

Chapter 6 Recommendations

6.1 Implementation of the National Strategies for SWM

In order to implement the National Strategies for SWM, the following measures should be taken urgently.

6.1.1 Establishment of a National SWM Support Centre (NSWMSC)

LAs will not be able to improve their SWM by themselves in accordance with the NSSWM due to the weak capacity. In order to ensure the LAs actually implement the strategy, it is essential to have a government institution to assist LAs regarding their problems. The Study team, therefore, recommends the central government to urgently establish NSWMSC which will play this role.

6.1.2 Strengthening of Provincial and LA Level Coordinating Committees for the Implementation of the NSSWM

Provincial and LA level Coordinating Committees have been established to implement the NSSWM, however, they do not function well. The early establishment of the NSWMSC is needed for those coordinating committees to function. NSWMSC will maintain a close relationship with the committees and strengthen their functions.

6.1.3 Preparation of Implementation Plans for the NSSWM

The NSSWM established the policy for the improvement of SWM in the country. In order to implement the strategy, the central government needs to provide plans and guidelines on how to implement each component of the strategy, for instance how to raise the recycling rate.

6.2 Establishment of a Financial Base for SWM

6.2.1 Establishment of a Financial Base for SWM in LAs

SWM works provide people with a sanitary environment, which is a basic human need. The proper execution of SWM, therefore, has to be provided by LAs regardless of the financial feasibility. However, because of the extremely tight financial conditions of the central government at present, it appears to be difficult to seek subsidies from it. Therefore, the government shall instruct LAs to secure their own financial sources by taking the following measures:

- a) To reduce the cost by improving the efficiency of existing resources owned by LAs.
- b) To make current SWM works more efficient through public cooperation such as the introduction of bell collection, and reduce current SWM costs and save some budget
- c) To contract current SWM works out to the private sector , and reduce SWM costs and save

some budget

- d) To increase the revenue from assessment tax, trade licenses, etc.
- e) LAs provide residents with only basic services and should charge for special services, which also contributes to waste reduction
- f) To develop an independent accounting system for SWM works and identify each unit cost.

6.2.2 Implementation of the Project for Strengthening the Local Loan System for Facilitating SWM Projects of LAs

It is too difficult for most LAs to invest a considerable amount of money in SWM facilities and equipment without any financial support system. However, it is also too difficult for LAs to get a loan for it because the existing local loan system is weak, getting a return from the SWM project is difficult, etc. On the other hand, the demand for financing money for the construction of SWM facilities and the procurement of equipment is predicted to increase day by day since tourism will soon be booming due to the cease fire between the government and LTTE.

Therefore, the local loan system for SWM projects should be strengthened.

Proposed amount of fund: Rs 1 billion

Proposed interest: Less than 4% per year

6.2.3 Promotion of the Improvement of SWM by Financial Scheme

A financial scheme should be provided to LAs in return for the implementation of a formulated long term plan, revenue increase measure, cost reduction measure, management improvement plan, public education plan, building social acceptability plan, public awareness plan, etc. in order to improve the SWM works.

6.2.4 Subsidy to SWM Projects

With economic growth, waste issues will surely become more serious. As for considering how to cope with this problem, private sector participation is absolutely necessary; however, what the private sector can contribute has to be limited because SWM work is a public service. Therefore, LAs still play an active role in the SWM works even though the private sector is involved. On this point, SWM works should be regarded as the same as infrastructure such as roads, water supply, sewage facilities, etc.

At present, grants are given to water supply projects. In order to cope with the increasing seriousness of waste problems, it is necessary to establish a similar grant scheme for the SWM works, SWM facilities in particular.

6.2.5 Establishment of Incentive Mechanism in Subsidy to LAs Towards Cost Reduction

In the present system, the subsidy amount to an LA is based on the salary amount of the LA. If the labour cost is reduced by the improvement of waste collection efficiency with public cooperation, the subsidy amount to the LA decreases. Therefore, LAs have no incentive to reduce costs, the labour cost in particular. This present mechanism discourages LAs from reducing costs by improving work efficiency. In order to create an incentive for LAs to reduce costs by improving work efficiency, the subsidy mechanism has to be changed so that the subsidy does not decrease with a reduction in costs. The saved budget can be spent for other purposes to be determined by the LAs. A block grant, for example, can be a better option.

6.3 Strengthening of the Administrative Capability for SWM

6.3.1 Strengthening of the Administrative Capability of PCs

It is difficult for each LA to plan, construct and operate a proper SWM facility, especially a sanitary landfill. The need for the construction and operation of inter-municipal SWM facilities will, therefore, increase year by year. In order to establish an inter-municipal SWM system, the role of PCs, which will be to take initiative and coordinate LAs for the location of inter-municipal SWM facilities, is quite important. The central government shall provide support and instruction as follows to strengthen PCs' capabilities to carry out their role in the administration of SWM.

