



Waste to Energy Research & Technology Council
(WTERT – India)

Progress Report of WTERT – India (2012 to 2015)

May 30, 2015

Prepared by



Waste to Energy Research and
Technology Council
(WTERT – India)

Address: 9B, 1st Floor, Ramanand Premises, Gokhale Road, Opp. Mango Showroom,
Naupada, Thane (W) – 400601
Phone: 022 – 65616261; Email: info@wert.in



1.0 About WTERT – India

WTERT-India was co-founded by the CSIR – National Environmental Engineering Research Institute (**NEERI**) and the Earth Engineering Center (**EEC**) of Columbia University and represents India in the Global WTERT Council (**GWC**). The mission of GWC, of which WTERT-India is a part, is to identify the best available technologies for the treatment of various waste materials, conduct additional academic research as required, and disseminate the information by means of publications, the WTERT's web pages, and periodic meetings. The EEC of Columbia University is a research group that in the last decade has published over one hundred papers and theses on many aspects of sustainable energy and sustainable Waste Management (www.wtert.org).

The guiding principle of WTERT-India activities will be that responsible management of wastes must be based on science and best available technology and not what seems to be inexpensive now but can be very costly in the future. In particular, WTERT-India will focus on assisting government agencies and industry in implementing of technologies that reduce the public health impacts of improper solid waste management in India and increase the recovery of materials and energy from used solids, by means of recycling, composting, waste-to-energy, and, sanitary landfilling with landfill gas utilization.

The EEC was formed in 1995. Its original mission was to direct engineering research on processes and products that balance the increasing use of materials, the finite resources of the Earth, and the need for clean air, water, and soil. EEC introduced the teaching of Industrial Ecology at Columbia University, was the first engineering unit of Columbia's Earth Institute, and co-organized the 1997 Global Warming International Conference (GW8), held at Columbia University.

In 1998, the historic Henry Krumb School of Mines, the first mining and metallurgy school in the U.S. (1864) and the foundation of SEAS, was divided into the Department of Earth and Environmental Engineering (EEE), the first such program to be accredited in the U.S., the

Materials Science Program. EEC has contributed to the formation of EEE and several important research units at Columbia (Clean Ocean and Shore Trust, Lenfest Center for Sustainable Energy, Water Center, and Center for Life Cycle Analysis).

As of 1998, EEC has concentrated on advancing the goals of sustainable waste management in the U.S. and globally. Economic development has resulted in the annual generation of billions of tons of used materials which are a considerable resource and, when not managed properly, constitute a major environmental problem both in developed and developing nations. This research has engaged many M.S. and Ph. .D. students on all aspects of waste management.

2.0 Achievement of WTERT – India

2.1 Permanent Address

WTERT – India has now acquired 1000 ft² area for its operation. The address for the same is as below:

**WTERT – India, 9B, 1st Floor, Ramanand Society, Ghokhale Road, Naupada, Opp,
Mango Showroom, Thane – 400601, Maharashtra, India**

This place is at the outskirts of main city of Mumbai, and it is about 10 km away from Mumbai International Airport.

2.2 Organizational Set up

In 2015, amongst the exiting members of WTERT – India, the following members were selected for the various posts for an initial tenure of one year and further extensions will be with concurrence of the trustees.

Post	Name
President	: D. M Shrotriya
Vice President	: K. S Rao
Secretary	: Sunil Kumar
Treasurer	: Geetanjali Pawar

In terms of staff recruitment, WTERT – India has grown through step by step. Initially, it was run by few professional and by 2015, WTERT – India has about 5 permanent staff. The details of different members and staff are given in Annexure I. The progress of permanent staff management is shown in **Figure 1**.

