Editorial Journalism and Environmental Issues in the Majority World

SHAFIQ AHMAD KAMBOH
University of the Punjab, Pakistan

MUHAMMAD ITTEFAQ
James Madison University, USA

MUHAMMAD YOUSAF
University of Gujrat, Pakistan

Prior research suggests that reliance on news media is dramatically increased during a public health crisis because people need more information to reduce their anxiety levels. This is an ideal situation for editorialists to influence the public policy-making process around certain social issues related to that health crisis, particularly if established by the scientific community. Drawing on media dependency theory and editorial journalism conceptual framework, we analyzed the editorial coverage of environmental issues in four leading majority world English language newspapers during the COVID-19 pandemic. Our findings suggest that in relation to advocating environmental issues, the editorialists either ignored linking environmental issues to the pandemic or, if they established a link, gave negligible coverage, hence seem to have failed to perform their normative role. Thus, we recommend that civic advocacy groups help build the news media capacity regarding how to cover environmental issues amid a pandemic.

Keywords: COVID-19, civic advocacy, editorial journalism, environmental issues, majority world, media dependency theory

Environmental degradation is the greatest global health crisis in the 21st century. Therefore, with the start of the COVID-19 pandemic, global concern on five associated environmental issues, (i.e., air pollution, livestock emissions, wildlife conservation, deforestation, and medical waste management) has grossly increased and eventually become a reason for sparking scientists' interest to establish this association (Gibb et al., 2020; Godlee, 2020; Lam et al., 2020; Sangkham, 2020; Zhu, Xie, Huang, & Cao, 2020). Unfortunately, during the other recent pandemics (e.g., H1N1, Ebola, SARS, MERS), this association was not established by the scientific community. Establishing this association is paramount because a scientifically proven phenomenon highlighted through mass media can have more impact on the public

Shafiq Ahmad Kamboh: shafiq.ics@pu.edu.pk
Muhammad Ittefaq: ittefaqmuhammad1@gmail.com
Muhammad Yousaf: yousafspeaks@gmail.com
Date submitted: 2021-06-15

policy-making process. In fact, during public health crises, reliance on news media is significantly increased because audiences need more information to reduce their anxiety levels (Ball-Rokeach & DeFleur, 1976). Therefore, the COVID-19 health crisis is an ideal situation for news media to influence the public policy-making process around scientifically established environmental issues related to this pandemic.

In media, newspaper editorials are considered a more influential genre as they possess more potential to impact (1) public opinion, (2) internal news agendas, (3) other news media agendas, and (4) policy agendas (Firmstone, 2019). Despite carrying this strong merit, editorials have historically been ignored by media scholars to study environmental issues (Das, 2019).

Based on this rationale, we examined the editorial journalism coverage of environmental issues in mainstream English newspapers of four majority world countries amid the COVID-19 pandemic by using quantitative and qualitative content analysis. This study considers majority world to countries where most of the population lives, including Africa, Asia, Latin America, and the Middle East (Cheruiyot & Ferrer-Conill, 2021). This study contributes to environmental science, journalism practice, and editorial journalism research by comparing the editorial coverage of overall COVID-19-related issues (advocating any of the aspects of the COVID-19 pandemic) versus other issues (having no connection with the COVID-19 pandemic); and by comparing the editorial coverage of overall COVID-19-related issues to COVID-19-related environmental issues (advocating only the environmental aspect of the COVID-19 pandemic) within the larger context of media dependency theory and editorial journalism conceptual framework. The findings of the present study are discussed in the light of media dependency theory amid the COVID-19 pandemic, editorial journalism practice, and the role of editorial journalism in advocating environment-related issues in the selected majority world countries.

Literature Review

Environmental Issues Amid a Pandemic

Prior studies suggested that exposure to air pollution may increase widespread COVID-19 outbreaks (Zhu et al., 2020) or may cause greater disease severity resulting in intensive care unit (ICU) admission (Frontera, Cianfanelli, Vlachos, Landoni, & Cremona, 2020), or even lead to higher death rates (Ogen, 2020). These revelations should be of dire concern to public policy makers, particularly in the majority world, as it is the world's worst polluted region (McCarthy, 2020), having the world's 24 most polluted cities situated in India, Pakistan, China, and Bangladesh (IQAir, n.d.).

The recent recurrent COVID-19 outbreaks at meat processing plants in Western countries have received significant media attention (Middleton, Reintjes, & Lopes, 2020), which further turned out to be blessings in disguise for advocate journalists to reiterate their preexisting notions of reduced consumption of animal-based products, eventually to help reduce global carbon emissions (Barone, 2020; "Pandemic to Spark," 2020). Current COVID-19 research also suggests dietary behavior changes because high intake of fat-rich dairy products contributes to the development of obesity, diabetes, cancer, and cardiovascular and lung diseases, which are all reported to be the known underlying health conditions causing more severe COVID-19 illness and even death (Godlee, 2020; Sattar, McInnes, & McMurray, 2020). From a policy perspective, scholars emphasize

taking a single action that can have cobenefits on both climate and personal health, such as eating less red meat may reduce greenhouse gas (GHG) emissions and lower the risk of cardiovascular disease (Lohmann & Aref, 2020). Such remedial actions are essential to undertake in the livestock-dominated majority world countries, where India owns the world's highest number of milk cows (Shahbandeh, 2020) and is the second-largest global beef exporter (Buchholz, 2021), whereas China eats about one-quarter of the world's meat (Myers, 2016). Likewise, Pakistan is committed to prioritizing the dairy industry in its national development plan ("Government Committed," 2019) despite having the second-highest share of the agriculture and livestock sector (44.8%) in the national GHG emissions (Mir, Purohit, & Mehmood, 2017), whereas studies report rising GHG emissions from the livestock sector in Bangladesh (Das, Sarker, & Haque, 2020).

Among issues pertaining to wildlife conservation amid the COVID-19 pandemic, poaching and trafficking of pangolin have catapulted this world's most smuggled mammal into the limelight because it is an intermediate host that might have facilitated SARS-CoV-2 transmission to humans at a wet market in Wuhan, China (Lam et al., 2020). Concerning its trafficking, China is the biggest global market for pangolin meat and scales despite having an official ban on its trade (Nijman, Zhang, & Shepherd, 2016), whereas Pakistan, India, and Bangladesh are among the main suppliers (Awale, 2019; Trageser et al., 2017). This requires urgent conservation measures by the relevant local authorities because the International Union for Conservation of Nature's (n.d.) Red List has already placed its Indian and Chinese species in endangered and critically endangered categories, respectively. Likewise, the findings of many studies warn that largely because of poaching, smuggling, and illicit trade, this natural pest controller is on the brink of extinction in the majority world (Kumar, Rajpoot, & Rasaily, 2020; Mahmood et al., 2019; Trageser et al., 2017).

Apart from the illegal wildlife trade, contemporary COVID-19-related media reports also associate deforestation to the increasing number of infectious disease outbreaks (Pontes, 2020). In this connection, research suggests that the destruction of forests leads to increased contact between humans and wild animals and eventually enhances the chances of zoonotic spillover (Gibb et al., 2020) and pandemics. Despite that alert, recent reports reveal that China, India, and Bangladesh are rapidly losing their forest cover (Ahrends et al., 2017; "Post-Covid Development," 2020; Upadhyay, 2020), whereas Pakistan holds the highest annual deforestation rate in the world (Iqbal, 2019).

