

Framing and sources

News on environmental justice in Bangladesh

Abstract: With the rapid economic development and growing population, Bangladesh is one of the most environmentally vulnerable countries in the world. In this country, news reporting of environmental issues is vibrant and vigorous, although it attracts scant scholarly attention. In fact, environmental journalism in this South Asian country is one of the least studied topics in the area of journalism research. The current study attends to this country and examines news sources in two newspapers in Bangladesh, focusing on their coverage of river systems and climate change in 2009 and 2015. This study explores various sources, such as politicians, bureaucrats, activists, and citizens, and the patterns of emphasis in the news by using these sources to understand the framing of river degradation and climate change. The aim here is to illustrate the journalists' influence in defining these environmental problems against various news sources and social actors. The qualitative analysis reveals an emphasis on political and bureaucratic sources in 2009 and on expert and citizen sources in 2015. Additionally, the analysis also demonstrates that the journalists—as actors in defining the reality—have exerted 'influence' on accentuating environmental concerns by shifting their source emphasis over time from politicians and bureaucrats to experts and citizens. Through this emphasis, they uphold the discourse of environmental justice in varied contexts.

Keywords: Bangladesh, climate change, environment, environmental justice, framing, journalists, sources

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Introduction

NEWS MEDIA play a crucial role in environmental politics by negotiating access to news spaces and shaping the meaning of news content (Hansen, 2010). Negotiating access and shaping meaning are essential parts of the power dynamic between news media and other social institutions. In the world of environmental politics, this 'crucial' role of the news media has become particularly prominent since the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro. Since Rio, the

environmental issues have crept upward on the news agenda, and the environment has become a ‘beat’ of major concern that overlaps with those of politics and economics in many developed and developing countries. In recent years, increased industrialisation in the developing countries has caused many people to become concerned about environmental sustainability issues (Lewis, 2015). Bangladesh, as an emerging economy, is one of the most vulnerable to changes in climate and sea level due to so much flat, deltaic land (IPCC, 2007; Dastagir, 2015). These features make Bangladesh a good choice for exploring how news media exert influence on the debates surrounding environmental issues. This study explores how environmental issues are discussed in Bangladesh’s newspapers and how the access allowed to—and meaning produced by—journalists are ingrained in the dynamic of influence between the country’s news media and other social institutions.

Media scholarship has produced a large body of literature on environmental issues (e.g., Brossard et al., 2004; Neuzil, 2008; Shanahan & McComas, 1997). However, these studies are mainly Western-centric, which is consistent with the overall trend in the broad area of communication scholarship (Joseph, 2005). Some recent studies have addressed this gap by focusing on environmental journalism in the Global South. For example, Pham & Nash (2017) and Biswas & Kim (2016) have explored issues in South Asia while Takahashi (2011), Guedes (2000), and Waisbord & Peruzzotti (2009) have done so for Latin America. The findings of these studies indicate journalistic preference for episodic and comfortable political framing undermines the potential for journalists to cover multiple aspects of environmental issues, rather than simply the political aspects (Waisbord & Peruzzotti, 2009; Hall et al., 1978; Boykoff, 2011). These multiple aspects include authoritative statements of scientific confidence in observed and expected physical impacts of climate change, published in a series of reports by the UN Intergovernmental Panel on Climate Change (IPCC). Bangladesh features in the IPCC’s Working Group 2 reports (vulnerability and adaptation) as being particularly vulnerable to climate and sea level changes.

The extant literature on the news production (Cook, 2005; Dimitrova & Strömbäck, 2009) has emphasised the significance of politicians as crucial actors in the construction of news. However, the contemporary escalation of public discussion surrounding scientific and environmental issues, such as climate change, has presumably raised questions about this conventional wisdom of politicians’ pre-eminence and made it necessary to explore whether journalists solicit the help of other actors, e.g. scientific climate change experts as one group of sources.

The context: Sources and framing

Scholars have already indicated an association between the process of framing in the news and various claim-makers, including sources and journalists. While

the sources attempt to command or exercise their power through selective release of information or restricting news media's access to key individuals, the journalists can present the claim-makers in a certain light or evaluate their claims (Entman, 1993; Anderson, 2014; Hansen, 2010; Pham & Nash, 2017). Equipped with these powers, sources and journalists vie against each other as they try to define the world according to their preferred standpoints.

