

**POST EVALUATION OF OPERATIONAL
PERFORMANCE OF COMPOST PROJECTS OF
LOCAL AUTHORITIES FUNDED BY PILISARU
NATIONAL SOLID WASTE MANAGEMENT PROJECT**

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Degree of Master of Science

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Sri Lanka

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Dissertation submitted in partial fulfillment of the requirements for the
Degree of Master of Science in Environmental Management

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DECLARATION

“I declare that this is my own work and this dissertation does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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Abstract

The highest percentage (80%) of organic waste generation was recorded in Sri Lanka compared to the other Asian region countries with higher moisture content and low calorific value (Waste Management Outlook, 2017). Total waste generation in the country is about 8,700 Tons/Day and from that 4,480 Tons of waste has been collecting per day (NSWMS,2019). Considering the waste composition and prevailing socio-economic parameters, composting can be considered as a most convenient technology that can be applied for organic waste having high moisture content.

Pilisaru National Solid Waste Management project has been initiated as a long term solution for solid waste management in the country towards zero waste in 2030. Considering the necessity and suitability, Pilisaru Project provides financial and technical assistance to the requested local authorities in the country to initiate compost projects and other requirements to manage solid waste in a sustainable manner. According to the Pilisaru data, majority of compost plants are in operational stage (83%) and 17% of sites are not in operational states either those sites were totally ended or inactive due to many reasons. The cumulative financial progress of the Pilisaru project is Rs. 2629.74 Million by 31.12.2018. Compost yards implemented under the Pilisaru Project produce about 386 Tons/month of compost and it is about 67% of the total designed capacity.

This study aims to evaluate the performance of projects implemented by Pilisaru National Solid Waste Management Project in Southern and Western part of Sri Lanka based on analyzing data and information through field visits, questionnaire survey, formal and informal discussion and expert interviews.

According to the findings sites were failed due to poor waste management such as inadequate financial assistance and technical expertise in waste management, failures in site selection and design considerations, low institutional commitment and community involvement, produced compost in poor quality and no regular monitoring of composting process and quality of produced compost etc. Furthermore, gaps identified by analyzing existing solid waste management practices conducted by the local authorities at a significant level and this study proposed practices that can be used by local authorities to rectify the identified gaps. Therefore, best practices in solid waste management need to be practiced further to overcome issues related to waste management in the country.

This revealed that out of 20 selected sites, 07 sites show over 75% performance level, 08 sites show 75% - 50% performance level and only 5 sites show below 50% lower performance level.

Keywords

Waste management, compost, projects, waste, Pilisaru, compost yards, local authorities, pradeshiya sabha

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LIST OF ABBREVIATIONS

ADB	-	Asian Development Bank
CEA	-	Central Environmental Authority
EPL	-	Environmental protection license
ISWM	-	Integrated Solid Waste Management
JICA	-	Japan International Cooperation Agency
KOICA	-	Korea International Cooperation Agency
LA	-	Local Authority
MC	-	Municipal Council
MENR	-	Environment and Natural Resources
MMDE	-	Ministry of Mahaweli Development and Environment
MSW	-	Municipal Solid Waste
NEA	-	National Environmental Act
NSWMS	-	National Solid Waste Management Supporting Center
PPE	-	Personnel Protective Equipment
PS	-	Pradeshiya Sabha
SLLRDC	-	Sri Lanka Land Reclamation and Development Cooperation
TEC	-	Technical Evaluation Committee
UC	-	Urban Council
USEPA	-	United States Environmental Protection Agency