

Media and Climate Change Communication: A Systematic Review Based on Issues, Coverage and Framing

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Abstract

Climate change has turned to become the most academically discussed and debated environmental topic in the mass media, especially since last decade. Hence, the depiction of climate change in the media has been a major domain of multi disciplinary research as well. This paper made a systematic review of 'media and climate change communication', in according to its widely discussed themes including; 'Issue', 'Coverage' and 'Framing'. Media has been playing not only a pivotal role in portraying various aspects of climate change issues but also it enhances both public opinion and other climate change policy related matters. The study addressed here is that of how widely the mass media coverage addresses climate change. Media framing of climate change is another significant facet which study explored. This paper has reviewed 20 studies across 14 different nations using systematic search on electronic databases. The whole review revealed that in the process of climate change communication, media acts as most important intermediary between the common people and scientific community.

Keywords

Climate Change (CC), Issue, Framing, Coverage, Representation, Climate Change Communication (CCC)

Introduction

“Climate Change is no longer some far-off problem; it is happening here, it is happening now.”

- Barack Obama, Former US President

It is quite evident from many research studies since last decade that climate change is one of the most critical issues of 21st century (Boykoff & Boykoff, 2007). Inter Governmental Panel on Climate Change (IPCC, 2007) also had clearly reiterated that humans have interfered greatly with the climate and that further human-induced climate change is on the way.

Over time, many research studies are happening in the domain Media Communication about Climate Change (MCCC). Mass media can act as a propelling force in enlightening the masses on various issues relating to climate change. Media likely play an

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important role in the public’s perception of climate change risks by generalizing personal experiences and by framing them in specific ways (McComas and Shanahan, 1999). Media representations, media framing and media coverage to climate change are also portraying a significant role in the social construction of climate change among common people.

Media and Climate Change: Issues, Coverage and Framing

Media and climate change is always in the topic of discussion that how the media portrays the climate change issue, and its influences among public perception and policy makers understanding. Studies have also shown that the common people learn a lot about environment through consuming mass media exposure.

Media coverage and framing of climate change can be primarily focused on science of climate change, its impacts and adaptation and mitigation level. Media gives coverage to various sets of climate change issues including flood, unseasonal rainfall, global means temperature, glaciers melting, green house gas emission and frequency of extreme events (Climate change indicators according to IPCC).

Framing communicates how and why an issue should be seen as a problem, how it should be handled, and who is responsible for it. Likewise, media framing is a process through which an issue or phenomenon portrayed by the news. Media coverage and framing of climate change has been an area of concern especially in the developed and developing countries since last decade.

Identification of the Literature

Electronic data bases were used to identify the literature relating to media and climate change communication. Relevant literature on the topic was obtained from e-journal repository of the CHMK library, University of Calicut. The studies were mainly retrieved from the Sage Journals and Taylor and Francis Online (between 2009 and 2017) using the keyword, media and climate change. The full texts or abstracts from all the databases searched were reviewed prior to their inclusion. Finally, 20 papers from 14 different countries that directly dealt with media and climate change were selected for the systematic review.

Table: I: Summary of Included Studies on Media and Climate Change Communication

Author (s) Location	Methodology	Key Words	Major Findings	Comments
Neil T. Gavin (2009) <i>UK</i>	Content Analysis	media coverage, climate change, public sphere, Britain	The media coverage contributes to a public sphere that is truly international in character	Climate change policy must take international public sphere into account
Lei Xie (2009) <i>China</i>	Content Analysis	changing climate, coverage, mainstream media	Media coverage in developed countries was overall more skeptical toward climate change than that in developing countries	Media plays a crucial role in the social construction of climate change
Nathan Young, Eric Dugas (2011) <i>Canada</i>	Content Analysis	Representation, global warming, climate change	Canadian national printmedia has been complicit in the ‘decontextualization’	Canadians are reading more about climate change in their

