

Mass Media and Climate Change

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Abstract:

This paper focuses on the issue of Climate Change as an emerging area of concern among citizens, governments and policy makers globally. Since anthropogenic factors play an important role in contributing to climate change, it is imperative that attitudinal and behavioral changes among people concerning the environment could play an important role in mitigating the effects of climate change. Communication plays an important role in this regard as it creates awareness that could lead to positive action. The mass media therefore has an important role to play in this regard.

This paper discusses the anthropogenic factors leading to climate change, and argues how a change in behavior of people could be a positive intervention in climate change mitigation. It explores the positive role that mass media could play in this regard.

Introduction

Climate change is a reality that is looming large on the horizon as a phenomenon that could threaten the existence of this planet. As the implications of climate change are being felt increasingly by people all over the world, there is a need to bring this issue front and centre to the public's awareness. Concerns on the anthropogenic impact on climate change necessitate inciting efforts on changing attitudes and promoting change in practice. The issue assumes importance due to the futuristic projections of the doom of the human civilization, given the current trends in changes in climatic conditions on Earth. Thus, climate change has become one of the most intensely researched and discussed environmental issue. A huge amount of public resources is being spent on efforts to understand causes their associated impacts while considering appropriate responses. While considering appropriate strategies for sustainable development, actively involving citizens in all initiatives towards this end is a priority.

Effective responses to climate change must focus on involving citizens directly in problem-solving and policy-making measures.

Importance of Climate Change Communication

Communication has been recognised as an essential element in involving citizens in the efforts to mitigate and adapt to the challenge of climate change. Effective communication is an important tool that can be used to identify problems, encourage participation, invite innovation in problem solving, and promote adaptation and mitigation. Climate change is a complex scientific issue and public understanding of the same may be extremely limited. Also, the public who are sought to be involved in mitigation effects differ in educational, economic, cultural diversity and this invariably presents challenges for effective communication. The scientific language of climate impact assessments makes it difficult for the general public to respond effectively.

Communicating the climate change issue requires the imparting of information to fulfil three expectations:

- 1) To raise awareness;
- 2) To confer understanding; and 3) to motivate action.

Growing concerns about the anthropogenic impact of climate change has made it important for governments and activists to motivate people to participate in reducing greenhouse gases by adopting lifestyle

changes that are environmental friendly. Communication, primarily through the mass media is thought to play an important role in this regard, by creating awareness of the problem and motivating responsive action.

Public awareness and education are the first steps in the process of mitigating anthropogenic contributions to climate change. Communication thus becomes a potent tool in the task of making people aware of the reasons for and hazards of climate change. Several players are involved in the field of climate change communication. At the core of the communication cycle are the scientists and policy makers from whom the knowledge on climate change emerges, to reach out to the people. It is then the business of the mass media to play a major role in shaping perceptions and awareness of environmental issues. Media coverage of climate change has been identified as an important factor in public understanding (e.g. Wilkins, 1993; Mazur and Lee, 1993; Mormont and Dasnoy, 1995; Trumbo, 1996). Ulrich Beck's (1992) thesis of "risk society" applies to the dangerous environmental problems that result from our techno-scientific expertise and economic development. The lay public relies on experts to understand such risks, and the one platform that exists for the continual discourse between experts and citizenry is the mass media (Beck,

1995; Gregory and Miller, 1998). Research has found that not only do news outlets "define pressing issues" and "influence public policy," but news articles written on existing risks "can lead to dramatic changes in behaviour" (Nelkin, 1995). Thus, the mass media are very influential tools for widening public awareness of environmental issues (Slovic, 2000).

The term 'global warming' entered the lexicon of the mass media in the 1970s. On July 21, 1997, staff writer Paul Valentine wrote a page-one story for the Washington Post headlined "100-Year Trend: Warmer; Confirming What You Feel: Our Summers are Getting Warmer." Since then, the media across the world have been providing extensive coverage of environmental issues, which threaten both immediate and long term human sustainability. In this quest however, the media is often tempted to provide front page coverage to incidents such as accidents and spills while relegating chronic environmental problems - such as global warming and climate change - to the inside pages or the end of the news program.

