

MUMBAI
30th NOVEMBER
2015

WORKHOP SUMMARY REPORT

Why waste a business opportunity?

JOINTLY ORGANIZED BY:

Environmental Management Centre (EMC LLP), Mumbai

and

Griffith University, Australia

SUPPORTED BY:

Australia-India Council (AIC)



environmental
management
centre LLP



Australian Government



Australia-India Council

SUMMARY REPORT

FINAL IWR WORKSHOP: "WHY WASTE A BUSINESS OPPORTUNITY?"

Jointly Organised by

Environmental Management Centre LLP (EMC)

A-60 Royal Industrial Estate

4th Floor, Naigaon Cross Road, Wadala

Mumbai- 400031

and

Griffith University

170 Kessels Road

Nathan QLD 4111

Australia

Funded by

Department of Foreign Affairs and Trade (DFAT), Government of Australia

via

Australia India Council Grant Scheme

Held at

Bombay Chamber of Commerce and Industry (BCCI)

The Ruby, 4th Floor NW 29, Tulsi Pipe Road,

Senapati Bapat Marg, Kasaravadi, Dadar,

Mumbai, Maharashtra 400028

On 30th November 2015

TABLE OF CONTENTS

BACKGROUND.....	3
About Australia India Council Grants Program	4
About Griffith University	4
About Environmental Management Centre LLP	4
ABOUT THE PROJECT.....	5
Objectives	5
Program for the workshop	6
About the principal speakers.....	7
Dr. Prasad Modak.....	7
Dr. Sunil Herat	7
Participants.....	7
WORKSHOP PROCEEDINGS.....	8
E-Waste Management – An International Perspective	8
Sharing of Best Practices and Experiences.....	9
Converting Plastic Waste to Fuel	9
Waste Management at Housing Societies.....	9
Mobile App for Waste Collection from Households	9
Managing organic waste effectively using Biogas technology	10
Construction and Demolition Waste - An Indian Perspective	11
Waste Management initiatives by the Municipal Corporation of Greater Mumbai (MCGM)	12
ANNEXURES	13
Annexure I: List of participants	13
Annexure II: Stakeholder Feedback	15

LIST OF FIGURES

Figure 1 Dr. Prasad Modak addressing the participants of the workshop	8
Figure 2 Dr. Sunil Herat interacting with the participants.....	8
Figure 3 Process diagram showing conversion of waste raw material into useful finished products	9
Figure 4 Monisha Narke from RUR Greenlife	10
Figure 5 Jahnvi Shah from Sampurn(e)arth Environment Solutions	10
Figure 6 Akshay Surana from ViaGreen.....	10
Figure 7 Mahuri Bogawat from Crimson Cobalt.....	10
Figure 8 Waste flow diagram for C&D waste.....	11
Figure 9 Asha Panwar interacting with the participants.....	11
Figure 10 Mr. Chandrakant Tambe sharing the initiatives taken by MCGM for waste mangement	12

BACKGROUND

Urban India generates around 188,500 tonnes of Municipal Solid Waste (MSW) every day. The MSW generation rate is expected to increase as the Indian economy prospers. Only 30% to 60% of the MSW generated is currently collected and almost 90% of the waste collected is simply dumped. Improved collection services in Public Private Partnership (PPP) mode, implementation of decentralized waste processing units and rehabilitation of the dumpsites is therefore a priority.

Waste is often a result of over consumption, poor resource use efficiency, perverse subsidies and low level of awareness. "Reduce at Source" should be the first action towards in the sustainable management of wastes and resources. Waste when generated is a misplaced resource. There is a great value in practicing Reduce, Reuse and Recycling (3Rs). The 3Rs help in substituting virgin resources, reduce Green House Gases (GHG) emissions and create green jobs. 3Rs also lead to a Green Economy. Waste to Resource Management should therefore be the focus of capacity building.

To respond to this need and bring in international experience, a Program on Capacity Building for Waste to Resource Management was devised under the Australia-India Council Grants Program 2014-15. This year-long program is an initiative to create a toolkit and pedagogy for training diverse stakeholders in the realm of waste and resource management. Professionals, staff of municipal councils/corporations, NGOs working with informal sector and students are the focus. The [Environmental Management Centre LLP](#), Mumbai (EMC) and [Griffith University](#) (GU), Australia are the designers and implementers of this program. *The program is supported by the Australian Government through the [Australia-India Council](#) of the [Department of Foreign Affairs and Trade](#).* This section provides a background of the organizations that has been involved in the program, the program details and timeline of actions in the year.

