INSTITUTE OF HOME ECONOMICS

(UNIVERSITY OF DELHI)

Supporting Documents for Criterion 7.1.3

Facilities in the Institution for the Management of Degradable and Non-degradable Waste

Ref. No. .....

Supporting Documents for Criterion 7.1.3

Facilities in the Institution for the Management Degradable and non-degradable Waste

Key Indicator	Details of Proofs Attached	Page No
7.1.3	Link for Geotagged photographs of the facilities: 1.Aerobins 2. Vermicomposting 3. Waste management bins 4. Paper Recycling Unit 5. My 10 kg Plastic Waste Campaign 6. Liquid waste management	3-9
	Students Survey on Waste Management	10-17

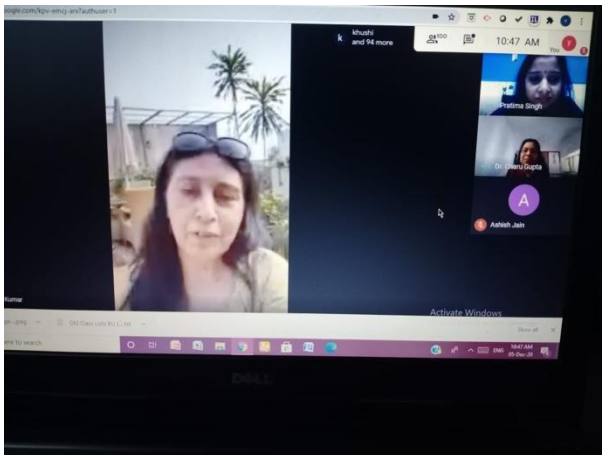
Aerobins

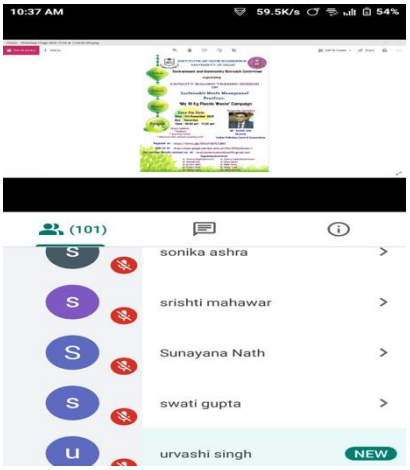
Vermicomposting

Paper Recycling Unit

Waste Management Bins

My 10 Kg Plastic Waste Campaign





Following are the details of the students who participated actively and have done outstanding work in collecting plastic beyond 10 kg by creating awareness and enforcing their society members to join hands in this campaign to save our mother earth.

Name	Course	Section	Year	Phone no.	Plastic Collected
Bhawna Mishra	Bsc. pass Home science	H	1st	7011150951	10 Kg
Shivani	Bsc. pass Home science	H	1st	8287851249	12 Kg
Divya	Bsc. pass Home science	H	1st	9582843204	18 Kg
Madhu	Bsc. pass Home science	H	1st	9625560498	9 Kg
Dr Charu Gupta	Faculty			9810404641	12 kg

Liquid Waste Management

Water Saving Measures

Waste Management Awareness Surveys

A. Assessment of the Awareness Regarding Plastic Waste Management

With a perspective to create awareness among the students regarding plastic management a validated questionnaire including information sheet, consent form, socio demographic profile and plastic awareness related questions was circulated among the students for their responses. 161 students from the Department of Home Science and Food technology responded and contributed to the pre intervention data. A webinar was organized by the Waste Management team of the Environment committee in 2021 on "Solid, Hazardous, Electronic and Plastic Waste Management". The webinar was done from an intervention perspective to strengthen students' awareness. A post webinar questionnaire was circulated to the same students for their responses based on the knowledge and understanding they have gathered from the webinar. Post intervention data was collected from 158 students. Information regarding the common plastic items used by the participants was collected. The participants stated that they usually avoided plastic bags, bottles, snacks packed in plastic and plastic straws. Figure 1 showcases the pre intervention data regarding the alternatives they used for plastics. Also Figure 2 showcases the post intervention data. We saw a positive trend with more usage of plastic alternatives among the participants after the intervention via webinar. Hence the intervention seemed to have a positive impact with creating more awareness among the participants.

