

Research Note:

**Coverage of climate change risks in leading
Philippine newspapers**

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ABSTRACT

The study aimed to find out the coverage of climate change risks in Philippine leading newspapers - *Philippine Daily Inquirer*, *Philippine Star*, and *Manila Bulletin*. The sample issues were from those published from January to December 2007. Results showed that the sample newspaper issues had 401 articles on climate change risks. Of these articles, the biggest number was related to education and the least was on species extinction. The one-way ANOVA showed that the three national dailies were not significantly different in terms of the number of climate change risk articles. Results also revealed that the three newspapers did not give prominence to climate change risk articles. Aside from the small space allocated, most of these articles were placed in inside pages. Experts were the most common sources of information for the articles.

Keywords: climate change communication, content analysis, news media, global warming, Philippine media

INTRODUCTION

Currently, concerned organizations, including government agencies, non-government and international scientific organizations, are implementing programs to disseminate climate change information. These initiatives are anchored on such major reports as the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (2007) showing the far-reaching effects of this climate change. The objectives of these communication efforts are to make people understand and to enlist their support for policy initiatives to mitigate the impact of climate change.

In communicating climate change, the mass media play important roles. Together with government officials, environmental activists, scientists and industrialists, journalists and broadcasters set the agenda for environmental discourse and decision-making.

Among the mass media that play an important role in climate change communication is the newspaper. Compared to TV and radio, the print media are more powerful as they are able to give, in a more concrete way, the background and significance of an event. The permanence of print media compared to other mass media makes them ideal for disseminating information like climate change than radio and TV (Eilers, 1994).

However, climate change reporting in newspapers seems problematic. Brossard *et al.* (2000) observed that newspapers limit stories to some issues and misreport climate change. Sachsman (2000) added that some newspapers provide extensive front-page coverage of acute environmental issues such as accidents and spills and relegate chronic environmental problems such as global warming and climate change to the inside pages.

Considering the importance of the topic, the Philippine newspapers have included in their daily reportage issues on climate change. However, at this time, no study has been conducted to determine how these newspapers cover climate change issues.

This study aimed to determine the coverage and amplification of climate change risks in Philippine leading newspapers (*Philippine Daily Inquirer*, *Manila Bulletin*, and *Philippine Star*). This study is important for a number of reasons. For one, it can provide feedback on the extent to which our news media give value to climate change risks. Through these data, agencies and

organizations mandated to improve the quality of climate change reporting in the country can design activities to improve journalists' skills. Results of this study can also provide significant implications for designing communication and journalism curricular programs, staff development activities and research on risk amplification in the country's news media.

METHODS

A content analysis was done to find out the aspects of coverage. Using the procedure applied by Murthy (2000) and Nuñez and Gravoso (2007), the content analysis involved news attention, news making and access to voice, frequency and space allocation of climate change risk articles. Table 1 summarizes the methods used in the content analysis.

Sample issues for each of the three newspapers were drawn through random sampling. Paper slips numbered 1-31, representing the number of days of in a month, were rolled and placed in a box. From these, 6 slips were drawn and recorded as representative samples for each month. This was done 12 times to represent the months in a year. This procedure brought the sample to 216, that is, 72 sample issues for each national daily. The one-way ANOVA was used to determine the differences among the three newspapers in terms of the number and space allocated for climate change risk articles.

RESULTS

Climate change risk articles in the three national newspapers

In 2007, sample issues from the *Manila Bulletin*, the *Philippine Daily Inquirer*, and the *Philippine Star* published 401 climate change risk articles. Figure 1 shows that more than one-third (37.66%) of these articles were in the *Philippine Daily Inquirer*. The *Manila Bulletin* and the *Philippine Star* published an almost equal number of articles (31.42% and 30.92%, respectively).