The first initiative under this program was a two day workshop targeted at building a course on waste and resource management for practicing professionals and post-graduate students. This workshop was conducted on January 20-21 in 2015. Between January to July, a website hosting resources on waste and resource management was established (integratedwasteresources.net). Guidance manuals on how to use these resources to develop training programmes for various stakeholders were drafted. A second workshop was conducted on July 16-17th 2015 where the "toolkit" was presented. The participants to the workshop used this toolkit and applied to develop training resources for different stakeholders. In addition, sessions on experience sharing were also held.

The third and final workshop under this programme was held on 30th November 2015. The main objective of this workshop was to present the final toolkit and discuss next steps for the continued contribution of this project to all its stakeholders. This report covers the proceedings of the final workshop.

About Australia India Council Grants Program

The AIC aims at strengthening and development of the relationship between Australia and India. The council promotes and organizes a number of activities aimed at the promotion of a greater awareness about India and Australia amongst the citizens of both of the countries. The AIC funds proposals which further supports this main objective and helps in the development of relations between the two countries, including economic operations, community knowledge and understanding, public awareness and take up important developments relevant to Australia-India relations.

In 2014-15, there have been 13 proposals that have been approved by the Australia-India Council Grants Program. The proposals span over many areas of focus, including arts, culture, development and knowledge sharing between the two countries. Visit [AIC](#) online for more information

About Griffith University

Griffith University (GU) is one of Australia's most innovative and dynamic public universities located in the Brisbane-Gold Coast corridor. GU offers degree programs in number of engineering disciplines including environmental engineering which teaches how to develop innovative strategies and technologies for a sustainable future through a strong interdisciplinary focus on formulating solutions to environmental problems. GU leads the field in environmental and sustainable practices.

GU's waste management program has been highly regarded by the United Nations and other international agencies. GU is the Regional Focal Point in the South Pacific of the UN Solving the E-waste Problem (StEP) initiative. It is also the Sub-Regional Secretariat for Australia and New Zealand of the United Nations International Partnership for Expanding Waste Management Services in Local Authorities (IPLA) and a member of the United Nations Subsidiary Expert Group (SEG) of Regional 3R Forum for Asia advising on E-waste. It also is an advisor on e-waste to Pacific hazardous waste management, European Union (EU) grant managed by the South Pacific Regional Environment Programme (SPREP). Visit <http://www.griffith.edu.au/> to know more about GU.

About Environmental Management Centre LLP

Environmental Management Centre LLP (EMC) was established in 1996. EMC's consulting services are essentially strategic, knowledge driven and supported through research and training. In all the consulting assignments, EMC's expertise lies in harmonizing economic, environmental and social considerations (often called triple bottom line) in the business logic, development plans and policy frameworks.

EMC has been involved in consultancy for waste and resource management at both international and national levels. EMC worked closely with UNEP on areas such as Cleaner Production, Integrated Solid Waste Management and Waste Management & Recycling in the preparation of Green Economy report¹. EMC LLP developed for UNEP Regional Resource Centre for Asia and the Pacific (UNEP-RRC.AP)/Asian Institute of Technology (AIT) in Bangkok a portal for 3R Knowledge Hub (3RKH) for AIT, Bangkok. Currently, EMC LLP was also engaged in the authoring of a chapter for the Global Waste Management Outlook (GWMO)² that is jointly prepared by UNEP's International Environmental Technology Centre (UNEP-IETC) and International Solid Waste Association (ISWA). Visit www.emcentre.com to know more about EMC.

¹ UNEP, 2011, Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication, www.unep.org/greeneconomy

² Available at <http://www.unep.org/ietc/InformationResources/Events/GlobalWasteManagementOutlookGWMO/tabid/106373/Default.aspx>, accessed on 20th August, 2015

ABOUT THE PROJECT

The EMC-GU project on capacity building for waste and resource management has been planned over a period of the year 2014-15.