			of climate change, whereby less attention is paid to issues of causation, scientific claims, and potential impacts	national print news than ever before, but it is closely bounded with political and business issues
Jari Lyytimäki (2011) <i>Finland</i>	Content Analysis	Climate change. Mass media coverage, Newspapers, Policy integration	Broad-based media coverage of climate change can provide promising building blocks for the mainstreaming of climate policies.	Media coverage into account as a key factor in the formulation and implementation of environmental policies aimed at broad-based actions.
Jules Boykoff (2012) <i>USA</i>	Content Analysis	Media coverage, climate change, climate change conference	US media coverage of the Cancún climate change conference was relatively scarce. As a way of injecting urgency and gravity, journalists could concertedly demonstrate how climate change is an economic story	The global media's challenge is to address these complex, overlapping issues in a clear, comprehensible manner that captured the urgency of the situation
G. C. Prem Nivas, Dr. I. Arul Aram (2013) <i>India</i>	Content Analysis and Frame Analysis	Doha climate change conference, News media framing, public perception, impact of media	<i>The Hindu and The NDTV had majority of the articles captured from the attribution of responsibility frame.</i>	The climate change conferences mainly urged the parties that climate change is a certain issue and everyone must react soon to combat it.
Andrew R. Jones (2014) <i>USA</i>	Content Analysis and Frame Analysis	News media framing, climate destabilization, global warming, ordinal regression, content analysis, frame analysis	The framing of global warming and the content conveyed by news media is highly problematic	Inclusion of climate contrarians in news stories about global warming has a significant impact on the framing of the issue
James D. Ford, Diana King (2015) <i>Canada</i>	Content Analysis	Climate change, Adaptation, Media Framing, Newspapers, North America	Media coverage does not necessarily lead to increased adaptation efforts or increased interest in adaptation among the public and policy makers.	The Canadian newspaper articles were significantly more likely to focus on providing statements of recognition on the importance of climate

				change adaptation.
Jari Lyytimäki (2015) <i>Finland</i>	Content Analysis	Environmental communication, newspaper coverage, climate change, eutrophication	It is obvious that climate change is not just a passing environmental trend, it will remain a major global challenge of the 21st century	The coverage of climate change in Finland had three distinctive peaks, such as of international climate policy negotiations, domestic energy debates, and mild and snowless winter weather.
Fernández-Reyes, JL Piñuel-Raigada, M Vicente-Mariño (2015) <i>Spain</i>	Content Analysis	Climate change, global warming, media coverage	A decline of the presence of climate change in newspapers, although there is growing empirical evidence about the environmental risk.	In climate change news coverage, International agenda is setting the national agenda
K Chetty, V Devadas, JS Fleming (2015) <i>New Zealand</i>	Content Analysis and Frame Analysis	climate change, Copenhagen climate change summit, economic competitiveness, framing analysis, framing theory, news media, New Zealand newspapers,	New Zealand newspapers have presented climate change in accordance with the scientific consensus position since 2009	climate change was framed in a manner that reflected a strong alignment with the scientific consensus position
Michael Brüggemann, Sven Engesser (2016) <i>Germany & Switzerland</i>	Content Analysis and Survey	Climate change Journalism, Skeptics, Denial, Journalistic norms, Balance	Climate journalism has moved beyond the norm of balance towards a more interpretive pattern of journalism.	Transnational climate coverage clearly conveys the climate change consensus.
Federico Pasquare' Mariotto, Corrado Venturini (2016) <i>Italy</i>	Content Analysis	Climate change, Weather, Media, Coverage	The climate change issue has received little attention in the analyzed news articles	The media should try incorporating as much scientific evidence as possible when writing about climate change
Chinenye Nwabueze, Stella Egbra (2016) <i>Nigeria</i>	Content Analysis and Frame Analysis	Framing, coverage, climate change	The media in Nigeria and Ghana source their reports mainly from international fora.	Nigerian and Ghanaian press should use more of the information and awareness frame in writing their news reports.
G. C. Prem Nivas, C. Arul and A. Aram (2016) <i>India</i>	Content Analysis and Frame Analysis	Climate change, global warming, news framing, television, news	Policy makers and NGOs were strongly associated with the 'judgment' frame;	TV channels could adopt the model of <i>NDTV24X7</i> in

