

Successful Integrated Urban Planning Approach to Solid Waste Management in Sri Lanka

Planning and Implementation of

Pilisaru National Solid Waste Management Project



Case Study of successful Story of Solid Waste Management Project implemented in Sri Lanka

by

Malaka Dassanayake

Manager (Planning & Implementation)

Pilisaru National Solid Waste Management Project

**Central Environmental Authority
Ministry of Environment & Natural Resources
Sri Lanka**

CURRICULUM VITAE

NAME IN FULL : KONARA MUDIYANSELAGE MALAKA NILANGA DASSANAYAKE

BIRTH DATE & AGE : 1969. 12. 08 41 Years

NATIONALITY : Sri Lankan

POSTAL ADDRESS : No 110/7 Siril Jaans Mawatha Panadura.Sri Lanka.
E-dassmalaka@yahoo.com Tel +94-382-244-357

OFFICIAL ADDRESS : Pilisaru National Solid Waste Management Project, Central Environmental Authority , Sri Lanka Mobile+ 94-71 3128434. +94-722-167-582

QUALIFICATIONS : (i) Bachelor of Science Degree in Biological Sciences (Chemistry, Botany & Zoology) from the University of Sri Jayawardenapura, Sri Lanka 1994.
(ii) Master of Science Degree in Environmental Science from the University of Peradeniya, Sri Lanka, 1999

WORK EXPERIENCE :

EMPLOYMENT RECORD

- Environmental Planner in Urban Development authority of Sri Lanka (October 1995- October 2002).
- Field Project Implementation Unit Manager of the Kalpitiya Field Project Implementation Unit in ADB funded Coastal Resources Management Project implemented under the Ministry of Fisheries & Ocean Resources Sri Lanka (from Oct 2002 – Jan 2005).
- Deputy Project Manager, Project Implementation Unit (PIU) in Coastal Environmental Resources Management component of the ADB funded Coastal Resources Management Project implemented under the Ministry of Fisheries and Aquatic Resources Sri Lanka (Jan 2005 – Oct 2005)
- Environmental Scientist in Urban Development Authority (from Oct 2005- Oct2006,)
- Provincial Coordinator/Consultant Health Care Waste Management Program for Southern Province in Health Sector Development Project implemented through the World Bank funding Under the Ministry of Healthcare and Nutrition of Sri Lanka. (Oct 2006-November 2007)
- Environmental Specialist in World Bank Funded Puttalam Housing Project implemented by Ministry of Resettlement and Disaster Relief services of Sri Lanka . (Oct 2006-May 2007)
- Senior Program Officer /Relationship Manager – (Holcim -IUCN Partnership)Sri Lanka country office of IUCN International Union for Conservation of Nature (World Conservation Union) November 2007- March 2008)
- Manager (Planning & Implementation) in Pilisaru National Solid Waste Management Project under the Central Environmental Authority in Ministry of Environment and Natural Resources Sri Lanka (March 2008- August 2010)
- Board Director , Natural Resources Management Services (Pvt) Limited (NRMS) ,which is a Sri Lankan Government own Limited Liability company operation under the commercial wing of the Mahaweli Authority of Sri Lanka

Successful Integrated Urban Planning Approach to Solid Waste Management in Sri Lanka

Planning and Implementation of “Pilisaru” National Solid Waste Management Project Sri Lanka

1. Introduction

Urban planning in Sri Lanka been regularised by the Urban Development act No 41 of year 1978. The urban Development Authority of Sri Lanka (UDA) has been formulated under the purview of this act in 1978. The Urban Development Authority (UDA) is a multi –disciplinary organisation engage in urban planning and sustainable urban development in Sri Lanka. Powers and functions of UDA described in part II of the act closer (J) of the said Urban development act has delegated powers to Urban development authority to develop environmental standards and prepare schemes of Environmental improvements within the respective urban areas. The Urban Development Authority (UDA) is a multi –disciplinary organisation engage in urban planning and sustainable urban development in Sri Lanka.

Ministry of Environment and Natural Resources is the main policy making body for environmental sector in Sri Lanka. Under this Ministry, Central Environmental Authority (CEA) has been formulated as a regulatory body for the Environmental management in the Country. It is revealed that these two institutional streams are having equal right and responsibility for ensure maintain the hygienic environment in the urban areas. Out of the other environmental problems in urban areas of Sri Lanka, improper management of solid waste is one of the biggest and key environmental problems in Sri Lanka. Lack of systematic systems on waste collection, waste transport, and intermediate treatment systems and suitable waste disposal have been contributing to aggravate the solid waste problem in Sri Lanka. The present haphazard waste disposal practices in Sri Lanka have created many environmental problems and numerous nuisances on general public. As a consequence of this practice entire communities are suffering and number of health, social, economic and cultural problems have been created.

In view of the fact that the infrastructure and resources for waste collection and disposal are lacking in most parts of the country, scattering and dumping of garbage in environmentally sensitive places takes place in an uncontrolled manner. There are no proper facilities for final disposal of most of the solid waste produced by households and industries. Waste that is improperly dumped can impede water-flow in drainage channels, and provides breeding places for disease vectors such as flies, mosquitoes and rats. Open dumping sites in natural areas cause pollution of ground- and surface-water, and will facilitate encroachment. Open burning of waste at low temperatures is also widespread. It contributes to atmospheric pollution and may cause serious health problems.

In Sri Lanka, the entire responsibility for Solid Waste Management (SWM) lies on Local Authorities (LA) under respective legal enactments. The powers in relation to SWM have been vested on Municipal Council Ordinance, Urban Council Ordinance, and Pradeshiya Sabha (Rural Local Authority) Act. Although most of the local Authorities pay more attention to the improvement of physical resources falling within their purview, the concern towards SWM issue is comparatively low. The amount of resources utilized for SWM too is relatively low.

2. Establishment of the Pilisaru Project

Because of the poor comparatively poor attention paid to the waste management issue by most of the LAs in most Parts of Sri Lanka, the general public has to undergo risks with regard to several SWM problems and the faith they have on the Local authorities to solve these problems has substantially reduced over the past years. Hence various complaints are being frequently lodged against such LAs by the public.

Despite the responsibility to find reasonable solutions to this problem lies within the purview of the LAs, Ministry of Environment & Natural Resources of Sri Lanka has launched a national level solid waste management programme titled ‘**Pilisaru**’ with the participation of other government organisations, specially Urban Development Authority private Institutions, NGOs & experts in this field.

The word Pilisaru means re-resource in Sinhala (local) language. This has become the main goal of the programme. The concept of this programme is to maximize the reutilization of resources discarded as wastes & to dispose the non utilizable residue in an environmentally acceptable manner.

This program include *inter alias* the following activities;

- Preparation of a National Waste Management Policy.
- Capacity building and awareness creation for those involved with waste management.
- Provision of technical assistance and resources to Local Authorities to improve ongoing waste management programs and to embark on new initiatives.
- Facilitation of waste management programs through mobilization and optimal utilization of resources.
- Monitoring of waste management program.
- Legal actions as a long term approach to address non-compliance by responsible parties.

The Pilisaru National Solid Waste Management Project (PP) was established in the CEA with effect from 1st January 2008 subsequent to an approval given by the Cabinet of Ministers on 19th December 2008. The overall guidance for the implementation of the *Pilisaru* program will be provided by a high level National Committee on SWM (called as ‘National Pilisaru Platform) co-chaired by the Secretaries of the Ministries of Environment & Natural Resources and the Local Government & Provincial Councils (MLGPC).