Drawing on political communication perspectives, a few comparative studies on election issues in Europe and the US (e.g. Dimitrova & Strömbäck, 2009) have explored the pattern of dominance of the news sources and confirmed the pre-eminence of officials in the news. A few other studies have focused explicitly on the sources used in environmental coverage. For example, Burch and Harry (2004) analysed the coverage of pesticide use in four Californian newspapers and found that journalists widely used anti-pesticide sources to invoke counter-hegemonic and environmental justice themes, despite the fact that large newspapers themselves were part of the ruling hegemony. In contrast, Liebler and Bendix (1996), in their examination of television news coverage of old growth forests in the US, concluded that the reporters had supported the hegemonic position by using loggers or mill workers as those individuals predominantly reflected pro-cut frames over pro-save frames. Takahashi (2011) looked beyond the pro and anti-environmental frames and found that in the coverage of the Fifth Latin American, Caribbean and the European Union Summit in Peru, journalists relied heavily on political sources and provided limited access to other voices, such as environmentalists. Although Takahashi's study confirmed the journalists' reliance on 'primary definers' (Hall et al., 1978), a complex scenario emerged when the number of lay sources was considered. This complexity brings to the fore Ericson and co-authors' argument (Ericson et al., 1989) that the key to negotiations between journalists and source organisations is not the dominance of certain authoritative sources, but rather the use of sources by the journalists. This usage of sources relates to, among other things, the maintenance of the quality of news content, which is an instrument with which journalists establish or enhance their power relative to other definers of reality (see also Pham & Nash, 2017). From these source-specific studies, one can infer two different outcomes. In the cases of the old growth forest controversy and the climate change conference, the coverage was influenced by the socio-political interests of the time. However, in the reporting of pesticide use, the journalists invoked environmental justice and supported the conservationist position. So, journalists prefer hegemonic or counter-hegemonic views depending on the context.

The above studies set the context for the use of sources in environmental news from both developed and developing countries (i.e. US and Peru), but there is a room for closer scrutiny of journalistic processes and rationales for source selection and use. The current study contributes to this area by analysing the use of sources in the

coverage of two interconnected environmental issues in Bangladesh which attracts public attention from diverse political contestations. A focus on these contestations surrounding environmental issue enables this study to offer robust scrutiny of how journalists use sources of crucial information in their coverage and how it invokes discourses of environmental justice. Considering the varied practical and political contexts (i.e. national and international) it can be argued that ‘environmental justice should be seen more as a discourse, embedded in social movement, always provisional and contested and reflecting interests’ (Scandrett, 2007, p.1).

In this study, the political contestations between various interest groups are represented by the journalists will be examined. It is assumed that one aspect of journalists’ influence is the quality of their news content. The use of a large number of relevant sources in an article indicates a more in-depth exploration of the subject matter and higher quality of the content. The journalists maintain this quality in two main ways: First, they attribute responsibility for specific issues to individuals, groups or institutions (e.g. government). This attribution is critical to the exercise of civic control and is a key ingredient of all social knowledge (Iyengar, 1991). Second, they select sources to frame the issues in a particular way. In some cases, the selection is aimed at promoting a preferred perspective; in others, the choice of particular sources works as a counter to a perspective opposed by the journalist or news organisation. The attribution of responsibility and the selection of sources are interdependent. In controversial or highly technical matters, the questions of source selection, citation, and framing are of vital professional importance. By discussing framing in relation to sources, this study scrutinises whether this selection and use of sources is utilised by the news organisations to justify certain positions on environmental policy debates in Bangladesh and to delegitimise other positions.

In academic literature examining the media, the widely discussed notion of framing has produced a number of perspectives; for example, framing as ‘an individual psychological process’, an ‘organisational process’, and ‘a political strategic tool’ (Entman et al., 2009; Ettema, 2010). Many of these perspectives assume ‘frames simply as content features that produce media effects’ (Carragee & Roefs, 2004, p. 215). This study intends to overcome the confines of this assumption and focus on how various actors (including sources and journalists) engage in promoting certain frames with the resources available to them. However, because journalists consider themselves the principal driving force of the public sphere (Habermas, 2006), it is essential to look at not only the ‘authorised knowers’ or ‘primary definers’ but also the whole gamut of sources present in an article. In this respect, the idea of ‘competitive definers’ (Anderson, 2017) may be helpful; this idea sees everyone as competitors in the public sphere regardless of the sources’ positions in the hierarchy of social power. This idea allows monitoring of those who possess social power as well as those who do not (Cottle, 2000; Schlesinger,

