
TRAINING WORKSHOP ON INTEGRATED SOLID WASTE MANAGEMENT (ISWM) BASED ON 3R

PROCEEDING

ORGANIZED

BY



Addis Ababa, Ethiopia 22-24 February 2010

1. Introduction

The training workshop on Integrated Solid Waste Management (ISWM) based on Reduce, Reuse, and Recycle (3R) approach was carried out from 22nd to 24th February 2010 at Axum Hotel, Addis Ababa, Ethiopia. The training was organized by Forum for Environment (FfE) in collaboration with the United Nations Environment Programme (UNEP) and Bahir Dar's Forum for Environment. The 3-day training was designed to train experts and practitioners who have basic knowledge and roles in the solid waste management at federal and regional levels. The training contents were based on the recently published UNEP's ISWM guidelines. The training guided the participants on ISWM processes, and it is specifically focused on

- characterization and quantification of solid waste,
- assessment of the current waste management system and gap therein
- target Setting for ISWM and Identification of Stakeholders' Issues of Concern, and
- Development of ISWM Plan and case studies.

2. Objective

The overall objective of the training was to build the capacity of the local experts and thus develop resource persons who are capable of conducting the solid waste inventory and situation analysis of solid waste generation as well as target setting and development of ISWM plan for their respective city/town.

3. Training Process and Structure

The training was prepared for experts from five cities/towns (Addis Ababa, Adama, Hawassa, Dire Dawa and Bahir Dar) who have basic knowledge and involvement in solid waste management in their respective city/town. The training was offered by Dr Mushtaq Memon who is a senior expert on ISWM and a programme officer at UNEP, Osaka office. The approaches applied for the training were:

- Participatory and interactive
- Experiences and knowledge sharing
- Mixture of presentations, group and individual exercises
- Group discussions and the presentations of the group work

The 3-day training contents were structured as:

First day: Overview of ISWM, waste characterization and quantification with projections, Situation analysis of existing SWM

Second day: Target Setting for ISWM and Identification of Stakeholders' Issues of Concern

Third day: How to Develop ISWM Plan and case studies

Detailed plan of the training is attached in the Annex 1.

4. Training Participants

The training workshop was attended by 47 participants from three regional states and two city administrations (table 1).

	Region/City	Number of Participants	Organizations
1	Addis Ababa	25	City Admin., Sub Cities, SWM Agency, AAEP, NGO, College
2	Amhara	13	Bahir Dar (BD) City Administration, BoEPLUA, BD University, Dream Light Private, BD FfE
3	Oromia	3	Adama City Admin., Oromia EPA, Adama City EPA
4	SNNPR	3	Hawassa City Admins., NGO
5	Dire Dawa	3	DD City Administration, DD EPA

Table 1 Summary of Participants



Picture 1 Partial Picture of Training Participants

5. Training proceedings

First day: 22nd February

The training started with welcome address by Mr Negusu Aklilu, Director of FfE, followed by the keynote address of Dr. Strike Mkandla, UNEP Representative to UNECA, AU and Ethiopia. On his keynote speech, Dr Strike highlighted the series challenge faced by many cities in the developing world in managing the solid waste generated. He noted that complex challenges posed by solid waste management and this require a holistic and integrated approach by forging partnership with relevant stakeholders. With this respect, he appreciated the ongoing strong partnership between UNEP and FfE (see inbox for full keynote). Subsequently Dr.

Picture 2 Welcoming by Ato Negusu

Mushtaq started the training by introducing the training programme and overview of ISWM. The session also included the roadmap for data and sample collection and analysis, characterization and quantification of solid waste from different sources, and situation analysis of existing waste management practices. Groups were formed for each participating city/town and the groups exercised on zoning and identification of potential waste generators and waste types.





Picture 3 Keynote Speech by Dr Mkandla

Keynote Speech by Dr. Strike Mkandla

UNEP Representative to AU, UNECA and ETHIOPA

At the training workshop on “Integrated Solid Waste Management Based on The 3Rs”

**Axum Hotel Addis Ababa, Ethiopia
22 February, 2010**

**Distinguished Colleagues!
Ladies and Gentlemen!
All protocols observed!**

It is a great pleasure to address this gathering on an important topic of concern: ‘solid waste management’. The difference between most of you gathered here today and myself is that you know more than I do about the subject of waste management. I am therefore not really qualified to “lecture” you about the importance of waste management. Talking to about this subject is also a typical case of preaching to the converted because you do not need to be convinced about the importance of what you have come here for. However, on the issue of preaching to the converted, I like to tell colleagues that this is a very respectable practice, because if it were not so there would be no business left for the churches, mosques, synagogues, temples and other place where the faithful are reminded of their commitments and the right way to moral health, I therefore have no apologies following this honorable practice.

