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## Comparative Cost Benefit Analysis of Different Solid Waste Management Scenarios in Basrah, Iraq

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### ABSTRACT

Solid Waste Management (SWM) system in Basrah has deteriorated recently to the point that only limited waste collection is undertaken in certain urban areas and disposal is largely to uncontrolled dump sites. In this study, the technical, economical, and environmental aspects of three SWM scenarios were investigated aiming to compare the scenarios and select the most appropriate one for implementation. Scenario 1 was to consider waste disposal into a sanitary landfill. Scenario 2 added waste transportation to transfer station before disposal to a sanitary landfill. Scenario 3 considered waste sorting, recycling and composting followed by landfill disposal in an integrated treatment disposal facility. The current open dumping practice was considered as the baseline scenario. According to economic analysis, the benefits from the revenues of selling the produced recyclables and compost did not improve the ranking of scenario 3. However, scenario 3 has gained positive recognition due to the environmental benefits of waste recycling. Therefore, final recommendations were in favour of scenario 3, which has been approved by the UNICEF, as well. Currently the recommended scenario is under implementation in Basrah, Iraq.

### KEYWORDS

Cost-Benefit Analysis, Environmental Analysis, Economical Cost, Integrated SWM Plan

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