		channels	while the news bureaus and scientists were strongly associated with the 'problem' frame.	collaborating with an institution working on climate change to offer quality coverage.
Bradley C. Freeman 2016 (UAE)	Content Analysis	Environmental Communication, Journalism & Professional Media, Media & Communications	the Gulf English-language newspapers do cover the issue of climate change—and not from a skeptical or deniers standpoint, rather a gradualism-oriented frame.	climate change receives varied coverage in the Gulf press
Kimberly J. Quesnel, Newsha K. Ajami (2017) USA	Content Analysis	Media coverage, extreme climate events	Heavy news media coverage on climate change truly indicative of public awareness and education	News media coverage was correlated with changes in urban water use in the San Francisco Bay Area from 2005 to 2015
Jason T. Carmichael, Robert J. Brulle (2017) USA	Content Analysis	US public opinion, climate change, elite cues, media effects, time-series analysis, structural equation models	Media coverage exerts an important influence, it is itself largely a function of elite cues and economic factors.	The importance the media assigns to coverage of climate change translates into the importance the public attaches to this issue.
Ana Horta, Anabela Carvalho & Luísa Schmidt (2017) Portugal	Content Analysis	Climate change, ccrossnational Comparison, domestication in journalism, global news, global politics,	Portuguese press tends to reproduce the global political agenda on climate change, mainly focusing on international events associated with global political decision-making processes	This kind of news coverage enhance public expectation of national governments' commitment at the international level and help policymakers' attempts to legitimize top-down implementation .
Renée Moernaut, Jelle Mast & Luc Pauwels (2017) US	Content Analysis and Frame Analysis	climate change, frame-building, ideology, journalist frames, news frames, newsroom organisation, news values	Journalist frames have only limited predictive value for the usage of news frames in climate change coverage	climate change is the subject of lively newsroom debates

The domain Media and climate change communication has been extensively studied by the researchers in developed and developing countries across the world, especially since last the last decade (see table 1). From the findings in Table 1, it is obvious that climate

change is not just a passing environmental trend, it will remain a major global challenge of the 21st century (Jari Lyytimäki, 2015). Data also showed that media did give prominence to the issue of climate change in two broader perspectives including coverage and framing. But most of the early studies were based on the developed countries and later moved towards the attention of developing countries.

It is quite evident from the studies (especially from USA and UK) that media coverage and framing of climate change communication have got significant contribution to create public awareness and education (Kimberly J. Quesnel and Newsha K. Ajami, 2017). But they did give less attention paid to the scientific consensus and other potential impacts of climate change (Nathan Young and Eric Dugas, 2011). Ironically, there were a few studies from developed countries itself (see table 1) which presented climate change in accordance with the scientific consensus position since 2009 (K Chetty, V Devadas and JS Fleming, 2015).

From the findings in Table 1, studies from the developing countries (especially from China and India) showed that media plays a crucial role in the social construction of climate change. But they strongly recommended that developed countries were overall more skeptical toward climate change than that in developing countries (Lei Xie, 2009). A few Indian studies which reviewed also urged climate change is a certain issue, it needs some quality media coverage and everyone must react soon to combat it (G. C. Prem Nivas, C. Arul and A. Aram 2016). Data showed one pivotal aspect about underdeveloped countries like Nigeria and Ghana that they were depending upon developed countries as a source pattern for climate change news coverage and framing (Chinenye Nwabueze and Stella Egbra, 2016).

