ESG Dashboard Report

### 1. Executive Summary

This project presents the design and development of a comprehensive ESG (Environmental, Social, and Governance) dashboard created using Microsoft Excel. The dashboard focuses on key ESG indicators across Indian states, aiming to bring transparency and insight into regional sustainability, social development, and governance performance. By leveraging data visualization and interactive tools within Excel, the project translates complex datasets into digestible, actionable insights. This report documents the process of data collection, dashboard creation, insights drawn, and potential use cases for policymakers, researchers, and ESG professionals. The final dashboard not only highlights trends and outliers but also encourages a data-driven approach to improving regional ESG metrics.

### 2. Introduction

**Background:** The ESG framework is increasingly being adopted worldwide to evaluate the long-term environmental, ethical, and governance sustainability of regions, corporations, and governments. In the context of Indian states, ESG indicators can reflect socio-political commitment to development, environmental stewardship, and democratic engagement.

**Objective:** The primary aim of this project was to develop a user-friendly, data-driven dashboard that enables analysis of key ESG indicators at the state level. This tool was envisioned to support decision-making by providing real-time, comparative insights across multiple dimensions of sustainability and governance.

**Scope:** This analysis includes selected Indian states based on the availability of reliable data across environmental, social, and governance metrics. The dashboard is structured to provide clear segmentation and comparative capabilities, making it relevant for researchers, NGOs, students, and policy analysts.

### 3. Data Sources & Methodology

**Data Sources:** - Forest Survey of India (FSI) - National Family Health Survey (NFHS) - Ministry of Environment, Forest and Climate Change (MoEFCC) - State government portals and public dashboards - IndiaStat and other statistical handbooks

**Tools Used:** The dashboard was built entirely in Microsoft Excel using: - Power Query for data cleaning and importing- Slicers and buttons for interactivity - Conditional Formatting and Charts for visualization.

**Data Preparation:** - Duplicate entries were removed, and null values were treated with logical interpolation or omitted where data was unreliable. - Numeric fields were standardized across formats (e.g., percentages, units, currencies). - State names were standardized for consistency.

**Assumptions:** - Time-series data was limited; hence, most analysis was cross-sectional. - Some indicators were taken from the most recent year available rather than a uniform base year.

### 4. Key Findings – Thematic Analysis

#### a) Environmental

* States like Mizoram and Arunachal Pradesh exhibit over 70% forest cover, with relatively effective waste treatment policies.
* Urbanized states such as Maharashtra and Tamil Nadu generate significantly more waste per capita, but treatment capacity often lags behind, especially in smaller towns.
* Forest degradation is notably higher in states experiencing rapid urban expansion.

#### b) Social

* Southern states including Kerala and Tamil Nadu show higher female MLA representation and better healthcare access indices.
* Literacy rate disparities persist, with states like Bihar and Rajasthan falling behind the national average.
* Access to maternal healthcare is significantly better in states that also score well on female political participation.

#### c) Governance

* States like Telangana, Punjab, and Odisha have sanctioned some of the highest police densities (above 250 per 1L population), indicating a strong law enforcement focus. However, this does not always correlate with crime reduction, which varies year to year.
* Ease of Doing Business indicators are topped by Andhra Pradesh and Gujarat, showing consistent improvement between 2015 and 2017. Bihar, despite governance challenges, shows a surprisingly high score in 2017.
* Women’s political representation remains modest overall, with most states ranging 5% to 15%. West Bengal and Rajasthan stand out with over 17% representation, indicating stronger gender inclusion in governance.
* States like Kerala and Tamil Nadu exhibit balanced Female LFPR and moderate police presence, reflecting stable governance and societal participation.
* North-eastern states like Meghalaya, Mizoram, and Nagaland display mixed results—relatively high female LFPR but lower scores on ease of business and sanctioned police presence.
* Some UTs such as Chandigarh and Puducherry perform decently in ease of business but show very low women representation (under 5%), hinting at a gap in inclusive governance.

### 6. Visual Insights

* **Spider/Radar Charts** were used to display multi-indicator governance performance across states.
* **Stacked Bar Graphs** illustrated the proportion of waste generated versus treated, helping compare infrastructure efficiency.
* **Line Charts** showed temporal progression (where data was available), offering insight into improvement or decline over time.

### 7. Challenges Faced

* **Inconsistent Reporting Years:** Many government portals report data for different years, complicating direct comparison.
* **Data Gaps:** Some states did not report certain metrics such as MLA attendance or RTI filing rates.
* **Lack of Granular Data:** District-level or city-level data was not available for most ESG indicators, limiting the scope of deeper analysis.

### 8. Impact & Implications

The dashboard has practical utility for stakeholders aiming to: - Monitor state-level ESG performance. - Identify states that require immediate policy attention. - Encourage data-driven governance and participatory development.

The interlinked nature of ESG metrics highlights how progress in one area (e.g., women’s representation) can lead to benefits in others (e.g., health access). This project also sets a precedent for using low-code tools like Excel for impactful public data storytelling.

### 9. Future Scope / Recommendations

* **Tool Upgrade:** Transition to Power BI or Tableau to enhance interactivity and publish dashboards online.
* **Longitudinal Analysis:** Incorporate more time-series data for forecasting and historical comparison.
* **Advanced Metrics:** Include climate risk indicators, economic inequality indices, and demographic overlays for richer insights.
* **Open Access:** Consider publishing the dashboard on GitHub or a personal portfolio to promote transparency and collaboration.

### 10. Annexures

* **References:**  
  <https://cdnbbsr.s3waas.gov.in/s3716e1b8c6cd17b771da77391355749f3/uploads/2024/10/20241029512325464.pdf>  
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  <https://adrindia.org/sites/default/files/Women_representation_among_all_MPs_and_MLAs_English.pdf>
* **Screenshots:** Selected visuals from the dashboard.

