



Industrial Waste Management Association

Industry Interface - Projects

IWMA – (over 2700 members)

Original Purpose - 2002

- To establish first Common Hazardous Waste Storage, Treatment and Disposal Facility (CHWSTDF) through a service provider for industries in Tamil Nadu.
- To supervise the operation of CHWSTDF.

IWMA – Original Purpose (2002)

- Gummidipoondi secured Landfill site



Seminar & Trainings to Industry

- Seminar on various domain related to Environment and energy
- 2 seminars (375 participants) and more than 15 training programs (156 participants) in the past year



Two days trainings for TNPCB

- Training for 25 TNPCB Engineers
- Seminar along with Secured Landfill site visit



Social Responsibility

- Young Environmental Scientist (YES) – conducting since 2012 every year.
- YES 2018 - Projects from 122 teams across Chennai (including Govt schools)



Social Responsibility

- E-CAP (e-waste Campaign)
- E-waste collection among communities through Chennai schools



Social Responsibility

- ENVIRO Competition – annually since 2009.
- ENVIRO 2018 – 120+ schools including Govt schools



IWMA – Knowledge Hub

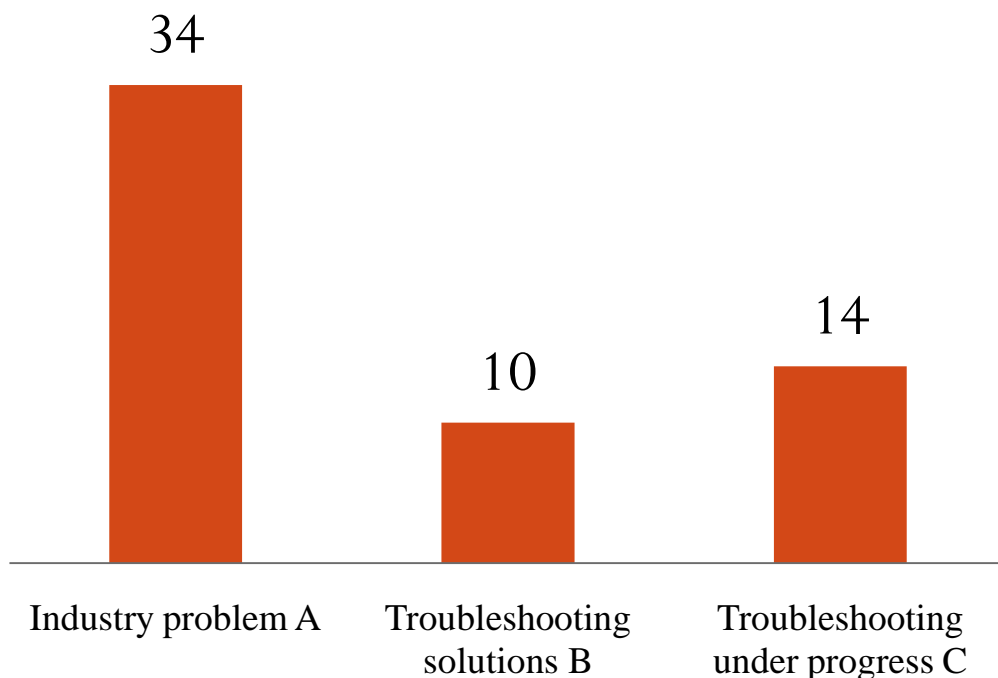
IWMA - To assist its members in solving their environmental issues by becoming a
Knowledge Hub.



Troubleshooting for members

Industry Queries

■ No of Queries



- **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

Troubleshooting for members

IWMA provided technical support and obtained good feedback from members.

- An auto-ancillary manufacturer located at Ambathur - technical guidance on improvement treatment scheme.
 - Degreasing Effluent 2.4KL/ week.
 - Suggestion on removing oil and recycling

Troubleshooting for members

IWMA provided technical support and obtained good feedback from members.

- An electroplating industry located at Thirumudivakkam- provided guidance on reduction of sludge generation.
 - Segregation of Con acid from effluent
 - Recommended to increase the bath life period
 - Sludge management practices

Troubleshooting for members

Continued...

**A wire manufacturer located at Chengalpattu –
Feasibility report on water conservation and
improvisation study.**

- Minimization of sulphuric acid generation 0.3 to 0.7 KL/day (con. 12%, iron value 50-60)
- Water management and increase the recovery of water upto 80-90% of water

Troubleshooting for members

Continued. . .