The Pilisaru Program is implemented for a period of 3 years commencing from January 2008 in the form of a Project titled ‘Pilisaru Project’ established in the Central Environmental Authority of Sri Lanka. The financial provisions to the tune of 5.675 billion is expected to be accrued mainly from two sources; *i.e.* the annual budget allocations from the General Treasury (2.675 billion) and revenues generated by imposing the ‘Green Levy’ which was newly introduced at the 2008 Budget Speech.

3. National Solid Waste Management Policy

As part of the Pilisaru initiative, the MENR has taken steps to formulate a National Policy on Solid Waste Management (NPSWM) in October 2007 and drafted new National Solid Waste Management Strategies for implementing the National Policy on Solid Waste Management. Currently, there is a dire need to translate the strategy into action in order to implement suitable waste management programs for respective areas and obtain the fullest involvement and cooperation of the LAS to implement them. The Pilisaru Program envisages this challenge of translation of the strategy into action.

4. Objectives

There are five main objectives in the Pilisaru Program

- Development of a National Policy on Solid Waste Management
- Development of a National Strategy on SWM
- Effective education & awareness for all stakeholders on SWM including training & capacity building
- Facilitation for LAS for implementation of SWM projects / programs
- Legal reforms to strengthen effective law enforcement

These objectives are formulated considering the existing solid waste related problems and issues faced by the stakeholders and to improve the overall solid waste management system in the country, emphasizing particularly the crucial issues such as intermediate treatments and environmentally friendly final disposal of residues.

5 Scope

Solid waste in this context covers household wastes, commercial wastes, market wastes, institutional and certain industrial wastes as well as waste produced in public places owned by the LAS. The Scope of the Pilisaru Project generally encompasses the following key activities

i. Collection of information on disposal of solid waste by LAs

Information on current waste disposal methods, projects and programmes abandoned by LAs and the resources available is collected for planning purposes. In the process of collecting data the assistance of the Divisional Environmental Officers (DEOs) of the CEA is obtained through the network of the CEA's Provincial and District Offices.

ii. Evaluation of Project proposals

Evaluation of Proposals put forward by LAs is carried out and necessary assistance provided to implement them on the ground. An evaluation procedure is formulated and assistance is sought from various technical experts for the successful implementation of the proposals.

iii. Establishment of Waste Recycling Banking System

The Pilisaru Project negotiates with the SANASA Development Bank with regard to the possibility of implementing a waste banking system. The Bank collects the recyclable waste, particularly the plastics and polythene from the account holders and an amount equal to the value of the waste handed over is credited in the account of the account holder. The collected waste is sold by the Bank to recyclers regularly to recover the money paid to the account holders with a nominal profit to cover the bank expenses. In fact, this is an innovative approach introduced by the Pilisaru Project with the 'SANASA Bank'

iv. Establishment of waste collecting centres.

v. Technical Support , Institutional strengthening and capacity building

vi. Strengthening recycling by establishing collection network for metal, plastic, glass, and paper wastes

Waste plastic, metal, glass, papers are preferable items used for recycling. An increasing number of Private sector organizations are now providing plastics and paper collection services. One of the main activities of the Pilisaru project is establishment of proper collection network system for paper and plastic wastes. Especially education and awareness programs are launched through schools, community organizations, women societies and Local Authorities to encourage recycling of such wastes material.

vii. Establishment of Compost plants at Local Authority level.

In an effort to find a scientifically acceptable and reasonable solution for the problem of haphazard dumping of solid waste in open lands and water bodies, Pilisaru project takes an initiative to assist the establishment of a composting plants and an environmentally safe waste disposal facility with appropriate technologies utilizing the expert knowledge of members of the technical committee established under the National Committee on SWM.

viii. Construction of low cost sanitary land fills for disposing residual waste.

Sanitary landfill site is a location designed for the final disposal of waste in an environmentally sound manner. The design includes controlling of leakage and gas, daily cover for the working surface of waste, runoff and run on diversions, which would result in decreasing the potential of surface and ground water pollution. The Pilisaru Project plans to establish a number of sanitary landfills in such a way that the LAS can make use of them to dispose residual wastes on a cluster system

ix. Promoting Home Composting

Household composting usually involves relatively small volumes of organic materials generated from the kitchen and garden. Using a bin or pit helps to retain the heat and moisture that would be lost in a small, open pile. A container also has the advantage of being tidy, which is desirable in a residential area. Therefore, the Pilisaru Project makes arrangements to promote the use of home composting by providing bins to LAS at a subsidized rate.

x. Monitoring and taking Legal action for LAs continue to carry out improper SWM practices.

Pilisaru project, as its final action would resort to taking legal actions against LAs which do not carry out proper SWM practices. Regular evaluation and monitoring of SWM programs being implemented by the LAS is carried out by a Monitoring & Evaluation Committee which consists of the DEOs and the Pilisaru Staff as the Committee members.

6 Pilisaru Action Plans

In addition to the Three year action plan (2008 – 2010) of the Pilisaru Project, annual action plans are prepared for respective years. Accordingly Pilisaru Action plan -2009 was formulated giving all the activities to be implemented along with the budget envisaged for corresponding activities. However, the Pilisaru Action Plan -2009 was subject to several amendments during its implementation in 2009 in view of the action taken by the General Treasury to revise the annual allocation made to the Pilisaru Project.

7 Construction of Compost Plant Complexes (major projects)

The Action Plan – 2009-2010 envisaged construction of a number of compost plant complexes covering several provinces of the country including the Northern Province of Sri Lanka. The proposed projects are as follows
Proposed Composting plants

- Compost plant at Potuwilkubura, Kolonnawa (Western province)
- Compost plant at Pohorawatta, Kalutara (Western province)
- Compost plant at Keerikkulama at Nuwaragampalatha, Anuradhapura (North Central Province)
- Compost plant at Madirigiriya, Polonnaruwa (North Central Province)
- Compost plant at Heenpandala, Galle (Southern province)
- Compost Plant at Gohagoda, Kandy (Central Province)
- Compost Plant for Negombo Municipality at Divulapitiya(Western province)
- Compost plant at Homagama (Western province)
- Compost plant at Pompaimadu, Vavnia (Northern province)
- Compost plant at Chemmani, Jaffna (Northern province)

It was decided to obtain the services of Consultants to prepare the engineering estimates, structural designs, BOQS and all other architectural drawings of major composting plant complexes. Accordingly, National Procurement Guidelines were followed and consultants were selected to carry out the engineering designs, estimates etc.

The financial support for the construction of composting plants at Galle, Divulapitiya, Homagama and Vauniya were expected from the revenue generated by imposing the Green Tax which was introduced under the provisions of the National Environmental Act No. 47 of 1981 and its subsequent amendments. However, none of the above four composting projects were able to be implemented as funds from Green Tax was not mobilized by the Treasury as expected.

Technical evaluation process was adopted to ensure the technical soundness and integrity prior to mobilize financial assistance. The process of evaluation commenced with a Preliminary investigation of the project site by Pilisaru Project officers followed by the critical technical evaluation of project proposals by a Panel of Experts (known as

Technical Sub-Group) nominated by the Pilisaru National Platform. Following are the major steps adopted in the planning and implementation of any project proposal funded by the Pilisaru Project.

- ❖ Development of concept
 - ❖ Preparation of project proposal
 - ❖ Obtain environmental clearance
 - ❖ Obtaining approval of the Local Authority
 - ❖ Obtaining soil testing and other investigation reports relevant to the land
 - ❖ Complete the boundary survey
 - ❖ Designing (planning & designing of all buildings)
 - ❖ Preparation of agreement
 - ❖ Sign of agreement
 - ❖ Complete the tender procedure
 - ❖ Commencement of constructions
 - ❖ Monitoring & progress review
 - ❖ Handing over the site

8.1 Construction of composting plant complex at Kolonnawa

An existing garbage dump site called as Potuwilkubura located in Kolonnawa UC limits owned by Urban Development Authority (UDA) has been selected to construct a composting facility for Kolonnawa UC. In regard to a request made by the Pilisaru project, the UDA has given a 4 acre land, a portion of Potuwilkumbura existing dump site, to Kolonnawa UC on free grant basis.

