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The Awareness Levels of Environmental Conservation Practices Among the Media Users: The Perception of Climate Effectuated Residents of Pakistan

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Abstract

Environmental Change is a significant global issue, and the media is one of the main sources of information about environmental change awareness. This study aims to investigate the media users understanding of environmental conservation methods in Khyber Pakhtunkhwa's Malakand Division. This study is quantitative in nature, and survey data collection was used. A simple random sampling method was used to gather data from 446 media users in the Malakand Division's Dir Lower, Malakand, Swat, Bajaur, and Chirtal districts. To determine a representative sample, the sample was computed using an online sample calculator. Data was examined using both descriptive and inferential statistics using the Statistical Package for Social Sciences (SPSS). It has found that the majority of the residents of Malakand division consumed time with different media for awareness about environmental issues but social media is the most effective source of information and awareness regarding environmental issues. The Chi-square test results confirmed the relationship between media exposure and environmental conservation practices significantly with *P value, 0.001*. The findings of Chi-Square *p-value of.029* also disclosed that there is a strong correlation between environmental conservation practices and social media as compare to television. Additionally, the relationship test also supported the assumption the television is more effective about environmental conservation practices awareness and public opinion change than print media with *P value, 0.003*. It is recommended that public should actively participate in environmental conservation discourse through awareness campaigns. The media outlets to prioritize environmental issues and enhance coverage through dedicated segments; investigative reporting; and feature articles to raise awareness, similarly, the government should focus on policy integration and brought up legislative reforms for environmental conservation and biodiversity protection

Keywords: Environmental conservation practices, Media awareness, Media Users, Malakand Division, KP, Pakistan

Introduction

The world we live in is a beautiful and complex ecosystem, where every living thing is interconnected. However, human activities have put tremendous strain on this delicate balance, leading to environmental degradation at an alarming rate. As David Attenborough, the renowned naturalist, once said, "We are the first generation to feel the impact of climate change and the last generation that can do something about it" (Watch David Attenborough: A Life on Our Planet | Netflix Official Site, n.d.). This underscores the urgency of environmental conservation efforts.

Our planet faces numerous environmental challenges, from deforestation and loss of biodiversity to pollution and climate change. The consequences of these challenges are far-reaching, affecting not only the natural world but also human health, livelihoods, and economies. The world health organization approximations shows that each year, nearly seven millions premature deaths are the results of air pollution. (Air Quality Database 2022, n.d.). Such statistics highlight the critical need for immediate action to protect our environment.

Environmental conservation aims to preserve and restore the integrity of ecosystems, ensuring that they can continue to support life in all its forms. It involves various strategies, including habitat preservation, sustainable resource management, and pollution control. Conservation efforts are often interdisciplinary, drawing upon insights from ecology, biology, economics, and social sciences. Collaboration between scientists, policymakers, businesses, and communities is essential for developing effective conservation initiatives that address the complexities of environmental issues (Conservation, 2020).

Environment conservation means looking after nature and the resources it provides. This includes keeping ecosystems healthy, protecting wildlife, and making sure we don't harm the planet. It's really important because it helps keep a wide variety of plants and animals alive, tackles climate change, and ensures a good future for people and the Earth. When we work to conserve nature, we stop habitats from being destroyed, protect animals and plants that are at risk, and keep ecosystems in harmony. By using natural resources wisely, we can stop the environment from getting worse, cut down on pollution, and support ways of living that last a long time without hurting the planet (Carvalho P, 2023).

What comes after the disasters made by man on the nature is the practice to save it and reduce the impact. Here is a point where environment conservation comes into action. The environment conservation involves all the practices and action we take to preserve the environment and manage the natural resources. The ultimate goal is to ensure a natural balance of environment without damaging it any further (Saxena, H. M., 2017).

One of the key principles of environmental conservation is the precautionary approach, which emphasizes taking precautionary action about the potential harm caused by human activities in the situation of uncertainty. This principle underscores the importance of acting swiftly to mitigate environmental threats, even if the full extent of their impacts is not yet fully understood. By adopting a precautionary mindset, we can avoid irreversible damage to ecosystems and safeguard the welfare of contemporary and upcoming generations (Kriebel et al., 2001).

