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A Comprehensive Study of Public Knowledge, Attitudes, and Perceptions towards National and Local Government Policies on Climate Change Mitigation, Adaptation, and Sustainability in Bangladesh: *Analyzing Socioeconomic, Environmental, and Cultural Impacts, Demographic Variations, Stakeholder Engagement, and Comparative Policy Evaluation.*

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Abstract

One of the major international issues affecting all countries is climate change. Bangladesh is extremely susceptible to climate-related calamities, thus developing and implementing successful climate change policies would require a sophisticated grasp of public attitudes about these measures. The efficacy of policies is impeded by gaps in public understanding, even in the face of government measures such as the National Adaptation Programme of Action (NAPA) and the Bangladesh Climate Change Strategy and Action Plan (BCCSAP). This study uses structured questionnaires disseminated to a variety of demographic groups to evaluate Bangladeshi attitudes, knowledge, and perceptions regarding climate policies. Results show that opinions vary by gender and geographical area, emphasizing the need for basic understanding of climate change but low policy-specific knowledge. People's confidence in NGOs and civil society organizations to address climate change is noteworthy, in contrast to their mistrust of government-led initiatives because of alleged corruption and inefficiencies. Strengthening frameworks for policy execution, encouraging political willingness, encouraging stakeholder involvement, and supporting grassroots initiatives are some of the main recommendations. These steps are intended to close knowledge gaps, enhance the implementation of policies, and guarantee inclusive climate action throughout Bangladesh's heterogeneous socioeconomic environment.

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***Keywords*:** Climate change policy, Public perceptions, Bangladesh, Policy effectiveness

Introduction

One of the most important worldwide issues of our day, affecting all nations, is undoubtedly climate change. For effective policy design and implementation in Bangladesh which is a country especially vulnerable to climate-related disasters(Toufique and Islam 2014) ,it is imperative to understand public knowledge, attitudes, and perceptions regarding climate change policy.

Millions of people in Bangladesh are at risk of losing their livelihoods due to increasing sea levels, cyclones, and frequent floods brought on by climate change(Afjal Hossain et al. 2012). The nation is among those most vulnerable to climate-related problems due to its geographic location and socioeconomic circumstances. The National Adaptation Programme of Action (NAPA) (Islam, Shaw, and Mallick 2013; Mallick and Rahman 2010) and the Bangladesh Climate Change Strategy and Action Plan (BCCSAP)(Yamin, Rahman, and Huq 2005) are two among the many steps the Bangladeshi government has made over the years to address these issues. Despite these initiatives, the public's knowledge, attitudes, and perceptions play a major role in how effective these policies are. Recent research indicates that a substantial public awareness and involvement gap still exists, which makes it difficult to successfully execute climate legislation(Ahmed and Roy 2015; Swapan 2016).

Though many strategies and regulations have been implemented to tackle climate change, little is known about how the Bangladeshi population views these initiatives(Hasan and Akhter 2011; Ullah, Abu HASAN, and Uddin 2013). Initiatives to combat climate change are hampered by this knowledge gap in terms of successful implementation. Policymakers cannot adjust their tactics to guarantee community support and engagement, which are essential for the long-term sustainability of climate policies, unless they have a good grasp of public perception.

By guaranteeing that all citizens' opinions are heard during the decision-making process, democratic participation promotes an environment where policies are more inclusive and representational(Michels 2011). Bangladesh has a lengthy history of democratic struggle(Maniruzzaman 1992), highlighting the significance of directly or indirectly involving the general public in decision-making processes. According to studies(Coleman and Gøtze 2001; Mettler and Soss 2004; Michels 2011), democratic engagement is essential for good public policy, and climate

change policy need to be at the forefront of this engagement. Public participation in climate policy debates not only gives the policies

legitimacy, but it also makes them more successful by bringing in a variety of viewpoints and local expertise. Second, in order to successfully execute global goals like those mentioned in the Paris Agreement, localization is necessary to make sure that these goals are adapted to local requirements and conditions(Mansuri and Rao 2013). Bangladesh, one of the most climate-vulnerable nations, is essential to achieving these international goals. Localized climate initiatives are essential for accomplishing larger sustainable development targets, according to the United Nations Development Programme (Graute 2016; Reddy 2016). This research will shed light on how Bangladesh may effectively localize global climate goals, guaranteeing that policies not only meet international norms but also tackle particular issues at the local, national, and community levels.. Lastly, the creation of successful and long-lasting policies depends on accurate data and knowledge of public opinion(Drews and Van Den Bergh 2016; Soroka, Stecula, and Wlezien 2015). Bangladesh's climate change policies have frequently faced implementation challenges as a result of low public awareness and engagement(Ayers et al. 2014, 2017). Studies show that extensive public perception studies increase the likelihood of policy success (Dalton 2013). By providing useful information on the knowledge, attitudes, and views of the Bangladeshi population, this study will help policymakers create more informed and popular climate solutions. In conclusion, this study's significance is underscored by its potential to enhance democratic participation in climate policy, localize global climate goals to address specific national challenges, and inform the development of more effective and sustainable policies through comprehensive public perception data.

