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2024

International Journal of Multidisciplinary Research & Innovation

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Biwott, E. J., Mulwo, A. K., & Nyamboga, E. N. (2024). Trends in the Framing of Climate Change Issues in Selected Print Media in Kenya. *International Journal of Multidisciplinary Research and Innovation*, 2(2), 101-106.

Trends in the Framing of Climate Change Issues in Selected Print Media in Kenya

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ABSTRACT

Presenting messages in the newspapers entails a deliberate process of careful selection of language and words to ensure specific messages or meanings are conveyed to the public. This choice of words represents the structures that the media uses to paint or project certain images. These projections can impact how people interpret issues as well as how policy makers conceptualize ideas. This paper sought to explore the current trends in the framing of climate change issues in the selected print media. Specifically, it sought to find out the triggers of climate change stories, the authorship of climate change articles, the temporal distance of climate change issues, sources cited, attribution of blame, as well as the geographical focus. A qualitative content analysis was carried out on selected newspapers in Kenya for a period of five years (2013 to 2017). The study findings showed that there were no consistent authors of climate change stories. Most of the articles in both newspapers were opinion pieces. The findings indicated that the climate change issue is framed as an immediate challenge, caused by them (developed countries) versus us (developing countries), whose solutions are found at the corporate level (international bodies/governments) rather than individual level, and the responsibility and blame for climate change and its effects is placed on the developed countries whereas the developing countries are depicted as victims. Given the power of the media to shape public perception through framing, the dominance of certain frames and sources in the media can have a significant impact on climate change policy making. The authors therefore need to be keen on the frames they use and the ultimate agenda they sell through these frames.

Keywords: Framing, climate change, print media, Kenya

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1. INTRODUCTION

The media is an actor and interpreter of information that emerges from the interface of humans and their environment. It influences voices and content of information relayed; in other words, the media shapes who has a say, how information is said and interpreted. It mediates how environmental science and governance find meaning in the everyday lives of citizens. Corbett and Drfee (2005) argue that even when a person is confronted directly with circumstances of extreme heat, floods or drought, he or she will still often depend on the news to link those events to global climate change.

Climate change is one of the most challenging environmental problems in the world currently. The past few decades have been marked by major concerns for the environment. For instance, according to Boykoff and Boykoff (2007), climate change is one of the most serious environmental risks of the twenty-first century.

It is an issue that affects individuals, communities, countries and geographical regions in varying degrees. For instance, global climate change is projected to alter Kenya's mean annual climatic conditions as well as its pattern of weather extremes (Parry *et al.*, 2012). In Kenya, the public awareness and communication strategy (Ministry of Environmental and Mineral Resources [MEMR], 2012) notes that climate change is one of the serious environmental issues that the country currently faces.

The impact of climate change varies, ranging from changes in ecosystems, depletion of human subsistence systems such as water resources, potential forced human migrations, widespread acidification of the oceans, to insurance and reinsurance difficulties (O'Neill & Nicholson-Cole, 2009). Its adverse effects are already being felt globally and locally in the sectors of environment, human health, food security, tourism, natural resources, physical infrastructure and many others. Economic losses from climate change worldwide amount to 125 billion dollars per year, roughly equivalent to flow of 2008 Official Development Assistance (ODA) from developed to developing countries (Mearns & Andrew, 2010).

According to IPCC (2007), many impacts of climate change can be avoided, reduced, or delayed through appropriate mitigation. One way of mitigating is appropriate information and communication which in turn affects the citizens perception. Communication profoundly influences the way people perceive health and environmental risks and how they relate to the built and natural environment. These perceptions shape, among many other things, whether we adopt or reject risk messages, support or disregard environmental policies, and trust or express scepticism about risk and environmental management.

Our understanding of nature and our actions towards the environment depend not only on science but on public debate, media, the internet, and even ordinary conversations. Unobtrusive issues like pollution and the environment are directly affected by media coverage because the public is not

directly in contact with these issues and their effects (Zucker, 1978 cited in Dotson, 2009). The media acts as the mediator between the scientist or climate specialist and the general citizenry (Boykoff, 2007).

