



Natural Disaster Reporting: A Content Analysis of Locust Infestation Coverage in Pakistani Newspaper

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Abstract

This study analyzed the quality of disaster reporting by the daily Dawn on the locust attack of 2019-20 in Pakistan through the prevention, preparedness, response and recovery (PPRR) phases of disaster management. The findings showed that: (1) the amount of coverage given to the disaster was insufficient in face of the severity of the crisis. (2) The crisis was covered in the current affairs lens inadequate for disaster coverage which requires a comprehensive approach and sustained focus. (3) Due to the absence of maps and charts the coverage was unable to establish a clear timeline of the disaster and the response, orientation of the scale and course of the locust attack in the minds of the public thus failed to merit the due attention of the donors and volunteerism in the people. It is concluded that discrepancies in the disaster reporting are due to the lack of training and knowledge that disaster reporting demands. .

Key Words: Locust Infestation, Locust Control, Disaster Reporting, Media Coverage, Disaster Management Cycle, PPRR, Prevention, Preparedness, Response, Recovery

Introduction

Effective communication is the heart of the disaster management process. Media coverage determines the way “disasters became known and responded to” (Hannides, 2015, p. 17). People get orientation and guidelines for the actions required to control and mitigate the harms from media (Vieweg, Palen, Liu, & Hughes, 2008; Pipes, 2007). The media assists governments in assessing, mobilizing, and prioritizing the need for relief and emergency arrangements, and also draw the attention of concerned agencies, authorities, and professionals to important issues as they arise. (Littlefield & Quenette, 2007). Therefore, the information dissemination from the media forges a link between public and emergency organizations and disseminates reliable and relevant information at every stage that is before, during and after the disaster. Most importantly, the media, through disaster coverage, stimulates public debates to evaluate the national response and preparedness level of emergency relief and response agencies and departments. This allows the disaster management issues to come into the public radar thus pushing it up on the policy agenda, providing an opportunity to improve upon on the weaknesses and challenges highlighted through the debates (Nair, 2010). Media coverage aids in bringing the disaster into international notice, thus garnering international financial aid and expertise (Scheufele, 1999; Bennett & Kottasz, 2000). Therefore, the media either aids or obstructs disaster management by the way it covers the emergency (Bhandary, Dahal, & Okamura, 2012).

Purpose of the Study

Pakistan saw the first wave of locust invasions in May 2019 since 1993. UN Food and Agriculture Organization (FAO) warned that the entire country is under threat of an attack by desert locusts with around 37% area of Pakistan being most vulnerable to the attack. This includes 60% area of Baluchistan, 25% area of Sindh and 15% area of Punjab. Locust infestation mitigation requires careful planning and appropriate timing. The only time the

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locust plagues can be treated without using pesticides is 25 to 50 days after eggs have hatched. During this period, the locusts are wingless and crawling on the ground and thus can be destroyed easily. This cannot be done without collaboration and coordination between the government, disaster managers, and vulnerable communities; it essentially includes joint effort with other countries in the region ([Lys, 2004](#); [World Disasters Report, 2005](#)). Media, therefore, has a vital role in connecting stakeholders, making the disaster worthy or unworthy of the attention of donors and aid agencies, and thus facilitating efforts to manage the locust plague ([Poudel, 2016](#); [Pipes, 2007](#)).

This study analyzed the coverage of the disaster of locust infestation through the prevention, preparedness, response and recovery (PPRR) cycle of disaster management in the leading newspaper Dawn.

The findings of this study will identify the gap between disaster intensity and reporting appropriateness. The information will be useful for media professionals and media industries in improving effective news coverage; as well as, for the government and disaster management agencies that formulate and develop appropriate programs and policies incorporating the role of the media for disasters. The research questions guiding the study are as follows:

1. With what frequency the news stories relating to locust infestation in Pakistan appeared in the Dawn during the period (June 2019- July 2020)?
2. How the Dawn covered the locust infestation with respect to the prevention, preparedness, response, and recovery (PPRR) phases of disaster management? The newspaper's analysis was selected because the broadcast media provides immediate information to the public while print media is concerned with providing orientation and comprehensive analysis of the situation. ([Littlefield & Quenette, 2007](#)). Though people get informed in a personalized manner through online citizen journalism, still researchers believe that traditional media to be a most trusted and reliable source of information about disasters ([Jin, Liu, & Austin, 2011](#); [Stephens, Barrett, & Mahometa, 2013](#)).