- An auto ancillary manufacturer located at Chengalpatu - better treatment scheme to treat their oil mixed waste water.
 - Segregation of waste oil mixed wash water (0.5KLD).
 - Pre-treatment methodology for oil mixed water - recommended

Troubleshooting for members

Continued...

- An electroplating industry located at Thirumazhisai - a plan of treatment scheme was provided to the industry
- Proposal design of 5KLD for new the plant

Troubleshooting for members

Visited and guided applicable environmental regulation for the factory based on detailed assessment.

1. An auto-ancillary manufacturer located at Irungattukotai requested - detailed environment compliance report submitted to the Industry.
2. A pump manufacturer located at Old Mahabalipuram Road (OMR) - the detailed environment compliance report submitted to the industry.

Troubleshooting for members

- An electrical circuit manufacturing industry located at Old Mahabalipuram Road (OMR) - guidance on food waste and other solid waste management.
- Suggestions on food waste management practice – Proposal for Composter
- Proposal for Sanitary Napkin Incinerator

Troubleshooting for members

Continued...

- An auto ancillary manufacturer located at Manavala Nagar - to find opportunity to utilize their byproduct as a resource to any other industry. Adequate efforts are being taken to identify prospective industry to reuse the by product.
- 30KL per month of byproduct as Iron with Sulphuric acid (FeSO_4)

Projects for Industry

IWMA through research institutions - solving environment concern

- **Foundry Industry - Potential opportunity in identifying reuse of reject foundry sand – IIT Madras**
- **Forging Industry - Reuse of used graphite on various opportunities – NIT Warrangal**



IMPRINT - 2

IMPACTING RESEARCH INNOVATION
AND TECHNOLOGY

- Technology development initiative by Ministry of HRD & DST (GoI) – IMPRINT 2
- <http://www.imprint-2.in/>
- Funding up to Rs. 2 crores each selected projects
- IIT and IWMA member Industry jointly submitted proposal.
- Foundry Industry committed for funding support.
- Application shortlisted in the first round of screening.



in collaboration with



SHA Astra 2018
THE SPIRIT OF ENGINEERING

Carbon Zero Challenge 2018

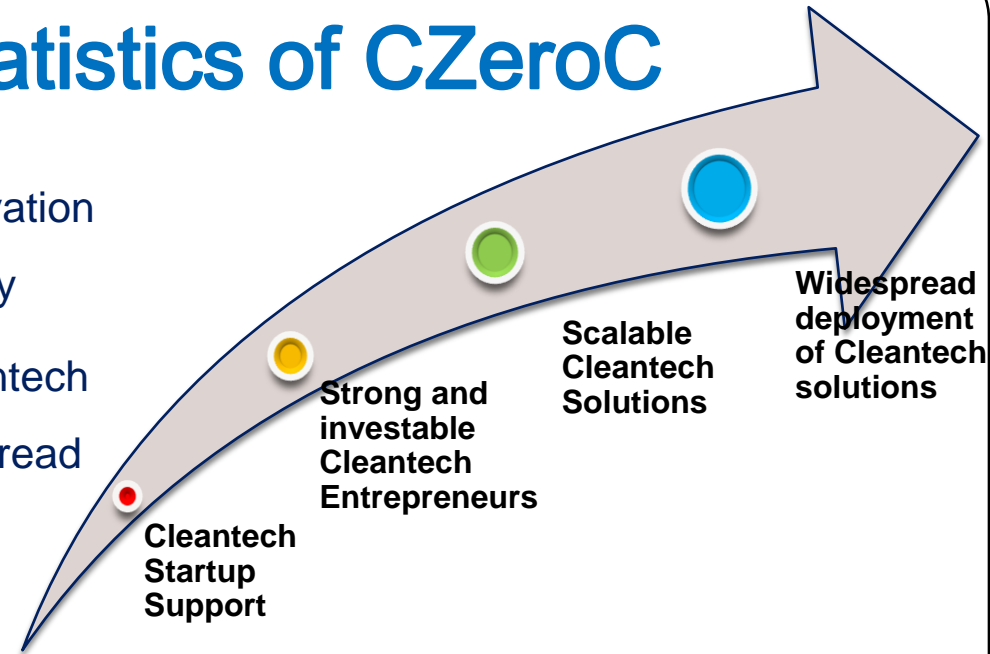
- A renewable energy innovation competition for college students, early stage entrepreneurs, innovators and researchers.



