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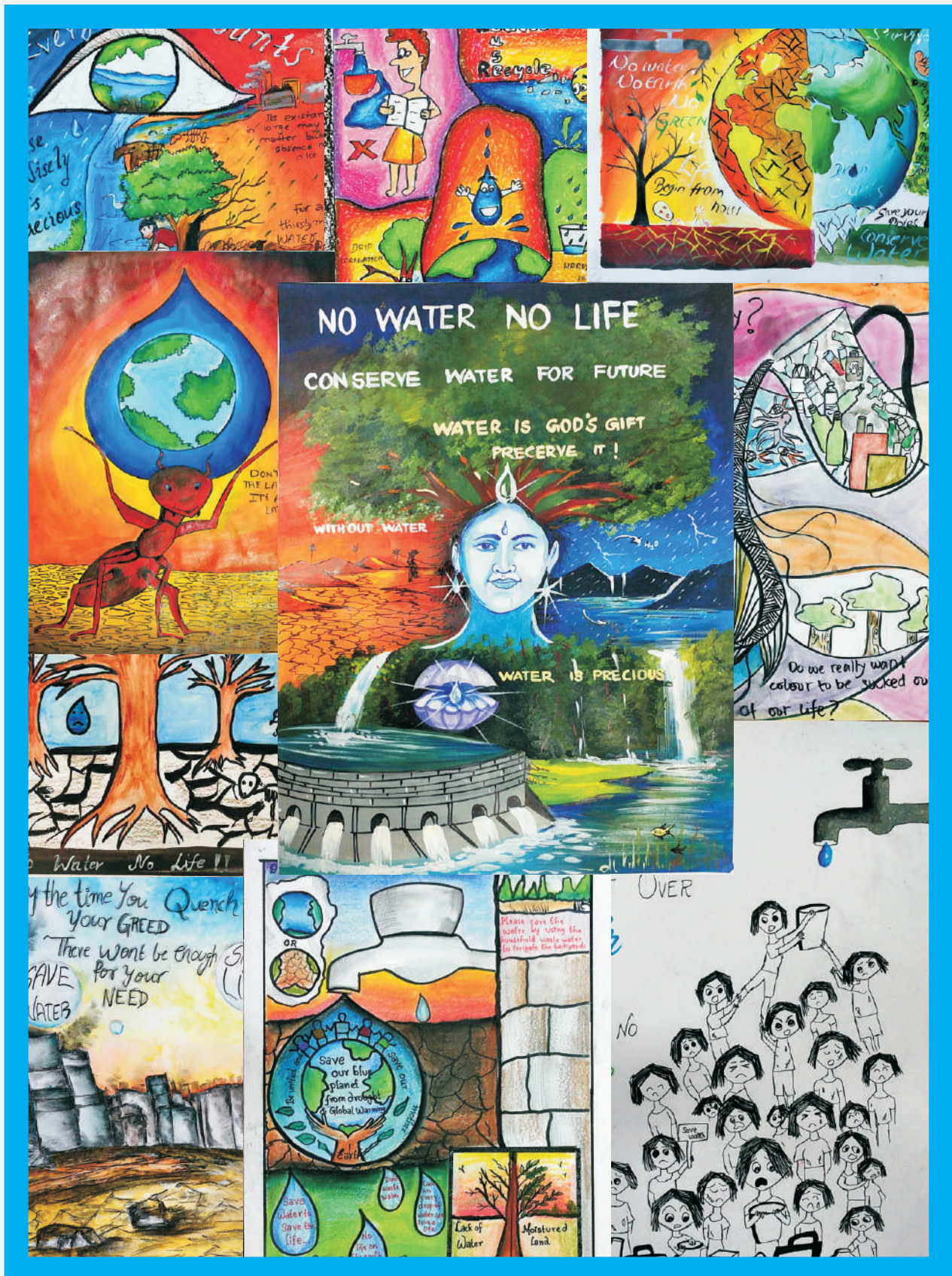
# INDUSTRIAL WASTE MANAGEMENT ASSOCIATION

## IWMA OWN NEW OFFICE



# 16<sup>th</sup> Annual General Meeting Annual Report 2017 - 2018

# Poster Designing Winners - ENVIRO 2017



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## Chairman's Message



Dear Members,

I am very happy to be with you on this glorious occasion when our organisation, IWMA, is conducting its 16<sup>th</sup> Annual General Body Meeting.

The world celebrated “World Environment Day” on 5th June, 2018 with the theme “BEAT PLASTIC POLLUTION” it's worth remembering that synthetic microfiber pollution is washing up in our oceans at alarming rates. Around [100,000 marine animals are killed](#) each year by plastic waste, including microfibers. The gift of nature is at a very big stake on the usage of plastics in a haphazardous manner.

Like other states, The Government of Tamil Nadu is coming out with a ban on plastics from 01<sup>st</sup> January 2019. Almost, we have been living with plastics for more than 3 decades with a bad notion that Modern life would be impossible without plastic.

While whole heartedly welcoming the ban, I would like to share my thought on how our industries will accustom themselves to this paradigm change. It would be very big challenge for the industries to overcome the challenge. We cannot continue to act and behave as if business as usual

Although recycling is the best alternative in front of us, the increasing plastic recycling rates is a matter of concern. Without bold new ideas and management strategies, current recycling rates will no longer be met, and ambitious goals and timelines for future recycling growth will be insurmountable.” I am confident that the industries will rise up to these challenges and move forward with a new vibration and energy.

IWMA, as an organization caring environment has long miles to march further towards its portfolio of Industrial Waste Management and Environment Protection. I thank the entire IWMA team for being enthusiastically travelling in the right direction.

Best wishes to all members

**Mr. K. Baskaran, Chairman, IWMA.**

## Secretary's Message



Dear Members,

I am very happy to connect with you on this excellent occasion and presenting this report for the year 2017-18. I thank you all for giving me this opportunity. I have enormous pleasure to announce that our organization's members strength is 2674. This is evident because of our continuous and dedicated service to the industries in the field of Hazardous Waste Management.

SIPCOT has allotted 26 acres of additional land at the CHWTSDF at Gummidipoondi. This will help the industries to dispace their wastes continuously.

### OWN NEW OFFICE

You all will be happy to find that our Association has crossed a new land mark by having its own land space and office. We are one among the very few Industrial Organisations who have own offices. The new office is close to one of the important land marks of the city. We have a total of 2500 Sq Ft space accommodating a well advanced Training Centre. Office area is comfortable with Board Room, Office Bearers Room and sufficient space is provided for the Secretariat. The 35 seated Training is a mixture of aestheticism and technology. Its elegance and serene environment are much comfortable for Training Programmes.

New Office inauguration was conducted on 27<sup>th</sup> March 2018. Mr. K.Srinivasan, I.A.S., Managing Director, SIPCOT, inaugurated the new office and the Training Centre.

### SERVICES OF IWMA

- ◆ Technical clarifications to industries on disposal of Hazardous waste
- ◆ Providing updates on change in Environment regulations to members (through website and training programs)
- ◆ Guidance for submission of Consent order application to TNPCB
- ◆ Signed MOU with SSM polytechnic, Erode, to conduct ETP Operators and Technicians Courses.
- ◆ Working with Sathya Bama University and other institutions to establish Training Courses.
- ◆ Discussions are taking place with NCGJ (Regional Partner of National Skill Development Council) for conducting Skill Development Programmes and also working for signing MOU for a long term partnership.

Best wishes to all members

**Mr. N. Palanisamy, Secretary, IWMA.**

## Secretary's Report

Dear Members,

### ACCREDITATION

Our association has obtained Accreditation of Business Membership Organization (Industry Association) by the National Accreditation Board for Education and Training (NABET), Quality Council of India (QCI) in SILVER GRADE. This is an Accreditation standard like ISO systems. We plan to work for an upgradation soon.

### SIPCOT & IWMA PROJECTS CHWTSDF

SIPCOT has identified IWMA as a nodal agency to implement TSDF at various industrial estates.

SIPCOT has identified Thoothukudi and Bargur locations to establish TSDF with comprehensive and innovative designs that fit within regulatory framework.

#### **1. Bargur**

EIA report have been revised. The proposed project would proactively promote the public interest through provision of basic amenities such as roads, transportation, electricity, education, sanitation and healthcare facilities. This would also encourage community growth, development and improved socio-economic conditions and quality of life of the people living in the project area.

#### **2. Thoothukudi Project**

Engaged suitable consultant for conducting EIA and public hearing has been given by MoEF. Further, monitoring data has been done for EIA report and once the report is submitted to the ministry, EC will be obtained.






#### **3. Gummidipoondi – Additional Land Requirement**

The 6<sup>th</sup> Cell is approaching the final stage of landfilling and approval for 7<sup>th</sup> and 8<sup>th</sup> cell is under process. SIPCOT has allotted 26 acres to IWMA and proposal for Landfill and ARAF facility by the service provider is in progress. In the meantime, IWMA requested the balance land of 13 acres to SIPCOT.

### TNPCB

Co-ordination with TNPCB has been strengthened and I am glad to inform you that IWMA is part of the Consultative Committee for Online Monitoring of Hazardous Waste from the industries.

