 

9. Norway's Hafslund Celsio to pioneer Waste-to-Energy Carbon removal retrofit


Norway's Hafslund Celsio is set to become the world's first waste-to-energy facility to integrate carbon capture technology. This move could serve as a model for retrofitting hundreds of similar plants across Europe to remove carbon dioxide from the atmosphere.

[Read More.....](#) 

10. IATA launched the Civil Aviation Decarbonization Organization to manage


the global SAF registry, boosting trust in sustainable aviation

The International Air Transport Association has established the Civil Aviation Decarbonisation Organization to oversee the soon-to-be-launched Sustainable Aviation Fuel Registry, a key initiative aimed at accelerating the aviation sector's shift toward net-zero emissions.

[Read More.....](#) 

11. ESMA recommends simplifying ESG disclosure rules for benchmark administrators in EU


The European Securities and Markets Authority (ESMA) has published the findings of its 2024 Common Supervisory Action (CSA) on environmental, social, and governance (ESG) disclosures under the Benchmarks Regulation (BMR). This marks a pivotal step in ESMA's role as a direct supervisor of benchmark administrators—its first coordinated review with National Competent Authorities (NCAs).

[Read More.....](#) 

Sustainability – Indian Context

1. Social protection in India doubles in 3 Years driven by Government programs

India's social protection coverage has doubled to 48.8 percent in 2024 from 24.4 percent in 2021, driven by government welfare programs, the International Labour Organization said in its latest report The World Social Protection Report 2024-26 credited initiatives such as the Ayushman Bharat health insurance scheme and the eShram portal for contributing to the sharp increase in coverage.

[Read More.....](#) 


2. IREDA raises over \$133M through bonds to bolster green energy financing

Indian Renewable Energy Development Agency Ltd has raised over ₹1,100 crore (\$133 million) through two separate bond issuances to strengthen its financial position and support India's clean energy transition.

[Read More.....](#) 


3. Municipal Green Bonds could unlock \$2.5B with reforms, report says

India's municipal green bond market has the potential to mobilize up to ₹20,000 crore (\$2.5 billion) by 2030, provided targeted reforms and structured support mechanisms are implemented, according to a report released on Wednesday by the CEEW Green Finance Centre.

[Read More.....](#) 


4. Supreme Court halts tree felling in Hyderabad's Kancha Gachibowli

India's municipal green bond market has the potential to mobilize up to ₹20,000 crore (\$2.5 billion) by 2030, provided targeted reforms and structured support mechanisms are implemented, according to a report released on Wednesday by the CEEW Green Finance Centre.

[Read More.....](#) 


5. Supreme Court halts tree felling in Hyderabad's Kancha Gachibowli

The Supreme Court directed the Telangana government to halt all tree-felling and excavation activities being conducted on 400 acres of land in Kancha Gachibowli near the Hyderabad Central University (HCU) campus

[Read More.....](#) 


6. Inox Solar gets land from Odisha Government for Solar Module Manufacturing Plant

INOXGFL Group said the Odisha government has allocated Inox Solar a land parcel to set up a cell module manufacturing plant in the state and set up a cell module manufacturing plant in the state.

[Read More.....](#) 

7. Draft EV Policy 2.0 recommends phasing out of CNG-Driven auto rickshaws in Delhi

The draft of electric vehicle (EV) policy 2.0, which is likely to be announced soon by the Delhi government, recommends the phasing out of CNG-driven auto rickshaws.

[Read More.....](#) 




8. GreenLine Mobility to invest \$1 Billion in India's green trucking fleet

GreenLine Mobility Solutions, a logistics firm backed by the Essar Group, is accelerating its green transportation goals with a \$1 billion investment—including \$275 million in equity from its promoters and investors like Nikhil Kamath, co-founder of Zerodha.

[Read More.....](#) 


9. Diesel demand growth falls to lowest since pandemic

Diesel consumption rose 2 per cent to 91.4 million tonnes in 2024-25 (April 2024 to March 2025) fiscal, according to provisional data released by the Petroleum Planning and Analysis Cell (PPAC) of the Oil Ministry.

[Read More.....](#) 


10. EU Needs to De-Link Climate Issues from Trade Pact Talks; Address Non-Trade Barriers: Goyal

Commerce and Industry Minister Piyush Goyal said it would be difficult to conclude a free trade agreement with the European Union (EU) unless they exclude the climate regulations from the negotiations.

[Read More.....](#) 

11. Tariff War Opens Door for India to Emerge as Global Toy Export Hub

As the US-China tariff war intensifies, the Indian toy industry leaders are calling the situation a “golden opportunity” to position India as a major export hub for toys, especially to the United States, a trade body official said on Monday.

[Read More.....](#) 

CPCB Redefines Sector Classification to Strengthen ESG-Driven Sustainable Governance

Rakesh Kumar Sharma
New Delhi

The Central Pollution Control Board (CPCB) has revamped its sector classification system to enhance environmental governance and align industries with ESG-driven sustainability. Expanding classified sectors from 257 to 419, the new framework categorizes industries into Red, Orange, Green, White and Blue based on their Cumulative Pollution Index (CPI), which assesses pollution across Air, Water, and Hazardous Waste. Key updates include a refined CPI methodology, equal weightage for pollution factors, and incentives such as reduced consent fees, fewer inspections, and extended validity for compliant industries. The CEPI framework facilitates ESG audits, ratings, and reporting under standards like BRSR, GRI etc. To further ease compliance, CPCB's Digital Consent Application Portal will streamline regulatory approvals and monitoring.

This transformation represents a major step in strengthening environmental governance, promoting sustainable industrial growth, and reinforcing India's commitment to ESG principles and climate resilience.

Introduction: The built environment has historically contributed to environmental degradation through resource extraction, habitat destruction, and pollution. However, as industries face increasing scrutiny, sustainability has become an essential priority. Governance ('G') within ESG is pivotal in enforcing and ensuring the effective implementation of environmental ('E') regulations, thereby fostering compliance and sustainability. This alignment fosters long-term value creation for society, stakeholders and businesses while promoting environmental

stewardship.

The industrial sector, which significantly contributes to resource extraction, pollution and habitat destruction, is under increased scrutiny. Addressing these environmental effects is critical for achieving a more sustainable and resilient future.

CPCB's New Sector Classification System : To strengthen environmental governance and streamline pollution control efforts, the Central Pollution Control Board (CPCB) has introduced a revised sector classification system. This new system categorizes industries into five groups based on their pollution potential. The primary objective of this classification is to enhance regulatory oversight, improve consent management, optimize inspection frequency, and establish a more robust pollution control framework across India.

This classification framework will play a crucial role in determining inspection frequencies, guiding industry siting, and supporting the development of pollution control plans. Industries in higher-risk categories will undergo more frequent monitoring, while lower-risk sectors will face reduced regulatory scrutiny. Also, the system facilitates the formation of industry-specific clusters and regional pollution control infrastructure, reinforcing India's commitment to sustainable industrial growth.

Key Changes in the Revised Classification System: Building upon the previous classification system introduced in 2016, CPCB has implemented notable modifications:

A refined approach to calculating the Cumulative Pollution Index (CPI) for a more comprehensive assessment of an industry's pollution impact.

Equal weightage assigned to pollution factors across Air, Water, and Waste, ensuring a holistic evaluation.

Expansion of classified sectors from 257 to 419, accommodating emerging industries and evolving environmental concerns.

New incentives for environment-friendly practices, including 100% wastewater treatment and reuse, adoption of cleaner fuels, and promotion of energy-efficient technologies.

Sub-categorization of industries based on scale of operations, fuel type, and technology, allowing for more tailored regulatory oversight.

The Blue category has been introduced for industries that meet advanced environmental standards, setting a benchmark for sustainable industrial operations.

Pollution Index-Based Categorization: The Pollution Index (PI) is derived based on emissions data, resource consumption, and industry-specific pollution factors. Industries are classified as follows:

Pollution Index (PI)	Category of Sector
$PI > 80$	Red
$55 \leq PI < 80$	Orange
$25 \leq PI < 55$	Green
$PI < 25$	White
$PI = i_{max} + (100 - i_{max}) \left(\frac{i_2 + i_3}{200} \right)$	
Essential Environmental Services for Domestic / Household activities	Blue

#Red (High Pollution Potential), #Orange (Moderate Pollution Potential), #Green (Low Pollution Potential), #White (Non-Polluting Industries) and #Blue (Newly introduced category for industries with specific environmental standards)

Incentives and Compliance Privileges: To encourage industries to adopt sustainable practices, the CPCB has introduced several incentives for those demonstrating high environmental performance:

Reduced consent renewal fees, lowering operational costs for compliant industries.