As you all know in most major cities in Africa, a rapid population growth and high rural urban migration poses several environmental challenges, one of which is the issue of solid waste management. In our cities, inadequate management of solid waste is resulting in the accumulation of waste on open lands, in drains and in residential areas, causing nuisance and foul-smelling pools, environmental pollution, clogging of drains and the possible spread of diseases. Consequently this poses an ever-present risk of epidemics, with commensurate treats to health and productive activity. Indeed, if you look at it you will see that several of the Millennium Development Goals (MDGs) have elements whose accomplishment is to some degree dependent on safe and productive management of waste. Water and sanitation, maternal and child health, environmental sustainability, agricultural and industrial production, and safer cities and human settlements in general are some of the areas in which waste management is key issue.

In the light of the pervasiveness of waste in human activity, the multi-faceted implications of solid waste management need to be addressed in a holistic and integrated manner by forging partnership with concerned governmental bodies, donor and UN agencies, and civil society. In this regard, I am pleased to that our consistent partners, the Forum for Environment (FfE), are the forefront in this workshop. The UNEP Addis Ababa Office and the Forum have collaborated on many occasions particularly in advocacy initiatives and special events such as the national Green Hero award, Clean Up the World, World Environment Day, Africa

Environment Day and the promotion of Africa Climate Appeal. This week's workshop highlights that the Forum has further reach into UNEP programmes beyond what we generate locally, because it involves dealings with one of our global structures, the International Environment Technology Center (IETC) of the Division of Technology, Industry and Economics (DTIE). I am extending warm welcome to my colleague Dr. Mushtaq Memon from IETC. Because UNEP is an inter-governmental organization, I am pleased to see that this training on waste management is a real partnership, bringing together governmental and non-governmental participants represented here.

This undertaking comes at a juncture when the Ethiopian Government and other partners are putting sustained efforts to address the solid waste management issues in the country. Solid waste management has been legislated by the Federal Environmental Protection Authority, with its dictates addressing issues related to the handling and disposal of solid waste of different sources. As you know, the proclamation also provides the basis for regulating the importation and manufacture of fine plastic bags, which as we all agree is becoming a major source of pollution and nuisance in most major cities of the country. A number of initiatives at the grassroots level are also underway to address this major challenge, and we have partnered at the grassroots level are also underway to address this major challenge, and we have partnered with a variety of campaign groups either raising consciousness on this or promoting re-use of plastics.

I would like to take this opportunity to highlight too the efforts of UNEP in this regard. Apart from our support to various national-level environmental initiatives, our Paris based UNEP-DTIE is also currently completing the pilot phase of a project whose name tells the story: Promoting Resource Efficiency in Small and Medium-Scale Enterprises (PRE_SME) that is being implemented in partnership with the Ministry of Trade and Industry (MoTI) and the Ethiopian Cleaner Production Center (ECPC). This project, which was implemented in 15 manufacturing enterprises in different sectors, provides good illustrative experience on the benefits of an integrated approach in resource management, as it has enabled the participating industries to:

- Reduce their resource use consumption per unit product (wastage) thereby increasing their competitiveness and economic benefit,
- Reduce their impact on the surrounding natural environment as a result of reduced pollution intensity per unit product; and
- Improve their working environment, thereby enhancing the productivity and well-being of their employees.

In the context of the foregoing project, UNEP is also in the process of developing other project that similarly focus on integrated approaches for water and energy saving in the brewery and tannery sectors respectively. Our commitment clearly illustrates that the 3Rs (Reduce, Reuse and Recycle) are at the core of our work at UNEP. We consider waste as a potential resource that can provide livelihoods for many, if managed and utilized properly. There are experiences from Ethiopia and elsewhere that clearly support this hypothesis. I hope that this forum of like-minded practitioners will create a platform that will instigate our thinking processes to consider innovative ways of converting and utilizing what is considered 'waste' into 'resource'.

My humble preaching to the converted would not be complete if I do not wish you a fruitful experience in this current training workshop.

Thank you for your attention. I now officially declare the training workshop open.



Second day: 23rd February

Second day started with the presentations of the outcome of the group exercises of the previous day. The outcome of each group was shared among the participants through presentations by a member from each group and the participants discussed on the presentations.

