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RISE WORLD SUMMIT 2021

Research Paper



Sustainable Development Goal - 6

Clean Water and Sanitation

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An Abstract

The White Paper on UN SDG-6 Clean Water and Sanitation is an attempt to understand the perspectives of various people across the globe saving potable/fresh water and using recycled waste water. The research paper has helped in understanding if there is any provision or provisions of recycling sewage water in different parts of the world and which government and non-government bodies are involved in implementing it. Also the paper has highlighted how much awareness is there among the people about using potable/fresh water and recycled water for various activities. The paper gave an insight about how far the updated information about potential value of recycled waste water for sustainable practices is given.



Part 1

INTRODUCTION

In 2015, the United Nations (UN) declared the Sustainable Development Goals also known as SDGs. These goals are aimed at providing facilities of clean water and sanitation, reduction of poverty, protection of biodiversity, and ensuring peace and prosperity by 2030 around the world. All 193 member states agreed to work in achieving these goals aligning their national interests in light of these SDGs. The UN General Assembly meeting declared these goals as to implement the action plan of ensuring the reduction of poverty, prosperity among people, resolve the critical issues at all forms, save the trees and plants on earth and ensure no one left behind this race. The agenda also seeks human rights and gender equality. The agenda focuses on women empowerment and all sustainable policies that should be implemented in a collaborating partnership. The SDG target is implementing outcomes with balanced economic and environmental dimensions.

The 17 Sustainable Development Goals set out by the UN are the blueprint to achieve a better and more sustainable future for all. The Sustainable Development Goals are a plan of action, to target and resolve the challenges we as a world are facing on the planet. They are not just about the environment, they encompass much more than that, with goals targeting issues such as gender equality, poverty and peace.

Sustainable Development Goal-6 Clean Water and Sanitation

The sixth Sustainable Development Goal- Clean Water and Sanitation aims to ensure the availability and sustainable management of water and sanitation for all by 2030. SDG 6 defines 8 global targets which are universally accepted but all governments ensure the implementation of the targets according to their national liabilities. Currently several challenges like governance, finance, capacity building etc. remain to enable and accelerate the progress towards achieving these goals.

According to UN-Water SDG 6 Synthesis Report 2018, water pollution is worsening water resource governance is weak and fragmented, and agriculture places enormous and increasing stress on freshwater supplies. The World Health Organization and UN children UNICEF Joint Monitoring Programme confirms the bad news that is 2.2 billion people lack safely managed drinking water services and 4.2 billion well over half the world's population still have no access to safely managed sanitation services, many of them living in rural areas.

Water Action Decade, 2018-2028



40 per cent shortfall in freshwater resources by 2030 coupled with a rising world

the population of the world is careening towards a global water crisis. Recognizing the growing challenge of water scarcity the UN General Assembly launched the Water Action Decade on 22 March 2018, to mobilize action that will help transform how we manage water.

The UN announced a new framework to accelerate progress to achieve the water and sanitation related goals and to better support countries over the next ten years to help them meet the targets of SDG 6 that is clean water and sanitation.

Part 2

REVIEW OF RELATED LITERATURE

The review or related literature plays an important role in informing the researchers about the researches done in the area selected for the research. It is also known as, 'research on research.' Though primarily it appears as the basic need of any research but if done vigilantly it can help immensely in laying the strong foundation for the topic under investigation.

Article Title- Goal 6: Ensure access to water and sanitation for all by UN SDGs. The article states while substantial progress has been made in increasing access to clean drinking water and sanitation, billions of people mostly in rural areas still lack these basic services. Worldwide, one in three people do not have access to safe drinking water, two out of five people do not have a basic hand-washing facility with soap and water, and more than 673 million people still practice open defecation. Some of the facts and figures given in the article are: 1 in 4 health care facilities lacks basic water services; 3 in 10 people lack access to safely managed drinking water services and 6 in 10 people lack access to safely managed sanitation facilities; At least 892 million people continue to practice open defecation; Women and girls are responsible for water collection in 80 per cent of households without access to water on premises; Between 1990 and 2015, the proportion of the global population using an improved drinking water source has increased from 76 per cent to 90 per cent; Water scarcity affects more than 40 per cent of the global population and is projected to rise. Over 1.7 billion people are currently living in river basins where water use exceeds recharge; 2.4 billion people lack access to basic sanitation services, such as toilets or latrines; More than 80 per cent of wastewater resulting from human activities is discharged into rivers or sea without any pollution removal; Each day, nearly 1,000 children die due to preventable water and sanitation-related diarrheal diseases; Approximately 70 per cent of all water abstracted from rivers, lakes and aquifers is used for irrigation; Floods and other water-related disasters account for 70 per cent of all deaths related to natural disasters



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Article Title- Sustainable Development Goal 6- Clean Water And Sanitation Ensure access to water and sanitation for all. In this article the UN explains "Clean water is a basic human need, and one that should be easily accessible to all. There is sufficient fresh water on the planet to achieve this. However, due to poor infrastructure, investment and planning, every year millions of people — most of them children — die from diseases associated with inadequate water supply, sanitation and hygiene." The UN has defined 8 Targets and 11 Indicators for SDG 6. Targets specify the goals and Indicators represent the metrics by which the world aims to track whether these Targets are achieved.

Article Title- Water Use and Stress by Hannah Ritchie and Max Roser, First published in 2015. The article covered the aspects of clean water and sanitation access. The article talks about various aspects of water and the issues related to water such as the freshwater use, agriculture and water withdrawals, industrial water withdrawals, household water withdrawals, water stress and scarcity, how much water we use.

Research Article - A Note on SDG 6 -Clean Water and Sanitation for All, February 2020 by Ibrahim Alshomali and Osman Gulseven, Skyline University College, Middle East Technical University. The research article is about the Sustainable Development Goals -6 (SDG 6) clean water and sanitation for all. While most developed countries have reached their goal in providing these services, the developing and underdeveloped countries are struggling to offer clean water and sanitation services to their inhabitants. The research summarizes several local governance challenges and potential barriers to providing clean water and sanitation in some communities.

Research Article- Reconciling Global Aspirations and Local Realities: Challenges Facing the Sustainable Development Goals for Water and Sanitation by Veronica Herrera, 2019.

This research paper assesses governance challenges at the local level associated with Sustainable Development Goal (SDG) 6, which pledges to ensure sustainable water and sanitation for all. It also reviews the shortcomings in global monitoring efforts and barriers to effective implementations of measures at the local level. The paper finally addresses the local realities and contradictions in global water and sanitation monitoring.

Research Article- Tracking India's Progress in Clean Water and Sanitation: A Sub-National Analysis by Soumya Bhowmick; Nilanjan Ghosh; Roshan Saha, June 2020

This paper creates an index to track the achievement of UN Sustainable Development Goal 6 (SDG 6: Clean Water and Sanitation) across India's states. The SDG 6 index incorporates both supply-side indicators and demand management variables, as well as institutional interventions. In this paper, state-wise indices are constructed to identify their respective performances in the domains of access to clean water and provision of sanitation facilities. The analysis finds that the worst-performing states in SDG 6 are the ones that are not facing shortages in water supply; this call for a paradigm shift that will focus policymaking on demand



management. While outlining the imperative for such a policy shift, the paper highlights the importance of the index within the broader emerging framework of Integrated Water Resource Management (IWRM). SDG 6 Clean Water and Sanitation has a very important place among all the nations in the world. The above mentioned articles and researches are the few to represent the efforts that are taken to achieve the UN target with respect to SDG 6 Clean water and Sanitation.



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Part 3

RESEARCH METHODOLOGY

Research methodology is a systematic, theoretical analysis of the methods applied to the field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge. Research methodology is the process used to collect information and data for the purpose of making important decisions. The methodology may include interviews, surveys and other research techniques, and could include both present and historical information.

To study about the SDG-6 Clean Water and Sanitation the research method selected was Descriptive research design. This method was used to find the opinion of the participants about the parameters selected for the research. It was through this method that the data was collected from the participants for the research.

The population of the present research study consists of participants who participated in the RISE World Summit 2021 from different nations like India, Nepal, Malaysia, Afghanistan, Yemen, Israel etc. There were 57 participants who participated in the research study.

Tool of the study

The tool prepared for the study consisted of three questions along with the preliminary information about the participants like age, education, gender, nation, type of family etc. The questions for the research were as follows:

1. In my locality there is provision of recycling sewage water implemented by the:
 - a. Local Government
 - b. NGO
 - c. Society
 - d. None
 - e. Any Other
2. I am aware that recycled water is cost friendly than fresh/potable water provided by the government for various activities like household, Sanitation, Agriculture, Construction, Industry, Medical, Gardening, Cleanliness etc.
 - a. Yes
 - b. No
 - c. Don't know
3. I get updated information about potential value of recycled waste water for sustainable practices through:
 - a. Government Policies/Advertisement/ Notifications
 - b. Educational Institutions
 - c. NGOs



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- d. Social Media
- e. Mass Media
- f. Hoardings
- g. None
- h. If any other Specify

The data with respect to the questions about SDG 6 – Clean Water Sanitation was collected from the participants who were present for the RISE World Summit 2021.



Part 4

ANALYSIS OF DATA

ANALYSIS OF THE DATA

Data from various sources is gathered, reviewed, and then analysed to form some sort of finding or conclusion. Analysis helps the researcher understand the data by describing general trends in the data and pointing out differences and similarities among data points. Interpretation relates data to the objectives they are supposed to measure, explores the relationships between multiple measures of an educational objective, qualifies, amplifies, draws inferences, and evaluates. This is a process by which sense is made of the data gathered in qualitative research, and by which the knowledge obtained is applied to problems. This form of analysis is just one of the many steps that must be completed when conducting a research.

This stage involved the analysis of data that was collected for the study. The data was used to understand the opinion of the participants about the three questions framed. For this study descriptive analysis of the data was done where graphical presentation of data was also done. This helped to identify the result and opinion of the students. A percentage analysis was done per area with the help of a bar graph.

Percentage Analysis

Percentage analysis is one of the basic statistical tools which is widely used in analysis and interpretation of primary data. It deals with the number of respondents response to a particular question is percentage arrived from the total population selected for the study. Percentages are used in making comparison between two or more series of data.

The data was further classified into following categories for the purpose of analysis.

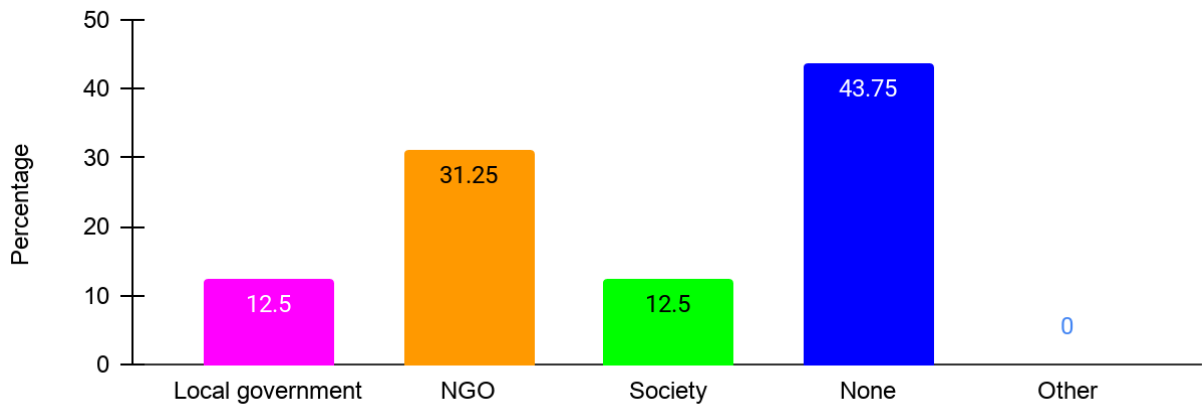
Areas	Categories			
On the basis of Educational Qualifications	Ph.D. and M.Phil	Post Graduate	Graduate	Under Graduate and High School
On the basis of Gender	Female		Male	
On the basis of Country	India		Out of India	

On the basis of age	Below 18 to 30 years	31 to 45 years	45 to 60 and above 60 years
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1. In my locality there is provision of recycling sewage water implemented by the:

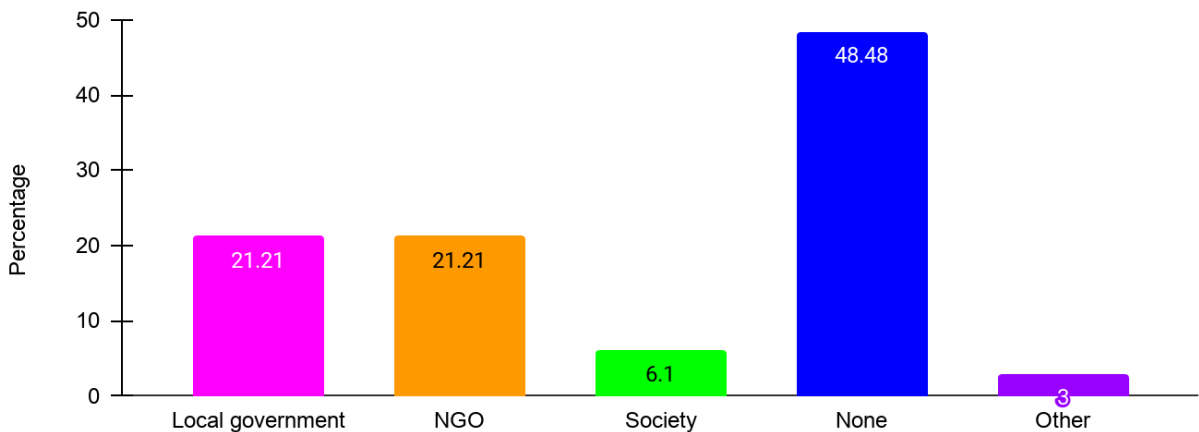
- a. Local Government**
- b. NGO**
- c. Society**
- d. None**
- e. Any Other**

