Disaster Management in Nepal: Media engagement in the Post-2015 Framework for Disaster Risk Reduction

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Abstract – Nepal, as a consequence of its geographical location and changing climate, faces frequent threats of natural disasters. According to the World Bank’s 2005 Natural Disasters Hotspots Report, Nepal is ranked the 11th most vulnerable country to earthquake and 30th to flood risk. Geo-Hazards International (2011) has classified Kathmandu as one of the world’s most vulnerable cities to earthquakes. In the last four decades more than 32,000 people in Nepal have lost their lives and annual monetary loss is estimated at more than 15 million (US) dollars. This review identifies gaps in knowledge, and progress towards implementation of the Post Hyogo Framework of Action. Nepal has identified priority areas: community resilience, sustainable development and climate change induced disaster risk reduction. However, one gap between policy and action lies in the ability of Nepal to act effectively in accordance with an appropriate framework for media activities.

Supporting media agencies include the Press Council, Federation of Nepalese Journalists, Nepal Television, Radio Nepal and Telecommunications Authority and community based organizations. The challenge lies in further strengthening traditional and new media to undertake systematic work supported by government bodies and the National Risk Reduction Consortium (NRRC). Within this context, the ideal role for media is one that is proactive where journalists pay attention to a range of appropriate angles or frames when preparing and disseminating information. It is important to develop policy for effective information collection, sharing and dissemination in collaboration with Telecommunication, Media and Journalists.

The aim of this paper is to describe the developments in disaster management in Nepal and their implications for media management. This study provides lessons for government, community and the media to help improve the framing of disaster messages. Significantly, the research highlights the prominence that should be given to flood, landslides, lightning and earthquakes.

Keywords – Hyogo Framework, disasters, media framing, role of media in disasters, risk communication and disasters, Nepal

1. Introduction and Background

Nepal, as a consequence of its geographical location and changing climate, faces frequent threats of natural disasters. Since 1900, 7 million people in Nepal have been affected by disasters (K. R. Aryal, 2007). Over the last four decades, Nepal has experienced approximately 23,000 disasters of all types (MoHA-Nepal-Government & DPNET-Nepal, 2013) and more than 32,000 people have lost their lives (K. Aryal, 2012; DesInventar, 2014; MoHA-Nepal-Government & DPNET-Nepal, 2013). Annual economic losses are estimated at more than 15 million (US) dollars per annum (K. R. Aryal, 2007; MoHA-Nepal-Government & DPNET-Nepal, 2013).

Nepal is highly vulnerable to multiple hazards due to its variable geo-climatic conditions, young geology, unplanned settlements, deforestation and environmental degradation. On the other hand, increasing population,
rapid and unplanned urbanization and other economic activities in vulnerable areas are also contributing factors to this vulnerability. The effects of climate change have further aggravated disasters in Nepal. According to the World Bank’s 2005 Natural Disasters Hotspots Report, Nepal is ranked the 11th most vulnerable country in the world to earthquake and 30th to flood risk (World Bank, 2005). Geo-Hazards International (2011) has classified Kathmandu as one of the world’s most vulnerable cities to earthquakes (Geo-Hazards International, 2011; Nepal MoHA, 2011).

In spite of the rate of disasters and the associated economic and human impact, the media has a limited focus on the issue of disasters (Adhikari, Pokhrel, KC, & Rai, 2011). Despite attempts to harness the power of communication technology to bring about social change and to meet people’s needs (Hannides, 2011), the media lacks maturity in fulfilling its role as public informant (Panday, 2009). Maturity is lacking in contemporary Nepalese newspapers; however, media reporting is now improving (Panday, 2009). Nepalese news outlets can be a useful source for hazard information and can help inform and protect the people in specific areas (Panday, 2009).

Despite an increasing number of people affected by natural disasters (UNDP-Nepal, 2009), the management strategies have been inadequate and not well implemented (UNDP-Nepal, 2009). The impact of disasters is increasing due to the lack of preparedness, public awareness, effective media reporting and proper news dissemination (NSDRM, 2009). The media help the community in different ways. Often the community does not go to the authorities directly, but tries to solve issues by themselves, no matter how serious it is. In such a situation, journalists provide information relating to the crisis and appropriate actions required (Gurung, 2011).