Fewer regulatory inspections, allowing businesses to focus on sustainability improvements without unnecessary bureaucratic hurdles.

Extended validity periods for consent, rewarding industries that adhere to stringent environmental norms.

This initiative aligns with broader ESG goals by incentivizing industries to transition toward cleaner technologies, circular economy models, and resource efficiency, thereby fostering sustainable industrial growth. These measures not only incentivize businesses to comply but also support India's vision for a low-carbon, resource-efficient economy.

Steps for Industries to Comply with the New System: Industries must follow a structured approach to assess and improve their compliance under the revised classification system. The following steps outline how industries can assess their Cumulative Pollution Index (CPI) and ensure compliance with CPCB's revised classification system:

Collect environmental impact data from operational activities.

Analyze pollutant levels from laboratory reports (Air, Water, and Hazardous Waste).

Monitor maintenance and equipment efficiency affecting pollution control measures.

Assess energy and water usage to identify indirect pollution factors.

Utilize the CPI formula to compute the pollution index.

Categorize pollution levels based on predefined regulatory thresholds.

Data Collection – A Critical Step for Compliance

Data Source	Purpose	Pollution Parameters to Track
Raw Material Components	Identify environmental impact	Toxicity, Biodegradability
Process Materials	Track pollutants used	Chemicals, Solvents, Waste By-products
Lab Reports (Air Quality)	Monitor emissions	CO ₂ , NO _x , PM, VOCs, SO ₂ , Ozone
Lab Reports (Water Quality)	Assess effluent impact	pH, BOD, COD, TSS, Heavy Metals
Hazardous Waste Reports	Track waste disposal	Chemical & Biological Waste Types
Purchase Records	Assess material footprint	Carbon Footprint, Waste Generation
Maintenance Reports	Evaluate equipment efficiency	Machinery Leaks, Emissions
Energy Data	Assess emissions from energy use	CO ₂ , GHGs
Water Data	Track water consumption & discharge	Total Usage, Treatment Efficiency
STP & ETP Logbooks	Evaluate wastewater treatment	Flow Rates, BOD & COD Removal

Detailed CEPI Methodology and Compliance Guidelines : The revised Comprehensive Environmental Pollution Index (CEPI) framework introduces key improvements to ensure industries adhere to updated pollution control norms:

Revised consent application processes for Consent to Establish (CTE), Consent to Operate (CTO), and Grant of Authorization.

Equal weightage for Air, Water, and Hazardous Waste in pollution evaluation.

New scoring metrics for assessing pollutants such as BOD, COD, and hazardous waste generation.

Implementation and Compliance Action Plan : The new CPCB classification guidelines will be mandatory from January 29, 2025, under the “Control of Air Pollution (Grant, Refusal or Cancellation of Consent) Guidelines, 2025.” Now, following are the illustrative key actions for Industries :

Appoint a Lead Compliance Officer – Establish accountability for ensuring adherence to CPCB guidelines.

Evaluate Pollution Index (CPI) – Conduct an industry-specific environmental impact assessment.

Implement Major Compliance Activities:

Secure necessary capital expenditure approvals from the Corporate Finance Team.

Reassess industry classification under the new framework.

File amendment applications where necessary.

Apply for Star Status Recognition for exemplary environmental performance.

Engage Third-Party Environmental Consultants – Ensure accurate calculation and validation of pollution indices.

Coordinate with State Pollution Control Boards (SPCBs) – Stay informed on region-specific regulatory implementations.

Government Initiative for Simplified Compliance: Development of a Digital Consent Application Portal: To streamline regulatory compliance, CPCB is set to launch a centralized online portal for consent applications. This platform will:



Enable real-time tracking of applications and approvals.

Simplify submission of pollution data and compliance reports.


Improve transparency in regulatory interactions.

This portal will provide industries, regulators, and compliance officers with real-time access to application statuses, ensuring faster approvals and enhanced transparency

Conclusion: The implementation of the new CEPI Methodology and Compliance Guidelines will aid organizations in ESG audits, enhance ESG ratings, and support ESG reporting under frameworks like BRSR, GRI, SASB, and TCFD. By aligning with these standards, industries can improve environmental disclosures, ensure regulatory compliance, and strengthen their position in sustainable governance.

The CPCB's revised classification system represents a transformative step toward strengthening environmental governance in India. By aligning industrial operations with stricter pollution

controls and ESG principles, the framework encourages industries to adopt sustainable solutions, enhance operational efficiency, and drive responsible industrial growth.

By proactively aligning with CPCB's revised classification and CEPI framework, industries can not only achieve regulatory compliance but also enhance their ESG performance, attract responsible investors, and contribute to India's broader sustainability ambitions. 

References:

1. <https://cpcb.nic.in/categorization-of-industrial-sectors/>
2. <https://cpcb.nic.in/categorization-of-industrial-sectors-2016/>
3. <https://egazette.gov.in/WriteReadData/2025/260611.pdf>
4. [https://dste.py.gov.in/ppcc/pdf/Industry/18%20\(1\)%20B%20categorisation%20Direction%2012.02.2025.pdf](https://dste.py.gov.in/ppcc/pdf/Industry/18%20(1)%20B%20categorisation%20Direction%2012.02.2025.pdf)

Eco-Insurance: The Future of Risk Management

Dr. Dileep Kumar S. D.

Assistant Professor and Coordinator

PG Department of Commerce

PES Institute of Advanced Management Studies

Shivamogga

Eco-insurance is emerging as a vital tool in combating climate-induced risks by aligning financial protection with sustainability goals. As traditional insurance models falter under rising environmental volatility, eco-insurance offers innovative solutions ranging from crop and biodiversity insurance to parametric and carbon credit coverage. In India, where climate-sensitive livelihoods dominate, it holds transformative potential for resilience and recovery. By means of integrating ESG principles and supporting the SDGs, eco-insurance not only addresses protection gaps but also incentivizes green practices. With policy support, data innovation, and public-private collaboration, eco-insurance can become a cornerstone of India's climate adaptation and sustainable development strategy.

Introduction

The importance for eco-insurance is rapidly growing as climate-related risks intensify, threatening both environmental and economic stability. According to the UN Office for Disaster Risk Reduction (UNDRR), climate-related disasters have increased five fold over the past 50 years, resulting in over \$3.6 trillion in global economic losses. In 2023 alone, natural disasters caused \$250 billion in insured losses globally, as reported by Swiss Re, highlighting a critical gap between actual damage and insured coverage. However, Eco-insurance addresses this gap by offering tailored risk management solutions for environmental threats such as climate risk, biodiversity loss, pollution liabilities, and carbon market fluctuations. Unlike traditional insurance, it supports proactive adaptation and mitigation by incentivizing sustainable practices across sectors. In India, where over 55% of the population relies on climate-sensitive livelihoods like agriculture, the need for eco-insurance is acute. India ranked 7th globally in the 2023 Global Climate Risk Index,

with recurring losses from floods, cyclones, and droughts. Yet, crop insurance penetration remains below 30%, and climate risk coverage in other sectors is minimal.

Moreover, the World Economic Forum's 2024 Global Risks Report lists "Failure to Mitigate Climate Change" and "Extreme Weather Events" among the top three global threats over the next decade. As businesses face growing ESG obligations and governments commit to net-zero goals, eco-insurance offers a strategic pathway to align financial protection with sustainability. In spite of, challenges such as climate data gaps, regulatory uncertainties, and low awareness persist. Addressing these through policy support, public-private partnerships, and innovation is crucial for eco-insurance to become mainstream. In this backdrop, eco-insurance is not just a financial product, it is a necessity in the era of environmental volatility, helping societies absorb shocks, promote resilience, and transition toward a more sustainable future.