Similarly, pictorial coverage of discarded plastic waste materials (e.g., PPEs, face masks, gloves, swabs, polythene bags) lying unattended in either coronavirus isolation wards or around quarantine halls has raised many eyebrows in several developing countries. Many studies warn that poor medical waste management can lead to severe environmental and human health issues (Manzoor & Sharma, 2019). India, Pakistan, Bangladesh, and China are, respectively, the first, third, fifth, and 12th highest COVID-19-related medical waste producers in Asia (Sangkham, 2020). These figures are alarming because all these countries are lacking medical waste management infrastructure (Khan, Cheng, Khan, & Ahmed, 2019).

The COVID-19 Crisis and Media Dependency Theory

Although the novel coronavirus was first reported in December 2019 in Wuhan, China, the World Health Organization (WHO) declared it a major global health crisis (i.e., a pandemic) on March 11, 2020

(Mackenzie & Smith, 2020). Since that date, besides taking the lives of more than 5.8 million people globally (Johns Hopkins Coronavirus Resource Center, 2022), the COVID-19 pandemic has led to severe global economic disruptions because of lockdowns, travel bans, and social distancing measures. Moreover, owing to the cancellations or postponements of scores of political, cultural, religious, and sporting events around the globe, the outbreak has plunged the world into social, political, financial, psychological, and emotional chaos. Owing to the severity of this disease, the United Nations (UN, 2020)—despite admitting the current pandemic as an unprecedented global health crisis—further acknowledges it is an even bigger human, economic, and social crisis than a simple health emergency.

The media dependency theory (MDT) asserts that in times of crisis, chaos, or uncertainty, media dependency is dramatically increased because there exists a strong need for information and advice among members of a social system (Ball-Rokeach & DeFleur, 1976; Loveless, 2008). This useful theory was proposed by Sandra Ball-Rokeach and Melvin DeFleur in 1976 while considering audiences as active parts of the communication process. Since the inception of MDT, media and communication scholars have used this theoretical framework to examine media's role during crises and emergencies (Jung, 2017). A few of the many reasons people usually need more information during a crisis event are to reduce their anxiety levels and make sense of their environment (Ball-Rokeach & DeFleur, 1976; Liu & Liu, 2020). In this quest, mass media become people's preferred choice "as they offer speed of transmission and structural connectedness to expert sources of information" (Lowrey, 2004, p. 339). Particularly, amid a public health crisis, such expert sources heavily rely on mass media "to inform the public, encourage the adoption of preventive behaviors, and limit the impact of adverse events" (Savoia, Lin, & Viswanath, 2013, p. 170). The current COVID-19 pandemic is a similar health crisis that has created high levels of uncertainty and the perception of a severe threat (Liu & Liu, 2020) and therefore carries the potential of gaining both higher audience and mass media attention. From the audience perspective, the findings of several studies testify to this growing dependence.

According to the data collected from various countries since the beginning of COVID-19, media consumption has largely increased among members of different age groups around the world (Watson, 2020a). For instance, a survey conducted in India showed that during the first week of lockdown, the newspaper reading frequency increased by almost 64% compared with the week preceding the lockdown (Basuroy, 2021). A similar study conducted in the United Kingdom revealed that amid the COVID-19 crisis, one-third of those surveyed were reading more newspapers than ever before (Johnson, 2020). In Pakistan, a majority of the people rely on newspapers and live news media to seek COVID-19-related information (52.3%), followed by social media (23.7%) (Kamboh, Ittefaq, & Sahi, 2022). A worldwide online survey conducted in March 2020 revealed that watching more news coverage was the most popular media genre among the global audience (Watson, 2020b).

Findings of all these user-centered studies confirm the audience increased dependence on news media for seeking COVID-19-related information, hence indicating a gap to examine the actual amount of coverage given to gratify such audience needs. It would be interesting to measure the extent of editorial coverage given to advocate the overall COVID-19-related issues versus other issues (particularly the internal and external conflicts) in the mainstream English press of the selected countries of the majority world.

Editorial Journalism

Since editorial journalism is not a well-established research domain in media studies (Elyazale, 2014; Firmstone, 2019), it is important to explicate its different dimensions such as definitions, its differences from other forms of opinionated journalism, structure of an editorial, and its agenda setting potential in the context of environmental issues. This section sheds light on these aspects of editorial journalism.

There are a number of opinion journalism forms that make no claim of objectivity, including columns, editorials, and editorial cartoons. According to the Collins (n.d.) online dictionary, an editorial is "an article in a newspaper which gives the opinion of the editor or owner on a topic or item of news" (para. 3). Marques, Mont'Alverne, and Mitozo (2021) defined editorials as unsigned texts that exhibit media outlets' opinions, which eventually contribute to both highlighting opinion and reporting facts. Both definitions suggest that though an editorial is a subjective write-up, advocating a media organization's stance on an issue, it is primarily based on some news and facts. Along with establishing editorials as essential and regular features of contemporary newspaper journalism, Firmstone (2019) highlighted some of their main objectives as editorials represent the collective opinion or the public voice of a newspaper. Editorials allow newspapers to make allegiances known, support and oppose individuals, speak on behalf of their readers, speak to readers, and speak to politicians, parties, and other organizations.

For the sake of distinguishing editorials from other forms of opinion-based writings, Pimentel, Marques, and Santos (2021) assert that editorials are different from columns and enjoy a noble place in the opinion section of a newspaper. Firmstone (2019) further emphasized this distinction and noted that editorials are the primary format for the expression of a newspaper's partisan views. Contrarily, opinions in comment and analysis pieces represent the views of individual journalists or guest commentators and meet different goals. Editorials are usually published on a specifically devoted space on the editorial page of a newspaper and are published without the name of the writer. On a given day, the number of published editorials in a newspaper may differ from country to country. While revealing different editorial writing practices around the globe, Firmstone (2019) added that:

> Editorials are written by specialist journalists known as leader writers (in the United Kingdom) who occupy senior positions within newspapers and/or by members of the editorial board (in the United States), and by high profile named journalists (Greece). In the most common format in the United Kingdom, a daily leader column consists of three editorial articles, usually of diminishing length and with the first article indicating prominence. Editorials vary in length according to the traditional newspapers' formats (broadsheet/quality/tabloid) and are rarely over five hundred words (p. 3).

Having colonial pasts, Indian, Pakistani, and Bangladeshi editorial journalism seems strongly influenced by the British editorial writing model (i.e., by publishing daily two to three editorials of varying lengths with up to 500–600 words and the first article, with the highest length, indicating prominence). Interestingly, Chinese newspapers follow the same editorial practice. Universally, and in the selected countries of this study, the structure of a typical editorial is similar to the one as described by Pimentel and colleagues (2021):

In their first part, editorials briefly describe a particular event or issue so that it can be contextualized (and widely known events are more quickly presented than others). In the second part, the newspaper develops its opinion on the subject to evaluate what is good or bad, wrong, or right, especially concerning the actions of the institutions or agents involved. In this same section, the principles, positions, and ideologies shaping the journalistic organization's opinion are put into action. The third and last part brings the conclusions, embracing the explanations that form the basis of the editorial opinion and communicating a recommendation or a summon to act (para. 27).