The first phase of the project was completed on the 20th and 21st of January 2015. The event was directed by Dr. Prasad Modak from EMC and Dr. Sunil Herat from GU. As a sequel to the first workshop, the second workshop was conducted on the 16th and 17th July, 2015 at Mumbai. This workshop was directed by Dr. Prasad Modak from EMC, India and Prof. Visvanathan Chettiyappan, Asian Institute of Technology, Bangkok, Thailand.

The third and final phase of the project took place in the form of a workshop on 30th November 2015. It was directed by Dr. Prasad Modak from EMC and Dr. Sunil Herat from GU. Feedback and suggestions on the program were collected by all the participants towards the end of the workshop. Key points from the responses collected are mentioned as Annexure II of this report.

Objectives

The objectives for the final workshop were as follows:

- To present and disseminate the final training toolkit of the AIC-IWR project and guidance manual for host and training institutions
- To bring together practitioners and professionals from this field to share their experience on waste to resources
- To emphasize the business opportunities from waste as a resource and enable potential business partnerships
- To facilitate an ongoing dialogue between academicians and practitioners so as to fill the gap of knowledge of the latest innovations in the waste to resource market
- To explore partnerships among organizations and facilitate training using the toolkit, manuals and references
- To consult and discuss next steps in order to ensure continued contribution of this programme to various stakeholders

Program for the workshop

Time	Session	Speaker
9:45 am	Registrations	
10:00 am to 10:30 am	Welcome, Introductions & Presenting the Final Toolkit of the Integrated Waste Resources program	Dr.Prasad Modak, Executive President, Environmental Management Centre
10:30 am to 11:00 am	E-waste Management – An International Perspective	Dr. Sunil Herat, Senior Lecturer in Environmental Engineering (Waste Management), Griffith School of Engineering, Griffith University
11:00 am to 11:15 am	Break for Tea & Refreshments	
11:30 am to 12:15 pm	Converting plastics to fuel - Technology	Madhuri Bogawat, Director – Crimson Cobalt Group
	Resource recovery from C&D waste	Asha Panwar, Research Scholar, IIT Bombay
	Managing waste from an Urban Local Body perspective	Chandrakant Tambe, Junior Overseer, H/West Ward, BMC
12:15 pm to 1:00 pm	Energy from waste – green energy from food waste	Jahnvi Shah, Manager - Business Development at Sampurn(e)arth Environment Solutions
	Waste management for Housing Societies	Monisha Narke, Founder, RUR Greenlife Pvt. Ltd.
	Recycling waste: Mobile application based management	Akshay Surana, Co-founder, Usedless Paper
1:00 pm	Distribution of the toolkit, manuals and references & the Global Waste Management Outlook report on pen drives and close	
	Lunch	

About the principal speakers

Dr. Prasad Modak

Dr. Modak is the Executive President of Environmental Management Centre LLP. He has worked extensively in the area of waste and resource management. He contributed a chapter on Waste Management in UNEP's Green Economy report, contributed substantially to the establishment of International Partnership for expanding waste management services of Local Authorities (IPLA) for United Nations Centre for Regional Development (UNCRD). He contributed a chapter in the Global Waste Management Outlook report. UNEP-IETC commissioned Dr. Modak to prepare a UNEP wide Waste Management Action Plan. Dr. Modak's work over the past three decades has influenced environmental policies at the Governments, investments and practices in the industry on a global basis. He is currently Professor (Adjunct) at Indian Institute of Technology (IIT) Bombay and Chief Sustainability Officer (CSO) at Infrastructure Leasing & Financial Services (IL&FS) Ltd. and Dean of IL&FS Academy for Applied Development (IAAD). Visit in.linkedin.com/in/prasadmodak to see his LinkedIn profile.



Dr. Sunil Herat

Dr. Herat's currently the head of e-waste project at Griffith University, and is a consultant to the United Nations on waste management issues. He is an expert on solid waste management, hazardous waste management and cleaner production and eco-efficiency. He has completed extensive research on waste management in developing countries, especially municipal solid waste and e-waste, and has published a number of research papers on the topic. He is a member of the expert subsidiary group on e-waste in the United Nations' Regional 3R Forum in Asia. He has also provided advice on e-waste matters to local authorities through United Nations' International Partnership for Expanding Waste Management Services in Local Authorities (IPLA). He is also working as the program coordinator of the postgraduate degree in waste management offered by Griffith University, and is in charge of teaching postgraduate courses in solid waste management, hazardous management and cleaner production and eco-efficiency. Visit <http://goo.gl/dqZOJ2> to see his LinkedIn profile.



