Politics for Environment: Youth Perception on Campaign for Billion Tree Tsunami to Combat Climate Change Situation in Pakistan

Fahad Mahmood[1]

Abstract

Pakistan is considered a highly vulnerable country because of the disastrous effects of climate change. Billion Tree Tsunami campaign by Pakistan Tehreek-e-Insaf (PTI) government in Khyber Pakhtunkhwa (KP) province of Pakistan in 2014 was the first attempt to mitigate climate change effects. The campaign was politicized and got media attention because of accusations of mismanagement, corruption and using the campaign for political motives by PTI. Studies on climate change communication assert that management of perception in such campaigns should be handled with great care as any is communication and misperception thus created could have serious consequences for the future of any effort carried out for climate change mitigation. Therefore, this study was conducted to know the perception of youth on the Billion Tree Tsunami campaign. Climate Change Risk Perception Model by Linden (2014) was used to develop a conceptual framework for the study. The quantitative method of the survey was used for data collection. Data was collected from five hundred respondents belonging to KP. It was found that the politicizing of billion tree tsunami campaign affected the perception of youth. The youth had a mixed perception of the campaign. They believe that they feel motivated to work for climate change mitigation after the campaign. It was found that the campaign was visible on media and PTI provided endorsing evidence from independent sources to support the campaign. On the other hand, there was a little effort for ensuring cross-sectional participation and minimizing opposition to it. It is also found that youth motivation to work for climate change mitigation is correlated to enhancing visibility and providing evidence through media whereas, it is not correlated to political affiliation.

Keyword: Climate Change, Youth, Perception, Billion Tree Tsunami, Media Visibility, Motivation, Political Affiliation.

[1]Assistant Professor, Institute of Communication Studies, University of the Punjab, Pakistan.

Introduction

Climate change is a future project. Youth is a direct stakeholder in it. Mitigating climate change means making efforts to have a sustainable future where our future generations could live with lesser hazards. No effort to combat this crisis that our planet earth is facing could be successful without the active involvement of the young generation. Therefore, youth should be involved in all stages of policy formulation and execution for climate change. Youth must also have clarity that all efforts that are carried out to deal with this crisis are in good faith and there is no ill motive behind these efforts (O'Brien et al., 2018). Media can play an important role in creating these perceptions (Ratter et al., 2012). If the youth of a nation starts having doubts about the intentions of efforts made by policymakers to combat it, then it could have serious negative consequences for the future of any policy and effort made to combat the threat of climate change.

Misperceptions in climate change communication may also affect the motivation of youth leading to a lower level of involvement in climate change mitigation efforts thus resulting in climate apathy and worsening the crisis. Politicizing climate change issues could result in this attitude formation (McCright, 2011). The policies and actions of President Trump to deny climate change and democrat's reaction to them make it one of the best cases to cite. It is gradually creating apathy among Americans to the whole idea of climate change (Pryck & Gemenne, 2017).

It is important to give proper attention to the youth's perception and involvement in climate change campaigns. The hope for a better climate situation in the future emerges when one witness many youngsters assuming the role of climate leaders and

setting up examples for their elders. Greta Thunberg from Sweden is an example to quote. Only at the age of seventeen, she has drawn the attention of all around the world to take climate crisis with more seriousness. When she said, "You have stolen my dreams and my childhood with your empty words" in United Nations climate summit in New York (BBC, 23 September 2019), it means she is representing the voice of young people around the world who are not happy with their leaders on their actions on climate change. Youth and children are considered vulnerable in natural calamities and worsening of climate change situations demand strategies to include the youth in the efforts to combat the climate change threats (Tanner, 2010; MacDonald et al., 2013).

Pakistan stands at number eight as a vulnerable country on a global climate risk index. The country with 122 million people has suffered from many deadly climate events (Eckstein et al., 2019). It is especially prone to earthquakes and heavy floods. Kashmir earthquake of 8th October 2005 was the worst that caused deaths of 73,338 humans. Pakistan also has a long history of heavy floods. The more recent were 2010 floods that affected 20,251,550 populations in 132,000 square km causing deaths of 1,767 and damaging 1,884,708 households (NDMA, 2010; & NDMA 2011). Moreover, the Karachi city heatwave of 2015 caused deaths of 1200 to 2000 people (Chaudhary, et al., 2015; Haider & Anis, 2015).