Though many strategies and regulations have been implemented to tackle climate change, little is known about how the Bangladeshi population views these initiatives. Initiatives to combat climate change are hampered by this knowledge gap in terms of successful implementation. Policymakers cannot adjust their tactics to guarantee community support and engagement, which are essential for the long-term sustainability of climate policies, unless they have a good grasp of public perception. This study's main goal is to evaluate the public's knowledge, attitudes, and views on climate change policy in Bangladesh. The particular objectives are consist of:

- To evaluate the level of knowledge about climate change and related policies among different demographic groups.
- To identify the attitudes and beliefs held by the public

regarding the effectiveness and necessity of these policies.

- To analyse the perceptions of the public about the role of government and other stakeholders in addressing climate change.
- To recommend actionable policy changes based on the findings to enhance public engagement and effectiveness of climate change policies in Bangladesh.

The goal of this study is to offer a thorough grasp of Bangladeshi perceptions of climate change policies. By tackling these goals, the study will help in the creation of more inclusive and successful climate plans that appeal to the general people and encourage increased community participation in the fight against climate change.

Methodology

Study Design: To evaluate the public's knowledge, attitudes, and views of climate change policy in Bangladesh, a cross-sectional study design was utilized. This method made it possible to gather data at a certain moment in time, giving an overview of public sentiment.

Data Collection:

- **Population and Sampling**: To ensure comprehensive representation, the study population was composed of adults who were at least 18 years old and came from a variety of socioeconomic backgrounds living in both urban and rural parts of Bangladesh. In order to guarantee equitable representation from both urban and rural areas, sampling was stratified, with districts and sub-districts serving as the main sampling units for variance in geography.
- **Sample Size:** A sample size of 100 was determined using statistical methods to achieve a representative sample, allowing for generalization of findings with a specified level of confidence.
- **Questionnaire Development:** A structured questionnaire was developed based on research objectives and a comprehensive literature review. It included closed-ended questions to assess knowledge levels and attitudes towards climate policies, as well as open-ended questions to capture nuanced perceptions and beliefs.

Data Collection Period and Methods: Data collection spanned from March 2019 to May 2019, utilizing both online and in-person surveys to reach a diverse respondent base across Bangladesh.

- **Online Collection:** Surveys were distributed via online platforms,

leveraging social media, email lists.

- **In-person Collection:** Two Trained enumerators conducted surveys in identified locations, particularly in rural areas with limited internet access, to ensure inclusivity.

Data Management and Analysis:

- **Data Entry and Cleaning:** Responses were systematically entered into a digital database for secure storage. Thorough cleaning and validation processes were implemented to ensure data integrity.
- **Quantitative Analysis:** Descriptive statistics (e.g., frequencies, percentages) were utilized to analyze demographic characteristics, knowledge levels, and attitudes towards climate policies.
- **Qualitative Analysis:** Content analysis was uses to identify themes and patterns in open-ended responses, offering deeper insights into public perceptions of policy effectiveness and government roles.

Ethical Considerations:

- **Informed Consent:** Participants were provided with claer informations about the study's purpose and procedures, ensuring voluntary participation and informed consent.
- **Confidentiality:** Throughout the investigation, precautions were taken to maintain the confidentiality and identity of the respondents.

Reporting Findings:

- **Interpretation:** Results were interpreted within the context of research objectives and existing literature, providing insights into public perceptions of climate change policies in Bangladesh during 2019.
- **Recommendations:** Actionable policy recommendations were formulated based on study findings to enhance public engagement and the effectiveness of climate change policies, addressing identified gaps and opportunities.

The Bangladeshi public's knowledge, attitudes, and views of climate change policies in 2019 were thoroughly examined using a methodical and rigorous approach, which added significant value to the field of climate policy research.

Analysis

The demographic profile of the respondents is presented at the beginning of this chapter, followed by an analysis of each question that was asked of the participants and their responses. Here, the solutions are shown utilizing a range of visualization methods, such as bars, charts, and graphs. The

purpose of this section is to summarize the findings without making any attempt to analyze or interpret them, and to provide some direction for the discussion chapter.