Following the presentations, Dr. Mushtaq provided a lecture on target setting.

Group work: groups were formed to set solid waste management targets for each city/town and presented their results.

After the group presentations, Dr. Mushtaq offered the next lecture on identification of Stakeholders' issue of concern.

A role play was conducted by dividing the participants into five groups (namely waste generator, service provider, regulator, recycler and community group). During the role play, different potential issues of concern by different stakeholders were speculated and some solutions for the potential concerns were also provided.

Third Day: 24th February

The last day lecture on ISWM plan preparation was offered after further role play on the remaining topics of the previous day exercise. Following the lecture, participants again divided into participating city/town and exercised the development of ISWM plan for their respective city/town.



Picture 6 Group Presentation

Finally a template to be used by the participating cities for the development of a project proposal for an integrated solid waste management plan preparation was presented.

6. Closing

At the end one of the training Mr. Meskir, on the behalf of FfE, thanked UNEP and Dr. Mushtaq for their support and active participations in ISWM training workshop.

7. Achievement

The main achievements of the trainings were:

- ♻️ 47 personnel from five cities were trained on ISWM based on 3R
- ♻️ built the capacities of local experts in regard to ISWM Plan preparation
- ♻️ brought together experts from various cities/towns in one forum and shared their experiences and knowledge and created a network for exchange of information and knowledge with respect to SWM
- ♻️ at large participants felt that the workshop was successful in meeting their expectations and were confident that they would develop a project for the development of ISWM plan for their respective city/town

8. General Assessment of the training workshop

Overall the training workshop was successful in fulfilling its objectives. The training introduced ISWM tools to the participants. The training was encouraging and motivating to introduce integrated solid waste management practices at their respective city/town. For many of them, the general perception on the prevailing conventional waste management practices (collect and dispose) was changed after the training.

Next Steps

- 1- **Formation of an experts pool on Solid Waste Management (March and April)**
- 2- **Initiate the introduction and amalgamation of ISWM concepts and practices in the solid waste management system of the participating towns/cities (March-)**
- 3- **Assist participant cities/towns in the development of project proposals for ISWM plan (March -).**
- 4- **Use the current Addis Ababa City Administration's waste management campaign for incorporation of the ISWM concepts (March-)**
- 5- **Talk to Addis Ababa City Administration top officials on the issue of ISWM (March)**
- 6- **Inform the existence of such initiatives to the top officials of the Addis Ababa City Administration who will participate in the upcoming C40 Workshop in London (March)**
- 7- **Try all options to participate on the C40 Meeting**

- 8- Indulge more on the fast execution of the Bahir Dar ISWM Plan project**
- 9- Publish the proceeding of this training workshop and forward to concerned parties**
- 10- Follow up the outcome of the C40 meeting**

Annex I
Training Workshop on
Integrated Solid Waste Management (ISWM) based on 3R
(22-24 February 2010)
Addis Ababa, Ethiopia
Organized by



Forum for Environment

AGENDA

Monday, 22 February 2010

10 30 – 11 00	Registration	
11 00 – 12 00	Welcome Speech Key Note Address Participant Introduction and Expectations Pre-training Assessment Quiz	FfE UNEP
14 00 – 15 30	Waste characterization & quantification with projections	Mushtaq Ahmed Memon, UNEP
15 30 – 16 00	Tea Break	
16 00 – 17 30	Assessment of Current Waste Management System	Mushtaq Ahmed Memon, UNEP
17 30	Close	

Tuesday, 23 February 2010

09 00 – 10 00	Target Setting for ISWM	Mushtaq Ahmed Memon, UNEP
10 00 –	Tea Break	

10 30		
10 30 – 12 30	Identification of Stakeholders' Issues of Concern	Mushtaq Ahmed Memon, UNEP
12 30 – 13 30	Lunch	
13 30 – 17 00	Exercise on Target Setting and Issues of Concern	Forum for Environment
Working Tea Break		
	Contd. Exercise on Target Setting and Issues of Concern	Forum for Environment
17 00	Summary of the Day	Mushtaq Ahmed Memon, UNEP

Wednesday, 24 February 2010

09 00 – 10 00	How to Develop ISWM Plan	Mushtaq Ahmed Memon, UNEP
10 00 – 11 00	Case Studies on ISWM Plan	Mushtaq Ahmed Memon, UNEP
11 00 – 13 00	How to Develop ISWM Plan for Bahir Dar	Forum for Environment
Closing Remarks		
13 00	Close	