Although Pakistan has been suffering because of the climate change crisis for many years, yet it is only recently that its governments have started taking the issue with seriousness. Climate change ministry was established in 2017 (Hussain, 21

May 2019). Pakistan Tehreek-e-Insaf formed a government in Province Khyber Pakhtunkhwa after victory in elections 2013 and initiated a massive plantation drive called Billion Tree Tsunami in 2014. The campaign aimed to plant a billion trees in 350,000 hectares area of Peshawar, Abbottabad and Malakand divisions of the KP province in connection to Bonn Challenge (Hutt, 02 July 2018).

As claimed by PTI, the campaign was aimed at improving climate conditions. Media strategies were formed and several measures were taken to communicate the messages about the campaign. Opposition parties both in KP and at the federal level criticized PTI for major flaws in the billion-tree tsunami project. They also leveled allegations on the PTI government for corruption in this mega project. Despite these, the initiative was massively projected in public discourse through media campaigns and political speeches. PTI drew its political base from youth that also includes newly enrolled voters. Therefore, it projected itself as a party that is taking measures to combat climate change threats to ensure a sustainable and protected future for young generations. They framed it as the most tangible measure to combat the threat of climate change faced by Pakistan and as a reflection of their political will to deal with this challenge, but the campaign benefits were put in jeopardy because of political divide and propaganda made against it.

There was a great political divide witnessed on this campaign, and all political and social stakeholders were seen standing on opposite poles. PTI government used it more to gain political leverage against their rival political parties including

PPP, PML (N), ANP and others, whereas other political parties used it as a substance to criticize PTI's ability to manage and run mega projects. Therefore, this initiative for climate change turned into a case of mudslinging and political propaganda on both the mainstream and social media platforms of various political parties. The worst blow on this initiative was an inquiry by the National Accountability Bureau (NAB) for the embezzlement of 46 million rupees in the project (Aziz, 2020; Raza, 2018)

It is pertinent to mention that despite all criticism, political propaganda and allegations from the national accountability bureau of Pakistan (NAB) the KP government completed the task and International Union for Conservation of Nature (IUCN) granted KP government a completion certificate. All these efforts were highlighted in the media by PTI.

This campaign was the first serious initiative to mitigate climate change, but it was politicized. Studies on climate change communication assert that it is highly significant to develop a positive perception of climate change campaigns through effective communication (Hart & Nisbet, 2012; McCright & Dunlap, 2011). Therefore, this study is conducted to know the perception of youth about this campaign with the following research questions:

RQ 1. What is the perception of youth on PTI billion tree tsunami campaign in KP?

RQ 2. Has politics on the campaign of billion tree tsunami in KP created motivation or de-motivation among the youth of KP to combat the threat of climate change?

RQ 3. What factors are correlated to the motivation among the youth on the initiative of billion tree tsunami   campaign in KP to mitigate climate change?

The study is of highly significant keeping in consideration the climate change vulnerability of Pakistan. The outcomes of the study will help in designing media strategies to motivate and include Pakistani youth for initiatives aimed to mitigate climate change in future.

Literature Review

The global agenda of climate change communication revolves around youth. New strategies are being introduced, adopted and implemented to engage youth for education, training and practices to combat the threat of climate change (Aljets & Ebinger, 2016; MacDonald et al., 2015). Contrary to the general belief, children and youth are not passive in communication and activities of natural disasters. They are active and play an important role in all those activities. Findings show that youth play a significant role in disaster risk reduction and other mitigation activities. Their role is active both at the formal and informal levels (Mitchell et. al., 2008). Studies conducted on the cases of New Orleans and El Salvador have proved many previous assumptions on youth inactivity for natural disasters as incorrect (Anderson, 2005; Ansell, 2005; Kirschke & van Vilet, 2005). The role of children and youth has also been witnessed in decision making. Their participation is also taken into consideration for making decisions in the case of anticipating a calamity or developing any protective strategy for an imminent natural disaster.

The world has witnessed an emergence of youth activism with reference to climate change during the past few years. Youth has expressed its displeasure over the policies and actions being taken to mitigate the situation. Youth dissenting behavior on climate change is characterized as dutiful, disruptive or dangerous (O'Brien, Selboe & Hayward, 2018).