Furthermore, environmental conservation is closely linked to sustainable development because environmental conservation is important to fulfill the need of present without bargaining future generation ability to meet their needs (Rockefeller, n.d.).

Need for Environment Conservation

The degradation of our environment poses significant challenges to both the natural world and human societies. Deforestation, pollution, and climate change are just some of the pressing issues we face today. These problems not only threaten the existence of uncountable plant and animal species but also endanger human health and well-being. For example, harmful pollutants into the air are released due to burning of fossil fuel, leading to respiratory problems and other health issues (Carvalho, 2023). Such consequences underscore the critical importance of prioritizing environmental conservation.

Environmental conservation encompasses a range of practices aimed at preserving and restoring the integrity of ecosystems. This includes efforts to protect biodiversity, conserve natural habitats, and promote sustainable resource management. By conserving our environment, we can ensure the continued provision of essential ecosystem services, including fertile soil, fresh water and hygienic air, which are important for supporting life on Earth (5 Reasons Why Environmental conservation is so important, 2023). Additionally, conservation initiatives help to alleviate the effects of environment change and enhance resilience to environmental threats.

The rapid degradation of Earth's environment due to unsustainable agriculture, urbanization, and industrialization, leading to threats like climate imbalance, public health risks, and biodiversity loss. It emphasizes the urgent need for environmental conservation, focusing on MDG-7 of the Millennium Development Goals (MDGs). MDG-7 targets to safeguard environmental sustainability by integrating sustainable development policies and principle, reducing biodiversity, improving access to sanitation and clean drinking water and reversing resource loss (Narayana et al., 2015).

Environment Destruction and Conservation Practices in Pakistan

The environmental challenges are widespread, every single state is under its threat and Pakistan is one of them. The effects of environment destruction on societies across the biosphere are a worldwide phenomenon. According to Javed et al. (2020), Pakistan is now extremely susceptible owing to environmental challenges. According to Choudhry (2016), Climate change is currently one of Pakistan's biggest problems as it is an agricultural society. Pakistan is placed in topmost eight states of the world which are tremendously vulnerable to climate changes.

Being an agricultural state, Pakistan's economy and infrastructure is largely based on the environmental products. From cultivation to the wood resources and more, the country is highly depending on the environment. These operations and processes are impacting climate in a diverse manner. Where the 20% of the Pakistani land is aggressively utilized for agriculture, there is only 4% of it is covered with the forests. Almost 90% of country's agriculture relies on irrigation system which calls for a bigger and better management. However, poor management and organization of resources are causing a reduction of up to 40% in the overall productivity. On the other hand, its damaging the environment too (Pakistan & and, 1998).

Pakistan is among the most effected states from environmental change despite the fact that it has very low contribution in greenhouse gases. Among the countries that are the top

contributors of CO₂, Pakistan acquires 135th position (Naseer, 2013), and regrettably ranks 7th in terms of climate change hazard (Global Climate Risk Index, 2017). Pakistan is particularly vulnerable to climatic changes due to the fact that it is situated in regions where air temperature is thought to be greater than the world average temperature (IPPC, 2007A).

By 2035, it is anticipated that Pakistan's glaciers would have melted, which will have a severe effect on the flow of clean water. The majority of the country's economy is centered on agriculture, which accounts for 21% of its GDP (Naseer, 2013). The economy of Pakistan is highly reliant on agriculture, which accounts for 4/5 of all irrigated arable land in South Asia. The state is highly vulnerable to both indoor and outdoor air pollution, in addition to its risk of flooding and hunger due to famine (Shakoor et al., 2011).

Statement of the problem

Media plays a pivotal role to educate people and government officials to protect and keep natural resources in the interest of upcoming generation which in climatic disorder. This purpose of sustainable progress will be achieved by taking care of the atmosphere in a rational consumption of natural assets. The rich and poor countries both have equal stake this stewardship of the earth (Sonwalkar, 2002).

It has been observed that Pakistani media outlets such as other issue of the country do not cover environment conservation. The researcher in this research study examined the impact of media's agenda setting for educating general community about climate change and practices for environmental conservation. Study aims to explore the environmental conservation practices by the media users as the agenda setting theory argues that media play a crucial part in shaping public opinion about a particular subject. It is the procedure of presenting particular subjects prominently and frequently. Agenda setting is a crucial aspect of the media role in determining communal perception and understanding of environmental damages leading to the need for its conservation and preservation. However, the extent to which agenda setting influences public awareness, understanding of climate change and encourage to participate in environmental conservation is not fully understood. Therefore, the problem that this research aims to address that what is the agenda setting role in climate change awareness, how does it influence public perception of environmental change and conservation practices?