Participants

The workshop was attended by 30 participants in all. The participants included students, practitioners, environmental Non-Governmental Organizations (NGOs), urban local body representatives, ALM representatives, civic activists, health professionals, technology providers, researchers and academicians with considerable experience in the field of waste and resource management. Annexure I provides the list of participants with contact details.

WORKSHOP PROCEEDINGS

Dr. Prasad Modak, set the background of the workshop by welcoming the participants and requesting them to introduce themselves. The participants highlighted their work experience in the sector of waste and resource management. Dr. Modak started his session by demonstrating the latest version of the 'Training Toolkit' and providing an update on the progress from the previous workshop held in July earlier this year. He also informed the participants about the updated version of the 'Guidance Manual' that was prepared as a consolidated document for both host as well as training institutions.

While demonstrating the toolkit, Dr. Modak emphasized the need for further promotion and contribution to the toolkit by all the relevant stakeholders. An important feature of the IWR website presented by Dr. Modak was the 'Waste Dashboard'. The dashboard allows the user to correlate various parameters such as waste recycling, treatment and disposal with economic indicators like GDP per capita, across the world. Visit the website here: www.integratedwasteresources.net. Concluding his session, Dr. Modak thanked all the participants for their contribution to this programme and also requested support in the implementation of the toolkit for designing courses on waste to resource for stakeholders.



Figure 1 Dr. Prasad Modak addressing the participants of the workshop

E-Waste Management – An International Perspective

In his presentation, Dr. Sunil Herat mainly focused on the major challenges in effective management of e-waste worldwide and potential business opportunities in the e-waste industry. Firstly, he shared some global statistics on e-waste generation around the world, putting more emphasis on the Asia-Pacific region. **The top three Asia-Pacific countries with the highest e-waste generation in absolute quantities are China (6 Mt), Japan (2.2Mt) and India (1.7Mt).**³

He then shifted the focus on to the problems associated with this large amount of e-waste generated and sensitized the participants about the various health and environmental impacts. As the theme of the workshop was to explore business opportunities available in the waste management sector, Dr. Herat then explained the importance of waste recovery and recycling as a potential business option. He also explained the role of Public Private Partnerships (PPPs) as key contributors to effective recovery and recycling of e-waste.

During this session, many points were debated by the participants and one such issue was the informal waste management sector in developing nations like India. The discussions concluded by recognizing an urgent need to address the requirements of the informal sector in order to ensure scientific management of e-waste. The informal sector mainly comprises of the rag pickers and waste handlers and smelters.



Figure 2 Dr. Sunil Herat interacting with the participants

³ The Global E-Waste Monitor 2014 Report, United Nations University- Institute for the Advanced Study of Sustainability (UNU-IAS)

Moving ahead, Dr. Herat introduced the concept of Extended Producer Responsibility (EPR) and its potential for environmentally sound management of e-waste. EPR programmes are implemented worldwide mainly by the large scale companies. Adaption of such programmes by small and medium scale industries is still a rare observation. Adding to this, Dr. Modak shared some best practices under EPR by some leading companies like Philips, Microsoft and Sony.

Concluding his session, Dr. Herat discussed the immediate steps to be taken for better management of e-waste. These included policy and strategy framework for sustainable management of e-waste, relevance of EPR as a policy tool, stronger legal and institutional framework to increase the potential of business towards resource recovery and recycling.

Sharing of Best Practices and Experiences

Converting Plastic Waste to Fuel

Ms. Madhuri Bogawat shared information about the plastic waste to fuel technology that Crimson Cobalt uses to convert the plastic waste into fuel. The technology is called Pyrolysis i.e. heating of large plastic molecules to break them into three final products; Pyro oil, Pyro gas and carbon black. Pyro oil used as fuel to substitute industrial Light Diesel Oil (LDO) and carbon black is used as a substitute to industrial coal, cement and bitumen in road construction. The pyro gas is reused in pyrolysis plant to heat the reactor. This results in energy savings for the plant of up to 35%.