The core challenge for communication in climate change activities is creating a positive perception and attitude for present and future generations. This can be achieved through the designing of messages that are directed to both generations. Moreover, these messages should be designed to keep social, economic, cultural and climate needs into consideration (Monreal & Veulliet, 2010).

There is a consensus that communication activities for climate change must be straightforward and without any deception. The effects of climate change are pervasive and it is really hard to reverse any conviction when formed. Therefore, communication activities for climate change should be planned and executed with the utmost care. In this regard, the framing of climate change events by media and campaign developers should be taken with great care (Good, 2008).

Mitigating climate change is a holistic project. It requires a positive attitude from all stakeholders. It is observed that efforts for climate change are initiated from three levels; One is from policymakers who realize the severity of the situation, thus initiating efforts at policy level ensuring the availability of resources and execution of plans. Secondly, climate activists raise their voice on climate issues for attention gathering and social

mobilization. Thirdly, climate change mitigation activities are initiated where there is some natural calamity (Bullar & Johnson, 2000).

Climate change has become a matter of survival for nations. This survival is multifold. It is not about the issue of climate change; rather, it is about a complete change in lifestyle and attitudes. It is asserted that media campaigns on climate projects should pass on ownership to future generations to make them sustainable. This transfer of ownership can only work by ensuring the involvement of youth at various phases of climate change mitigation activities (Morton, et al. 2010). Several factors could hamper the success of climate change initiatives. It includes problem classification, ulterior attitude, non-sustainability, non-inclusive behavior and oppositional views (Leiserowitz, 2006; Wells et al., 2011).

Political angling of climate change affects public attitudes. It is argued that climate change is inherently a political issue. In the USA, it has raised skepticism among people. Studies show that Trump's actions to deal with the issue in political rhetoric and casting doubts on local and international efforts have made Americans aloof to the issue. Americans are now more indecisive and silent on the issue than ever before. American media is also blamed for creating this divide of liberals and democrats on climate change. Many Americans believe that the issue must not be politicized (Kamarck, September 23, 2019; Lydia, March 25, 2015). Therefore, President Trump represents an interesting case in analyzing climate deniers' stances and strategies. The narrative he built for creating a skeptic attitude on

climate change is interesting to analyze. He asserts that climate issue is catering to many big corporations that want to make billions of dollars from it. Similarly, his opposition by democrats has raised questions on the ability of Trump to comprehend this threat. They have accused the President of putting the lives of millions of Americans at risk (Pryck & Gemenne, 2017). The same situation can be compared to Pakistani politics, but the numbers of players are more. Imran Khan accuses opposition parties of not understanding climate change as an issue and in terms of its severity. He has also ridiculed opposition for not comprehending the issue (Saeed, 7 July 2015).

In the UK, Brexit can also affect the future of efforts dealing with climate change. It is lamented that media is hardly covering this aspect of Brexit, as more focus is on the issues related to trade, economy and defense. The Paris agreement status in the post Brexit scenario is not visible in debates. Many believe that the UK leaving the EU will affect the UK climate change policy (Farstad, Carter & Burns, 2018).

Dealing with public perception for climate change is a difficult task. Debates on climate change could only have a little direct effect on public perception. It is found that only a direct experience of natural calamity could have a potent effect to change the perception of the public from climate change denier to accepted. The political affiliation could also affect the change in perception of climate change (Saad, 2015; Toth, 2018).

Climate change perception as a threat is not equal around the globe. It varies according to the social, cultural and political settings of the country and region. European and Australian

regions show more concerns than American and Asian (Pidgeon, 2012). The attitude formation for climate change is conditioned to many factors. Studies conducted on environmental psychology show that risk perception and likes or dislikes for climate change mitigation activities are more culturally entrenched than perceptions made on other threats (Renn, 2010). Media exposure and its place in the development of cognition in individual and societal life play an important role in it (Kellstedt et al., 2008).

Theoretical Framework

There are several theoretical models for climate change communication. The majority of them keep youth at the core of the sustainability of these efforts. Climate Change Risk Perception Model proposed by Linden (2014) tends to provide cognitive, experiential and socio-cultural influences on climate change perception. Although the model has been reaming a significant framework in research but it is criticized for its oversimplified explanation and inclusion of too many factors. It is argued that it is not exhaustive either. A rise of politics on climate change demands to include or exclude the factors that are related to the perception of campaigns aimed to mitigate climate change effects (Chaiken & Trope, 1999; Marx et al., 2007; Weber, 2006). But still, this model provides a good framework to analyze the perception of youth on a billion-tree tsunami initiative that was politicized but projected well in the media.