The scientists and climate specialist communicate the climate change information, but it is the media that in most instances mediates frames or reframes this message before it gets to the audiences. The way the issues of climate change are covered or framed will therefore affect they are perceived by the citizens and in turn affect their attitude towards climate change issues. This study therefore found it imperative to explore the way print media (newspapers) in Kenya prime as well as frame climate change information.

2. THEORETICAL FRAMEWORK

This study was guided by the Framing theory. The framing theory is attributed to Erving Goffman (1974). This theory proposes that how audiences perceive media events is determined by the way media messages are presented. According to this theory, the exact same message presented in different ways can impact audiences' choices and evaluations. It claims that news contains not only plain facts but also a value frames that helps us understand these facts. It is based on the assumption that how an issue is characterized in news reports can have an influence on how it is understood by audiences. Framing has been defined as "the way events and issues are organized and made sense of, especially by media, media professionals, and their audiences" (Reese, 2001, p. 7).

3. METHODOLOGY

Qualitative Content analysis was carried out on the two major newspapers in Kenya, namely *The Standard* and *Daily Nation*. The newspapers were selected purposively due to their wide circulation and coverage. The researcher purposefully selected newspapers published over a span of five years (2013, 2014, 2015, 2016 and 2017). This period represented two years before and two years after the launch of the public communication strategy (2015), which lays emphasis on liaising with the media to communicate environmental issues. All the newspapers published during this period were selected and analysed for content relevant to the topic of study. A total of 127 articles from *The Standard* and 119 from the *Daily Nation* that carried stories on climate change were analysed. Content analysis was used to generate the data. The data was then analysed thematically based on themes derived from the study.

4. FINDINGS

This study examined the trends in climate change coverage evident in the selected newspaper articles. Some of the areas of interest included the triggers of climate change stories, the authorship of climate change articles, the temporal distance of climate change issues, sources cited, attribution of blame, as well as the message focus.

4.1 Authorship of articles

The study findings indicated that the articles presented in the sample showed that there were no consistent authors who covered the climate change stories in both newspapers. This means that no one author covered a substantial amount of articles to warrant further analysis of the same. From the findings the lack of consistency undermined the comparative analysis of articles authorship. This finding pointed to the possibility of climate change not being a major beat in the

selected newspapers and thus no consistent author assigned to it.

4.2 Sections the articles appear

This study sought to identify the category/sections where most of the articles were found in the selected newspapers. The results from the *Daily Nation* indicated that most of the articles that covered climate change stories were opinion pieces which mainly comprised of letters to the editor and a few media house's editorials. For example *Daily Nation*, May 7, 2013 has an opinion piece which talks about how the poor are bearing the brunt of the rising heat; *Daily Nation* December 7, 2014 has an opinion piece which urges the reader that it is time to act on climate change but then goes further to pose a question on who should pay for these actions on climate change; whereas *Daily Nation*, November 28, 2015 has an article which urges the government to involve youths in the fight against climate change. The findings from *The Standard* were a replica of that of the *Daily Nation*. Just like the *Daily Nation*, most of the articles in *The Standard* newspaper were under the opinion piece category. For example *The Standard*, July 23, 2014 which talks about 'Rights to water needs to be implemented; *The Standard*, June 27, 2014 'more needs to be done to conserve the environment; *The Standard*, March 23, 2013 'Remove environmental concerns from back burned' and *The Standard*, February 18, 2015, 'Can science solve climate change?'.

4.3 Sources cited

This study sought to examine the sources cited in the selected articles. This study found out that in both newspapers, most of the sources cited were scientific sources. For example, in *The Daily Nation* January 9, 2013 The Stockholm Environment Institute is cited as the source of the statistics – the country stands to lose up to three percent of its GDP about sh87 billion due to changing weather patterns. In *The Standard* March 19, 2015 the author cites the fifth assessment report of the intergovernmental panel on climate change as the source of his arguments on the effects of climate change. In *The Standard* December 3, 2015 The UN Secretary General Ban Ki-moon is cited criticising the nations for not doing enough to close the emission gap in the Paris conference. *The Standard* November 27, 2015 cites UN officials – United Nations Environment programme Under-Secretary General and Executive Director Achim Steiner and the UN Nairobi office Director Genrala Sahle-Work Zewde as lauding the calls from the pope for environmental conservation. The study findings from *The Standard* newspaper further showed that other sources that were attributed to include government sources, individual sources, university sources and articles whose sources were not specifically mentioned. The study findings further showed that the assertions made varied based on the sources attributed. For example from *The Standard Newspaper*, scientific sources mainly focused on the effects of climate change, solutions to climate change and the contributions of different sectors to climate change. The assertions made by the government sources mainly pointed to the government's awareness of the climate change impacts and the efforts made by the government to deal with climate change. University sources were mainly linked to the policy issues surrounding climate change, research findings in relation to climate change. The individual sources mainly pointed out the devastating effects of climate change and

pointed out their suffering and helplessness in dealing with climate change.