Graph 1.1 Opinion of Ph.D and M.Phil Participants about provision of recycling sewage water in their areas



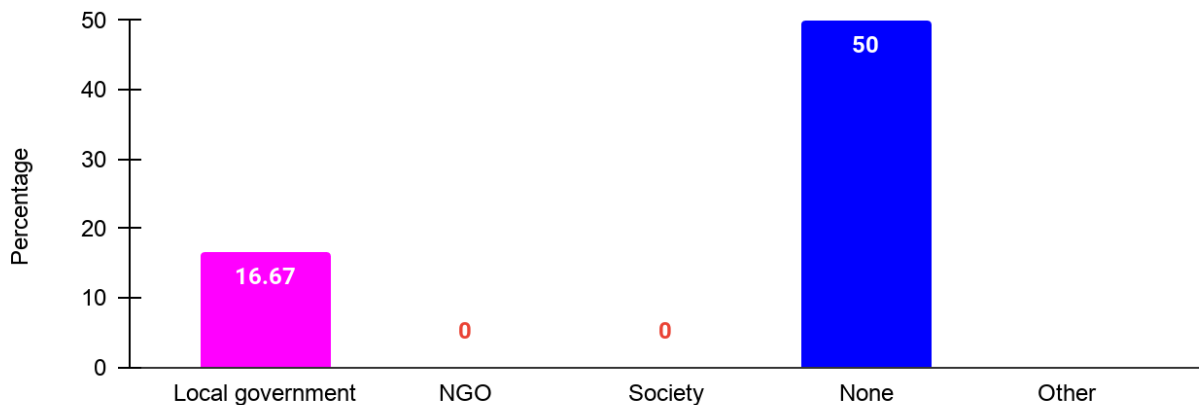
The above graph indicates that the 43.75% Ph.D and M.Phil participants are having the opinion that none of the institutions (local government, NGO, Society) is implementing provision for recycling sewage water in their area or locality. 31.25 % participants are of the opinion that it is implemented by NGO. 12.5% are indicating that it is implemented by the Society as well as local government while none of the participants have indicated that it is implemented by others. Therefore from the graph it is observed that the majority of the participants are indicating that none of the institutions (local government, NGO, Society, etc) are implementing the provision of recycling the sewage water.

Graph 1.2 Opinion of Post Graduate Participants about provision of recycling sewage water in their areas



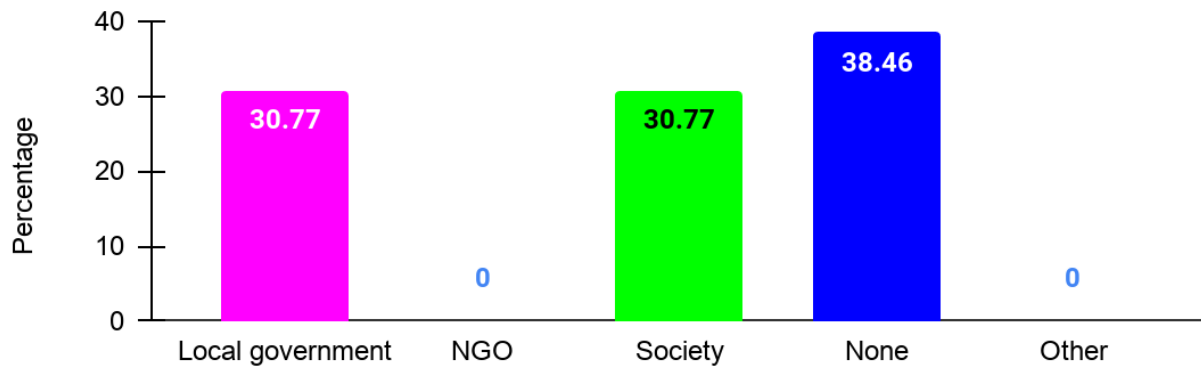
The above graph indicates that the 48.48 % Post Graduate participants are having the opinion that none of the institutions (local government, NGO, Society) is implementing provision for recycling sewage water in their area or locality . 21.21 % participants are of the opinion that it is implemented by local government as well as NGO. 6.1% are indicating that it is implemented by the Society while 3%of the participants have indicated that it is implemented by others. Therefore from the graph it is observed that the majority of the participants are indicating that none of the institutions (local government, NGO, Society, etc) are implementing the provision of recycling the sewage water.

Graph 1.3 Opinion of Graduate Participants about provision of recycling sewage water in their areas



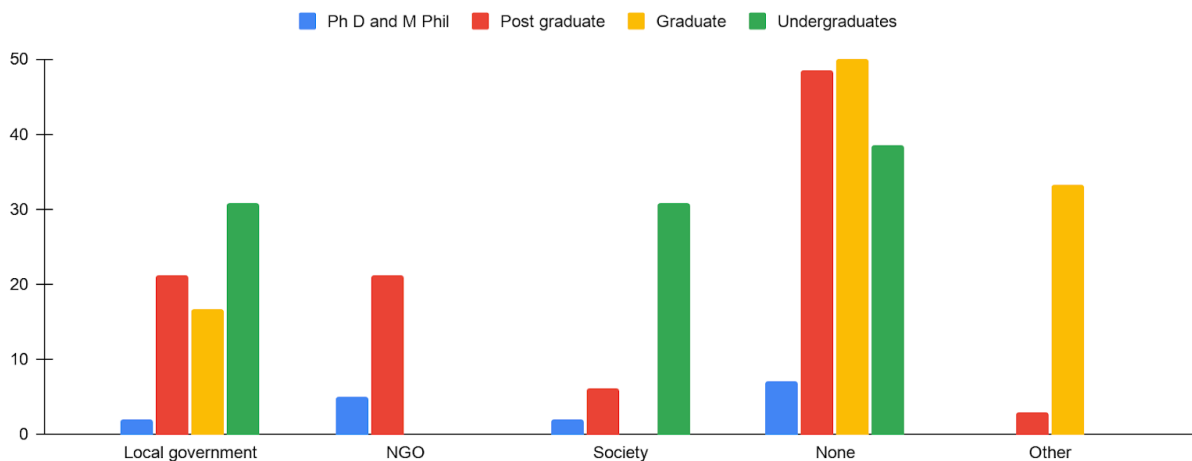
The above graph indicates that the 50 % Graduate participants are having the opinion that none of the institutions (local government, NGO, Society) is implementing provision for recycling sewage water in their area or locality . 16.67 % participants are of the opinion that it is implemented by local government while none of the participants have indicated that it is implemented by NGO, Society or others. Therefore from the graph it is observed that the majority of the participants are indicating that none of the institutions (local government, NGO, Society, etc) are implementing the provision of recycling the sewage water.

Graph 1.4 Opinion of undergraduate Participants about provision of recycling sewage water in their areas

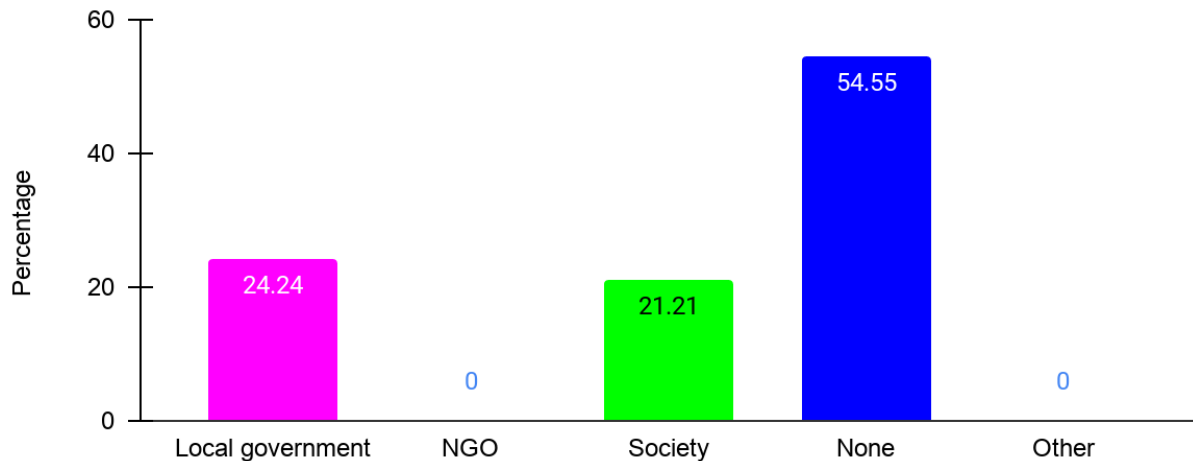


The above graph indicates that the 38.36 % Undergraduate participants are having the opinion that none of the institutions (local government, NGO, Society) is implementing provision for recycling sewage water in their area or locality . 30.77 % participants are of the opinion that it is implemented by local government as well as Society. while none of the participants have indicated that it is implemented by NGO or others. Therefore from the graph it is observed that the majority of the participants are indicating that none of the institutions (local government, NGO, Society, etc) are implementing the provision of recycling the sewage water.

Graph 1.5 consolidated graph based on educational qualification of participants

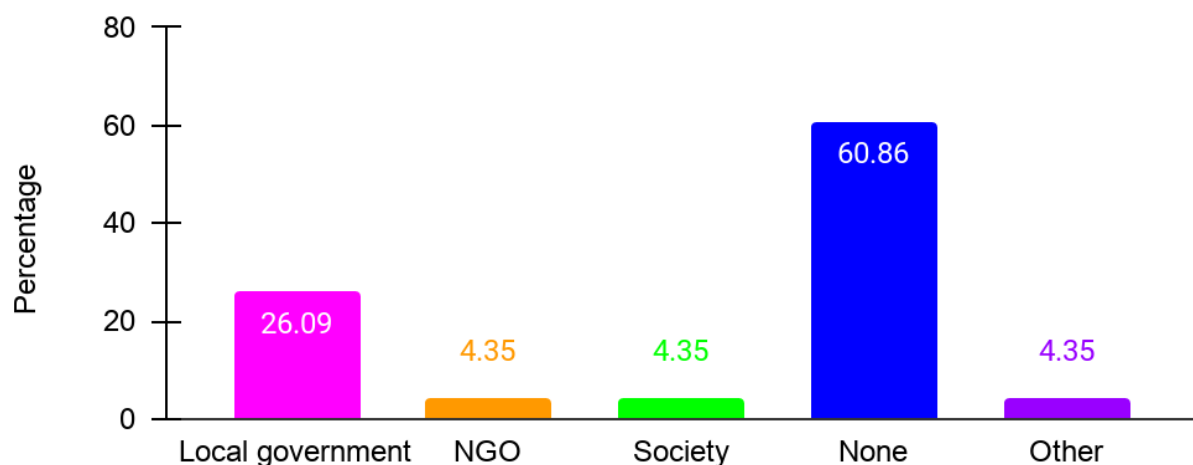


Graph 1.6 Opinion of female Participants about provision of recycling sewage water in their areas



The above graph indicates that the 54.55 % female participants are having the opinion that none of the institutions (local government, NGO, Society) is implementing provision for recycling sewage water in their area or locality . 24.24 % participants are of the opinion that it is implemented by the local government. 21.21% are indicating that it is implemented by the Society while none of the participants have indicated that it is implemented by NGO or others. Therefore from the graph it is observed that the majority of the participants are indicating that none of the institutions (local government, NGO, Society, etc) are implementing the provision of recycling the sewage water.

Graph 1.7 Opinion of male Participants about provision of recycling sewage water in their areas

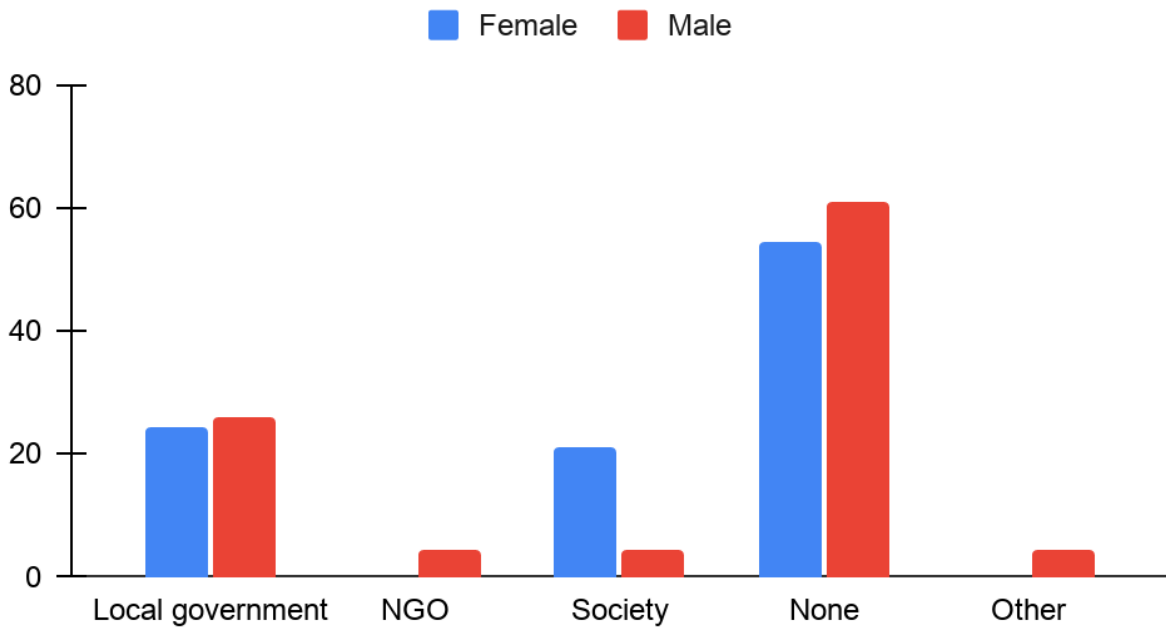


The above graph indicates that the 60.86 % male participants are having the opinion that none of the institutions (local government, NGO, Society) is implementing provision for recycling sewage water in