## EXECUTIVE COMMITTEE FOR THE YEAR 2017-18 WITH PHOTOGRAPHS

<p><b>Chairman</b></p> <p>Mr. K. Baskaran          Managing Director          Aarthi Industries</p>	
<p><b>Vice Chairman</b></p> <p>Mr. R. Jagannathan          Director          Sri Suryodhayaa Processing Pvt. Ltd.</p>	
<p><b>Secretary</b></p> <p>Mr. N. Palanisamy          Managing Director          Aruna Textile Processing Mills</p>	
<p><b>Joint Secretary</b></p> <p>Mr. R. Thirugnanam          Dy. General Manager Maintenance          Simpson &amp; Co. Ltd.</p>	
<p><b>Treasurer</b></p> <p>Mr. Suresh Kandi Manoharan          Executive Director          Best Colour Solutions India Pvt. Ltd.</p>	

## EXECUTIVE COMMITTEE MEMBERS FOR THE YEAR- 2017-2018

<p>Mr. S. Balan</p> <p>Senior Manager – Utilities &amp; Services Hyundai Motor India Limited</p>	
<p>Mrs. S. Chellammal</p> <p>Manager EHS MTL Instruments Pvt. Ltd.</p>	
<p>Mr. George. N.C</p> <p>AGM - Environment Strides Shasun Ltd.</p>	
<p>Mr. P. A. Madheswaran,</p> <p>Senior Executive, VST Tillers Tractors Ltd</p>	



<p>Mr. Mohan Kottaisamy, Environmental Officer C P Aqua Culture India Pvt Ltd</p>	
<p>Mr. R. Muruganantham Proprietor SRI MURUGANANTHAM TEX</p>	
<p>Mr. K. Natarajan Proprietor Divya Engineering Works</p>	
<p>Mr. P. E. Purushothaman Director SSM Processing Mills Limited</p>	

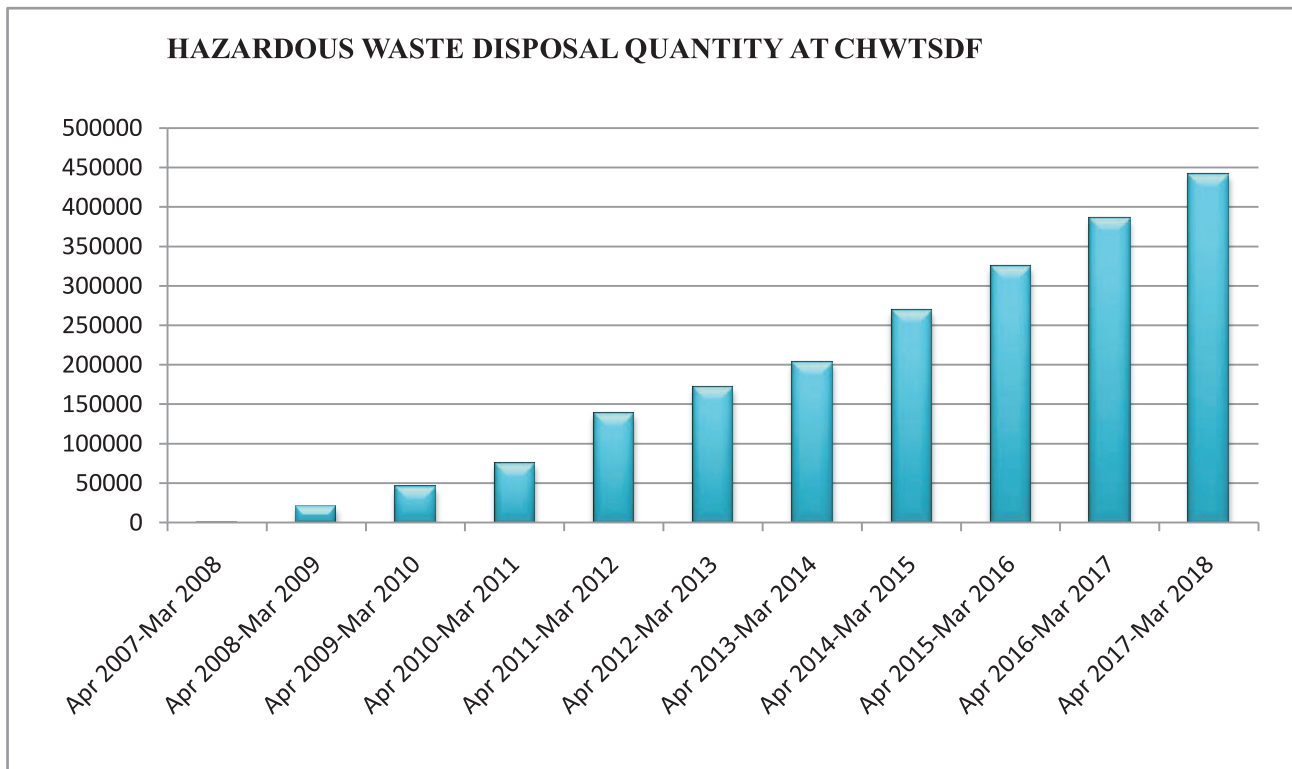
<p>Mr. C. S. Rajan           Vice President          Iljin Automotive Private Limited</p>	
<p>Mr. B. Saravanan           Deputy General Manager-Facilities,          Super Auto Forge Pvt Ltd.</p>	
<p>Mr. M. Thiyagarajan          Asst. Manager - Utilities &amp; Projects          Brakes India Ltd. (Unit 36)</p>	

**Auditor** : **Mr. H. Chandrasekaran, Varadarajan & Co.**

**Secretariat:**

**General Manager - Operations** : **Mr. R. Venkatasubramanian**  
**Advisor - Projects** : **Mr. K. Sivaraman**  
**Assistant Manager - Technical & Training** : **Mr. M. Vignesh Raj**  
**Assistant Manager - Projects** : **Mr. B. Hari Prakash**  
**Executive - Administration & External Affairs** : **Ms. K. Lalitha**  
**Executive - Program & Training** : **Ms. R. Mridula**  
**Co-ordinator CZC** : **Ms. Sanjelyn Joyson**  
**Accounts Officer** : **Mr. V. Gopalan**

## HAZARDOUS WASTE DISPOSAL QUANTITY – GUMMIDIPOONDI CHWTSDF



**COMMON HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITY  
 (CHWTSDF) ESTABLISHMENT & OPERATION**

<p><b>Common Hazardous Waste Treatment, Storage and Disposal Facility</b></p>	<p><u>Location:</u></p> <p>SIPCOT, Gummidipoondi          Thiruvallur District, Tamil Nadu</p> <p><u>Land Area:</u> ~ 27 Acres</p> <p><u>Facilities:</u></p> <ul style="list-style-type: none"> <li>+ <u>Landfill</u>  <u>Disposed quantity:</u> ~4.52 Lakh MT            Cell 1 Completed            Cell 2 Completed            Cell 3 Completed            Cell 4 Completed            Cell 5 Completed            Cell 6 in Progress – Final stage (1,22,476 MT)            Cell 7 &amp; 8 –Waiting for the approval from TNPCB</li> <li>+ <u>Incinerator</u>  <u>Disposed quantity:</u> ~27,568 MT</li> <li>+ <u>Capacity:</u>            100,000 TPA for Landfill            1.5 Tons/Hour for Incinerator</li> <li>+ <u>Project Promoter:</u> IWMA</li> <li>+ <u>Service Provider:</u>            TNWML Chennai (Group of Ramky Industries)</li> </ul> <p><u>Additional land area:</u> 26 Acres</p> <p><u>Facilities:</u></p> <ul style="list-style-type: none"> <li>+ Landfill – 17 Acres</li> <li>+ AFRF - 9 Acres</li> </ul>
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## Seminars

SNO	Date	Program	Venue	Number Of Participants
1	4 <sup>th</sup> August 2017	Regulatory Compliance Handling In Industries Towards Pollution Control	Hotel Fortune, Singaperumal Kovil	130
2	September 16 <sup>th</sup>	Advances in Environmental Management	Green Park Hotel, Vadapalani	124
3	October 12 <sup>th</sup> & 13 <sup>th</sup>	TNPCB Training Program on Hazardous Waste Management	Le Palace, Porur	25
4	February 16 <sup>th</sup> & 17 <sup>th</sup>	Sustainable Waste Water Treatment & ZLD	Hotel Club Melange, Erode	251

## TRAINING

IWMA, as an awareness initiative, conducts training programs to its member industries in order to make its members aware of the environment and the regulations that precede it. The training initiative of IWMA caters the needs of industries by bridging the gap between industries, consultants, academicians and Government. The training programs are conducted at a “No-profit/No-loss” basis for the expenses incidental to each program including hall booking, travel, hand-outs, literature, trainer fee etc.

In continuance of our efforts to conduct training programmes on Environment Management of the member industries. The association has conducted both in-house and out-houses training programs. IWMA has conducted the following training programs during this period. These programmes have focused on small groups to facilitate better understanding and involvement.

Sno	Date	Topic	No of Participants
1	15 <sup>th</sup> May 2017	Environmental Awareness	07
2	24 <sup>th</sup> & 25 <sup>th</sup> May 2017	Hazardous Waste Management Awareness	32
3	2 <sup>nd</sup> June 2017	Legal Issues	13
4	23 <sup>rd</sup> June 2017	Operation & Management of ETP & STP	23
5	3 <sup>rd</sup> July 2017	Operation & Management of ETP & STP	15
6	August 30 <sup>th</sup>	Industrial Hygiene & Occupational Health	13
7	September 8 <sup>th</sup>	Energy Management & Conservation (PCRA)	25
8	October 11 <sup>th</sup>	Operation & Management of ETP & STP	21
9	November 11 <sup>th</sup>	Role of EMS in Managing the Environmental Pillar of Sustainable Governance	16
10	December 8 <sup>th</sup>	Recycling of wash water from electroplating & allied industries	21
11	December 21 <sup>st</sup>	Energy Conservation in Boilers	10
12	January 3 <sup>rd</sup> & 4 <sup>th</sup>	EMS Workshop	14

13	January 29 <sup>th</sup> & 30 <sup>th</sup>	Role of ISO 14001:2015-Environmental Pillar of Sustainable Governance	20
14	February 24 <sup>th</sup>	EMS ISO 14001	15
15	March 20 <sup>th</sup>	Zero Liquid discharge(ZLD)	29
16	March 27 <sup>th</sup>	Zero Effect, Zero Defect(ZED)	10

## Onsite Training Program

IWMA conducts onsite training programs in the premises of the industry upon willingness of the industry. Training Faculty along with IWMA Training Staff conducts the Training Program and receives the feedback from the participants for the betterment of the foreseen training programme. The topic of the Training Program is related to Energy Conservation and EMS, participants were given Certificates at the end of the Training Program.