Similar findings were depicted in the *Daily Nation*. The study findings showed that the government sources mostly dwelled on the efforts made by the government and the policy interventions they have instituted to tackle climate change. The individual sources mainly dwelled on the effects of climate change on their livelihoods. It pointed out how they were suffering due to climate change. For instance in the *Daily Nation* December 2, 2014 the story of Tiksan- whose house was flooded is depicted as she gives a first person narration of the woes they faced due to the flooding. From the study findings, the academic sources were mentioned but in a negligible way. For example, in the *Daily Nation* January 21, 2013, Dr. Rhoda Birech a lecturer and climate adaptation specialist from Egerton University cites financial challenges and technologies that have not been upscaled as killing the new technologies which can help curb climate change.

4.4 Key actors

The study sought to find out the main individuals/bodies that are mentioned as taking action on climate change. The action they were taking as well as the motive if any was highlighted. In the analysis of the articles, the inverted pyramid was used as a guide. The first actor to appear in the title or the first two paragraphs of the article was classified as the key actor. If no actor appeared in the title or the first two paragraphs then it was analysed as an article with no actor.

The study findings from *The Standard Newspaper* show that the main actors in the articles were the national governments. Their main role was that of putting up policies and laws to deal with the issue of climate change. However, the articles also depict the government as being overwhelmed with the mitigation efforts. *The Standard* July 29, 2014 cites the government as "...understaffed and lack requisite resources to come up with modern techniques of dealing with traditional and emerging threats...". The government is generally depicted to be without funds to support the climate change efforts; they mainly manage the funds given by international bodies. For example in *The Standard* January 9, 2013 Kenya is mentioned as being in the process of integrating resilience and adaptation to climate change to its overall national planning framework. In *The Standard* January 21, 2013 the government is given credit of handling climate change through the climate innovation Centre meant to support the development of relevant technologies.

The study findings from the *Daily Nation* depicted climate change as an issue handled by international bodies. The role of the government is also mentioned though that of the international community receives more emphasis in this newspaper. For example in the *Daily Nation* December 1 2015, world leaders meet to talk about climate change in the UN sponsored summit. On the *Daily Nation* December 7, 2014, Unep warns of climate change funding crisis and the *Daily Nation* December 31 2014 point to the Global Finance as having a key role to play in development and climate safety. The *Daily Nation* depicts the government as lacking the will power to engage in the mitigation efforts. This is seen in the conflicts surrounding the resources that could have been directed to the mitigation efforts. The government is also seen to be at the fore front in policy formulation and implementation. For example, the action plan mentioned by Uhuru Kenyatta in the *Daily Nation* January 9, 2013 only

mentions what the government is planning to do suggesting that the issue is a government issue rather than an individual issue. It is presented as a corporate issue to be tackled corporately. *The Daily Nation* November 17, 2016 also point to the efforts already put by the government in dealing with climate change.

4.5 Geographical focus of the articles

This study sought to find out how climate change was presented in terms of the coverage. This was specifically with an interest of the local versus the global dimension. It sought to find out whether climate change was presented as a local issue, a regional issue a global issue or a combination of all. This was done by looking at the causes, consequences, action statement or solutions.

From the study findings on *The Standard* newspaper, most of the articles presented climate change from a local rather than global scale. The findings showed that most of the articles focused on the national scale meaning on Kenya- this is considered a local scale. For example in the focus of local scale, *The Standard* January 9, 2013 Kenya is discussed to be in the process of integrating resilience and adaptation to climate change to its overall national planning framework. In *The Standard* March 20, 2013, the focus of the article is the current developments in climate technology as Kenya sets up the climate technology centre and network (CTCN) in Nairobi Kenya.