1990). As critics note, the imbalance of power among the providers of information to journalists has always been the crux of the study of news sources (Bell, 1994; Mann, 2000; Franklin et al., 2010), although some argue that the influence of digital and social media has challenged the authoritative position of the primary definers (Anderson, 2017). To understand the influence of journalists on the news production process, this study looks at the selection and citation of sources that enables journalists and news organisations to support and endorse—as well as to challenge and undermine—certain claim makers’ policy positions.

Data collection method

In this study, framing was scrutinised at content level through inferences by the journalist (e.g., problem identification, problem definition, attribution of responsibility, or solution). For this purpose, a combination of quantitative and qualitative content analysis was adopted; while the numbers provided details about the source composition (i.e. types of sources; prominence of sources), the quotes made the inferences (for example, frames implied) and underlying assumptions (i.e., the perception of responsibility) evident. News and feature articles about river systems and climate change were collected manually from the web archives of the *Prothom Alo* (PA) (<http://archive.prothom-alo.com>) and *The Daily Star* (DS) (<http://www.thedailystar.net/newspaper>), two prominent Bangladeshi newspapers. A manual search was conducted because the content was not available in any well-known databases. Both the dailies are based in Dhaka and owned by leading media companies. In general, many Bangladeshi newspapers including the two selected here follow an editorial middle ground in politics, both supporting and criticising the government of the day. The data collection period was July to December in 2009 and 2015 to cover the UN Climate Summits in Copenhagen (COP15) and Paris (COP21), respectively. The following search terms were used: ‘Shitalakhya’, ‘Buriganga’, ‘Turag’, ‘Dhaleswari’ [river names], ‘pollution’, ‘climate change’, ‘Copenhagen’, and ‘Paris’.

The search produced a total of 602 news and feature articles that contained 956 sources (Table 1). Based on these numbers and attributes of the articles, and drawing on some previous studies of framing (i.e. Bell, 1994; Schneider, 2011), a procedure of coding and analysis was followed. In the quantitative phase, all the articles were analysed to identify the types of sources used. However, since the number of articles in 2015 was significantly low, it warranted a qualitative approach to obtain a deeper and more authentic understanding of the news frames (Miller & Riechert, 1999; Metag, 2016). So, in the qualitative phase, a total of 27 articles were selected from both the 2009 and 2015 periods, which were dominated by different sources where information provided by the sources was contested. These articles were then analysed qualitatively to identify two frames ascertained as predominant in some other frame studies (Semetko & Valkenburg,

Table 1: Overview of coding for frames

Frames	Definition	Examples
Action	When the excerpts in the article suggest call for measures, demonstrate strong determination to solve the problem surrounding river systems and climate change with utmost importance (or as national priority)	‘We must save our rivers which have been seriously polluted and partly grabbed. Influential people, whoever they are, cannot be any barrier to the justified demands of common people,’ said Speaker of the Parliament Abdul Hamid, who addressed the function as chief guest.
Conflict	When the excerpts in the article demonstrate contestation between various stakeholders (e.g. activist, citizen, experts, bureaucrats, politicians) and attribute responsibilities to certain entities (e.g. government, economic exploitation, high consumption of rich countries)	Kamaluddin Ahmed, the Environment and Forest Secretary of Bangladesh, defended the government’s decision by stating that ‘the Power Board has conducted extensive research and review in order to build this plant by using a very up-to-date technology ... If they [the protesters] are still not happy, we have nothing to do about that’.

2000; Nisbet, 2010; Dimitrova & Störmbäck, 2012). These frames were: the action frame and the conflict frame (see Table 1). Many critics have defined the conflict frame as a matter of contestation between two or more forces in a social context, whereas the action frame emphasises an act intended to solve an urgent problem or address a critical issue. While in the conflict frame, contesting groups or entities may remain distant, in the action frame, they would perhaps align their interests for the sake of resolving the problem or issue (Benford & Snow, 2000).