Demographic Profile of Respondents

It is crucial to know the respondents' demographic makeup. It is also excellent academic practice to display the profiles prior to analyzing the respondents' responses, as this helps the reader and research better grasp the unique background and features of the respondents, which are closely related to the study.(KELLEY et al. 2003)

Demographic Profile of Respondents

Variables	Classifications	Frequency	Percentage
Age			
	<19	28	28
	19-25	23	23
	26-30	37	37
	31-40	12	12
	Total	100	100
Gender			
	Male	38	38
	Female	62	62
	Total	100	100
Area Type			
	Rural	37	37
	Urban	63	63
	Total	100	100
Educational level			
	Bachelor	64	64
	Masters	36	36
	Total	100	100
Employment			
	Unanswered	20	20
	Employed	28	28
	Unemployed	52	52
	Total	100	100

Table 1: Demographic Profile of Respondents

Figure-1: Familiarity with the concept of Climate Change

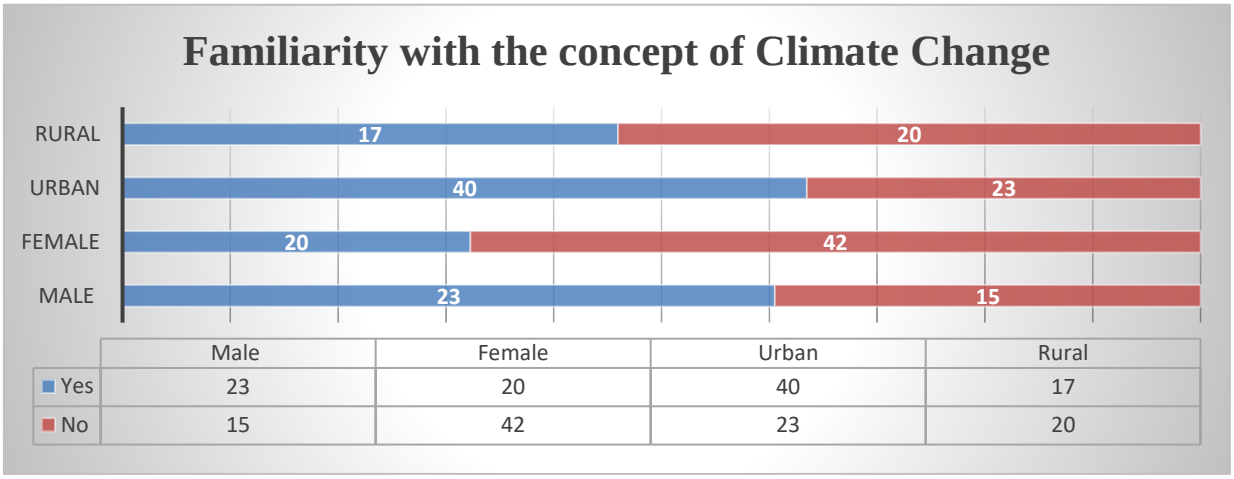

Figure-1: The illustration above analyzes the respondents' responses based on two main demographic variables: area type and gender. The analysis reveals that among the respondents from rural areas, 17 are familiar with the term "climate change," while 20 are unfamiliar. Conversely, in urban areas, 40 respondents are familiar with the concept of climate change, and only 23 are not. Finally, the analysis from a gender perspective shows that out of 63 females, 20 are familiar with the concept, while the remaining 43 are not. On the other hand, among males, 23 out of 38 are familiar with the term, and 15 are not.