Two day Training Program for TNPCB Officials was conducted at Hotel Le Palace, Porur on October 12<sup>th</sup> & 13<sup>th</sup> 2017. First day comprised of Theory class and participants were taken to landfill site at Gummidipoondi. Second day participants visited various industries around Ranipet.

## CSR ACTIVITIES

### ENVIRO 2017

Every year IWMA in collaboration with Science Olympiad Foundation (SOF) conducts ENVIRO-a two day environmental awareness program for school children. Competitive events like Story Writing, Quiz & Banner/Poster Designing were held to promote the importance of environment among school children. Hon'ble Thiru. Justice. Dr. T.N Vallinayagam, Judge, Lok Adalat, High Court of Madras was invited as the Chief Guest for the event.

This year, ENVIRO 2017 was conducted at IIT Madras on 22<sup>nd</sup> & 23<sup>rd</sup> July 2017. Around 120 schools & over 400 students in and around Chennai participated in the following topics related to the environment.

Story Writing	- Junior
Quiz	- Middle
Banner/ Poster Designing	- Senior

A Science Awareness Workshop for the YES 2018 (Young Environmental Scientist) program was also conducted. Dr. T.S. Natarajan, IIT-Tirupathi demonstrated interesting science experiments during the workshop.





## YOUNG ENVIRONMENTAL SCIENTISTS AWARDS - YES 2018

IWMA conducts an inter-school (Classes 8 to 12) research oriented competition for school children, since 2012, called YOUNG ENVIRONMENTAL SCIENTIST (YES). This is a Quest for young minds, who are intent on shaping tomorrow. Prof. Natarajan of IIT (T) & Prof.CV.Krishnamurthy, Department of Physics mentors the students and their guides on the modality of Research, viz. Observation, Experimentation, Data Collection & Analysis. The program is run over 6 months from the selection of the project through experiment and data analysis to demonstration. Besides the students, their mentors are also recognized for their contribution.

YES Awards-2018 was conducted on 21<sup>st</sup> January 2018 at IC & SR Conference Hall, IIT Madras. Over 16 projects were presented. Professor Krishnamurthy, Department of Physics, IIT-M, Thiru Thirugnanam from IWMA & 2 other Professors from IIT-M evaluated the projects. Mr. Indra Kumar, Exnora: A Zero Waste Model was the Chief Guest for the program, distributed the prizes to the winners.

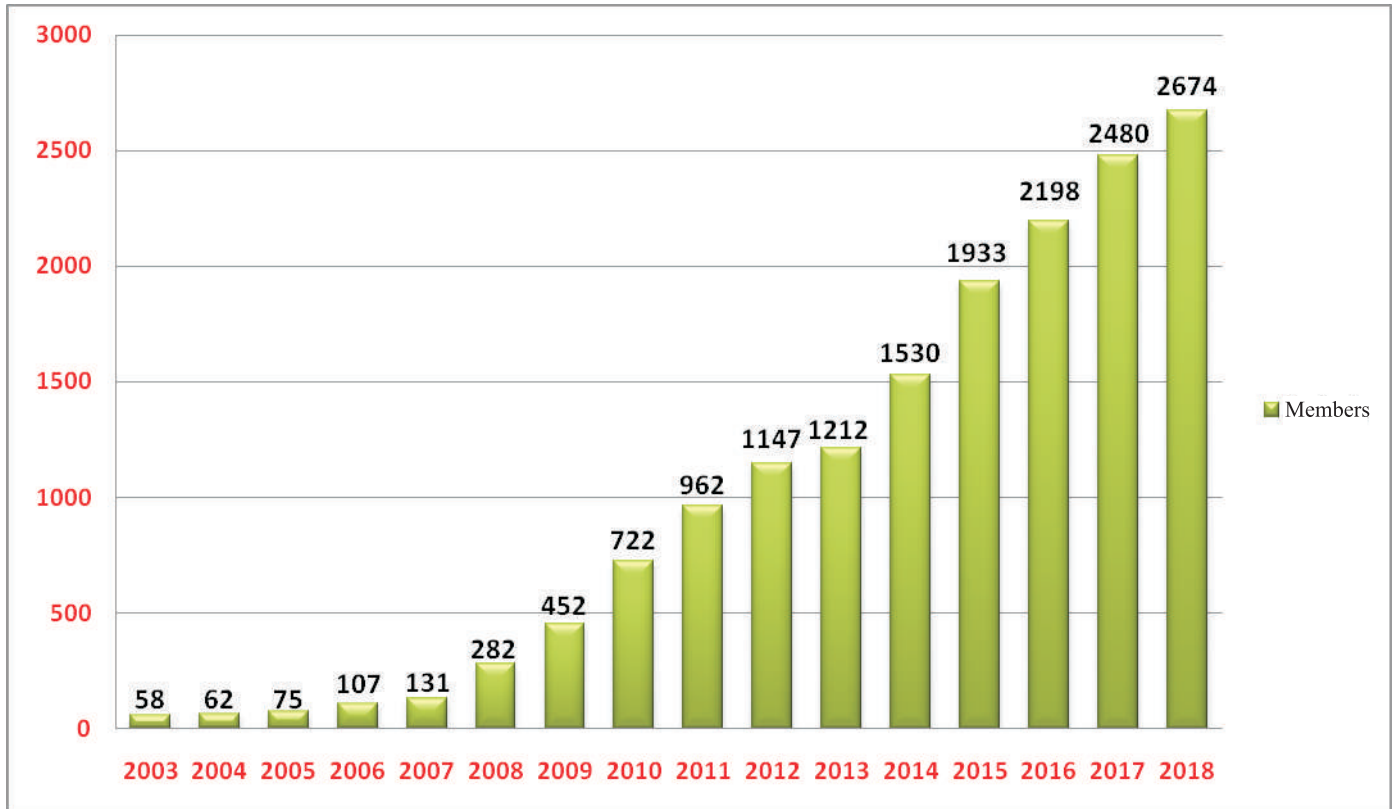


## E-CAP

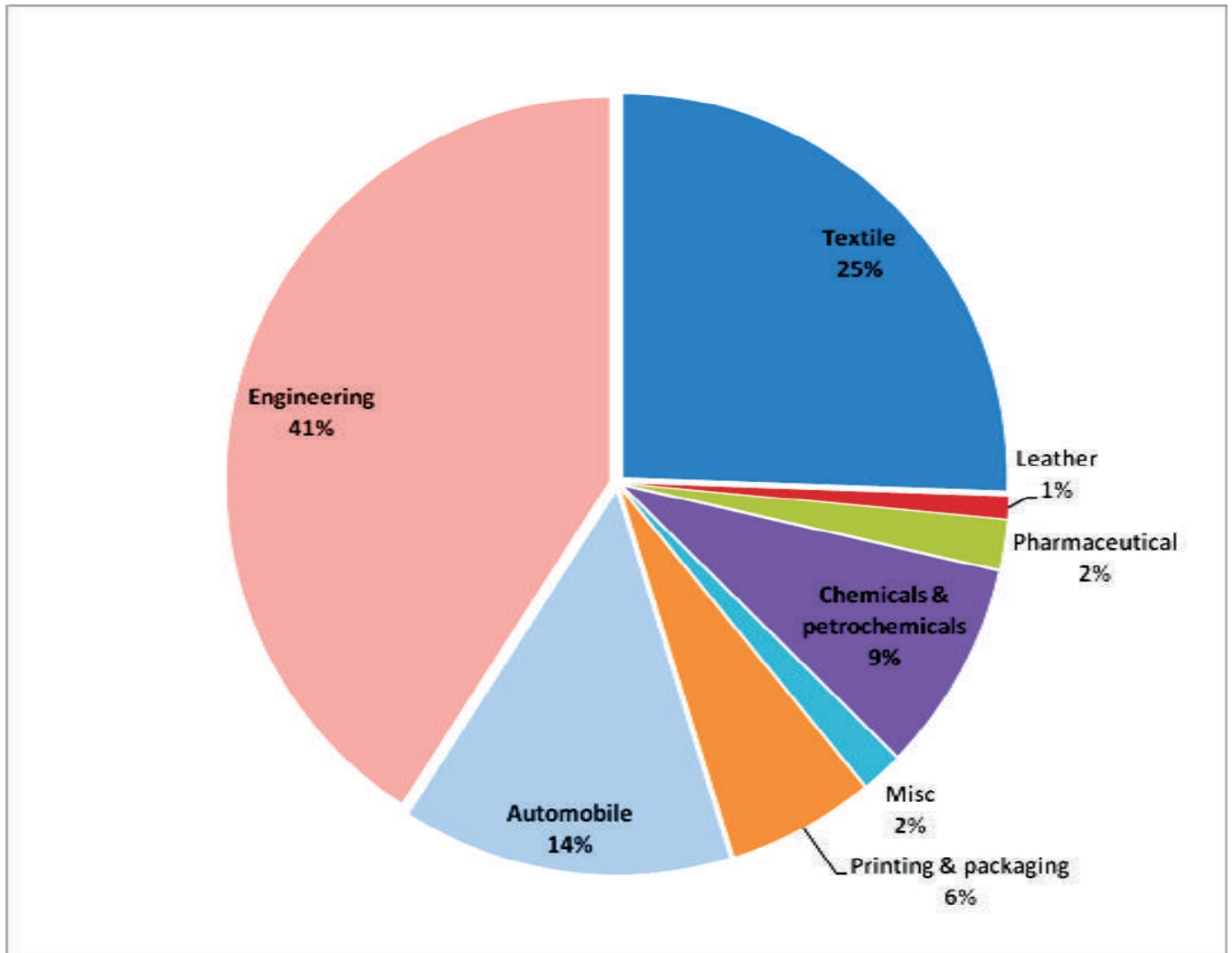
E- CAP is E-Waste Awareness & Collection Program. This program will be launched during ENVIRO Program. Schools will register for the program & they will ask students to collect E-Waste from their locality. Schools will have a common bin for the collection of such wastes. The school which collects more E-Waste will be awarded with cash prize and Best Co-Ordinator award will be given.



