



“Gheorghe Asachi” Technical University of Iasi, Romania



ORIENTED-PLANNING SOLID WASTE MANAGEMENT SYSTEM IN VIETNAM TOWARD SUSTAINABILITY – MINIMALISM OR OPTIMIZATION

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Abstract

In Vietnam, the rapid development of the tourism industry has led to significant challenges in the management of municipal solid waste. In Hoi An city (HAC), the solid waste management (SWM) system in the tourism area (TA) in downtown is facing many urgent problems such as the overload of waste, the inefficiency in the collection system, and the loss of revenues from tipping fee. Aiming to reduce these gaps, five scenarios of the SWM models are built based on the practical issues, the assumption on enhancing of SWM practice, improving the SWM collection, and approving the waste regulation from local government. The optimisation and feasibility of an SWM model were analysed and assessed based on the efficiency of the collection system, the enhancement of recycling practice, the consensus of stakeholders, the favourability for treatment, and the optimisation of economic benefits. The results revealed that the SWM scenario 1 (S₁) and S₂ get a more positive response from stakeholders (especially commercial sectors) by the high consensus and willingness to pay the higher tipping fee (1.2 times) due to the minimalism in the SWM practice at source. While S₃ and S₄ clearly show more optimization in sustainable waste management such as technical efficiency, economic affordability and effective environment. The upgraded process of the SWM system is suggested to gradual apply from S₀ to S₃ and S₄ under the monitoring of the government and the support from social organisations. It should be an oriented-plan of the SWM system in HAC toward sustainability.

Key words: city, developing countries, solid waste management, tourism destination, sustainable waste management

Received: January, 2022; Revised final: September, 2022; Accepted: September, 2022; Published in final edited form: September, 2022

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