Methodology

For the study quantitative method was used for data collection. Initially to sort out relevant variables qualitative research method of the focus group was used. It is defined as, "a research strategy

for understanding people's attitudes and behavior"(Wimmer & Domminick, 2009, p. 132). A total of three focus groups, one online and two in real settings were conducted. Youth aged between 16 to 32 years and belonging to KP province participated. Each focus group was consisting of eight participants and one moderator (researcher). The purpose of the focus groups was to find variables to be studied in the research. It is found that the following factors are important in making perception for campaigns on climate change a sustainable idea for youth: Creating motivation, cross-sectional participation, minimizing opposition, enhancing visibility, endorsing evidence and political motives.

For quantitative methodology, a survey questionnaire was used to collect data from respondents. Neuman (2013) defines a survey as, "quantitative research in which the researcher systematically asks a large number of people the same questions and then records their answers" (p.49). Simple random sampling is used. Data was collected from a sample of 500 respondents from the population. All respondents were youth of age between 16 to 32 years belonging to Khyber Pakhtunkhwa province.

An instrument with eighteen items measuring the following variables on five points Likert scale was developed: Creating motivation, cross-sectional participation, minimizing opposition, enhancing visibility, endorsing evidence and political motives. Statements were measured on the scale strongly disagree, disagree, neutral, agree, and strongly agree. Demographic variables managed separately. The reliability of the instrument is checked with Cronbach's Alpha with a value of 0.78.

Following are hypotheses for the study:

H1. Youth believes that media treatment of Billion Tree Tsunami campaign created motivation to work for climate change mitigation.

H2. Youth believes that Billion Tree Tsunami campaign ensured cross sectional participation form all stakeholders.

H3. Youth believes that Billion Tree Tsunami campaign provided endorsing evidences through media for successful implementation of the campaign.

H4. Youth believes that Billion Tree Tsunami campaign ensured visibility on media.

H5. Youth believes that Billion Tree Tsunami campaign successfully minimize the opposition.

H6. Youth believes that Billion Tree Tsunami campaign had clear political motives.

H7. Motivation of youth created by Billion Tree Tsunami campaign is positively correlated to:

>   a) Enhancing visibility
>   b). Minimizing opposition
>   c) Endorsing evidence.
>   d): Political affiliation.

Results and Findings

For null hypotheses of H1o, H2o, H3o, H4o, H5o and H6o one sample t-test (one-tail) was applied that generated following results:

Table 1: One Sample T-Test for Variable Significance

Sr.	Variable	t-Value	p-Value	Remarks
1.	Creating motivation	7.064	0.00	Significant
2.	Cross sectional participation	-10.541	0.231	Insignificant
3.	Minimizing opposition	-8.710	0.384	Insignificant
4.	Enhance visibility	11.015	0.00	Significant
5.	Endorsing evidence	3.940	0.00	Significant
6.	Political motives	8.039	0.00	Significant

For the variables creating motivation, enhancing visibility, providing endorsing evidence and political motives the obtained p-values are $p>0.05$, $p>0.05$, $p>0.05$ and $p>0.05$ respectively. Hence H1o, H4o H5o and H6o are rejected. Therefore, corresponding research hypotheses are corroborated. For the variables cross sectional participation and minimizing opposition the obtained p-values are $p<0.05$ and $p<0.05$ respectively. Hence H2o and H3o are not rejected. Therefore, corresponding research hypotheses are not corroborated.