Previous research assigns a powerful role to editorial journalism in terms of having multipronged effects. Firmstone (2019) recognizes and enumerates a few of them as:

Rooted in the effects tradition, researchers have attributed an important role to editorials in informing and shaping debate in the public sphere in four ways: (1) as an influence on readers, voters, and/or public opinion; (2) as an influence on the internal news agendas and coverage of newspapers; (3) as an influence on the agendas and coverage in other news media; and (4) as an influence on political or policy agendas (p. 1).

Editorial journalism has been known for having an uneasy relationship with governments. In a bid to cite different cases where newspaper editorials were subject to influence/interruption from political actors and their agendas, Pimentel and Marques (2021) reported that:

Regarding the importance of opinion texts, Firmstone (2008) sustains that media professionals are aware that political authorities monitor editorials. Some decades ago, Oakes (1964) mentioned different occasions when former US presidents said they were uncomfortable with editorials' criticisms. In the Brazilian case, Mundim (2012) argues that the news and opinionated coverage influenced the presidential elections of 2002 and 2006. Miola (2012) and Mont'Alverne (2020), in turn, highlight the agenda power that *O Globo* has on the negotiations taking place in Congress (p. 285).

However, despite carrying such strong significance and impact, newspaper editorials have historically been ignored by mass communication researchers while exploring different newspaper content genres. To this perspective, Ansary and Babaii (2005) added that editorials seem to be neglected in print media research compared with the overwhelming work undertaken on other newspaper texts, particularly the news.

In this study, we argue that environmental issues can be best contended by applying newspaper editorials because such issues are usually underrepresented in the mainstream media (Kamboh & Yousaf, 2020) and need some special journalistic treatment to have better influence on public policy debates. On top of that, despite being a specific form of opinionated journalism, newspaper editorials have barely been studied before for advocating environmental issues in the majority world countries (Das, 2019).

Based on the above discussion, it would be worthwhile to investigate the dominant issues in the overall COVID-19-related issues published in the editorials and eventually note the incidence of COVID-19-related environmental issues among them amid the readers' enhanced dependence on news media to stay abreast of coronavirus updates. The resultant findings would determine the functioning or nonfunctioning of editorial journalism practices for environmental issues in the selected majority world countries. Based on the preceding review, we pose the following research questions:

RQ1:   Was there a difference in editorial coverage of overall COVID-19-related issues and other issues in the mainstream English newspapers of the selected majority world countries?

RQ2:   What were the dominant issues found in the editorials written on overall COVID-19-related issues in the mainstream English newspapers of the selected majority world countries?

Methods

This study primarily seeks to examine the frequency of editorial attention given to overall COVID-19-related issues versus all other issues (particularly the internal and external conflicts) in view of the presumed enhanced media dependency amid a global health crisis, and, finally, to measure and compare the frequency of COVID-19-related environmental issues with other dominant issues in the editorials written on overall COVID-19-related issues. We used both quantitative and qualitative content analysis, which is one of the most widely used methods for measuring and analyzing media texts (Neuman, 2005; Wimmer & Dominick, 2003). We used this method to measure the frequency characteristics of the sample content. In Neuman's (2005) words, "Frequency simply means counting whether or not something occurs and, if it occurs, how often" (p. 294). We answered RQ1 by applying quantitative content analysis to measure and compare the editorial coverage of overall COVID-19-related issues and other issues. Whereas to answer RQ2, we applied inductive qualitative content analysis to identify dominant issues in all such editorials written in the context of the ongoing COVID-19 pandemic. While using content analysis, we followed Wimmer and Dominick's (2003) defined procedures.

To proceed with their guidelines, we selected the editorial content of four mainstream majority world countries' English language dailies (i.e., *China Daily* in China, *The Hindu* in India, *Dawn* in Pakistan, and *The Daily Star* in Bangladesh) as *sample content*. We used electronic versions of the selected newspapers to collect required data. In total, 1,301 editorials were collected from *China Daily* ($N = 313$), *The Hindu* ($N = 260$), *Dawn* ($N = 447$), and *The Daily Star* ($N = 281$). To analyze the sample content, we used SPSS software (version 27) for analyzing quantitative data, whereas to undertake qualitative analysis, Dedoose software (version 9.0) was used. We chose these dailies because they represent the most influential elite English press of the respective countries. Moreover, all of them have somehow similar editorial writing features. For instance, being based on a news event, it starts by revealing important details from a published news story or report, followed by a comprehensive note by the editorialist, who critically evaluates the relevant governmental policy or action. Mostly, it ends up providing some tangible suggestions to the policy makers or decision makers.

It is generally believed that Chinese newspapers are propaganda organs of the Communist Party, yet "unlike the mouthpieces of earlier communist regimes, the [contemporary] marketized Chinese media provide more convincing and sophisticated messages that continue to accord with state censorship demands

while satisfying readers' interest in real-life stories and problems" and eventually "lead aggrieved citizens to the law as a realm for dispute resolution and rights protection" (Stockmann & Gallagher, 2011, p. 436). During the coding process of *China Daily*, we found many such editorials offering limited but somehow guided criticism on state authorities.

We counted one entire write-up from each editorial section of the selected newspapers as a *unit of analysis* (only editorials, no letters to the editor or opinionated articles), which were collected from the official websites of all selected newspapers. Bearing in mind the significance of editorials as an advocacy platform to influence public, intramedia, intermedia, and policy agendas (Firmstone, 2019) on environmental issues, we made this selection.

We selected a time period of five months (i.e., for the *China Daily* from January 15, 2020 to June 14, 2020 and for the remaining three dailies from March 15, 2020 to August 14, 2020). As the pandemic started in China and gradually spread to other parts of the world, an earlier time period was selected for the *China Daily*. We purposely chose these time slots because selected COVID-19-related environmental issues (i.e., air pollution, livestock emissions, wildlife conservation, deforestation, and medical waste management) received higher global media attention during the selected time frame (Gerretsen, 2020; Marshall, 2020) and eventually created a best opportunity for the editorial writers to influence the public policy-making process. Later, to answer RQ1, we constructed and operationalized the following two major categories.

Category A: COVID-19-Related Issues

In this category, we included all such editorials that were published to advocate any aspect of the COVID-19 pandemic.

Category B: Other Issues

This category contained all such editorials published on any of the issues having no direct or indirect connection with the COVID-19 pandemic. Keeping in view the general perception about all of the selected countries as conflict-prone and their respective journalistic routine of giving more coverage to conflicts and wars (Kamboh & Yousaf, 2020; Lee & Maslog, 2005), we further divided this category into three subcategories:

B1: Internal and External Conflicts

It included editorials published on selected countries' (1) internal political, social, religious conflicts, and civil unrests; (2) chronic or recent conflicts with neighboring or other global countries; (3) irrelevant external world conflicts having no direct link to the selected countries.

B2: Environment Issues

This subcategory contained editorials that were written without establishing a connection between the published environmental issue and the COVID-19 pandemic.

B3: Miscellaneous

It included editorials that could not fit into any of the above-mentioned categories.