Objectives of the study

The objectives of this study include:

- To investigate the role of media in spreading awareness about environmental change and conservation practices
- To examine how media impact its users to practice environmental conservation
- To draw the relationship between media reporting and public's environmental conservation practices in Pakistan.

Hypothesis

H1: The More media give coverage to environmental change issue, the more public will get awareness.

H2: The public get more awareness regarding environmental change due to more coverage of social media as compare to television.

H3: It is more likely that television is more effective about environmental change awareness and public opinion change than print media.

Literature Review

Environmental conservation and management involve the sustainable utilization and preservation of natural resources to maintain ecological balance and safeguard biodiversity. It encompasses a range of practices aimed at minimizing human impact on the environment while ensuring its long-term viability. Conservation efforts include protecting endangered species, preserving habitats, reducing pollution, and promoting sustainable development practices. Management strategies focus on implementing policies, regulations, and initiatives to address environmental challenges effectively to achieve a healthy and resilient planet for future generations (Mishra, 2021).

Conservation practices offer numerous environmental benefits, including the preservation of biodiversity, protection of natural habitats, and mitigation of climate change. By safeguarding ecosystems and reducing deforestation and habitat destruction, conservation efforts help maintain critical habitats for wildlife. Additionally, conservation practices contribute to carbon sequestration, soil conservation, and water quality improvement, ultimately fostering healthier ecosystems and enhancing resilience to environmental threats. These benefits support overall environmental sustainability and the well-being of both ecosystems and human communities (Mausbach & Dedrick, 2004).

Considering the importance of the environmental conservation practices, there are numerous implications to control the consequences of brutal environmental exploitation practices. To mediate the impact, the awareness and implementation of conservation practices lacks the efficiency. A study about the policies and practices of environmental protection and conservation at Ankara hotels revealed the lack of attributes relevant to standard guidelines. The hotel managers lack the essential environmental knowledge. They were least interested to encounter the elementary aims of environmental and social responsibility (Erdogan & Baris, 2007).

Connecting land managers and environmental conservation experts is crucial to effectively address climate change. By fostering strong communication channels, land managers can access expert knowledge and guidance on implementing sustainable land management practices. This collaboration promotes the adoption of strategies to mitigate climate change, such as reforestation, soil conservation, and sustainable agriculture. Additionally, it enables land managers to adapt to changing environmental conditions by integrating resilience-building measures into their land management approaches. Ultimately, this partnership enhances the collective capacity to combat climate change and protect ecosystems for future generations (Delgado et al., 2011).

Global Warming, Environment Change & Media Reports

Global warming is gaining attention among the masses due to its high rate of impact on the lives and environment. Though there is a little research found on the issue but a study of Toronto and Chicago in spreading awareness towards the global warming by agenda setting and taking it into account show some positive results. It reflects that both cities have started policy

making against the global warming on a common model (Lambright, Changnon, & Harvey, 1996).

The Environment change issue was reported for the first time in mass media in 1930s when the New York Times wrote that the globe must be unavoidably altering both its appearance and its Environment, it has been thought about how the transformation is slowly occurring and what the outcome will be (New York Times 1932, 4). In the 1950s, the media started talking more clearly about how humans are causing Environment change. For example, the Saturday Evening Post published a story called “Is the World Getting Warmer?” by Abarbanel and McClusky. It looked at how changes in the Earth's temperature, agriculture, and rising sea levels are connected (Abarbanel and McClusky, 1950).

The rapid increase in the after effects and impact of the global warming, the need for adaptation policies raised. The study of 2012, spot light on the development of multi-level adaptation policy window for global warming in Italy, Finland, Sweden and United kingdom. It concludes that the national and sub-national streams are playing their part in the promotion of policy windows for Environment change and public awareness as well. Media reports related to Environment events are significantly playing a role in bringing the issue to light. It's not only making the general public aware of what's happening but bringing the issue to policy makers attention as well. The issue is widely highlighted in UK, Sweden and Finland however in Italy, it's still an underdog by 2012 (H. Keskitalo, Westerhoff, & Juhola, 2012).