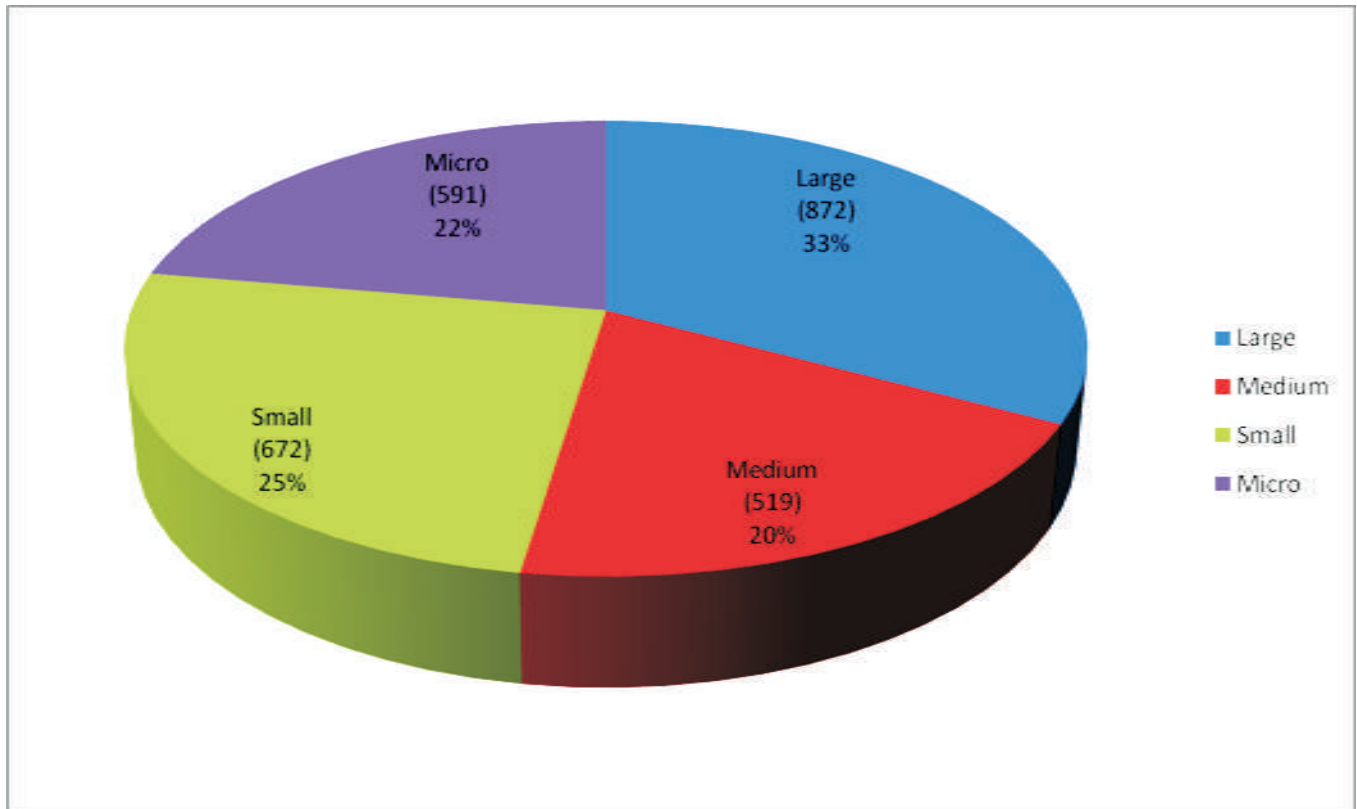
## MEMBERSHIP GROWTH



## INDUSTRIAL MEMBERS - CATEGORY WISE (As on March 2018)



## INDUSTRIAL MEMBERS - SECTOR WISE (As on March, 2018)



## PROJECTS – Industry Interface

### 1. Re-use of rinse from electroplating – Prototype:

IWMA along with IIT Madras has been involved in developing a cost effective solution for re-use of rinse water generated from electroplating industries. Prototype was designed by one of the shortlisted teams of Carbon Zero Challenge. Funding of Rs. 5 Lakhs was provided to the team. Prototype was made and demonstrated to senior representatives from electroplating industry cluster of IWMA. Feedback was provided by industry to take this project forward. IWMA will be happy to explore opportunities for further funding if electroplating industry can at least partially fund the next phase of development.



**Feedback from Industry cluster on prototype**

### 2. Unlocking the Circular Potential of the Foundry Industry:

With initiative taken by a leading foundry industry member through IWMA, IIT Madras has made application to IMPRINT 2 ([www.imprint-2.in](http://www.imprint-2.in)), a technology development initiative of Ministry of Human Resource and Development (MHRD) and Department of Science and Technology (DST). The objective of the proposal is to identify a solution for the sand generated from foundry sector. We are happy to inform you that the application has been successfully shortlisted at the first level of screening. Final selection results are awaited. This scheme entails a funding of approximately Rs 2 Crores out of which 10 % will be contributed by the industry.

IWMA is happy to take up many such initiatives to facilitate their industry members in the coming years.

### **3. Graphite from forging Industry**

Graphite is one of the important by-products from the forging industry. IWMA along with IIT Madras has taken various noteworthy efforts in re-using the graphite powder with the support of a leading forging industry member of IWMA. Various options like dye adsorption in textile industry, intense laser matter interaction studies for different applications, synthesis of graphene and treatment of pharmaceutical wastewater has been identified. Further study is in progress.

### **4. Marine disposal of unusable textile residual salt:**

IWMA member industries from textile sector requested IWMA to find out a feasible solution for marine disposal of salts generated from effluent treatment plants of IETPs and CETPs. IWMA approached IIT Madras for taking up feasibility study on Marine Disposal of Salts Generated from Effluent Treatment Plants of Textile Dyeing Units. After completion of the study in Nov 2015, IWMA organized meeting with Chairman, Member Secretary and senior officials of TNPCB in Feb 2016 on the subject along with IIT Madras. Further at the behest of TNPCB, IWMA approached National Institute of Ocean Technology (NIOT) for further studies. NIOT suggested that WAPCOS (Govt of India Undertaking, Ministry of Water Resources, River Development and Ganga Rejuvenation) take up the study.

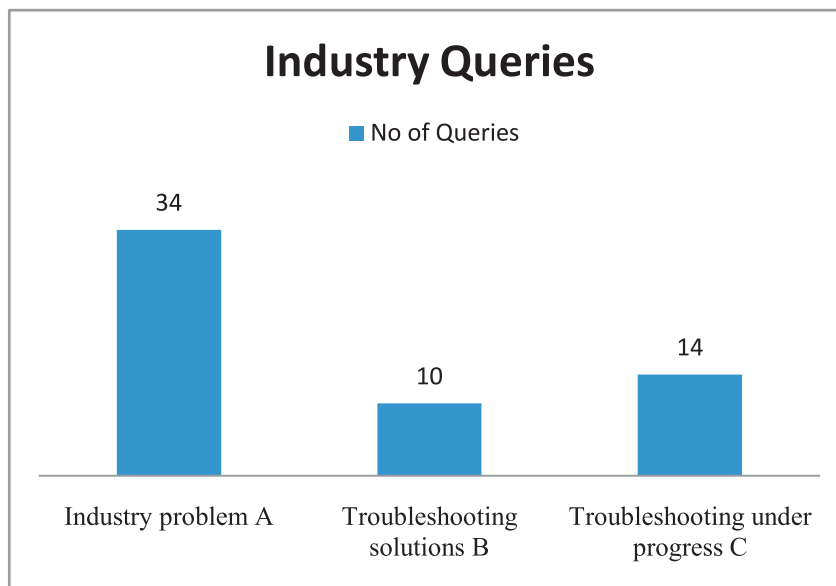
Draft pre-feasibility report has been prepared by WAPCOS and is being reviewed for final report submission. After completion, IWMA proposes to work along with WAPCOS in the preparation of EIA report and for obtaining Environment/ CRZ Clearance subject to getting Government grants.

IWMA has invested around Rs 10 lakhs on this initiative as part of its ongoing efforts to serve textile industry.

## 5. Industry interface problem statement

IWMA is committed to troubleshooting and solving environmental problems for their member industries with inputs from domain experts.