Later, we trained two coders (graduate students) to carry out both manifest (RQ1) and inductive coding (RQ2). Manifest coding is defined by Neuman (2005) as a process of placement of observable, countable surface data (i.e., unit of analysis) into a relevant category. In light of this guideline, the coders put all the units of analyses into relevant categories having sentences or paragraphs about each category. In the end, we counted the coded content from both of the categories, which helped us answer RQ1. However, unlike RQ1, RQ2 required a different treatment of content analysis. For instance, to identify dominant issues in the editorials published on overall COVID-19-related issues (RQ2), we trained our coders to apply inductive coding method. According to Chandra and Shang (2019), it is a content analysis technique by which the coders develop concepts and themes after reading and interpreting raw textual data. As maintained by this guideline, coders read and reviewed every relevant unit of analysis, made important notes and headings, and eventually transcribed them onto a coding sheet. Later, they were trained in how to undertake grouping the data and merging similar headings to eventually locate dominant issues. Before the actual coding, a pretest was conducted to help the coders better operationalize dominant issues. To establish intercoder reliability, a coding of 100 editorials produced Scott's pi of between .77 and .90, with the following ranges: COVID-19-related issues between .79 and .89, internal and external conflicts between .80 and .83, environment issues between .82 and .90, and miscellaneous between .77 and .80.

Findings

To answer RQ 1, this study analyzed 1,301 editorials. We used the Chi-Square test to find the differences between both of the major categories. The χ^2 test value—χ^2 (3, N = 1,301) = 48. 468, p < .001; Cramer's V = .193, p < .001—shows that there is a significant difference between the overall COVID-19-related issues (category A) and other issues (category B). The data in Table 1 show that out of the total 1,301 editorials published during the selected time period, an overwhelming number of them (i.e., 805, or 62%) were published to advocate overall COVID-19-related issues. The data further reveal that all of the selected dailies gave almost equal and adequate editorial coverage to the pandemic-related issues (i.e., 64%, 62%, 51%, and 76%, respectively). These results indicate that the newspaper editorialists were well aware of the audience enhanced dependence on news media and were therefore either giving excessive coverage to the pandemic-related issues or relating various issues to the pandemic.

Table 1. Comparison Between the Issues of Major Content Categories A and B (N = 1,301).

Newspapers	COVID-19-related issues (A)	Other issues (B)	Total
China Daily	200(64%)	113(36%)	313(100%)
The Hindu	162(62%)	98(38%)	260(100%)
Dawn	228(51%)	219(49%)	447(100%)
The Daily Star	215(76%)	66(24%)	281(100%)
Total	805(62%)	496(38%)	1,301(100%)

χ^2 (3, N = 1,301) = 48.468, p < .001; Cramer's V = .193, p < .001.

Later, we also performed a Chi-Square test to measure the differences among the three subcategories of major category B. The results again suggested that there was a significant difference among the subcategories A, B, and C issues, that is, χ^2 (6, N = 496) =78.115, p < .001; Cramer's V = .281, p < .001. The data in Table 2 reveal that selected newspapers gave significant priority to internal and external conflicts (subcategory B1 issues) over the environmental issues (subcategory B2) by publishing 285 (57.4%) and only 16 (3.2%) editorials for each of the subcategories, respectively.

Table 2. Frequency of Category B Issues Published in Selected Newspapers (N = 496).

| Newspapers | Editorials published on issues other than COVID-19 | | | Total |
	Internal/external conflicts (B1)	Environmental issues (B2)	Miscellaneous issues (B3)	
China Daily	94(19%)	03(0.6%)	16(3.2%)	113(22.8%)
The Hindu	66(13.3%)	03(0.6%)	29(5.8%)	98(19.7%)
Dawn	112(22.6%)	06(1.2%)	101(20.4)	219(44.2%)
The Daily Star	13(2.6%)	04(0.8%)	49(9.9%)	66(13.3%)
Total	285(57.4%)	16(3.2%)	195(39.3%)	496(100%)

χ^2 (6, N = 496) = 78.115, p < .001; Cramer's V = .281, p < .001.

While answering RQ2 (i.e., to identify dominant issues in the editorials written on overall COVID-19-related issues [N = 805]) the data in Tables 3–6 reveal that there was a tangible difference in priorities while covering the pandemic-related issues among the selected countries' newspapers. For instance, unlike *China Daily,* which gave third preference to advocate remedial measures to effectively address COVID-19, and economy-related issues (21.5%), the editorialists of *The Hindu, Dawn*, and *The Daily Star* used more than half of their editorial space for advocating similar issues by publishing 56%, 53%, and 83% editorials, respectively. On the other hand, *China Daily* gave the highest coverage to internal and external conflicts (43%), which received the second highest attention by the other three newspapers while getting 32%, 34%, and 09% editorials, respectively.

Table 3. Dominant Issues in COVID-19-Related Editorials Published in China Daily (N = 200).

Issues	Editorials (age%)	Example*
Internal–external conflicts	86(43%)	With the U.S. administration being berated at home for its response to the pandemic, it has opened two new fronts, trying to blacken China and to whitewash itself ("Rumormongering by Fox," 2020).
Appreciation of the Chinese efforts	43(21.5%)	Chinese authorities have demonstrated impressive transparency, responsiveness, efficiency, and capability in dealing with the public health emergency ("Health Authorities," 2020).
Disease-economy-related measures	30(15%)	Hopefully, the full force of the law will dissuade any possible violators from

		spreading the virus by hiding their conditions and make the border more secure against the disease ("Law Strengthens," 2020).
COVID-19-related environmental issues	02(01%)	We need the trade in wildlife to be banned and such marketplaces to be closed ("Strict Ban," 2020).
Others	39(19.5%)	With the situation worsening worldwide, countries need to strengthen their cooperation and coordination ("China's Key," 2020).

*Excerpt (editorial headline; publication date).

Table 4. Dominant Issues in COVID-19-Related Editorials Published in The Hindu (N = 162).

Issues	Editorials (age%)	Example*
Disease-economy-related measures	91(56%)	Policy makers have the unenviable task of stemming the COVID-19 tide without dampening economic momentum ("Contraction Slows," 2020).
Internal–external conflicts	52(32%)	At a time of a double crisis for India—battling the novel coronavirus pandemic in the country and Chinese aggression at the border—the message from New Delhi is one of a carefully calibrated balance (Calibrated Balance, 2020).
Sports	07(05%)	The IPL remains a big draw, but it should not put public health at risk ("Delayed Start," 2020).
COVID-19-related environmental issues	02(01%)	Destruction of forests sends wild animals, and the deadly viruses they carry, closer to humans ("Safe Forests," 2020).
Others	10(06%)	A Eurozone consensus on a new financial debt instrument is crucial for the bloc ("Corona Bond," 2020).

Table 5. Dominant Issues in COVID-19-Related Editorials Published in Dawn (N = 228).

Issues	Editorials (age%)	Example*
Disease-economy-related measures	121(53%)	Across cities, the government must kick off mass multilingual awareness drives about hygiene, symptoms, and the availability of medical help ("Containing the Virus," 2020).
Internal–external conflicts	77(34%)	If India keeps on beating the drums of war and violating the LoC, Pakistan will respond as this country's civil and military leaders have made clear ("India's Belligerence," 2020).

Sports	07(03%)	Though fans are an integral component of the game, they will hopefully come around to the idea of watching matches on TV for their own and their teams' safety ("Changing Face," 2020).
COVID-19-related environmental issues	02(01%)	On Thursday, wildlife officials seized a pangolin from poachers in Punjab. In the midst of a pandemic and a climate crisis, if greater sense does not set in, perhaps we are doomed (Save the Pangolin," 2020).
Others	21(10%)	This same spirit of unity is needed, especially with Eidul Azha coming up, to prevent the coronavirus from spreading further ("Haj Decision," 2020).

Table 6. Dominant Issues in COVID-19-Related Editorials Published in The Daily Star (N = 215).