For the New York Times in 1956, Waldemar Kaempffert penned the following: "Today, man-made technological innovations produce more carbon dioxide than geysers, hot springs and volcanoes combined. Man is causing the atmosphere's carbon dioxide content to rise by 30% every century, or 1.1 degrees Celsius, each century. The observation that the global average temperature has increased at around this rate since 1900 may be an accidental coincidence. The likelihood that man played a role in the ascent, however, cannot be excluded (Kaempffert 1956, 191).

In 2009, the attention given to Environment change increased by 50% because of two main reasons: The Climatic Research Unit email dispute and the United Nations Environment Change Conference. Additionally, the Media and Environment Change Observatory team at the University of Colorado Boulder discovered that in the year 2017, media coverage of Environment change and raise in global temprature varied over time. The month of June received the highest amount of global media coverage on both topics.

The way the media talks about Environment change has changed over time. In the past, a lot of research which was oriented on understanding how Environment change disturbs the biosphere. However, nowadays, people who use the media and read newspapers are not as interested in learning about it even there is very high non-existence of basic acquaintance of the science that causes the 99% consensus among Environment scientists. It is clear, uncomplicated, and visible how powerful media is and how it should be treated.

In today's globalized society, the media—whether it be television, the newspaper, or online—play a vital and crucial role in updating the people about events occurring all over the world, even beyond the star galaxies. In most situations, such as Environment change, where the

general public lacks firsthand information or experience of what is occurring around, it is especially reliant on the media to tell them about that striking issue

Media setting the agenda to Promote Environment Conservation Practices

This study is a predecessor in Malaysian Environment change awareness research. This research concentrates on the awareness and impact of Environment change among Malaysian youth, with a particular emphasis on gender inequalities. According to a survey of 200 students, the media has an vital role in promoting awareness. Male respondents emphasized Environment change's physical impact, whereas females emphasized its psychological impact. The findings can assist policymakers comprehend young citizens' perceived understanding of Environment change concerns and launch measures to solve them (Rahman et al., 2014).

The aim of this study is to identify the major flaws in Environment change media communication and to discuss potential solutions. It examines 1609 news stories published in five European nations between 2017 and 2018. The findings suggest that European media frequently utilizes remote and result framings, ignoring civil society's participation in Environment change adaptation. As a result, there is widespread social apathy and disengagement from environmental issues. Evidence-based approaches to enhancing Environment change media communication will be discussed. (Tavares et al., 2020).

This research focuses on the evolution of Environment change adaptation in 4 European countries: Italy, Sweden, Finland and the united kingdom using John Kingdon's theory of agenda setting. It demonstrates that the United Kingdom has opened a multi-level adaptation policy window; Finland and Sweden have created adaptation at the national and municipal levels, while Italy is still on the table. (Keskitalo et al., 2012)

Theoretical Framework

The agenda setting theory is extremely applicable to this study. According to this theory, the media can have an impact on the issues and subjects that the general public views as significant and deserving of attention. The agenda setting hypothesis aids in our comprehension of how media coverage significantly influences public perception and concern about climate change awareness. News organizations may successfully set the agenda for public conversations and actions by emphasizing environmental conservation practices related topics. Researchers may thus investigate how media coverage affects public perceptions in relation to environmental conservation practices by investigating the agenda-setting function in environmental conservation practices awareness, eventually helping to solve this global issue.

Research Methodology

This study is quantitative in nature. Quantitative research is based on statistical procedure and tools giving result in the form of numbers, digits and facts. According to Aliaga and Gunderson (2000) Quantitative research is 'Explaining phenomena by collecting numerical data that are analyzed using mathematically based methods, in particular statistics.

For the current study quantitative research methodology fits as the purpose is to collect, interpret and analyze data in numbers from the respondents. The researchers are not evaluating how mass media is presenting its awareness programs on environmental conservation. Instead its

focusing how the media users are perceiving the information and using it. To evaluate from the end of media users, it's essential to know their side of story with facts and quantitative figures.

Additionally, the researchers used cross sectional survey design. In Cross sectional study data is collected only single time from the respondents. The researchers collected data only once from the selected districts of Malakand Division. While longitudinal survey is, time consuming which is not suitable for the researcher due to the degree time requirement.