Table 1. Guide in determining the climate change risk articles in the newspaper

Variable	Method of measurement
News making	Climate change risk articles were classified based on what prompted the story, whether activities of scientific and academic communities or experiences of the public.
Access to voice	Climate change articles were classified according to the persons quoted in the risk story whether they were expert sources, government officials or ordinary members of the public.
Frequency	Frequency counts were used to determine the total number of climate change risk articles in each newspaper.
Space allocation	<p>Space allocation for climate change articles was measured using a ruler. The space or area (cm²) allotted for each climate change article was obtained by multiplying the length of the article (in cm) by the width of the article (in cm). The operational formula applied was:</p> $\text{SAA} = \text{length of the article (cm)} \times \text{width of the column (cm)}$ <p>The total space allocation for climate change risks articles (TSAA) was determined by adding the space allocations for climate change risk articles. This was compared with the total space allocation of the paper, computed using the formula:</p> $\text{TSA} = \text{column width (cm)} \times \text{Length of the column (cm)} \times \text{number of standard columns} \times \text{number of pages}$ <p>The percentage of space allocatted for climate change risk articles (PSA) was compared to the total space allocation of the paper. The total space allocation of the newspapers was computed using the formula:</p> $\text{PSA} = \frac{\text{TSAA}}{\text{TSA}} \times 100$
Treatment	In terms of format, climate change risk articles were classified into straight news, feature, news feature and documentary. The importance of climate change risk articles were determined through their placement in the pages of the newspaper. Articles located in front pages were considered important while those in the inside pages were less important.

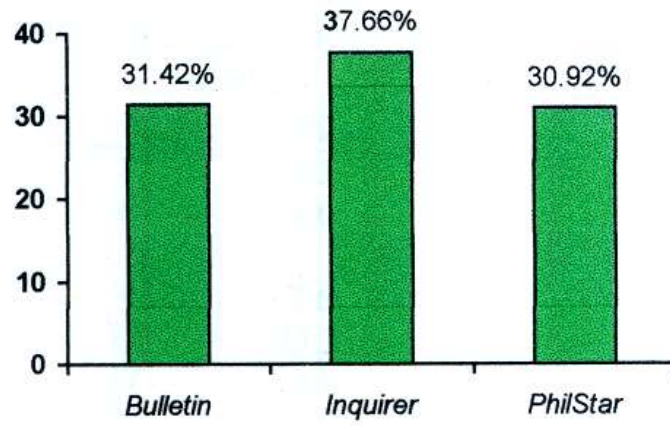


Figure 1. Percentage of climate change risk articles in the three newspapers

Table 2. Climate change issues published by the newspapers

Topics	Inquirer		Bulletin		PhilStar	
	n	%	n	%	n	%
Water scarcity	8	5.3	4	3.17	5	4.03
Decrease in crop yield	6	4.0	5	3.97	2	1.61
Species extinction	4	2.6	2	1.59	1	0.81
Heavy rainfall	17	11.3	14	11.11	14	11.29
Drought	17	4.6	4	3.17	7	5.65
Tropical cyclone	15	9.9	28	22.22	25	20.16
Extreme sea level	8	5.3	5	3.97	8	6.45
Extreme weather	19	12.6	18	14.29	21	16.93
Education-related articles	67	44.4	46	36.51	41	33.06
Total	151	100	126	100	124	100

Table 2 shows that of the 401 articles, more than one-third (38.71%) dealt with education-related articles. This type of articles included those that focused on educational activities related to climate change like seminars, fora, and conventions. Ranked second were articles on tropical cyclone, which consisted less than one-fifth (16.87%) of the total number of articles. The articles on temperature increase and extreme weather (14.39%) came next. The rest were on extreme sea level (5.21%), drought (4.47%), crop yield decrease (3.22%), and species extinction (1.75%). The one-way ANOVA revealed that the three dailies did not significantly differ in terms of the number of climate change risk articles ($F_{(2,392)}=0.17, p>0.05$).

Of the 401 climate change risk articles, almost half (47.13%) were presented in straight news format. Others were presented in news feature (27.43%), feature (20.20%) and commentaries (5.24%). Data revealed that the *Bulletin* published the most number of straight news (70 or 55.56%) compared to the *Inquirer* (56 or 37.09%) and the *PhilStar* (63 or 50.81%).

In terms of the total space allotted, the climate change risk articles occupied only 0.80% of the newspapers' space. Among the three newspapers, the *Inquirer* had the biggest, with 1.60% of its total space allotted for climate change risk issues. The *Bulletin* came second with 0.72% while *PhilStar* had only 0.45%. Results of the one-way ANOVA showed that the three

Table 3. Space allocation (cm²) of climate change risk articles for each newspaper

Newspaper	TSAP (cm ²)	TSA (cm ²)	%
<i>Manila Bulletin</i>	725,987,880	5,246,694	0.72
<i>Philippine Daily Inquirer</i>	471,271,136	7,563,237	1.60
<i>Philippine Star</i>	932,036,039	4,237,426	0.45

newspapers were not significantly different ($F_{(2,392)}=1.09, p>0.05$) in terms of space allocated for climate change risk articles.