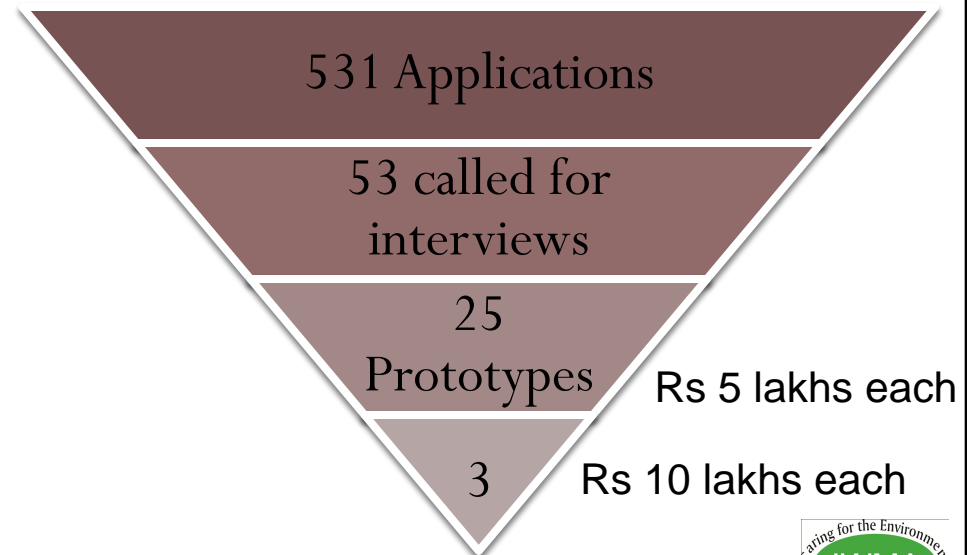
POLARIS
A Virtusa Company

Goals, Stages Statistics of CZeroC

- CZeroC aims to find and foster eco-innovation among students and the youth community
- The objective is to provide a strong Cleantech support that will ultimately lead to widespread deployment of Cleantech solutions



Sector wise Distribution	No Of Teams
Transport	124
Water and waste management	125
Urban and cities	139
Industries	84
Agriculture	59
TOTAL	531



Mentors – from India and the U.S.





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SHAASTRA 2018
THE SPIRIT OF ENGINEERING

Carbon Zero Challenge 2018



- Award Ceremony



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Carbon Zero Challenge 2018

- Industry representatives visit to prototypes.



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#	Team	Project Outline	Achievements
1	Enviro, IIT Madras	Decentralized mobile pyrolysis unit to convert solid plastic waste into fuel products	<ul style="list-style-type: none"> • Innovation Excellence Award Winner @CZeroC'18 - incubation funding support of Rs.10 Lakhs. • Underwent intensive 7-week customer discovery process with Gopalakrishna-Deshpande-Centre for Innovation. • Received 30+ enquiries for their product, incl Unilever, Indian Oil Corporation. • Team applies for additional funding support – ENGSUI Funding, Atal Innovation Mission.
2	Innovative Building & Cooling Systems, IIT Madras	Energy efficient cooling technology for buildings - Glass Fibre Reinforced Gypsum (GFRG)	<ul style="list-style-type: none"> • Innovation Excellence Award Winner @CZeroC'18 - incubation funding support of Rs.10 Lakhs • Team secures additional funding from the prestigious DST-Lockheed Martin-Tata Trusts Innovation Growth Program
3	Turbo T, Dayanand Sagar College of Engg, Bengaluru	Maximizing day-lighting to reduce power consumption in large commercial /industrial buildings	<ul style="list-style-type: none"> • Innovation Excellence Award Winner @CZeroC'18 - incubation funding support of Rs.10 Lakhs • Team approached by BESCOM
4	Ozone, Kongu Engg College, Erode	In-Situ CO2 bricks made from construction debris	<ul style="list-style-type: none"> • Innovation Excellence Award Winner @CZeroC'18 • In discussion with Godrej & Tata groups for technology collaboration • Team applies for additional funding support --ENGSIUI Funding
5	U-Farm, Startup Team from Puducherry	A fully automated IoT enabled small scale vertical farming appliance for homes	<ul style="list-style-type: none"> • Technical Excellence Award Winner @CZeroC'18 • Startup doing pilot at a well-known hotel at Mumbai & receiving positive feedback
6	Vacuryogen, IIT Madras & Rajalakshmi Engg College, Anna Univ	Energy efficient cold storage solution for the shipping industry	<ul style="list-style-type: none"> • Team secures additional funding from the prestigious DST-Lockheed Martin-Tata Trusts Innovation Growth Program
7	Electrochem, IIT Madras	Sustainable zero energy prototype for desalination coupled waste water treatment	<ul style="list-style-type: none"> • Technical Excellence Award Winner @CZeroC'18 • Recipient of Cavinkare-MMA Chinnikrishnan Innovation Award 2018 • VC shown interest in the technology and for further R&D collaboration
8	Steprecoder, IIT Madras	Solar thermal energy based potential resource recovery from industrial wastewater	<ul style="list-style-type: none"> • Technical Excellence Award Winner @CZeroC'18 • VC shown interest in the technology and for further R&D collaboration