A brief summary of progress made by IWMA is captured below



- Industry Problem A – Industry problems addressed through phone and emails to the satisfaction of IWMA members
- Troubleshooting solutions B – Troubleshooting through multiple visits to industry by IWMA along with in-house environment consultant. Completed to the satisfaction of industry and good feedback reports received.
- Troubleshooting under progress C – Troubleshooting through multiple visits to industry by IWMA along with in-house environment Consultant. Work under progress



## Examples of trouble-shooting solutions B

- a. An auto ancillary manufacturer located at Ambathur approached IWMA for guidance on improvement efficiency of the effluent treatment. IWMA provided technical guidance and an improved treatment scheme.
- b. An electroplating industry located at Thirumudivakkam approached IWMA for efficient management of sludge and for improvement the waste water treatment. After multiple visits to industry, IWMA provided guidance on reduction of sludge generation and obtained good feedback from industry.
- c. A MIG wire manufacturer located at Chengalpatu approached IWMA to solve their concern on high sludge generation in their ETP. After considering different options, IWMA provided a feasibility proposal on water conservation and improved methods for effluent treatment. Industry provided good feedback and thanked IWMA on the support
- d. An auto ancillary manufacturer located at Chengalpatu approached IWMA to treat their oil mixed waste water. IWMA suggested a better treatment scheme and obtained good feedback from industry.
- e. An electroplating industry located at Thirumazhisai has requested IWMA to provide scheme of treatment for effluent generated after studying the process. After complete study, a plan of treatment scheme was provided to the industry.
- f. A pump manufacturer located at Old Mahabalipuram Road (OMR) requested IWMA provide regulatory requirements applicable to their industry after visiting their site. IWMA obtained good feedback based on the detailed environment compliance report submitted to the industry.
- g. An auto-ancillary manufacturer located at Irungattukotai requested IWMA to provide regulatory requirements applicable to their industry after visiting their site. IWMA obtained good feedback based on the detailed environment compliance report submitted to the Industry.
- h. An electrical circuit manufacturing industry located at Old Mahabalipuram Road (OMR) requested IWMA for guidance on food waste and other solid waste management. By providing appropriate solution, IWMA obtained good feedback from the industry.

## Examples of trouble-shooting under progress C

- i. An auto ancillary manufacturer located at Manavala Nagar has requested IWMA to find opportunity to utilize their byproduct as a resource to any other industry. Adequate efforts are being taken by IWMA to identify prospective industry to reuse the by product.
- j. An exhaust fan manufacturer located at Madhavaram has requested IWMA for the guidance in their waste water treatment. After multiple discussions and site visit, work is actively in progress to provide an appropriate solution.

IWMA is committed to solving many such industry environment problems in the coming years.

## **Carbon Zero Challenge – A pioneering initiative on energy and environment**

Carbon Zero Challenge (CZeroC) is a Green Business Idea Competition pioneered by IIT Madras.

CZeroC aims to trigger novel ideas towards developing carbon neutral systems to serve major sectors which are plagued by energy and environmental challenges. The thematic areas are: Agriculture, Industries, Transportation systems, Urban Areas & Cities, and Water & Waste management. The grand challenge posed to the competing teams was to develop a grid free /alternative system which is economically viable, socially acceptable, environment friendly and easily replicable in multiple areas. The challenge is to understand the energy needs of these sectors and develop a sustainable green energy alternative by combination of one or more renewable energy sources.

Carbon Zero Challenge (CZeroC) 2018 is South India Renewable Energy Innovation Competition for colleges and early stage start-ups, which aims to accelerate innovations that address Climate Change. CZeroC 2018 was the initiative of IIT Madras in collaboration with the U.S. Consulate General Chennai, Polaris – A Virtusa Company and Shaastra 2018. IWMA was the Organising Partner.

Carbon Zero Challenge 2018 was open to students and/or early stage entrepreneurs of Tamil Nadu, Kerala, Karnataka, Puducherry, and Andaman and Nicobar Islands. The competition received a wide response with a total of 531 applications from college student teams (479) and early stage start-ups (52).

The project applications were evaluated based on how close they were to being carbon neutral or grid free in terms of minimizing GHG emissions and their overall life cycle costs. The metrics used were output, outcome, impact and value. After rigorous two-level screening, a total of 25 teams were shortlisted to go to the Phase II of CZC – wherein teams built prototypes for their project ideas.

These 25 teams were provided with expert mentorship and prototype funding upto Rs 5 lakhs per shortlisted project to transform their solutions into tangible products. The contest culminated in a final demo day when the shortlisted teams demonstrated their prototypes before experts from industry and academia. The best solutions received rewards and recognition as well as commitment for further financial support to progress their journey. All the teams were provided with opportunities to interact with investors and researchers to further develop their ideas.



## Shortlisted teams (25) for Prototype Funding

Prototypes relevant to industry problems such as removal of hexavalent chromium from industrial waste water, recovery and re-use of rinse water from electroplating attracted industry members during the demo day on February. Selected winning teams have been committed further funding upto Rs. 10 Lakhs to scale up to market stage.

Encouraged by the response to Carbon Zero Challenge 2018, IIT Madras in collaboration with Virtusa and Shastra has launched Carbon Zero Challenge (CZeroC) 2019. IWMA is the Organising Partner. CZeroC 2019 invites applications from students, early stage startups and those aspiring to be entrepreneurs across the country (PAN India). In this second edition of Carbon Zero Challenge, CZeroC2019 now offers

- Entrepreneurship training and certification program
- Greater emphasis on commercialization of the selected idea
- Prototype development in collaboration with a prospective industry partner
- Alignment with academic calendar, curriculum & internship needs of participating student teams

To know more about CZeroC 2019, visit <https://czeroc.iitm.ac.in/>



**Demo day (9<sup>th</sup> Feb 2018) – Dignitaries on Dais**



**Team Enviro receiving award Innovation Excellence with funding for incubation support**



**Shortlisting of teams of Phase II July 2017**



**Award to team Vision X being handed over by Chairman IWMA**



**Dignitaries visiting the prototypes of teams on Demo Day**



**Electroplating Industry members of IWMA interacting with Teams**

## Media Coverage for IWMA- April 2017 to March 2018

### Carbon Zero Challenge:



### IIT Madras teams bag two of the top five honours in Carbon Zero Challenge



(FROM L\_R) Mr. Robert G Burgess, U.S. Consul General, Chennai, Shri Vikram Kapur, IAS, Principal Secretary, Mr. Kris Canekeratne, Chairman & CEO – Virtusa Corporation & Ramamurthi, Director, IIT Madras'

Big achievement! These 2 teams of IIT Madras made institute proud, bagged top honours in this big challenge

By: FE Online | Updated: February 10, 2018 7:09 PM



It's a big achievement for IIT Madras students.

It's a big achievement for IIT Madras as the two teams of this prestigious institute have bagged two of the top five honours in Carbon Zero Challenge. It was a pioneering initiative to identify innovative and indigenous solutions to India's unique energy problems. The finale of Carbon Zero – Renewable Energy Innovation Challenge (CZeroC) was hosted on Friday by the Indian Institute of Technology Madras (IIT Madras). The program was conducted jointly with Industrial Waste Management Association (IWMA), U.S. Consulate in Chennai and Polaris, a Virtusa Company. Basically, the Carbon Zero Challenge challenge aims to encourage technological innovations among college students

### IIT Madras teams bag two of the top five honours in Carbon Zero Challenge

February 11, 2018



Chennai: The finale of Carbon Zero – Renewable Energy Innovation Challenge (CZeroC) was hosted today, 9th February 2018, by the Indian Institute of Technology Madras (IIT Madras). This South-India level event was conducted jointly with Industrial Waste Management Association (IWMA), U.S. Consulate in Chennai and Polaris, a Virtusa Company. The challenge aims to encourage technological innovations among college students and early startups. The winners were announced during the Grand Finale in the presence of a host of industry experts and dignitaries.

It is a pioneering initiative to identify innovative and indigenous solutions to India's unique energy problems

Chennai, 9th February 2018: The finale of Carbon Zero – Renewable Energy Innovation Challenge (CZeroC) was hosted today, 9th February 2018, by the Indian Institute of Technology Madras (IIT Madras). This South-India level event was conducted jointly with Industrial Waste Management Association (IWMA), U.S. Consulate in Chennai and Polaris, a Virtusa Company. The challenge aims to encourage technological innovations among college students and early startups. The winners were announced during the Grand Finale in the presence of a host of industry experts and dignitaries.

The projects that won the Innovation Excellence Awards with Funding for Incubation Support are:

- a) Innovative Building and Cooling Systems – Student team from IIT Madras.
- b) Enviro – Student team from IIT Madras.
- c) Blue Wave – Startup from Bengaluru

Additionally, two more teams won the Innovation Excellence Awards but without funding support:

- d) Turbo T – Student team from Dayananda Sagar College of Engineering, Bengaluru.
- e) Ozone - Student team from Kongu Engineering College, Erode.

### IIT Madras teams bag two of the top five honours in Carbon Zero Challenge

#TOP NEWS EDUCATION 6 MONTHSAGO



Chennai, 09 February 2018: The finale of Carbon Zero – Renewable Energy Innovation Challenge (CZeroC) was hosted today, 9 February 2018, by the Indian Institute of Technology Madras (IIT Madras). This South-India level event was conducted jointly with Industrial Waste Management Association (IWMA), U.S. Consulate in Chennai and Polaris, a Virtusa Company. The challenge aims to encourage technological innovations among college students and early startups. The winners were announced during the Grand Finale in the presence of a host of industry experts and dignitaries.

## Going the tech way to solve environmental problems

Engineering students develop prototypes; 25 teams from colleges across south India to demonstrate projects at IIT-M

R. SUJATHA  
CHENNAI

Enterprising engineering students from across south India are developing prototypes to address issues such as reducing industrial waste and improving the environment.

Around 25 teams of students from various colleges will demonstrate their prototypes at the Indian Institute of Technology - Madras from February 7 to 9. The teams were selected based on their

proposals and presentation. Feasible projects were given ₹5 lakh each to take forward their idea.

On the sidelines of IIT-M's tech fest Shastra, teams from Kongu Engineering College, Erode; SSN College of Engineering and IITM, Chennai; SCMS College of Engineering, Kochi; and CEERI Taramani, showcased their projects.

The team led by T. Dinosh Kumar and S. Abinesh of Kongu Engineering have de-

signed a process to convert solar power directly to current in homes dispensing with the AC-DC-AC conversion now in vogue.

### Saving energy, water

Veena Aishwarya and her team from CEERI have designed a low-concentration photovoltaic thermal (LC-PVT) system. "The PVT is used in hotels and textile industry. Our design will reduce the size of the solar module and produce more solar

energy" Ms. Veena explained.