Issues	Editorials (age%)	Example*
Disease-economy-related measures	179(83%)	Anything less will not be enough to curb the spread of a virus that has already devastated our life and economy ("With so," 2020).
Internal–external conflicts	18(09%)	It is imperative to stop any illegal movement out of the country at this time, and the Rohingya community must be warned of the near-death sentence that awaits trafficking victims, with borders being closed and countries like Malaysia proving, time and again, that they have no qualms about pushing sick and starving Rohingyas out to sea ("Rohingyas Can't," 2020).
COVID-19-related environmental issues	03(01%)	The government must start thinking of a modern medical waste management system that includes using safe transport vehicles that can be sterilized, training drivers and waste collectors, and stopping the recycling of all waste completely during the pandemic ("Hazardous Plastic," 2020).
Others	15(07%)	We hope Bangladesh's development partners will respond promptly to provide the necessary assistance to help the country cope with the impacts of COVID-19 ("WFP's Appeal," 2020).

The *China Daily* published the second highest number of editorials on appreciating the Chinese efforts to efficiently respond to pandemic-related issues (21.5%), whereas such appreciation for the local authorities by the other selected newspapers received almost negligible coverage. However, all of the selected newspapers equally ignored advocating COVID-19-related environmental issues by giving just 1% of the total COVID-19-related editorial coverage. This editorial inattention can be further noticed from the fact that *The Hindu* and *Dawn* published many more editorials on the postponement of sports events, 05% and 03% respectively, than the COVID-19-related environmental issues.

The final analysis of COVID-19-related environmental issues (Table 7) shows that none of the selected newspapers published any editorial linking air pollution and livestock emissions to the COVID-19 pandemic. Similarly, apart from *The Daily Star*, none of the newspapers bothered to advocate more than one type of the COVID-19-related environmental issues to the authorities.

Table 7. Frequency of COVID-19-Related Environmental Issues Published in Selected Newspapers.

Newspaper	Air pollution	Livestock emissions	Wildlife conservation	Deforestation	Medical waste management	Total
China Daily	00	00	02	00	00	02
The Hindu	00	00	00	02	00	02
Dawn	00	00	02	00	00	02
The Daily Star	00	00	00	01	02	03
Total	00	00	04	03	02	09

Discussions and Conclusions

This study primarily analyzed the editorial journalism coverage of environmental issues in four majority world countries' English language newspapers in the context of the COVID-19 pandemic. In this regard, the results suggest that while realizing the audience enhanced media dependency amid the pandemic, the selected newspapers published an ample number of editorials on COVID-19-related issues and eventually provided strong supporting evidence to MDT. However, in relation to advocating COVID-19-related environmental issues, the editorialists didn't seem to adequately perform their normative role of voicing for the voiceless faction of the society. In this connection, the following three major flaws have been identified on the part of both newspaper editorialists and civic advocacy groups.

Muddled Editorial Priorities Amid a Pandemic: The First Flaw

The results reveal that all the selected newspapers gave significant coverage to each country's internal and external conflicts. Ironically enough, such conflicts equally received higher editorial attention in both COVID-19-related issues (A) and other issues (B) categories. Undoubtedly, the COVID-19 pandemic has exacerbated existing social and political conflicts (Rubenstein & Simmons, 2021) in all of the selected countries, but instead of using these testing times as opportunities for building peace and conflict resolution, the editorialists generally continued to prefer writing on various disputes with conflict incitement spirit (see Tables 3–6). Likewise, a large number of editorials were published on external world conflicts, which had less significance for the selected

countries (e.g., internal conflicts of Sudan and the Koreas in *The Hindu*, Saudi-Yemeni conflict in *Dawn*). Also, *The Hindu* and *Dawn* published many more editorials on the status of sports events in the context of the pandemic than evaluating relevant country's environmental policies in the time of COVID-19.

Speaking about the differences of editorial coverage of COVID-19-related issues among all selected newspapers, the extracted themes in Table 3 show that *China Daily* gave the highest coverage to *internal-external conflicts* and *appreciation of the Chinese efforts* to mitigate the effects of the COVID-19 pandemic. This trend is comprehensible because *China Daily* is a state-owned newspaper committed to toe and promote state narratives on all types of issues (Hartig, 2017). Contrarily, the remaining three selected South Asian newspapers seem to raise the issues of the general public while extending most of their editorial space to *Disease-economy-related measures*. One of the possible explanations could be that half of world's population living under the poverty line are residing in these countries (Deyshappriya, 2018).

Based on this evidence, we contend that the editorial priorities of about all of the selected newspapers to advocate COVID-19-related issues were predominantly disordered and were therefore setting misleading agendas of the readers. Instead of capitalizing on the crisis situation created by COVID-19 to positively impact the local environmental health policies, the majority world countries' editorialists seem either to toe their respective state agendas or exploit the notion of "conflict" as a news value in general (Lee & Maslog, 2005) or earning profit from the top-selling item of cricket craze in the case of India and Pakistan (Nair, 2011).

Missing Link Between COVID-19 and Environmental Issues: The Second Flaw

Many of the editorials published on environmental issues (subcategory B2) in the selected newspapers were advocating air and plastic pollution, deforestation, and wildlife conservation issues to the concerned authorities. However, none of the editorialists attempted to relate these issues to the COVID-19 pandemic, which could have otherwise been more effective in keeping in view the fact that this association has been well established by the scientists (Gibb et al., 2020; Godlee, 2020; Lam et al., 2020; Sangkham, 2020; Zhu et al., 2020). This linkage, when transmitted through editorials, could have more impact on the readers in the times of enhanced media dependency and concern about COVID-19-related issues. Similarly, health emergencies are mostly linked to economic crisis (Shang, Li, & Zhang, 2021) and consequently receive greater media coverage. In this context, we contend that the scientifically established link between COVID-19 and environmental issues should also be given sufficient attention by the mass media.

In this connection, we argue that, in the wake of COVID-19-related enhanced media dependency, readers are more prone to receiving pandemic-related information to reduce their anxiety levels (Liu & Liu, 2020). Therefore, if an editorial is intended to link air pollution to an increased risk of dying from COVID-19, it would generate more concern among the audience and the resultant pressure could eventually impact the environmental policy-making process in a more meaningful way.

Inadequacies in COVID-19-Related Environmental Issues: The Third Flaw

An inductive analysis of overall COVID-19-related issues suggests that even the coverage of COVID-19-related environmental issues was both insufficient and incoherent. Findings indicate that selected

newspapers not only published an almost negligible number of editorials on COVID-19-related environmental issues but also covered just one type of such issues and ignored the others. For instance, two editorials each in *China Daily* and *Dawn* cautioned local authorities about the wildlife poaching and illegal trade that can cause similar pandemics in the future; on the other hand, both newspapers published nothing on the remaining four COVID-19-related environmental issues. Similarly, the editorialists of *The Hindu* remained restricted to only one type of such issue by publishing only two editorials about the approaching threat of an increasing number of breakouts of zoonotic viral diseases owing to the rapid rate of deforestation. *The Daily Star* was the only newspaper that bothered to highlight more than one type of issue (i.e., medical waste management and deforestation). In short, environmental issues were among those that were least linked to the COVID-19 pandemic in the overall COVID-19-related category, which eventually indicates editorial inadequacy on the part of all the selected newspapers.