Design work of the Yard complex was completed by the Consultants appointed by the Pilisaru project

Summary of the Project					
Facilities to be provided	1. Under cover pilling space 2. Rest room, Shredder, Sever & Store building 3. Office 4. Security 5. Final sorting space, Changing room & Toilet 6. Stores 7. Garage & Maintenance 8. Bicycle shed			4545.36m ² 86.40m ² 46.07m ² 16.00m ² 357.35m ² 52.25m ² 112.06m ² 21.58m ²	
Funding	Financial Source	2008	2009	2010	Total by 2009
	Treasury		1,040,649.08		1,040,649.08
Stakeholders	Overall coordination: Pilisaru Project F/S, detailed design: Team4 Architect & Engineering Supervision: Commissioner of Local Government-WP Contractor: Squire Mech Engineering Pvt. Ltd.				
Total estimated Project cost	Rs. 172.4 Mn				
Estimated cost of constructions	Rs. 105.0 Mn				
Estimated cost for Machinery equipments and others	Rs. 67.4 Mn				

The plant was designed to take 60 tons of waste per day collected within the limits of Kolonnawa UC.

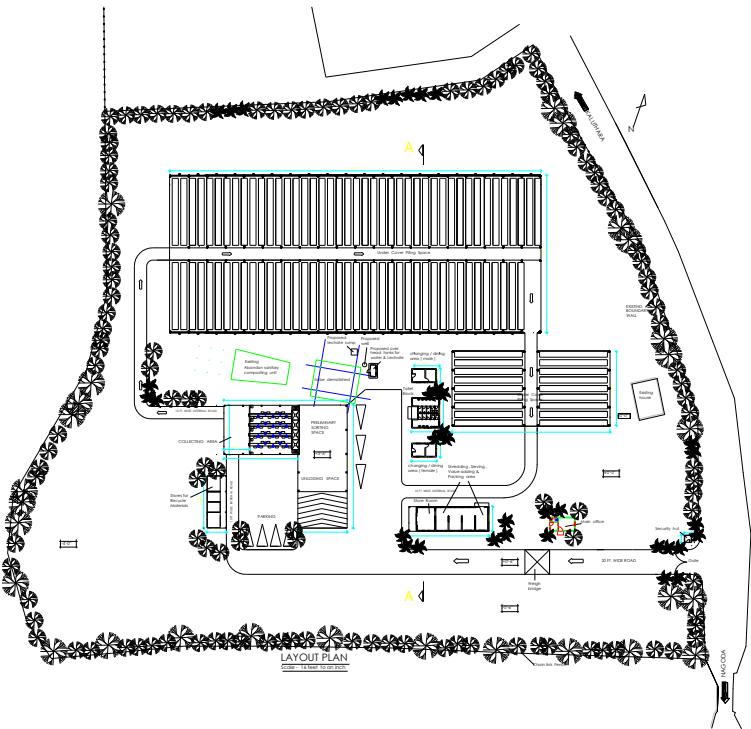


Potuvilkubura site at Kolonnawa

8.2 Construction of composting plant complex at Pohorawatta, Kalutara

The composting plant complex at Pohorawatta, Kalutara has been planned to be constructed at land that belonged to Kalutara UC located within the jurisdiction of Kalutara Pradeshiya Sabha. This composting plant is planned to serve four Local authorities namely Kalutara UC, Kalutara PS, Panadura UC and Panadura PS, which are the main waste producers in Kalutara District. The plant has been designed to manage 60 tons/day waste stream and it is planned that non-compostable waste and inert residual be directed to the Malamulla site, which will be constructed as a final disposal facility for sanitary land filling

Summary of the Project					
Facilities to be provided	1. Under Cover Pilling Space (1) 40522.00 Sq.ft 2. Under Cover Pilling Space (2) 7839.52 Sq.ft 3. Stores for Recycling Material 671.34 Sq.ft 4. Stores, Shredding & Sieving area 1295.00 Sq.ft 5. Workers Changing room 232.87 Sq.ft 6. Washing area & Toilet area 568.75 Sq.ft 7. Unloading area for Preliminary Sorting 6410.00 Sq.ft 8. Store & Main Office 671.34 Sq.ft 9. Security hut 36.00 Sq.ft				
Funding	Financial Source	2008	2009	2010	Total by 2009
	Treasury		1,023,676.00		1,023,676.00
Stakeholders	Overall coordination: Pilisaru Project F/S, detailed design: Mr. W.P.S.T. Jayasooriya Supervision: Commissioner of Local Government - WP Contractor: RH Steel Building Systems (Pvt) Ltd.				
Total estimated Project cost Estimated cost of constructions Estimated cost for Machinery equipments and others	Rs. 112.2 Mn Rs. 60.32 Mn Rs. 51.88 Mn				



Existing dumps and proposed compost yard complex at Pohorawatta site, Kalutara

Memorandum of Understanding (MOU) was signed between Kalutara UC, Kalutara PS, Waste Management Authority (Western Province) after several debatable discussions, which alone took a considerable time for the parties to come to a workable consensus. The MoU was followed by an Agreement which was subsequently signed between Kalutara UC, Waste Management Authority (WP) and CEA prior to initiate the construction work.

8.3 Construction of Composting Plant Complex at Keerikkulama, Anuradhapura

Planning for this project has been initiated in year 2008 and majority of pre-required approvals and project related activities have been completed in year 2009. An extent of 25 acre land has been allocated by Divisional secretary for the project and position of land has been entrusted to Commissioner of Local Government, North Central Province. Design work for the composting plant has been completed by Consultants appointed by the Pilisaru project. Requisite facilities for incoming waste of 37 tons per day generated in the areas of Anuradhapura MC, and East Nuwaragampalatha PS are provided at this compost plant complex.

Keerakkulama Site at Anuradhapura (prior to initiate construction)



Construction in progress at Anuradhapura Keerikkulama Composting site

Summary of the Project					
Facilities to be provided	1. Under Cover Pilling 2. Unloading & Sorting 3. Preparation & Store 4. Facility Building (Rest room, Wash room & Toilets) 5. Office 6. Watcher hut			3076.15m ² 240.41m ² 72.85m ² 103.56m ² 18.42m ² 3.42m ²	
Funding	Financial Source Treasury	2008 26,217,082.00	2009 26,217,082.00	2010	Total by 2009
Stakeholders	Overall coordination: Pilisaru Project F/S, detailed design: Archt. N.D. Nawarathne Supervision: Commissioner of Local Government - NCP Contractor: GGC International Pvt. Ltd.				
Total estimated Project cost Estimated cost of constructions Estimated cost for Machinery equipments and others	Rs. 104.2 Mn Rs. 69.04 Mn Rs. 35.16 Mn				

8.4 Construction of composting complex at Madirigiriya

At the request of the Pilisaru project, a block of 4 acre land initially owned by the Forest Department was released to Commissioner of Local Government (North Central Province) to develop the Compost Plant Complex for Madirigiriya Pradeshiya Sabha (MPS). This plant will be developed to take waste generated in both MPS as well as Hingurakgoda Pradeshiya Sabha areas (HPS). The total quantity of waste generated in the MPS & HPS areas were estimated at 10 tons/per day.