However, merely disseminating information on the various media channels does not ensure a behavioural change among people. It is important to examine whether public understanding of climate change has

improved over the decades. Does increase in information have a bearing on changing attitudes and thereby on behaviour? This is increasingly becoming the focus of climate change communication research today. Skea (1992) concluded that public attitudes were a mix of ignorance, apprehension and confusion; and Changnon et al. (1992) noted that scientists thought that global change communications were confusing and misleading to the public. There is a need to therefore identify communications that have been successful while strategizing efforts so as to improve pro-environmental efforts. This will also help in developing a policy framework to mitigate/adapt to climate change.

Communication thus plays a vital role in creating awareness about essential issues in the society and in mobilizing civic action towards the same. The media also garners support for civil action and provides a platform for the members of society to form an opinion on the issue and sustains their engagement. Lack of information and communication can keep citizens away from the public sphere and disable their participation.

A citizen is defined as a person "participating in civic action" (Susanne C. Moser, 2000). A person merely fulfilling the technical aspects of being a citizen of a country can

hardly fulfil the greater roles of an informed and pro-active citizen. The problem of an indifferent citizenry is what plagues most communities today and also is at the root of the increasing anthropogenic contribution to environmental degradation. In such cases, communication could bring about an individual behavioural change. On the other hand communication can go a long way in supporting the activities of individuals active in civic action. The role of communication in public work focuses on how the issue of concern is framed; how its causes, implications, and solutions are explained; how dialogue occurs; and how it draws on and feeds social capital (Daniel, Schwier, and McCalla, 2003).

Communication can thus network people working towards a common environmental cause, such as mitigating climate change and give momentum to the agenda on hand. However, it requires a good amount of expertise, sensitivity and skill to use communication to achieve these objectives. Environmental issues such as climate change are steeped in scientific jargon and to communicate the same to a heterogeneous lay audience is an arduous task. This is further complicated by the fact that changing behaviour is far more complex even though a person is armed with information and may also have the right attitude. There are several

psychological and cognitive processes that holdback the individual from adopting a pro-environment behaviour change.

Behaviour Change Variables*

Knowledge: It is important that people have the knowledge of the current state of the environment, factors causing environmental degradation, strategies that have to be adopted at the individual and societal level to protect the environment and also models of strategies being adopted across the globe towards the issue in hand.

Attitude: Providing facts alone will not lead to a change in behaviour (Hines et al, 1987). People must have a positive attitude towards adopting environmentally friendly practices. Both types of attitudes, i.e., attitude towards the environment as well as attitude towards adopting pro-active behaviours will affect people's engagement with conservation methods.

Self-Efficacy: Information is important for people to take a stand on the issue and take action. Insufficient information acts as a deterrent for most people to actively engage in civic action. People often stay away from issues which are scary, ill-understood, difficult to control, overwhelming, and in which people are

complicit, such as global climate change (Moser, 2007).

Locus of Control: People who have a strong locus of control believe that they can bring about a change and it is these very people who will adopt environmentally friendly activities. Those who presume that their actions will be of not much consequence are not expected to bring about any major changes in behaviour. Other such factors could include: a sense of being powerless and overwhelmed; denial; numbing; feeling exempt from the threat; blame; wishful thinking or rationalization that the problem will be resolved by experts; displacement of attention on other problems; apathy; fatalism; or other forms of "capitulatory imagination" (Immerwahr, 1999; Loeb, 2004).

Intent: Intent is a major factor affecting a behavioural change. Before an individual will take a deliberate action, he must have the intent to do it (Ajzen, 1991).

*Variables adopted from Dotzour et al., "Crossing the Bog of Habits: An Evaluation of an exhibit's effectiveness in promoting environmentally responsible behaviours", 2002.

Other common cognitive barriers to more active personal engagement on climate change include: not understanding the issue, the causes, the relevance of climate change impacts

to one's life, or the possible solutions; misunderstanding, confusion, or disagreement with the actions, policies, or strategies proposed by advocates or policymakers to address climate change; an unattractive future vision painted in people's imagination (often one of doom); and lack of resonance with the framing and language in which climate change is being discussed (synthesized in Moser and Dilling, 2007).

Even in the present age of information, there are several barriers that may impede adoption of environmentally friendly behaviour. Heavy filters against the information, gate keeping and media policies, precedence of political and economic news over development issues, can limit the availability of information regarding climate change on the media.

Role of Mass Media in Communicating Climate Change

The mass media have played a pivotal role in shaping public understanding of climate change and has been instrumental in shaping science and policy discourse. Mass media representational practices have broadly affected translations between science and policy and have shaped perceptions of various issues of environment, technology and risk (Weingart et al., 2000).