Figure-2: Familiarity with the concept of Public Policy

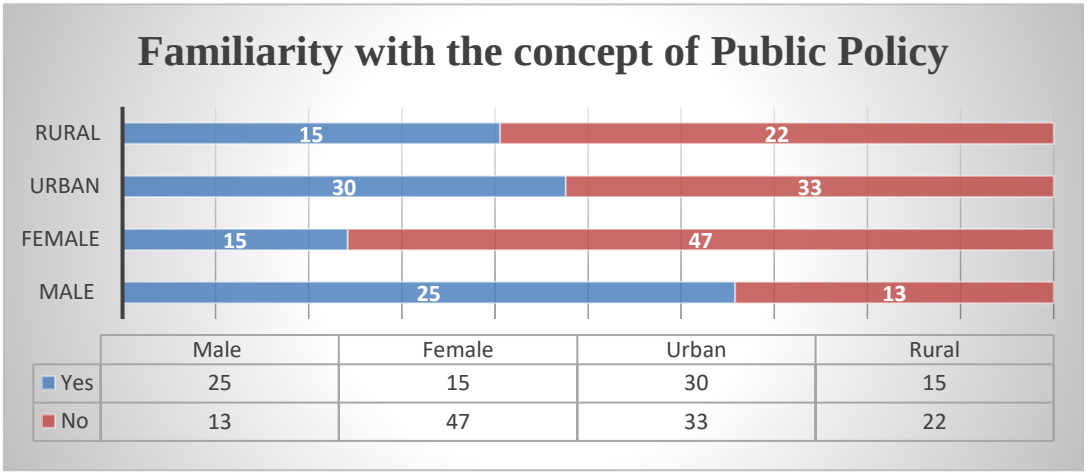

Figure-2: The illustration above analyzes the respondents' responses based on two main demographic variables: area type and gender. The analysis reveals that among the respondents from rural areas, 15 are familiar with the term "Public Policy," while 22 are unfamiliar. Conversely, in urban areas, 30 respondents are familiar with the concept of Public Policy, and 33 are not. Finally, the analysis from a gender perspective shows that out of 63 females, 15 are familiar with the concept, while the remaining 48 are not. On the other hand, among males, 25 out of 38 are familiar with the

term, and 13 are not.

Figure-3: Causes and Impact of Climate Change

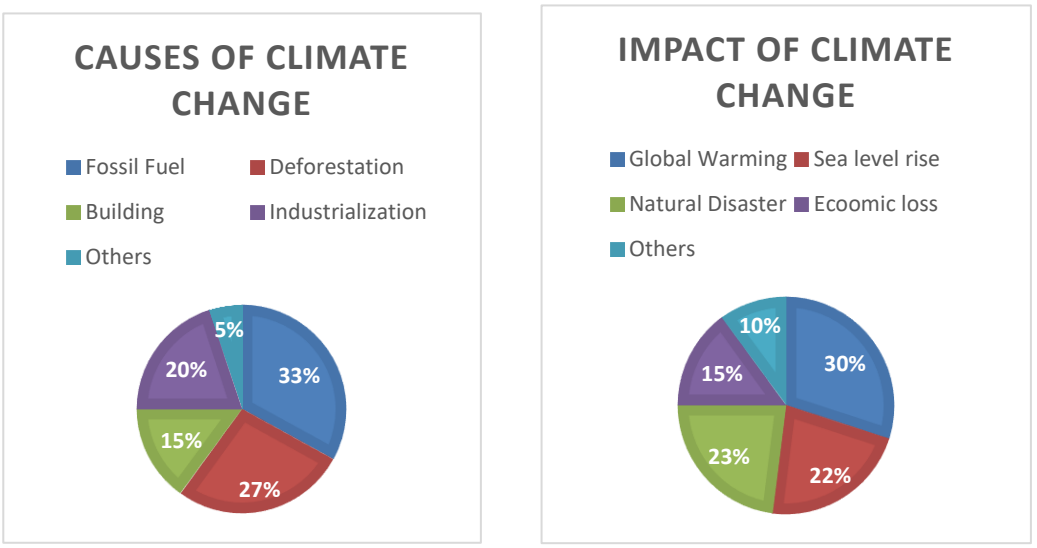

Figure-3: The illustration above analyzes the respondents' responses in terms of the causes and impacts of climate change. The analysis reveals that among the 100 respondents, 33 consider fossil fuels a cause of climate change, followed by 27 who identified deforestation as another cause. Twenty respondents cited industrialization as a major cause, 15 mentioned factory building construction, and 5 referred to other causes. On the other hand, the analysis of the impacts reveals that among the 100 respondents, 30 consider global warming the main impact of climate change, followed by 23 who believe in sea level rise as another impact. Next, 22 respondents identified natural disasters as an impact, 15 cited economic loss, and 10 mentioned other impacts of climate change.