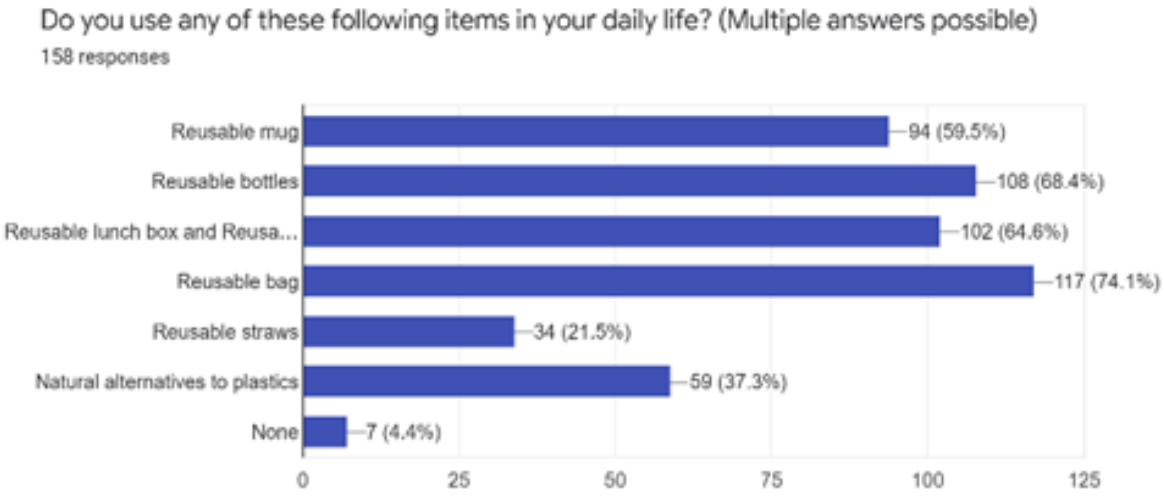


Fig 1: Pre Intervention Awareness Regarding Plastic Waste Management

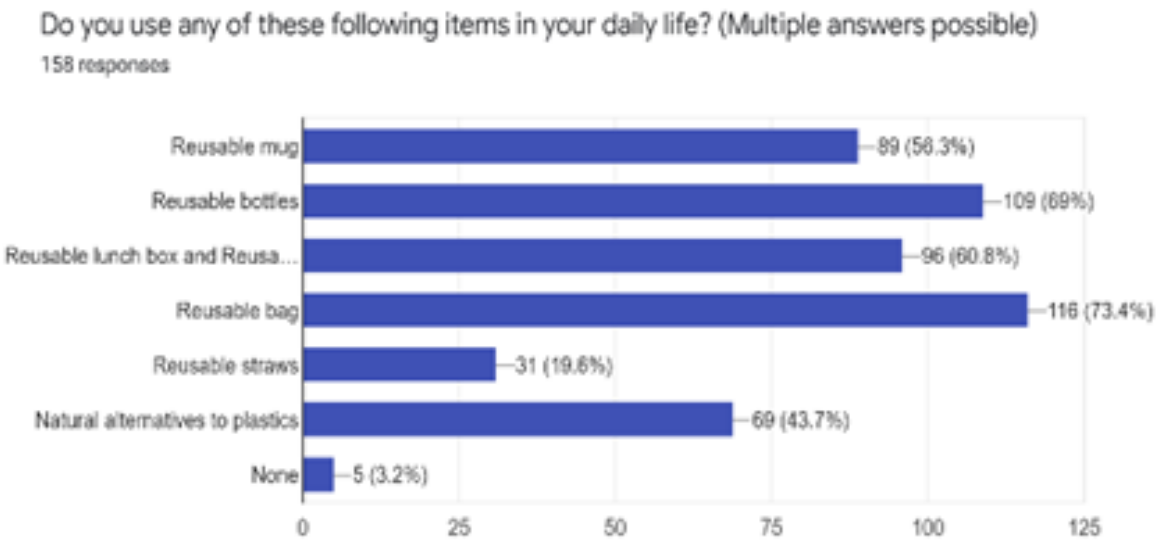


Fig 2: Post Intervention Awareness Regarding Plastic Waste Management

A. Assessment of the Awareness Regarding Bio Waste Management

A pre-validated Questionnaire was used to study awareness Regarding Bio Waste Management which included consent form, socio demographic profiles and Bio waste management awareness related questions. Pre-intervention data was collected from students (B.Sc. Home Sc., Microbiology and Biochemistry) using this Questionnaire (N=206). A Webinar was conducted on Bio waste and its management on 15th Nov 21, by Prof. J.S. Virdi (Former Professor), Dept. of Microbiology, University of Delhi, South Campus. Post intervention data was collected from students (B.Sc. Home Sc Microbiology and Biochemistry) using Questionnaire after webinar (N=156) .Analysis of data indicates (fig. 1 and 2) that about **96.6%** students were aware about biomedical waste management (pre intervention). After the webinar, post intervention awareness percentage was **97.4%** .To summarize, high bio waste management awareness level among our students may be due to the presence of environment related initiatives which are integrated in their course curriculum and the previous activities related to environment done in the college.