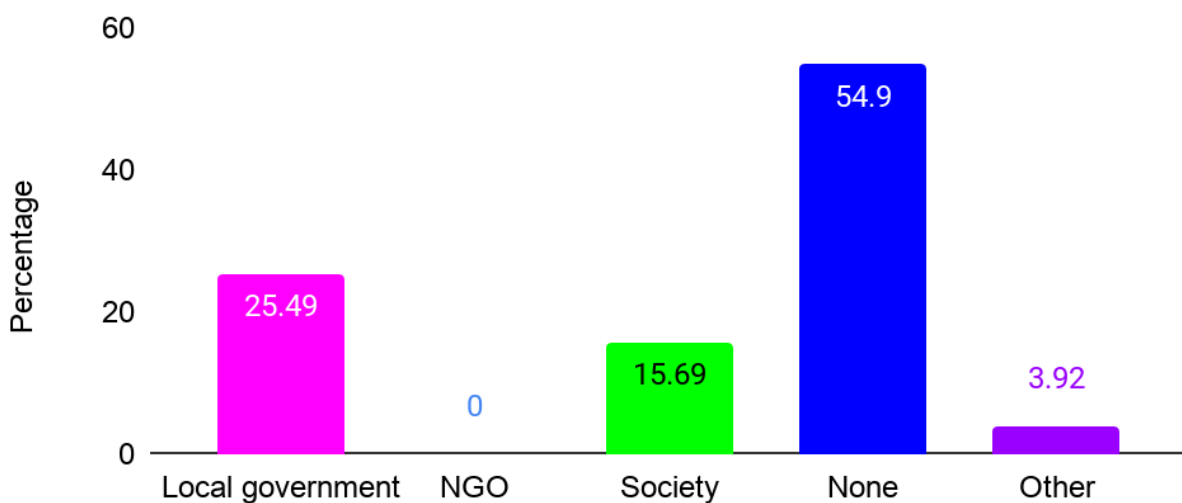


their area or locality. 26.09 % participants are of the opinion that it is implemented by the local government. 4.35% are indicating that it is implemented by the NGO, Society and others. Therefore from the graph it is observed that the majority of the participants are indicating that none of the institutions (local government, NGO, Society, etc) are implementing the provision of recycling the sewage water.

Graph 1.8 Consolidated graph based on gender of participants



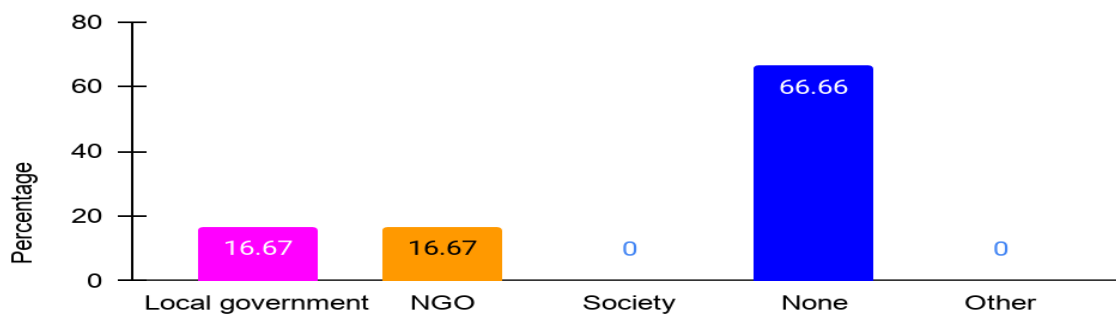
Graph 1.9 Opinion of Indian Participants about provision of recycling sewage water in their areas





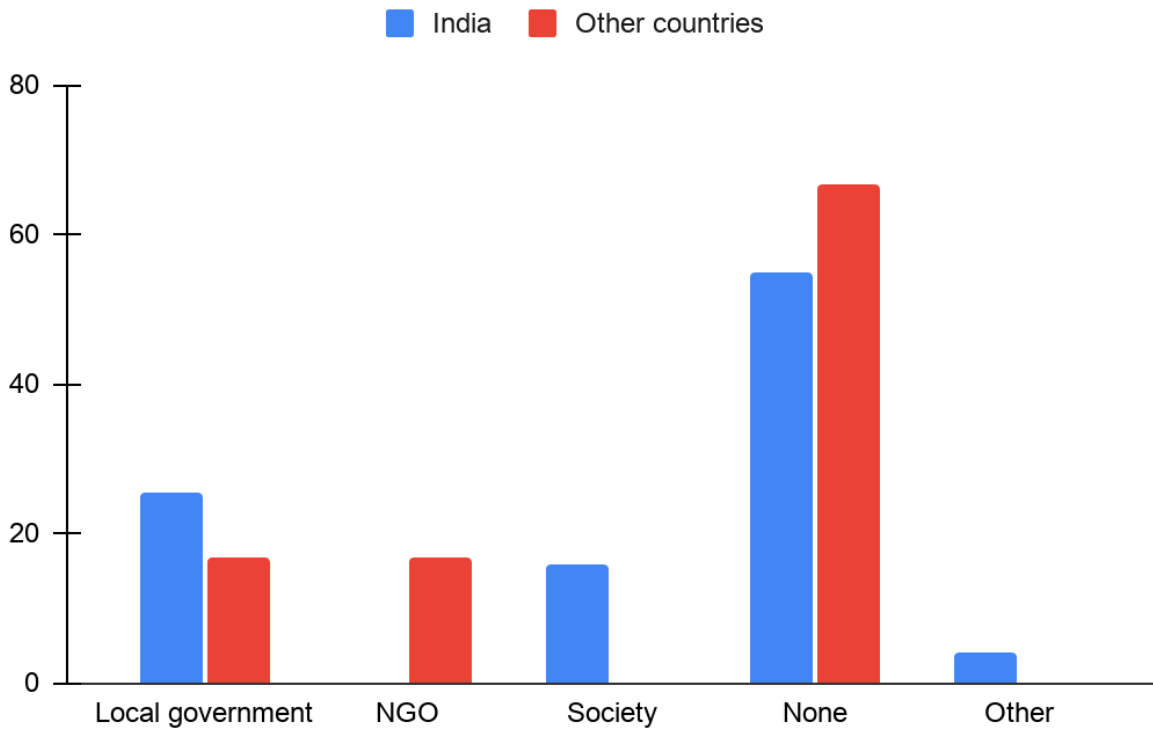
The above graph indicates that the 54.9 % Indian participants are having the opinion that none of the institutions (local government, NGO, Society) is implementing provision for recycling sewage water in their area or locality . 25.49 % participants are of the opinion that it is implemented by the local government. 15.69 % are indicating that it is implemented by the Society while 3.92 % of the participants have indicated that it is implemented by others. None of the participants indicated that it is implemented by any NGO. Therefore from the graph it is observed that the majority of the participants are indicating that none of the institutions (local government, NGO, Society, etc) are implementing the provision of recycling the sewage water.

Graph 1.10 Opinion of Participants from other countries about provision of recycling sewage water in their areas

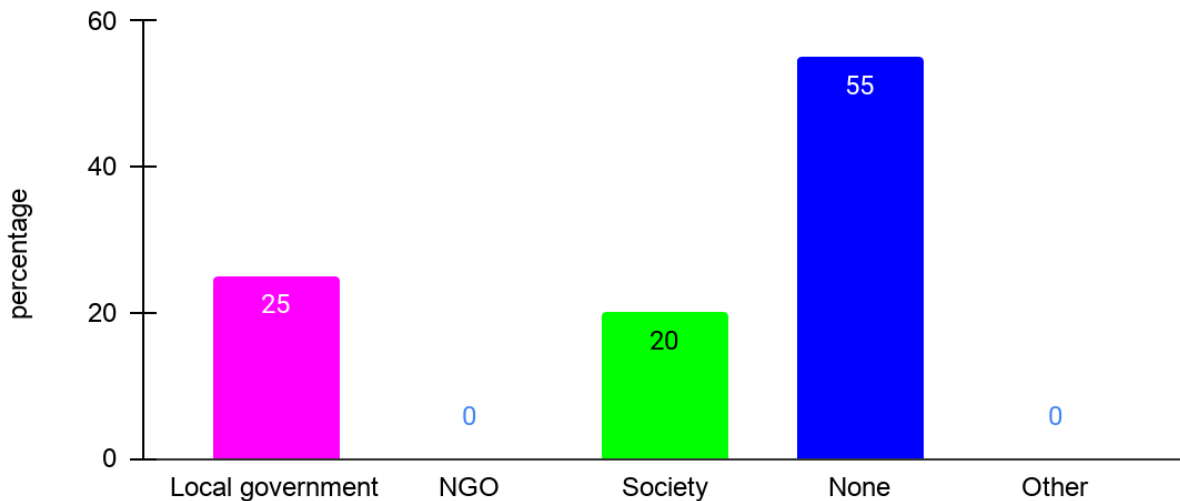


The above graph indicates that the 66.66 % participants from other countries are having the opinion that none of the institutions (local government, NGO, Society) is implementing provision for recycling sewage water in their area or locality . 16.67 % participants are of the opinion that it is implemented by the local government as well as NGO. while none of the participants have indicated that it is implemented by the Society or others. Therefore from the graph it is observed that the majority of the participants are indicating that none of the institutions (local government, NGO, Society, etc) are implementing the provision of recycling the sewage water.

Graph 1.11 Consolidated graph based on countries of participants



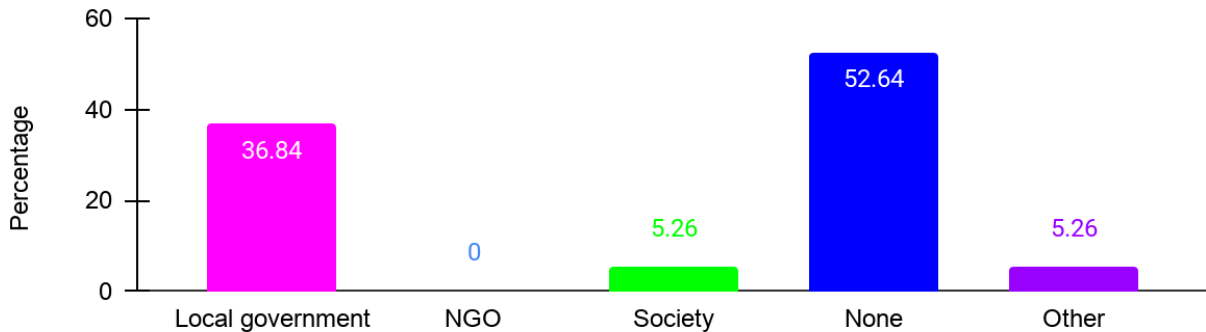
Graph 1.12 Opinion of Participants of age below 18 and 18 to 30 years about provision of recycling sewage water in their areas



The above graph indicates that the 55 % participants of age below 18 and 18 to 30 years are having the opinion that none of the institutions (local government, NGO, Society) is implementing provision for recycling sewage water in their area or locality. 25 % participants are of the opinion that it is implemented by the local government. 20 % are indicating that it is implemented by the Society while none of the participants have indicated that it is implemented by the NGO or others. Therefore from the

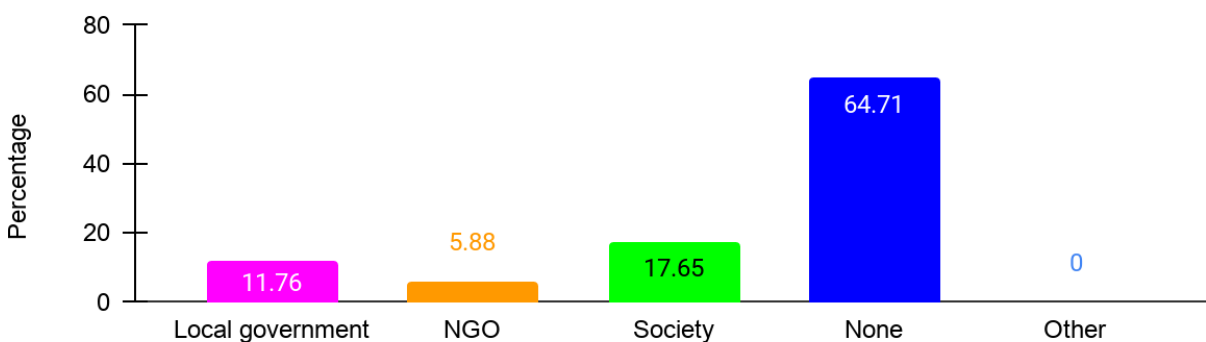
graph it is observed that the majority of the participants are indicating that none of the institutions (local government, NGO, Society, etc) are implementing the provision of recycling the sewage water.

Graph 1.13 Opinion of Participants of age 31 to 45 years about provision of recycling sewage water in their areas



The above graph indicates that the 52.64 % participants of age 31 to 45 years are having the opinion that none of the institutions (local government, NGO, Society) is implementing provision for recycling sewage water in their area or locality . 36.84 % participants are of the opinion that it is implemented by the local government. 5.26 % are indicating that it is implemented by the Society and others. while none of the participants have indicated that it is implemented by the NGO. Therefore from the graph it is observed that the majority of the participants are indicating that none of the institutions (local government, NGO, Society, etc) are implementing the provision of recycling the sewage water.