On the other hand, the findings in the *Daily Nation* depicted climate change in a global scale as compared to the local scale. From the study, most of the articles depicted climate change as a global issue. In the depiction of the global scale, the *Daily Nation* December 1, 2015 depicts the cop21 summit in Paris which depicts various heads of state gathering to discuss issues climate change. In the *Daily Nation* November 28, 2015 the article focuses on global warming and the call by Australian to avert calamity. In the *Daily Nation* December 2, 2014, the article discusses the findings of Daavid M. Romps an atmospheric physicist at the University of California, Berkeley who predicts more lightning due to climate change. In the *Daily Nation* December 7, 2014 the United Nations Environmental Programme (Unep) executive director Acim Steiner is cited as mentioning that there would be a climate funding crisis due to the increased effects of climate change.

The findings from the two newspapers differed in terms of geographical coverage. *The Standard* newspaper focused on the local scale whereas the *Daily Nation* focused on the international or global scale.

4.6 Attribution of blame

The study sought to find out the agency or body that was blamed for the climate change issues. According to Nisbet (2010, p.63) the public tends to reach decisions on political issues by reducing them down to questions of responsibility and blame. The attribution of blame has a great influence on how the readers will interpret the article and more so whether they feel they are responsible for the problem of climate change or not.

The study findings from *The Standard* Newspaper mainly attributed blame to the developed nations. The findings presented it as an issue caused by the developed countries, and it is the developing countries that bear the brunt of their

negligence. The articles depict this as a situation in which the developing countries are victims of the developed countries. For instance, in *The Standard January 7, 2015*, the author attributes the drought experienced to “the pollution in countries located north of the equator, primarily in America and Europe...” This ignores the fact that African countries also contribute to the drought situation by their actions. This attribution seems to lay blame on “them” rather than “us”.

The study findings in the *Daily Nation* echo the sentiments voiced in *The Standard* newspaper; they attribute blame to the developed countries. For example in the *Daily Nation December 1, 2015*, the developing countries lay blame on the industrialized nations as “they have polluted the earth longer”. The blame is squarely placed on the industrialized nations and therefore, it seems to suggest that the developing nations are not to blame for the climate crisis. This is also depicted in the *Daily Nation December 04, 2015* where the problem is depicted as being caused by the developed countries and only suffered by the developing countries.

4.7 Temporal distance

The study sought to find out how climate change was depicted in terms of how soon it would happen; will it happen in the future or is it something that is already taking place. The findings from *The Standard* newspaper framed the effects of climate change as something happening and being felt now. The articles identified mainly showed climate change effects as something being experienced currently. The livelihoods of individuals affected by climate change are depicted as well as other specific effects. For instance in *The Standard March 20, 2013*, changing weather patterns, drought, and soil erosion are given as the effects of climate change taking place now. *The Standard July, 28, 2014* uses a flooded homestead to depict the effects experienced due to climate change. In *The Standard July 16 2014* the author cites, annual economic loss to Kenya of sh115 billion as well as respiratory diseases, deadly cardiovascular disease, lung cancer and stroke as being associated with climate change.

The findings from the *Daily Nation* were almost a replica of those in *The Standard* Newspaper. It mainly depicted climate change as something happening now: affecting people’s livelihoods rather than a phenomenon that will occur in the future. For example in *Daily Nation December 1, 2015*; *Daily Nation December 4, 2015*; *Daily Nation December 2, 2014*, the authors presents climate change as causing food insecurity forcing communities to migrate from place to place leading to conflict among communities, depletion of fresh water, decline in soil productivity, an increase in the global temperature of 3.8 degrees Celsius, desertification etc which have implications on food security, food crop production, water supplies, and economic growth. unprecedented human and physical crisis characterised by drought and famine, heat waves, flooding from heavier rains in some regions and rising ocean levels are also depicted as the effects happening now.

5.0 DISCUSSION

This paper sought to explore the trends in climate change coverage evident in the two selected newspaper articles. Some of the areas of interest included the authorship of climate change articles, the temporal distance of climate change issues, sources cited, attribution of blame, as well as the message focus.

