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**34th WEDC International Conference, Addis Ababa, Ethiopia, 2009****WATER, SANITATION AND HYGIENE:  
SUSTAINABLE DEVELOPMENT AND MULTISECTORAL APPROACHES****The case for citywide IEC strategy for Addis Ababa's  
solid waste management system***Tilahun Fekade, Ethiopia*

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*Information, education and communication (IEC)-related activities being undertaken by the various actors in the solid waste management (SWM) system of the Addis Ababa City Administration (AACA) were reviewed employing a rapid appraisal methodology. Brochures, posters, awareness enhancing and skills training workshops, compost demonstration sites and event-based radio- and TV-based educational programs are found to be the major media employed with varying levels of importance in disseminating SWM-related messages. The coverage and level of coordination among the various IEC-related interventions is found to be low, which precluded achieving synergetic impact. The absence of a citywide IEC strategy for SWM is highlighted as a missing link in the rather bad state of affairs in the city's SWM system and hence its sanitation situation. The study has identified a number of issues that should be taken up in the attempt to create sufficient capacity to plan, execute and coordinate IEC activities in SWM.*

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**Introduction**

In a recent review on the SWM system in Addis Ababa (ILO, 2007), the current population of the City is projected to be around 3 million and estimated to grow at 3.8% per annum. The available statistics for solid waste generation in the City (0.22 kg./capita/day) is reckoned to be very low when compared to a recent estimate provided by the World Bank on the extent of waste generation in low income countries, which is 0.5-0.75 kg./capita/day. The amount of solid waste to be generated in the city is expected to grow in the coming years due to population increase, expansion and diversification of economic activities and expected changes in the lifestyles of its residents.

Around 70% of the solid waste generated in the City is estimated to be bio-degradable, whilst only a negligible portion is currently composted. Similarly, the share of non-organic recyclable waste (such as paper, plastic, metals and glasses) is estimated to be 15%, of which only 4% is actually recovered. On the other hand, unmanaged waste is a public health concern as it results in air, soil and water pollution in the city. This underlines the need to adopt approaches that consider waste as a resource and give heed to the overall SWM hierarchy.

Since the year 2003, the SWM sector in AACA has been the subject of a citywide and holistic municipal reform that aimed at, among others, bringing about decentralized urban management and improved urban management. Accordingly, the reform involved institutional re-organization and putting in place the policy and legal framework for SWM, which embraced state-of-the-art approaches and principles that consider the whole SWM hierarchy. In fact, some visible changes have occurred in the SWM system including a wider operating space for non-municipal actors, which is reckoned to have contributed to improvements in the coverage of SWM services compared to the pre-reform period (ILO, 2007).

Yet, the sustainability of such achievements is at stake in view of, among others, limited public participation, low level of coordination among the activities of the various SWM actors, and perhaps more importantly, the persistence of end-of-pipe approaches in SWM operations as evidenced by limited activities in the areas of waste reduction, reuse and recycling. In fact, the realization of the visions of, and hence the changes envisaged by, the policy and legal frameworks require minimum level of competencies on the part of the various actors and hence significant shifts in their attitudes and behaviors.

The main premise of the study commissioned by ILO's Sub Regional Office for Eastern Africa (ILO-SRO), summarized in this review paper that falls under one of the broad themes of the conference - environmental sanitation - has been a basic understanding that the achievements registered in the City's SWM system can be leveraged by IEC-interventions, underling its contributions in bringing about sustainable changes in the attitude and behavior of the various actors that participate at different stages of the SWM hierarchy. Its main objective has therefore been exploring the salient issues to be taken up in developing a long-term strategy that can be adopted by AACA in guiding and coordinating IEC-related activities targeted at the entire SWM system.

## **Methodology**

The study employed a rapid appraisal methodology and thus involved desk review of accessible documents, including relevant literature obtained from the internet, as well as individual and group-based interviews held with resource persons working in over twenty stakeholder organizations focusing on their experiences in undertaking IEC-related activities. It was carried out giving heed, among others, to the policy and legal frameworks for the municipal SWM system in general and IEC in SWM in particular.