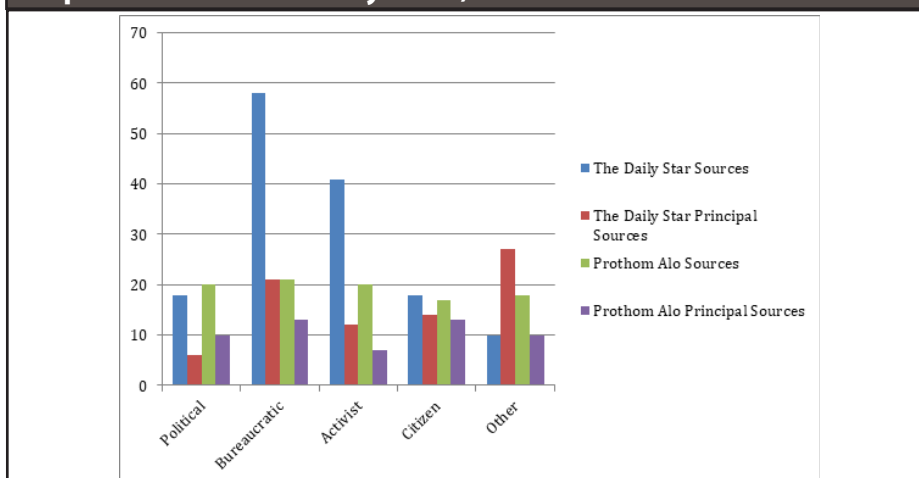
To identify the action frame in an article, the following matters were assessed: a) Did the article contain any call for measures to save river systems or reduce the catastrophic impact of climate change? b) Did the article demonstrate a strong determination to solve the problems surrounding the rivers and climate change? c) Did the article address the issue of climate change or river systems as a national priority? In the case of the conflict frame, the questions included the following: a) Did the article attribute responsibilities to some entities (e.g., economic exploitations by vested interests with regard to the degradation of the rivers’ health and Western countries’ high consumptions habits with regard to climate change)? b) Did the article contain two opposing sides? c) Did the article attribute responsibility to any government for failing to take adequate action in addressing climate change or river problems?

Findings

Sources

Altogether, five categories of important sources were identified through the examination of all direct and indirect quotes in the selected news and feature articles. These sources included politicians, bureaucrats, experts, activists from non-governmental organisations and alleged perpetrators or victims of environmental problems. These perpetrators or victims were identified as citizens or lay sources. In 2009, news coverage of the four rivers surrounding Dhaka was heavily dominated by the bureaucratic sources, who were followed by the activist, political, and citizen sources. On the other hand, the coverage of the climate change issue was dominated by the political sources, followed by the bureaucratic, expert and activist sources.

Graph 1: Sources in river systems, 2009



River Systems in 2009

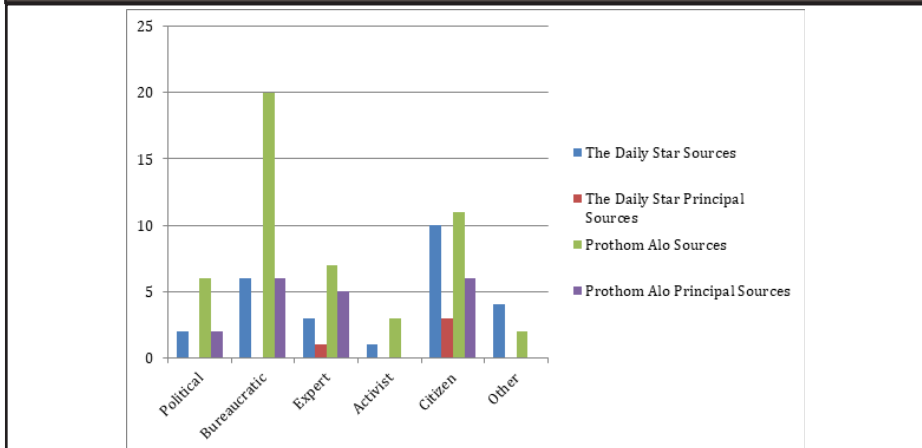
Although there were fewer citizen sources, the way they were positioned to dispute the official versions of river degradation made them symbolically more powerful and visible at times compared to other sources (Graph 1). For example, an article titled ‘Sand lifters back in rivers’ (*The Daily Star*, 2009, August 8) described the return of sand extractors to a spot in the river Buriganga despite an official ban on such activity. In this report, one of the panicked residents, who lived in a locality that was seriously affected by indiscriminate sand extraction a few years ago, was quoted as saying that the [original] permission for extracting sand from this riverbed could not be justified because the river route was properly dredged a few years ago for a legitimate purpose. ‘The deal to sell sand ... at the cost of their homes, land and river must be investigated,’ demanded the resident.