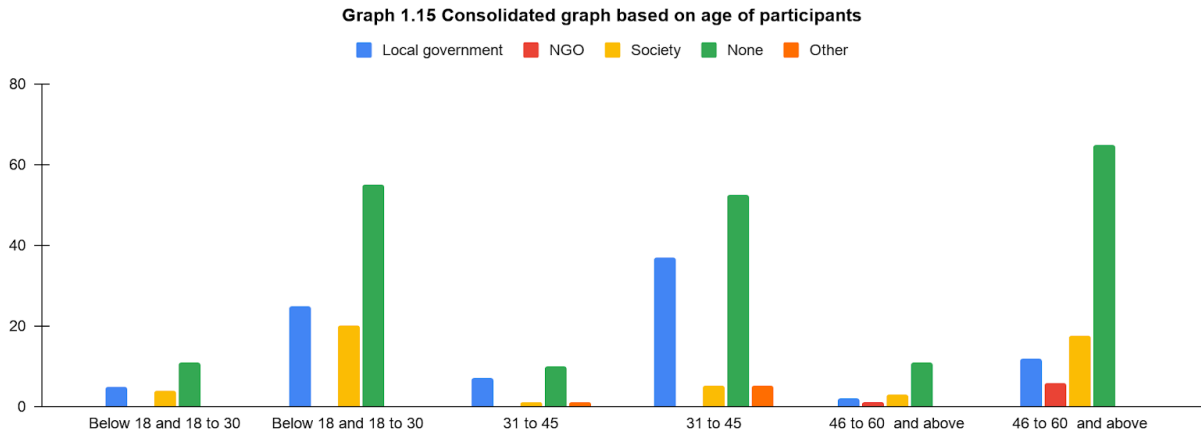
Graph 1.14 Opinion of Participants of age 46 - 60 years and above 60 years about



The above graph indicates that the 64.71 % participants of age 46 - 60 years and above 60 years are having the opinion that none of the institutions (local government, NGO, Society) is implementing provision for recycling sewage water in their area or locality . 17.65 % participants are of the opinion that it is implemented by the Society. 11.76 % are indicating that it is implemented by the Society while 5.88 % of the participants have indicated that it is implemented by the NGO. None of the participants have indicated that it is implemented by other institutions. Therefore from the graph it is observed that



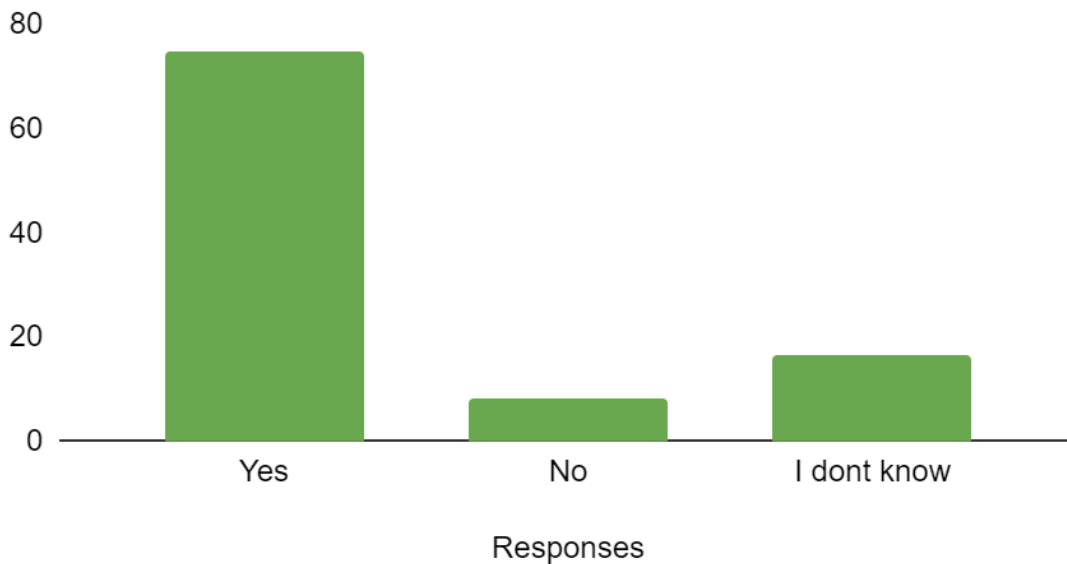
the majority of the participants are indicating that none of the institutions (local government, NGO, Society, etc) are implementing the provision of recycling the sewage water.



2. I am aware that recycled water is cost friendly than fresh/potable water provided by the government for various activities like household, Sanitation, Agriculture, Construction, Industry, Medical, Gardening, Cleanliness etc.

- a. Yes
- b. No
- c. Don't know

Graph 2.1 Opinion of the Ph.D and M.Phil Participants about providing cost friendly recycled waste water than potable/fresh water for various activities

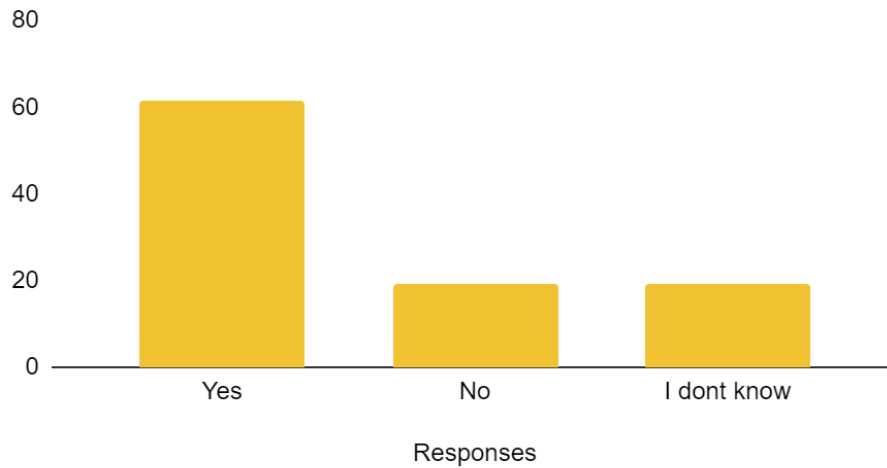


The above graph indicates that among the Ph.D and M.Phil participants 75% of the participants are aware that recycled water is cost friendly than fresh/potable water provided by the government for various activities like household, Sanitation, Agriculture, Construction, Industry, Medical, Gardening, Cleanliness etc. 8.3% of the participants were not aware whereas 16.66% of participants



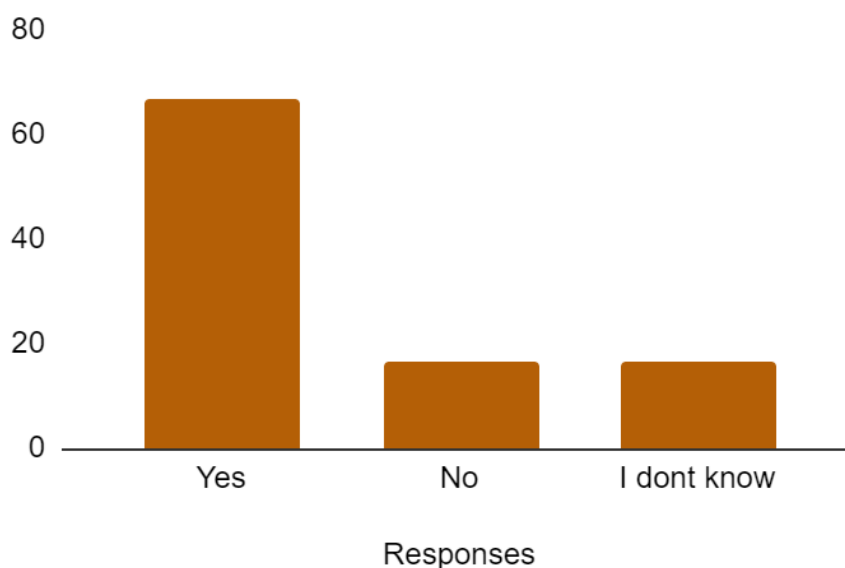
are indicating that they don't know about such practice. Therefore, from the above results it is clear that the majority of the Ph.D and M.Phil participants are aware that recycled water is cost friendly than fresh/potable water provided by the government.

Graph 2.2 Opinion of the Post graduate Participants about providing cost friendly recycled waste water than potable/fresh water for various activities



The graph 2.2 indicates that 61.53% of Post graduate participants are aware about the cost of recycled water. 19.23% of the participants felt that they are not aware that the cost of recycled water is less than fresh/potable water whereas 19.23% of the participants under this category were not sure about it and thus have mentioned that they don't know. This shows majority of the post graduate participants are aware about the cost difference between recycled water and fresh water provided by the government.

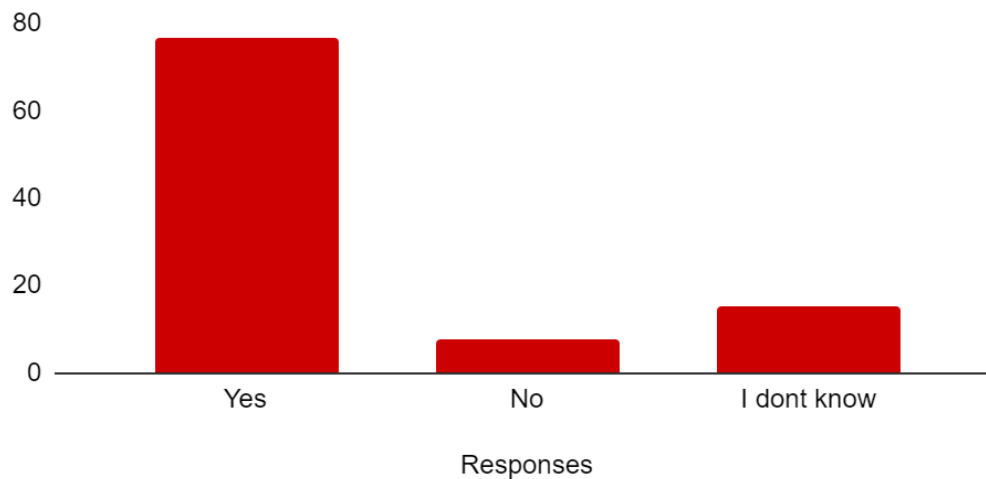
Graph 2.3 Opinion of the Graduate Participants about providing cost friendly recycled waste water than potable/fresh water for various activities





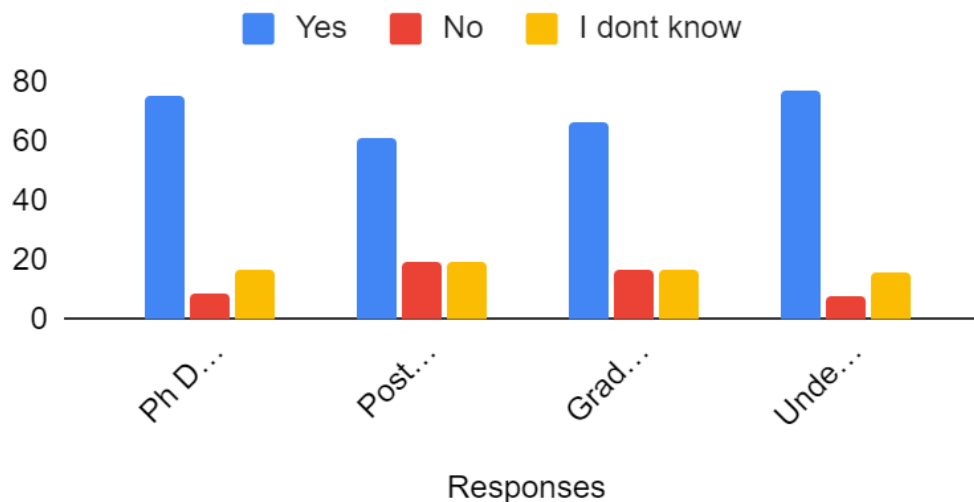
The above graph indicates that 66.66% of the graduate participants were aware that recycled water is cost friendly than the fresh and potable water provided by the government. Whereas 16.66% of the participants are not aware and are not sure that they knew about it or not. With the above results, it is clearly seen that participants were aware about the provision and the cost of recycling water.

Graph 2.4 Opinion of the undergraduates and high school Participants about providing cost friendly recycled waste water than potable/fresh water for various activities

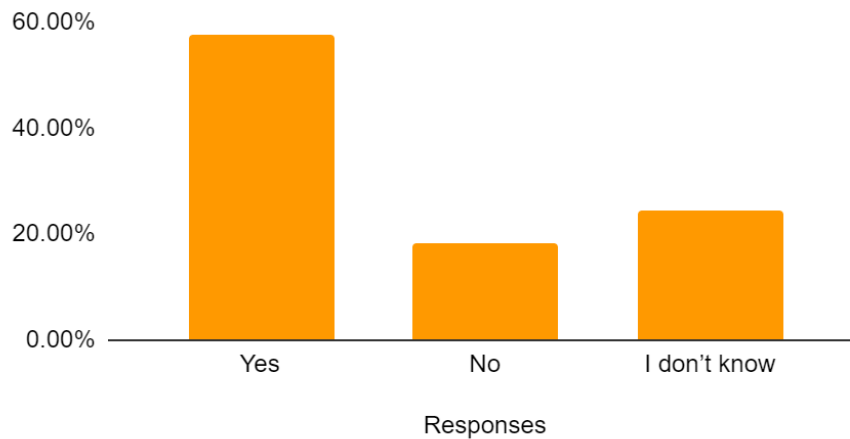


The graph 2.4 represents the opinions of undergraduates and high school participants. It shows that 76.92% of the participants were aware about the provision of cost of recycled water. 15.38% of the participants mentioned that they don't know about such provision and the cost of recycling water. 7.69% of the participants don't know that recycled water is cost friendly than fresh and potable water. This result shows that the majority of undergraduate and high school participants are aware about the provision.