Figure-4: Knowledge and Awareness about Climate Policy

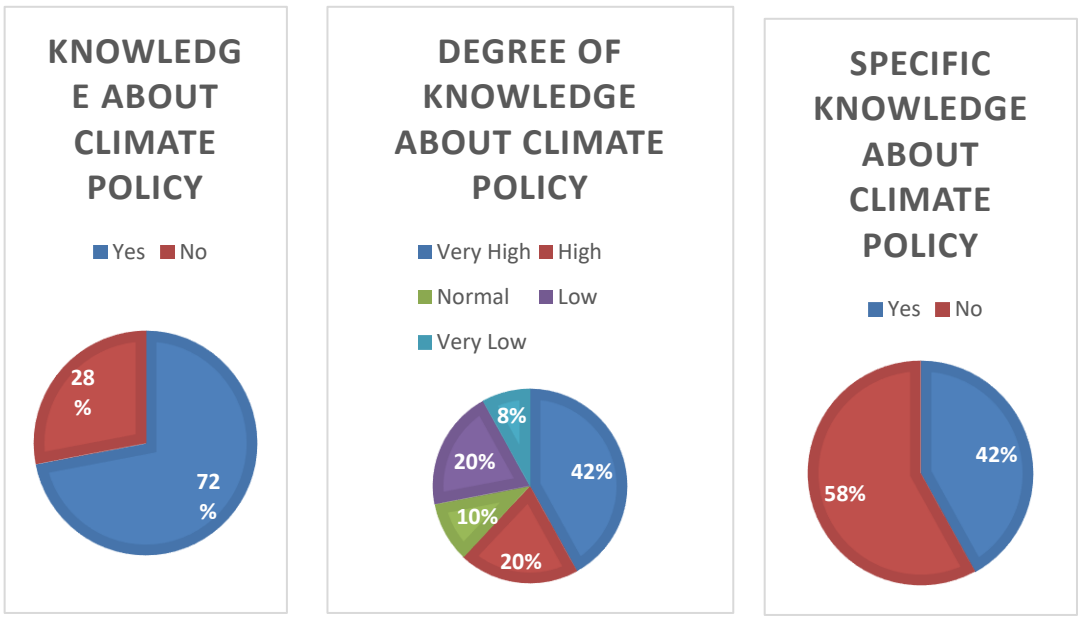

Figure-4: The above illustration analyzes the respondents' responses in terms of claimed knowledge, degree of knowledge, and actual degree of knowledge about climate policy. The first graph illustrates that out of 100 respondents, 72 acknowledged being aware of climate policy, while 28 expressed a lack of knowledge. The second graph demonstrates that among these respondents, 42 claimed to have a very high degree of knowledge about climate policy, 20 claimed a high degree of knowledge, 10 stated their knowledge is average, 20 reported a low level of knowledge, and 8 admitted to having a very low level of knowledge. According to the last graph, 58 out of 100 respondents could not mention any specific climate policy, whereas 42 could.

Figure-5: Perceived Importance and effectiveness of Climate Policy

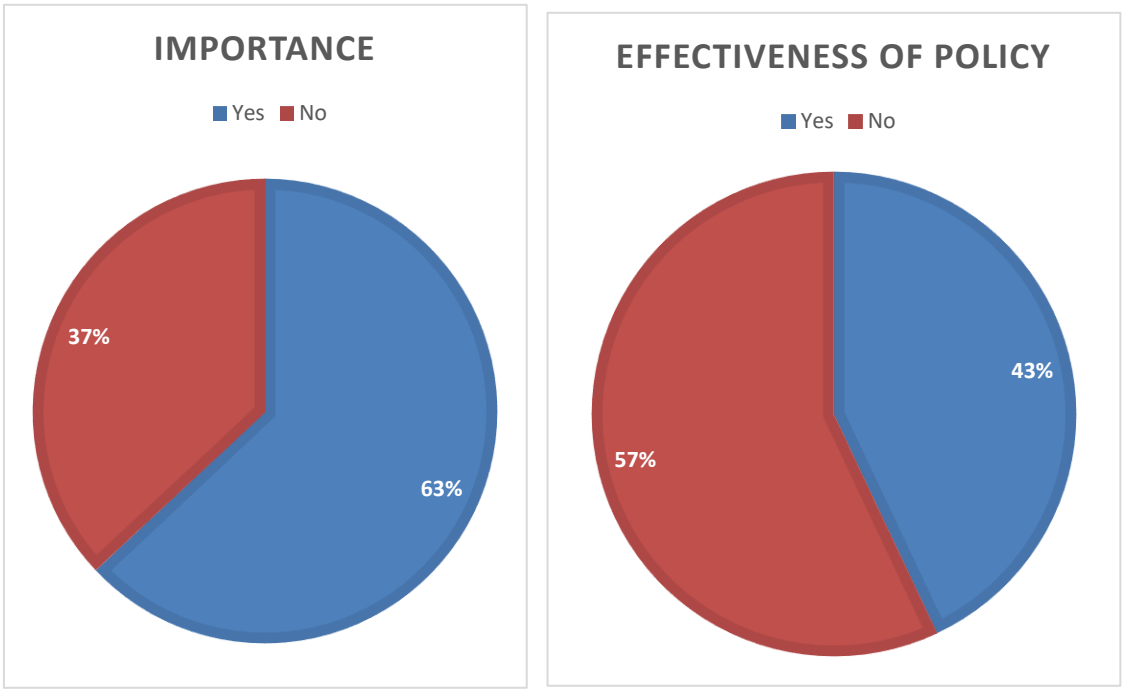

Figure-5: The above illustration analyses respondents' perceptions of the importance of prioritizing climate change policies and whether these policies can effectively improve living conditions in Bangladesh. The analysis reveals that among the 100 respondents, 63 consider prioritizing climate change policies important, while 37 do not. Regarding the effectiveness of climate change policies in improving living conditions in Bangladesh, 43 respondents believe these policies can contribute, whereas 57 believe they cannot.

