



TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY

LABOR MARKET INTELLIGENCE REPORT

SOLID WASTE MANAGEMENT

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Solid Waste Management

I. Background

Republic Act No. 9003, the “Ecological Solid Waste Management Act” enacted in 2000 provides the legal framework for the country’s systematic, comprehensive and ecological solid waste management program that shall ensure protection of public health and the environment. It emphasizes, among other things, the need to create the necessary institutional mechanisms and incentives, as well as the imposition of penalties for acts in violation of any of its provisions.

The creation of the National Solid Waste Management Commission (NSWMC) is one of the salient features of the Act. The NSWMC is responsible in the formulation of the National Solid Waste Management Framework and other policies on solid waste, in overseeing the implementation of solid waste management plans and the management of the solid waste management fund. It is further mandated that a provincial and city/municipal Solid Waste Management Board shall be established by the LGUs in their respective localities, they will be responsible for the development of their respective solid waste management plans, among others. Moreover, the National Ecology Center (NEC) is also created, which will be responsible for consulting, information, training and networking services relative to the implementation of the Act. Figure 1 shows the institutional mechanism in the implementation of solid waste management in the country.

Figure 1: Ecological Solid Waste Management Act Institutional Structure



Source: National Solid Waste Management Commission

Another salient provision of the Act is the prohibition against the use of open dumps for solid waste (Section 37) and the guidelines for controlled dumps (Section 39). The law also provides for the securing of permits for solid waste management facility construction and expansion (Section 38). With these provisions the LGUs are mandated to establish sanitary land fills (SLFs) facilities in their locality. This would require people who will manage and operate the facilities with the necessary background and competencies.

II. Economic Contribution and Prospect

Per a report¹ by SWAPP, there are 7,713 material recovery facilities (MRFs) in operation, 18 sanitary land fills (SLFs) operated by the city governments, 26 SLFs by the municipal governments, 340 controlled disposal facilities, and 606 open dumpsites. However, only a few of these landfills are being operated and managed properly as engineered facilities. The main problem lies with the inadequate technical know-how and skills of the assigned personnel which often lead to the “open dumping” practices being applied.

In terms of labor demand, refer to the figures below on the computation done by SWAPP:

Given:	Assume:	Assume:
<ul style="list-style-type: none"> • 44 SLFs completed and 69 under construction • 7713 MRFs • 143 Cities • 1496 Municipalities 	<ul style="list-style-type: none"> • All 143 cities will put up a SLF • 33 cities have completed SLF and SLF under construction (Source: NSWMC – List of SLF Sites) 	<ul style="list-style-type: none"> • 10% of the remaining 1346 municipalities are 3rd, 4th and 5th class municipalities and will form a cluster • There will be 135 clustered municipalities with a SLF • Total Actual and Projected SLF = 143 + 150 + 135 = 428 SLFs

¹ Presentation of SWAPP Executive Director Lizette Cardenas during the TESDA Board Direction Setting Committee Meeting held on 11 December 2012

Management of solid waste reduces adverse impacts on the environment and society as well as supports local economic development. There are many benefits derived from the use of this method:

- Improved quality of life;
- Lower incidence of diseases;
- Less environmental risks;
- Reduce the demand for landfill space;
- Healthy environment as a result of the reduction of pollutants; and
- More economic activity in the locality.

III. Employment and Skills In-Demand/requirements

With the above projection of SLFs and MRFs that will be established in the next several years, a total of 24,100 jobs will be needed for the sector. Moreover, for paleros alone, a total of 11,130 will be needed ².

Projected Manpower Demand

Position	SLF	MRF	Total
Foreman	428	7713	8,141
Spotters (2 shift/SLF)	856	7713	8,569
Paleros	7390	-	7,390
Total	8,674	15,426	24,100

Projection of Garbage Crew needed

SLF	Truck per SLF	Total trucks	Crew per truck	Paleros needed
143 (cities)	10	1430	3	4,290
285 (municipalities)	8	2280	3	6,840
				11,130

² Ibid

IV. TVET Programs and Supply

Consultations with the solid waste management stakeholders specifically the National Solid Waste Management Commission, Solid Waste Association of the Philippines and other land fill operators were conducted the past several months. The development of qualifications and standards for specific skills requirements for solid waste management were discussed during these consultation meetings.

Finally, in the December 2012 TESDA Board Direction Setting Committee, the following qualifications were approved as priority qualifications:

- Spotter (tumbalero)
- Site foreman
- palero

Moreover, the TR for heavy equipment operator, which is a qualification that is also required in the operation of a SLF, will be reviewed to include the competencies needed by the sector.

The primary objective of upgrading the skills of the SLF personnel is to ensure proper operation and maintenance of landfill technologies and avoid detrimental side effects on human health and environment. The target clientele are the following:

- LGUs SLF operators/personnel
- Privately operated SLFs
- Informal waste reclaimers at SLFs

V. Implications to TVET and TVET Programs

The development of qualifications standards will professionalize the personnel involved in solid waste management in SLFs and MRFs. This would ensure that SLFs and MRFs are sustained and managed in accordance to prescribed environmental standards.

Aside from the three approved priority qualifications for standards development: spotter (tumbalero), site foreman and palero, other qualifications in solid waste management should continuously be studied for future skills requirements.

Moreover, as mandated in RA 9003, specifically in Section 55, Public Education and information: *“The Commission shall, in coordination with DepEd, TESDA, CHED, DILG and PIA, conduct a continuing education and information campaign on solid waste management, such education and information program shall:*

- (a) Aim to develop public awareness of the ill-effects of and the community based solutions to the solid waste problem;*

(b) Concentrate on activities which are feasible and which will have the greatest impact on the solid waste problem of the country, like resource conservation and recovery, recycling, segregation at source, re-use, reduction, and composing of solid waste; and

(c) Encourage the general public, accredited NGOs and people's organizations to publicly endorse and patronize environmentally acceptable products and packaging materials.”

In this case, TESDA should strengthen its curriculum and continue the implementation of environmental programs in its network of TESDA Technology Institutes.

TESDA should ensure active involvement as member of the National Solid Waste Management Board (NSWMB). With all the ecological problems and challenges that we are experiencing, a sustainable solid waste management is very important. Solid waste management transcends in all sectors of our society and it has implications in health, environment, infrastructure, education, among others. It is the agency's responsibility to contribute to the goal of a green economy for the country – part of it is a sustainable waste management through highly competent waste management workers.

References:

Republic Act 9003: Ecological Solid Waste Management Act of 2000.

http://www.lawphil.net/statutes/repacts/ra2001/ra_9003_2001.html.

Solid Waste Management Association of the Philippines (SWAPP).

<http://www.swapp.org.ph/>

National Solid Waste Management Commission (NSWMC).

National Environmental Management Bureau

<http://www.emb.gov.ph/Portal/>