Disaster Management Cycle

Disasters have been defined as singular large-scale situations or high impact events which overwhelm local capacities to withstand, cope and recover, necessitating external assistance and involving various stakeholders ([Cutter, 2003](#); [Guha-Sapir, Vos, Below, & Ponserre, 2014](#); [Coppola, 2015](#)). Disasters do not have a definite starting point and gradually build up with time. Disaster management does not strive to eliminate the possibility of disasters to happen but to minimize the risk of occurrence and damage ([WMO/GWP, 2008](#)). Disaster management cycle (DMC) is an ongoing process of response and relief, active at all the three stages of a disaster - pre-disaster, during a disaster, and post-disaster ([Warfield, 2008](#)). *Pre-disaster stage* corresponds to the prevention and mitigation phase in the DMC. The DMC, also known as the PPRR (prevention, preparedness, response, recovery) cycle is the fundamental concept of emergency management ([Cronstedt, 2002](#); [EMA, 1998](#)). It involves all risk reduction activities aiming to minimize human and material losses caused by potential hazards. The primary role of media at this stage is about educating the public about disasters and alerting them of the impending crisis by giving hazard warnings. *During a disaster*, the stage corresponds to the response stage in DMC. At this stage, the responsibility of the media is gathering and transmitting information about affected areas; alerting government officials, relief organizations and the public to specific needs. The *after-disaster stage* that is the relief phase in DMC media enabling affected communities to recover and facilitating discussions about disaster preparedness and response for continuous improvement ([Nair, 2010](#); [Tingsanchali, 2012](#); [Dave, 2018](#)).

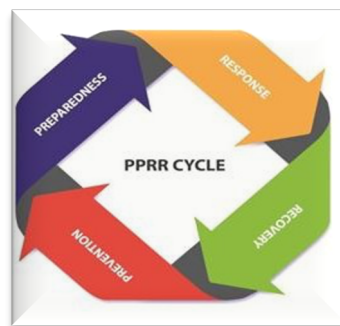


Figure 1: Disaster Management Cycle

Role of Media during Disasters

Appropriate media communications are required at all stages to mitigate the impact of disaster and achieve rapid

and effective recovery. The Asia Disaster Preparedness Center provides clear guidelines (2006) of the established media tasks at every stage of the disaster.

Role of Media at Pre-Disaster Stage

At the pre-disaster stage, media needs to disseminate information to promote *prevention* and *preparedness*. The prevention typically involves the media promoting the prevention culture. Media role at this stage is, focuses on eliminating and reducing the severity of the disaster, reporting on developing *norms and structure to prevent disaster*, watching over the *physical and legal measures adopted* and implemented by the government. Preparedness includes; *Analysis of risk sources and patterns* -The main task of media at the pre-disaster stage is to inform and educate the public about the impending risk. The media organizations at this stage pro-actively have to get involved with disaster management agencies and produce hazard maps, vulnerability maps and comprehensible statistics for public information and orientation of the hazards. *Issuing early warning* based on scientific forecasts and expert opinions and also highlights the areas or groups most at risk. *Preparedness information* is an essential part of media messages. This includes precautionary measures that vulnerable groups can take to minimize the risk such as, regarding the safety of crops and livestock, food storage, and other mitigation measures etc. *Advocate for risk reduction* involves encouraging and influencing decision-makers to prioritize risk reduction and take actions timely to reduce the disaster impact. *Encouraging people's participation* is another important function media need to perform. Media messages urge the civil society, communities and NGOs to join hands to assist government and agencies in the risk aversion and disaster management by contributing to their own capacities.

Role of Media During a Disaster

This is the response phase in DMC. In the period of disaster occurrence, the focus is to save lives and properties and avoid secondary risk hazards. During the crisis phase range of players are involved in response activities, so it is not unlikely that authorities may not share information with the media. It is, therefore, important that the media keep close contact with all the local and international partners and keep track of all the progress and get relevant and reliable information to keep the general public informed. *Informing the public of timely and factual information* is the prime job of media during the crisis. This typically includes facts and statistics about what happened, the extent of the damage caused, what is the current situation of danger. *Advising the public of the actions to be taken* in emergency situations is also media's responsibility during a crisis. Media is supposed to guide the public about what steps they should take to avoid damages. *Informing the public about actions being taken by authorities and aid groups* such as what measures the government has taken to save lives and property and what they intend to do further for the affected. *To communicate potential secondary hazards to prevent further damage* is deemed as the responsibility of media in the aftermath of the disaster. Media gathers authentic information from relevant departments and authorities and scientific experts, to bring to the public knowledge, including decision and policymakers, to take appropriate measures to avoid potential secondary damage.