Examining the space allotted to each risk issue, data showed that the newspapers gave prominence to education-related articles (Table 4). In fact, of the total space allotted to climate change risk issues in the *Inquirer* and *Bulletin*, almost half (45.3% and 41.0%, respectively) were occupied by education-related articles. Among the three newspapers, the *PhilStar* had the least space (36.72%) devoted to education-related articles.

Second to education-related articles were extreme weather articles. Both the *Bulletin* (20.1%) and *Inquirer* (18.1%) ranked these second to education-related articles. The *PhilStar*, however, gave it the least (13.4%) space. Tropical cyclone made it to the third. The *PhilStar* allotted 20.2% of its space for these articles, while the *Bulletin* and the *Inquirer* had 18.1% and 7.5%, respectively.

As regards placement of the articles, an indicator of whether or not the articles were given importance, data showed that in general the three national dailies did not give prominence to climate change risks. A large percentage of these articles (98.25%) were located in the inside pages. Only 1.75% of the articles were located in the front page (Table 5). In journalism, it has become a rule for editors to place articles they consider important in the front page and in the inside pages, the less important.

For news making, data showed that many of the articles in the three national dailies were prompted by public's experiences. In fact, more than two-thirds (66.94%) of the climate change risks articles in the *PhilStar* were of this type. The *Bulletin* and *Inquirer* published an almost the same number of articles prompted by public's experiences (65.87% and 64.90%, respectively). Typical examples of these articles were the sad plight of victims of environmental catastrophes like typhoons, drought, and the floods.

Table 4. Space allotted to the different climate change risk issues by the newspapers

Topics	<i>Inquirer</i>		<i>Bulletin</i>		<i>PhiStar</i>		Total	
	Space (cm)	%	Space (cm)	%	Space (cm)	%	Space (cm)	%
Water scarcity	297,604	3.93	104,446	1.99	291,140	6.87	693,190	4.06
Yield decrease	413,809	5.47	143,913	2.74	80,584	1.90	638,306	3.74
Species extinction	75,176	0.99	72,246	1.38	10,836	0.26	158,258	0.93
Heavy rainfall	639,037	8.44	483,776	9.22	399,890	9.44	1,522,703	8.93
Drought	560,946	7.41	49,015	0.93	223,440	5.27	833,401	4.88
Tropical cyclone	557,883	7.37	953,891	18.18	857,175	20.22	2,368,949	13.90
Extreme rise in sea level	222,587	2.94	233,800	4.46	229,544	5.42	685,931	4.02
Extreme weather	1,370,948	18.12	1,052,354	20.05	569,115	13.43	2,992,417	17.55
Education-related articles	3,425,247	45.29	2,153,253	41.04	1,575,702	37.18	7,154,202	41.96
Total	7,563,237	100	5,246,694	100	4,237,426	100	17,047,357	100

Table 5. Placement of climate change risk articles

Newspapers	Front page		Inside page		Total	
	n	%	n	%	n	%
<i>Phil Daily Inquirer</i>	2	1.3	149	98.7	151	100
<i>Philippine Star</i>	4	3.1	120	96.8	124	100
<i>Manila Bulletin</i>	1	0.8	125	99.2	126	100

As regards access to voice, results showed that the three national dailies quoted experts in their climate change risk articles. Experts were quoted in more than half (55.6%) of the *Inquirer* articles. The same sources were quoted by the *Bulletin* in almost half (46.03%) of its articles. Similarly, more than a third (38.71%) of the *PhilStar* articles quoted experts.

DISCUSSION

Results of the content analysis showed that climate change risk reporting in the Philippines is not yet a priority as can be inferred from the following findings: 1) climate change risk occupied a very small space in the sample newspapers (only 0.80% of the total newshole), 2) only a very few articles on the topic was published, and 3) most of the articles were placed in the inside pages. These results are consistent with the previous studies showing that climate change reporting is not a priority by the mass media (Lofsted, 1991; Brossard, 2000).

Considering the far-reaching effects of climate change on sustaining food supply and existence of human beings, this poor reporting presents a sad reality in the Philippine media. This means that our media could hardly contribute to efforts in educating our people of the potential hazards posed by climate change and lead them to design ways to adapt to the changes and mitigate impacts. If this trend continues, our media will fall short of their expectation to drumbeat for policy changes in our government. Thus, the issue on climate change will remain relegated to the background.

Based on current discussions, more substantive coverage of climate change and its associated risks is beneficial. As many authors have argued, the more attention the mass media give to an issue, the more the issue is perceived as serious. Wahlberg and Sjoberg (2000) added that a frequent media reporting of a risk regardless of the content of the reporting, can lead to one's increased ability to recall the risk from memory. These arguments are supported by the availability heuristic that holds that one's increased ability to recall a risk increases his/her perception of the likelihood that the risk will occur (Abbassi, 1998).