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SHAASTRA2019

CARBON **ZERO** CHALLENGE

**ALL INDIA GREEN INNOVATION AND
ENTREPRENEURSHIP CONTEST**

-FOR COLLEGES & EARLY STAGE STARTUPS



AGRICULTURE



TRANSPORTATION



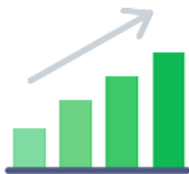
**WATER &
WASTE MANAGEMENT**



INDUSTRY



**URBAN AREAS
& CITIES**



**Business Incubation
Opportunities post
the contest**



**Funding support to
build prototypes**



**Rewards and
Recognition
for Winners**



**Mentorship by Experts
from both India and U.S.**



Presented by IIT on behalf of CZC



Carbon Zero Challenge

- Long lasting issues, improvement studies from Industries shall be a potential project.
- IWMA will be a catalyst in these projects





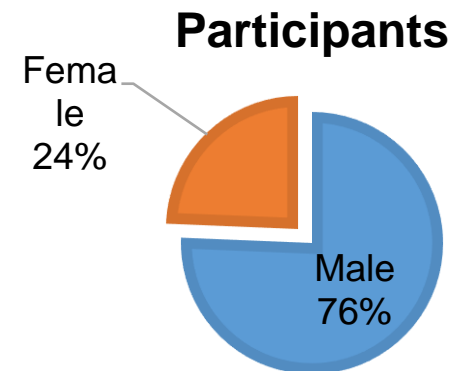
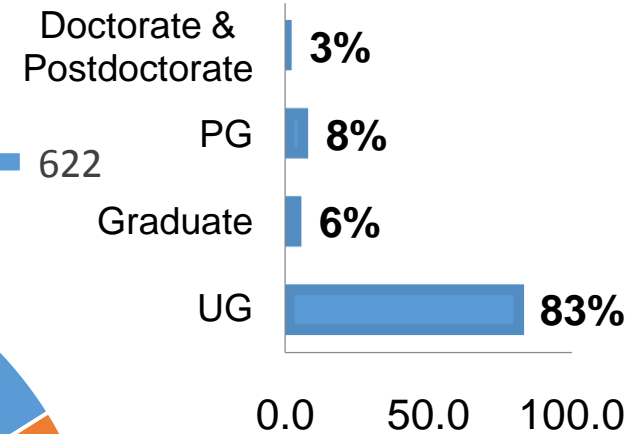
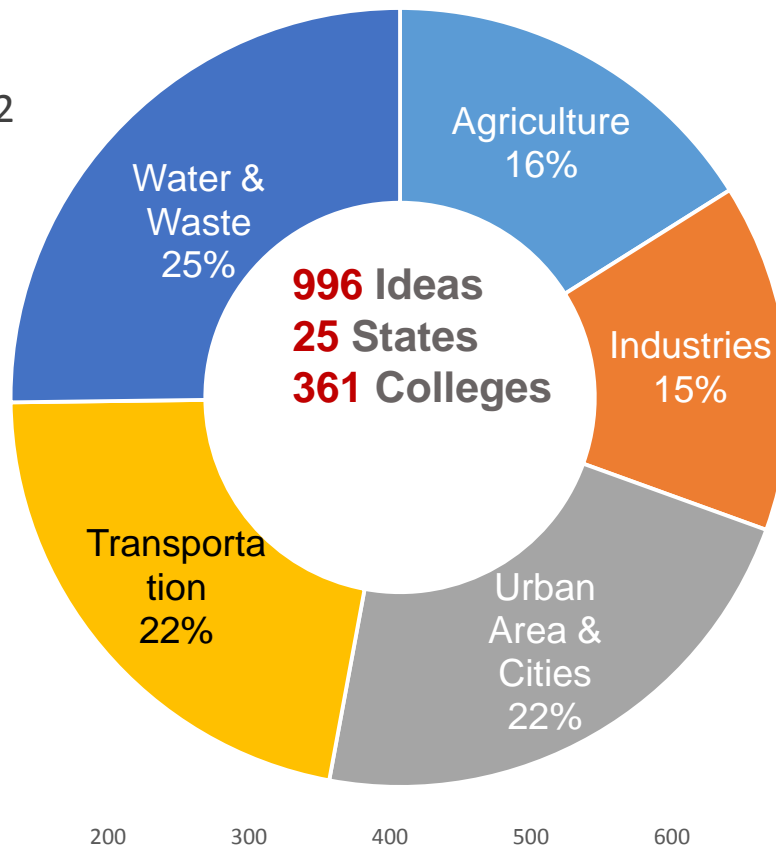
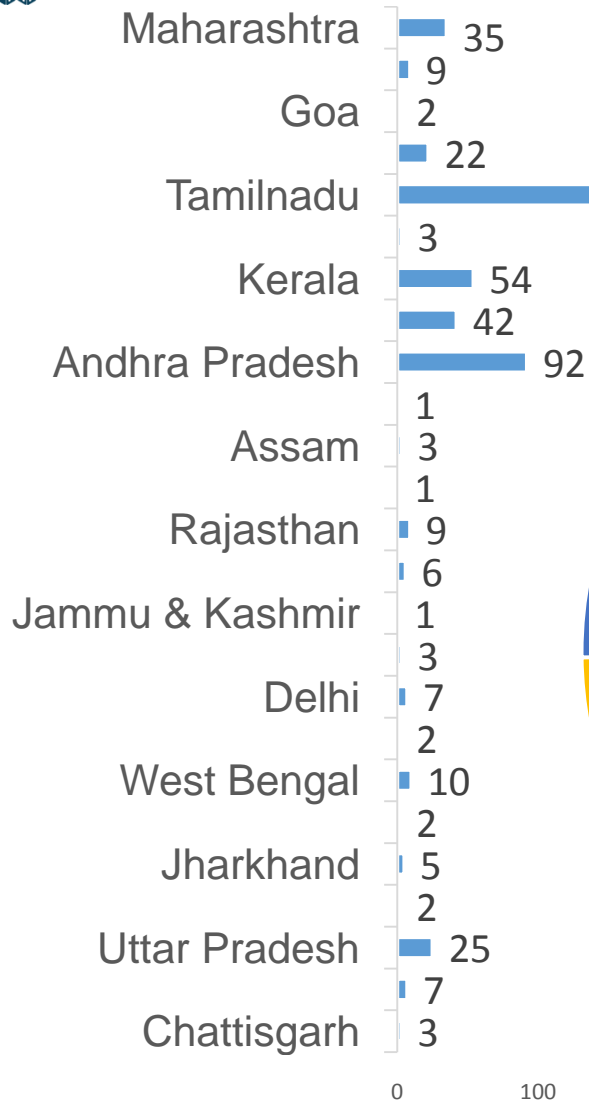
Carbon Zero Challenge