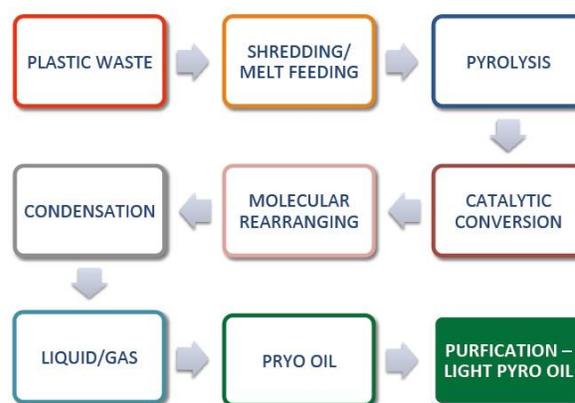


Figure 3 Process diagram showing conversion of waste raw material into useful finished products

Crimson Cobalt currently operates plants of the capacity ranging from 10 to 20 MT plastic per day. Figure 3 shows the process diagram of the conversion of waste raw material into useful finished products, as demonstrated by Ms. Madhuri Bogawat during her session.

Waste Management at Housing Societies

Another interesting presentation was made by Ms. Monisha Narke of RUR Greenlife Pvt. Ltd. The company offers many waste management solutions for housing societies in Mumbai and has completed waste audits of more than 500 societies. RUR not only offers solutions for organic waste management but also for non-biodegradable waste such as metal, TetraPak cartons and glass. They also offer similar solutions to industries depending upon the specific requirements. The company's TetraPak carton recycling programme has been much appreciated by the citizens and large number of schools has been a part of this programme.

Mobile App for Waste Collection from Households

In his session, Akshay Surana of ViaGreen (formerly known as Useless Paper) shared the thoughts behind the start-up company and their future plans to earn from waste. The company aims to streamline the unorganized informal waste sector and empower the rag pickers or raddiwalas in the process. The plan is to launch a mobile app where users can request for a pick-up of their recyclable waste as per their convenience. The company plans for door to door collection of household dry waste that includes waste paper, plastic, clothes, e-waste, glass, etc.

The company will also incentivize their customers in the form of cash, tree plantations, donations or recycled products. According to Akshay, providing incentives to customers makes it difficult for the company to remain profitable and they are still working towards the correct equation. In addition to this,

Akshay also shared their plan of including a carbon calculator in the mobile app so as to create awareness among the consumers about the positive impacts resulting from efficient waste management.

Managing organic waste effectively using Biogas technology

Jahnvi Shah from Sampurn(e)arth Environment Solutions Pvt. Ltd. explained the role of biogas technology in effective management of organic waste in urban cities. The session focused on shifting from the linear approach of waste disposal to a cyclic approach that ensures minimum waste going to the landfills. Decentralized waste management approach such as installing a biogas plant offers scalable business models and at the same time generates employment.

During this session, Jahnvi showcased the various models of a biogas plant available in the market. These were ranging from a 2kg plant for a single household to a 5MT plant operated by municipal corporations. Although these plants have been successfully working in various parts of the country, their sustainability in a city like Mumbai was questioned by the participants. Questions were raised on the working of such a model in Mumbai, considering that a large size of the population lives in residential societies where distribution of the gas could be a major barrier. Nevertheless, the biogas technology has been used effectively to manage the organic waste since many decades and is improving with time.