The Role of the Media in Post-Disaster Stage

After the disaster, the focus shifts to recovery and rehabilitation of the affected communities and regions. *Appeal for assistance from all parties* is important at this stage. Media can assist local, provincial and national authorities in generating resources rehabilitation and reconstruction.

Media role is to highlight the disaster news in the international media for attracting and appealing to international aid agencies. This is effectively done by *communicating about rehabilitation and reconstruction plans*. The public in the affected areas and other concerned quarters are informed about the government, and I/NGOs plans and debates are stimulated to involve all stakeholders. Media actively involves in *Advocating for integrating risk reduction and prevention*. The disaster risk reduction elements should be integrated into the recovery and relief process for future risk avoidance and for sustainable social development.

Media Strategies in Order to Accomplish all the Above-Mentioned Goals Media Adopt Various Strategies. Few of them are

Organizing expert dialogues – media houses bring together scientific experts and representatives of all the concerned departments (e.g., National disaster management authority, Food and Agriculture Organization, Meteorological department, Plant protection department, and entomologists etc., in case of locust disaster) and facilitate dialogue among them on the various aspects of the disaster ranging from causes to prevention. Such sessions are helpful in raising public awareness about the crisis and coming up with appropriate, feasible solutions and strategies to counter disaster problems. *Public forums* are held to bring certain issues of affected communities and areas to the public knowledge and to deliberate upon its solutions.

Public auditing – public surveys and opinion polls are conducted by the media to gauge the effectiveness of relief and recovery efforts. *Interviews* with disaster management officials and *field visits* prove to be an efficient way to highlight the strengths and weaknesses of the work being done and making people aware of the problems of the relief agencies and workers and of the victims.

Methodology

The Dawn

The Dawn was selected for this study because of its elite status and serious readership. It is read by government officials, policymakers, and professionals, who are influential and are often opinion leaders in their respective fields. All the Locust related news stories (n=102) during a period of one year starting from June, 2019-July 2020 were retrieved from the online archive of the epaper Dawn using the search words „locust“, „locust attack“, „locust invasion“. News reports were analyzed regarding the news frames and reporting throughout the PRR cycle to determine how media are reporting throughout the phases of disaster. For news framing analysis the predefined frames; human interest, economic consequences, responsibility, conflict and morality were used. (Valkenburg, Smetko, & Claes, 1999). Another category „fact sheet“ framework was created for the news stories that was plainly reporting the facts and did not aptly fit the other standard five frames.

Results and Discussion

Frequency of the Dawn News Reports Regarding Locust Infestation

Dawn has reported total (n=102) locust infestation news stories during the period of one year from June 2019-June, 2020, with an average of 280 words per story. An average of 7.07 stories were written per month on Locust infestation, with the number being heightened due to a period of extensive reporting in May 2020. Otherwise, the average number of stories is low, compared to the severity of the disaster (Fig 2). It is important to note that despite the government of Pakistan has declared a national emergency over locust swarms on January 28, 2020 (National emergency declared against locusts, 2020) no urgency was shown, and no significant change occurred in the frequency of the news stories on locust attacks till May 2020.

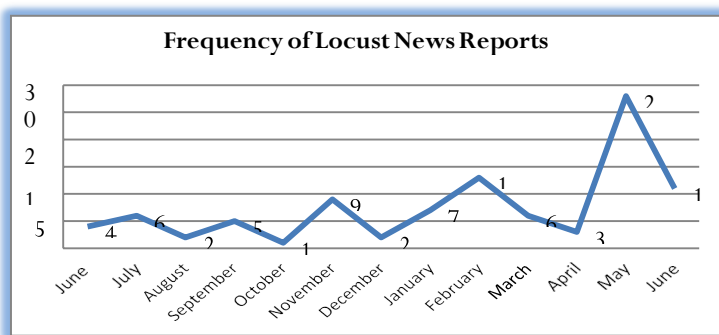


Figure 2: Frequency of Locust News Reports in the Daily Dawn
News coverage analysis with respect to PRR cycle

In accordance with the PPRR cycle, the news stories regarding locust infestation were analyzed and categorized. It was found that out of a total of 102 news stories. The PPRR news stories overlap; therefore the graph (Fig 3) shows the frequency of each of the phase. News stories including information about preparedness (n=111); followed by (n=73) news stories reporting response activities; The news stories focusing on recovery and prevention were (n=7);and (n=6) respectively.