Compared to this strong comment, the official reactions were weak. The Chairman of the Bangladesh Inland Water Transport Authority (BIWTA) claimed that he had ‘no clue’ about the continuous extraction of sand from the spot. When pressed, he suggested to the journalist: ‘You [had] better inform the law enforcement agencies of the matter’ (*The Daily Star*, 2009, August 8). Here, the pitching of a lay source against the official sources, who were essentially ignoring the damage being done to the river, could also be interpreted as a journalistic exertion of influence over the authority-order. In this instance, the journalist apparently used the lay source to ensure the comprehensiveness of the report (using all sides of a controversy). The 423-word news article was also highly engaged with the issue, as it used three very relevant sources from two official bodies and the affected resident to provide a comprehensive picture of the new development. By pitching the resident against the officials, the journalist put this issue in a conflict frame. Additionally, attribution of responsibility to officials and purposeful source selection (the resident with a compelling quote) are both evident. The report’s quality is at the crux of the journalistic exertion of influence which is exercised by creating a strong impression against the authorities via the use of a lay source.

From this example, it is evident that the positioning or pitching of sources, not their raw numbers, is an influential factor in sourcing practice (i.e. Ericson et al., 1989). This view becomes even more evident when another article in the action frame is analysed. This article, titled ‘Lawmakers pledge to save the rivers’ (*The Daily Star*, 2009, June 2), reported on the inauguration of a campaign to save the country’s rivers from pollution. The article used representatives from the legislative body, businesses and activist organisations to express concerns about the polluting industries, such as dyeing and textiles. The journalist cited nine sources, including six politicians, one businessman, and two activists who expressed their determination ‘to take every measure necessary to stop illegal grabbing and pollution of the rivers’. The sources expressed strong resolve and promised full cooperation with the campaigners to address the problems. One campaigner, the editor of a newspaper, attempted to speak with some bite when he referred to the polluting industries and focused on the priority of sustainability over immediate economic interests. He said: ‘They [the industries] contribute to our economy but that should not be at the cost of our rivers.’

However, despite a large number of diverse sources and ample news space (1,278 words and a large photograph), the article does not give the impression of a journalistic upper hand over others in defining the environmental reality of rivers in the country. It can be inferred that activists with a high level of access to news media can provide instant information, but that access does not always enhance journalists’ influence. On the other hand, a lay source with a low level of access can offer immediate and useful insights that can make journalistic content more powerful.

Graph 2: Sources in river systems, 2015



River systems in 2015

As the analysis below demonstrates, the action frame was not as emphasised in 2015 as it was in 2009. Statements from expert, lay and, to a lesser extent, bureaucratic sources pointed to the continuation of endemic degradation of river systems surrounding the capital Dhaka. These statements also underscored the lackadaisical approach of the government in taking actions against the perpetrators, as it was revealed that the local ruling party members were involved in encroaching on river banks, where they built unauthorised structures. In 2009, the journalists used predominantly political sources to frame the river issues, indicating a firm determination to protect the river from the encroachers. In 2015 (Graph 2), there was more use of expert sources in the conflict frame, attributing the responsibility for economic exploitation of the rivers to the government. Both the expert and lay sources highlighted the extent of the contamination of river water by various industries.

For example, in an article titled ‘Save rivers, Save Bangladesh’ (*The Daily Star*, 2015, December 31), water resources expert Professor Ainun Nishat stated that the degradation was not confined to the rivers surrounding Dhaka but extended across the country. He even accused the state of being ‘...a big polluter’ because of its ‘business as usual’ approach to water management and a lack of political commitment to stopping the river polluters and encroachers, who are ‘... politically powerful’.