Two interesting observations obtained in this study are: climate change risk articles dealt mostly with accidents (death tolls, injuries, floods) and that these are presented as straight news. This practice runs contrary to the concept of risk communication espoused by social scientists. According to Singer and Endreny (1999), to communicate risks means fostering rational decision-making. This, therefore, calls on writers and editors to provide detailed and precise information about immediate and long-term consequences of the risk, let them weigh the costs and benefits of hazard and its alternatives for the individual and societies, and discuss the moral and economic issues attendant to the risk. Definitely, straight news is inadequate for these tasks. Feature or investigative articles are the best for this role as these articles allow for a more in-depth reporting and interpretation of scientific facts.

Most of the articles cited experts as sources of information. This result is consistent with the findings obtained by Wilson and his colleagues (2004) in their study of Canadian newspapers. While citing experts is potentially beneficial, Wilson and his team suggest the use of specific publications as experts tend to highlight the angles related to their field and ignore issues not covered in their domain. Scientific publications are recommended because having passed through a peer-review, use of scientific publications protect readers from biases and agenda that may be inherent in expert opinions. Also, citing these publications support the dissemination of evidence to the general research community.

An interesting observation is the fact that a certain climate risk issue appeared more than once in a certain newspaper and is also featured in another

newspaper. This means that to some extent, the editors had the same concern for climate change risks. The impact of climate change reporting would be much greater if these newspapers could forge collaboration for a more systematic coverage of climate change and its risk.

Overall, the poor reporting of climate change risk in the Philippine media suggests that agencies should design programs that will alleviate this problem. One way is to conduct trainings and workshops aimed at achieving the twin goals of improving journalists' understanding of climate change and its associated risks and the skill to report these risks. While workshops are being conducted, the academe should also start integrating into their curricular programs climate change reporting to develop professionals who will be proficient in climate change reporting.

LITERATURE CITED

- ABBASSI, K. 1998. *Headlines: More perilous than pills?* BMJ, 316, 82.
- BROSSARD, D., J. SHANAHAN, and K. MCCOMBS. 2000. Is mass media coverage of global warming culturally bound? A comparison of French and American coverage of global climate change. In: D. Scott, B. Jones, J. Andre, R. Gibson, P. Kay, L. Mortsch, & K. Warriner (Eds.), *Climate Change Communication: Proceedings of an International Conference* (pp.B2-9-B2-20), Waterloo-Ontario, Canada.
- EILERS, F. S. 1994. *Communicating in community and introduction to social communication society*. Manila, Philippines: Divine World LOGOS Publication, Inc.
- INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE. 2007. *Climate change 2007. Climate change impacts, adaptation, and vulnerability. Summary for Policymakers*. IPCC Working Group II Fourth Assessment Report. Retrieved on November 5, 2007 from http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/06_04_05_climate.pdf.
- LOFSTED, R. E. 1991. Climate change perceptions and energy-use decisions in Northern Canada. *Global Environmental Change*, 1(2):32-324.
- MURTHY, D. V. 2000. Development news coverage in the Indian Press: A content analysis of four dailies. *Media Asia*. 27(1):24-29.
- NUÑEZ, J. M. and R. S. GRAVOSO. 2007. Amplification of health risk messages in leading Philippine Newspapers. *Annals of Tropical Research*, 29(1): 90-103

- SACHSMAN, D. 2000. The role of mass media in shaping perceptions and awareness of environmental issues. In: *D. Scott, B. Jones, J. Andre, R. Gibson, P. kay, L. Mortsch & K. Warriner (Eds.), Climate change communication: Proceedings of an international conference* (pp. A2-1-A2-7), Waterloo-Ontario, Canada.
- SINGER, E. and P. M. ENDERNY. 1999. *Reporting on risk: How the mass media portray accidents, hazards, disasters and other hazards*. Retrieved on February 2, 2002 from <http://www.fplc.edu/risk/vol5/summer.htm>.
- WAHLBERG, A. A. and L. SJOBERG. 2000. Risk perception and media. *Journal of Risk Research* **3**(1):31-50
- WILSON, K., C. CODE, C. DORNAN, P.H. ALIMAD, and J. GRAHAM. 2004. The reporting of theoretical health risks by the media: Canadian newspaper reporting of potential blood transmission of Creutzfeldt-Jakob disease. *BMC Public Health*, **4**(1).