For H7o correlation was applied for creating motivation with following results:

Table 2: Variable's Correlation Coefficient

	Variables	Correlation Coefficient	p-value	Remarks
a.	Endorsing evidence	0.601	0.00	Significant
b.	Minimizing opposition	0.140	0.17	Insignificant
c.	Enhancing visibility	0.587	0.00	Significant
d.	Political affiliation	0.069	0.122	Insignificant

For the correlation spearman's rho is performed and obtained p-values for endorsing evidence and enhancing visibility are $p>0.05$ and $p>0.05$ with motivation. Therefore, H7ao and H7co are rejected and corresponding research hypotheses are corroborated. The values of coefficient for these falls above 0.5 thus indicating moderate correlation. Whereas for minimizing opposition $p<0.05$ with motivation. Therefore, H7bo is not rejected and corresponding research hypothesis is not corroborated. The values of coefficient fall below 0.2 thus indicating very weak correlation. For H7do point biserial correlation was applied with p-value is $p<0.05$ thus it is not rejected and corresponding research hypothesis is not corroborated. Moreover, value of coefficient 0.069 also shows almost no association.

Discussion

The threat to Pakistan for climate change is becoming severe over time. The campaign of a billion-tree tsunami was a significant step to mitigate the risks and must have been managed with care. Although the campaign was politicized, findings show that youth of province KP that is directly stakeholder in that campaign feel motivated to work for climate change mitigation. They believe that the campaign was properly visible to the media. Rather than creating cynicism to combat the climate change, threat is created and increased motivation on this important issue. It is believed that politics by PTI on climate change has affected the campaign. But strategically constructed media strategy compensated it. The campaign was visible on media, especially on social media. Although negative perceptions were created and PTI tried to

dismantle them yet opposition for the campaign could not be minimized.

Media partisan in Pakistan also played its role in politicizing the campaign and thus affected the perception of the campaign. Since Pakistani media both electronic and print is clearly divided into political lines either favoring PTI or PML(N) therefore those media groups that are in opposition to PTI criticized and did propaganda against the campaign. The campaign was not treated on merit. The whole perception was politically oriented. It was the worst form of treatment by rival media groups affecting the issue that has consequences for all irrespective of political or any other affiliation. The biggest mistake of PTI was not to involve any other political party represented in the planning and execution of that project and respondents also indicted that cross-sectional representation was not present (Tribune, April 27, 2019).

PTI provided endorsing evidence to media to support that the campaign was in the larger interest of the public. There was an endorsement from the International Union for Conservation of Nature (IUCN) and the World Economic Forum for the achievement made on a billion-tree tsunami campaign. That was clearly indicated by findings and proves the assumptions of the Climate Change Risk Perception Model (Hutt, July 2018; Hart and Nisbet, 2012; Blennow & Persson, 2009).

The issue was properly highlighted in the media. A special section of the media cell of PTI social media wing was dedicated to project it for audiences. Special visits of journalists, anchors and other related persons were arranged to show the

achievement of the campaign. But the media strategy tried to present it as a politically driven campaign and it is considered as a flaw in it. It seems the campaign had more a political agenda than climate change. Findings also show that youth believe that the campaign was politicized. It was a flaw as it could have consequences for any future campaign. It is also observed that ministers made appearances and stated KP government position in prime-time TV shows, but their tone was political rather than talking about the issue in a manner to highlight that it is an important issue for all. The spokesperson on the issue to give policy statement papered to be politically motivated. It is pertinent to mention that the political leadership of PTI appeared to be scientifically educated on the issue of climate change. They used images and videos to support their statements. Although politicizing of campaign tried to jeopardize the future of such campaigns, but findings showing the motivation of youth to work for climate change are heartening. The model also suggests that effective use of media could possibly create motivation among the target audiences despite the cultural impediments (Linden, 2015).

Media management of the campaign was good but criticism, political propaganda and allegations also made their place in the discourse on million tree tsunami campaigns. It has resulted in a situation wherein oppositional narratives on this campaign able to enter into public discourse because of media partisanship. Findings showing that KP youth feel motivated to work for climate change mitigation irrespective of their political ideology has created hope for a better future.

Conclusion

It is concluded that the youth of KP is motivated to work for climate change mitigation. Media projection of billion tree tsunami project played an important role in it. PTI's strategy to use media effectively for the campaign remained successful despite the politicizing of the campaign. Climate Change Risk Perception Model assumption that indicates the role of media for cognition development for climate change through media and evidence were proved. Study shows that youth has concerns for climate change and wants to work for it despite political differences.

References

Aljets, J., & Ebinger, K. (2016). Youth environmental movement: implementing socio-ecological transformation with enthusiasm. Degrowth in Bewegung(en). Leipzig: Germany. Retrieved from https://www.degrowth.de/wpcontent/uploads/2016/12/DIM_Environmental-Youth.pdf.