Part of the Compost Yard Complex after completion – October 2009

As per the recommendation made by the Inter-ministerial Committee of the Ministry of Environment and Natural Resources, an electric fence has been constructed along the boundary of the Medirigiriya project site (total length of the fence is 860 meters) to prevent elephants from entering into the site.

Summary of the Project					
Facilities provided	1. Under Cover Pilling	2. Unloading & Sorting	3. Preparation & Store	4. Facility Building (Rest room, Wash room & Toilets)	5. Office
					805.20m ²
					45.00m ²
					43.00m ²
					54.43m ²
					18.42m ²
					3.42m ²
Funding	Financial Source	2008	2009	2010	Total by 2009
	Treasury		21,880,903.53		21,880,903.53
Stakeholders	Overall coordination: Pilisaru Project F/S, detailed design: Archt. N.D. Nawarathne Supervision: Commissioner of Local Government - NCP Contractor: GGC International Pvt. Ltd.				
Total estimated Project cost	Rs. 31.7 Mn				
Estimated cost of constructions	Rs. 22.8 Mn				
Estimated cost for Machinery equipments and others	Rs. 8.9 Mn				

Facilities provided at the Medirigiriya Compost Yard Complex



Undercover Piling Yard



Office Room



Electric fence

Watcher Hut

8.5 Construction of Compost Plant complex at Monrovia Estate, Hikkaduwa

As the Galle site was not suitable for a large scale compost plant complex due to its location in a sensitive area, a site at Hikkaduwa was selected as an alternative solution by the Pilisaru Project. Since the land belongs to the Land Reform Commission (LRC) several discussions were held between stakeholder institutions and finally the LRC agreed to release an area of 20 acres for the said activity on long term lease basis.

The proposed Compost plant complex at Monrovia Estate is planned to serve 7 local authorities namely, Rajgama PS, Hikkaduwa UC, Ambalangoda PS, Ambalangoda UC, Balapitiya PS, Galle MC, Bope-Poddala PS.



Hikkaduwa Monrovia Estate site

8.6 Construction of Compost plant complex at Maligawatta, Dompe

Subsequent to a request made to Ministry of Environment & Natural Resources by the Dompe Pradeshiya Sabha seeking assistance from Pilisaru project to make available the requisite facilities for the proper management of solid waste generated within the limits of the said PS, a suitable land covered with exotic forest species such as *Acacia*, *Pinus* etc at Maligawatta was identified to establish a solid waste management project for the Dompe PS.

This land was originally owned by the LRC and the LRC has handed over the land to Forest Department to establish a commercial forest plantation. The LRC agreed to hand over the entire extent of the land (78 acres) to Pilisaru Project on lease basis to establish the sanitary landfill and composting project.

Out of the total 78 acres, a core area having an extent of 6 Ha was initially selected to develop a sanitary landfill for which the Korean International Cooperation Agency (KOICA) agreed to provide technical & financial assistance on grant basis to establish a full-fledged landfill facility only for the disposal of waste generated within the limits of Dompe PS.

Environmental Assessment in the form of an Initial Environmental Examination (IEE) was carried out in order to obtain the environmental approval as it was a legal requirement. The IEE has been approved by the Forest Department, which served as the Project Approving Agency. Experts from a number of Korean Consulting Companies which were assigned as the Project Consultants by the KOICA visited the site to gather necessary information to prepare the necessary designs and other estimates.



Proposed land for the sanitary Landfill site at Dompe

With a view to raising the awareness of the citizens on the proposed activities which are planned to be carried out in the site, several public awareness programs such as 60 pocket meetings and 8 special Pilisaru Pariasara Gammana Programmes were conducted in Dompe area. This special programme was designed in view of the enormous public protest demonstrated against the proposed sanitary landfill site at Dompe motivated by a group of opponents said to be backed by local politicians

9 Establishment of Sanitary Landfill sites

9.1 Landfill at Malamulla, Panadura

The proposed site at Malamulla located within the limits of Panadura PS is said to be released to Western Province Waste Management Authority (WMA-WP). The PP has requested the WMA-WP to carry out the contour survey and other preliminary investigations in order to initiate the designing work. However, the WMA-WP was unable to complete this exercise for a long time resulting in a delay in the implementation of this project.

This landfill site is planned to serve as the final disposal facility to dispose the residual waste generated in the proposed compost plant to be establish at Pohorawatta existing dump site, Kalutara. The solid waste collected in the four Local Authorities namely Panadura UC, Panadura PS, Kalutara UC, Kalutara PS will be directed to Pohorawatta site for composting.

Possibilities are being explored to establish this landfill site under the financial assistance from the Export Development Corporation Fund – Korea, obtainable in the form of a soft loan. The consultants of the KUNHWA Consulting and Engineering Co. Ltd. (KUNHWA Ltd), Korea has visited the site along with the officials of PP and the WMA-WP.

9.2 Landfill at Keerikkulama, Nuwaragampalatha, Anuradhapura

The above landfill is planned to be established adjoining to the compost plant complex being constructed at Keerikkulama site, Nuwaragampalatha, Anuradhapura. This landfill will be developed as a fully engineered sanitary landfill to serve Anuradhapura UC, East Nuwaragampalatha PS and Central Nuwaragampalatha PS. Residual waste generated after the composting process will be directed to this landfill for final disposal.

Possibilities are being explored to establish this landfill site under the financial assistance from the Export Development Corporation Fund – Korea, obtainable in the form of a soft loan. The consultants of the KUNHWA Consulting and Engineering Co. Ltd. (KUNHWA Ltd), Korea has visited the site and confirmed the suitability of the site to develop a sanitary landfill verbally

9.3 Landfill at Madirigiriya, Polonnaruwa

This landfill is planned to be established at the same site where the composting plant complex was constructed at Yudaganawa, Madirigiriya. This landfill will be developed as a fully engineered sanitary landfill to serve Madirigiriya and Hingurakgoda PSs. Residual waste generated after the composting process will be directed to this landfill for final disposal.

Possibilities are being explored to harness the assistance of the Korean experts in the process of designing the landfill.

9.4 Landfill at Monroviawatta, Hikkaduwa

Monroviawatta land is situated within the Rajgama PS limits in Southern Province. This land belongs to Land Reform Commission (LRC) and LRC will provide the land to Pilisaru Project to establish Composting Plant and sanitary landfill to serve a number of Local Authorities in the Galle district. Since, Galle MC is operating its own composting plant within the MC limits, it is planned that the residual waste will be directed to the site.

Six Local Authorities namely Rajgama PS, Ambalangoda PS, Ambalangoda UC, Hikkaduwa UC, Balapitiya PS, and Bope Poddala PS are supposed to use this landfill site as their final disposal facility.

Possibilities are being explored to establish this landfill site under the financial assistance from the Export Development Corporation Fund – Korea, obtainable in the form of a soft loan. The consultants of the KUNHWA Consulting and Engineering Co. Ltd. (KUNHWA Ltd), Korea has visited the site and confirmed the suitability of the site to develop a sanitary landfill verbally

9.5 Gonadikawatta landfill at Gampola

This landfill is supposed to serve as the final disposal facility for the Udunuwara PS, Yatinuwara PS, Kadugannawa UC and Gampola UC. Inert materials from the Gohagoda composting site is planned to be transported to this landfill site for final disposal. Pilisaru Project has requested a land of an extent of 11 hectares from the Land Reform Commission. Hence, this land originally belonged to the Land Reform Commission and the possession of the land is still with Pussellawa Plantation Ltd., the Pilisaru Project requested the Ministry of Plantation to negotiate with the Pussellawa Plantation Ltd. and get the land released for the establishment of the sanitary landfill site. However, until the possession of the land is transferred to the Pilisaru Project action has been taken to initiate design work of the landfill site.