Eco-Insurance – The Conceptual Background

Eco-insurance has evolved alongside increasing awareness of climate change and environmental degradation. Its roots can be traced to early insurance responses to natural disasters, but it truly gained momentum after the 2015 Paris Agreement and the subsequent global push for carbon neutrality and sustainability. Initially, the industry's focus was largely reactive covering property damage and business losses from climate-related disasters. Today, however, insurers are taking a more proactive stance, integrating environmental, social, and governance (ESG) principles into their risk models and promoting resilience through insurance products. Several global insurance leaders, including Swiss Re, Munich Re, and AXA, have pioneered eco-insurance models that link climate data, satellite imagery, and AI-driven risk assessments to design sophisticated environmental insurance products.

Eco-insurance refers to insurance products specifically designed to protect against environmental risks while promoting sustainability. Unlike conventional insurance, which typically responds to the aftermath of a disaster, eco-insurance emphasizes prevention, resilience, and eco-friendly recovery. These insurance products often support or incentivize environmentally sustainable practices among

policyholders. The key features of eco-insurance include:

- Coverage for climate-related risks such as floods, storms, and wildfires.
- Premium incentives for adopting green technologies or sustainable practices.
- Investment in sustainable infrastructure and ecosystem restoration.
- Parametric insurance models that offer quicker payouts based on predefined triggers (e.g., rainfall levels, wind speed).

Types of Eco-Insurance

- Green Property Insurance:** This covers buildings and infrastructure developed using eco-friendly materials or designed with energy efficiency in mind. In the event of damage, these policies may include benefits for rebuilding using green technologies.
- Crop and Agricultural Insurance:** Focused on helping farmers adapt to changing weather patterns, these policies often include incentives for adopting climate-smart agriculture, such as drought-resistant crops or organic farming techniques.
- Parametric Insurance:** Offers predetermined payouts based on the occurrence of a specific event, such as an earthquake of a certain magnitude or rainfall below a threshold. This



is especially useful in disaster-prone regions where quick recovery is essential.

- 4) **Carbon Credit Insurance:** Provides protection to companies participating in carbon markets by insuring the value of carbon credits against price volatility, regulatory changes, or fraud.
- 5) **Renewable Energy Insurance:** Tailored for solar, wind, and other renewable energy projects, covering risks related to equipment damage, delays, and resource variability.
- 6) **Biodiversity and Ecosystem Insurance:** Protects natural assets such as forests, coral reefs, and wetlands that provide ecosystem services (e.g., flood mitigation, carbon sequestration). Insurance payouts may be used to restore or protect these resources after environmental damage.

Why Eco-Insurance is Vital for India?

As climate change accelerates the frequency and severity of natural disasters in India such as floods, cyclones, droughts, and heatwaves etc., traditional insurance mechanisms are struggling to provide timely and adequate relief. **Eco-insurance** emerges as a critical innovation in this context, designed not only to insure against environmental risks but also to promote sustainable practices and climate resilience. India ranks **7th on the Global Climate Risk Index 2021**, with economic losses of over **\$87 billion** due to climate-related disasters in the last two

decades (Germanwatch). According to the **RBI's Climate Risk and Sustainable Finance report (2023)**, climate-induced events could potentially shave off **2.5–4.5% of India's GDP by 2030**. Eco-insurance can help mitigate these losses by offering coverage linked to environmental variables, incentivizing green behavior, and supporting faster recovery. However, some of the important initiatives are presented below:

- 1) **Pradhan Mantri Fasal Bima Yojana (PMFBY):** India's flagship crop insurance program protects farmers from yield loss due to extreme weather. In 2022–23, claims worth **Rs. 34,000 crore** were settled, aiding over **1.5 crore** farmers. There's growing demand to integrate climate-smart practices into this scheme to reduce long-term risk.
- 2) **Parametric Insurance Pilots:** NGOs and insurtech startups like *GramCover* and *Weather Risk Management Services* are running pilots in flood-prone Bihar and Assam. These offer quick payouts based on weather triggers, with minimal documentation and empowering vulnerable communities.
- 3) **Green Insurance for Solar Projects:** IRDAI's 2024 directive encourages insurers to support renewable energy assets. For example, *Tata AIG* has launched specialized insurance for solar rooftop and utility-scale projects, covering climate-related operational risks.

- 4) **Index-Based Livestock Insurance:** Deployed in arid regions of Rajasthan and Gujarat, this model provides coverage for heat-related livestock mortality, protecting rural livelihoods.

Eco-Insurance and the SDGs

Eco-insurance, a rapidly evolving segment within the insurance industry, plays a vital role in addressing the growing environmental risks caused by climate change. By integrating sustainability into financial protection mechanisms, eco-insurance aligns closely with the **United Nations Sustainable Development Goals (SDGs)**, a global blueprint for peace, prosperity, and environmental resilience by 2030. **Alignment with Key SDGs such as (1) SDG -1, (No Poverty),** Eco-insurance protects vulnerable communities from climate shocks. For example, index-based crop and livestock insurance schemes in India and sub-Saharan Africa provide a financial buffer to farmers, helping them recover without falling into poverty. **(2) SDG -11, (Sustainable Cities and Communities),** Urban areas prone to flooding, landslides, and heatwaves benefit from climate-resilient infrastructure insurance. Policies that support green buildings and nature-based solutions reduce urban vulnerability and promote resilience. **(3) SDG -13, (Climate Action),** Eco-insurance fosters climate preparedness. Parametric insurance offers quicker payouts, enabling timely disaster response. Insurers are increasingly incorporating ESG factors and climate risk modeling, nudging businesses toward low-carbon operations. **(4) SDG -15, (Life on Land),** Biodiversity insurance protects forests, wetlands, and coral reefs. For example, in Mexico, a coral reef insurance fund ensures post-storm restoration of the Mesoamerican Reef an ecosystem crucial for coastal protection and marine biodiversity.

According to the **UNEP Finance Initiative (2022)**, aligning insurance with SDGs can mobilize **trillions in green investment**, reduce disaster recovery costs by **30–40%**, and support sustainable development across sectors. As of 2023, over **\$2 billion worth of parametric insurance products**

have been implemented globally to support climate-vulnerable regions.

Conclusion

Eco-insurance stands at the intersection of environmental sustainability and financial resilience, offering a transformative approach to managing escalating climate risks. In a country like India, where a significant portion of the population depends on climate-sensitive sectors. Eco-insurance is not just desirable but essential. It supports faster recovery, encourages green practices, and aligns with global commitments such as the SDGs and the Paris Agreement. However, its widespread adoption demands a robust ecosystem of data infrastructure, regulatory clarity, and public-private collaboration. Moving forward, integrating eco-insurance into national climate adaptation plans, mainstreaming it into ESG frameworks, and leveraging technologies like AI, satellite data, and blockchain can unlock its full potential. Insurers must evolve from risk carriers to climate risk partners. With targeted policy support and awareness campaigns, eco-insurance can become a cornerstone of India's climate resilience strategy such as safeguarding livelihoods, preserving biodiversity, and driving sustainable development in an increasingly uncertain world. 

References:

- <https://www.bhartiataxa.com/be-smart/life/insurance-and-sustainable-development>
- <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/560821632197166715/the-insurance-sector-s-contribution-to-the-sustainable-development-goals-sdgs>
- <https://sdgs.un.org/>
- <https://irdai.gov.in/>
- https://www.casact.org/sites/default/files/database/forum_14wforum_zona_roll_law.pdf
- <https://axaxl.com/insurance/product-families/environmental>
- <https://www.iii.org/article/green-insurance>



29th Webinar Solar Projects: Demystifying Myths

March 28, 2025 from 4 to 5:15 p.m.



Shri Devendra Kulai



CMA Dibbendu Roy

Shri Devendra Kulai, Cold and Supply Chain Expert, was the esteemed speaker for the 29th webinar of the Vasudhaiva Kutumbakam series, held on 28th March 2025. The session focused on the theme: “Solar Projects – Demystifying Myths.”

Mr. Kulai began by tracing the evolution of solar energy and highlighting the key features of renewable energy—specifically its zero carbon footprint and self-replenishing nature. He then explained the basic mechanism of converting solar energy into electricity for household use.

A significant portion of the webinar was dedicated to busting common myths surrounding solar energy. Mr. Kulai provided clear, science-backed explanations to debunk each myth, making the topic accessible to all participants.

He further discussed how solar energy is accounted for in our daily lives, along with the broader mechanisms involved in its adoption. The financial aspects were also addressed, including the payback period and return on investment associated with solar power installations.

The speaker elaborated on the various incentives and schemes offered by the Government of India and state governments to promote the adoption of solar energy. He also touched upon the challenges in implementation and highlighted how solar power has evolved over time, especially with the support of new government initiatives aimed at clean energy solutions.

