Advancing Women's Participation in SIDS' Renewable Energy Sector: A Multicriteria Evaluation Framework

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Abstract : Due to their unique geographic challenges and the imperative to combat climate change, Small Island Developing States (SIDS) are experiencing rapid growth in the renewable energy (RE) sector. However, women's representation in formal employment within this burgeoning field remains significantly lower than their male counterparts. Conventional methodologies often overlook critical geographic data that influence women's job prospects. To address this gap, this paper introduces a Multicriteria Evaluation (MCE) framework designed to identify spatially enabling environments and restrictions affecting women's access to formal employment and business opportunities in the SIDS' RE sector. The proposed MCE framework comprises 24 key factors categorized into four dimensions: Individual, Contextual, Accessibility, and Place Characterization. "Individual factors" encompass personal attributes influencing women's career development, including caregiving responsibilities, exposure to domestic violence, and disparities in education. "Contextual factors" pertain to the legal and policy environment, influencing workplace gender discrimination, financial autonomy, and overall gender empowerment. "Accessibility factors" evaluate women's day-to-day mobility, considering travel patterns, access to public transport, educational facilities, RE job opportunities, healthcare facilities, and financial services. Finally, "Place Characterization factors" enclose attributes of geographical locations or environments. This dimension includes walkability, public transport availability, safety, electricity access, digital inclusion, fragility, conflict, violence, water and sanitation, and climatic factors in specific regions. The analytical framework proposed in this paper incorporates a spatial methodology to visualize regions within countries where conducive environments for women to access RE jobs exist. In areas where these environments are absent, the methodology serves as a decision-making tool to reinforce critical factors, such as transportation, education, and internet access, which currently hinder access to employment opportunities. This approach is designed to equip policymakers and institutions with data-driven insights, enabling them to make evidence-based decisions that consider the geographic dimensions of disparity. These insights, in turn, can help ensure the efficient allocation of resources to achieve gender equity objectives.

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