## **Main results**

### **Current paradigm in SWM**

The literature review highlighted the current paradigm shift in SWM that involves a move away from end-of-pipe approach (that give attention to the treatment and final disposal of waste) to those that give heed to the various stages of the waste hierarchy (and hence to the reduction, reuse and recycling of waste). Important elements in such shifts include, among others, the active involvement of non-municipal actors and promoting awareness building and hence attitudinal and behavioral changes among SWM-related actors.

The rationale for IEC is therefore undertaking holistic interventions in addressing SWM issues and hence to enable workable communication among different stakeholders that participate at the different stages of the SWM hierarchy. In particular, effective communication interventions can help identify drivers and barriers to change, and hence IEC can be used as a change management tool (OECD, 1999 and GTZ, 2006). IEC-interventions, however, are not the panacea for all SWM-related issues and work best in combination with other instruments, namely economic incentives and law enforcement.

### **Effective message design and packaging**

Effective communication is about appropriate message design and its dissemination, which is another area addressed in the literature review. It presupposes a clear definition of the specific attitudinal behavioral changes a particular SWM actor is expected to make, hence an understanding of its basic characteristics with a view to identifying specific drivers and barriers to the desired change. Thus, to be effective, messages should be: audience specific, attractive and attention catching, easy to understand, simple to remember, evidence-based, contextualized, culturally sensitive and consistent. In addition, the selection of appropriate media and the combined use of different media would give better results in terms of transmitting messages and bringing about the desired attitudinal and behavioral changes.

The review also highlighted the importance of gender mainstreaming and integrating SWM in school curricula. IEC interventions should consider the gender-based SWM-related roles as well as their potential gender impact as women (and children) play the main role in SWM. On the other hand, there is a benefit to be gained by integrating SWM in school curricula, as persons often form habits at very young stage and schools are appropriate places to change the mindsets and behavior of the young generation.

### **IEC-related activities of institutions established under AACA**

The Sanitation, Beautification and Parks Development Agency (SBPDA) has a wider SWM-related mandates that fall under operational, coordination-related, educational and regulatory activities, while the Environmental Protection Authority (EPA) has regulatory and public education-related responsibilities pertaining to SWM. Both SBPDA and EPA, which are established under the AACA, have some experience in preparing and distributing SWM-related IEC materials. These mainly refer to brochures (and some posters) that are distributed during monthly sanitation campaigns and especially during Hidar Sitaten the annual sanitation week, while there is no experience in the preparation and distribution of SWM-related

newsletters. EPA publishes a quarterly newsletter and annual magazine – Akababiachin – but they cover a wide range of environmental topics and hence the attention given to SWM issues varies from time to time.

In addition, SBPDA organizes short-term SWM-related orientation training to sanitation coordinators and micro and small enterprise (MSE) operators, which are found to be generic and one-go sessions undertaken in the absence of systematic training needs assessment. Moreover, EPA has a compost demonstration site located in Gerji locality, whereas the involvement of SBPDA in promoting composting has been rather limited. The only exception is the pilot compost demonstration project in Yeka Sub-city (Berihun Tefera and Getachew Tikubet, 2007), a public private partnership which is now discontinued. The SBPDA-ILO SWM Project has started a pilot waste segregation and composting project in selected condominium sites in Bole and Kolfe Sub-cities.

The key message addressed in these IEC-related interventions, especially in recent periods, is “Waste is a Resource”.

The weekly Akababiachin radio and TV programs and the bi-weekly Addis Lisan Magazine under the Mass Media Agency (MMA) of AACA, provide news coverage and broadcast event-based educational programs on wide ranging environment-related activities of SBPDA, EPA, non-governmental organizations (NGOs) and other SWM actors. MMA has also started a live telephone-based weekly radio program that addresses the various environment-related concerns of the city dwellers. SWM issues, however, are only one of several environmental topics to be covered in such programs.

EPA had some experience in broadcasting, jointly with the Ethiopian Radio, a weekly radio program that was on air for about a year on FM 97.1 featuring articles on SWM as one of several environmental topics, while it is currently working on an electronic media project that envisages to commence a joint educational program with MMA. Recently, the SBPDA-ILO SWM project has started a twice weekly radio program – Koralio – that focuses on SWM issues.