The session concluded with an engaging Q&A segment, during which Mr. Kulai responded to several thought-provoking questions from the audience. The webinar ended with concluding remarks and a vote of thanks delivered by CMA Dibbendu Roy, Secretary, SSB, ICAI.



30th Webinar

Bamboo and Sustainability: Key Takeaways for CMAs

April 11, 2025 from 4 to 5:15 p.m.



CMA Jyotsna Rajpal



CMA Dibbendu Roy

The Sustainability Standards Board (SSB) of the Institute of Cost Accountants of India (ICMAI) organized an insightful webinar on “Bamboo and Sustainability: Key Takeaways for CMAs” on April 11, 2025. The session was led by CMA Jyotsna Rajpal, a Practising Cost Accountant, who provided an in-depth perspective on the role of bamboo as a sustainable resource and its relevance to the profession of Cost and Management Accountants (CMAs). CMA Rajpal began the session by outlining the objectives of the webinar, emphasizing the significance of bamboo in enhancing environmental sustainability due to its versatile applications. The presentation was structured around the concept of the “Three Ps” – Planet, People, and Profit, highlighting the holistic sustainability benefits of bamboo.

Bamboo contributes significantly to environmental conservation by helping combat global warming, reducing carbon emissions, and supporting biodiversity. As a fast-growing, renewable plant, it plays a crucial role in ecological restoration and soil conservation.

The speaker underlined the social impact of bamboo, particularly in supporting rural livelihoods and indigenous communities. Bamboo can be transformed into a wide range of artefacts and products, possesses medicinal properties, and even serves as a renewable energy source—such as ethanol—providing affordable energy solutions to local populations.

From an economic perspective, bamboo is a highly sustainable cash crop. It is non-cyclical, requires minimal maintenance, and thrives in diverse terrains, particularly in hilly regions. Its high water

retention enhances agricultural productivity. Moreover, bamboo plantation involves low input costs and results in zero waste, as every part of the plant is reusable. It also offers potential in replacing fossil fuels and reducing dependency on crude oil through its application in biofuel production.

CMA Rajpal emphasized the strategic role CMAs can play in promoting and measuring sustainability initiatives. The discussion covered the role of bamboo in reducing carbon footprints, the economic potential of bamboo in achieving sustainable development goals.

The opportunity for Carbon Credit Trading through bamboo plantation initiatives, by increasing oxygen levels and reducing carbon emissions—aligning with global ESG and climate change commitments.

The session concluded with an engaging Q&A round, where participants posed insightful questions, sparking meaningful discussions around sustainability practices and bamboo-based innovations.

The webinar ended with concluding remarks and a vote of thanks by CMA Dibbendu Roy, Secretary, SSB, ICAI, who appreciated the speaker for her valuable insights and thanked all participants for their active engagement.

Announcement

SSB is happy to commence an exclusive section called Sustainability Guidance Cell from March 2025. The objective of the cell is resolving various queries of members in areas of sustainability. The responses would be replied with respect to various queries within 14 days in response to the queries. We request you write to us at ssb@icmai.in. The queries will be selected on “First Come; First Serve Basis”.

Webinar on Draft ICMAI Sustainability Standard (ISS 1) on General requirements for disclosure of Sustainability related information

April 4, 2025, from 4:00 to 5:15 p.m.



CMA (Dr.) S.K. Gupta



CMA Dibbendu Roy

CMA (Dr.) S.K. Gupta, Managing Director of ICMAI RVO, CEO of SAO, and COO of ICMAI International ADR Chamber, was the distinguished speaker at a webinar held on April 4, 2025, from 4:00 to 5:15 p.m. Dr. Gupta began his presentation by discussing the ongoing changes and transformations in disruptive business models. He introduced the concept of sustainability in the context of a VUCAFU world (Volatility, Uncertainty, Complexity, Ambiguity, Fragility, and Unpredictability), emphasizing the need for businesses to adapt and thrive amid these challenges.

He then elaborated on the virtues of sustainable development and how sustainability reporting has evolved over the years. Dr. Gupta highlighted the benefits of sustainability reporting and the growing necessity for standardized frameworks to enhance corporate disclosures—particularly in relation to Business Responsibility and Sustainability Reporting (BRSR). A key highlight of his talk was the pioneering role of ICMAI as the only professional institute in India to have developed two sustainability standards. These standards are adapted from ISSB's IFRS Standards—ISS1 (General Requirements for Disclosure of Sustainability-related Financial Information) and ISS2 (Climate-related Disclosures)—infused with a Management Accounting perspective. These sector-agnostic draft standards follow the structure and template of Cost Accounting Standards and are designed to align with stakeholder interests. Dr. Gupta presented the framework of ISS1, detailing its components: objective, scope, principles of identification and measurement, governance, strategy, risk management, metrics and targets, and presentation and disclosures.

The session concluded with an engaging Q&A segment, during which Dr. Gupta thoughtfully addressed several insightful questions from the audience. The webinar wrapped up with concluding remarks and a vote of thanks delivered by CMA Dibbendu Roy, Secretary, SSB, ICMAI.

॥ सुखिनो भवन्तु ॥

FORTHCOMING VASUDHAIVA KUTUMBAKAM SERIES



ICMAI
THE INSTITUTE OF
COST ACCOUNTANTS OF INDIA
(Statutory body under an Act of Parliament)



31st
Vasudhaiva Kutumbakam
VK Webinar Series of the Sustainability Standards Board

Mandala for Professionals
(A Soft Skill Session)
Friday, 25th April, 2025 from 4:00 to 5:15 pm
Organised by: Sustainability Standards Board (SSB)



CMA Bibhuti Bhushan Nayak
President, ICMAI



CMA T C A Srinivasa Prasad
Vice President, ICMAI



CMA (Dr.) Ashish P. Thatte
Chairman, SSB, ICMAI

SPEAKER


Ms. Geeta Joshi Brahme
Founder - Sun n Soul
Certified Mandala Therapist

CPE Credit 1 Hour

For queries, email to
ssb@icmai.in

Web Link:
https://eicmai.in/Webinar_Portal/Members/Memberlogin.aspx

Behind every successful business decision, there is always a CMA

**CPE Credit
1 Hour**

Web Link:

https://eicmai.in/Webinar_Portal/Members/Memberlogin.aspx

FORTHCOMING WEBINAR



ICMAI
THE INSTITUTE OF
COST ACCOUNTANTS OF INDIA
(Statutory body under an Act of Parliament)



Webinar on
Draft ICMAI Sustainability Standard (ISS 2)
on Climate Related Disclosures
2nd May 2025 from 4 to 5: 15 pm (IST)



CMA Bibhuti Bhushan Nayak
President, ICMAI



CMA T C A Srinivasa Prasad
Vice President, ICMAI

CPE: 1 hour

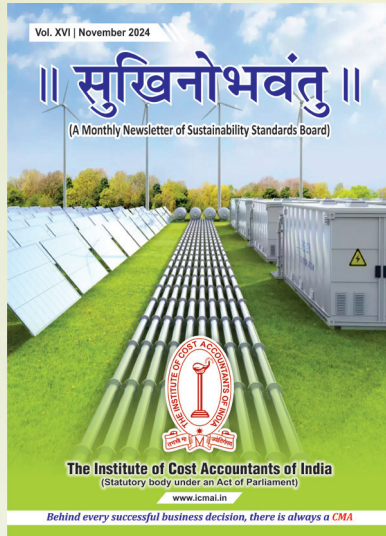
Speaker


CMA (Dr.) Ashish P. Thatte
Chairman, SSB, ICMAI

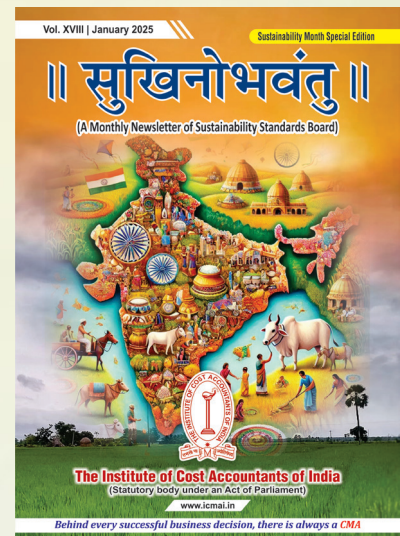


CMA (Dr.) S. K. Gupta
MD, ICMAI Registered Valuers Organization
CEO, ICMAI Social Auditors Organization
COO, ICMAI International ADR Chamber