From the study findings, it was evident that there were no consistent writers of the climate change stories. The study findings from both newspapers showed that no one author wrote more than ten climate change stories in the selected period. Studies (Takahashi, Huang, Fico and Poulson, 2017) have shown that reporting frequency is an important element in scientific reporting. Berkowitz (2009) has asserted that for the reporter, three aspects stand out: experience so that a reporter with longevity in the profession gains status over the years; track record for writing stories of impact as well as; intra-organizational power. The experience in reporting climate change stories can give a reporter an edge in their choice of sources as well as their framing techniques. The study findings thus showed that the reporters had no consistency in writing the stories and thus limiting their expertise. This could also point to the lack of reporters dedicated to the climate change beat meaning it may not be a major beat in the selected newspapers.

The *Daily Nation* newspaper presented climate change as a global phenomenon making it hard for the reader to decipher it as something touching on them. It is presented in a global scale leaving out much of the local dimension. These findings were similar to that of Schäfer and Schlichting (2014) who argue that climate change is usually described on large temporal and spatial scales making it an issue that most people are unable to grasp first-hand. These findings were however different from that of the *Standard Newspaper* which depicted climate change as a local issue happening and touching on Kenya and its people.

The study findings showed that climate change was depicted as a problem caused by developed countries affecting the developing countries. These findings are similar to those of Thaker et al. (2017) who blame the industrialized western countries for causing the climate change problem. The framing of the climate change problem as caused by the developed countries and it is the developing countries that are suffering can have an impact when designing ways of curbing the problem as it is seen as a ‘them problem’ rather than all of us contributing to the problem. This frame can lead to ‘their’ problem versus our solutions. It may push the reader to look at it as we are not the cause of the problem and therefore we should not be held responsible for what happens on our earth. According to Nisbet (2010) the public tends to reach decisions on issues by reducing them down to questions of responsibility and blame. The attribution of blame has a great influence on how the readers will interpret the article and more so whether they feel they are responsible for the problem of climate change or not.

In terms of the temporal distance, both newspapers depicted climate change as an issue taking place right now. These findings differed with those of previous scholars such as Nicholson-Cole (2005) and Doyle (2007; 2009) who found out that media often distances us from climate change communication and reinforces feelings of psychological, temporal and/or spatial disconnection. The framing of climate change as an issue taking place right now and affecting the current generation can stir up action amongst the people as they seek to ‘save’ themselves from the current crisis.

This paper also sought to identify the actors and the assertions that they had in relation to climate change. Studies (Das, 2020; Garcia & Proffitt, 2021) have shown that there is a continued dominance of state and expert actors over others in climate change literature. From the study findings the main

actors were mainly the government (*The Standard Newspaper*) and the international bodies (*The Daily Nation*). It is important to note that the role of the individual in tackling or contributing to climate change is not a main frame in this study. This is a reflection of Das's (2020) assertions that the citizen is always presented as a victim of climate change and cannot actively engage as a climate agent with dignity. The role of the individual is seen as very minimal. The presentation of climate solutions as coming from 'big' bodies can put off individual efforts towards mitigation. It thus makes climate change mitigation efforts a 'hopeless case' as the individual can do nothing about it (Oxford Research Encyclopaedia, 2016). This is also in line with the assertions of Léon and Erviti's (2015) who aver that articles often foreground (international) political or technological causes and solutions, remote from the individual (domestic) sphere, in which the audience might feel committed to the climate problem and able to respond. The individual is thus presented as too 'little' to deal with the climate change issue.

6.0 CONCLUSION

This study has shown that the selected newspapers have succeeded in framing the climate change issue as something happening now. This can help promote engagement as individuals can easily relate to what is happening in their environments. In terms of responsibility more needs to be done to move the narrative from just blaming the developed nations for the climate change problem. Our role in contributing to the climate change issue and also our role in coming up with solutions should be emphasised in the framing of climate change. Depicting the importance and specific actions individuals can do to mitigate climate change can boost the self-efficacy of individuals as they engage in the mitigation efforts.

It can be concluded that the print media alone (which was the focus of this study) cannot be the only solution to the climate change issues. However, it can be a part of the solution. By consciously engaging the readers with specific frames, the climate change issues can be brought to the fore promoting engagement amongst the readers.