Table: II: 'Issue' as Theme of Media and Climate Change Review Analysis

Sl. No	Title of the Study	Main Issue Focus	Issue Discussed
1.	<i>Addressing climate change: a media perspective (2009 – UK)</i>	Media coverage and politics of climate policy	Media coverage and public sphere
2.	<i>Climate Change in the Changing Climate of News Media: A Comparative Analysis of Mainstream Media and Blog Coverage of Climate Change in the United States and the People's Republic of China, 2005-2008 (2009 – China)</i>	Media coverage of climate change between developed and developing countries	Media coverage and construction of meaning of climate change
3.	<i>Representations of Climate Change in Canadian National Print Media: The Banalization of Global Warming (2011 – Canada)</i>	media coverage of global climate change issues in Canada's national print media	Print news as a main source of climate change information
4.	<i>Mainstreaming climate policy: the role of media coverage in Finland (2011 – Finland)</i>	Media coverage and climate policy	Media coverage and implementation of climate change policies
5.	<i>US Media Coverage of the Cancún Climate Change Conference (2012 – USA)</i>	Media coverage and UN climate change conference	US media coverage of the Cancún climate change conference
6.	<i>News media framing on Doha climate change conference (2013 – India)</i>	Media framing and Doha climate change conference	Climate change conferences are the news hook
7.	<i>Framing Global Warming: An International Comparison of the Influence of Climate Contrarians on News Media Coverage (2014 – USA)</i>	Media Framing on Global Warming	Global warming has a significant impact on the framing of the issue

8.	<i>Coverage and framing of climate change adaptation in the media: A review of influential North American newspapers during 1993–2013 ((2015 – Canada)</i>	Coverage and framing of North American newspapers in climate change adaptation	Canadian newspaper article content and climate change adaptation strategies
9.	<i>Prospects for Environmental Communication Based on 25 Years of Newspaper Coverage of Climate Change and Eutrophication in Finland (2015 – Finland)</i>	Media coverage and the prospects for environment communication	Climate change as a global challenge for 21 st century
10.	Media coverage of climate change and global warming en <i>El País, El Mundo y La Vanguardia (2015 – Spain)</i>	Media coverage of climate change and global warming in Spain	National media coverage and international agenda on climate policy
11.	The framing of climate change in New Zealand newspapers from June 2009 to June 2010 ((2015 - New Zealand)	Media framing and climate in New Zealand newspapers	Climate change framing in media and scientific consensus position
12.	Beyond false balance: How interpretive journalism shapes media coverage of climate change (2016 - Germany & Switzerland)	Media coverage and interpretative journalism	Transnational climate coverage and scope of interpretative journalism
13.	<i>2014, The ‘year without a summer’ in Italy: news media coverage and implications for the climate change debate ((2016 – Italy)</i>	Media coverage and news media in Italy	Climate change coverage and scientific consensus position
14.	<i>Newspaper framing of climate change in Nigeria and Ghana (2016 – Nigeria)</i>	Media Framing and climate change representation	Climate change related Newspaper article content of Nigerian and Ghanaian press
15.	<i>Framing of climate change issues in Indian television news channels ((2016 – India)</i>	Climate change framing and Indian television channels	News media content of NDTV and CNN-IBN
16.	<i>Protecting the Gulf: Climate change coverage in GCC print media (2016 – UAE)</i>	Media coverage in Gulf print media	Climate change related content in GCC print media
17.	<i>Changes in water consumption linked to heavy news media coverage of extreme climatic events (2017 – USA)</i>	Media coverage of extreme climatic events	News media coverage in urban water use in the San Francisco Bay Area from 2005 to 2015
18.	<i>Elite cues, media coverage, and public concern: an integrated path analysis of public opinion on climate change, 2001–2013 (2017 – USA)</i>	Media coverage and public opinion formulation	Media coverage of climate change issues and public attention to it
19.	<i>The Hegemony of Global Politics: News Coverage of Climate Change in a Small Country (2017 – Portugal)</i>	Media coverage and global political agenda	Climate change news coverage and public expectation of national governments’ commitment
20.	<i>Climate change journalist and news frames in mainstream and alternative media (2017 – US)</i>	Journalist frame and media frame according to climate change	climate change is the subject of lively newsroom debates

All the studies taken for systematic review were widely debated, discussed and focused ‘issue’ as a theme of media and climate change communication (see the table II) across the countries. From the findings in the Table II, it is evident that ‘issues’ associating with media and climate change has systematically, specifically and objectively studied mainly in the perspective of both coverage and framing.