It is expected to obtain the technical and financial support from the Government of Korea in the form of a soft loan, the initial discussions of which has already been held between the two governments. A team of experts from KUNHWA Consulting and Engineering Co. Ltd. (KUNHWA Ltd), Korea has visited the site and expressed the suitability of the site for a sanitary landfill verbally.

9.6 KOICA funded Landfill at Maligawatta, Dompe

This landfill is planned to serve as the final disposal site for Dompe PS, managing 10 tons of waste per day. In addition to the sanitary landfill it is also planned to construct a composting plant within the same site. Originally this site was belonged to the Land Reform Commission (LRC) and leased out to Forest Department to setup a commercial forest plantation. The LRC has been taking action to release (lease out on long term basis) 68 acres of the land to the Pilisaru Project and out of which 6 hectares have been selected as the core area to construct the landfill site.

With the approval granted by the Forest Department based on an Initial Environmental Examination (IEE) report submitted by PP of the CEA, the vegetation cover of the core area, which primarily consisted of exotic timber & fuel wood species such as *Pinus*, *Acacia*, etc has been removed by the State Timber Corporation.

The entire waste management project with respect to the sanitary landfill is to be established with the technical and financial assistance from Korean International Corporation Agency (KOICA), Korea. The KOICA has awarded the consultancy to the KUNHWA Consulting and Engineering Co. Ltd. (KUNHWA Ltd), Korea and experts from KUNHWA, Sudokwan Landfill Site Management Cooperation and Korean Environment Institute (KEI) visited Sri Lanka at several occasions for bilateral meetings and to carry out the pre-feasibility study and initiate the design work.



Korean Experts collecting data for the pre-feasibility study

In addition to the above, two awareness raising meetings were conducted at the Divisional Secretariat, Dompe for Grama Niladari & Samurdhi Managers on 21st April 2009 and for the Villagers of the Dompe Pradeshiya Sabha Area on 06th May 2009.

With the participation of Hon Minister of Environment & Natural Resources another meeting was organized at the Auditorium of the CEA on 07th September 2009 for the National as well as Local level Politicians and Religious Monks in Dompe area to get their consensus again. This meeting was followed by the Media Conference, chaired by the Hon. Minister of Environment & Natural Resources held at the same venue.



Villagers attending a pocket meeting held at Dompe

However, the progress has been greatly affected due to the enormous public and socio-political objections demonstrated against the project, in spite of the financial, technical and other infrastructure facilities readily available. Pilisaru Project conducted 60 pocket meetings to raise awareness on the real aspects of sanitary land filling and the composting for People living in Dompe area.

In accordance with the KOICA- Pilisaru Action Plan, a training program on Waste Administration was arranged for a group of 20 personnel selected from various government sector institutions which has a direct stake for the implementation of the project.



Officers visiting the Sudokwan Land fill site, Seoul, Korea

Accordingly 20 officials were sent to Seoul, Korea for one week training and awareness on Waste Administration and practical aspects of land filling.

9.7 Landfill at Pompeimadu, Vavuniya

Pompeimadu landfill will be constructed at Vavuniya under the “Uthuru Wasanthaya Programme”. Required reports such as soil testing, survey plans, contour plans were requested from the Assistant Commissioner of Local Government, Vavuniya for the preliminary planning work. Officials of the Pilisaru Project visited the site and evaluated the possibility to construct this sanitary landfill at Vavuniya. Since, the land identified for this project is currently owned by the Forest Department a letter has been forwarded by the Divisional Secretary, Vavuniya requesting the Forest Department to release the land. The PP is unable proceed with the planning and designing work until such time the exact boundaries of the land are demarcated and the land released.

9.8 Landfill at Oluvil

This landfill has been proposed to serve the urban Local Authorities situated at Oluvill, Eastern Province. Project proposal has been developed and awaiting assistance from the officers in Eastern Province to proceed with the project.

10 Small – Medium Scale Composting Plants for Local Authorities

The PP, while implementing large scale composting plants and landfill projects, called for project proposals from the LAS to provide technical as well as financial support to develop small scale composting and recycling projects. The approval of the Board of Management of the CEA and the Pilisaru National Platform were obtained to carry out this program.

The project proposals of the LAS located within the Western Province were received via the WPWMA with its recommendation while the national Solid Waste Management Centre (NSWMSC) of the Ministry of Local Government & Provincial Councils also submitted project proposals to develop Environmental Preservation Centres At four LA areas, viz; Kuliapitiya Urban Council, Nawalapitiya Urban Council, Matara Municipality and Badulla Municipality.

Almost all the LAS in the country was officially informed to submit proposals, if interested, seeking the assistance of the PP. The proposals so submitted by the LAS are subject to an evaluation by a panel of Experts appointed by the National Pilisaru Platform (Apex Body), prior to release the funding. The sequential procedure adopted by the PP in evaluating the proposals for the consideration of financial support is as follows;

- Calling project proposals from Local Authorities
- Evaluating the proposals by the Technical Sub Committee (TSC) appointed by the Apex Body
- Site visits by Pilisaru officials/TEC members
- Revision of project proposals and estimates according to the observations of site visit and norms prepared by Pilisaru Project
- Resubmit the revised project proposals by Local Authority through District Engineer and Commissioner of Local Government (CLG) of the Province with their recommendation
- Reconsider the project proposal by TSC
- Signing the agreements between the Pilisaru project/CEA and relevant Local Authorities
- Granting the funding (30 % of total committed amount paid as a mobilization advance)
- Establishment of Monitoring and Evaluation committee in each local authority to monitor the implementation process according to the time frame.
- Carrying out field inspections by the monitoring group of the Pilisaru Project consisting Project Officer (Planning and Implementation) and Engineer/Quantity Surveyor.
- Submitting payment bills by the LA with the observations and approvals of the monitoring committee, District Engineer and CLG to the Pilisaru Project

- Field inspection carried out by the Project Officer (Planning and Implementation) and Engineer/Quantity Surveyor of the Pilisaru Project and evaluate the progress for construction for payments
- Release remaining funds and completing the project.
- Continue monitoring of the project by the Monitoring Committee appointed by the Local Authority to ensure the sustainability of the project.

Once the TSG's recommendations were received for the proposals, approval of the Board of Management of the CEA is obtained prior to releasing the funds. In order to ensure consistency of the BOQs for the construction of various infrastructure facilities such as composting yard, concrete drying pad, access roads, toilets, office rooms, store rooms, fencing, supply of electricity, water wells, laying of pipelines etc the LAS were instructed to submit the project proposals through the Commissioner of Local Government of the respective Province along with the BOQs recommended / approved by the District Engineer. It was expected that this procedure will ensure the transparency of transactions.

10.1 Brief description of Mini – Medium scale Composting Projects implemented by the Pilisaru Project in 2009.

Pilisaru Project provided funding assistance to 50 LAS including Karandeniya PS, Niyagama PS, Akurana PS, Baddegama PS, Elpitiya PS, Hali-Ela PS, Kalawana PS, Matale MC, Matale PS, Matugama PS, Polgahawela PS, Rattota PS, Udubaddawa PS to construct small- medium scale Composting projects in 2008-210 .

An agreement between the Head of the respective LA and the Chairman of the CEA was signed for each LA prior to release the funds. An amount equivalent to 30% of the total allocated amount agreed was disbursed as the advance payment. All the LAS were instructed to establish Monitoring & Evaluation Committees to monitor the constructions and also to submit a report for the settlements / reimbursements of the bills.