Figure 5 Jahnvi Shah from Sampurn(e)arth Environment Solutions



Figure 4 Monisha Narke from RUR Greenlife



Figure 6 Akshay Surana from ViaGreen



Figure 7 Madhuri Bogawat from Crimson Cobalt

Construction and Demolition Waste - An Indian Perspective

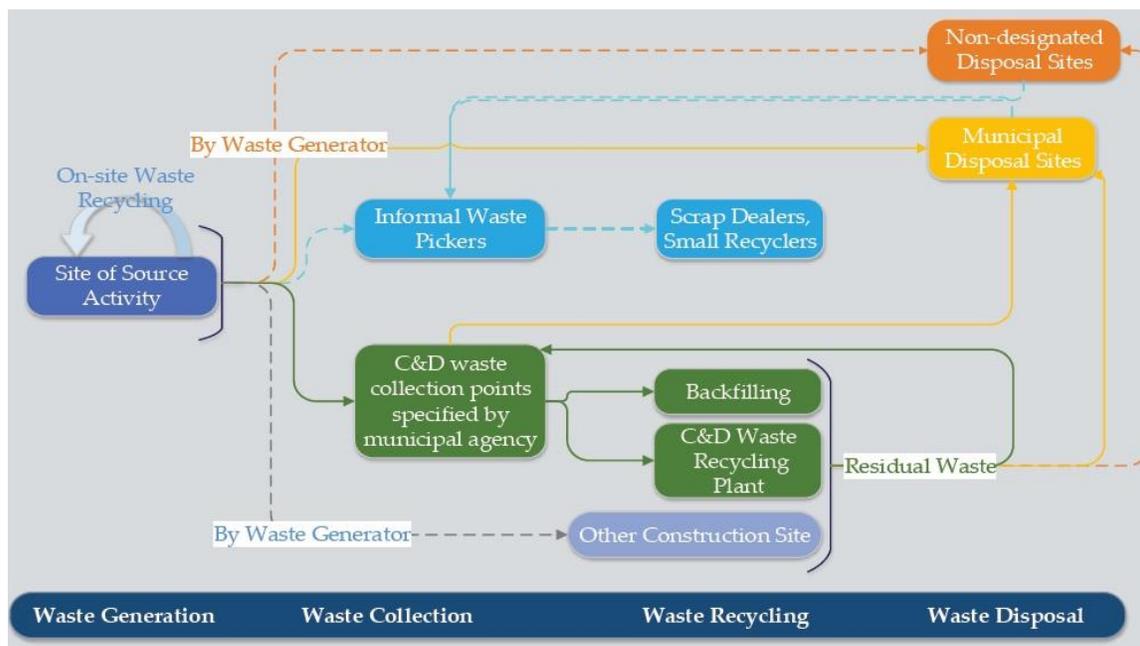


Figure 8 Waste flow diagram for C&D waste

Asha Panwar, research scholar from IIT Bombay gave a short presentation on the status of Construction and Demolition (C&D) waste management in India. She started the session with defining the C&D waste and its composition. Under the Municipal Solid Waste Rules 2000, C&D waste is defined as "wastes from building materials debris and rubble resulting from construction, remodelling, repair and demolition operations". There have been additions to this definition by other regulatory bodies over the time.

She then moved on to explain the disposal methods used for C&D waste in India. The C&D waste usually ends up in the landfills or is dumped at low lying areas by the municipal bodies. Illegal disposal of C&D waste near surface water bodies, coastal areas, green belts, etc. in Mumbai is subject to penalty of INR 20,000.

However, the proper implementation of this rule is still under question. Further, Asha focused on the potential of resource recovery and recycling from C&D waste. As of now, there are only 2 centralized functional recycling plants for recycling C&D waste in India. These plants are located in Delhi and Ahmedabad and are of the capacity 2000 tonnes/day and 300 tonnes/day respectively. Many such plants are in the pipeline and may be in working condition in the near future.

Towards the end, Asha strongly urged for a need to focus more on the management of much neglected C&D waste and recommended for strong policy instruments on the same.



Figure 9 Asha Panwar interacting with the participants

Waste Management initiatives by the Municipal Corporation of Greater Mumbai (MCGM)

Mr. Chandrakant Tambe from MCGM was invited to share the various initiatives taken by the municipal body in order to ensure proper waste management in the city. During his session, Mr. Tambe shared the best practices followed in their ward such as collection centres for recyclable dry waste such as paper, plastic, glass, metal, etc.

According to Mr. Tambe, the major challenge faced by the local bodies is the lack of public participation in ensuring the effective management of waste in their area. "There is a lack in responsible behaviour from the citizens towards managing their waste and this needs to change at the earliest." He then mentioned the various initiatives taken at the municipal offices with the objective to achieving what he called a 'Zero Garbage Office'. These initiatives were much appreciated by all the participants.



Figure 10 Mr. Chandrakant Tambe sharing the initiatives taken by MCGM for waste management

The workshop ended with thanks to the organizers and sharing the Global Waste Management Outlook (GWMO) Report and the Guidance Manual for the training toolkit.