The researchers collected data by two-stage sampling method. In first stage, the area was divided in clusters on the bases of districts including Malakand, Lower Dir, Upper Dir, Bajaur, Chitral Upper, Chitral Lower, Swat, Buner and Shangla, while data was collected from the districts including Malakand, Lower Dir, lower Chitral, Bajaur and Swat. In the second stage, data was collected by simple random sampling.

The sample was 500 respondents of districts Dir Lower, Malakand, Swat, Chitral and Bajaur (100 from each district). After conducting the survey, total 446 respondents participated in the survey including 100 from bajaur, 100 from dir lower, 80 from chitral, 83 from Malakand and 83 from Swat. The response rate was 89.2%. It was assumed that the researcher will face hurdle in collecting responses from district chitral and district bajaur for being far flung and mountainous areas and lack of communication technologies infrastructure and availability of internet but unexpectedly, 100 respondents fill the survey from bajaur while from district swat and malakand, which have comparatively a better broadband access and the education ratio is higher than bajaur, the target 100 responses didn't fullfilled.

Moreover, the researchers used a self-developed questionnaire as a tool for the collection of data. The questionnaire was based on objectives, research questions and hypotheses. A pilot study was conducted to find the reliability of the questionnaire and distributed it among 200 respondents. The questionnaire was refined under the reviews of the respondents on different questions in the questionnaire to find reliable and valid response. The final questionnaire was distributed among the respondents by online and face to face method among 500 respondents. The survey was started on Nov 17, 2023 and completed in Jan 13, 2024, while the data collected was analyzed through the software SPSS. The researchers applied descriptive and inferential statistics to reach the conclusion. A chi-square tests were applied for relationship between media agenda and awareness level of environmental conservation practices.

Results and Discussion

Table 1 Gender of the Respondents

	F	%
Male	404	90.6
Female	40	9.0
Prefer not to say	2	.4
Total	446	100.0

The table 1 shows the gender distribution of the respondents that 90.6% were male, 9% were female and .4% among them were reluctant to show their gender.

Table 2 Distribution of the Respondents on the basis of Districts in which they live

	F	%
Bajaur	100	22.4
Chitral	80	17.9
Dir Lower	100	22.4
Malakand	83	18.6
Swat	83	18.6
Total	446	100.0

The table 2 show the distribution of the participants among the districts which they belong to. It shows that 22.4% respondents belong to district Bajaur, 22.4% to Dir Lower, 18.6% to Swat, 18.6% to Malakand, and 17.9% to Chitral.

Table 3 Time Respondents spend on using Media

	F	%
Less than hour	36	8.1
1 to 2 hours	113	25.3
3 to 4 hours	197	45.2
Above	100	22.4
Total	446	100

The table 3 shows that 45.2% of the respondents spend 3 to 4 hours on using media, 25.3% spend 1 to 2 hours on media,

22.4% spend more than 4 hours on Media while 8.1% less than an hour on media.

Table 4 Type of Media Respondents exposed to for environmental issues

	F	%
Newspaper	18	4
Magazine	2	.4
T.V	28	6.3
Social Media	398	89.2

Total	446	100.0
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Table 4 shows that 89.2% respondents use Social Media for environmental issues, 6.3% use T.V, 4% of the respondents use Newspaper, and 0.4% use Magazines.

Hypotheses Results

H1: The more media give time to environmental conservation practices, the more the public will get awareness.

Table 5: Association between exposure to media contents and environmental conservational practices

Chi-Square Tests

	Value	df	Asymptotic Significance (2- sided)
Pearson Chi-Square	8.548 ^a	6	.001
Likelihood Ratio	8.563	6	.000
Linear-by-Linear Association	.905	1	.341
N of Valid Cases	446		

a. 1 cells (8.3%) have expected count less than 5. The minimum expected count is 4.44.

The Pearson chi-square statistic is 8.548 with 6 degrees of freedom (df). The p-value, or asymptotic significance (2-sided), is .001. This indicates that there is a statistically significant association between the variables. The chi-square statistic was used to investigate the hypothesis about the relationship between media exposure time and knowledge of environmental conservation techniques. The p-value for the computed chi-square value, which was 8.548, was 0.001. It is determined that there is a statistically significant correlation between media exposure duration and knowledge of environmental conservation techniques since the p-value is smaller than the traditional significance criterion of 0.05. As a consequence, the data point to a link between exposure duration and awareness levels, supporting the null hypothesis.