Graph 2.5 Consolidated opinions on the basis of educational qualifications

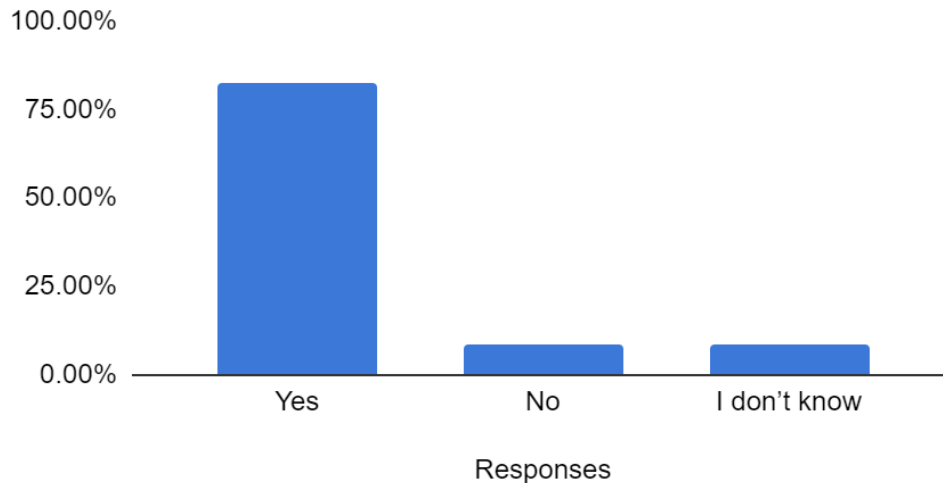


Graph 2.6 Opinion of Female Participants about providing cost friendly recycled waste water than potable/fresh water for various activities



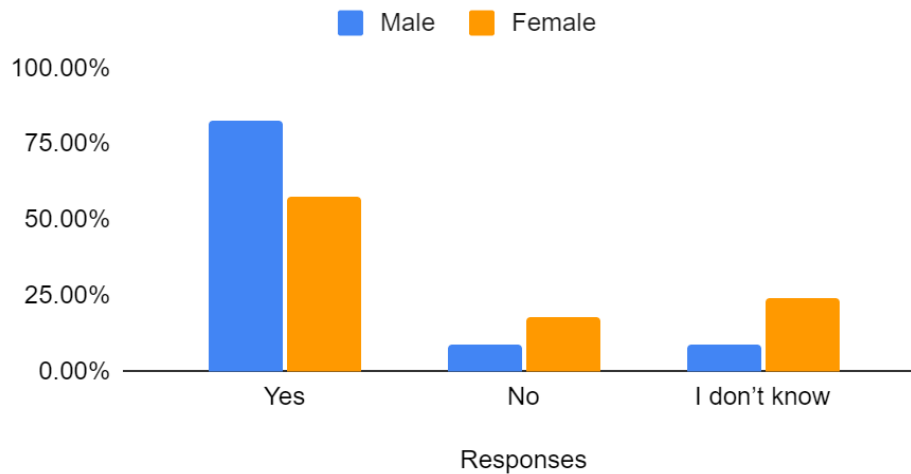
The graph 2.6 shows the opinions of female participants about providing cost friendly recycled waste water than potable water. It is clearly seen that the majority of the female participants that is 57.58% are aware about the cost of recycled water. 24.24% of them have indicated that they don't know. Whereas 18.18% of the participants were clearly not aware of the cost of the recycled water than potable water.

Graph 2.7 Opinion of Male Participants about providing cost friendly recycled waste water than potable/fresh water for various activities



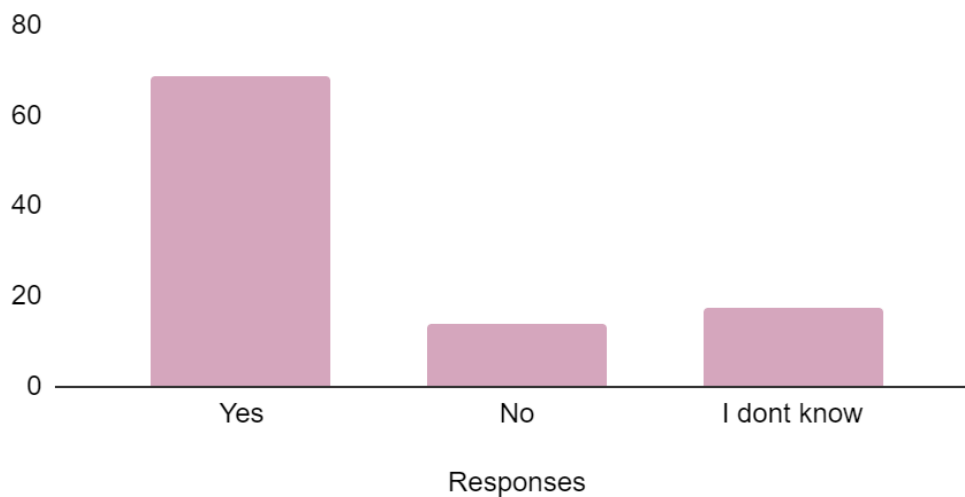
The graph 2.7 indicates that the opinions of male participants about providing cost friendly recycled water than potable/fresh water. It shows that 82.60% of the male participants are aware that recycled water is cost friendly than fresh potable water supplied by the government. Hence it indicates that the majority of the male participants are well aware about the provision which is a good impact. 8.70% of the participants are not aware whereas 8.70% of the participants have said they don't know.

Graph 2.8 Opinion of Male and Female Participants about providing cost friendly recycled waste water than potable/fresh water for various activities



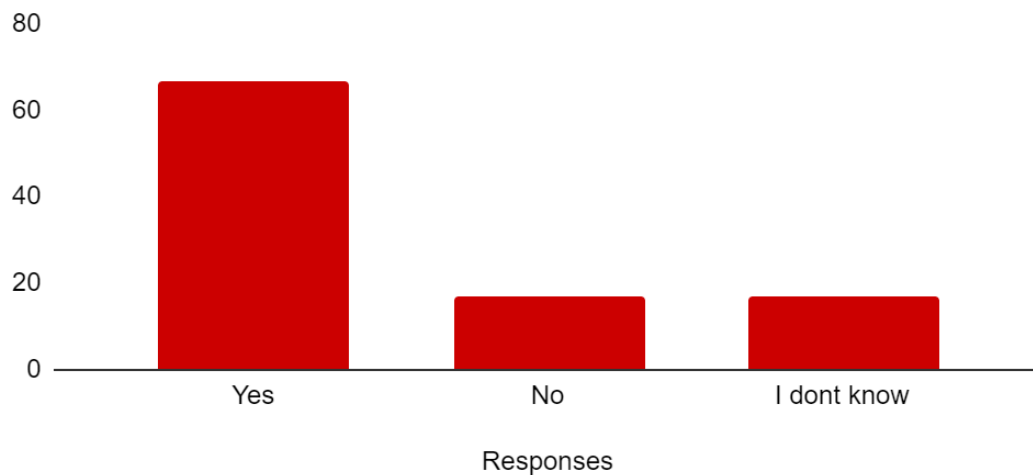
The graph 2.8 shows the consolidated opinions of the male and female participants. This graph indicates that the majority of male participants than the female participants are aware about providing cost friendly water than potable and fresh water. Overall, this also indicates that awareness related to recycled water is less among female participants which is alarming.

Graph 2.9 Opinion of Participants from India about providing cost friendly recycled waste water than potable/fresh water for various activities



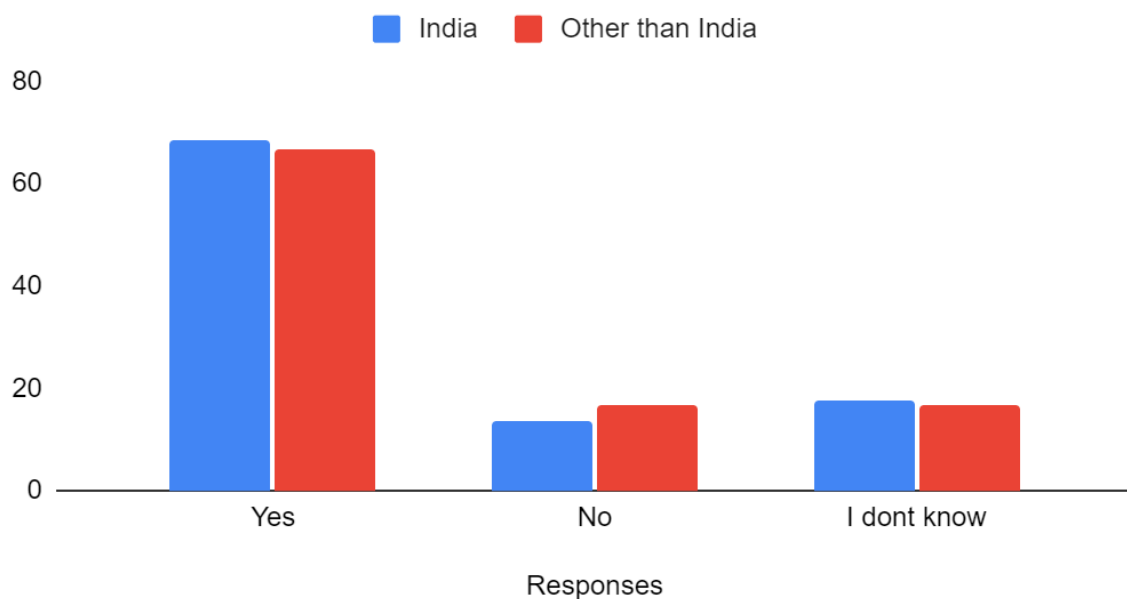
The graph 2.9 indicates that 68.62% participants from India are aware that recycled water is cost friendly than fresh/potable water provided by the government for various activities like household, Sanitation, Agriculture, Construction, Industry, Medical, Gardening, Cleanliness etc. 13.72% participants were not aware whereas 17.64% participants have indicated that they don't know. Thus it can be said that the majority of the participants are aware about the recycled water cost and its provisions.

Graph 2.10 Opinion of the Participants from other countries than India about providing cost friendly recycled waste water than potable/fresh water for various activities



The graph 2.10 indicates that 66.66% participants from other countries than India were aware that recycled water is cost friendly than fresh/potable water provided by the government for various activities like household, Sanitation, Agriculture, Construction, Industry, Medical, Gardening, Cleanliness etc. 16.66% participants were not aware whereas 16.66% participants have indicated that they don't know. Therefore from the graph it is observed that the majority of the participants are aware that recycled water is cost friendly.

Graph 2.11 Consolidated Opinion of the Participants from India and other countries about providing cost friendly recycled waste water than potable/fresh water for various activities



The Graph 2.11 indicates the consolidated results of the opinion of the participants from India and other countries. Comparatively, the majority of the participants from India are aware than the

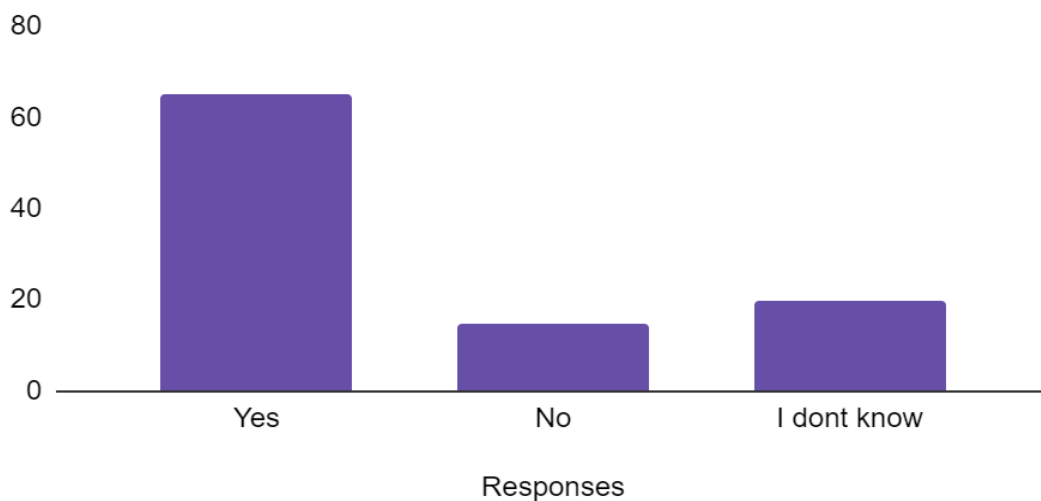


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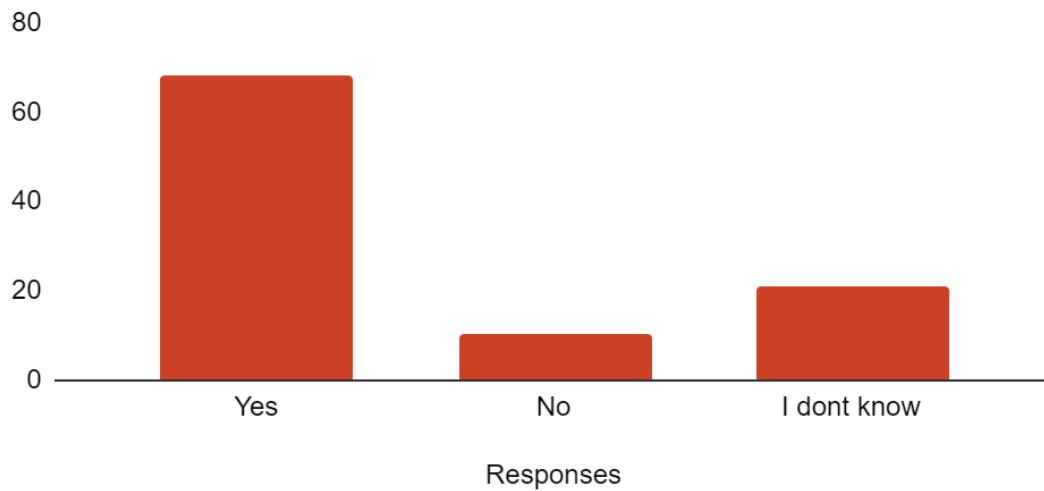
participants from the other countries. This indicates that participants in India are well aware and have accepted the change in their daily lives. The difference between these countries is quite less which makes it easier to introduce the provision. This shows us the positive side for bringing in the change required to attain the goals set for 2030. A lot of awareness is still left to be brought in among the people to reach the defined goal.