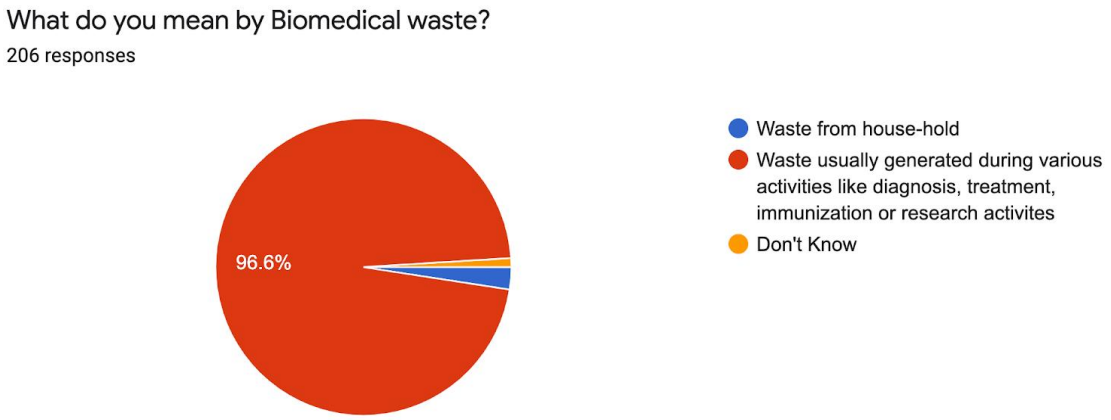


Fig. 1. Results of Pre intervention

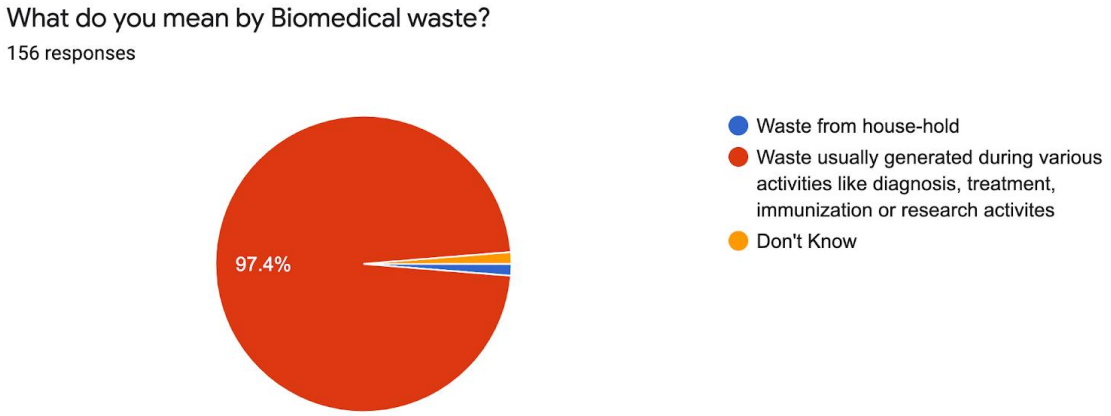


Fig. 2. Results of Post intervention

A. Assessment of the Awareness Regarding Solid Waste Management

To learn about the students' perspectives and knowledge about solid waste waste management a validated questionnaire was administered to students at the Institute of Home Economics University of Delhi. The study was conducted with the help of a pre-intervention questionnaire ,online awareness webinar and post-intervention questionnaire .According to the data collected, 98.2 percent of students were already aware of solid waste management, with 77 percent hearing the word from schools, indicating that waste management knowledge imparted in schools had a great impact on them. Students were also familiar with the term "trash recycling."

According to the findings, students have good knowledge of the waste that must be treated. They recognise that waste that is not properly collected, stored, or handled has negative environmental and health impact. To summarize, environment related views based on sound science and established facts need to be ingrained in the psyche of the youth in educational institutions like schools and colleges to sensitize students about issues pertaining to problems of waste management.