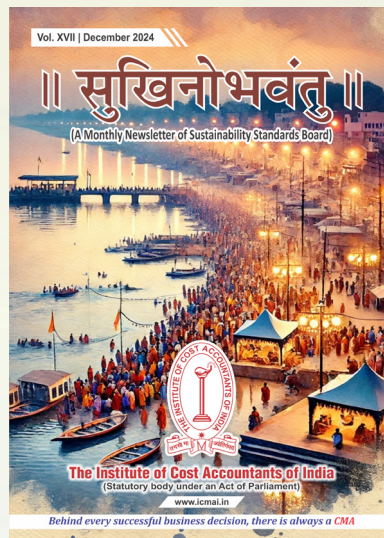
Past Issues of Sukhinobhavantu



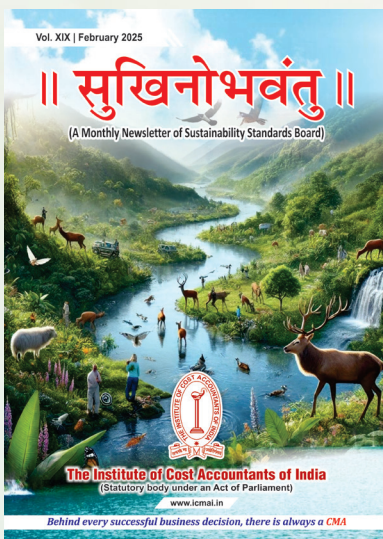
https://icmai.in/upload/Institute/Updates/SSB_Nov_2024.pdf



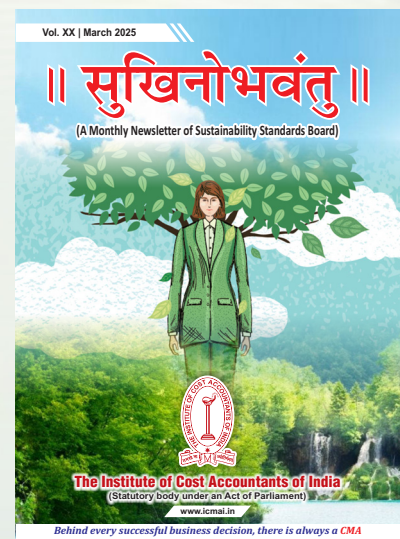
https://icmai.in/upload/Institute/Updates/SSB_Jan_2025.pdf



https://icmai.in/upload/Institute/Updates/SSB_Dec_2024.pdf



https://icmai.in/upload/Institute/Updates/SSB_Feb_2025.pdf



https://icmai.in/upload/Institute/Updates/SSB_March_2025.pdf

Reviving Lost Grains: The Millet Revolution in India

Usha Ganapathy Subramanian
Practicing Company Secretary
Chennai

Introduction

Today, right from supermarkets to swanky restaurants have a section dedicated for millets and millet-based dishes. And they are priced a bit on the expensive side these days contrary to what was once considered a poor man's food. Is it the new food fad? No, in fact, these are ancient grains that were once the mainstay of rural India much like today's staples – rice and wheat, and which had taken a backseat for a few decades due to green revolution and lack of awareness. However, as awareness spreads among the population on the health benefits of millets, they are making a quite but sure-footed comeback. What's more, they aid food security and build climate resilience too.

The year 2023 was declared by the United Nations (UN) as the International Year of Millets. The millet revolution that is happening today is a proof of how ancient wisdom guides modern sustainability. Let us understand what is causing the revolution.

The Historical Significance of Millets and Reasons for their Decline in Recent History

Millets are small-seeded grains like pearl millet (bajra/kambu), finger millet (ragi/kezhvaragu), sorghum (jowar/solam), foxtail millet (kangni / thinai), barnyard millet (sanwa / kudiraivali), little millet (kutki), kodo millet/varagu, and so on.

These small-seeded grasses have been cultivated even since the days of the Indus Valley civilization as food crops.¹ Ancient texts like the Vedas, Upanishads, Sushrut Samhita, and Abhijnana

¹ <https://www.sciencedirect.com/science/article/abs/pii/S0305440313004251#:~:text=The%20peripheral%20region%20of%20Harappan,Kanmer%3B%20Italian%20millet%20during%20Late>

Shakuntalam contain mentions of millets, their benefits and the practices surrounding them.² Millets were not just food but also part of rituals and customs.

However, the Green Revolution focussed on rice and wheat, and millets lost prominence.³ As the yield of rice and wheat grew, producers and the markets favoured them over millets. Lack of awareness and nascence of food processing technologies also contributed to their decline. However, their resilient nature make them uniquely suited for the present-day challenges.

Millets as Champions of Sustainability

In a world grappling with climate change, millets become all the more relevant.⁴ Millets require 70% less water than rice to grow, use 40% less energy to process. They are drought-resistant and thrive in arid climate.⁵ They are naturally resistant to pests and diseases and require don't require much of chemical inputs like fertilizers and pesticides.⁶ As millets are produced more, it indirectly leads to reduced greenhouse gas emissions. They are also small-farm friendly. All these factors make them ideal for low-input sustainable agriculture. Their revival supports UN's Sustainable Development Goals (SDGs) related to zero hunger (SDG 2), climate action

² <https://africaindia.org/millets-an-ingredient-of-celebrating-harvest-festivals-and-religion-in-bharat/#:~:text=Sushrut%20Samhita%2C%20600%2D500%20BC,as%20mentioned%20in%20Table%2D1.>

³ <https://www.indiascienceandtechnology.gov.in/listing-page/millets-future-food>

⁴ https://agriwelfare.gov.in/Documents/MOA_PIN01_Millets_Booklet_Final_24_Nov_2023.pdf

⁵ <https://books.kdpublications.in/index.php/kdp/catalog/download/361/437/3006?inline=1>

⁶ <https://books.kdpublications.in/index.php/kdp/catalog/download/361/437/3006?inline=1>

(SDG 13), and land degradation neutrality (SDG 15 Life on Land). Millets provide food security without burdening the environment.

Health and Nutrition Benefits

More awareness of their health benefits is making them popular again among the masses, and they have come to be known as nutri-cereals. They provide nutritional diversity to diets. Most millets are gluten-free and hence, are friendly for those with gluten sensitivity. They generally have a relatively lower glycemic index making them suited for those with elevated blood sugar levels. Many of them are rich in fiber, iron, calcium, protein, making them nutritionally rich. They could help address malnutrition in rural areas.

Government Initiatives

Based on the proposal of the Indian government, the United Nations declared 2023 as the International Year of Millets to give a significant boost to awareness efforts on the benefits of millets.⁷ Building on that momentum, there are several programmes focused on millets or Shree Anna, as they are mentioned under the Government programmes. Under the National Food Security Mission, there is a Sub-Mission on Nutri-cereals being implemented throughout the country. It gives incentives to farmers through production and distribution of certified seeds, capacity building of farmers, distribution of seed mini-kits, publicity measures, etc. Some States have also initiated Millet Missions. The Indian Institute of Millets Research has been declared as a Centre of Excellence in the field of millets. Millets are also included in the Poshan Abhiyan of the Ministry of Women and Child Development. The FSSAI is also promoting the use of millets under the Eat Right campaign. The Production Linked Incentive Scheme for Food Processing Industry for Millet-based products has been implemented.⁸

⁷ <https://pib.gov.in/PressReleasePage.aspx?PRID=2016693>

⁸ <https://pib.gov.in/PressReleaselframePage.aspx?PRID=1947884>

Grassroots Movements and Market Revival

Besides government initiatives, NGOs, farmers' producer organizations (FPOs), and startups are playing a transformative role in the market mainstreaming millets. Women's self-help groups also promote millets by playing various roles in the millet value chain.⁹ The millet cuisine culture – complete with millet noodles, cookies, cakes, upma, pooris, rotis, idlis, dosas and what not – is embraced by urban health-conscious consumers. Millet-based cafes, e-commerce platforms and startups coming up with healthy millet-based snacks are adding to the momentum. Culinary festivals and workshops are helping revive forgotten recipes with a new twist.