Graph 2.12 Opinion of the Participants of below 18 to 30 age group about providing cost friendly recycled waste water than potable/fresh water for various activities



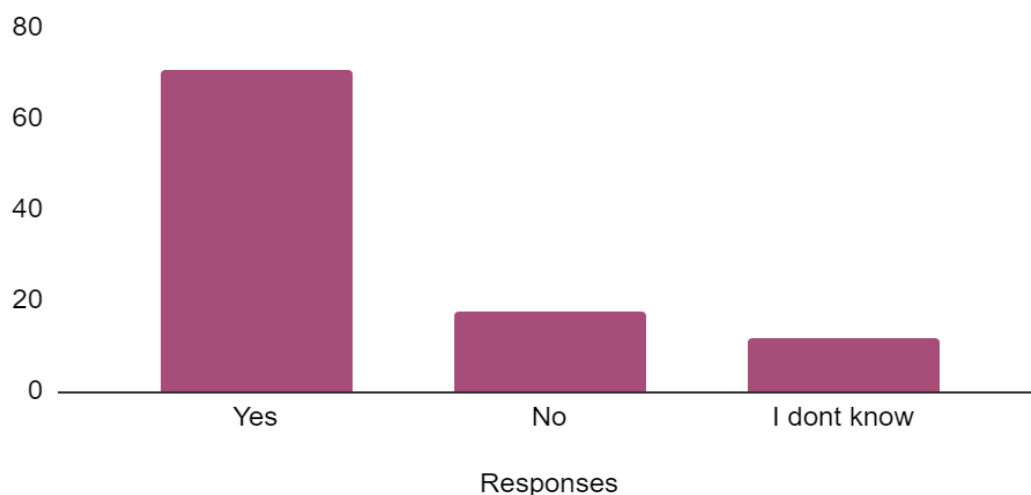
The graph 2.12 indicates the opinions of the participants under the age group of below 18 to 30 years. 65% of the participants have indicated that they are aware that recycled water is cost friendly than fresh and potable water supplied by the government. 20% of the participants mentioned that they don't know and 15% of the participants mentioned that they are not aware about the costing of recycled water and fresh potable water supplied by the government for various uses.

Graph 2.13 Opinion of the Participants of 31 to 45 age group about providing cost friendly recycled waste water than potable/fresh water for various activities



The graph 2.13 indicates the opinions of the participants who are in the age group of 31 to 45years. It shows that 68.42% of the participants have mentioned yes which means that they are aware that recycled water is cost friendly than fresh and potable water. 21.05% of the participants have mentioned that they don't know about it whereas 10.52% of the participants have clearly mentioned no. It is observed that the majority of the participants have marked they don't know.

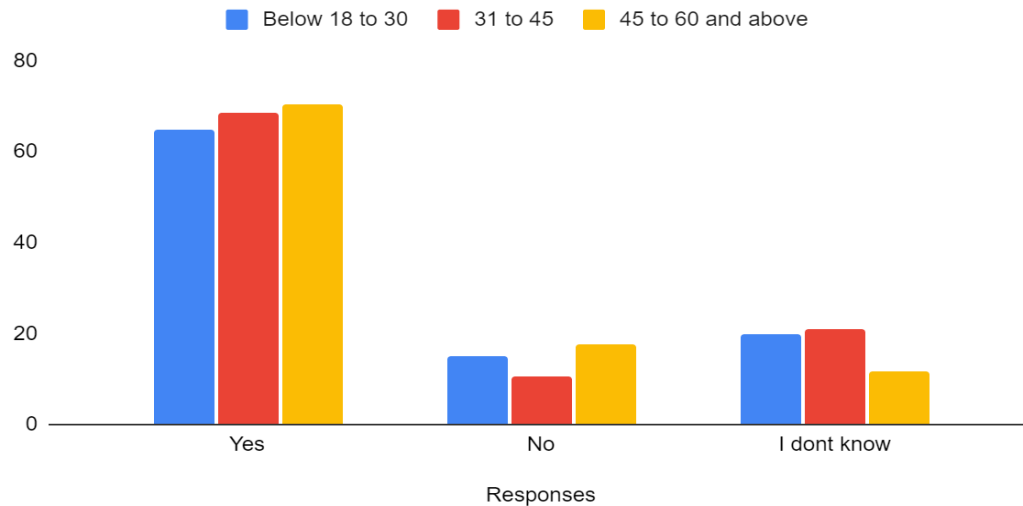
Graph 2.14 Opinion of the Participants of 46 to 60 and above age group about providing cost friendly recycled waste water than potable/fresh water for various activities





The Graph 2.14 indicates the opinions of the participants under the age group of 46 to 60 years.. 70.58% of the participants under this age group are aware about the provision of supplying recycled water than potable and fresh water whereas 17.64% of the participants are not aware about it. 11.76% of the participants do not have any idea about the cost and supply of recycled water for various daily uses.

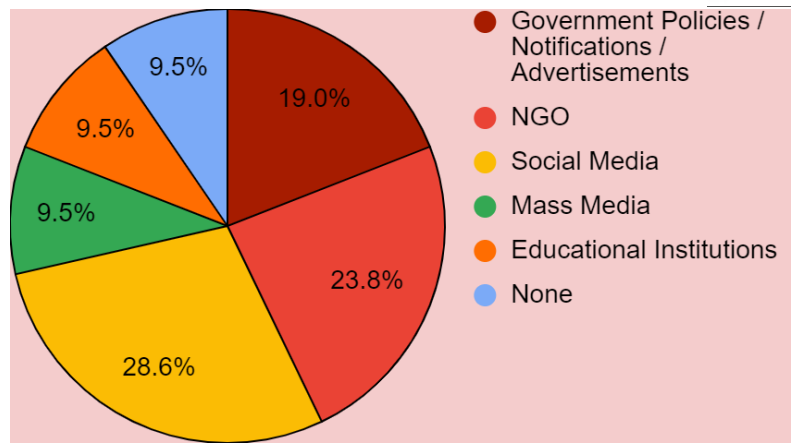
Graph 2.15 Consolidated Opinion of the Participants of different age groups about providing cost friendly recycled waste water than potable/fresh water for various activities



3. I get updated information about potential value of recycled waste water for sustainable practices through:

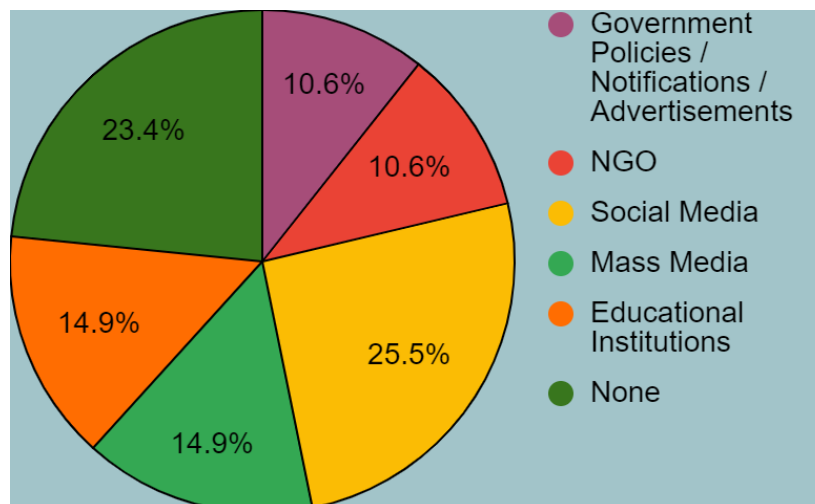
- a. Government Policies/Advertisement/ Notifications
- b. Educational Institutions
- c. NGOs
- d. Social Media
- e. Mass Media
- f. Hoardings
- g. None
- h. If any other Specify

Chart 3.1 Opinion of Ph.D & M.Phil participants about the source through which they get information regarding potential value of recycled waste water for sustainable practices



The above chart indicates that the 28.6% Ph.D and M.Phil participants are of the opinion that social media is the main source of information that makes the people aware of the potential value of recycled wastewater for sustainable practices. 23.8% are of the opinion that NGO play an important role. 19% are indicating that the information comes from the government policies / notifications/ advertisements. 9.5% are of the opinion that it is mass media that spreads the awareness in their area. Another 9.5% believe that educational institutions also equally contributed in making people aware about these sustainable practices. 9.5% of the participants have indicated that none of the sources are working for this cause in their society. Therefore from the chart it is observed that the majority of the participants are indicating that social media is playing an important role in spreading awareness amongst people regarding the potential value of recycled wastewater for sustainable practices.

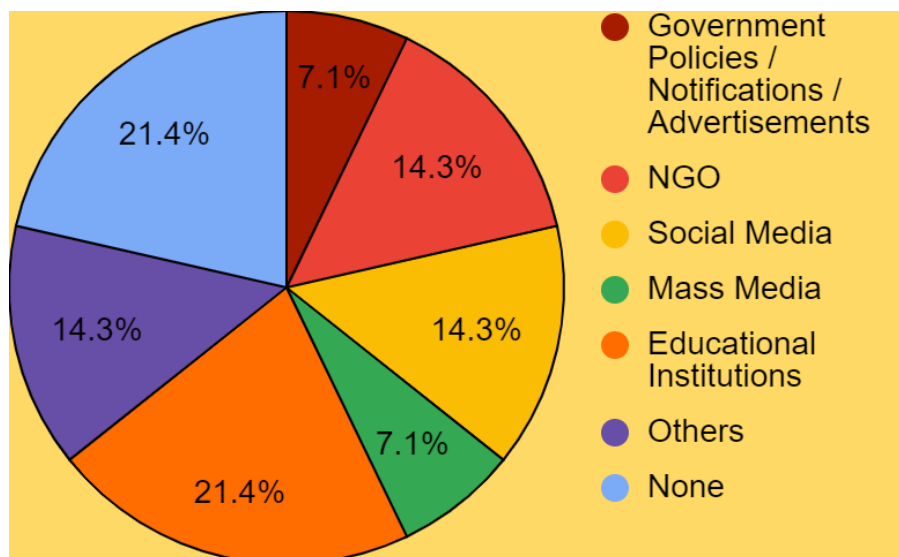
Chart 3.2 Opinion of Post Graduate participants about the source through which they get information regarding potential value of recycled wastewater for sustainable practices





The above chart indicates that the 25.5% Post graduate participants are of the opinion that social media is the main source of information that makes the people aware of the potential value of recycled wastewater for sustainable practices. 23.4% are of the opinion that none of the agencies help in spreading the awareness amongst the people regarding the potential value of recycled wastewater for sustainable practices. 14.9% are indicating that the information comes from the mass media. Whereas other 14.9% are of the opinion that the educational institutions spread the awareness in their area. 10.6% believe that NGO is doing their best to make people aware of the importance of recycling wastewater. Another 10.6% believe that government policies/notifications/advertisements also equally contribute in making people aware about these sustainable practices. Therefore from the chart it is observed that the majority of the participants are indicating that social media is playing an important role in spreading awareness amongst people regarding the potential value of recycled wastewater for sustainable practices.

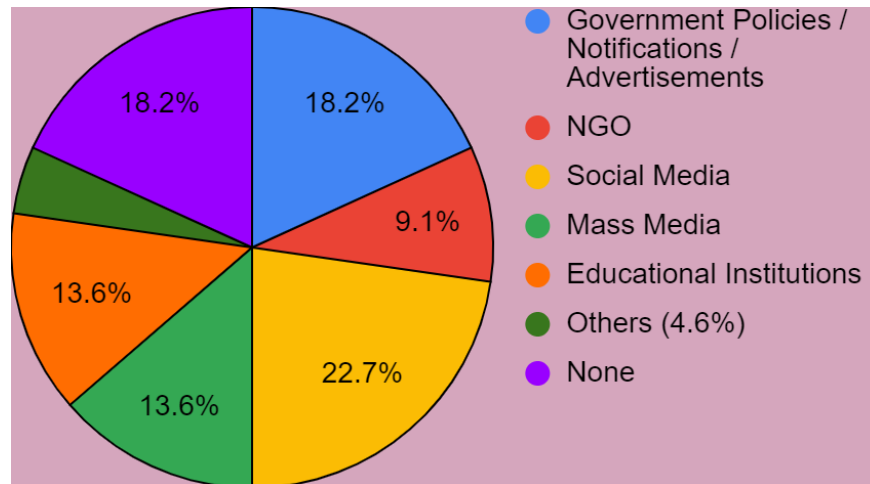
Chart 3.3 Opinion of Graduate participants about the source through which they get information regarding potential value of recycled wastewater for sustainable practices



The above chart shows that the 21.4% Graduate participants are of the opinion that educational institutions are the main source of information that makes the people aware of the potential value of recycled wastewater for sustainable practices. Another 21.4% are of the opinion that none of the agencies help in spreading awareness amongst the people regarding the potential value of recycled wastewater for sustainable practices. 14.3% are indicating that the information comes from social media. Whereas other 14.3% are of the opinion that various NGO's are involved in spreading the awareness in their area. Also 14.3% believe that other sources also make people aware of the importance of recycling wastewater. Another 7.1% believe that government policies/notifications/advertisements also contribute in making people aware about these sustainable practices. 7.1% are also indicating that mass media also helps in making people aware in their society. Therefore from the chart it is observed that the majority of the participants are indicating that either

educational institutions are playing an important role in spreading awareness amongst people regarding the potential value of recycled wastewater for sustainable practices or none of the institutions are involved in this cause.