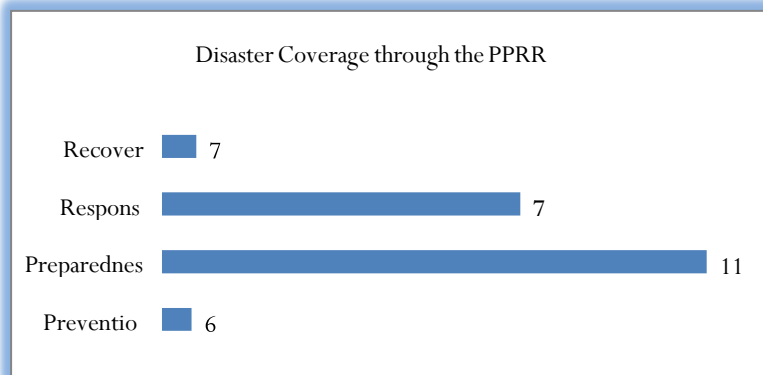


Figure 3: The Disaster Coverage Through the PPRR

The qualitative analysis of Dawn reporting during the four phases of the disaster management cycle of Locust infestation according to the established media disaster reporting guidelines (Puzon-Diopenes & Murshed, 2006). The news stories were examined for the majortasks that media is required to perform during each phase, as mentioned in the section of the role ofmedia in disaster.

Preparedness

Preparedness information largely focused on the arrangements that were availableto deal with the locust invasion (n=46) mostly limited to inventory listing. A comprehensive risk analysis (n=18) that included the impact on individual families was not provided; it was mainly in terms of national economic losses. The issued warnings (n=24) were far less in the number given the time span. Also, it did not mention specific time and region, thus not very helpful to thefarmers. Advocacy for risk reduction was negligible and was only through the statements of the government officials and public representatives. Efforts to encourage people’s participation (n=8) were missing on behalf of journalists, and the few appeals that were made were due to the urging of agencies and religious groups.

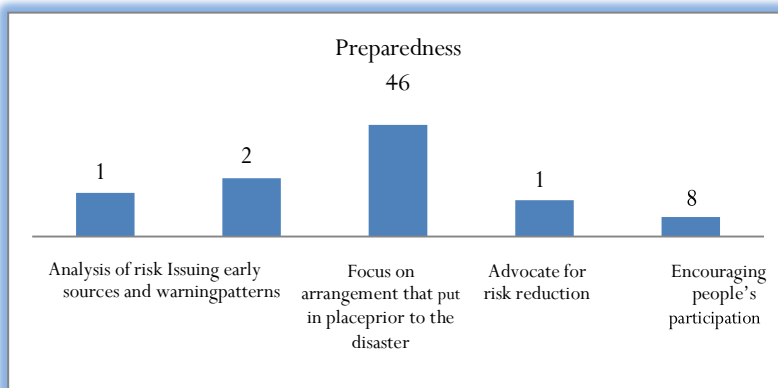


Figure 4: News Stories Concerning Preparedness

Response

The response mainly focused on the measures and decisions taken by the authorities and agencies (n=52). Information about aid from national and international groups, buying of pesticides and relevant personnel and equipment was discussed. However, timely and factual information (n=6) that would be useful to the farmers was missing. Proper directions (n=3) that would guide the affected community in protecting their crops and property were lacking. The secondary risk of famine and losses to rural livelihoods (n=12) was mentioned.

