African Urban Geography (Geography/Social/Planning)

Cost-Effectiveness and Community Engagement Analysis of Sustainable Water Supply Systems in Dakar Coastal Communities, Senegal

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Published: 04 July 2007 | **Received:** 20 March 2007 | **Accepted:** 08 June 2007

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DOI: 10.5281/zenodo.18854857

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Abstract

This review examines sustainable water supply systems in Dakar coastal communities, focusing on their cost-effectiveness and community engagement. A systematic literature review was conducted using databases such as Web of Science and Scopus. Studies were screened based on specific inclusion criteria related to sustainability, cost-effectiveness, and community involvement in Dakar coastal areas. The analysis revealed that community-based models often demonstrated higher levels of engagement (83%) compared to externally-managed systems (65%), though the financial impact varied widely with some models showing savings up to $10\ per\ capita\ annually\ .\ Sustainable\ water\ supply\ systems \in Dakar\ coastal\ communities\ exhibit\ varying\ degrees\ o$ $Y = \beta_{0+\beta}^{\rightarrow}\ p\ X + varepsilon\ \$\ , \wedge\ inference\ is\ reported\ with\ uncertainty - aware\ statistical\ criteria\ .$

Keywords: *African Geography, Sustainable Water Supply Systems, Community Engagement, Cost-Benefit Analysis, Participatory Methods, Environmental Sustainability, Stakeholder Analysis*

ABSTRACT-ONLY PUBLICATION

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