Towards A Sustainable Community-Based Waste Governance Framework: Designing Strategic Segregation Programs for Environmental Resilience of San Mateo, Rizal

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Abstract

Community-based waste governance is vital in sustaining municipalities such as San Mateo, Rizal, where urbanization has increased waste generation and environmental risks. This study assessed strategic segregation programs, environmental resilience, and community-based waste governance, including their relationships, differences, challenges, and the mediating role of environmental resilience. Using a mixed-method research design, data were gathered through survey questionnaires, interviews, and observations from local government officials, waste management personnel, environmental groups, and community stakeholders. Quantitative data were analyzed through descriptive and inferential statistics, while qualitative responses supported the interpretation of results. Findings revealed that strategic segregation programs, environmental resilience, and community-based waste governance were generally perceived positively. However, challenges remained in policy implementation, infrastructure support, community participation, monitoring, and enforcement. The study concluded that strategic segregation programs help strengthen waste governance and environmental resilience, but their success depends on clear policies, sufficient facilities, active stakeholder involvement, and consistent enforcement. Thus, the study recommends strengthening waste policies, improving segregation facilities, expanding environmental education, enhancing monitoring systems, and adopting the proposed governance framework.

Keywords: Eco-citizenship, circularity, local stewardship, policy coherence, green transition