Studies have found that the public learns a large amount about science through consuming mass media news (Wilson, 1995). In what are conventionally regarded as 'developed nations', many polls have found that television and daily newspapers are the primary sources of information (Project for Excellence in Journalism, 2006). In 'developing countries' and more specifically in rural areas, radio has been a principle medium through which climate change news is communicated (Luganda, 2005). The media has portrayed environmental issues through the numerous formats available. News reporting, documentaries, feature films, advertisements and talk shows have been used to explore the various nuances of climate change. Communication researchers have also been immensely interested in examining the persuasive power of the media in bringing about a pro-environment behaviour change in people. The interplay between science and media is dynamic. Science formulates media messages and thereby public understanding; also, it is media activism and thereby public enthusiasm that shapes climate science policy decisions. Carvalho and Burgess (2005) in their model of environmental communication focus on three circuits through which communications pass over time. They emphasise that media coverage of climate change takes place in the larger context of

regulatory frameworks, political constraints, and economic drivers, cultural, regional and national differences.

There are several factors that affect the framing of news by a media organisation. The occurrence of events of significance, the social, educational and cultural background of news reporters and editors, the political, social and economic landscape, existing journalistic norms and values, asymmetrical power relationships and media policies affect the framing of environmental news in the media. Thus, media coverage of climate change (adaptation and mitigation) is not a simple collection of news articles and clips produced by journalists and producers; rather, representations signify key frames derived through complex and non-linear relationships between scientists, policy actors and the public, often mediated by news stories.

Framing news is essential to promoting climate change concerns. Media sets the agenda for public opinion. The process of media framing regarding climate change issues involves choosing coverage of certain events over others, setting the tone and language of communication and allotting space/time to the issue. These choices will in turn score the news as an issue of prime importance or one that is to be not given much notice. There are also several other factors that affect framing of

news. Deadlines and space constraints may affect a journalist's reporting of news. For instance, tight deadlines can lead to stories that rely on just one source for information (Dunwoody, 1986) and they can limit the ability of journalists to both comprehend and communicate complex climate science (Weingart et al., 2000). The reporters' and subeditor's knowledge and aptitude towards environmental news also impacts coverage. This affects communications of scientific information when complex scientific material is simplified in media reports (Anderson 1997). Gilens and Hertzman have provided "systematic evidence that financial interests of media owners influence not only newspaper editorials but straight news reporting as well" (Gilens and Hertzman, 2000).

McChesney (1999) has written, "The core structural factors that influence the nature of media content include the overall pursuit of profit, the size of the firm, the amount of direct and indirect competition facing the firm and the nature of that competition, the degree of horizontal and vertical integration, the influence of advertising, the specific interests of media owners and managers, and, to a lesser extent, media employees. In combination, these factors can go a long way to providing a context (and a trajectory) for understanding the nature

of media content...". This statement holds across regions and environmental issues.

It is also true that media of the developed countries are in the fore front of climate change coverage. This is largely due to the fact that they have greater access to technology as well as research and development in climate change. Journalists from developing countries also face the constraints of language and translation. Scientific jargon has to be understood in the context in which it is spoken and translated into the regional dialect. Science is an encoded form of knowledge that requires translation in order to be understood (Ungar, 2000).

Scientists may also find it difficult to communicate effectively to the journalist in order to get their story across the board. Scientific writing differs from journalistic writing. News states the most important and the most obvious first, whereas scientific writing carefully builds up a whole background and base of research before proceeding with the findings. Also, scientists must be able to communicate to the journalist in common man's terms several of the research findings associated with climate change. Most of the media organisations do not have a separate science or environment reporter to cover environmental beat and has to rely on regular reporter whose understanding of these issues

may be limited. It is often seen that environmental issues figure in the media if it is event or person associated. For e.g., Floods, Hurricanes and Tsunamis increase the volume of coverage of environmental issues. The Convention on Biological Diversity conducted in Hyderabad in 2012 received coverage as long as the event was held. Newspapers brought out special supplements on various environmental issues. However the enthusiasm died down after the conclusion of the event. As an effect, these stories are seldom linked to deeper social analysis.

Harbinson et al (2006) attributes little media coverage to climate change issues in the developing countries to low levels of knowledge of the issue: this was linked to a lack of access to "timely, clear and understandable information on climate change" as well as the ways that "scientists, NGOs and institutions use excessive jargon" in communicating the issue. He also cites insufficient financial resources that impedes first-hand reporting.