Prior research suggests that majority world countries' news media generally do not adequately cover environment-related issues in normal times (Barkemeyer et al., 2017; Kamboh & Yousaf, 2020; Schmidt, Ivanova, & Schäfer, 2013). The findings of the present study added that this trend persists even during the COVID-19 health crisis. Moreover, prior literature informs that a majority of the past studies have been exploring the news coverage patterns of environmental issues (Ejaz, Ittefaq, & Arif, 2022; Schmidt et al., 2013) and editorial journalism has rarely been studied in this context (Das, 2019). Our study not only fills this void in the literature but also extends an understanding that editorial journalism practices are not different from other forms of journalistic content when it comes to giving adequate attention to environmental issues in the majority world countries.

The ultimate analysis of foregoing flaws suggests the inefficiency of editorial journalism practices for not effectively advocating the environmental issues in selected South and East Asian countries. The editorial writers of these regions seem unable to promote perspectives (e.g., environmental issues) that are typically under or misrepresented in the media (Das, 2019; Ejaz et al., 2022). While suggesting a way out to this journalistic lack, Waisbord (2009) draws attention to the civic-advocacy journalism model:

> Across the South, a myriad of journalists' organizations actively try to increase the volume of reporting and widening news perspectives on social issues. These organizations feed information to newsrooms, provide logistical support to facilitate coverage, bring journalists together through virtual networks, form alliances with news organizations, organize training workshops, produce articles and series for publication, and so on (p. 380).

There exists a large number of such environmental advocacy groups active in South and East Asian countries. For their consideration, we present some recommendations. There is a dire need to feed the local news organizations with the latest research studies that find intersections between the COVID-19 pandemic and local environmental issues. Such groups should collaborate with local press clubs and journalism training institutes to organize professional training for editorial staff to sensitize them as to how to effectively use editorial space for advocating environmental issues amid a pandemic. Last but not least, to make future journalism more inclusive of environmental discourse, civic advocacy groups should aim at influencing the

existing media studies' curriculum development process to add to the latest environmental health and advocacy journalism debates in various course contents.

References

Ahrends, A., Hollingsworth, P. M., Beckschäfer, P., Chen, H., Zomer, R. J., Zhang, L., . . . Xu, J. (2017). China's fight to halt tree cover loss. *Proceedings of the Royal Society B: Biological Sciences, 284*(1854), 1–10. doi:10.1098/rspb.2016.2559

Ansary, H., & Babaii, E. (2005). The generic integrity of newspaper editorials: A systemic functional perspective. *RELC Journal, 36*(3), 271–295. doi:10.1177/0033688205060051

Awale, S. (2019, July 7). *How Nepal became a Pangolin smuggling route to meet growing China demand*. Retrieved from https://www.pangolinreports.com/nepal-pangolin-smuggling/

Ball-Rokeach, S. J., & DeFleur, M. L. (1976). A dependency model of mass-media effects. *Communication Research, 3*(1), 3–21. doi:10.1177/009365027600300101

Barkemeyer, R., Figge, F., Hoepner, A., Holt, D., Kraak, J. M., & Yu, P. S. (2017). Media coverage of climate change: An international comparison. *Environment and Planning C: Politics and Space, 35*(6), 1029–1054. doi:10.1177/0263774X16680818

Barone, E. (2020, July 9). The coronavirus pandemic has disrupted big agriculture. Here's what that means for the planet. *TIME*. Retrieved from https://time.com/5865037/coronavirus-agriculture-us/

Basuroy, T. (2021, March 19). COVID-19 impact on media consumption India 2020 by type of media. *Statista*. Retrieved from https://www.statista.com/statistics/1113485

Buchholz, K. (2021, April 27). The biggest exporters of beef in the world. *Statista*. Retrieved from https://www.statista.com/chart/19122/biggest-exporters-of-beef/

Calibrated balance: On India and non-alignment. (2020, July 24). *The Hindu*. Retrieved from https://www.thehindu.com/opinion/editorial/calibrated-balance-the-hindu-editorial-on-india-and-non-alignment/article32175684.ece

Chandra, Y., & Shang, L. (2019). *Qualitative research using R: A systematic approach*. Singapore: Springer.

Changing face of sports. (2020, May 23). *Dawn*. Retrieved from https://www.dawn.com/news/1559105/changing-face-of-sports

Cheruiyot, D., & Ferrer-Conill, R. (2021). Pathway outta pigeonhole? De-contextualizing majority world countries. *Media, Culture & Society, 43*(1), 189–197. doi:10.1177/0163443720960907

China's key role in global supply chains. (2020, March 4). *China Daily*. Retrieved from https://www.chinadaily.com.cn/a/202003/04/WS5e5f9750a31012821727c553.html

Collins. (n.d.). Editorial. *Collins Dictionary*. Retrieved from https://www.collinsdictionary.com/dictionary/english/editorial

Containing the virus. (2020, March 15). *Dawn*. Retrieved from https://www.dawn.com/news/1541040/containing-the-virus

Contraction slows: On signs of economic recovery. (2020, August 3). *The Hindu*. Retrieved from https://www.thehindu.com/opinion/editorial/contraction-slows-the-hindu-editorial-on-signs-of-economic-recovery/article32255100.ece

Corona bond: Eurozone COVID-19 rescue package. (2020, April 15). *The Hindu*. Retrieved from https://www.thehindu.com/opinion/editorial/corona-bond-the-hindu-editorial-on-eurozones-covid-19-rescue-package/article31342021.ece

Das, J. (2019). *Reporting climate change in the Global North and South: Journalism in Australia and Bangladesh*. New York, NY: Routledge.

Das, N. G., Sarker, N. R., & Haque, M. N. (2020). An estimation of greenhouse gas emission from livestock in Bangladesh. *Journal of Advanced Veterinary and Animal Research, 7*(1), 133–140. doi:10.5455/javar.2020.g402

Delayed start: On IPL 2020. (2020, August 6). *The Hindu*. Retrieved from https://www.thehindu.com/opinion/editorial/delayed-start-the-hindu-editorial-on-ipl-2020/article32279786.ece

Deyshappriya, N. R. (2018, July 31). Examining poverty trends in South Asian countries: Where is Sri Lanka among its South Asian counterparts? *South Asia LSE*. Retrieved from https://blogs.lse.ac.uk/southasia/2018/07/31/examining-poverty-trends-in-south-asian-countries-where-is-sri-lanka-among-its-south-asian-counterparts/

Ejaz, W., Ittefaq, M., & Arif, M. (2022). Understanding influences, misinformation, and fact-checking concerning climate-change journalism in Pakistan. *Journalism Practice, 16*(2–3), 404–424. doi:10.1080/17512786.2021.1972029

Elyazale, N. (2014). Characteristics of newspaper editorials: 'Chouftchouf' in 'Almassae' Moroccan newspaper as a case study. *New Media and Mass Communication, 32*(1), 21–43. https://www.iiste.org/Journals/index.php/NMMC/article/view/18405/18687?fbclid=IwAR1fD7A-JB4-iH0NJbti8HltBCybrbuGb_SF3hN0mdzJxirEEjoYnR-HGJI

Firmstone, J. (2019). Editorial journalism and newspapers' editorial opinions. In J. F. Nussbaum (Ed.), *Oxford Research Encyclopedia of Communication* (pp. 1–24). Oxford, UK: Oxford University Press. doi:10.1093/acrefore/9780190228613.013.803