Chart 3.4 Opinion of Undergraduate participants about the source through which they get information regarding potential value of recycled wastewater for sustainable practices



The above chart indicates that the 22.7% Undergraduate participants believe that social media majorly spreads awareness of the potential value of recycled wastewater for sustainable practices. Another 18.2% are of the opinion that none of the agencies help in spreading awareness amongst the people regarding the potential value of recycled wastewater for sustainable practices. Also 18.2% are indicating that the information comes from government policies/notifications/advertisement. 13.6% are of the opinion that educational institutions are involved in spreading the awareness in their area. Another 13.6% believe that mass media make people aware of the importance of recycling wastewater. 9.1% believe that NGO also contribute in making people aware about these sustainable practices. 4.6% are also indicating that there are other sources that help in making people aware in their society. Therefore from the chart it is observed that the majority of the participants are indicating that social media is the main source in spreading awareness amongst people regarding the potential value of recycled wastewater for sustainable practices or none of the institutions are involved in this cause.

Chart 3.5 Consolidated for Educational Qualification

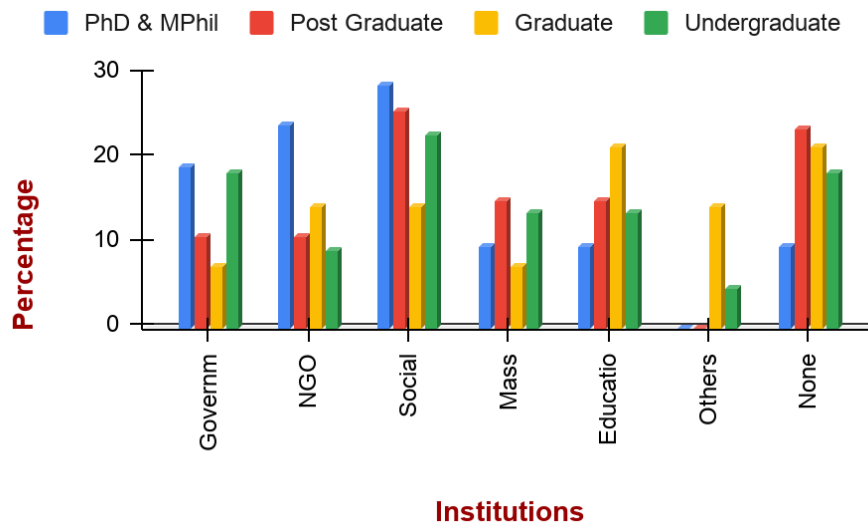
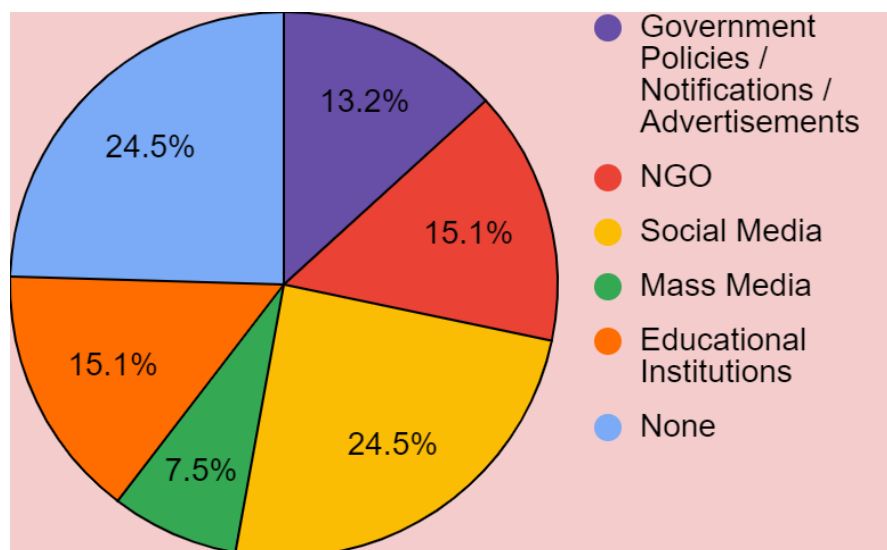


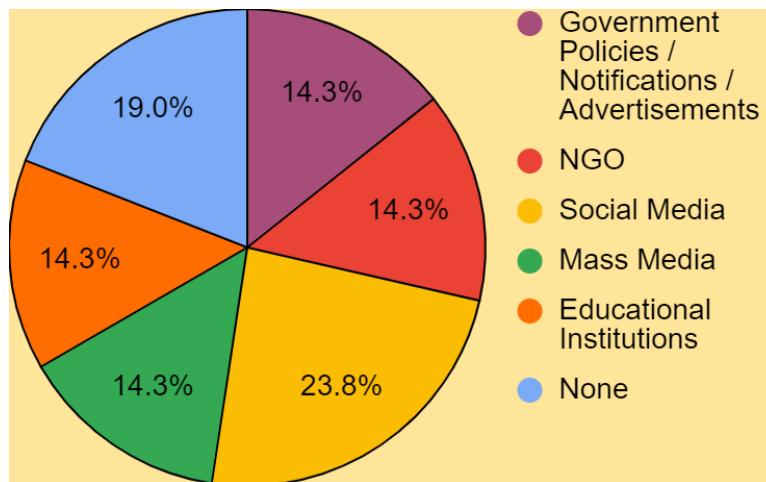
Chart 3.6 Opinion of Female participants about the source through which they get information regarding potential value of recycled wastewater for sustainable practices



The above chart shows that the 24.5% female participants believe that social media majorly spreads awareness of the potential value of recycled wastewater for sustainable practices. Another 24.5% are of the opinion that none of the agencies help in spreading awareness amongst the people regarding the potential value of recycled wastewater for sustainable practices. Another 15.1% are indicating that the information comes from various NGOs working for this cause. 15.1% are of the opinion that educational institutions are involved in spreading the awareness in their area. 13.2% believe that government policies/notifications/advertisements help in making people aware of the importance of recycling wastewater. 7.5% believe that mass media also contribute in making people aware about these sustainable practices. Therefore from the chart we can conclude that the majority of the participants are indicating that

social media is the main source in spreading awareness amongst people regarding the potential value of recycled wastewater for sustainable practices or none of the institutions are involved in this cause.

Chart 3.7 Opinion of Male participants about the source through which they get information regarding potential value of recycled wastewater for sustainable practices



The above chart shows that the 23.8% male participants believe that social media majorly spreads awareness of the potential value of recycled wastewater for sustainable practices. Another 19% are of the opinion that none of the agencies help in spreading awareness amongst the people regarding the potential value of recycled wastewater for sustainable practices. 14.3% are indicating that the information comes from mass media. 14.3% are of the opinion that government policies/notifications/advertisements contribute to spreading the awareness in their area. Also another 14.3% believe that government policies/notifications/advertisements help in making people aware of the importance of recycling wastewater. 14.3% equally believe that mass media also contribute in making people aware about these sustainable practices. Therefore from the chart we can conclude that the majority of the participants are indicating that social media is the main source in spreading awareness amongst people regarding the potential value of recycled wastewater for sustainable practices or none of the institutions are involved in this cause.

Chart 3.8 Consolidated Gender Wise

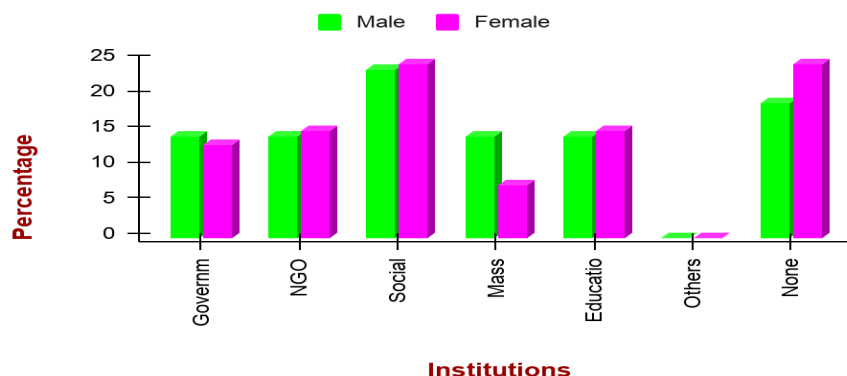
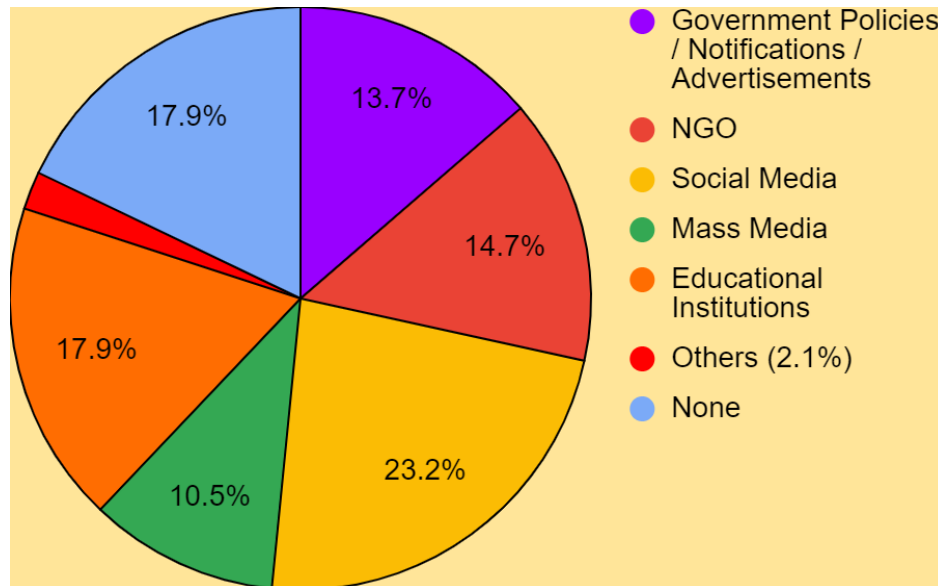
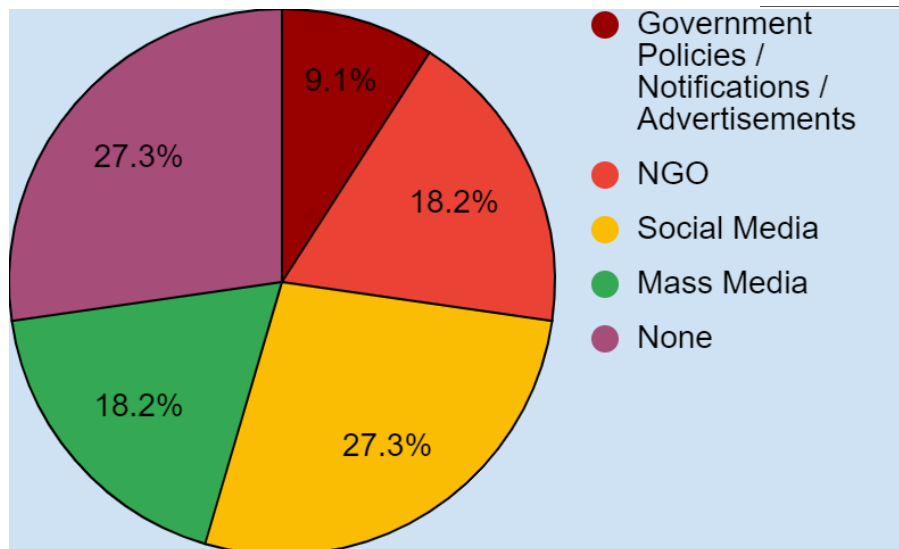


Chart 3.9 Opinion of the participants from India about the source through which they get information regarding potential value of recycled wastewater for sustainable practices



The above chart shows that the 23.2% participants from India believe that social media majorly spreads awareness of the potential value of recycled wastewater for sustainable practices. Another 17.9% are of the opinion that none of the agencies help in spreading awareness amongst the people regarding the potential value of recycled wastewater for sustainable practices. 17.9% are indicating that the information comes from educational institutions. 14.7% are of the opinion that various NGOs contribute to spreading the awareness in their area. Also another 13.7% believe that government policies/notifications/advertisements help in making people aware of the importance of recycling wastewater. 10.5% believe that mass media also contribute in making people aware about these sustainable practices. 2.1% even believe that none of the institutions are involved in this cause. Therefore from the chart we can conclude that the majority of the participants are indicating that social media is the main source in spreading awareness amongst people regarding the potential value of recycled wastewater for sustainable practices or none of the institutions are involved in this cause.

Chart 3.10 Opinion of the participants from out of India about the source through which they get information regarding potential value of recycled wastewater for sustainable practices



The above chart shows that the 27.3% participants from out of India also believe that social media majorly spreads awareness of the potential value of recycled wastewater for sustainable practices. Another 27.3% are of the opinion that none of the agencies help in spreading awareness amongst the people regarding the potential value of recycled wastewater for sustainable practices. 18.2% are indicating that the information comes from mass media. 18.2% are of the opinion that NGOs contribute to spreading the awareness in their area. Also another 9.1% believe that government policies/notifications/advertisements help in making people aware of the importance of recycling wastewater. Therefore from the chart we can conclude that the majority of the participants are indicating that social media is the main source in spreading awareness amongst people regarding the potential value of recycled wastewater for sustainable practices or none of the institutions are involved in this cause.