EMC and GU plan to continue building the toolkit and work with institutions to operate pilot training courses. CEPT, Ahmedabad, Symbiosis International University, Pune, Stree Mukti Sangathana in Mumbai have already expressed their interest in jointly running these courses.

ANNEXURES

Annexure I: List of participants

Table 1 List of Participants

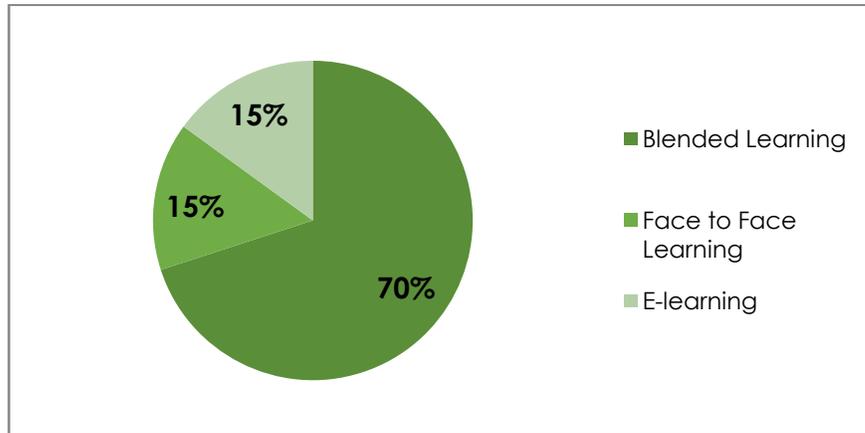
Sr. No.	Participant Name	Organization/Institute	Email
1	Akshay Surana	Usedless Paper	akshay.surana@usedlesspaper.com
2	Amruta Kalwar	E - Incarnation Recycling Pvt. Ltd.	amruta@e-incarnation.com
3	Anand Palkar	MERC Learnings Pvt. Ltd.	director@merc.co.in
4	Anil Ranglani	Mumbai Goes Green	anilranglani@gmail.com
5	Anish Tiwary	Samurnearth, Stree Mukti Sanghatana	anish.sespl@gmail.com
6	Asha Panwar	Research Scholar, IIT Bombay	ashapanwar@iitb.ac.in
7	Chandrakant Tambe	Municipal Corporation of Greater Mumbai (MCGM)	tambechandrakant73@gmail.com
8	Dilip Lothe	Associate, Environmental Management Centre	dilip.lothe125@gmail.com
9	Disha Modi	IL&FS	disha.modi@ilfsindia.com
10	Dr. Anju Singh	National Institute of Industrial Engineering (NITIE)	anjusingh@nitie.edu
11	Dr. Deepali Nimbalkar	Department of Environmental Sciences, Vasantdada Sugar Institute	ds.nimbalkar@vsisugar.org.in
12	Dr. Leena Kelshikar	Nisarg Waste Management	drkelshkar@gmail.com
13	Dr. Prasad Modak	Environmental Management Centre	prasad.modak@emcentre.com
14	Dr.Sunil Herat	Senior Lecturer in Waste management, Griffith University(Australia)	s.herat@griffith.edu.au
15	Karishma Kashyap	Manager-SIG, IL&FS	karishma.kashyap@ilfsindia.com
16	Kirtiman Dubey	Student, IIT Bombay	Kirtiman91@gmail.com
17	Madhuri Bogawat	Crimson Cobalt	madhuri@crimsoncobalt.com
18	Manisha Choubey	Kruti Green	choubeymanisha@gmail.com
19	Monisha Narke	RUR	monisha.narke@gmail.com
20	Ms. Seema Redkar	Independent Consultant (Ex-MCGM staff)	redkarcma@gmail.com

21	Nilay Shah	Student, IIT Bombay	nilayshah@iitb.ac.in
22	Pankaj Arora	Sanskara Solutions	pankajarora.gem@gmail.com
23	Romil Bajaj	Ekonnnect Knowledge Foundation	romil.bajaj@ekonnnect.net
24	Satish Kolvankar	Architect	satishkolvankar@gmail.com
25	Sonal Alvares	Ekonnnect Knowledge Foundation	sonal.alvares@ekonnnect.net
26	Sonam Dumbre	M.S. Swaminathani Research Foundation	sonamdumbra@gmail.com
27	Tulsiram Neupane	E - Incarnation Recycling Pvt. Ltd.	tulsiram@e-incarnation.com
28	Tushar Desai	Benson India	bensoindia@hotmail.com
29	Zarasp Irani	Xavier Institute of Communications	zarasp@gmail.com
30	Jahnvi Shah	Sampurn(e)arth Environment Solutions	