IIT-M research scholars Ambika Selvaraj and T. Srihari Vikram have designed an evaporation and distillation unit for electroplating units in the Ambattur industrial estate to reduce water use.

"The 150 electroplating units in Ambattur use around 500 litres of water daily which is then wasted. Our unit will enable reuse of the water and also recover zinc, a metal the industry invests

heavily in," said Ms. Ambika.

Angel Joseph, an M.Tech student and her team from SCMS College, have designed microbial fuel cells to treat industrial waste water containing chromium. Ms. Joseph said this would prevent chromium pollution in the environment.

Keshav Kumar, a final year B.Tech chemical engineering student and his team from SSN, have designed a plastic disposal unit that can be installed in buildings. "Burning

1 kg of plastic produces 3 kg of CO2 which is released into the atmosphere. We are using a method called pyrolysis to burn the plastic which converts CO2 into gas and carbon," Keshav said.

K. Srinivasan, advisor, projects of Industrial Waste Management Association said funding for the projects came from Virtusa Polaris and the U.S. Consulate. "We will also help selected teams to develop multiple prototypes as a reward," he said.

## IIT-M students develop intelligent street lighting device

### Will Help Cut Use Of Power

U.Tejanmayam@timesgroup.com

**Chennai:** At a time when the city corporation is set to revamp lighting on streets in the extended zones with LED lamps, students from Indian Institute of Technology Madras (IIT-M) have come with a solution that they say can reduce power consumption. They have developed an IoT (Internet of Things) sensor-based low-cost device that can cut down power consumption by half simply by synchronised dimming of lights after dark when not required. The device also lets electricians

keep track of faults from a remote location.

The team won an award at the Carbon Zero Challenge competition on Friday, organised by IITM, Industrial Waste Management Association, US Consulate, Chennai, and Polaris, a Virtusa company.

Sushant Wadavkar, one of the four team members, said, Chennai city daily used more than 27MW of power, which is around 2% of the total energy on streetlights. This works to nearly 233 tonnes of CO2 getting released into the atmosphere every day. Globally the consumption is at 18% to 38% by street lighting. "There is a need to decrease the energy consumption and this is possible, as people won't be using the streetlights for all the 12

### DO CITY A POWER OF GOOD

> The intelligent autonomous cloud-based adaptive device (module)

> The sensors in the device keep track of the presence of a pedestrian or a vehicle in the street

> It sends signal to a control unit. The control unit lets the light send signals to each other to synchronise its lighting



The control unit sends instruction to an LED driver that decides on the amount of power to be supplied to the LED panel - either to brighten or dim the lamp

hours and hence it need not be at maximum brightness at all times,"

he said. This simple thought was turned

into a technology that can be used in the existing LED streetlights to cut down power usage. When used with street lamps, the device can dim or brighten the light according to the presence of a pedestrian or a vehicle on the road. Wadavkar said the device or module has three main features - sensors to detect the presence of a pedestrian or a vehicle, a control unit that lets the light send signals to each other to synchronise its lighting and an LED driver that takes instruction from the control unit on the amount of power to be supplied to the LED panel to either increase or decrease the brightness of the light.

While dimming of streetlights is already followed in a few countries, the IIT students said they have add-

ed a few other features like the ability to keep track of faults in the lights and synchronise the lighting that makes their device different. "Our module keeps sending data to a cloud server which helps keep track of any fault that may occur in the lights. This will reduce the time spent by an electrician on maintenance and repair, as the data will let them identify the exact problem," he explained. "Our device is also made of basic components that any electrician can repair. Because of the simple components, the device is also four times cheaper than those that are available." The students have tested the device on IIT Madras campus and have received a provisional patent. They are planning to approach the city corporation soon.

## Start-up makes vertical farming appliance to grow organic veggies

Chennai: A large refrigerated box may be a single solution to growing and selling fresh, pesticide-free vegetables right inside your apartment.

A Mumbai-based startup U-Farm has developed a semi-autonomous IoT-enabled smart scale vertical farming appliance to grow organic vegetables all year round. The technology won a technical excellence award at the Carbon Zero - Innovatech Energy Innovation Challenge organised by Indian Institute of Technology - Madras along with Industrial Waste Management Association, US Consulate in Chennai and Polaris, a Virtusa company.

Uday Gadhwal said the appliance uses hydroponics, a method used to grow plants only with mineral nutrient solutions in water solutions, without soil. "We are looking at a reliable urban farming system. If residents of apartment suburbs, we will install the system in their complex, we will grow and maintain the plants. All that they would need to provide us is a power socket," he said, adding that the appliance is ideal for large residential



ENTREPRENEUR INNOVATIONS: Entrepreneur Uday Gadhwal said the technology will help consumers get fresh food, as it could be used within the living complex.

apartment office and supermarkets. "In an apartment of 40 families, it may consume about 1,00 units a month." The appliance works on IoT sensors and cameras that help set, keep track and control various parameters required to grow vegetable plants, including temperature, humidity, dissolved oxygen in water, air flow pillows and so on. While vegetables that are similar in terms of these parameters could be grown together, the entrepreneur says the plants can grow 1.5 faster than in the traditional method as they get the ideal

blend of nutrients required. While large scale vertical farming is popular in the West, Umbhale said, their technology will help consumers get fresh food, as it could be used within the living complex that is organically grown, thereby also cutting down on the food wastage that occurs during transportation, reducing usage of water and decreasing pressure on land to mitigate land degradation. "We are also working on predictive systems that will eventually replace the sensors and reduce our operational cost," he said.

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## 'IIT-Madras Launches Second Phase of 'Carbon Zero Challenge'

July 21, 2017

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Chennai: The Second Phase of the 'Carbon Zero Challenge' was launched at Indian Institute of Technology Madras on Wednesday (19th July 2017). Personalities from academia, venture capitalists and entrepreneurs took part in the event.

The Carbon Zero Challenge is a pioneering initiative by the IIT-Madras and Industrial Waste Management Association (IWMA), in collaboration with the U.S. Consulate General Chennai, Polaris - A Virtusa Company, Shastra 2018 and Energy Alternatives India (EAI), to identify innovative and indigenous solutions to India's unique energy problems.

## E-Waste Campaign:

### Appeal to participate in E-waste collection drive

By Our Staff Reporter

Madras Spice Ladies Circle 133 (a part of Ladies Circle India, an All India organisation), in association with Industrial Waste Management Association and TESS-AMM, has organized an E-waste collection drive from Sept. 17 to Oct. 4.

It has appealed to households, commercial establishments and offices to participate in the drive.

They can donate non-working, damaged or unused old laptops, desktops, chargers, electric wires, electronic gadgets including mobile phones, mp3 players, electronic toys, electronic appliances, cameras and other battery operated items.

The collection center for the neighbourhood is in AD23, AD Block 5th Street, Anna Nagar. For more details, call Sandhya Grover (Member, Madras Spice Ladies Circle 133) in 98407 38616.

She told *Anna Nagar Times* that the e-waste collected will not be used for any commercial purpose and discarded or recycled as per environmental norms. She further added that wrong dumping of e-waste, like in Corporation garbage bins, open places or waterways, leads to harmful toxins poisoning the environment.

## Electronic items enter the scene



In every community-driven waste management initiative, the usual suspects (which include kitchen waste and plastics) would be in full attendance. Electronic waste (e-waste) would be conspicuously absent. Partly because of the complexity involved in handling and disposing of e-waste. Not anymore. E-waste is now beginning to put in an appearance.

In and around Anna Nagar, there is a community-driven drive to collect and dispose of discarded electronic goods in an environment-friendly manner.

Residents of these neighbourhoods are helped by non-governmental organisations as well as groups engaged in e-waste management.

For example, a few months ago, the Madras Spice Ladies Circle 133 (MSLC 133), a voluntary organisation, launched an e-waste collection drive, in association with Industrial Waste Management Association and TESS-AMM, an e-waste recycler. Sandhya Grover, a resident of Anna Nagar and a member of the Association, offered her front yard as a drop-off point.

## Unburnt Cracker Disposal:

### 80 லன் பட்டாசு கழிவு சென்னையில் அகற்றும்

சென்னை, அக். 20- சென்னையில், தீபாவளி பண்டிகைக்காக வெடிக்கப்பட்ட பட்டாசுகளின் கழிவு, 80 லன் அளவிற்கு அகற்றப்பட்டதாக மாநகராட்சி தெரிவித்து உள்ளது.

இது குறித்து, மாநகராட்சி வெளியீட்டுள்ள செய்திக் குறிப்பு: பொருள்கள் சென்னை மாநகராட்சிக்குட்பட்ட பகுதிகளில், நால் ஒன்றாக, 5,300 லன் குப்பை அகற்றப்படுகின்றன. இந்த காலதூய்மை பணியில், 19 ஆயிரம் ஊழியர்கள் ஈடுபடுத்தப்படுகின்றனர். தீபாவளி பண்டிகையை முன்னிட்டு, சென்னை மாநகரம் முழுவதும் பட்டாசுகள் வெடிக்கப்பட்டு, சாலைகளில் குவித்து கிடந்த குப்பையை, மாநகராட்சி ஊழியர்கள் அகற்றினர். இதில், பட்டாசு கூகி தங்கள் மற்றும் குப்பை மட்டும், 80 லன் அளவிற்கு அகற்றப்பட்டன. அம்பத்தூர் மண்டலத்தில், அதிகப்பட்சமாக, 12.69 லன் குப்பையும்; குறைந்தபட்சமாக, அண்ணா நகரில், 1 லன் குப்பையும் சேகரிக்கப்பட்டது. இந்த குப்பை, தமிழ்நாடு மாகாண்டுப்பாட்டு வாரியத்தின் அறிவுரைகள் படி, கட்டிட ஆயத்தலையில் போது, மாநகராட்சி, 420 லன் குப்பையை, கடுதலை அகற்றியது. புதன் கிழமைகளில் மட்டும், மக்களது குப்பையை, மாநகராட்சி பெறுகிறது; மற்ற தினங்களில், மக்கும் குப்பைகள் பெறப்படுகின்றன.