Blennow, K., & Persson, J. (2009). Climate change: Motivation for taking measure to adapt. *Global Environmental Change,* 19(1), 100-104. doi: 10.1016/j.gloenvcha.2008.10.003

Bullard, D. R. & Johnson, S. G. Glenn S. (2000). Environmental justice: Grassroots activism and its impact on public policy decision making. *Journal of Social Issues,* 56(3), 555–578

Chaiken, S., & Trope, Y. (1999) Dual-process theories in social psychology. New York: Guilford Press.

Children, Youth and Environments, 18(1), 254-279. Retrieved from https://www.jstor.org/stable/10.7721/chilyoutenvi.18.1.0254.

Chaudhry, Z. Q., Rasul, G., Kamal,A., Mangrio, M. A., & Mahmood, S. (June, 2015). Technical report on Karachi heat wave. Islamabad: NDMA. Retrieved from

http://www.ndma.gov.pk/files/heatwave.pdfNDMA
(National Disaster Management Authority), Government of
Pakistan. (2011). Annual Report 2011.   Retrieved   from
http://www.ndma.gov.pk/publications/AR2011.pdf   NDMA
(National Disaster Management Authority), Government of
Pakistan. (2010). important disasters: Comparative statement.
Retrieved   from
http://ndma.gov.pk/Documents/flood_2010/flood_comparis
on.pdf.

Corner, Adam & Whitmarsh, L. & Xenias, D. (2012). Uncertainty,
scepticism and attitudes towards climate change: biased
assimilation and attitude polarisation. *Climatic Change,* 114(e 3–
4), 463–478. Doi: 10.1007/s10584-   012-0424-6.

Eckstein, D., Hutfils, M. & Winges,. (2019). Global climate climax risk
index 2019. Who suffers most from extreme   weather   events?
Weather-related loss events in 2017 and 1998 to 2017. Berlin:
Germany

Farstad, F., Carter, N. & Burns, C. (2018). What does Brexit Mean for the
UK's climate change act? *The Political   Quarterly,*   89(2),
291-297. Doi.org/10.1111/1467-923X.12486 Citations: 4

Good, J. E. (2008). The framing of climate change in Canadian,
American and international newspapers: A media propaganda
model analysis. *Canadian Journal of Communication,* 33(2), 233-
255.

Haider , K. & Anis, K. (June 24, 2015). Heat wave death toll rises to 2,000
in Pakistan's financial hub. Bloomberg. Retrieved from
https://www.bloomberg.com/news/articles/2015-06-
24/heat-wave-death-toll-rises-to-2-000-in-pakistan-s-financial-
hub.

Hart, P.S., & Nisbet, E.C. (2012). Boomerang effects in science
communication: How motivated reasoning and   identity
cues amplify opinion polarization about climate mitigation
policies. *Communication Research,*   39(6), 701-723.

Hutt, R. (02 July 2018). Pakistan has planted over a billion trees.

Retrieved from https://www.weforum.org/agenda/2018/07/pakistan-s-billion-tree-tsunami-is-astonishing/

Kamarck, E. (Monday, September 23, 2019). The challenging politics of climate change Retrieved from https://www.brookings.edu/research/the-challenging-politics-of-climate-change/

Kellstedt, P.M., Zahran, S., & Vedlitz, A. (2008). Personal efficacy, the information environment, and attitudes toward global warming and climate change in the United States. *Risk Analysis,* 28(1), 113-126.

Leiserowitz, A. (2006). Climate change risk perception and policy preferences: the role of affect, imagery, and values. *Climatic Change,* 77, 45–72. Doi: 10.1007/s10584-006-9059-9

Linden, van der S. (2015). The social-psychological determinants of climate change risk perceptions: Towards a comprehensive model. *Journal of Environmental Psychology,* 14(1), 112-124. Doi: 10.1016/j.jenvp.2014.11.012.

Lydia, S. (March 25, 2015). "U.S. Views on climate change stable after extreme winter." Gallup. Retrieved from: https://news.gallup.com/poll/182150/views-climate-change-stable-extreme-winter.aspx.