Both SBPDA and EPA seem to relegate the onus of enforcing AACA's SWM regulation to the Code Enforcement Agency (CEA), which has decentralized functions at the Sub-city and Keble levels. Yet, there are no code enforcement officers (CEOs) that specialize in SWM, due to their very wide mandates that include controlling illegal construction, trade and slaughtering and indiscriminate waste disposal. The mindset of CEOs, on the other hand, seems to be geared toward the reactive fining of perpetrators, rather than the proactive education of SWM actors.

### **IEC-related activities of NGOs**

The activities of NGOs engaged in SWM-related activities, despite their few number, range from the provision of direct material/ financial assistance to MSEs providing door-to-door solid waste collection services to advocacy efforts aimed at better policies and regulatory frameworks. NGOs like SOS-Addis focus on raising public awareness about the pollution, health and economic effects of plastic waste, while NGOs like PICDO, IBFE and ENDA are engaged in awareness and skills training in integrated SWM, composting and urban agriculture.

The Key Message transmitted by these NGOs promoting composting is: “Waste is Food”, which is a variant of “waste is a resource”. The solid waste that is brought from households to composting sites is non-segregated, which renders composting a laborious activity and exposes compost workers to OSH hazards. This necessitates public education programs that address the issue of waste as a resource and the importance of waste segregation as well as OSH.

### **School based IEC-related activities**

Personal and environmental hygiene-related topics are covered in environmental science textbooks prepared for elementary schools. Those that pertain to SWM, while scanty, focus on the collection and burial/ burning of solid waste, and thus do not give adequate attention to waste reduction, reuse and recycling. There are also environmental/nature clubs established by students in most government schools, but their inclination towards “green” environmental issues, shortage of budget and absence of environmentally motivated teachers and, perhaps more importantly, the fact that their activities are “extra-curricular” is impinging upon their SWM-related activities. It is also observed that the attempts made by SBPDA, EPA and some NGOs to work with such clubs in SWM-related awareness activities have been rather ad-hoc.

### **Coordination of IEC-related activities**

The various IEC-related interventions are found to be not well-coordinated and this has precluded achieving synergy as well as the possibility of horizontal learning. Some of the factors that explain this state of affairs

include: a rather weak political commitment to SWM issues, overlapping mandates and limited capacity among institutions with SWM-related responsibilities and the absence of strong networks. Moreover, most IEC interventions are found to be standalone activities not linked with other SWM-related technical, informational and training-related endeavors. For example, the preparation and distribution of brochures seems to be seen as an end in itself, while there has never been any systematic attempt to monitor and evaluate their distribution and impact.

## Conclusions

- There is an apparent need to create the requisite capacities among SWM actors for enhancing the coverage and effectiveness of IEC interventions in the City's SWM system, as this would leverage efforts to be made by the various SWM actors.
- The capacity building efforts should aim at the pervasive problems in the SWM system, namely the importance of controlling indiscriminate solid waste disposal, mitigating the mismanagement of temporary waste collection sites, promoting the participation of stakeholders in SWM, encouraging the production and marketing compost, promoting reduction, reuse and recycling of plastic waste, institutionalizing SWM-Related IEC interventions, integrating SWM issues in school curricula and mainstreaming OSH in SWM.
- The key message to be transmitted to the various actors in the SWM system, in addition to the health and pollution impacts of unmanaged solid waste, should be "waste is a resource" and hence the need to focus on the whole SWM hierarchy.
- The key message can further be broken down to different elements in view of a multitude of target audiences with different roles in SWM and hence varying motivations and expectations.
- The SWM-related messages to be developed and, more importantly, the type of communication media to be employed need to be supported by concerted knowledge, attitude and practice (KAP) analysis.
- The putting in place and implementation of a citywide strategy for IEC in SWM will fill some of the above mentioned gaps and leverage the effectiveness of IEC-related interventions to be carried out by SWM actors and hence the realization of an integrated SWM.

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## Note

This Abstract is prepared based on a recent study commissioned by ILO-SRO: "Situation Analysis and Citywide Strategy for Information, Education and Communication (IEC) for Addis Ababa's Solid Waste Management (ILO, 2008).

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**Contact details**

Tilahun Fekade  
Ethiopian Civil Service College,  
P.O.Box 5648,  
Addis Ababa, Ethiopia  
Telephone +251 - 911- 872823  
Email: tilahunddg@yahoo.com

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