பொதுமக்கள் தங்கள் குப்பைகளை வீசிவிட்டு வரும் நிலை, துப்புறவு பணியாளர்களின் கடுமையை தவிர்க்க முடியும். இவ்வாறு செய்திக் குறிப்பில் கூறப்பட்டுள்ளது.

### சென்னையில் 80 லன் பட்டாசு கழிவுகள் அகற்றும்

சென்னை மாநகராட்சிக்கு உட்பட்ட பகுதிகளில் தீபாவளி பண்டிகையை முன்னிட்டு உருவான 80 லன் பட்டாசு கழிவுகளை மாநகராட்சி நிர்வாகம் நேற்று அகற்றியது.

இது தொடர்பாக சென்னை மாநகராட்சி வெளியிட்ட செய்திக் குறிப்பு: சென்னை மாநகராட்சியில் நாள்தோறும் 5,300 லன் குப்பைகள் அகற்றப்பட்டு வருகின்றன. இப்பணியில் 19,000 துப்புரவுத் தொழிலாளர் ஈடுபட்டு வருகின்றனர். தீபாவளி பண்டிகையை முன்னிட்டு, 80 லன் பட்டாசு கழிவுகள் நேற்று அகற்றப்பட்டன. அவை, தமிழ்நாடு மாகாண்டுப்பாட்டு வாரிய அறிவுறுத்தலின்படி, கும்மிடிப்பூண்டி அருகில் உள்ள அபாயகரமான கழிவுகளை சேகரிக்கும் தனியார் நிறுவனத்திடம் ஒப்படைக்கப்பட்டுள்ளது.

### சென்னையில் 80 லன் பட்டாசு குப்பைகள் அகற்றும் கடந்த ஆண்டை காட்டிலும் 12 லன் அதிகரிப்பு

சென்னை, அக். 20- தீபாவளி பண்டிகையின் போது சிறியவர்கள் முதல் பெரியவர்கள் வரை வயது வித்தியாசம் இன்றி பட்டாசுகள் வெடித்து குதூகலிப்பது பட்டாசுகள் வெடிக்கும்போது, அந்நேரம் பட்டுள்ளனர். தீபாவளி பண்டிகையை ஒட்டி 80 லன் பட்டாசு கழிவுகள் மற்றும் குப்பை கழிவுகள் அகற்றப்பட்டு, தமிழ்நாடு மாகாண்டுப்பாட்டு வாரியத்தின் அறிவுரையின்படி, கும்மிடிப்பூண்டி அருகிலுள்ள அபாயகரமான கழிவுகளை சேகரிக்கக்கூடிய தனியார் நிறுவனத்திடம் ஒப்படைக்கப்பட்டுள்ளது. மேலும், கடந்த ஆயத்தலையில் பண்டிகையின் போது கடந்தவா 420 லன் குப்பைகள் அகற்றப்பட்டது. இவ்வாறு அந்நேரம் கூறப்பட்டுள்ளது.

12 லன் அதிகரிப்பு: சென்னையில் கடந்த ஆண்டு தீபாவளி பண்டிகையின் போது 68 லன் பட்டாசு கழிவுகள் அகற்றப்பட்டது. இந்த ஆண்டு கடந்தவா 12 லன் குப்பைகள் சேர்த்துள்ளது குறிப்பிடத்தக்கது.



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## AUDITOR'S REPORT

To the Members of M/s. Industrial Waste Management Association.

### Report on the Financial Statements

We have audited the accompanying financial statements of M/s. Industrial Waste Management Association, which comprise the Balance Sheet as at March 31, 2018, Income and Expenditure Account and Receipts and payments for the year then ended, and a summary of significant accounting policies and other explanatory information.

### Management's Responsibility for the Financial Statements

The Executive Committee of the Association are responsible for the preparation of these financial statements that give a true and fair view of the financial position, financial performance and cash flows of the Association in accordance with the accounting principles generally accepted in India. This responsibility includes maintenance of adequate accounting records in accordance with the generally accepted accounting principles and the provisions of the Societies Act for safeguarding the assets of the Association and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; design, implementation and maintenance of adequate internal financial controls, that are operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

### Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We have taken into account the provisions of the Act, the accounting and auditing standards and matters which are required to be included in the audit report under the provisions of the Act and the Rules made there under. We conducted our audit in accordance with the Generally accepted Auditing Principles and the Societies Act.. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's



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judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considered the Audit report on internal financial control over financial reporting, that give a true and fair view, in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of the accounting estimates made by the Association's Executive Committee, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### Opinion

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid financial statements give the information required by the Act in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India of the state of affairs of the Association as at 31st March 2018, its surplus for the year ended on that date.

#### Report on other matters

We further report that:

- a) we have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit;
- b) in our opinion proper books of account as required by law have been kept by the Association so far as appears from our examination of those books;
- c) the Balance Sheet, Income and Expenditure Account and Receipts and Payments account dealt with by this Report are in agreement with the books of account;
- d) in our opinion, the aforesaid financial statements comply with the generally accepted accounting principles in India.
- e) In our opinion and to the best of our information and according to the explanations given to us, we report as under with respect to other matters:-



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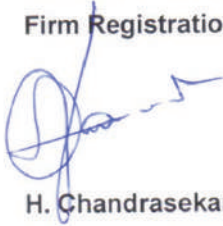
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- i. The Association does not have any pending litigations which would impact its financial position
- ii. The Association did not have any long-term contracts including derivative contracts; as such the question of commenting on any material foreseeable losses thereon does not arise

For Varadarajan & Co.,  
Chartered Accountants  
Firm Registration No. 04515S



H. Chandrasekaran  
Partner

Membership No: 022821

Place: Chennai

Date: 18.08.2018



## ANNEXURE TO AUDITOR'S REPORT

We have examined the annexed Receipts and Payment account, Income & Expenditure Account for the year ending 31.03.2018 and the Balance Sheet as at the above date of 31.03.2018, of Industrial waste management Association, Registration No.256/2002 with the Books of Account and vouchers relating thereto and report that:

- a) Accounts are maintained regularly and in accordance with the provisions of the Act and rules ;
- b) Receipts and disbursements are properly and correctly shown in the accounts ;
- c) The Cash balance and vouchers in the custody of the Association on the date of the audit were in agreement with the accounts ;
- d) All books, deeds, accounts, vouchers and other documents or records required by us were produced before us ;
- e) The Accountant appeared before us and furnished necessary information required by us;
- f) No property or funds of the association are applied for any object or purpose other than the objects of the Association;
- g) No money of the Association has been invested contrary to the provisions of Section 11(2) of the Income Tax Act, 1961.
- h) No alienation of the immovable properties is made.

Place : Chennai

Date : 18.08.2018



Sd/-

For VARADARAJAN & Co.  
CHARTERED ACCOUNTANT

A handwritten signature in blue ink, appearing to be "H. Chandrasekaran", written over the printed name.

H.CHANDRASEKARAN  
PARTNER

**INDUSTRIAL WASTE MANAGEMENT ASSOCIATION**  
409 Ten Square Mall 3rd Floor  
64 Jawaharlal Nehru Salai, Koyambedu - 600107

**RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.03.2018**

31.03.2017	RECEIPTS	31.03.2018	31.03.2017	PAYMENTS	31.03.2018
	Opening balance		1,953	Erode Seminar Expenses	628,497
35,980	- Cash at Indian bank	5,000	389,320	Enviro Programme Expenses	324,146
4,120,784	- Cash in Hand	-	3,248	District Seminar expenses	-
8,839	- Cash at Bank (SBI - Admin)	1,820,915	-	Seminar & Conference Expenses	858,267
	- Cash at Bank (SBI - Infra)	8,839	-	Confederation of Indian Industry	138,060
	Infrastructure Fund		5,955	-Madras Chamber of Commerce	5,750
2,660,415	-Large	2,218,386	303,963	Young Environmental Scientist(YES)	327,407
575,560	-Medium	427,437	26,703	Mediclaim Insurance	-
437,330	-Small	614,655	28,635	Subscription fees paid	2,470
387,813	-Tiny	76,576	115,000	Sponsorship expenses	-
144,250	Membership Fees	-	3,140	CLRI Expenses	-
332,088	-Training Fees Received	500,300	272,887	Project Expenses	203,701
			-	EC Training Expenses	62,223
			341,495	EC Meeting Expenses	368,517
			393,443	Consultancy Fees	-
			5,856	Bank Charges	22,115
45,312	Miscellaneous Income	1,009	8,000,000	Fixed Deposit	5,000,000
	Subscription Income		-	Equipment charges	201,340
7,997,928	-Large	7,019,187	-	AGM Expenses	1,302,089
1,780,060	-Medium	1,729,300	551,606	Accounting charges	22,375
1,277,258	-Small	1,070,757	-	AMC for Desktop & Laptops	-
182,328	-Tiny	229,549	27,000	Audit Fee	-
			57,500	Consultation Fees	5,000
50,000	Enviro Programme Income	-	57,500	Conveyance Expenses	55,935
			33,498	Courier Expenses	432,360
	Registration fees	106,698	300,858	Computer accessories	-
	Seminar fees	641,000	11,822	Electricity Charges	138,499
			101,490	Salary & Honorarium Expenses	2,971,409
	Sponsorship Income	500,000	2,906,406	Legal Charges	-
	FD Matured	33,252,266	7,500	Office Maintenance charges	-
			53,346	Miscellaneous Expenses	65,530
			125,335	Newsaper Charges	7,710
			-	Payment to SIPCOT for additional Land	26,082,200
	Tamil Nadu waste management (For additional Land allotment)	26,280,100	-	Land allotment fees	-
			206,000	Advertising Expenses	48,069
			9,500	Pooja Expenses	-
			2,146	Printer Rent	23,128
			28,598	TNWML Meeting Expenses	-
			3,386	Training Expenses	106,065
			265,259	Rental Deposit	-
			-	Printing Charges	573,439
			191,439	Property Tax	-
			174,350	Staff Advance	27,200
			-		



