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Customizing a Sustainability Assessment Framework for Infrastructure Projects in Iran Based on Envision

Civil infrastructures as the foundation of social, environmental, and economic development are facing many challenges, such as the optimal use of natural resources as a result of population growth and climate change. Therefore, previous standards and methods of development are not capable of meeting future needs and the sustainability of infrastructure projects has become a fundamental issue for developing countries like Iran. To address the need of enhancing the infrastructure's performance, this research aimed at introducing an appropriate tool for sustainability assessment by customizing an infrastructure sustainability rating system (Envision) according to Iran's conditions. Accordingly, the credits' list was firstly investigated through in-depth interviews with experts. Then, the validity for each credit's existence was assessed through the Likert spectrum. Finally, the weights were revised based on the context-specific circumstances using the paired comparison technique. Alongside the five newly added credits, the research's findings regarding the main groups' weights including the Quality of Life, Natural Environment, Resource Allocation, Climate and Resilience, and Leadership highlight the significance of paying more attention to the social aspect of sustainability. The results were structured in a framework consisting of five main groups, 14 subgroups, and 69 credits with new points. The results of this research can be useful in not only the infrastructure's performance improvement but also enhancing the decision-making process for infrastructure development. Accordingly, investigating the implementation of the proposed framework in Iran's infrastructure projects, and its application by policymakers and planners is highly recommended for future studies.

Keywords: Sustainability Assessment, Customized Framework, Iran's Infrastructure Projects, Developing Countries, Envision.

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