REFERENCES

- [1] Berkowitz, D. (2009). Journalism in the broader cultural mediascape. *Journalism Sage publications*, 10(3), 290-292 <https://doi.org/10.1177/1464884909102587>
- [2] Boykoff, M. T. & Boykoff, J. M (2007). Climate Change and journalistic norms: A case study of US mass media coverage. *Geoforum* 38, 1190–1204. Doi:10.1016/j.geoforum.2007.01.008
- [3] Boykoff, M. T. (2007). Flogging Dead norm? Newspaper coverage of anthropogenic climate change in the United States and United Kingdom from 2003 to 2006. *Royal Geographic Society* 39(2). Oxford: Oxford University Centre for environment.
- [4] Corbett, J. B. & Durfee, J. L. (2005). 'Context and Controversy: Global Warming Coverage', *Nieman Reports* 59(4): 88-89.
- [5] Das, J. (2020). The struggle for climate justice: Three Indian news media coverage of climate change. *Environmental Communication*. 14(1):126–140
- [6] Dotson, D. M. (2009). A Content Analysis Of Conservative And Liberal Newspaper Coverage Of Climate Change In Santiago, Chile. A Thesis Presented To The Graduate School Of The University Of Florida
- [7] Doyle, J. (2007). *Mediating Climate Change*. University of Brighton, UK Ashgate Series: Environmental Sociology
- [8] Garcia, C.J. & Proffitt, J.M. (2021). Elite Company: Sourcing trends in 2014–2017 prestige press climate change editorials. *Environmental Communication*. 1–13, doi: 10.1080/17524032.2020.1866635
- [9] Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Harvard University Press.
- [10] IPCC (2007). *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, Pachauri, R.K and Reisinger, A.(eds.)]. IPCC, Geneva, Switzerland, 104 pp
- [11] Léon, B. and Erviti, M.C. (2015) Science in pictures: Visual representation of climate change in Spain's television news. *Public UnderstSci*.24(2):183-99. doi: 10.1177/0963662513500196..
- [12] Mearns, R. & Andrew, N. (2010) *Social Dimensions of Climate Change : Equity and Vulnerability in a Warming World*. [World Bank Publications - Books](http://www.worldbank.org/publications/books), The World Bank Group, number 2689, December
- [13] Ministry of Environment and Mineral Resources (2012). National climate change action plan: *Knowledge Management and Capacity Development: Public Awareness and Communication Strategy*. Nairobi: Government Printing Press.
- [14] Nicholson-Cole, S. (2005). Representing climate change futures: a critique on the use of images for visual communication. *Computers, Environment and Urban Systems*, 29, 255-273.
- [15] Nisbet, M. C. (2010). Knowledge into action: Framing the debates over climate change and poverty. In P. A. D'Angelo (Ed.), *Doing news framing analysis: Empirical and theoretical perspectives* (pp. 43–83). New York, NY: Routledge
- [16] O'Neill, S.J. & Nicholson-Cole (2009). "Fear Won't Do It": Promoting Positive Engagement With Climate Change Through Visual and Iconic Representations. *Science Communication* 30(3), <https://doi.org/10.1177/1075547008329201>
- [17] Oxford Research Encyclopaedia (2016).
- [18] Parry, J., Echeverria, D., Dekens, J., & Maitima, J. (2012, November). *Climate Risks, Vulnerability and Governance in Kenya: A review*. International Institute of sustainable Development, UNDP
- [19] Reese, S. (2001). Prologue-Framing Public Life: A Bridging Model for Media Research. In Stephen Reese, Oscar Gandy, and August Grant (eds.) *Framing Public Life: Perspectives on Media and our Understanding of the Social World.*, pp. 7-31. Mahwah, N.J.: Lawrence Erlbaum.
- [20] Schäfer, M.S. & Schlichting, I. (2014). Media Representations of Climate Change: A Meta-Analysis of the Research Field. *Environmental Communication* 8(2):142-160 DOI:10.1080/17524032.2014.914050
- [21] Takahashi, B., Huang, K., Fico, F., & Poulson, D. (2017). Climate Change Reporting in Great Lakes Region

Newspapers: A Comparative Study of the Use of Expert Sources. *Environmental Communication*, 11(1), 106-121, DOI: 10.1080/17524032.2016.1220967

- [22] Thaker, J., Zhao, X., &Leiserowitz, A. (2017). Media Use and Public Perceptions of Global Warming in India, *Environmental Communication*, 11(3), 353-369, DOI: 10.1080/17524032.2016.1269824