The government’s lack of political commitment was also evident in a case related to an allegation of contamination against two industrial units. In an article titled ‘Pollution increases in Shitalakhya’ (*Prothom Alo*, 2015, June 14), an anonymous source was cited as saying ‘...a large export garment’s dyeing unit and another chemical factory have been indiscriminately dumping their poisonous

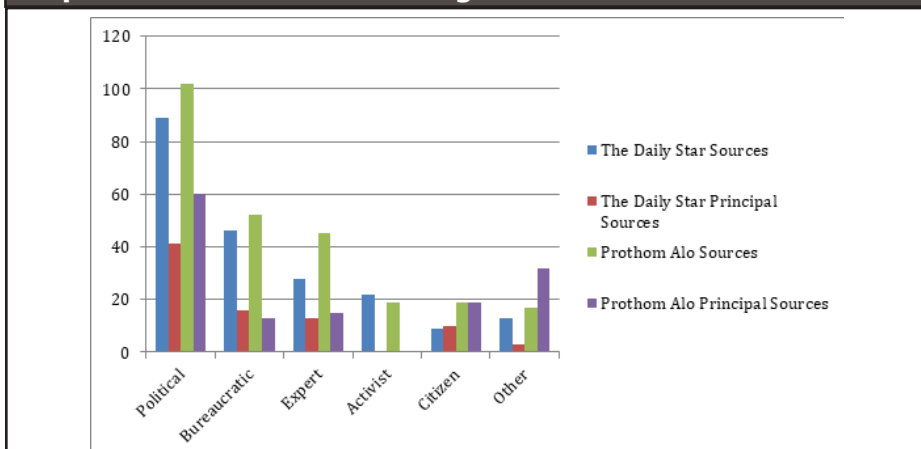
liquid effluent into the rivers despite owning Effluent Treatment Plants (ETP)’. The source claimed that these factories preferred not to use the plants in order to save on costs. An official from the Directorate of the Environment had confirmed the allegation. By using quotes from the business and government sources, the journalist effectively identified two sides as responsible for the pollution: directly, the industrial units discharging the pollutants into the water; and indirectly, the government, for condoning this behaviour and not taking any action against those responsible. However, the article did not use any sources from the accused industrial units.

Overall, news coverage can be seen as part of the monitoring activity, which provides a platform or battleground for various interests and sources to compete in ‘larger definitional struggles over the scale, degree and urgency of environmental risks’ (Allan et al., 1999, p. 16). In this 2015 coverage, the ‘experts’ can be seen as ‘self-evidently authoritative’, in the process which seek to ‘denaturalise’ issues related to rivers (for example, through the use of expert sources, journalists identified the state as a big polluter). Simultaneously, the use of some oppositional voices (e.g. the BIWTA official in the above article) can be seen as lacking credibility (Allan et al., 1999, p. 16) since apparently, they do not have control of the situation surrounding illegal structures. Additionally, the use of pithy quotes from lay sources is noticeable. In the news coverage of the river system, then, the strategic use of lay sources, needs to be recognised as the journalists’ weapon of discursive struggle and as a manifestation of journalists’ exertion of influence.

Climate change in 2009

So far, the coverage of river issues demonstrated risks of environmental degradation in Bangladesh whereas the climate change presented as an issue of environmental justice. The coverage of river problems also emphasised the risks of environmental

Graph 3: Sources in climate change, 2009



degradation (Graph 3). Here, the contention was against the Western developed nations, responsible for producing the lion’s share of greenhouse gas emissions and forcing developing countries, including Bangladesh, to pay the high cost of those emissions. In the articles about climate change, expert sources were prominently in support of the political establishment; whereas in the case of many river systems articles, they were at loggerheads with the political sources.