Especially, studies from developed countries were ‘focused issues’ upon media coverage and framing mainly in respect of politics of climate policy, global warming, environment communication, public opinion formulation, climate policy and global climate

change issues. Whereas findings showed that there were two major ‘issues discussed’ including; transnational climate change coverage and print news as main source of climate change (Michael Brüggemann and Sven Engesser, 2016), (Nathan Young and Eric Dugas, 2011).

A few reviewed studies from the developing countries (especially from China and India), ‘focused issues’ upon distinction between the climate change coverage of developing and developed countries (Lei Xie, 2009). ‘Discussed issues’ in the context of developing countries were mainly as the role of media coverage in the construction of meaning of climate change.

Table: III: ‘Coverage’ as Theme of Media and Climate Change Review Analysis

Sl No	Topic	Coverage Period	News Media	Type of news content	Key Empirical Sources
1.	<i>Addressing climate change: a media perspective (2009 – UK)</i>	Jan 2001 – Dec 2006	<i>British Newspapers (The Guardian, Times, Independent and Telegraph)</i>	1500 news stories	Gavin (2007), Boykoff (2007)
2.	<i>Climate Change in the Changing Climate of News Media: A Comparative Analysis of Mainstream Media and Blog Coverage of Climate Change in the United States and the People's Republic of China, 2005-2008 (2009 – China)</i>	2005 - 2008	US Newspapers, US blogs posts, Chinese Newspapers, Chinese Blog stories	242 U. S. newspaper stories, 130 U. S. blogs posts, 202 Chinese newspaper stories, and 64 Chinese blog stories	Boykoff Maxwell T (2007), Gallup (2007), Boykoff & Boykoff, (2004)
3.	<i>Representations of Climate Change in Canadian National Print Media: The Banalization of Global Warming (2011 – Canada)</i>	1988/1989, 1998/1999 2007/2008 (study in three time frame)	Canadian Newspapers (The Globe and Mail and The National Post)	897 news articles	Reese et al. (2007)
4.	<i>Mainstreaming climate policy: the role of media coverage in Finland (2011 – Finland)</i>	1990 - 2010	Finnish Newspapers (Ilta-Sanomat, Helsingin Sanomat, Aamulehti, Keskisuomalainen, Aamulehti, Iltalehti, Maaseudun Tulevaisuus)	800 Climate change related stories	Boykoff and Boykoff (2007), Tirkkonen (2000), Boykoff and Goodman (2009),
5.	<i>US Media Coverage of the Cancun Climate Change Conference (2012 – USA)</i>	Nov – Dec 2010 (Cancun Conference)	US Newspapers (The New York Times, USA Today, The Wall Street Journal, and the Washington Post)	176 climate change articles	Boykoff and Boykoff (2007), Ball (2010)
6.	<i>Coverage and framing of climate change adaptation in the media: A review of influential North American newspapers during 1993–2013 (2015 – Canada)</i>	1993 - 2003	North American broadsheet newspapers (Globe & Mail, Toronto Star, New York Times, Washington Post)	271 Climate change news articles	Boykoff and Yulsman (2013), IPCC (2007), Moser (2011)
7.	<i>Prospects for Environmental Communication</i>	1990 - 2014	Finnish Newspapers (Ilta-Sanomat, Helsingin Sanomat, Aamulehti)	10, 229 newspaper stories	Lyytimaki (2011), Kumpu (2015)