Challenges in Mainstreaming Millets

Millets are taking off in a big way. But despite it all, millets still face hurdles like having lower yield compared to rice or wheat, lack of consumer awareness and lower culinary familiarity as generations have got used to cooking with rice and wheat with millet recipes forgotten along the way. Storage and processing infrastructure must also be improved. Millet-based food products carry a premium price and much needs to be done before millets can go back to being the poor man's food again.

Conclusion: Towards a Resilient and Rooted Future

The millet movement are not just a food trend. It is the beginning of our journey back to our roots of climate resilience, nutritional wholesomeness and sustainable agriculture. Perhaps, the world's quest for food security lies in the humble millet seed—a grain of the past, and a grain for the future.

SB

⁹ <https://www.downtoearth.org.in/agriculture/women-shgs-in-odisha-champion-push-for-millets-90913>

Sustainability Measures to be undertaken by the Quick Commerce Companies in India

CMA Dibbendu Roy

Additional Director
Kolkata

Time is money as the saying goes the urban and now the rural life is now embracing in door delivery of products and goods and it is possible through the efficient distribution and logistics supply of the Quick commerce companies in India. To name few prominent ones like the Blinkit, Zepto, Swiggy Instamart, and Dunzo which are now rapidly growing. The stupendous growth has entailed serious ramifications in the continuous violation of the sustainability measures. The Companies inspite of their best efforts has the onus of timely delivery with the core model of providing goods and services within 10 to 15 minutes. The time pressured has engulfed their delivery channels into deep concerns of sustainable delivery by violations in emissions in last mile delivery and extra carbon through extra packaging materials which has plastic and other non-recycle products. It has impacted the reuse and recycling of the packaging materials and has increased pressure to incorporate sustainable practices. The operational inefficiencies have enhanced the pressure of protection of the environment by causing extra emissions and generation of waste through packaging and also convenience of shopping which has enhanced the consumerism and overload of consumption. Let us now delve on the measures the quick commerce companies are undertaking to protect the environment:

➤ **Transition to adaptability to Electric Vehicles (EVs)**

- Zepto, Blinkit, and Swiggy Instamart

have been expanding their fleet of EVs and bicycles for the last-mile delivery.

- Zepto has targeted to be 100% EV-based delivery over the next couple of years.
- They are associating and partnering with EV rental services or startups like Yulu, eBikeGo, and Bounce to reduce carbon emissions.
- The objective is to lower the reliance on petrol/diesel delivery modes and reduce the operational costs.
- Partnering with EV Startups has to be undertaken and collaborations with EV rental platforms (like Yulu or Zypp Electric) to scale this efficiently.

➤ **Packaging to be Sustainable**

- Shift towards biodegradable, compostable, or recyclable packaging (like paper bags, cloth alternatives, or corn-starch-based plastics).
- Introduction of “no plastic packaging” options, especially in metro cities where customer awareness is higher.
- Swiggy, Instamart and Zepto are experimenting with recyclable pouches, paper bags, or compostable materials.
- Use of reduction of plastic by phasing out single-use plastic in favor of paper-based or biodegradable alternatives.



- Returnable Packaging Pilots is an experiment undertaken by some players by which recycling of the returnable crates or bags is reinforced especially for recurring customers or B2B orders.
- **Micro-Fulfilment Centres Optimization**
 - Dark stores are being placed strategically to reduce delivery radius, fuel usage, and time.
 - Companies use AI and data analytics to forecast demand and avoid overstocking/wastage, especially for perishables.
 - Dark stores are being redesigned with LED lighting, solar rooftops, and energy-efficient cooling.
 - Reducing the carbon footprint by stocking products based on local demand and sourcing them closer to the delivery point which is a form of Hyperlocal Sourcing.
- **Reverse Logistics & Waste Management**
 - Trials in select cities for recycling packaging via pick-up during deliveries.
 - Returnable Packaging Systems though this is still in early stages due to logistical challenges.
- Some quick commerce platforms collaborate with NGOs to redistribute unsold food or near-expiry goods. For example, companies tie up with organizations like Feeding India or Robin Hood Army.
- Inventory AI: Better demand prediction using AI to reduce spoilage and overstocking.
- **Carbon Offsetting and Green Initiatives**
 - Initiatives like planting of trees per X number of deliveries or partnerships with NGOs for offsetting.
 - Swiggy has pledged to go carbon-neutral in coming days.
 - Some startups are exploring carbon accounting tools to track their emissions and offset them via reforestation or carbon credits.
- **Sourcing Local & Reducing Food Miles**
 - Platforms like Swiggy Instamart and Zepto collaborating with local vendors and small-scale producers and cutting down supply chain emissions and supporting local economies.



➤ Food Waste Reduction

- Efforts to donate near-expiry goods to food banks or NGOs instead of discarding them.
- Some also offer deep discounts on near-expiry items to move stock faster and reduce waste.
- Training delivery partners on eco-friendly practices including efficient routing, low idling, using economic modes on EVs.
- Promoting in-application nudges to customers for green choices like minimal packaging or opting out of carry bags.

The Quick Service Restaurant (QSR) industry is now at a critical juncture, where sustainability is no longer a mere trend but an essential business strategy. As global concerns around climate change, resource depletion and food waste intensify, QSRs must embrace sustainable food practices to remain relevant and responsible. Across India, where QSRs serve millions daily, the potential for impact is immense. Integrating sustainability into operations is not just about reducing environmental footprints, but also about enhancing efficiency, fostering customer loyalty, and achieving long-term profitability.

Sustainability in the food industry extends across three fundamental areas - environmental responsibility, economic viability and social impact. Traditional QSR models, with their emphasis on speed and convenience, have historically contributed to significant waste, excessive energy consumption and reliance on non-biodegradable packaging. However, as consumers become more environmentally conscious, the demand for greener alternatives has risen, prompting QSRs to adapt and innovate.

One of the most impactful ways for QSRs to embrace sustainability is through responsible sourcing. By prioritising local and seasonal ingredients, restaurants can significantly reduce the carbon emissions associated with long-distance transportation. Local sourcing not only reduces the environmental footprint but also supports regional farmers and promotes fresher, higher-quality ingredients. At Bird Foods, we focus on building relationships with local producers to ensure our supply chain is as sustainable as possible while maintaining the flavours and consistency that customers expect.

Sources:

1. <https://www.zeptonow.com/>
2. <https://blinkit.com/blog/category/sustainability>
3. <https://www.swiggy.com/corporate/sustainability/>

Professional Etiquettes- Time to Untangle Etiquette in International Business Environments

Usha Ganapathy Subramanian
Practicing Company Secretary
Chennai

Introduction

In today's globalized world, cross-cultural awareness is essential to bridge the differences and build trust. Missteps in etiquette can hamper relationships and deals. However, etiquette is not about being perfect – it is all about being respectful, aware and adaptable. Each culture has its own symbols of respect woven into it. Learning about the etiquettes of various cultures, observing the surroundings and context, and adapting to the environment helps one to blend in with ease, comfort and confidence.

Recognizing Cultural Differences

Each culture has a unique way of greeting each other. It might range from Namastes like in India, to bows like in Japan, to handshakes and nods. The way one prefers to be addressed too depends on a lot of factors. Use of titles, last names, first names, or Sir/Madam, differs from one culture to another, whether it is a formal or informal setting, and the relationship with the person. Generally, it is considered respectful to address Mr. or Ms. added to the last name of a person. In India, one cannot go wrong with Sir or Madam, unless the person specifies that they prefer to be addressed by their name. In Japan, using San after the name is commonly seen as respectful. Reading up prior on the respective cultural preferences will be helpful. However, being present, observant and learning the organisational practices is key. Prolonged or direct eye contact may be seen as a confident gesture in parts of the world like the

West, whereas it might be confrontational in other parts of the world. Physical proximity must also be measured on the basis of cultural preferences. What is normal in a particular country might be completely unacceptable or offensive in other parts of the world. Communication styles may also differ from one country to the other. Directness may be preferred in some countries, while subtlety may be preferred in others.

Adapting to Time Zones, Holidays, and Working Norms

In workplaces, one must be mindful of public holidays, working days and weekends of stakeholders belonging to other countries and plan their work accordingly. For scheduling across time zones, one may use tools like the Google Calendar. One must also be aware that in many countries expecting employees to be present beyond the working hours or on holidays is not the norm. Some cultures place great importance on punctuality and in others they may be relaxed. However, being punctual does not go wrong, if in doubt. When it comes to working hours, one must respect local practices like siestas in Spain, prayer times in the Middle East or other national observances that might impact work schedules.