MacDonald, J. P., Ford, Willox, A. C. & Mitchell, C. (2015). Youth-Led participatory video as a strategy to enhance *Inuit youth adaptive capacities for dealing with climate change. Arctic,* 68 (4), 486-499. Retrieved from https://www.jstor.org/stable/43871363

Malik, A. Aziz. (January 1, 2020). NAB detects over Rs462m loss in initial inquiry into Billion Tree Tsunami. Retrieved from https://www.thenews.com.pk/print/591740-nab-detects-over-rs462m-loss-in-initial-inquiry-into-billion-tree-tsunami

Marx, S.M., Weber, E.U., Orlove B.S., Leiserowitz, A., Krantz, D.H.,

Roncoli, C., & Philips, J. (2007). Communication and mental processes: Experiential and analytic processing of uncertain climate information. *Global Environmental Change,* 17(1), 47-58.

MacDonald, P. J., Harper, L. S., Willox, C. A., Edge, L., V., & Rigolet Inuit Community Government. (2013). A necessary voice: Climate change and lived experiences of youth in Rigolet, Nunatsiavut, Canada. Global *Environmental Change,* 23 (1), 360-371. Doi: s://doi.org/10.1016/j.gloenvcha.2012.07.010.

McCright, A.M. & Dunlap, R.E. (2011). The polarization of climate change and polarization in the American public's views of global warming, 2001-2010. *The Sociological Quarterly,* 52(2), 155-194.

McCright, M. A. (2011). The politicization of climate change and polarization in the American public's views of global warming. *The Sociological Quarterly,* 52 (2011), 155–194.

Mitchell, T., Haynes, K., Hall, N., Choong W. & Oven K. (2008). The roles of children and youth in communicating disaster risk.

Morton, T.A., Rabinovich, A., Marshall, D., & Bretschneider, P. (2010). The future that may (or may not) come: how framing changes response to uncertainty in climate change communication. *Glob Environ Change,* 21(1),103–109.

O'Brien, K., Selboe, E. & Hayward, B.M. (2018). Exploring youth activism on climate change: dutiful, disruptive, and dangerous dissent. *Ecology and Society,* 23(3), 42-53. Doi: 10.5751/ES-10287-230342

Pidgeon, N.F. (2012). Public understanding of, and attitudes to, climate change: UK and international perspectives. *Climate Policy,* 12(1), 85-106.

Pryck, D. K. & Gemenne, F. (2017). The Denier-in-Chief: Climate change, science and the election of Donald J. Trump. *Law and Critique,* 28(2), 119–126. Doi: 10.1007/s10978-017-9207-6

Ratter, M.W. B., Philipp, H.I. K. & Storch, H. (2012). Between hype and

decline: recent trends in public perception   of climate change. *Environment Science & Policy,* 18(2012), 3-8. Doi: 10.1016/j.envsci.2011.12.007.

Raza, I. S. (March 13, 2018). NAB to verify corruption allegations about billion tree 'tsunami' project. Retrieved   from https://www.dawn.com/news/1394924.

Renn, O. (2010). The social amplification / attenuation of risk framework: application to climate change. *WIREs   Climate Change,* 2(2), 154-169.

Saeed, A. (07 July 2015). Pakistan's climate policies are a 'joke', says Imran   Khan.   Retrieved   from https://www.theguardian.com/environment/2015/jul/07/pa kistans-climate-policies-are-a-joke-says-imran-khan

Tanner, T. (2010). Shifting the narrative: Child-led responses to climate change and disasters in El Salvador and the Philippines. *Children & Society,* 24 (4), 339–351. Doi: 10.1111/j.1099-0860.2010.00316.x

Tribune. (April 27, 2019). Yousufzai trashes criticism against Billion Tree Tsunami   project.   Retrieved   from https://tribune.com.pk/story/1960525/1

Weber, E.U. (2006). Evidence-based and description-based perceptions of long-term risk: Why global warming does not scare us (yet). *Climatic Change,* 77(1-2),   103-120.

Wells, V. K., Ponting, C. A., & Peattie, K. (2011). Behaviour and climate change: Consumer perceptions of   responsibility. *Journal of Marketing   Management,*   27(7-8),   808-833. doi.org/10.1080/0267257X.2010.500136

Wimmer, D. R. & Domminick, R. J. (2008). Mass media research: An introduction. USA: Wadsworth.