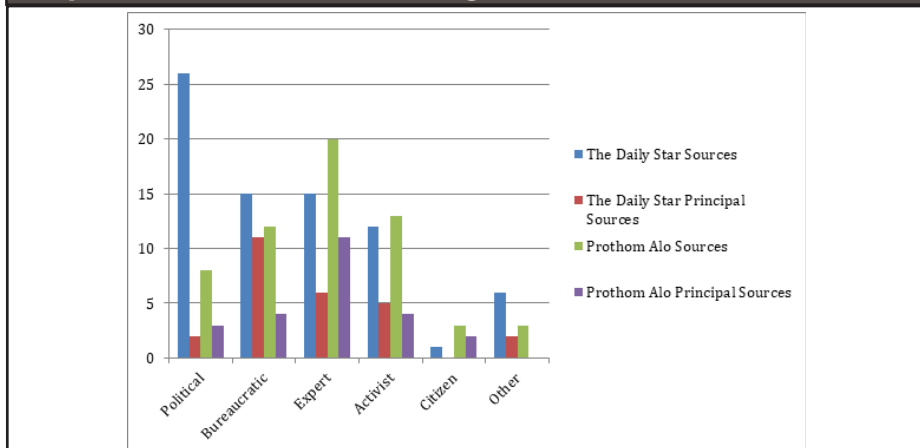
With regard to climate change, the coverage was dominated by political sources (n=191) who, along with the expert sources (n=73), were used in the conflict frame. Excerpts from political sources demonstrated that most of the developing countries’ politicians held ‘other countries’ responsible for the consequences of climate change in their countries, and they sought climate assistance from the developed countries.

Quotes from the political and expert sources revealed serious concerns about the outcomes of the Copenhagen conference and expressed frustration at the slow progress of the meeting’s final stage. In an article, Dr Saleemul Huq, director of the London-based International Institute of Environment and Development, said the conference outcome was entirely ‘inadequate’ for Bangladesh (*The Daily Star*, 2009, December 19). In the same article, Bangladeshi Prime Minister Sheikh Hasina also pronounced the outcomes as inadequate and called for the inclusion of ‘climate refugees’ in the climate change agreement. This clause would obligate the developed countries to accept Bangladeshi citizens as ‘refugees’ on the grounds of their vulnerability due to extreme exposure to climate change. Overall, it showed that the journalists positioned both experts and politicians in a synchronised, mutually reinforcing way.

Climate change in 2015

Unlike the coverage of climate change in 2009, the coverage in 2015 emphasised

Graph 4: Sources in climate change, 2015



expert and political sources in the action frame. This coverage highlighted the country's willingness to tackle the issue of climate change internationally (i.e. commitment to Intended Nationally Determined Contribution, or INDC). While politicians were the most used sources in 2009, in 2015, experts were important in the international negotiations on behalf of Bangladesh during COP21. Although the politicians were used as sources, they were also held responsible for not taking adequate actions to mitigate climate change locally. The experts' importance in 2015 was evident in an article titled 'Bangladesh to reduce carbon emission by 20 percent' (Mahmud, 2015, November 28), in which Professor Ainun Nishat referred to the country's emissions reduction commitment in its INDC and claimed: 'Despite the fact that Bangladesh has no role in global climate change, the country is committed to emissions reduction. Bangladesh should be an example for the rest of the world.' By using this expert opinion, the article clearly invoked the action frame and highlighted the country's precariousness—despite its strong emissions reduction commitment—resulting from the inaction of rich countries.

The coverage (Graph 4) also raised concerns about the removal of the compensation clause from the Paris Treaty, which meant rich countries would ask poor countries to contribute to the Green Climate Fund (GCF). In an article titled 'G77 & LDC protest: Rich ask developing and underdeveloped to pay' (Mahmud, 2015, December 5), one expert said: 'Bangladesh has already spent 400 million dollars of its fund in tackling climate change. However, adaptation to climate change fund needed to be provided by the industrialised countries'. This position was strongly supported by a number of activist groups as well.

These quotes demonstrate that despite a strong mitigation initiative from the affected countries, there was a lack of adequate action from the rich countries to tackle the imminent risks of climate change. This portrayal clearly reinforced the 'north-south' divide (Chapman et al., 1997). While the affected countries' mitigation initiatives were established through the use of expert sources, there was a lack of international political or official sources in discussing the rich countries' inaction. This gap can be explained by a lack of resources and lack of access to international sources in the developing countries (Shanahan, 2006). Furthermore, the climate change coverage was often aligned with the political position of the government and purposefully displayed 'various strands of advocacy' (Eide & Kulenius, 2012, p.16). Here, the frequent use of expert sources allowed journalists to purposefully reaffirm the vulnerability of Bangladesh as a climate victim.