Therefore, the procedure adopted by the PP requires that the LAS should forward their bills to the PP for settlements / reimbursements through the District Engineer and the CLG along with their endorsement recommending such settlements/ reimbursements.

As and where necessary, the staff of the Pilisaru Project attended at the Monitoring & Evaluation Committee meetings to provide necessary guidance and streamline the construction process in addition to close monitoring. Essentially the Pilisaru staff undertook visits at the construction sites when it comes to effecting payments to LAS in settlement / reimbursement of bills.

11 Construction of Biogas Plants for Local Authorities as requested

11.1 Construction of two Bio Gas Plants at Gampaha Municipal Council

The Gampaha MC submitted project proposal to setup a biogas plant at its premises and the TWG of the Apex Body recommended the proposal for funding. Accordingly, the funding assistance provided to construct a biogas unit by Gampaha MC after having approval of the Board of Management of the CEA.

Both units of the biogas plant completed by Gampaha MC and commenced supply of bio gas to Kitchen/ Canteen of the Municipal Council and 4 houses located in the vicinity.



Biogas plant constructed at Gampaha Municipal Council

12 Special Projects / Programs implemented by the Pilisaru Project

12.1 Interim solution for Karadiyana waste dump site

The dump site at Karadiyana has been used by a Private Sector Company to dispose the waste collected from Dehiwala Mt Lavinia MC, Moratuwa MC and Kesbewa MC since a long time. In view of the huge environmental & health impacts caused by open dumping of waste over a period of long time, the Pilisaru project was directed by the Cabinet Sub Committee to provide a temporary solution to manage the incoming waste in collaboration with the WMA-WP until such time the private sector company completes the construction of the waste management project for which approval has been sought from the CEA under the Environmental Impact Assessment (EIA) process. Accordingly, the PP and the WMA-WP jointly prepared a project proposal and approval of the Cabinet of Ministers was obtained on 16th December 2009 to implement the proposal with funding from the General treasury.



Present condition of Karadiyana open dump site

12.2 Identification of a suitable land at Muthurajawela for waste management in Colombo area

The Cabinet Sub Committee (comprises of Hon. Minister of Environment & Natural Resources, Hon. Minister of Urban Development & Sacred Area Development, and Hon. Minister of Local Government & provincial Councils) appointed by H.E. the President of the Sri Lanka to address the issue of haphazard solid waste handling in the Colombo area directed the Pilisaru Project, at its meeting held on 17th September 2009 at the Ministry of Local Government & Provincial Councils, to obtain a 43 acres land in Muthurajawela from the Sri Lanka Land Reclamation & Development Corporation (SLLR&DC) and to develop a suitable project proposal aimed at disposal of garbage in an environmentally friendly manner.

In order to give effect to the direction of the Cabinet Sub Committee, the SLLR&DC was informed to release a suitable land (43 acres) from the marshy bare land situated adjoin the sand filled mixed development zone at Kerawalapitiya.

12.4 Uthuruwasanthaya Programme

Under the Uthuruwasanthaya Programme, the Pilisaru Project has undertaken to supply 2000 Plastic Compost Bins and 1800 waste collection plastic bins (of 3 different colours) for the distribution among the LAS and the schools in the Northern Province, Sri Lanka.

The compost bins will be provided to the LAS while the waste collections bins are meant for the schools. The Commissioner of Local Government, Northern Province has submitted a list of the beneficiary LAS and the schools and accordingly PP has taken steps to deliver 522 compost bins in the year 2009.

13 Providing Household Compost Bins & Collection Bins /Provide private-public-NGO Partnership

The PP developed a new proposal to promote & popularize the use of compost bins to dispose the organic fraction of the municipal solid waste generated in households. As per the proposal, the Pilisaru Project bear 50% of the total cost of a bin while the balance 50% is co-shared by the respective LA and the final beneficiary (the recipient of the bin).

An enquiry was made from the LAS to get to know their willingness to join with the program and accordingly the following LAS have consented to receive the bins subject to the conditions stipulated by the PP.



Plastic Compost bins stacked in the CEA premises awaiting distribution among LAS

16 Waste Management Promotional Activities (Waste Banking, Awareness Material, Propaganda & Advertising, Promote segregation systems, Waste reduction & recycling activities, Waste Audit etc)

16.1 Production & Telecast of Documentary & Docudrama on Solid waste Management & Sanitary Land filling

The Hon. Minister of Environment & Natural Resources directed the Pilisaru Project to produce a documentary on the general aspects of solid waste management highlighting the 3-R concept, and a docudrama giving prominence to the fundamental aspects of sanitary land filling in order that they could be used as education material to raise the awareness of stakeholders, mainly the general public and the school children.

16.2 SANASA-Pilisaru School Waste Paper Management Program

The SANASA – Pilisaru Waste Paper Management Programme initiated in 2008 continued in the year 2009 too, adding several schools in the Southern Province. In collaboration with the Southern Province office of the CEA, the PP conducted two programmes for the school teachers and the Divisional Environmental Officers on waste paper management.

The following is a list of selected schools of the Sothern Province from which the school teachers participated in the above programme.

Se. No.	Galle District	Matara District
1	Batemulla M.V School Batemlla	Thalpawila Central college Matara
2	Sudharma M.V Magalle Galle.	St.Marist Convent Matara.
3	Labuduwa Siridhamma M.V Galle	Wijitha Central College Matara
4	Kularatna M.V Galle	Mahanama M.V Matara
5	Ahangama Sharipuththa M.V	St.Thomas girls High school Matara
6	Ahangama Rohana M.V	Dharma Wijaya M.V Thalalla.
7	Ahangama Kakaluwa M.v	Kokawala Central college Matara
8	Ambalangoda Prajapathi gothama M.V	Sri Sumangala Balika Central College Matara.
9	Unawatuna M.V Unawatuna	Sujatha Balika M.V
10	Kithulampitiya Ananda M.V	Rahula College Matara
11	Dharmashoka m.v Ambalangoda	Presidents College Matara.
12	Uswathune Hayana M.V Galle	Siddhartha M.V Matara
13	Batapola M.V Galle	Thelijjawila Central college.
14	Anuladevi Balika M.V Galle	Mahamaya Balika M.V Matara.
15	Sangamitta Balika M.V Galle	Matara Central College.
16	Meepawala Amarasooriya M.V	Malimbada North M.V
17	Zahira National College galle.	St Survayes College
18	Olkott M.V Galle	Kumaratunga Munidasa M.V Mathara
19	Mahinda M.V Galle	St. Thomas College Matara.
20	Galle Convent galle	Malimboda Sri Sumedha M.V
21	Richerd pathirana M.V	
22	Anuladevi Balika M.V	

16.3 Special Awareness Program conducted in Dompe

In line with the construction of sanitary landfill at Maligawatta, Dompe assisted both technically and financially by the Korean International Corporation Agency (KOICA), 60 pocket meetings and 8 special Pilisaru Pariasara

Gammana Programmes were conducted to raise the awareness of the people living in Dompe area. This special programme was designed in view of the huge public protest demonstrated against the proposed sanitary landfill site at Dompe motivated by a group of opponents said to be backed by local politicians.

16.4 Telecast of Good Solid Waste Management Practices in ‘Derana’ Environment Program telecast in the ITN

The Pilisaru Project, in collaboration with the Education & Awareness Division of the CEA took an initiative to telecast a few successful solid waste management practices, such as production of compost using garbage as raw material operated by Local Authorities, in the “Derana” environment programme aired in ITN with a view to raise the awareness among the general public as well as motivate other Local Authorities to resort to proper waste management practices.