	<i>Based on 25 Years of Newspaper Coverage of Climate Change and Eutrophication in Finland (2015 – Finland)</i>				
8.	Media coverage of climate change and global warming en <i>El País, El Mundo y La Vanguardia (2015 – Spain)</i>	January 2000 – November 2014	Spanish Newspapers (<i>El País, El Mundo and La Vanguardia</i>)	1966 News articles (based on 4 th & 5 th IPCC conferences)	Boykoff (2009), Corbett, Young and Byron (2009)
9.	Beyond false balance: How interpretive journalism shapes media coverage of climate change (2016 - <i>Germany & Switzerland</i>)	January 2011 – December 2014	Leading print and online news outlets in Germany, India, the United Kingdom, the United States, and Switzerland.	936 news stories	Boykoff and Boykoff (2004), Dunwoody and Peters (1992)
10.	2014, The ‘year without a summer’ in Italy: news media coverage and implications for the climate change debate (2016 – Italy)	June 1 – August 31	Two online Italian Newspapers (Repubblica. it and Corriere. it)	171 News articles	Boykoff and Goodman (2009), Taylor and Nathan (2002), Boykoff and Boykoff (2004), Boykoff (2007)
11.	<i>Protecting the Gulf: Climate change coverage in GCC print media (2016 – UAE)</i>	2009 - 2013	<i>Six GCC English Newspapers (Khaleej Times, Kuwait Times, Times of Oman, The Gulf Daily News, The Qatar Tribune, The Qatar Tribune, Arab News)</i>	300 articles (Ten articles per year from six Newspapers)	Carvalho & Burgess (2005), Boykoff (2011),
12.	<i>Changes in water consumption linked to heavy news media coverage of extreme climatic events (2017 – USA)</i>	2005 - 2016	Nine Newspapers in USA	100 draught related stories	Boykoff and Boykoff (2004)
13.	<i>Elite cues, media coverage, and public concern: an integrated path analysis of public opinion on climate change, 2001–2013 (2017 – USA)</i>	January 2002 – December 2013	Major news magazines and major popular scientific magazines in US	300 news articles	Weber and Stern (2011), Hamilton and Keim (2009)
14.	<i>The Hegemony of Global Politics: News Coverage of Climate Change in a Small Country (2017 – Portugal)</i>	2007 - 2014	Three Portuguese Newspapers (<i>Diário Económico, Journal de Notícias and Publico</i>)	545 news articles	Chong and Druckman (2011), Clausen (2004), Schlesinger (1998)

From the findings in Table III, the ‘Coverage’ as a theme of media and climate change has analyzed in respect of coverage period, selection of news media, types of news content and key empirical sources. Out of total 20 studies reviewed, 14 among them purely associated with the ‘coverage’, which has taken as one of the core themes of systematic review of media and climate change communication.

All the studies were taken ‘Newspaper’ as a selective news medium to study the theme of ‘coverage’ (see the table III), and news ‘stories/articles’ were the ‘type news

content' to analyze the 'coverage'. Each study has taken mainstream newspapers of their respective country to analyze the coverage of media and climate change communication.

Table: IV: 'Framing' as Theme of Media and Climate Change Review Analysis

Sl. No	Topic	Framing Period	Framing Aspects	Theoretical Frame Work	Key Empirical Sources
1.	<i>News media framing on Doha climate change conference (2013 – India)</i>	Nov 1, 2012 – Dec 09 th 2012	Attribution of responsibility, Human interest frame, Conflict frame, Morality frame, consequences frame	Semetko and Valkenburg (2000)	Boykoff (2008b), Reddy and Assenza (2009), Boykoff (2007)
2.	<i>Framing Global Warming: An International Comparison of the Influence of Climate Contrarians on News Media Coverage (2014 –USA)</i>	1993 - 2003	Thematic-current-near, thematic-future-near, thematic-current-distant, thematic-future-distant, episodic-current-near, episodic-future-near, episodic-current-distant, episodic-future-distant, no clear frame	Shanto Iyengar's operationalization of media frames (1987)	Charlie Ward (1993), Versteegen & Wilson (2008), Layden (2006)
3.	The framing of climate change in New Zealand newspapers from June 2009 to June 2010 (2015 - New Zealand)	June 2009 – June 2010	Social progress, Morality, Politics, Scientific Controversy, Science, Economic competitiveness	Generalisable typology designed by Nisbet (Nisbet & Scheufele 2009)	Williams (2010), Dispensa & Brulle (2003)
4.	<i>Newspaper framing of climate change in Nigeria and Ghana (2016 – Nigeria)</i>	March 2016 – September 2016	Social progress, Morality, Politics, Scientific Controversy, Science, Economic competitiveness	Generalisable typology designed by Nisbet (Nisbet & Scheufele 2009)	Spector & Kitsuse, (1977), Schoengeld, Mer, & Griffin (1979), Egbra, (2014)
5.	<i>Framing of climate change issues in Indian television news channels (2016 – India)</i>	2006 - 2012	Problem frame, diagnose causes frame, moral judgment frame, and remedies frame.	The frame is perceived from the Robert M Entman's idea (1993)	Goffman (1974), Boykoff and Mansfield (2008)
6.	<i>Climate change journalist and news frames in mainstream and alternative media (2017 – US)</i>	24 October – 4 December 2016	Cycles of Nature Frame, Environmental Justice Frame, Human Rights Frame, Economic Challenge Frame	Multilevel model - Moernaut, Renee Madeleine, Mast, and Pauwels (2017)	Entman, Matthes, and Pellicano (2009), Engesser and Brüggemann (2016)