Figure-6: Supportive Attitude and Contribution

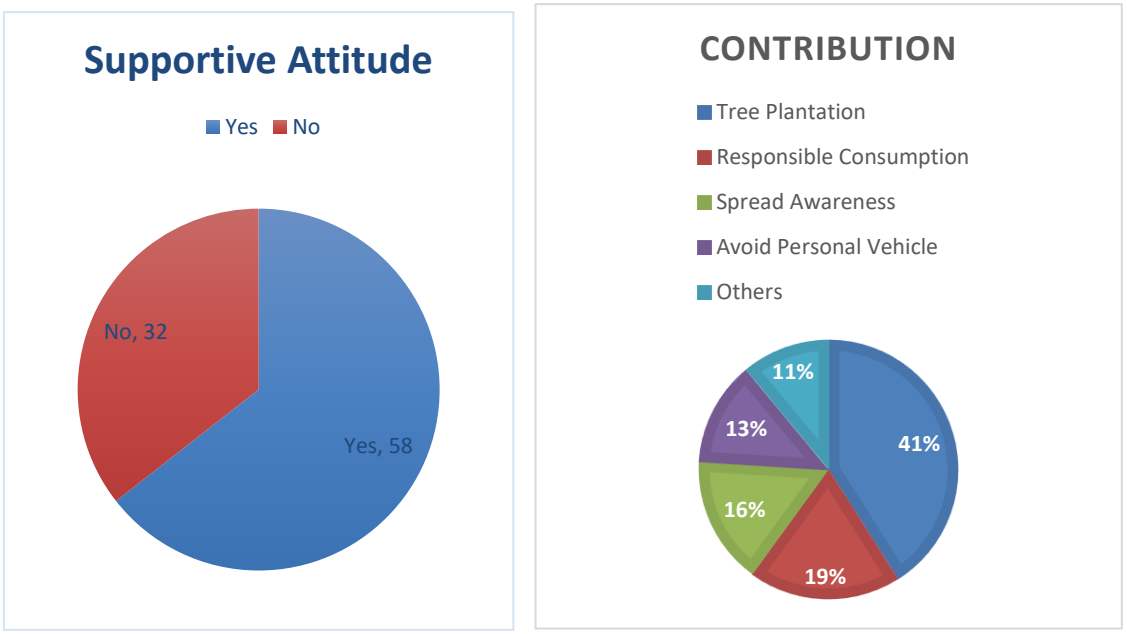

Figure-6: The above illustration analyzes respondents' supportive attitudes towards climate policy and their personal contributions to climate initiatives. From a supportive attitude perspective, 58 out of 100 respondents support government efforts to combat climate change, while 32 do not. Regarding personal contributions, 41 respondents plant trees, 19 avoid using personal vehicles and prefer public transport, 16 spread awareness about climate change, 13 practice responsible consumption, and 11 have various other preferences.

