

MULTI-CRITERIA ANALYSIS (MCA) EVALUATION TOOL FOR ASSESSMENT OF INFRASTRUCTURE PROJECTS BASED ON ESG & FUTURE READY PRINCIPLES

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ABSTRACT

There is an increasing focus by investment and financial stakeholders to rank, report, and track Environmental, Social and Governance (ESG) performance of all sectors, including the transport and infrastructure sector. This paper explores the application of ESG and Future Ready principles in the multi-criterion analysis (MCA) evaluation tool to help with decision making and implement the strategies and tactics to deliver on these commitments on individual transport and infrastructure projects. The paper proposes and discusses a systematic assessment framework for the appraisal of such projects. Such a framework is required as, by implication, the budgeting process for most transport and infrastructure agencies requires projects to be ranked in terms of their relative value.

The cost-benefit analysis (CBA), given its exclusive focus on economic efficiency, is not suitable for this purpose. The multi-criterion analysis (MCA) is however capable of facilitating project assessment and ranking in a multi-objective decision environment but requires customization to consider local conditions and incorporate the different ESG metrics that are part of the developing ESG reporting frameworks. The paper concludes with the assertion that, in efforts to reduce the global carbon footprint of the transport and infrastructure sector (net-zero) and ensure resilient and Future Ready societies, project assessment frameworks should combine both MCA and CBA analysis by adopting an overall multi-criterion approach with ESG, Future Ready principles and economic efficiency (optimal allocation of resources) as decision criteria.

Keywords: ESG, Future Ready, Net Zero, Project Assessment, Multi-criterion Analysis (MCA).