From the findings in Table IV, the ‘Framing’ as a theme of media and climate change has analyzed in respect of framing period, framing aspects, theoretical frame work and key empirical sources. Out of total 20 studies reviewed, six among them purely associated with the ‘Framing’, which has taken as one of the core themes of systematic review of media and climate change communication.

Studies were followed various theoretical frame works/models (see Table IV) including; Semetko and Valkenburg (2000), Shanto Iyengar’s operationalization of media frames (1987), Nisbet & Scheufele (2009), Robert M Entman’s idea (1993) and Moernaut, Renee Madeleine, Mast, and Pauwels (2017)

Conclusion

Our study has proved the fact that especially since last decade; media has been contributing increased attention to climate change issues across the world. Media coverage and framing of climate change has been an area of concern especially in the developed and developing countries. By reviewing 20 papers, study was also reiterated that climate change is not just a passing environmental trend; rather media should be given quality coverage and framing to construct the meaning of climate change. The Western media tends to give heavily the ‘problematic frame’ in the portrayal of climate change, whereas the favorable sign is that Indian media is initiated to give ‘responsibility frame/remedial frame’ in it. African countries are yet to take a strong stance towards climate change. The media in these countries have not been able to bring climate change issues in the conscience of public agenda.

Even though climate change issues are effectively framed and covered by the media all over the world, study recommends that to specifically determine how much expertise or professional involvement being ensured while reporting climate change issues. It is a high time that Indian media take appropriate steps to fill the gap which has raised when it comes to science communication, as it needs a very analytical and critical way of reporting.

The present review was restricted to the key word search ‘media and climate change’ alone excluding all other relevant findings came across and so care to be taken regarding application of the study to other issues relating to the prospects, challenges and practices of mediated climate change communication. Universality of the observations from the review could be doubted on the ground that the review covered only about 14 nations and 20 studies done across the world.

References

- Asplund, T., Hjerpe, M., & Wibeck, V. (2013). Framings and coverage of climate change in Swedish specialized farming magazines. *Climatic Change*, 117, 197–209.
- Boykoff MT (2008). Media and scientific communication: A case of climate change. *Geological Society*. London, Special Publications. pp. 11-18.
- Boykoff MT (2009). A discernible human influence on the COP15? Considering the role of media in shaping on going climate science, policy and politics. *Copenhagen Climate Congress*. Theme 6. Session 53. pp. 1-8.
- Boykoff MT, Mansfield M (2008). Ye olde hot aire: reporting on human contributions to climate change in the UK tabloid press. *Environ. Res. Lett.* 3 (2) : 1-8.

Goffman E (1974). *Frame Analysis: an Essay on the Organization of Experience*. New York: Harper & Row

IPCC (2001). *Climate Change 2001: Mitigation. The Third Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press. Cambridge. U. K.