6.3.2 Establishment of a Principle to dispose of MSW within the Juridical Areas of LAs

Many LAs in the country are facing extreme difficulty in siting urban sanitation facilities like landfills due to the very limited juridical areas of LAs. To solve this problem, the central government shall take the following measures:

- a) Instruct LAs to establish a principle to dispose of municipal SW within their juridical area
- b) Require LAs to include the location and plan of urban sanitation facilities like landfills in their urban development plans. Instruct LAs that are not able to locate the facilities within their juridical areas, to establish an inter-municipal SWM system in coordination with PC and LAs.
- c) Establish the siting of urban sanitation facilities as a condition for up-grading a UC to a MC or a PS to a UC
- d) Instruct LAs to formulate a long-term SWM plan and improve their SWM in accordance with the plan

6.3.3 Instruction to LAs of Importance of Landfill Site Acquisition

A landfill, which is a final disposal site, is indispensable in establishing sound SWM in an LA. Neither the central government nor the LAs understand this principle fully. Even if an LA makes every effort towards the 3Rs, a landfill is absolutely required for proper SWM. With full understanding of the above, the central government shall instruct LAs to secure their final disposal sites as described below.

- a) No landfill can be constructed without securing consensus of neighbouring communities. To get the consensus of people, LAs shall spend a considerable amount of time and efforts
- b) To obtain consensus from neighbouring communities, LAs are required to provide some compensation to them or their community. The government shall instruct LAs to secure this compensation for them.
- c) Establishment of transparent and public-involved policy making and planning
- d) In order to acquire trust from people, LAs shall conduct sanitary landfill operation at current landfills to the extent possible

6.3.4 Promotion of Private Participation into SWM Service

The government of Sri Lanka is promoting private participation in SWM services because their capacity and resources are very valuable in such works.

However, SWM is a basic public service to maintain sanitation and preserve the urban environment, and the service should cover all citizens in an LA. Therefore, a certain level of performance shall be achieved. Paying close attention to the very weak capability of LAs in every aspect, the central government shall establish a guideline for private participation in SWM services. The LAs shall promote private participation in SWM services in accordance with the guideline.

6.3.5 Acquisition of Public Cooperation

The 3Rs (Reduce, Reuse and Recycle), the main strategy of the NSSWM, will not be realised simply by formulating relevant legislation, developing the system and constructing the required facilities. What is most required for the realisation of the 3Rs, is the co-operation of the public. The type of public co-operation required, however, is one that is long-lived and steady. Consequently, much is expected from the resident education and information programs. Though such resident education and information programs are mainly conducted by LAs, the central government shall continuously support such activities. The pilot projects done in the study were the first step toward gaining public co-operation. The Team recommends the central government to support LAs in conducting education programs utilising several tools prepared by the study.

6.3.6 Strengthening of Educating and Training Functions on SWM

Many LAs suffer from lack of trained human resources in both technical aspects and management. The central government shall provide opportunities for education and training in SWM to as many stakeholders as possible in order to promote the 3Rs and implement proper disposal. Though PCs and LAs shall conduct various education programmes and training in SWM for the stakeholders, the Team recommends the central government to provide opportunities for such activities by utilising existing organisations.

Table 13: Proposed Education and Training Programs on SWM to be done by Central Government

Training	Executing Organisation	Target Stakeholders
1) Education for SWM Officers	NIPHS	SWM officers and PHI of PCs and LAs
2) Seminar on SWM administration for administrators	SLILG	Council members and high rank administrators of PCs and LAs
3) Training for SWM practitioners	SLILG	SWM staffs working in PCs and LAs
4) Seminar for NGO and SWM companies	SLILG	NGO, private SWM companies, etc.

As for the item 1. Training for SWM Officers, the trainees, who passed the examination to be held at the end of training, shall be given a certificate of a qualified SWM officer. In order to set up this training the central government shall establish a qualification system for SWM officers and order LA to have a qualified SWM officer for its waste management.

6.4 Implementation of the 3Rs and Proper Disposal

6.4.1 Establishment of PPPs

The establishment of the Polluter (waste discharger) Pay Principles (PPPs) in the country is indispensable to execute NSSWM and stabilize the SWM works. However, actually it should be applied to the waste type which the number of dischargers are fewer as charging is easier. The LAs shall take a phased approach and the first step will be the introduction of tipping fees for composting plants and landfills, and a waste collection fee for dischargers of large amounts of waste such as business enterprises.

6.4.2 Promotion of Reuse and Recycling

The Study identified that conventional reuse and recycling systems are established and are very active in the private sector. In terms of reuse and recycling systems, what the central government should do first is to maintain and preserve existing systems as much as possible.

The next step shall be promotion of the recycling of bio-degradable organic wastes such as kitchen waste and grass/woods, which account for more than 65 % of MSW weight-wise.

The third step, as a future issue, would be the promotion of reusable/recyclable products and the introduction of extended producer responsibility (EPR), which developed countries are very anxious to do today.