H2: The public get more awareness regarding environmental conservation practices due to more coverage of social media as compare to television.

Table 6: Association between Coverage of media and environmental conservational practices

Chi-Square Tests

	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	10.777 ^a	4	.029
Likelihood Ratio	10.982	4	.027
Linear-by-Linear Association	3.240	1	.072

N of Valid Cases 446
 a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 18.57.

The findings of the chi-square analysis contrasting the influence of television and social media on popular knowledge of environmental conservation measures. According to the findings, there is a statistically significant difference between the two media outlets' effects on public awareness. There is a strong correlation between the kind of medium (social media or television) and public knowledge of environmental conservation techniques, as indicated by the Pearson Chi-Square value of 10.777 with 4 degrees of freedom (df) and a p-value of .029.

The findings suggest that social media might be a more potential tool than television in raising public awareness of environmental conservation measures. However, more investigation might be required to completely comprehend this relationship's nature.

H3: It is more likely that television is more effective about environmental conservation practices awareness and public opinion change than print media.

Table 7: Association between exposure to TV contents with other media and environmental conservational practices

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.877 ^a	4	.003
Likelihood Ratio	8.727	4	.002
Linear-by-Linear Association	5.531	1	.012
N of Valid Cases	446		

The efficacy of print and television media in influencing public opinion and raising public knowledge of environmental conservation methods is contrasted in this hypothesis. In terms of efficacy, the chi-square test findings indicate that there is a statistically significant difference between the two media kinds. There is a substantial correlation between the kind of media (print or television) and public knowledge of environmental conservation techniques, as indicated by the Pearson Chi-Square value of 8.877 with 4 degrees of freedom (df) and a p-value of .003. Based on the results, it recommends that television is a more effective medium than print media for changing public opinion and raising public awareness of environmental conservation behaviors.

Conclusion

The result of the study shows that the audience belongs to different groups on the basis of age, gender, area of residence etc., which means that there is a clear cut diversity among the respondents and consequently, there is also a diversity of opinion regarding the awareness of environmental conservation practices.

On the basis of the results, it is concluded that media plays a high role in shaping public opinion about environmental conservation practices. The majority of the people use social media and consider it an effective source of information about environmental issues.

Study concludes that the people are aware of the consequences of environmental change and they know that the environmental change has impacted their lives and their community. But they are not actively practicing the environmental conservation practices as there is a lack of awareness or information about these practices. It is evident that people are unaware of the common conservation practices and it appears to be a challenge for them to adapt alternative options of consuming natural resources better.

On basis of the results, it is evident that social media is the most effective medium for spreading awareness about environmental conservation practices which approves a research hypothesis that comes out to be significant which means that social media can be used as significant tool as it has wide range coverage, economical and does not require literacy. Comparing to the other types of media i.e. print and broadcast media, social media proves to be efficient and effective.

On contrary, media has the power to influence government policies related to environmental conservation practices. It has been inferred that if media set the agenda on environmental conservation, it can divert the attention of the policy makers to launch campaigns and awareness programs related to environmental conservation practices.

Previous literature claimed that radio is the most effective sources of information environmental and crisis communication but current study results gave a latest perspective. It claimed that radio has limited influence in/on government policies. It may be due remote and far flung geographic locality the radio access is limited or people do not consider radio as an effective source of information for their local issues as well as majority of the respondents are using social media for awareness regarding environmental issues in the Malakand Division.

Similarly, one of the study hypothesis also conclude that people get more awareness from social media regarding environmental issues comparing to the conventional media outlets. However, the conventional media outlets do have their participation of raising environmental awareness in Pakistan. Even at a smaller scale, it's still spreading awareness among the people about adapting environmental friendly practices.

Social media has the power to highly influence government policies on environmental issues as compare to television and print media in the area which can influence the government policies in this regard. Media users does have higher levels of awareness about environmental conservation practices. However, social media is the most powerful and active source for the people of Malakand to receive the awareness and motivation for the environmental conservation practices.

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