However, the emphasis on activist sources in the conflict frame was marked by the competing views of the activists on both the global and local fronts. The environmental activists did not accept the Treaty as the outcome of the Paris Conference; they were also critical of a Bangladesh government plan to construct a coal-fired electricity plant near the Sundarbans mangrove forest (Mahmud, 2015, December 8). The official sources added that the proposed site of the power plant

was approximately 14 kilometres from the outer boundary of the Sundarbans and 65 kilometres from the world heritage site. The quotes from the official sources demonstrated denial of the threat posed by the proposed plant. Furthermore, while the government supported global attempts to reduce emissions in its INDC statement, it did not engage with concerns about risks to local Bangladesh environment.

In their questioning of the official sources, the journalists seemed to have privileged the activists' viewpoints. However, through the positioning of expert sources in the action frame and activist sources in the conflict frame, the newspapers demonstrated that the journalists stood by environmental causes without being tendentious (Mann, 2000). In both events, the use of the citizen and (politically marginal) activist sources was indicative of the newspapers' inclination to use sources in the frame-building process and enhance their influence to define environmental reality. In the qualitatively assessed articles about climate change, the journalists used citizens as well as activists to challenge the authorities, albeit in a less effective manner compared to their coverage of the river system.

Discussion and conclusion

The above comparison of sources has established several patterns. Overall, there was a shift in the use of sources in river news: from the action frame in 2009 to the conflict frame in 2015. In the action frame, the journalists identified the causes of river degradation and called upon the ruling politicians to address these problems. The politicians, as predominant sources, also expressed their determination to solve the river degradation and encroachments. However, in 2015, the frame was shifted to conflict, and the journalists explicitly mentioned political corruptions linked to the economic exploitation of rivers. Additionally, instead of seeking redress from the ruling politicians, the journalists directly held the government responsible for using inadequate measures to protect the water bodies. The presence of political sources was significantly reduced in 2015 as the journalists used more eyewitnesses' accounts or spot reports that employed both the citizen and activist sources.

During both study periods, the coverage of climate change showed the presence of two sides: Bangladesh as the climate victim and Western countries as the nations responsible for climate change. However, there is a twist here: in 2009, the coverage used mostly politicians, experts, and lay sources to demonstrate the vulnerability of deltaic Bangladesh as well as to demonstrate the responsibilities of other countries for climate change. Nevertheless, in 2015, the journalists turned to the Bangladesh government as well and criticised those activities that were perceived as detrimental to addressing climate change (e.g. the Rampal power plant) albeit without linking explicitly to global climate change.

The cross-temporal analysis demonstrated that, in the case of the river issues, the journalists exploited every opportunity to challenge the government;

but, in climate change, this heightened level of scrutiny was not explicitly evident. These findings are consistent with the notion of ‘unity of purpose’ (Pham & Nash, 2017) which argues that when there is a consensus within dominant sources (e.g. government), journalists tend to follow the line of these sources. As with the Vietnamese media, journalists in Bangladesh highlighted the government policy positions on climate change i.e. Bangladesh is the victim of climate change, and the Western countries should accept ‘climate refugee’ clause in any climate change agreement.

Overall, it may be asserted that while the news articles about river problems showed an advanced level of engagement with the subject matter through their selection and use of sources, the articles about climate change somewhat lacked this engagement despite using a relatively higher number of sources. Whether these varied levels of engagements could be equated with a higher or lower quality of news content is still an open question, but the analysis in this study showed that there was room to interpret the quality of some of the articles according to this equation. Moreover, this study revealed that the news framing was an ongoing process that shifted its trajectory according to the journalists’ inclinations. These inclinations, however, were not based on absolute free will but were contingent on a number of factors (Miller & Riechert, 1999), including the journalists’ or newspapers’ immediate positions on an issue (e.g. advocacy for saving rivers) and the availability of required information (e.g., pointed quotes from lay sources in the river news) or access (e.g. to politicians from the developed countries in climate change news) or lack thereof. With their positions and access, journalists in Bangladesh have attempted to influence discourses on environmental justice in varied practical contexts in these cases of river problems and climate change.

This study has established a difference between Bangladeshi news coverage of the two issues. In the climate change coverage, there was little conflict between experts and politicians. However, the coverage of river problems was framed as a matter of contestations between experts, citizens and politicians. With this difference, it can be argued that the journalists aligned with various sources to uphold the discourse of environmental justice. Here, the study identifies an interesting difference between global problems impacting the Bangladeshi situation and local problems where there is more contestation between actors. This could inform future necessary action as global climate change definitely impacts on local river systems in Bangladesh.

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