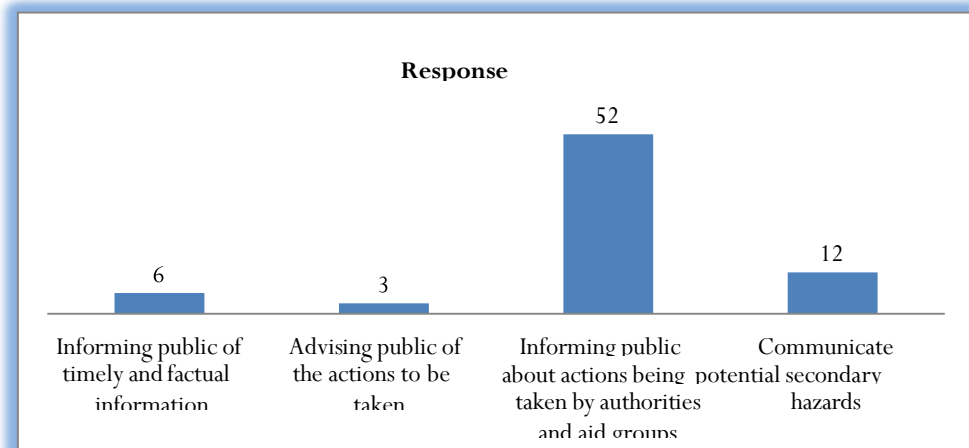


Figure 5: The News Stories Concerning Response

Recovery

Little attention was given to relief and recovery. The locust invasion continued for more than a year, but during that time there were only four appeals (n=4) for assistance, and instances of advocacy to integrate risk-reducing measures to prevent future disasters were even fewer (n=2). Only a single mention of the subsidies given to farmers for rehabilitation plans was made (n=1).

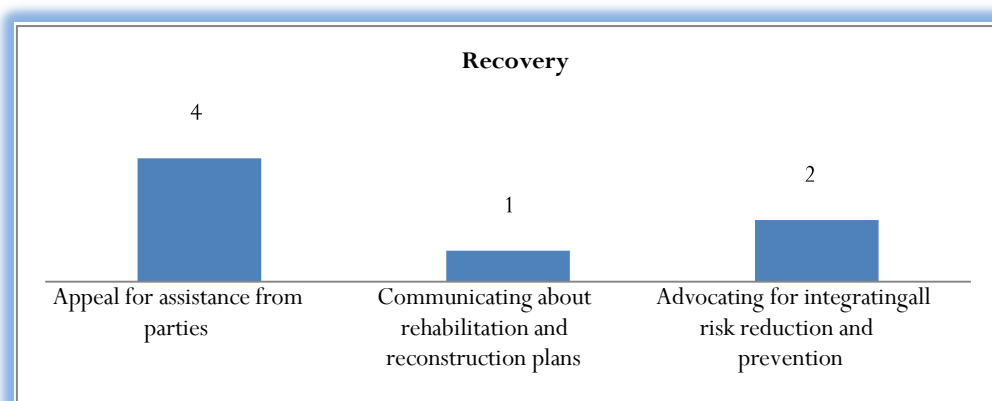


Figure 6: The News Stories Concerning Recovery

Prevention

Reports focusing on prevention were the least in number, mainly about physical and legal measures (n=5) of the disaster. For instance, the information regarding FSAWG (Food Security and Agriculture Working Group) development of remote assessment applications for Locust location and data collection with handheld eLocust3g

devices, capacity enhancement of DPP i.e., aerial spray to manage agriculture emergencies, Pak-China Action plan, was given. The news stories regarding developing norms and structures for sustainable prevention (n=1) and measures to be taken for eliminating or mitigating disaster were depressingly low (n=0).

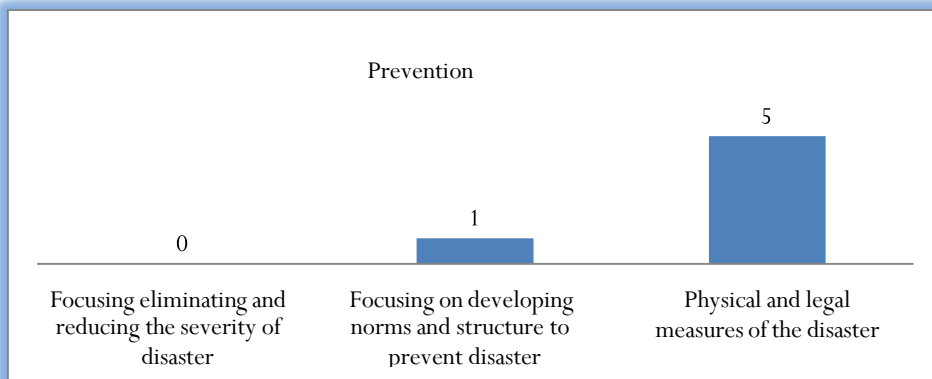


Figure 7: The News Stories Concerning Prevention

The findings of the study suggest that a more balanced approach in disaster reporting throughout the PPRR cycle is required. The reporting remained focused on response and to some extent on preparedness. The data indicates that journalists have a limited understanding of the principles of disaster management, and they cover natural disasters as they do current affairs. The major observations are as follows:

Absence of Maps and Timelines

The absence of photographs, maps, timeline representations, region-wise disaster progression visualization made the coverage incomprehensible for the general public. The reports made no use of statistical data or data visualization; no maps were provided to show the affected areas or how the disaster, and efforts to mitigate the disaster, was progressing.