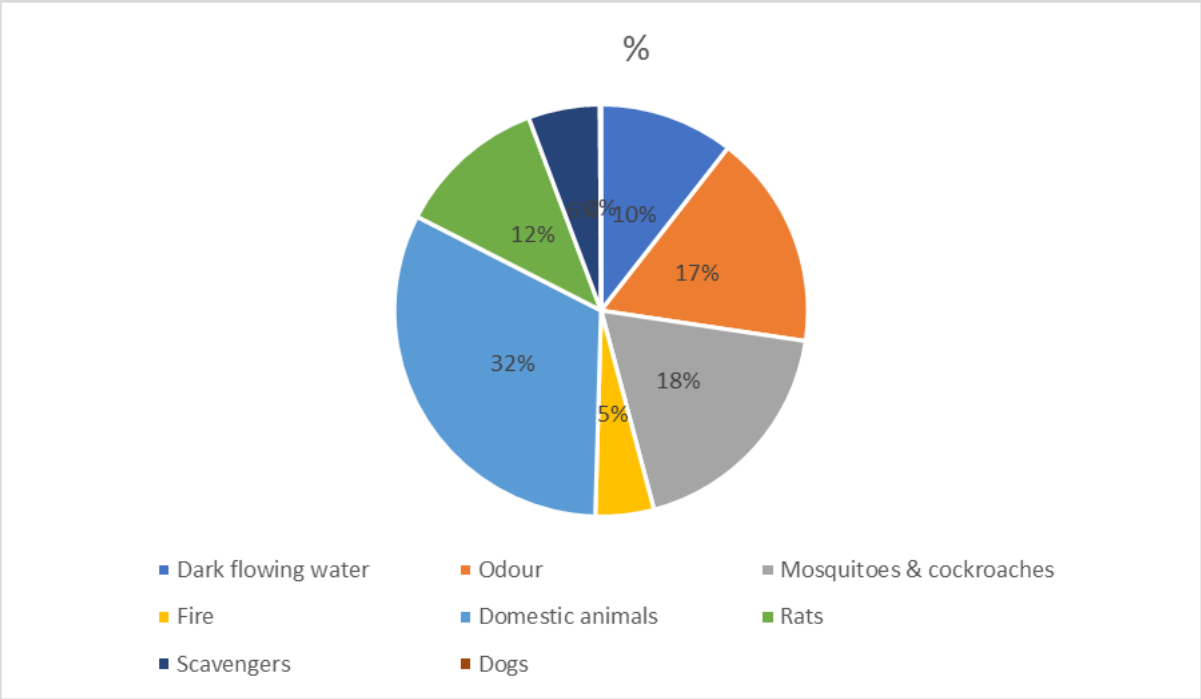


Fig.1 Pre-Intervention Awareness Regarding Solid Waste Management

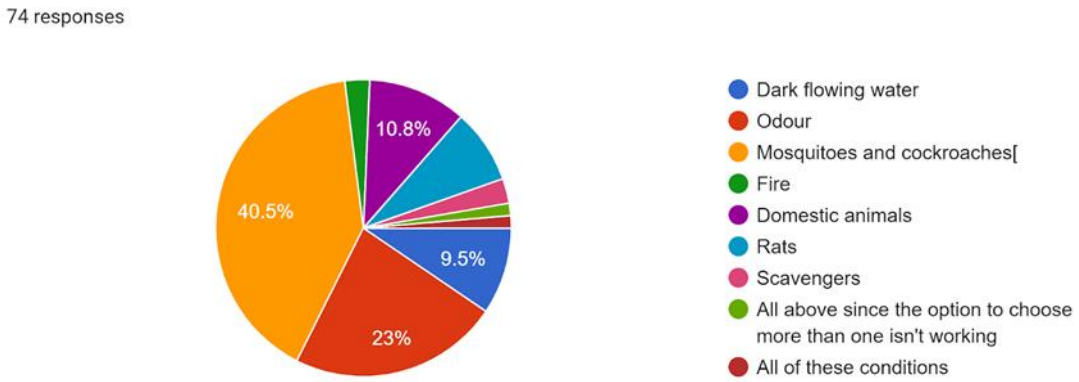


Fig. 2 Post -Intervention Awareness Regarding Solid Waste Management

A. Assessment of the Awareness regarding E/Glass/Metal-waste management

Electronic waste, or e-waste, is a term for electronic products that have become non-working, obsolete/redundant, in the sense those that have essentially reached the end of their useful life. As per E-waste Rule, such form of waste is- electrical and electronic equipment, whole or in part discarded as waste by consumers. However, e-waste contains many valuable, recoverable materials such as aluminum, copper, gold, silver, plastics, and ferrous metals. To conserve natural resources and the energy needed to produce new electronic equipment from virgin resources, it is crucial that electronic