The media are instrumental in shaping public understanding of environmental issues in India (Chapman et al. 1997). Simon Billett (2008) found that In comparison to the skepticism in the North American and European press, the Indian press entirely endorses climate change as a scientific reality. His study

concluded that the articles in Indian press argued that rapid, unusual climate change does exist today. In addition, almost 98% of the articles reviewed, directly attributed climate change to anthropogenic causes. The findings of Simon's study reveals that mass media in India concur with the current scientific consensus on climate change.

Von Stroch and Krauss's (2005) study revealed that the English language press in India does not treat climate change as merely a scientific process. The press discusses social and economic impact of climate change. Their study further states that the press in India treated climatic change as anthropogenic in nature and perceived the associated threats to the population. However, the Indian press puts the burden of taking corrective measures to address climate change on the developed west. Climate change is divided between the threat faced by India and the Northern responsibility for this threat: cause outside, effect inside (Lankala, 2006). Cause and effect are 'distaniciated' along developmental and international North-South lines (McManus, 2000).

Some of the studies have also found that compared to the regional press, it is the English language press that takes the credit of a major share of coverage of climate change issues.

However, this only goes on to mean that only the elite layer reading these dailies are targeted. On one hand, the Indian media present climate change in a far more scientifically representative frame than many Western media have done, almost completely depoliticising the question of the existence of climate change (Boykoff and Boykoff, 2004). However, this coverage carries with it a highly contentious political frame defining attitudes towards climate policy-making. The 'normative assumption' that there is a neo-colonial desire to suppress India's growth through unrestrained climate change impacts and restrictive policy has fuelled a nationalistic reaction in the press that reinforces the non-compliance of India and its public with any binding emissions targets (Power 2003: 136-137 in Radcliffe 2005).

Policy Implications for Media Coverage of Climate Change

In the present age of new media, journalists can also use the social media to put in stories that may not be accommodated in the mainstream media owing to various factors. This will go a long way in enhancing public understanding of climate change.

While existing communication efforts can be improved, more dialogic forms of communication are also needed. Such dialogs serve not only to exchange information and increase knowledge of climate science but also to develop common visions for a better future, address value differences, and form or revitalize social bonds to support the necessary behavioural and social changes. It is this much-needed face-to-face communication that stirs the hope that communication could play an essential role in forming trustful social bonds, building and maintaining social capital, facilitating civic engagement on climate change, and ultimately rejuvenating the democratic political process across the world (Moser, 2007).

It is imperative that climate change coverage has to be stepped up in the media in order to minimise anthropogenic contributions to climate change. The story about climate change is often that climate change is not the

story. Soaring temperatures are an opportunity for journalists to talk about climate change in a way that their audience can relate to. Climate change stories can also be related to other issues that directly affect people such as health problems. This will enable people to relate to climate change as a problem that has to be immediately addressed rather than one which has no implications in the near future.

Framing is an important process by which communicators can enhance their impact by linking messages and recommendations to their audience members' deeply held values and beliefs. Journalists must connect to the core values of the readers. There is also the need to localise the issue. Decreasing numbers of Polar Bears in the poles will be of hardly much interest to people living in the tropics. There is thus a need to give local angles to a global problem by moving the impact closer home.