**INDUSTRIAL WASTE MANAGEMENT ASSOCIATION**  
 409 Ten Square Mall 3rd Floor  
 64 Jawaharlal Nehru Salai, Kovambadu - 600107

**INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.03.2018**

31.03.2017	EXPENDITURE	31.03.2018	31.03.2017	INCOME	31.03.2018
389,320	To Enviro Programme Expenses	324,146	144,250	By Membership Fees	-
-	To Seminar & conference expenses	858,267	-	By Seminar Fees	641,000
115,000	To Sponsorship Expenses	-	-	By Registration fees received	106,698
3,140	To CLRI Expenses	-	44,282	By TDS on Accrued Interest	-
1,953	To Erode Seminar	-	45,312	By Miscellaneous income	1,009
3,248	To Seminar Expenses	628,497	332,088	By Training Fees Received	500,300
-	To Membership Fees	-	50,000	By Enviro Programme Income	-
5,955	-Confederation of Indian Industries	138,060	-	By TDS on Enviro Programme Expenses	-
-	-Madras Chamber of Commerce	5,750	-	By Sponsorship Income	500,000
303,963	To Subscription fees paid	2,470	1,452,445	By Accrued Interest on FD	-
393,443	To Young Environmental Scientist(YES)	327,407	8,004,131	By Subscription Income	7,037,204
206,000	To Consultancy Fees	-	1,780,060	-Large	1,729,300
272,887	To Land allotment fees	-	1,277,258	-Medium	1,070,757
5,856	To Project Expenses	203,701	181,328	-Tiny	229,549
341,495	To Bank Charges	22,115	-	By FD Interest	1,369,825
-	To E C Meeting Expenses	364,017	-		
551,606	To E C Training Expenses	62,223	-		
326,153	To AGM Expenses	1,303,202	-		
27,000	To Depreciation	423,884	-		
116,500	To AMC for Tally ,Desktops & Laptops	-	5,000		
116,500	To Consultation Fees	50,000	50,000		
-	To Audit Fee	201,340	-		
33,498	To Equipment Charges	55,935	-		
301,341	To Conveyance Expenses	432,837	-		
101,490	To Courier Expenses	138,499	-		
7,500	To Electricity Charges	-	-		
26,703	To Legal Charges	-	-		
125,335	To Staff Insurance	65,530	-		
-	To Miscellaneous Expenses	7,710	-		
53,346	To Newspaper Charges	-	-		
9,500	To Office maintenance charges	48,069	-		
2,146	To Advertising Expenses	22,375	-		
11,822	To Accounting Expenses	-	-		
28,598	To Pooja Expenses	-	-		
191,439	To Office Requirements-Computer accessories	23,128	-		
174,350	To Printer rent	573,439	-		
31,026	To Printing Charges	-	-		
1,439,062	To Property Tax	-	-		
180,391	To Refreshment Charges	1,121,455	-		
2,906,406	To Rent	-	-		
50,432	To Manpower Consultancy	2,964,909	-		
-	To Salary & Honorium paid	113,639	-		
67,269	To Staff Welfare expenses	74,535	-		
-	To Repairs & Maintenance	151,458	-		
139,602	To Stationery Expenses	17,762	-		
	To Food & Stay Expenses	109,236	-		
	To Telephone Expenses		-		

122,518	To Travelling Expenses	525,797		
265,259	To Training Expenses	106,065		
7,640	To Water charges	10,015		
3,386	To TNWML Meeting Charges	-		
174,279	To Technical charges	288,148		
126,500	To State level accreditation fee	-		
2,500	To Donation	-		
390,576	To General expense	197,652		
48,998	To House keeping expenses	-		
28,635	To Subscription fees paid	-		
-	To Felicitation Expenses - Mani	73,432		
	To New office Inauguration Expenses	27,625		
	To Office Shifting expenses	13,069		
	To TDS Interest & Penalty	14,889		
<b>3,079,588</b>	<b>To Excess of Income over Expenditure</b>	<b>1,088,355</b>		
<b>13,311,153</b>		<b>13,185,642</b>	<b>13,311,153</b>	<b>13,185,642</b>

For Varadarajan & Co.  
Chartered Accountants

Sd/-  
H. Chandrasekaran  
Partner.

Date: 18.08.2018  
Place: Chennai

For Industrial Waste Management Association

Sd/-  
Chairman

Sd/-  
Secretary

Sd/-  
Treasurer



**INDUSTRIAL WASTE MANAGEMENT ASSOCIATION**  
 409, Ten Square, Mall 3rd Floor,  
 64, Jawaharlal Nehru, Salai, Koyambedu - 600107

**STATEMENT OF AFFAIRS AS ON 31.03.2018**

31.03.2017		31.03.2018		31.03.2017		31.03.2018	
LIABILITIES		LIABILITIES		ASSETS		ASSETS	
14,023,248	Infrastructure Fund	18,084,366		904,774	Fixed Assets		32,264,092
4,061,118	Add: Additions during the year	3,337,054	21,421,420		Staff Advance	26,980,815	27,200
18,084,366	Less: Deletions During the Year			17,528,370	Fixed Deposit	5,000,000	
	Surplus o/b.	12,675,129		8,000,000	Add: Additions during the year	31,980,815	
9,595,541	Add: Excess of Income over	1,088,355		25,528,370	Less: Matured during the year	31,980,815	
3,079,588	Expenditure		13,763,484	-	Add: Accrued Interest	-	
	Current Liabilities	12,675,129		25,528,370	Less: Interest received	-	
	HR Consultancy	47,250		1,452,445	Rental Advance	1,062,000	
	TDS	20,026		26,980,815	Less: Rent Advance Adjusted	360,000	
	Rent	81,000			Sundry Debtors		80,000
	Audit fees	59,000		1,062,000	Payment to Sipcot for Additional Land		26,082,200
	Consultation fees	59,000	186,493		TDS		359,819
	Sundry Creditors				Cash in Hand		-
	woodtech interiors			90,692	Cash at Bank		13,082
	Ideasoftware			53,400	- SBI (Admin)		2,258,357
	Tamil Nadu Waste management		26,280,100		- SBI (Infra)		8,839
					- Indian Bank		-
31,025,771		61,795,589		31,025,771			61,795,589

For Varadarajan & Co.  
 Chartered Accountants

Sd/-  
 H. Chandrasekaran  
 Partner

Date: 18.08.2018  
 Place: Chennai

For Industrial Waste Management Association

Sd/-  
 Chairman

Sd/-  
 Secretary

Sd/-  
 Treasurer

## INDUSTRIAL WASTE MANAGEMENT ASSOCIATION

### DEPRECIATION SCHEDULE AS PER INCOME TAX ACT

PARTICULARS	AS ON 01.04.2017	ADDITIONS >180DAYS	ADDITIONS <180DAYS	DELETIONS	TOTAL	%	DEPN	AS ON 31.03.2018
Koyambedu office building		30,229,161			30,229,161	0%	-	30,229,161
Airconditioner	189,683		258,624	13,300	435,007	10%	43,501	391,506
Camera	14,284			6,667	7,617	15%	1,143	6,475
Computer	114,858			-	114,858	40%	45,943	68,915
CCTV Camera	7,362	49,169		6,667	49,864	40%	19,946	29,918
Cordless Phone	1,486			-	1,486	15%	223	1,263
UPS	34			34	-	40%	-	-
Fire extinguisher	8,692	119,830		6,667	121,855	15%	18,278	103,577
Furniture & Fittings	289,378	143,488		6,667	426,199	10%	42,620	383,579
Electrical fittings	-	691,175		-	691,175	15%	103,676	587,499
Inverter	41,806			6,667	35,139	15%	5,271	29,868
Laptop	11,006			-	11,006	40%	4,402	6,603
Name Board	12,493			6,667	5,826	15%	874	4,952
Printer	16,958			6,666	10,292	15%	1,544	8,748
Water Dispenser	10,911			6,666	4,245	15%	637	3,608
Projector	58,320	110,992		6,666	162,646	15%	24,397	138,249
Xerox Machine	23,440			6,666	16,774	15%	2,516	14,258
Safety Locker	34,735			-	34,735	15%	5,210	29,525
EBAX	-	107,363		-	107,363	15%	16,104	91,259
Software	63,360	153,400		-	216,760	40%	86,704	130,056
Mobile	5,968			-	5,968	15%	895	5,073
<b>TOTAL</b>	<b>904,774</b>	<b>31,863,202</b>	<b>-</b>	<b>80,000</b>	<b>32,687,976</b>		<b>423,884</b>	<b>32,264,092</b>
<b>Previous year</b>	<b>710,607</b>	<b>405,272</b>	<b>115,408</b>	<b>-</b>	<b>1,230,927</b>		<b>326,153</b>	<b>904,774</b>

## Inauguration of ETP Operator Course SSM Polytechnic College



## Felicitations and Honouring Ex-Chairman



## CHWTSDF, Gummidipoondi



Incinerator



Landfill

27 04 2016



## **INDUSTRIAL WASTE MANAGEMENT ASSOCIATION**

No: 409, Ten Square Mall, 3rd Floor,  
No: 64, Jawaharlal Nehru Salai,  
Koyambedu, Chennai – 600107  
Tel: +91 44 4552 2655 / 2479 8069  
E-mail : [contactus@iwma.in](mailto:contactus@iwma.in)



Recycling



Rainwater harvesting



Waste Management



Water Conservation



Climate Change



Renewable Energy



Global Warming



Waste Reduction