16.5 Participation at Exhibitions

The Pilisaru Project participated in a number of exhibitions held at various places in the country in an effort to provide the necessary awareness and the education to the various sectors of the society, particularly targeting the school children and the younger generation of the proper solid waste management practices. Following is a list of exhibitions for which the Pilisaru Project has participated in the year 2009.

i. Edex Exhibition

Edex exhibition was held at BMICH Colombo from 23rd – 25th January 2009 and over 50,000 people participated. Pilisaru Project made arrangements to distribute leaflets and other awareness material to the visitors. This was found to be a very good opportunity to disseminate correct information with regard to the technical aspects of composting process, bio gas technology and sanitary land filling technology particularly among the school leavers looking for higher educational prospects as well as university under graduates.



Pilisaru chamber at Edex exhibition

ii. “Deyata Kirula” Exhibition

“Deyata Kirula” exhibition was held at BMICH Colombo from 04th – 08th February 2009 and over 500,000 people visited this exhibition. Pilisaru Project made arrangements to distribute leaflets and Pilisaru Calendars among the visitors. This was found to be a very good opportunity to disseminate correct information with regard to the

technical aspects of composting process, bio gas technology and sanitary land filling technology particularly among the school children and university under graduates.



A model of a compost plant displayed at the exhibition

iii. Exhibition at Loyola College, Negombo.

An exhibition was held at Loyola College, Negombo from 27th – 31st May, 2009 and over 50000 people and school children visited the exhibition. Arrangements were made to disseminate information with regard to the solid waste management technologies and the advantages of proper waste management practices towards the improvement of sanitation, protection of health and conservation of environment through power point presentations and discussion forum.

iv. “Soba” National Environmental Exhibition

“Soba” exhibition was held at Vihara Maha Devi Park, Colombo from 04th – 06th June 2009 in line with the World Environment Day and over 80,000 people visited the exhibition.

v. Exhibition at Joseph Vas College, Wennappuwa

This exhibition was held at Joseph Vas College, Wennappuwa from 08th – 11th October, 2009 and over 80000 people visited this exhibition. The visitors were provided with requisite awareness and education on various aspects of solid waste management using power point presentations and other awareness materials

vi. “Wasantha Udanaya” Exhibition, Delgoda

The Pilisaru Project participated in the above exhibition which was held at Delgoda from 21st - 23rd December 2009 and over 25 000 people visited the exhibition.

16.6 Pilisaru Parisara Gammana Program

Pilisaru Parisara Gammana Program (PPGP) was designed to educate ordinary people on the importance of proper solid waste management practices and encourage them to produce high quality compost at household level using Bio degradable waste generated in the households. 400 families were selected from each Divisional Secretariat Division (DSD) in the Western Province and each of these families was provided with a cloth bag, a fruit plant, compost packet and a packet of vegetable seeds. The Pilisaru Project conducts an awareness and education programme to the participants on the proper handling of the compost bin and the advantage of using organic fertilizer in home gardening etc.

16.7 Establishment of Pilisaru Parisara Balakaya

On the direction given by the Hon. Patali Champika Ranawaka, Minister of Environment and Natural Resources a “Pilisaru Parisara Balakaya” (PPB) was established taking representative from the Pilisaru Parisara Gammana Program. This PPB is an informal arrangement to communicate between the Pilisaru project and the villagers who have participated in the PPG program. The objectives of setting up the PPB are as follows;

- Passing down the information on latest scientific knowledge which could be applicable at local level to villagers



Members of the Pilisaru Balakaya at the inaugural ceremony

- To act as leaders in organizing the villagers to promote household solution in the waste management
- Control of vector borne diseases through adoption of proper waste management practices
- Harnessing support and active participation in various occasions in disseminating information on the advantages of resorting to environmentally friendly practices such as organic farming, avoidance of use of pesticides, inorganic fertilizer etc among the general public.

The Inaugural function of PPB was held at Maharagama Youth Council on 18th November 2009 with the participation of Hon Maithreepala Sirisena, Minister of Agriculture and Agrarian Services and Hon. Minister of Environment and Natural Resources. This function was attended by about 1800 people including the members of the PPB. The Lional Ranwala Foundation staged a cultural programme at this event.

16.8 Promotion of Cloth Bags as an alternative to Polythene / Plastic Bags

In an effort to discourage the use of polythene / plastic bags as containers, a program was developed by the PP to promote using cloth bags. 15,000 cloth bags were tailored at a unit cost of Rs 62.30 at a total cost of Rs 934,500/- and about 8300 bags were distributed free of charge to the pilgrims & devotees who have attended at the national religious & cultural ceremonies such as procession at Sri Dalada Maligawa in Kandy, Feast at St. Anne's Church, Talawila, Kataragama religious festival and ‘Pitchcha Mal Pooja’ held at Anuradapura.

450 bags were released to the MENR to distribute among the participants who attended at the important meetings, functions, training programs, workshop, press conferences etc representing government sector Ministries & Departments, other government institutions, Privates sector agencies, media agencies etc, organized by the MENR. The balance 6250 bags were distributed at the Paraisara Gammana programs conducted at Dompe and various other places.

16.9 Solid Waste Management Program for Security Forces

Implementation of solid waste management programme for security forces, civil protection force, Police Department initiated in 2008 under the direction of Hon. Minister of Environment & Natural Resources. In 2009 financial and technical assistance was provided to setup a waste management system including a composting facility at the Civil Security Department at Galkiriyagama, Anuradhapura.



Officials at a discussion with Prof. Wimaladharma Abeywickrama, Chairman, CEA

16.10 Preparation of Education & Awareness Materials (Leaflets, Stickers and Models)

Action was taken by the PP to design leaflets and posters on the different aspects of waste management activities being carried out by the Pilisaru Project such as leaflet on Pilisaru Parisara Gammana, Compost project at Kolonnawa Urban Council and the importance of waste segregation based 3R Principle and correct use of household compost bin so that these material can be used at the education and awareness programs conducted both by the PP and other institutions.

A sizeable number of above material were distributed at the various exhibitions, fairs and other programs attended by the PP at places like BMICH, Universities, and Schools, Government sector Institutions held both in Colombo and elsewhere in the country.

Two models of a Compost plant and a Sanitary Landfill were fabricated with a view to using them for effective awareness rising particularly in exhibitions and other gatherings where the general public & school children are supposed to visit. The total cost incurred for the fabrication of the models is Rs.205,000.00

16.11 Awareness rising at the Opening of the Waste Management Projects completed by the Pilisaru Project

In view of the tremendous importance of raising awareness of the general public towards extending their support facilitating the solid waste management programs initiated by the respective Local Authorities established with the technical & financial assistance from the Pilisaru Project, several education & awareness programs were conducted in parallel to the opening / foundation stone laying ceremonies organized by the relevant Local Authorities, taking the advantage of mass gathering of citizens as well as school children . Below is list of events of openings of the projects completed by the Pilisaru Project

- Pannala composting project was opened on 30th January 2009 by the Hon. Minister of Environment and Natural Resources and Hon. Minister of Media & Information.
- Bingiriya composting project was opened on 31st January 2009 by the Hon. Minister of Environment and Natural Resources and Hon. Minister of Media & Information.
- Kuliyapitiya composting project was opened on 07th February 2009 by the Hon. Minister of Environment and Natural Resources