Benefits to Industry

- Finding creative solution for industry problems
- Young minds will be working on problems under Mentors
- Selected projects can be funded upto Rs. 5 Lakhs by CZC
- *Industry need not spend money for prototype expenditure.*



CZeroC 2019 STATISTICS



Road Map to CZC 2019

Market Needs and Demand Assessment before prototyping



Short Term

- Mentorship for the top 25 teams
- Entrepreneurship training for top 25 teams
- Jury during the shortlisting and final stage
- Offering Internships/ Motivational Lectures

Long term

- Continued patronizing for future CZCs
- Advisors to the steering committee
- Flagging issues which need innovative technology
- Adopting promising teams, pairing with industry
- Venture funds for the startups



Carbon Zero Challenge 2019

CZC 2019

- DtNEXT
- Daily Hunt
- Web India
- Skill Outlook
- United News of India
- The Hans India
- India Today
- Ucnews
- The New Indian Express
- NDTV



IIT Madras Carbon Zero Challenge goes National in Second Edition



Chennai, 5th June 2018: India Institute of Technology Madras has taken the Second Edition of the Carbon Zero Challenge national and is reaching out to environmental entrepreneurs and Educational Institutions across the country.

Carbon Zero Challenge (CZeroC) 2019, an 'All India Energy and Environment In Competition,' was launched at IIT Madras today (Tuesday, 5th June 2018) to commemorate World Environment Day 2018.

This is one-of-its-kind initiative pioneered by IIT Madras in collaboration with Virtusa, information technology services company, and Industrial Waste Management Association (IWMA), a Non-Profit Organization.



Website portal

Portal register you queries



Thank You !

Industry Interface Projects

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