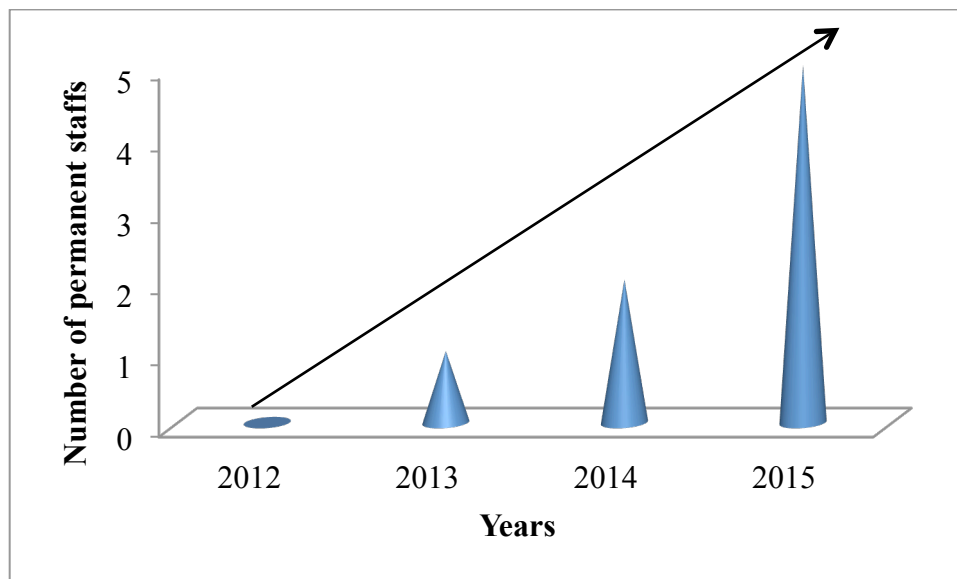


Figure 1: Progress in terms of staff recruitment

2.3 Conference Organization

In past 3 years, WTERT – India has carried out three brainstorming workshop towards understanding the current challenges in India about Sustainable Solid Waste Management (SWM). The details of these brainstorming workshops are presented in **Table 1**.

Table 1: Details of Workshops Organized by WTERT – India

Name	Venue
1 st International Brainstorming workshop on “Waste to Energy in India” on 24 th – 25 th August, 2012	Mumbai
2 nd International Brainstorming Workshop on “Short and Long-Term Solutions for Municipal Solid Waste Management Problem in Indian Cities” on 21 st – 22 nd February, 2013	Delhi
3 rd International Brainstorming Workshop on “Sustainable Municipal Solid Waste Management in India” on 29 th – 30 th January, 2015	Hyderabad

In all these brainstorming workshops, it was found that all the challenges related to SWM are sector and locality specific. Each municipality, ULBs has its unique problem and challenges ranging from collection and storage, segregation, transportation, leading to processing and disposal issues. Mostly in these brainstorming, it was discussed and debated about challenges faced by Municipal Authorities, local ULBs, service providers and researchers in selecting appropriate technologies for SWM. Mostly, they consider factors, such as waste segregation, easy operation and maintenance strategies, valuable product, low manpower and maintenance requirement, etc.

2.4 Waste Characterization Studies

WTER – India has carried out waste characterization studies for various cities and the detail of the same is given below:

- Jabalpur, Madhya Pradesh
- Surat, Gujarat
- Patna, Bihar
- Kohlapur, Maharashtra
- Bhubaneswar, Oddisha
- Bangalore, Karnataka

3.0 Way Forward and Future Projections

Based on all the experiences in past three years, WTER – India will be focusing on capacity development and knowledge support organization for municipal bodies, ULBs, Government authorities, etc. Some of the upcoming projects are:

- Pune University has invited WTER – India to organize a session on waste management in their conference which is to be held in June, 2015 at Pune. In this regard WTER – India would carry out an interactive session among the stakeholders to understand the current challenges of SWM in Pune and its nearby areas. Based on this assessment, a framework would be developed for Sustainable SWM strategies for ULBs near Pune.

- Acting as knowledge partner for “One day workshop on waste characterization” to be held at Surat in association with Surat Municipal Corporation (SMC). Tentative date for the same is at end of August, 2015
- Organizing one day workshop on waste characterization for ULBs of Mumbai Metropolitan Region (MMR). This would be carried out at end of July, 2015
- Organizing “One day brainstorming on status of industrial waste management in Maharashtra” in association with Institute of Chemical Technology (ICT), Mumbai. Tentative date for the same is December, 2015
- Acting as knowledge partner for “One day brainstorming on waste processing technologies” to be held at Surat in association with Surat Municipal Corporation (SMC). Tentative date for the same is at December 2015/ February, 2016
- WTERT – India is in talking sense with Surat Municipal Corporation (SMC) for establishment of Solid Waste Research and Training Centre (SWRTC) at Surat. WTERT – India would act as advisory body for setting up of this research centre. The main focus of the research centre would be collection and compilation of data regarding SWM in India, waste characteristic reports, providing awareness, training and capacity building services among local ULBs, researchers, Government authorities, and others for betterment of SWM status in India. This research centre would also act as certifying body for the waste treatment technologies in association with Columbia University, USA. WTERT – India has already submitted a proposal for the same.

Submitted to Global WTERT Council (GWC) by Dr>Sunil Kumar, Secretary of WTERT-India



Waste to Energy Research & Technology Council
(WTERT – India)

List of Members of WTERT – India

Board Members and Trustees

Mr. DM Shrotriya, President

Mr. KS Rao, Vice President

Dr. Sunil Kumar, Secretary

Ms. Geetanjali Pawar, Treasurer

Other Trustees

Dr. Rakesh Kumar

Dr. Vijay Kulkarni

Dr. A. D Sawant

Dr. A. N Vaidya

Other Members

Mr. Ranjith Aneppu

Mr. Avick Sil

Permanent Staff

Mr. Sadeep Tayde, Project Manager

Ms. Geetanjali Pawar, Junior Manager

Mr. Yash Masane, Technical Assistant

Ms. Archana Tiwari, Technical Manager

Mr. Shrikant Kamat, Office Assistant