6.4.3 Promotion of MSW Composting

In Sri Lanka, many LAs are promoting the composting of MSW. Though there are a few success cases, in most cases composting of MSW is hardly successful. Based on past experiences, the Team recommends the central government to take the measures described below in order to promote the composting of MSW.

First, all concerned people in SWM should understand that a certain treatment cost is required for the operation of a MSW composting plant in addition to the income from compost (product) sales. The treatment cost should be covered by the reduction of the final disposal cost (amount). For the promotion of MSW composting, therefore, the government should enforce and instruct LAs to stop open dumping operation and implement sanitary landfill, and make them understand a certain amount of money is required for the proper treatment/disposal of MSW.

In second the government should take the following measures to raise demands of compost from MSW:

- 1) Conduct a market study of compost made from MSW and establish a database that provides information on the demand and supply of compost to both users and suppliers
- 2) Develop a certificate system for MSW compost that guarantees its quality to users as shown in the figure below
- 3) Set up reference laboratories by using the existing ones in universities, etc. in order to issue the certificate of the quality

6.4.4 Strengthening of Enforcement and Monitoring Capability for SWM in LAs by Public Participation

It is necessary to strengthen monitoring and enforcement functions for improper disposal in order to facilitate the implementation of the national strategies by LAs, especially the proper disposal of SW. In principle, CEA should be responsible for this, however, difficult for CEA to take full responsibility by itself. Considering the very weak capabilities of LAs on SWM, it is essential to establish a monitoring and enforcement system, which puts continuous pressure on LAs to implement proper disposal. In order to establish the monitoring and enforcement system for improper landfill operation, the Study team recommends CEA to instruct all LAs to set up

monitoring committees consisting of the third party such as neighbourhoods, NGOs, relevant authorities.

6.4.5 Preparation of Guidelines and Standards for SWM

The policies, strategies and legal provisions for SWM currently in place in Sri Lanka provide the necessary basis for action leading to effective and sustainable improvement in the sector. Especially for HWM, Guidelines for the Implementation of HWM Regulations have been published. As for MSWM, only a national strategy has been announced by the government. The CEA in collaboration with other relevant central government organisations shall establish the following guidelines and standards on MSWM to implement the strategies:

- a) Guidelines for the implementation of the strategy (NSSWM)
- b) Standards for the planning, design and operation of SWM facilities including sanitary landfills
- c) Guidelines for private sector participation including tender and contract procedure with a private firm.

6.5 Social Actions

The following social actions should be taken to minimise the negative social impacts to be associated with the implementation of the SWM improvement plan.

- a) Eliminating bias to cleansing workers and traditional recyclers and to socially equitably evaluate them.
- b) To provide cleansing workers to be reduced with another job opportunities as a safety net as the very limited job opportunity for them
- c) Prevention from worsening workers' employment conditions to be brought with the introduction of market competition mechanism, and ignorance of environmental protection by contractors and price rise to be lead by the monopoly and oligopoly.
- d) Public participation into the preparation process of the SWM action plan

6.6 Development of A HCWM System

The results of the Healthcare Waste Study show that the amount of HHCW/HHHCW generated in the seven model towns is very limited, i.e. 1.2 ton/day, compare with MSW generation amount, i.e. 445 ton /day, and only 0.26 % of MSW generation amount. If segregation of HHCW/HHHCW from non-risk HCW is completely done, the burden of its treatment is also limited. Therefore, the competent authority (MOHNW) of enforcing segregation at medical institutions shall order them through separation of HHCW/HHHCW from non-risk HCW at each

stage of SWM; i.e. generation, internal collection, on-site treatment, storage and discharge.

It is necessary that technical system for HHCW and HHHCW be established (i.e., each type of HHCW and HHHCW be separated at generation sources, exclusive collection/transportation and treatment/disposal for HHCW and HHHCW be practiced.). Thermal treatment by individual small-scale incinerators has problems in air pollution control and O&M features. Meanwhile a centralized incinerator project should overcome problems of inefficient scale and cost recovery.

In this consequence, it is proposed that an exclusive section in a municipal landfill site should be allocated for a sanitary landfill for HHCW and HHHCW for the time being. Separate and isolated landfill operation should be employed there. In the future, HHCW and HHHCW should be sent to and incinerated at an incineration plant for HW. When centralized incineration plant is in operation, strict gas emission regulation may possibly start to be imposed on existing individual small-scale medical incinerators.

The construction of a HHCW and HHHCW disposal site would incur additional expenses. Legally, medical institutions should shoulder all expenses for the handling of HHCW and HHHCW, that is from collection to disposal. A study should be carried out, therefore, as to the manner in which medical institutions should cover the increase in the expenses.

The logo for JICA (Japan International Cooperation Agency) is centered on the page. It features a stylized graphic of two overlapping circles above the lowercase letters "jica". The "j" is lowercase, while "i", "c", and "a" are uppercase. The letters are bold and black.