Frontera, A., Cianfanelli, L., Vlachos, K., Landoni, G., & Cremona, G. (2020). Severe air pollution links to higher mortality in COVID-19 patients: The "double-hit" hypothesis. *Journal of Infection, 81*(2), 255–259. doi:10.1016/j.jinf.2020.05.031

Gerretsen, I. (2020, April 27). How air pollution exacerbates COVID-19. *BBC*. Retrieved from https://www.bbc.com/future/article/20200427-how-air-pollution-exacerbates-covid-19

Gibb, R., Redding, D. W., Chin, K. Q., Donnelly, C. A., Blackburn, T. M., Newbold, T., & Jones, K. E. (2020). Zoonotic host diversity increases in human-dominated ecosystems. *Nature, 584*(7821), 398–402. doi:10.1038/s41586-020-2562-8

Godlee, F. (2020). Covid-19: What we eat matters all the more now. *BMJ, 370*, m2840. doi:10.1136/bmj.m2840

Government committed to developing livestock sector on modern lines. (2019, February 7). *Business Recorder*. Retrieved from https://fp.brecorder.com/2019/02/20190207445241/

Haj decision. (2020, June 24). *Dawn*. Retrieved from https://www.dawn.com/news/1564856/haj-decision

Hartig, F. (2017). China Daily–Beijing's global voice? In D. K. Thussu, H. Burgh, & A. Shi (Eds.), *China's media go global* (1st ed., pp. 122–140). New York, NY: Routledge.

Hazardous plastic waste during pandemic. (2020, May 13). *The Daily Star*. Retrieved from https://www.thedailystar.net/editorial/news/hazardous-plastic-waste-during-pandemic-1901998

Health authorities must stay on alert. (2020, January 16). *China Daily*. Retrieved from https://www.chinadaily.com.cn/a/202001/16/WS5e206deca310128217271854.html

India's belligerence. (2020, May 05). *Dawn*. Retrieved from https://www.dawn.com/news/1554655/indias-belligerence

International Union for Conservation of Nature. (n.d.). *IUCN Red List of threatened species*. Retrieved from https://www.iucn.org/resources/conservation-tools/iucn-red-list-threatened-species

IQAir. (n.d.). *World's most polluted cities 2020 (PM2.5)*. Retrieved from https://www.iqair.com/us/world-most-polluted-cities

Iqbal, N. (2019, September 4). Pakistan's deforestation rate world's highest, observes LHC. *Dawn*. Retrieved from https://www.dawn.com/news/1503365/pakistans-deforestation-rate-worlds-highest-observes-lhc

Johns Hopkins Coronavirus Resource Center. (2022, March 20). Retrieved from https://coronavirus.jhu.edu/

Johnson, J. (2020, May 27). COVID-19: Media consumption in the United Kingdom (UK) 2020. *Statista*. Retrieved from https://www.statista.com/statistics/1105790

Jung, J. Y. (2017). Media dependency theory. *The International Encyclopedia of Media Effects,* 1–10. doi:10.1002/9781118783764.wbieme0063

Kamboh, S. A., Ittefaq, M., & Sahi, A. A. (2022). Journalistic routines as factors promoting COVID-19 vaccine hesitancy in Pakistan. *Third World Quarterly, 43*(1), 278–287. doi:10.1080/01436597.2021.1995713

Kamboh, S. A., & Yousaf, M. (2020). Human development and advocacy journalism: Analysis of low editorial coverage in Pakistan. *Development Policy Review, 38*(5), 646–663. doi:10.1111/dpr.12443

Khan, B. A., Cheng, L., Khan, A. A., & Ahmed, H. (2019). Healthcare waste management in Asian developing countries: A mini review. *Waste Management & Research, 37*(9), 863–875. doi:10.1177/0734242X19857470

Kumar, V. P., Rajpoot, A., & Rasaily, S. S. (2020). Peril for pangolins: An evaluation of the status of the last decade in India. *Forensic Science International: Reports, 2*(2), 1–6. doi:10.1016/j.fsir.2020.100058

Lam, T. T. Y., Jia, N., Zhang, Y. W., Shum, M. H., Jiang, J. F., Zhu, H. C., . . . Cao, W. C. (2020). Identifying SARS-CoV-2-related coronaviruses in Malayan pangolins. *Nature, 583*, 282–285. doi:10.1038/s41586-020-2169-0

Law strengthens anti-virus line of defense. (2020, March 16). *China Daily*. Retrieved from https://www.chinadaily.com.cn/a/202003/16/WS5e6f67b5a31012821727f7e1.html

Lee, S. T., & Maslog, C. C. (2005). War or peace journalism? Asian newspaper coverage of conflicts. *Journal of Communication, 55*(2), 311–329. doi:10.1111/j.1460-2466.2005.tb02674.x

Liu, C., & Liu, Y. (2020). Media exposure and anxiety during COVID-19: The mediation effect of media vicarious traumatization. *International Journal of Environmental Research and Public Health, 17*(13), 4720–4736. doi:10.3390/ijerph17134720

Lohmann, S., & Aref, S. (2020, April 22). Perceptions of possible co-benefits—views on the intersection between the climate crisis and the COVID-19 pandemic. *Behavioral & Social Sciences*. Retrieved from https://socialsciences.nature.com/posts/66610

Loveless, M. (2008). Media dependency: Mass media as sources of information in the democratizing countries of Central and Eastern Europe. *Democratization, 15*(1), 162–183. doi:10.1080/13510340701770030

Lowrey, W. (2004). Media dependency during a large-scale social disruption: The case of September 11. *Mass Communication & Society, 7*(3), 339–357. doi:10.1207/s15327825mcs0703_5

Mackenzie, J. S., & Smith, D. W. (2020). COVID-19: A novel zoonotic disease caused by a coronavirus from China: What we know and what we don't. *Microbiology Australia, 41*(1), 45–50. doi:10.1071/MA20013

Mahmood, T., Akrim, F., Irshad, N., Hussain, R., Fatima, H., Andleeb, S., & Aihetasham, A. (2019). Distribution and illegal killing of the endangered Indian pangolin Manis crassicaudata on the Potohar Plateau, Pakistan. *Oryx, 53*(1), 159–164. doi:10.1017/S0030605317000023

Manzoor, J., & Sharma, M. (2019). Impact of biomedical waste on environment and human health. *Environmental Claims Journal, 31*(4), 311–334. doi:10.1080/10406026.2019.1619265

Marques, F. P. J., Mont'Alverne, C., & Mitozo, I. (2021). Editorial journalism and political interests: Comparing the coverage of Dilma Rousseff's impeachment in Brazilian newspapers. *Journalism, 22*(11), 2816–2835. doi:10.1177/1464884919894126

Marshall, M. (2020, April 18). COVID-19—a blessing for pangolins? *The Guardian*. Retrieved from www.theguardian.com/environment/2020/apr/18/covid-19-a-blessing-for-pangolins

McCarthy, N. (2020, March 3). Where air pollution is reducing life expectancy the most. *Statista*. Retrieved from https://www.statista.com/chart/21012/average-life-expectancy-reduction-in-years-due-to-air-pollution/?

