

PERMANENT REFERENCE

**ENHANCING THE SOLID WASTE RECYCLE AND
DISPOSAL MANAGEMENT SYSTEM OF JAFFNA
MUNICIPAL ZONE**



by

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ABSTRACT

Municipal solid waste management is an integral part of an environmental management system. Increasing population levels, growing economy, rapid urbanization, and the rise in community living standards have greatly accelerated the municipal solid waste generation rate in cities. The consequence of improper management of solid waste management system causes are loss of human lives, loss of the ecosystem, loss of habitats, environmental pollution, lower standards of health and reduce lifetime. Accordingly, the disposal of solid waste from the Jaffna Municipal council (JMC) has become a severe problem and a significant amount of solid waste generated from the domestic sector must be properly treated. However, only inefficient, and limited number of tools, machinery and equipment, technologies and management strategies and approaches have so far been used by JMC for municipal solid waste. Therefore, this study is aimed to investigate and developed a municipal solid waste management framework in terms of “process framework for Jaffna municipal solid waste management (JMSWM)” and “Management framework for JMSWM” to achieve better future of the Jaffna municipal. The results of the JMSWM investigation reveal that the present solid waste management practice is a major issue for all local authorities and that JMC has faced many problems for over twenty-five years. Moreover, JMC has already established a medium-scale compost and recycling plant to manage solid waste from organic, recyclable, and other wastes, which has been identified as inadequate for proper solid waste management. Notably, the contribution of solid waste collected by JMC is 86.7% of organic waste, 4% of recyclable materials and 9.3% of other waste. On other hand, JMSWM process framework assist JMC by incorporating waste management process steps namely: Waste generation, Way of collection, Collection of waste, Waste segregation, 3R’s and Disposal. Moreover, JMSWM management framework reveals and