Opening of the Compost Palnt complex at Kuliyapiya

- Horana composting project was opened 20th March 2009 by the Hon. Minister of Environment and Natural Resources
- Bulathsinhala composting project was opened 31st March 2009 by the Hon. Minister of Environment and Natural Resources.
- Bandaragama composting project (improvement) was opened 2nd April 2009 by the Hon. Minister of Environment and Natural Resources
- Agalawatta composting project was opened 10th April 2009 by the Hon. Minister of Environment and Natural Resources.
- Attanagalla composting site was opened 21st April 2009 by the Hon. Minister of Environment and Natural Resources
- Kaduwela composting project (expansion) was opened 24th April 2009 by the Hon. Minister of Environment and Natural Resources
- Yatiyatota composting project was opened 07th May 2009 by the Hon. Minister of Environment and Natural Resources
- Balangoda composting project (expansion) was opened 28th May 2009 by the Hon. Minister of Environment and Natural Resources and Hon. Maheepala Herath, Chief Minister of Sabaragamuwa Province.
- Ella composting project was opened 1st August 2009 by the Hon. Minister of Environment and Natural Resources
- Bandarawela composting project (expansion) was opened 1st August 2009 by the Hon. Minister of Environment and Natural Resources
- Puttalam composting project (improvement) was opened 23rd November 2009 by the Hon. Minister of Environment and Natural Resources, Hon. Minister Milroy Fernando , and Hon. Athula Wijesinghe, Chief Minister of the North –Western Province

17 Establishment of Environmental Preservation Centres at Matara, Badulla, Nawalapitiya by SWM Supporting Center

The NSWMSC attached to the MLG&PC made a request to the PP asking for financial assistance to develop waste management programs for four LAS. The Secretary to the MLG&PC serves as the co-chair of the Pilisaru National Platform. On the invitation made by the PP, the NSWMSC submitted four conceptual project proposals in 2008 with a total estimated budget of Rs 82.0 million to develop Environmental Preservation Centres in Kuliyapitiya Urban Council, Nawalapitiya Urban Council, Matara Municipality and Badulla Municipality.

It was decided that the NSWMSC undertake to follow the entire tender process right from the beginning of calling consultancy services subject to complying with the national procurement guidelines.

However, the Secretary to the MLG&PC at a later stage informed the PP that the allocation set apart in the Pilisaru Action Plan for 2008 and 2009 for the development of four projects was inadequate when compared with the budget of the initial proposals submitted early, and there need to increase the total allocation from Rs 72.0 million to Rs 193.0 million.

18 Improved Inter Agency coordination and empowerment of civil society groups to strengthen Institutional Framework for sound waste management

Pilisaru Project produced the following two reports in keeping with the requisite activity included in the Pilisaru Action Plan- 2009.

- i. Report Relating to Obtaining the Assistance of Senior Citizens/ Experts on voluntary basis for solid waste management and
- ii. Guidelines for the Establishment of Provincial Steering Committees and Local Authority level Operational Committee for Solid Waste Management

The said first Report comprises following key thematic areas;

- Role of Local Authorities relating to Solid Waste Management and the importance of Utilizing the Senior Citizens for Solid Waste Management
- Objectives
- Methodology to select Retired Senior Citizens
- Procedure to be adopted in the selection of Retired Senior Citizens
- Terms of Reference (ToR) for the Expert Senior Citizens
- Basis of Obtaining the Services of the Retired Senior Citizens
- Monitoring and Evaluation of the Progress of Implementation of the Mechanism of Securing the Knowledge and Assistance of Retired Senior Citizens on voluntary basis for Solid Waste Management

And the second Report comprised following important thematic areas;

- Role of the Local Authority relating to Solid Waste Management
- Objectives
- Terms of Reference (ToR) for Provincial Steering Committee (PSC)
- Terms of Reference (ToR) for Local Authority Level Operational Committees
- Composition of Provincial Steering Committee (the PSC)
- Composition of the Local Authority Level Operational Committees (LALOC)
- Establishment of Advisory Groups
- Implementation, Monitoring and Evaluation of the Progress of Committee Meetings at Provincial Co Vertical Integration of Institutional Hierarchy for Solid Waste Management

The aforesaid reports in draft form were submitted for the evaluation of the Technical Expert Committee (TEC) and final Reports were prepared in accordance with the amendments suggested by the TEC. Pilisaru Project printed 1300 copies of the said Reports in Sinhala, English and Tamil languages and dispatched copies to 330 local authorities for consideration and giving effect to the suggestions made by the Reports for systematic and effective solid waste management.

19 Development of a Programmatic CDM Project for the “Pilisaru“ Program

The Sri Lanka Carbon Fund (SLCF) has taken action to obtain the assistance of various local and international experts in the field of Clean Development Mechanism (CDM) to develop projects for the SLCF. Accordingly, the UNEP Risoe Center, an organization that has experience in this regard has agreed to assist Sri Lanka to develop a ‘Programmatic CDM’ project for solid waste management.

In response to a recommendation made by the Secretary of the Ministry of Environment and Natural Resources (MENR), the Board of Management of the CEA approved a payment equivalent to US\$ 15,000/- to be paid to Carbon secretariat subject to submission of the Project Design Document by the Consultants. MOU was signed between the Sri Lanka Carbon Fund of the MENR and UNEP RISOE centre for the development of P-CDM for the Pilisaru Programme.

20 Strengthen existing regulatory mechanism and legal framework

Pilisaru Project prepared a report titled “Strengthening the Existing Regulatory Mechanism and Legal Framework” in terms of respective activity embodied in the Pilisaru Action Plan - 2009.

Draft Report was submitted for the evaluation of the TEC and final Report was prepared in accordance with the amendments suggested by the TEC. Pilisaru Project printed 1300 copies of the Report in Sinhala, English and Tamil languages and dispatched copies to 330 local authorities for consideration and giving effect to the suggestions made by the Report for strengthening of the regulatory mechanism and legal framework relating to solid waste management.

21 Training on operational & maintenance for stakeholders of large and medium scale composting and land filling/Awareness and education in ISWM for all stakeholders /Training and Capacity Building of Project staff

The PP organized 2-day residential training program for Assistant Directors of the CEA held at Weligama Compost Site. This special training program was arranged to provide a hands-on experience to the above officers. A number of training programs had to be cancelled due to unavailability of the resource persons who provides their services free of charge. An exposure on the composting process using the solid waste as raw material was given to the newly recruited workers attached to the Medirigiriya Pradeshiya Sabha through a seven day training program conducted at Weligama Composting site.



Assistant Directors of the CEA attending the training at Weligama Composting site

The curriculum of the training program was developed in such a way that the trainees are exposed to theoretical knowledge as well as practical hands-on experience on windrow composting. Detailed theoretical knowledge on the scientific aspects of land filling was also included in the program to harness the latest techniques of land filling.

An evaluation to assess the effectiveness and overall success was carried out at the end of all the training programs. More than 95% of the attendees has scored very high ratings and commented that the training was highly successful in the context of the course content, technical integrity, practical experience exposed, and the logistic arrangements etc.

Summary

Pilisaru project assisted various stakeholders, the Local Authorities being the prime beneficiary to improve the solid waste management situation in the country utilizing primarily of funding provided by the Treasury. The vivid assistance supported by the PP includes construction of compost plants, distribution of compost bins at a subsidized rate, recycling facilities, biogas plants, education & awareness materials, formulations of technical reports & guidelines etc.

The planning work of the proposed Sanitary Landfills were completed during the first phase of the project (year 2008-2010) and construction of compost plants which planned to be completed within the 1st phase were completed.

In additions to that the KOICA has fielded several missions along with the representatives of the Korean consultancy firms to carry out field investigations, prefeasibility studies and to hold formal discussions / meetings with the MENR, CEA and the PP for which the expenses were met by utilizing its own funding committed under the RoD agreement. They also provided financial assistance for the overseas training held in Korea from 1st to 7th November 2009.

According to the successful progress of the 1st 3 year period of the project Sri Lankan government has granted another 3 year period to extend the project and reach targets successfully.