Middleton, J., Reintjes, R., & Lopes, H. (2020). Meat plants—a new front line in the COVID-19 pandemic. *BMJ, 370*, m2716. doi:10.1136/bmj.m2716

Mir, K. A., Purohit, P., & Mehmood, S. (2017). Sectoral assessment of greenhouse gas emissions in Pakistan. *Environmental Science and Pollution Research, 24*(35), 27345–27355. doi:10.1007/s11356-017-0354-y

Myers, J. (2016, June 21). China consumes more than a quarter of the world's meat. The government wants to change that. *World Economic Forum*. Retrieved from https://www.weforum.org/agenda/2016/06/china-consumes-more-than-a-quarter-of-the-worlds-meat-the-government-wants-to-change-that

Nair, N. (2011). Cricket obsession in India: Through the lens of identity theory. *Sport in Society, 14*(5), 569–580. doi:10.1080/17430437.2011.574351

Neuman, W. L. (2005). *Social research methods: Quantitative and qualitative approaches*. New Delhi, India: Allyn and Bacon.

Nijman, V., Zhang, M. X., & Shepherd, C. R. (2016). Pangolin trade in the Mong La wildlife market and the role of Myanmar in the smuggling of pangolins into China. *Global Ecology and Conservation, 5*(2016), 118–126. doi:10.1016/j.gecco.2015.12.003

Ogen, Y. (2020). Assessing nitrogen dioxide (NO2) levels as a contributing factor to the coronavirus (COVID-19) fatality rate. *Science of the Total Environment, 726*(2020), 1–5. doi:10.1016/j.scitotenv.2020.138605

Pandemic to spark biggest retreat for meat eating in decades. (2020, July 7). *Bloomberg*. Retrieved from https://www.bloombergquint.com/business/pandemic-set-to-spark-biggest-retreat-for-meat-eating-in-decades

Pimentel, P. S., & Marques, F. P. J. (2021). De-Westernizing media parallelism: How editorial interests unfold during impeachment crises. *Journalism Studies, 22*(3), 282–304. doi:10.1080/1461670X.2020.1867000

Pimentel, P. S., Marques, F. P. J., & Santos, D. H. F. (2021). The structure, production routines, and political functions of editorials in contemporary journalism. *Atlantic Journal of Communication*, 1–14. Advance online publication. doi:10.1080/15456870.2021.1931218

Pontes, N. (2020, April 29). How deforestation can lead to more infectious diseases. *DW*. Retrieved from https://www.dw.com/en/how-deforestation-can-lead-to-more-infectious-diseases/a-53282244

Post-Covid development must incorporate preservation of nature. (2020, April 8). *The Daily Star*. Retrieved from https://www.thedailystar.net/editorial/news/post-covid-development-must-incorporate-preservation-nature-1909565

Rohingyas can't be left to starve at sea: Countries must abide by international law. (2020, April 19). *The Daily Star*. Retrieved from https://www.thedailystar.net/editorial/news/rohingyas-cant-be-left-starve-sea-1894321

Rubenstein, R. E., & Simmons, S. (2021). *Conflict resolution after the pandemic: Building peace, pursuing justice*. New York, NY: Routledge.

Rumormongering by Fox News reveals desperate situation of US. (2020, April 23). *China Daily*. Retrieved from https://www.chinadaily.com.cn/a/202004/23/WS5ea06e46a3105d50a3d181f9.html

Safe forests, safe people: On diseases of animal origin. (2020, April 3). *The Hindu*. Retrieved from https://www.thehindu.com/opinion/editorial/safe-forests-safe-people-the-hindu-editorial-on-diseases-of-animal-origin/article59779094.ece

Sangkham, S. (2020). Face mask and medical waste disposal during the novel COVID-19 pandemic in Asia. *Case Studies in Chemical and Environmental Engineering, 2*(2020), 1–9. doi:10.1016/j.cscee.2020.100052

Sattar, N., McInnes, I. B., & McMurray, J. V. (2020). Obesity is a risk factor for severe COVID-19 infection: Multiple potential mechanisms. *Circulation, 142*(1), 4–6. doi:10.1161/circulationaha.120.047659

Save the Pangolin. (2020, March 23). *Dawn*. Retrieved from https://www.dawn.com/news/1543044/save-the-pangolin

Savoia, E., Lin, L., & Viswanath, K. (2013). Communications in public health emergency preparedness: A systematic review of the literature. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science, 11*(3), 170–184. doi:10.1089/bsp.2013.0038

Schmidt, A., Ivanova, A., & Schäfer, M. S. (2013). Media attention for climate change around the world: A comparative analysis of newspaper coverage in 27 countries. *Global Environmental Change, 23*(5), 1233–1248. doi:10.1016/j.gloenvcha.2013.07.020

Shahbandeh, M. (2020, January 10). Number of milk cows worldwide in 2019, by country. *Statista*. Retrieved from https://www.statista.com/statistics/869885/global-number-milk-cows-by-country

Shang, Y., Li, H., & Zhang, R. (2021). Effects of pandemic outbreak on economies: Evidence from business history context. *Frontiers in Public Health, 9*, 146–160. doi:10.3389/fpubh.2021.632043

Stockmann, D., & Gallagher, M. E. (2011). Remote control: How the media sustain authoritarian rule in China. *Comparative Political Studies, 44*(4), 436–467. doi:10.1177/0010414010394773

Strict ban on wild animal trade imperative. (2020, February 13). *China Daily*. Retrieved from https://www.chinadaily.com.cn/a/202002/13/WS5e4532c9a310128217277616.html

Trageser, S. J., Ghose, A., Faisal, M., Mro, P., Mro, P., & Rahman, S. C. (2017). Pangolin distribution and conservation status in Bangladesh. *PloS One, 12*(4), 1–12. doi:10.1371/journal.pone.0175450

United Nations. (2020, April 6). *The social impact of COVID-19*. New York, NY: Department of Economic and Social Affairs Social Inclusion. Retrieved from https://www.un.org/development/desa/dspd/2020/04/social-impact-of-covid-19/

Upadhyay, V. (2020, February 10). Tree felling almost doubled between 2016–2019 in India: Data from Environment Ministry. *The New Indian Rxpress*. Retrieved from https://www.newindianexpress.com/nation/2020/feb/10/2101482.html

Waisbord, S. (2009). Advocacy journalism in a global context. In K. Wahl-Jorgensen, & T. Hanitzsch (Eds.), *The handbook of journalism studies* (pp. 372–384). New York, NY: Routledge.

Watson, A. (2020a, June 18). Media consumption increase due to the coronavirus worldwide 2020, by generation. *Statista*. Retrieved from https://www.statista.com/statistics/1106809

Watson, A. (2020b, June 18). Consuming media at home due to the coronavirus worldwide 2020, by country. *Statista*. Retrieved from https://www.statista.com/statistics/1106498

WFP's appeal to help Bangladesh. (2020, May 18). *The Daily Star*. Retrieved from https://www.thedailystar.net/editorial/news/wfps-appeal-help-bangladesh-1903498

Wimmer, R. D., & Dominick, J. R. (2003). *Mass media research: An introduction* (7th ed.). New Delhi, India: Wadsworth.

With so few tests, any claim regarding COVID-19 is dangerous. (2020, July 29). *The Daily Star*. Retrieved from https://www.thedailystar.net/editorial/news/so-few-tests-any-claim-regarding-covid-19-dangerous-1937777

Zhu, Y., Xie, J., Huang, F., & Cao, L. (2020). Association between short-term exposure to air pollution and COVID-19 infection: Evidence from China. *Science of the Total Environment, 727*(2020), 1–7. doi:10.1016/j.scitotenv.2020.138704