Figure-7: Barriers to Effective Execution of Climate Policy

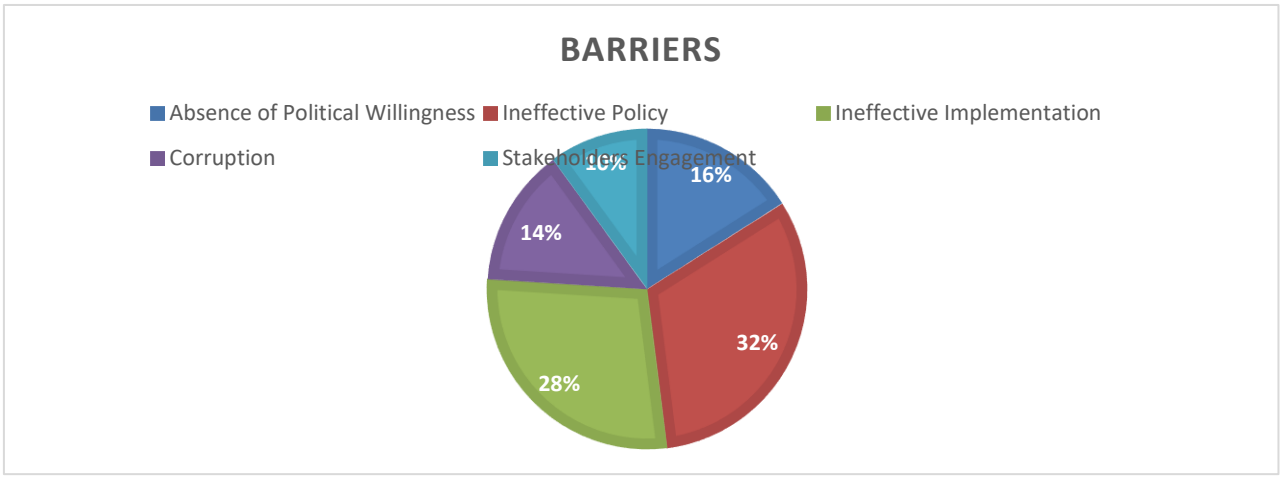

Figure-7: The above illustration analyzes respondents' views on the barriers to climate policy and its successful execution. Out of 100 respondents, 32 consider ineffective policy a barrier, 28 believe ineffective implementation is a barrier, 16 consider the absence of political willingness a barrier, 14 believe corruption is another barrier, and 10 believe weak

stakeholder engagement is a barrier.

Figure-8: Leading Position in Fight Against Climate Change

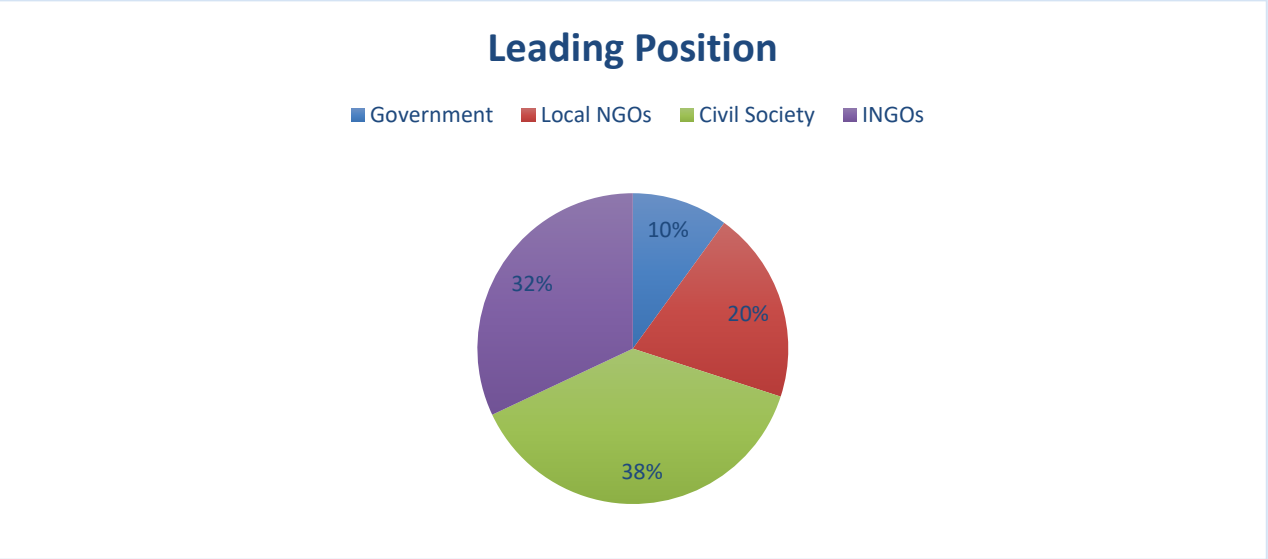

Figure-8: The above illustrations analyzes respondents' views on which entities are leading the fight against climate change. The first graph shows that out of 100 respondents, 38 believe that civil society is in the leading position, 32 believe international NGOs are leading, 20 believe local NGOs are leading, and 10 believe that the government is on the leading position.

Findings

- **Familiarity with Climate Change**

Based on location type and gender, the analysis reveals a substantial difference in the level of familiarity with the term "climate change". Urban respondents are more familiar with the notion than rural respondents are (40 vs. 17%). This suggests that access to education and information on climate change may differ across urban and rural areas. Males are more familiar with the word than females are (23% vs. 20%), which may indicate differences in environmental awareness between the sexes.

- **Familiarity with Public Policy**

Comparing urban to rural respondents, the former have a greater acquaintance with public policy (30% vs. 15%), which is consistent with the findings on climate change. This tendency perpetuates the knowledge and awareness gap between urban and rural areas. There are also clear gender inequalities, with men having a greater familiarity with public policy than women (25% vs. 15%). This emphasizes how specific educational initiatives are required to bridge these inequalities.