References

1. Ajzen, I. (1985, Reprinted): Attitudes, personality, and behavior. Milton Keynes : Open University.
2. Beck U. 1992. Risk Society: Towards a New Modernity. London: Sage.
3. Billett Simon (2008) Dividing climate change: global warming in the Indian mass media, Springer Science.
4. Boykoff, M., & Boykoff, J. (2004). Balance as bias: Global warming and the US prestige press. *Global Environmental Change*, 14(2), 125–136.
5. Burgess, J. and Carvalho, A. (2005) ‘Cultural Circuits of Climate Change in U.K. Broadsheet Newspapers, 1985-2003’, *Risk Analysis* 25(6): 1457-69.
6. Chagnon, Stanley A., et al. (1992). "Shifts in Perception of Climate Change: A Delphi Experiment Revisited." *Bulletin of the American Meteorological Society* 73(10): 1623-27.
7. Daniel, Ben, Richard A. Schwier, and Gordon McCalla. 2003. Social Capital in Virtual Learning and Distributed Communities of Practice. *Canadian Journal of Learning and Technology* 29(3). <http://www.cjlt.ca/index.php/cjlt/article/view/85/79>.
8. Dilling, L., Moser S. and L. Dilling (Ed.) (2007), Introduction. *Creating a Climate for Change: Communicating Climate Change and Facilitating Social Change 1-27*, Cambridge University Press.
9. Dotzour MG, Bravenec E. (2002) Insurance at a premium: *Tierra Grande*; 9(2).
10. Dunwoody, S. (1986). *The Science Writing Inner Club. Scientists and Journalists*. S. Dunwoody, S. Friedman and C. Rogers. New York, Free Press.
11. Gilens, Martin and Craig Hertzman. “Corporate Ownership and News Bias: Newspaper Coverage of the 1996 Telecommunications Act.” *The Journal of Politics*, Vol. 62, No. 2, May 2000, 369-386.
12. Gregory, J. and S. Miller (1998). *Science in Public: communication, culture and credibility*. New York, Plenum Press.
13. Harbison R (2006) Whatever the weather: media attitudes to reporting climate change. Panos Institute Report London.
14. Immerwahr, John, 1999. Waiting for a Signal: Public Attitudes toward Global Warming, the environment and Geophysical Research, American Geophysical Union, Electronic Publication, http://www.agu.org/sci_soc/sci_soc.html.
15. Lankala S (2006) Mediated nationalisms and ‘Islamic terror’: the articulation of religious and postcolonial secular nationalism in India. *Westminster Papers in Communication and Culture* 3(2):86–102.
16. Loeb, Paul R. 2004. Introduction to Part Four. In *The Impossible Will Take a Little While: A Citizen’s Guide to Hope in a Time of Fear*, edited by P. R. Loeb. New York: Basic Books.
17. Luganda, P. (2005). Communication Critical In Mitigating Climate Change in Africa Open Meeting of the International Human Dimensions Programme, Bonn , Germany
18. Mazur A, Lee J 1993 Sounding the global alarm: environmental issues in the US national news. *Social Stud. Sci.* 23, 681–720.
19. McChesney, R., 1998. This communication revolution is brought to you by US media at the dawn of the 21st century. In: Phillips, P., Project Censored (Eds.), *Censored 1998: The News that Didn’t Make the News—The Year’s Top 25 Censored Stories*. Seven Stories Press, New York, pp. 95–108.
20. Mormont, Marc and Christine Dasnoy (1995) Source strategies and the mediatization of climate change, *Media, Culture & Society* (SAGE, London, Thousand Oaks and New Delhi), Vol. 17 (1995), 49-64.

21. Moser C.Susanne (2000) *Communicating Climate Change and Facilitating Social Change* National Center for Atmospheric Research, Boulder.
22. Nelkin, D. 1995. *Selling science: How the press covers science and technology*. Rev. ed. New York: W. H. Freeman.
23. Radcliffe S (2005) *Development and geography: towards a postcolonial development geography*, *Prog Hum Geogr* 29(3):291–298.
24. Skea, J., 1992: *Physical impacts of climate change*. *Energy Policy*, 20(3), 269-272.
25. Slovic, P. (ed): 2000, *The Perception of Risk*, London: Earthscan.
26. Trumbo CW (1996) *Constructing climate change: claims and frames in US news coverage of an environmental issue*. *Public Underst Sci* 5(3):269–283.
27. Ungar, S., 1998. *Bringing the issue back in: comparing the marketability of the ozone hole and global warming*. *Social Problems* 45 (4), 510–527.
28. Von Storch Hans, Mariza Costa-Cabral, et al (2005) *Four decades of gasoline lead emissions and control policies in Europe: a retrospective assessment*, *The Science of the Total Environment* 311 (2003) 151–176.
29. Weingart, P., A. Engels, et al. (2000). "Risks of Communication: Discourses on Climate Change in Science, Politics, and the Mass Media." *Public Understanding of Science* 9: 261-283.
30. Weingart, P., Engels, A., & Pansegrau, P. (2000). *Risks of Communication: Discourse on Climate Change in Science, Politics, and the Mass Media*. *Public Understanding of Science*, 9, 261-283.
31. Wilkins, L. (1993). *Between facts and values: Print media coverage of the greenhouse effect, 1987–1990*. *Public Understanding of Science*, 2(1), 71–84.
32. Wilson KM (1995) *Mass media as sources of global warming knowledge*. *Mass Communication Review* 22: 75–89.

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