

Assessing Indicators Related to Infrastructure in Sustainable Development Goal 11: A Review

Sustainable Development Goal 11 (SDG 11) aims to ensure sustainable cities and communities, emphasizing resilient infrastructure. This review scrutinizes infrastructure-related indicators within the SDG 11 framework, assessing their efficacy in measuring progress toward sustainable urban development. The objectives are to evaluate the effectiveness of current indicators, identify challenges and limitations in existing frameworks, explore emerging trends such as GIS and citizen science initiatives, and highlight the importance of stakeholder engagement, interdisciplinary collaboration, and capacity building in refining these frameworks. This study systematically reviews literature, reports, and frameworks using text mining and tag cloud techniques, examining diverse indicators for transportation, housing, water and sanitation, energy, and telecommunications. The review identifies key challenges and limitations in current indicators and discusses innovations in infrastructure assessment. It underscores the necessity for a holistic approach to infrastructure assessment, considering social, economic, and environmental dimensions, and the interconnectedness of infrastructure challenges with other sustainable development goals. By providing insights into the strengths and limitations of existing indicators, this review contributes to the ongoing discourse on refining measurement methodologies for sustainable urban development. It underscores the importance of robust indicators in advancing the global agenda toward building inclusive, safe, resilient, and sustainable cities.

Primary author: Ms KUMARAVEL, PRIYANKA

Co-author: Dr R, velkennedy (Thiagarajar college of engineering)

Presenter: Ms KUMARAVEL, PRIYANKA

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