Avoiding Assumptions and Stereotypes

One must also be aware of the dangers of cultural stereotypes and generalizations perpetuated through popular media and movies. One may not hold any conscious biases but must introspect and become self-aware of the subconscious biases



one may have that may creep into conversations if unchecked. So, it is generally a good move to approach new interactions with curiosity, rather than judgment, learn through observation and open dialogues, and refrain from leaning towards cultural cliches while still being aware of them. Common stereotypes like assuming all Americans are informal or that all Asians are deferential that may backfire in business.

Handling Language Barriers

It is necessary to speak in plain language and to avoid jargons and idioms as far as possible. Jargons like “ballpark figure,” “circle back”, “touch base”, “EOD”, etc. may not mean the same to everyone. Using simple, structured sentences and pausing often for understanding can bridge the gap between persons who speak in different accents and dialects of the same language. The listener could summarise his understanding at the end of the discussion for better clarity. Meeting notes may be circulated for the better understanding of everyone involved. In cases where there is no common language, it is time to consider having interpreters. One must also keep in mind the etiquette of speaking through them. Accents may feel new but one must learn to hold space and make efforts to understand the content and appreciate the diversity.

Embracing Inclusivity and Local Business Customs

One must remember to acknowledge and adapt to dress codes, meeting rituals, seating arrangements, gift-giving, and hospitality traditions as well. Learning about the food etiquette of different cultures like use of cutlery, dietary preferences, etc. also comes in handy and helps avoid embarrassments. Deference to seating traditions is also wise. It also helps to be open to diverse forms of professional bonding like tea ceremonies, karaoke, long business dinners, and so on.

Conclusion

Cross-cultural etiquette is not a checklist but a mindset of inherent respect for the fellow human being. Being respectful, open and having an attitude of continuous learning itself ensures that good etiquette follows. Small gestures of respect help build immense trust. Investing in learning about different cultures, paying attention and being mindful opens doors to opportunities and to the hearts of people from varied cultures.

SB

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

Mysteries of Mandala

Geeta Joshi Brahme

Founder Sun N Soul
Certified Mandala Therapist

Till now, we understood what is the basic of Mandala. Today we will see some mystical part about Mandalas. Before there was nothing, the Universe was without form and void & darkness was up on the face of the deep. The first thing to come into existence was a point before anything could be. It has to start with a point. A point occupies no space, it has no dimension, it's so small, it can't be measured, yet it encompasses everything within it. You could say this point is spirit and the first thing spirit does is, it becomes conscious, it becomes aware. 360 degrees of awareness in the vast emptiness of the void. This innate aspect of consciousness sparked the process of creation.

The seed of Life in Mandala represents the egg of life, which is our entire existence. Everything about us from our height, eye color was created through egg of life form. After 6 movements of circle, the complete pattern is called seed of Life as it contains recipe of life. 19 circles produce the flower of life, a shape from China to Ireland to Egypt to India, that is formed in ancient cultures around the world.

Why Seed of Life so special?

The information hidden in it is so important and so sacred that our ancient ancestors had to keep it secret, which was appropriate at that time. However, now we either use the information or fall further into darkness. When all the circles are completed, the fruit of life is revealed. This is the secret out of flower comes the fruit. The fruit of life is entirely feminine shape. Curved lines are feminine. This represent formlessness and emotions. Once we start adding masculine energy or lines, the formless design begins to take shape. This is Metatron's Cube. This gives platonic solids. It has faces that are all the same size edges, that are all the same length, that are

all the same degrees, and if put into a sphere, all points will touch the edge of the sphere. These shapes were studied in the ancient times by the Egyptians who passed the knowledge to the Greeks, where Pythagoras would study them & later Plato. Which is where we get the name Platonic.

There are 5 Platonic solids:

- The Cube,
- The Tetrahedron
- The Octahedron,
- The Iso sahedron
- The Dode cahedron
- Earth, Air, Fire, Water and Ether (Prana)

Each Platonic solid corresponds to a different element & every element of the periodic table has a geometric relation to one of the platonic solids, from the motion of atoms to molecules, to viruses to snowflakes, to the shape of sounds, to the orbits of the Planets. In our solar system, everything stems from this basic geometric information system and it all starts with a spirit/dot. Looking at ancient myths and religious teaching, in a metaphorical sense and less in a literal materialistic sense will allow us to decipher the encoded wisdom & may perhaps serve to bridge the divide between spirit and science.

You can keep looking at this ancient symbol of Seed of Life for hours. This pattern immerses everyone in meditation. It opens up new edges of reality, awakens imagination and helps us to choose our own life path. Seed of Life looks like a two-dimensional pattern of seven circles of the same size. This symbol suggests that the life processes in the universe as a whole, are interconnected. This is based on the concept that life is a divine creation. The number seven is often associated with luck, perfection and divinity. The symbol of

seed of life is the beginnings of beginnings, from which all life concepts arose. This symbol is one of the key ones in almost all world religions.

Sacred geometry says people should consider all patterns of nature from a mathematical point of view. So when we speak about number seven, where do we see this magic number? Music has 7 notes, Rainbow has 7 colors, Human has 7 chakras, Buddhism have 7 steps of enlightenment, In Islam Koran speaks of the existence of 7 heavens and in Hinduism there are 7 underground and higher world. One example of sacred geometry is the Fibonacci Spiral. It is pattern that repeats throughout nature and greater universe. From Sunflowers, Galaxies, Seashells, even coiled snakes, to hurricanes we can find spirals. Many spirals found in nature follow the mathematical pattern of Fibonacci number sequence, and then which starts with 0 and 1 and then increases with the sum of previous numbers, such as 0,1,1,2,3,5,8,13,21 and so on.

Thus, Mandala shows there is much greater than us & there is lesser than us. There is as much outside us, as there is within. Everything above us, everything below us is constructed from geometric relationships. When we study **sacred** geometry – we begin to understand our place in the Universe. All this expansion of consciousness, all this curious exploration, is really about finding out who we are. कोहं.....

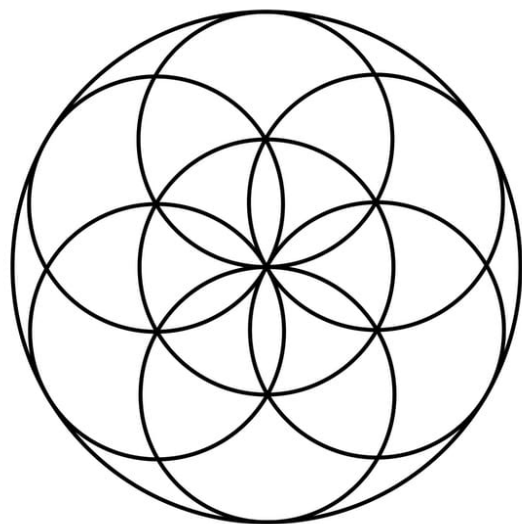
We are a mystery to ourselves and to uncover where we came from is to know ourselves on the deepest level. The smallest particle to the biggest star is connected and we are at the absolute Centre of it.

So how it connects with sustainability is, when we know what actions we are taking consciously are going to conserve natural resources and our next generations will be enjoying them happily and need not struggle for it.

If we see consciousness which comes to us is not only effect of external factors, that are family values, social values, pressures, they help us to experience vivid patterns of actions we undertake.

So, when this creates confusion in our mind, here comes role of your inner voice. To get right decisions from inner voice, one needs to have a calm, peaceful mind and as Mandala is deeply connected to mind, it acts on a different layers of mind. By practicing Mandalas, one can achieve meditative state of mind and can take right decisions.

Mandala creation integrates” cognition & patience”. When you start drawing Mandalas, you engage with *Karma* & foster self-reflection. Mandalas empower us to become leader of our own lives. Mandala also integrates mind & body. It creates harmony between two. This allows an individual to find the roots of their challenges and they can initiate into transformative healing. And feel that responsibility to sustain the resources & make world a better place to live.