equipment's are refurbished, reused, and recycled instead of being land-filled that is detrimental and hazardous for the environment.

Keeping the concerns and the importance to address the concerns in mind, a validated questionnaire was prepared and circulated among students to understand e-waste management awareness among them. The questionnaire prepared was specific to students of the Department of Elementary Education (II & III-year students). Around 151 students responded to the questionnaire that was circulated. The questionnaire had different types of questions on e-waste management awareness. Here are some of the important responses that came up from the data gathered:

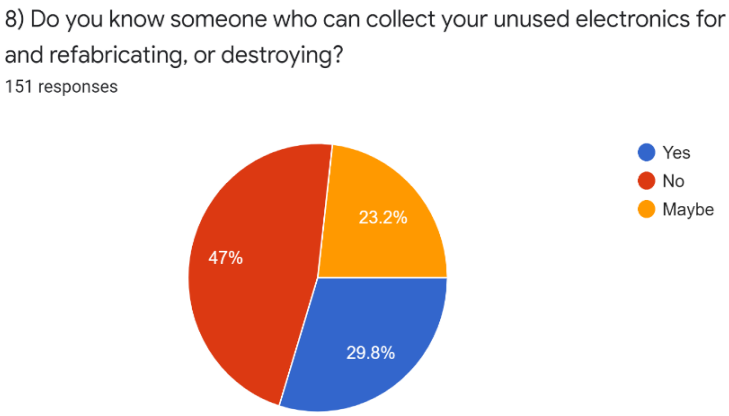
I. When students were asked what have they done with the electronic items that are no longer in use, here are some of the varied responses they came up with:

Sold them
Replaced them
Thrown them in the garbage
Exchanged for a new one
Given away to the needed
Kept in the store
Repaired them
Parts exchanged and reused
Returned back to the company in exchange offers
Crushed and dismantled
Sold to scrap dealers
Recycled and reusing them
Kept as emergency backups
Given to rag pickers

Sold them to stores that accept damaged electronic equipment

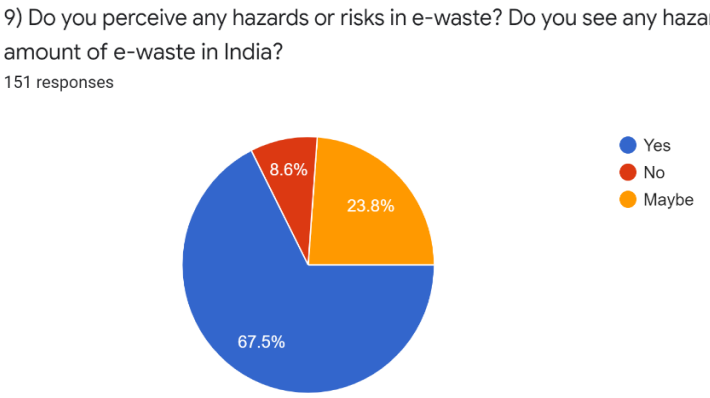
II. When students were asked about their awareness on agencies who collect unused electronic equipment for recycling/dismantling and refabricating/destroying, 47 percent students said that they were not aware of such agencies. 29.8 percent were aware and 23.2 percent said that maybe they are aware. (Figure 1 reveals that)

Figure 1:



III. When students were asked with regard to health hazards or risks in e-waste and that do they perceive hazards/risks to the growing e-waste in India, 67.5 percent said that they are aware about the hazardous nature of e-waste and that it can have an impact on health, 23.8 percent said maybe they know that e-waste is hazardous and only 8.6 percent said that they are unaware about the hazardous nature of e-waste. (Figure 2 reflects that)

Figure2:



IV. Students were asked if they are aware of electronic waste management policies currently implemented in India and if so, what do you know of these policies, 60 percent of them said

that they were aware of the e-waste management policies. However, the ones (40 percent) who were aware, here are their responses:

There is an Extended Producer Responsibility Plan as part of the E-Waste Management Rules. Under the plan, companies should undertake the responsibility to recycle a minimum percentage of the electronic products manufactured.
Laws to manage e-waste have been in place in India since 2011, mandating that only authorised dismantlers and recyclers collect e waste. E-waste (Management) Rules, 2016 was enacted on October 1, 2017. Over 21 products (Schedule-I) were included under the purview of the rule. The amendment in rules has been done with the objective of channelizing the E-waste generated in the country towards authorized dismantlers and recyclers in order to formalize the e-waste recycling sector.
There is e-waste management rules policy under which producers have to take the responsibility and recycle e-products manufactured.
There is Extended Producers' Responsibility Plan, according to this plan company should recycle 20% of electronic products manufactured
The current policy implemented in India is The National Electric Mobility Mission Plan. In 2020 it was launched by the Government of India in year 2012 with the aim of improving the national fuel security through the promotion of hybrid and electric vehicles.
The Indian Government introduced its first dedicated e-waste management policy in 2011 and expanded its scope in 2016. The programme aims to create effective awareness at various levels (of society) to reduce the adverse impact on environment and health arising out of the polluting technologies used in recycling e-waste.
The E-Waste Management Rules, 2016 were amended by the government in March 2018 to facilitate and effectively implement the environmentally sound management of e-waste in India.
I know about some policies and rules in context of this topic... Laws to manage electronic -waste management in India 2011, mandating that only authorised dismantlers and recyclers collect e waste. Some policies implemented by the government. 1. 2008 GUIDELINES FOR ENVIRONMENTALLY SOUND MANAGEMENT OF E-WASTE, which provided information about various types of e-waste components, methods for assessing their hazardous ness and appropriate technologies for managing them. 2. 2008 WAS THE HAZARDOUS WASTES...RULES which banned the importation of e-waste to India for disposal.