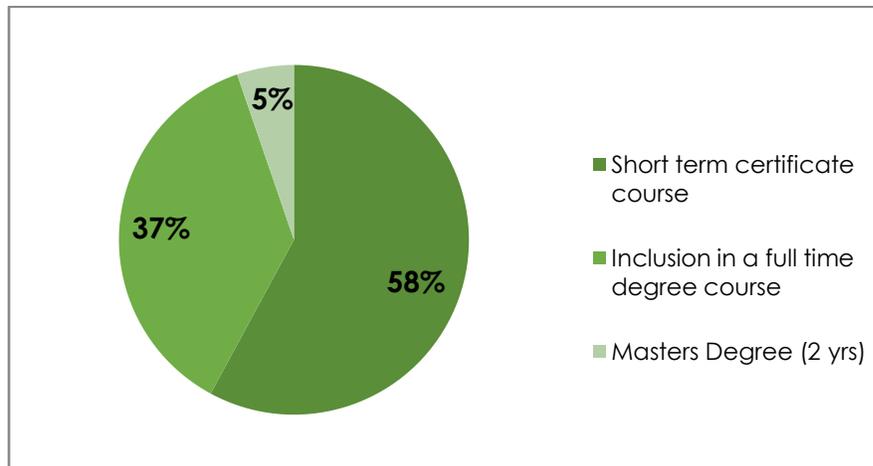
Annexure II: Stakeholder Feedback

Towards the end of the workshop, participants were asked to give their feedback and suggestions on the progress of the program and recommendations for next steps to be taken. The responses collected are mentioned below:

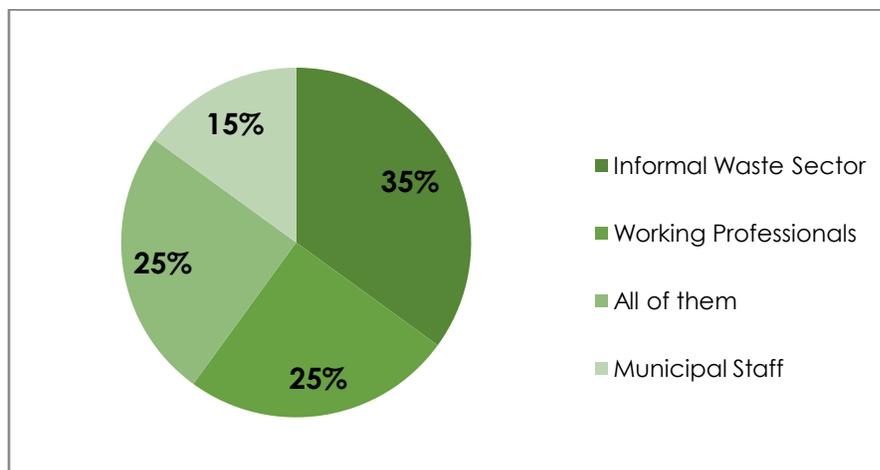
1. **As you are now aware of the resources under the IWR toolkit, which according to you is the ideal learning medium for such a course?**



2. **What according to you would be the ideal duration for a 'Waste to Resource' course?**



3. Which of the following stakeholders are in urgent need for such a course?



4. As we have reached the concluding part of this one year long program, what according to you should be the next steps taken to ensure the continued contribution of this project to the stakeholders? For instance, EMC is planning to convert the IWR toolkit into an E-learning module. In what way would you like to work with us on this or other future plans?

Key points from the responses collected are as below:

- Increase in participation from ALMs, academicians and educational institutions.
- Outreach and Promotional activities for the web portal and the toolkit
- Convert the training toolkit into an interactive e-learning module
- Reach stakeholders who are least exposed to the toolkit such as the informal waste sector and municipal staff
- Monitor and review the progress of the courses already under implementation
- Design and implement executive courses on waste and resource management for working professionals
- Conduct similar workshops in other cities across India