Chart 3.11 Consolidated Country Wise

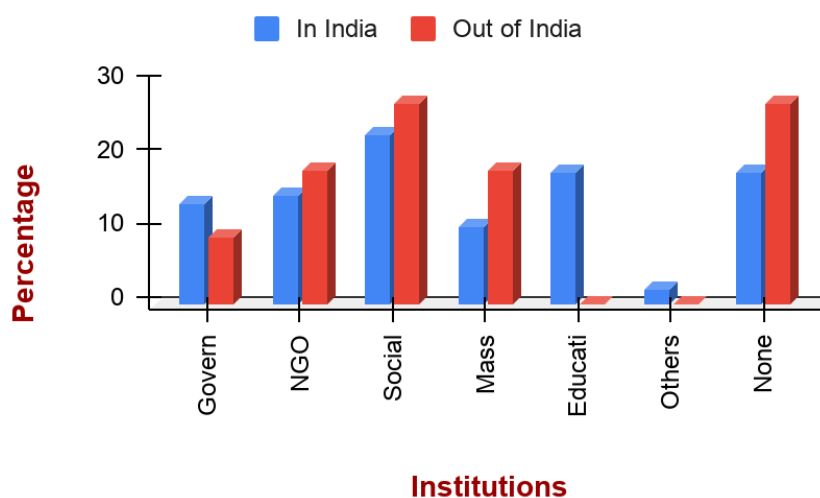
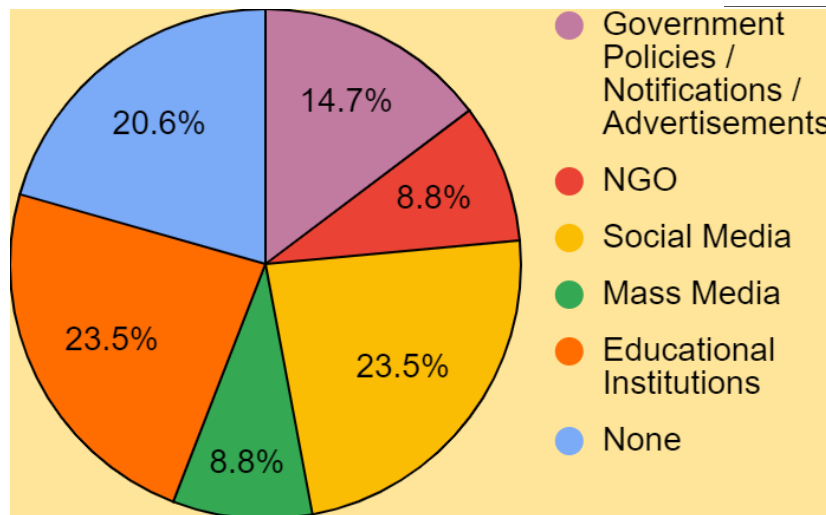
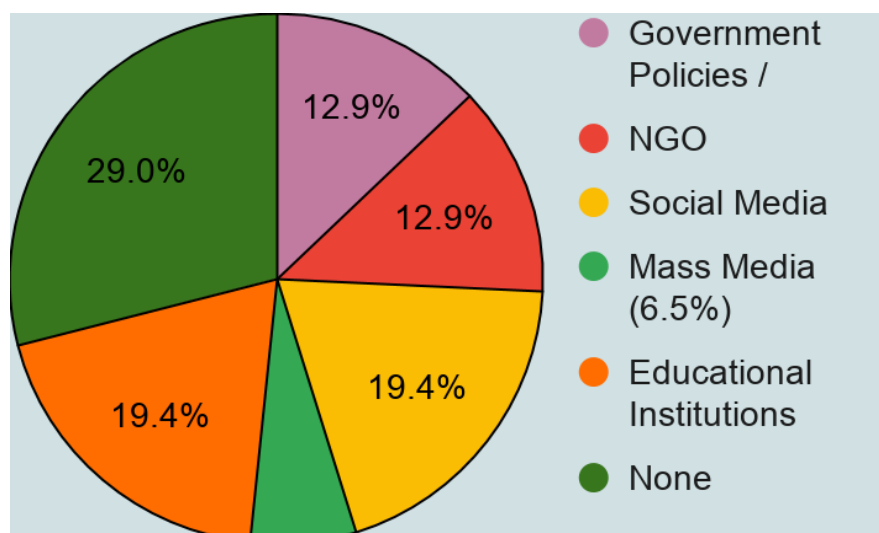


Chart 3.12 Opinion of the participants below 18 years & 18 - 30 years of age about the source through which they get information regarding potential value of recycled wastewater for sustainable practices



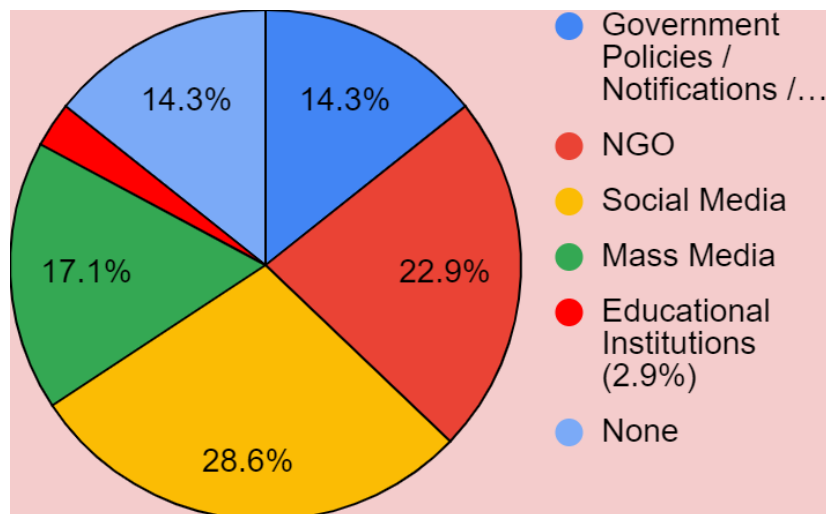
The above chart shows that the 23.5% participants below 18 years and 18-30 years indicate that social media majorly spreads awareness of the potential value of recycled wastewater for sustainable practices. Also another 23.5% are of the opinion that educational institutions help in spreading awareness amongst the people regarding the potential value of recycled wastewater for sustainable practices. 20.6% are indicating that the information comes from none of the institutions. 14.7% are of the opinion that government policies/notifications/advertisements contribute to spreading the awareness in their area. Also 8.8% believe that NGOs help in making people aware of the importance of recycling wastewater. 8.8% believe that mass media also contribute in making people aware about these sustainable practices. Therefore from the chart we can conclude that the majority of the participants are indicating that social media and educational institutions are the main source in spreading awareness amongst people regarding the potential value of recycled wastewater for sustainable practices or none of the institutions are involved in this cause.

Chart 3.13 Opinion of the participants 31 - 45 years of age about the source through which they get information regarding potential value of recycled wastewater for sustainable practices



The above chart shows that the 29% participants from 31 - 45 years indicate that none of the institutions help in spreading awareness of the potential value of recycled wastewater for sustainable practices. Also another 19.4% are of the opinion that educational institutions help in spreading awareness amongst the people regarding the potential value of recycled wastewater for sustainable practices. 19.4% are indicating that the information comes from social media. 12.9% are of the opinion that government policies/notifications/advertisements contribute to spreading the awareness in their area. Also 12.9% believe that NGOs help in making people aware of the importance of recycling wastewater. 6.5% believe that mass media also contribute in making people aware about these sustainable practices. Therefore from the chart we can conclude that the majority of the participants are indicating that none of the agencies help in spreading awareness amongst people regarding the potential value of recycled wastewater for sustainable practices or none of the institutions are involved in this cause.

Chart 3.14 Opinion of the participants 46 - 60 years and above 60 years of age about the source through which they get information regarding potential value of recycled wastewater for sustainable practices

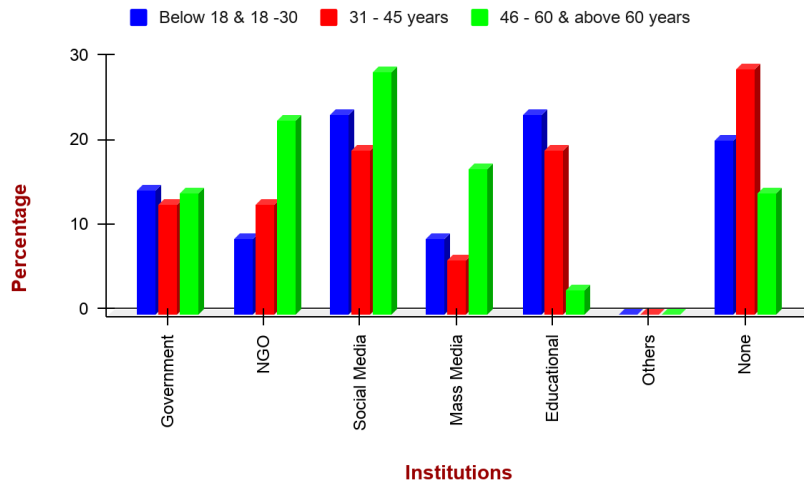


The above chart shows that the 28.6% of the participants from 46-60 years and 60 above believe that social media majorly spreads awareness of the potential value of recycled wastewater for sustainable practices. Another 22.9% are of the opinion that NGOs help in spreading awareness amongst the people regarding the potential value of recycled wastewater for sustainable practices. 17.1% are indicating that the information comes from mass media. 14.3% are of the opinion that they receive updated information from government policies/notifications. Another 14.3% believe that none of the agencies in their area actively participates in this cause. 2.9% are of the opinion that educational institutions are involved in spreading the awareness in their area. . Therefore from the chart we can conclude that the majority of the participants are indicating that



social media is the main source in spreading awareness amongst people regarding the potential value of recycled wastewater for sustainable practices or none of the institutions are involved in this cause.

Chart 3.15 Consolidated Age Wise





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PART 5

RESEARCH FINDINGS

Following are the major research findings:

- It was observed that the majority of the participants in different categories that is educational qualifications, gender, country and age groups are of the opinion that none of the institutions like Government, NGOs, and Societies etc. are implementing the provision of recycling the sewage water.
- The analysis of data indicates that the majority of the participants in different categories that is educational qualifications, gender, country and age groups are aware that recycled water is cost friendly than fresh/potable water provided by the government.
- It was observed that the majority of participants of different educational qualifications, gender, country and age groups are of the opinion that social media plays an important role in spreading the awareness amongst the people regarding potential value of recycled waste water for sustainable practices. Whereas graduates participants are of the opinion that educational institutions actively participates in the cause of spreading awareness about potential value of recycled waste water for sustainable practices. Also the age group 31 to 45 years believed that none of the institutions are working towards this cause.



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PART 6

DISCUSSION, RECOMMENDATIONS AND CONCLUSION

“The interlinkages and integrated nature of the Sustainable Development Goals are of crucial importance in ensuring that the purpose of the new Agenda is realized.” Transforming Our World: The 2030 Agenda for Sustainable Development

Ensuring clean and safe drinking water for all by 2030 needs many action oriented initiatives where the outcomes are seen clearly. Also there are many other requirements such as infrastructure, funds and proper awareness among the people with respect to hygiene which also need immediate attention. Appropriate measures and initiatives to protect the water bodies is another challenge which need to handle with proper planning and execution.

In the report on, ‘Water and sanitation Interlinkages across the 2030 Agenda for Sustainable Development’ by UN Water, some of the key messages are:

- There is a dynamic, two-way interdependence between Goal 6 targets and every other Goal. It is vital that the interlinkages are well understood and managed to achieve the social, economic and environmental dimensions of the 2030 Agenda.
- The majority of interlinkages between the targets under Goal 6 and other targets across the 2030 Agenda are mutually reinforcing. Harnessing these synergies will facilitate the implementation and achievement of the respective targets.
- To be truly transformative, the targets under each Goal must be implemented in an integrated fashion. Integration enables any potential conflict within and between Goals to be managed, thus ensuring the sustainable management of natural resources, and sustainable social and economic development.

When we analyze the key messages we realize that all the UN SDGs are interconnected and interrelated. So we need to understand this interwoven nature to foster innovations and policies that can make institutions and individuals take active part in spreading the message effectively about safeguarding and using water diligently. This type of collective action is the need of the hour. The integrated approach is going to help the organizations and individuals immensely to confront the challenges and to resolve the conflicting situations and issues. Collectively we have to work towards gaining productive achievements.



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In the entire journey of achieving UN Sustainable Development Goals one of the very crucial aspects is involving educational institutions and the young learners to take actions which can contribute immensely in the future. Developing countries need to think about it seriously and act accordingly.

Therefore some of the recommendations are as follows:

- Awareness programs in educational institutions about UN SDGs
- Encouraging teachers to incorporate various SDGs in the teaching learning process which will help in creating wider awareness among the teachers and the learners.
- Educational institutions should be encouraged to conduct research on the various dimensions and initiatives of UN with respect to SDGs at local, national and international level.
- Organizing and promoting Competitions and programs with reference to SDGs in the educational institutions like Poster Making, Slogans, Street Plays, Debate, Round Table Deliberations, Depicting messages about SDGs through various forms of art etc.
- Research on recycling of water and purification of water for the sustainable development is the need of the hour and hence more young learners could be involved and encouraged to work towards achieving the goal of providing clean and safe water to all by 2030.

Conclusion

Young generation is ready to act and change but there is a need to orient them with the purpose in mind and what are the outcomes that are expected. More we discuss and deliberate about it, the more it will be beneficial to the nations in the world. Also we need to systematically examine the SDGs and issues related to it which surely will have an impact.



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Part 7 References

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Clean_Water_and_Sanitation_for_All](https://www.researchgate.net/publication/339401692_A_Note_on_SDG_6_-_Clean_Water_and_Sanitation_for_All)
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