Moreover, the reports failed to establish a clear timeline of the disaster and the response and were of little help to orient the layperson to grasp the recurring nature of locust attack in the form of the first, second, and third wave. This resulted in an inability to adequately identify, generate and convey timely alerts. There was only one instance of providing map throughout the locust coverage, and that was in FAO report. (2020)

Lack of Collaboration and Coordination

The primary roles of the media are to analyze the situation and anticipating the actions required, to identify the gaps and discrepancies in the DMC, and draw the attention of the concerned authorities towards the needs of disaster-stricken and disaster vulnerable communities. But all the reporting was devoid of this purpose. There was no continuity or contextualizing in the reporting; the reporting was passive, reflecting a lack of coordination and collaboration with the stakeholders and simply stated the facts with no further effort.

Post Disaster Reporting

The news stories focused on the occurrence of the disaster and subsequent damages; however, how the aftermath of the destruction was dealt with was glossed over and not reported sufficiently. The needs of the affected were not highlighted, which is important for mitigation as well as prevention. At this stage, the function of the media is to forge links between the aid and donor agencies and the victims of disaster for sustainable recovery.

Capacity Building and Scientific Expert Input

From the reporting, it was understood that some training exercises and awareness campaigns for the farmers were conducted. But no further details were provided about where and since when these were being held. There

was also no information provided for the farmers regarding how to access these sessions. Moreover, no details from these campaigns were shared for public education and benefit. Additionally, due consultation with experts and agencies in the media would have provided the public with directions and safety guidelines to avoid or reduce the effects of the disastrous happenings; however, no such efforts were made. In one year of the disaster, there were only a few instances of an expert opinion being mentioned in a report, one was a self-report by an entomologist at the very start (June 24, 2019) and the others were brief reports about the awareness seminars conducted by the Faisalabad University of Agriculture UAF on July 5, 2020, and Sindh University on July 17, 2020.

Statements from Public Representatives and Government Officials

The major part of the disaster reports comprised of statements given by public representatives or government officials. But these statements were not contextualized in the larger disaster scenario; therefore it appeared as if the officials were either in denial or were unaware of the severity of the situation. Furthermore, there was never any fact-checking or follow-ups of the statements.

Feedback Responsiveness

The realities and demands of the farmers were left out of the narrative. A Dawn report showed that the farmers voiced their displeasure at being misrepresented as eating locusts in the media, which was not true. Despite these claims, no efforts were made to present the true reality of the affected and clarify the situation. Another Dawn news story revealed that the locals were awaiting guidelines regarding destroying locust eggs before their hatching, but the reports never gave a follow-up.

Absence of Discussion, Debate and Public Audit

The overall coverage reflected journalistic passivity and inexperience. The data indicates that no forums and sessions were arranged by the Dawn group for public awareness regarding the intensity of locust infestation and its potential hazards. The limited reporting failed to match the intensity of the disaster.

Appeals to Donors and Aid Agencies

Media identify areas where governmental assistance is needed stimulating a response from the general public in terms of donations and volunteerism. Proper coverage with an emotional angle helps to get disasters noticed by the national and international aid agencies and donors.

Dawn's coverage of the disaster fell short in this regard and was unable to draw due public attention. All of these weaknesses point towards a lack of training and an absence of specialized „disaster beat“ (Poudel, 2016). The reporters need to be made aware of the fundamental difference between disaster reporting and event reporting.

Conclusions and Recommendations

The findings of the study can be summarized as follows; (1) the amount of coverage given to the disaster was insufficient in the face of the severity of the crisis. (2) The crisis was covered in the current affairs lens inadequate for disaster coverage which requires a comprehensive approach and sustained focus. (3) Due to the absence of maps and charts, the coverage was unable to establish a clear timeline of the disaster, and the response, orientation of the scale and course of the locust attack in the minds of the public thus failed to merit the due attention of the donors and volunteerism in the people. It is concluded that discrepancies in disaster reporting are due to the lack of training and knowledge that disaster reporting demands. A permanent specialized „disaster beat“ in media outlets is recommended for a professional and effective media response in disaster and risk management.

Limitations of the Study

The limitations of this study include analyzing the disaster reporting of only one newspaper; moreover, other aspects such as framing needs to be examined.

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