- **Causes and Impacts of Climate Change**

The main drivers of climate change, according to respondents, are industrialization (20%), deforestation (27%), and fossil fuels (33%). These answers suggest that the main human activities causing climate change are acknowledged. Among the perceived effects are natural disasters (22%), sea level rise (23%), and global warming (30%). There was also mention of other repercussions (10%) and economic loss (15%), demonstrating a wide awareness of the various effects of climate change.

- **Knowledge and Awareness about Climate Policy**

Seventy-two out of the 100 respondents said they knew about climate policy, but a sizable portion (28%) didn't. Although 42% respondents claimed to know a great deal about climate policy, 58% respondents were unable to name any specific policies. This disparity highlights the need for more efficient information distribution and instruction on particular climate policies by pointing to a cursory comprehension or awareness lacking in in-depth knowledge.

- **Perceived Importance and Effectiveness of Climate Policy**

The majority of respondents (63% out of100) believe that it is crucial to prioritize climate change legislation. 57% respondents, however, are skeptical that these policies can make a substantial difference in the quality of life in Bangladesh, raising doubts about their efficacy. This suggests a disconnect between the belief in the efficacy and implementation of climate policies and their perceived importance.

- **Supportive Attitude and Contribution**

58 respondents were in favor of government initiatives to mitigate climate change, indicating a positive attitude. The most popular personal contributions include planting trees (41%), choosing to use public transportation (19%), and saving money (19%). Additional campaigns include of raising awareness (16%), engaging in responsible consumption (13%), and carrying out several additional tasks (11%). These results demonstrate the variety of ways people are involved in addressing climate change and the importance of encouraging these activities.

- **Barriers to Effective Execution of Climate Policy**

The implementation of climate policies is hindered by a number of factors, according to respondents, including poor policy (32%), poor implementation (28%), lack of political will (16%), corruption (14%), and low stakeholder participation (10%). These observations highlight institutional and structural issues that must be resolved to guarantee the effective implementation of climate policy.

- **Leading Position in the Fight Against Climate Change**

38 respondents believe that civil society is the most important organization fighting climate change, followed by international NGOs (32%), local NGOs (20%), and the government (10%). This indicates a lack of trust in the ability of the government to lead on climate issues and emphasizes the critical role that non-governmental organizations and civil society play in advancing climate action.

Significant differences in gender and urban-rural awareness and knowledge of public policy and climate change are revealed by the investigation. It also emphasizes a broad knowledge of the origins and effects of climate change but a cursory grasp of particular climate policies. Government initiatives are supported, but there are several ways that individuals are addressing climate change. There are perceived leadership gaps in government and systemic obstacles to efficient policy execution that point to areas that require attention for more effective climate action.

Conclusion

The examination of the respondents' attitudes and knowledge regarding public policy and climate change indicates notable differences according to gender and region type, as well as a basic knowledge of the causes and effects of climate change but a cursory grasp of particular policies. There is doubt about the efficacy of government-led programs, but there is substantial support for taking action on climate change, especially from NGOs and civil society. The obstacles that have been identified include poor stakeholder participation, corrupt practices, inefficient policy and implementation, and a lack of political will, these should be prevented using ‘Policracy’ which can refer to a system or governance model where policies are crafted and executed with high levels of transparency, stakeholder engagement, awareness dynamics, and accountability to prevent corruption, inefficiency, and lack of political will.

Policy Recommendations

1. **Enhance Climate Education and Awareness Campaigns**
    - To close the information gap, create focused educational initiatives and awareness campaigns that highlight women and rural communities. The causes, effects, and intricacies of current climate policies should all be highlighted in these programs.
2. **Strengthen Policy Implementation and Accountability**
    - Provide strong frameworks for monitoring and assessment to guarantee the efficient execution of climate policy. To fight corruption and make sure that policies are implemented in a

way that makes sense, there should be more accountability and transparency.

3. **Foster Political Will and Leadership**
    - Use lobbying and public pressure to persuade political leaders to give climate change top priority. It is imperative for policymakers to exhibit their dedication by incorporating climate considerations into all facets of government and allocating sufficient funds for climate initiatives.
4. **Promote Stakeholder Engagement and Collaboration**
    - Increase the participation of all parties involved in the development and execution of climate policy, including the private sector, civil society, and local communities. Create forums with multiple stakeholders to encourage communication, collaboration, and the exchange of best practices.
5. **Support and Scale Up Grassroots Initiatives**
    - Recognize and support local and grassroots initiatives that contribute to climate action, such as tree planting, public transportation usage, and awareness campaigns. Provide funding, technical assistance, and platforms for these initiatives to be scaled up and replicated in other regions.

By addressing these key areas, the government and relevant stakeholders can enhance the effectiveness of climate policies, ensure inclusive participation, and foster a more resilient and informed society capable of tackling the challenges of climate change.

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