Seed of Life



Few Sacred Geometry patterns



1. What Parenting approach is best for my child?

1. Assertive Parenting

- Setting clear boundaries and expectations
- Communicating effectively and respectfully
- Encouraging independence and responsibility
- Being consistent and fair

2. Positive Parenting

- Focusing on positive reinforcement and encouragement
- Building self-esteem and confidence
- Encouraging good behavior and habits
- Creating a supportive and loving environment

3. Empathetic Parenting

- Understanding and validating child's emotions
- Being sensitive to child's feelings and needs
- Encouraging emotional expression and regulation
- Building a strong, empathetic relationship

4. Responsive Parenting

- Being sensitive and responsive to child's needs
- Providing comfort and reassurance
- Encouraging communication and expression
- Building trust and security

5. Mindful Parenting

- Being present and aware in parenting approach
- Managing stress and emotions effectively
- Encouraging mindfulness and self-regulation
- Fostering a calm and peaceful environment

6. Sustainable Parenting

- Modeling environmentally conscious behaviors

- Teaching eco-friendly habits and values
- Encouraging sustainability and conservation
- Fostering a sense of responsibility and stewardship

7. Diligent Parenting

- Being consistent, attentive, and proactive
- Setting clear expectations and boundaries
- Encouraging responsibility and accountability
- Providing guidance and support

8. Parenting with Love

- Showing unconditional love and acceptance
- Providing physical affection and emotional support
- Encouraging self-love and self-acceptance
- Fostering a sense of security and belonging

9. Holistic Parenting

- Considering child's physical, emotional, and social development
- Encouraging balance and harmony in life
- Fostering a sense of connection and community
- Supporting child's overall well-being and growth

By combining elements of each approach, you can create a comprehensive and nurturing parenting style.

2. What are the common parenting puzzles and behavioural challenges to handle them?

Parenting puzzles refer to challenges parents face in raising their children. Here are some common parenting puzzles:

1. Emotional Puzzles

1. Managing tantrums and meltdowns
2. Understanding and validating emotions
3. Teaching emotional regulation and self-control

2. Behavioral Puzzles

1. Setting boundaries and discipline
2. Encouraging positive behavior and habits
3. Managing behavioral challenges
3. Developmental Puzzles

3. Supporting cognitive and social development

1. Encouraging independence and self-reliance
2. Navigating milestones and developmental stages

4. Relationship Puzzles

1. Building a strong parent-child bond
2. Managing co-parenting challenges
3. Balancing work-life balance and parenting

5. Communication Puzzles

1. Active listening and understanding child's needs
2. Effective communication with teenagers
3. Encouraging open and honest communication

6. Discipline Puzzles

1. Finding the right balance between discipline and nurturing
2. Setting clear boundaries and consequences
3. Encouraging responsibility and accountability

7. Social Puzzles

1. Navigating social relationships and friendships
2. Encouraging positive social skills
3. Managing bullying and peer pressure

8. Social Media and Screen Time Puzzles

1. Managing screen time and technology use
2. Ensuring online safety and digital citizenship
3. Setting boundaries and limits on social media

9. Academic Puzzles

1. Supporting learning and academic success
2. Managing homework and study habits
3. Encouraging curiosity and love for learning

10. Self-Care Puzzles


1. Prioritizing parental self-care and well-being
2. Managing stress and burnout
3. Building a support network and community

Behavioral Challenges:

Behavioral challenges in children can include tantrums, defiance, aggression, and impulsivity. Causes can include developmental stages, emotional regulation difficulties, and environmental factors. Strategies to address behavioral challenges include positive reinforcement, clear boundaries, and emotional validation.

Social Media and Screen Time Puzzles:

Social media and screen time puzzles refer to challenges parents face in managing their child's screen time and social media use. Strategies to address these puzzles include setting clear rules, monitoring screen time, encouraging physical activity, modeling healthy behavior, and having open conversations.

By understanding and addressing these parenting puzzles, parents can better support their child's growth and development. 

Regards

Ms. Jayasri Tangirala

Psychologist,

Founder, Beyond well being Yousva

The views expressed are the personal views of the author. The write-up is given as a general information and does not constitute the views of SSB and ICMAI. Readers are expected to take professional guidance from an expert whenever needed.

Today we will talk about a nakshatra of the Sun and that is Kritika Nakshatra.

The name Kritika brings about the origin of the word Critical.

The symbol of this nakshatra is a sword. These personalities have a razor sharp nature and they also show courage to achieve heights in their life.

The downside is that if there is no awareness then they can be overly critical and this can create non harmony at home as well as work.

Such personalities are achievers and their focus is always on transformation of Self as well as others.

Each nakshatra is divided into 4 pada or charan.

From Aries to Taurus approximately 4 degrees apart there lies 4 kinds of different personalities.

Generally this nakshatra personality will be pure, willing to transform self as well as others, good sense of justice, great analytical capabilities, consistent, sharp and can play a role in leadership of an organisation.

The 4 padas of this nakshatra are that of Sun, Moon, Mars and Mercury in that order. And based on the combinations of Sun - Sun, Sun - Moon, Sun - Mars & Sun - Mercury the personalities change from one pada or charan to the other within Kritika Nakshatra.

Sun is the symbol of Consistency, clarity, purity, and transformation.

So each charan will have these general characteristics and with each pada the qualities of Sun, Moon, Mars and Mercury become the sub nature that is additional.

Sun - Sun sub lord personality could be very sharp, analytical but may be a bit harsh.

Sun - Moon sub lord personality may be sharp but also more nurturing and developing the next in line in an organisation.

Sun - Mars sub lord may be sharp, witty, full of vigorous and energy, focussed and consistently action oriented.

Sun - Mercury may be consistent as well as extremely intelligent and using their intelligence in good activities which is good for everyone's well being.

Now how do the Kritika nakshatra people enhance their good qualities and use their abilities for the well being of others?

Planting Trees that belong to their Nakshatra.

Umbra or Cluster figs is the tree that impacts Kritika nakshatra. The sap of this tree is also used for cancer treatments!

SB



—Purvi Dalal
Industrial Designer

A Wedding Invite That Keeps On Growing.



A Bhopal Family Ditched Printed Wedding Cards And Gifted 400 Plant Pots Instead They Prepped For 8 Months In Advance

Great Initiative ❤️

Five questions on sustainability

1. _____ is a system of agricultural management that helps the land accumulate and store GHG.
2. The _____ has launched the World's First Nature Finance Standard to guide Green Investment.
3. According to the Ministry of New and Renewable Energy, India is blessed with a coastline of about _____.
4. _____ is ranked at the top with respect to biodiversity.
5. According to the Global Gender Gap Report 2024, _____ is consistently the top ranked country having closed more than 90% of its gender gap.

WINNERS	
Sl. No.	Name
1.	CMA Delzad Dinyar Tanaz Jivaasha
2.	CMA Nagalla Krishna Chaitanya

Congratulations to the Winners!

CORRECT ANSWERS OF PREVIOUS QUIZ

1.	Green Climate Fund
2.	Loan Market Association
3.	41 %
4.	2030
5.	46

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

Call for articles

Sukhinobhavantu is inviting articles on the theme ESG/ Sustainability or related themes for publishing in May'2025 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 May 14, 2025, by email to ssb.newsletters@icmai.in The right for selection of articles vests with SSB. Decision of SSB will be final and binding.

Research and Compilation:

CMA Arunabha Saha, Practising Cost Accountant
Dr. Ranjith Krishnan, SSB Member

Curated and Edited by

Dr. Ranjith Krishnan, SSB Member

Secretary to SSB:

CMA Dibbendu Roy, Additional Director, ICMAI

DISCLAIMER: *Sukhinobhavantu* is for information and academic purpose only and is intended to notify recent happenings as reported in the print media, with links providing access in accordance with their applicable policies only. It is to be distinctly noted that the content, information and/or observations contained in this *Sukhinobhavantu* do not provide advice of any nature and should not be acted upon in any specific situation without appropriate advice from experts. The views expressed in *Sukhinobhavantu* are not that of the Institute. Criticisms and suggestions are welcome as they help in our pursuit to constantly improve the content. Please feel free to send any feedback, suggestions or comments to ssb.newsletters@icmai.in



THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

(Statutory Body under an Act of Parliament)

www.icmai.in

Headquarters

CMA Bhawan, 12 Sudder Street, Kolkata – 700016
Ph: +91-33-2252 1031/34/35/1602/1492

Delhi Office

CMA Bhawan, 3 Institutional Area, Lodhi Road, New Delhi – 110003
Ph: +91-11-24666100