

## CHALLENGES FOR SOLID WASTE MANAGEMENT IN NALLUR PRADESHIYA SABHA, JAFFNA, SRI LANKA

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**Abstract:** Solid waste management is a pressing concern in the Jaffna Peninsula, where communities often resort to improper disposal methods, such as throwing waste on public places and roads. This research aimed to identify the specific locations where solid waste is generated and the types of solid waste thereby, shedding light on the critical issues of waste management. For this analysis, a comprehensive methodology was employed. Primary data were gathered through fieldwork involving the random selection of seventy (70) sampling locations, employing field observation, photography, and direct interview techniques. Throwing locations were pinpointed with the aid of GPS technology, while the spatial distribution of these sites was mapped using ArcMap 10.4 software. Furthermore, the study also traced locations where solid waste burning occurred using GPS technology. Thirty sites for solid waste burning were discovered and distributed throughout the area, and twenty locations for solid waste disposal were randomly identified, with many concealed in environmental or secluded areas. These secluded areas were characterised by relative locations surrounded by uninhabited structures, bends in roads, T-junctions, unusable lands, and land with high wall fences. Most of these secluded locations were not easily visible to the public, with limited public access or movement. These results were visually presented through diagrammatic representations. The types of solid waste discovered were diverse and included food waste, plastics, faecal waste, non-combustible waste, and more. Many of these waste types were burnt in the same locations by local residents and many people tended to throw solid waste in the evening and night. This suggests that stricter regulations need to be enforced during these hours. The research findings indicate that addressing this issue extends beyond legislation alone. The root causes lie in the attitudes and educational levels of the population, officials and workers who collect waste. Therefore, effective waste management strategies in the Jaffna Peninsula should involve not only strict regulatory measures but also community education and awareness programmes. The findings of this study can serve as a valuable foundation for policymakers and local authorities as they work towards sustainable solid waste management practices in the area.

**Keywords:** Nallur Pradeshiya Sabha; Solid waste burning; Secluded areas; Throwing solid waste