Ninety-five percentage of the e- waste in India is being recycled in non- formal sector and five percentage of the e- waste volume is handled in formal unit. In and around of metropolitan cities in India, there are over 3000 units engaged in non-formal sector for e-waste recycling. The phase wise Collection Target for e - waste, which can be either in number or Weight shall be 30% of the quantity of waste generation as indicated in EPR Plan during first two year of implementation of rules followed by 40% during third and fourth years, 50% during fifth and sixth years and 70% during seventh year.
Environmental Protection Act, 1986 The Environment (Protection) Act, 1986 authorizes the central government to protect and improve environmental quality, control and reduce pollution from all sources, and prohibit or restrict the setting and /or operation of any industrial facility on environmental grounds.
I don't know any. But some big brand like apple and Samsung have recycled bins for damaged electronics.
Do not know even if there is any, it is very much problematic but people are fine with it. These cellphones nowadays are refurbished. It is quite unclear to me what actually happens in this process. I would like to know more about it.

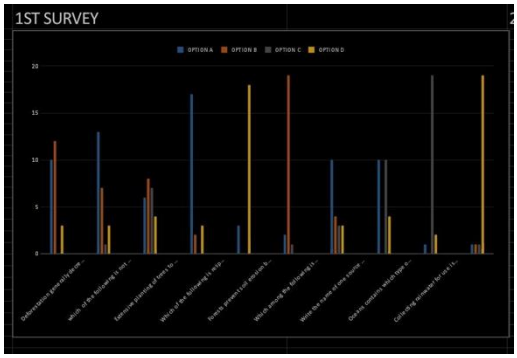
Water Conservation Workshop on 26th May 2022

National Service scheme (NSS) of Institute of home Economics, University of Delhi, in collaboration with eco club PRAKRITIK and environment and community outreach committee together organized a water conservation workshop on 26th May 2022.The aim of this workshop was the preservation, control, and development of water resources, both surface and groundwater, and the prevention of pollution.

The event started with welcoming our guest speaker MR. Ramveer Tanwar (PondMan), an Environmentalist and TEDx Speaker, based in Greater Noida has been passionate about water conservation during his Student life. He started his campaign called Jal Chaupal urging people to conserve water and to save natural resources like ponds, lakes & Wetlands. He was trained by The Central Pollution Control Board (CPCB), MOEF, and Govt. of India. Now Mr. Tanwar is the founder of Say Earth NGO.. Followed with a water conservation methods and technique quiz. The volunteers and college staff joined in at IHE's conference room. The workshop mainly focused on how Water is essential for our life, and there is no life without water on earth and how useful it is to grow plants for agricultural life to get food.

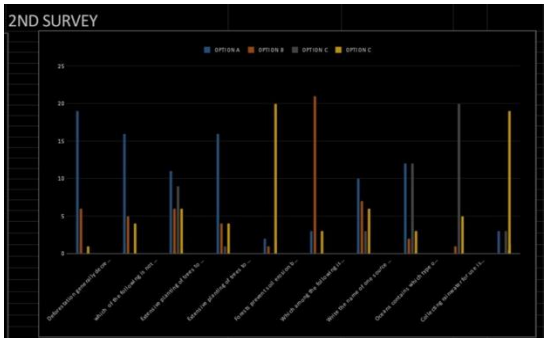
The pre analysis of the event

The first round of this quiz took place when our guest arrived , to gain a idea that how much knowledge students and staff already have about water conservative The quiz comprised of 10 MCQ questions



The post analysis of the event

The second round occurred when an informative session on water conservation was done by our guest where he talked about water and the measure we should take. This round helped us to know that how much knowledge did students gained after listening to Mr. Ramveer Tanwar



The results were impressive enough as the knowledge gained after the event was surprisingly very good.

Conclusion: The workshop helped everyone to gain knowledge about water conservation and its techniques