However there have not been any significant researches seeking to understand the media’s treatment of disasters in the Nepalese context. The Nepalese media outlets mostly cover current affairs, politics, business, technology and arts and disaster reporting is considerably less prominent (Adhikari, et al., 2011). The government in Nepal has been criticized for the quality of the information provided to the public (Adhikari, et al., 2011; M.B.P Chhetri, 2003). There is an information asymmetry between government and the media. Sometimes media may create confusion and undermine attempts to effectively manage response activities (M.B.P Chhetri, 2003).

The question is how the role of the media can be improved. There is a need to ensure that the media is responsible and transparent in their roles. Yet, despite being a disaster prone country, Nepal to date, has not implemented any major media management strategy to involve the media in disaster risk reduction, framework and management (M.B.P Chhetri, 2003). The aim of this article, through analysis of the literature and of government reports, is to describe the role of the media in disaster management and thus progress towards implementation of the 2005 Hyogo Framework for Action.

### 1.1. Process of collecting literature

This study uses standard academic techniques for searching articles, key databases, relevant documents, intensive reports, books. These were retrieved and saved using Endnote and APA 6th version style. The major sources of literature are the popular databases that are accessible through the electronic database portal of the Queensland University of Technology (QUT) library. The databases used were PubMed, Web of Science, Scopus, EBSCO-host, Pro-Quest, Science Direct, LexisNexis AU, and Informit. Additionally, electronic databases, including DesInventar of CRED, ReliefWeb, PreventionWeb, MoIC, MoHA, DP-NET, UN, FAO, World Bank, CIA World Fact book Nepal, SADKN, SEADHIN, INSEC, and CBS-Nepal, were scrutinised. Key words used in the search were ‘Hyogo Framework’, media management’, ‘mass media’, ‘disasters’, ‘media framing’, ‘role of media in disasters’, ‘risk communication and disasters’ and ‘effective communication’. Additionally, the references included in most relevant recent articles were reviewed.

Relevant articles relating to the role of the media, ‘Hyogo Framework for Action 2005-2015’, media framing, the PPRR approach and disaster journalism were identified as well as articles related to research methods, design, and the conceptual framework. The total list of articles was reviewed for relevance and significance and the final analysis was performed on 35 most significant articles and reports.

Relevant articles were reviewed by the principal researcher to identify significant contributions to the purpose of the review. Those contributions were collated into consistent ideas and where appropriate used to identify new themes.

### 1.2. The 2005 Hyogo framework for action in Nepal

The 2005 Hyogo Framework for Action (HFA) was formulated under the auspices of the United Nations and identified inter alia the need and importance of working with the media (HFA/UNISDR, 2005). The Framework aimed to explain, describe and detail the work required to reduce disaster losses (HFA/UNISDR, 2005; World Conference on Disaster Reduction, 2005). It has five priorities for action:

1. Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.
2. Identify, assess and monitor disaster risks and enhance early warning.
3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels.
4. Reduce the underlying risk factors.
5. Strengthen disaster preparedness for effective response at all level - bringing them into a common system of coordination.

Since the adoption of the HFA in 2005, and as documented in national and regional progress reports on the implementation as well as in other global reports, progress...
has been achieved in reducing disaster risk at local, national, regional and global levels by countries and other stakeholders. This has contributed to decreasing mortality risk. There is growing evidence that reducing disaster risk is a cost effective investment in preventing future losses. Countries have enhanced their capacities. International mechanisms for cooperation, such as the Global Platform for Disaster Risk Reduction and the regional platforms for disaster risk reduction have been instrumental in the development of policies, strategies, the advancement of knowledge and mutual learning. Overall, the HFA has been an important instrument for raising public and institutional awareness, generating political commitment, and focusing and catalysing actions by a wide range of stakeholders at local, national, regional and global levels (Pre zero draft IDRC-GRF, 2014). The HFA urged a focus on advocacy and awareness programs to educate people, communities, and decision makers (Matsuoka, Sharma, & Shaw, 2009).

Being a member of the United Nations, Nepal has sought to apply the principles and recommendations made regarding the framework and the role of media for disasters. However, media involvement in the dissemination of real time information is limited. Effective news room management by government owned, private, online and community media throughout the prevention, preparedness, response and recovery (PPRR) cycle of disaster management can be a useful tool for collecting risk information and disseminating protective information to the communities at risk (Poudel, FitzGerald, Clark, Mehta, & Poudyal Chhetri, 2014).

The recent 5th International Disaster and Risk Conference (IDRC) in Davos Switzerland highlighted the new level of media involvement to be included in the post 2015 framework for disaster risk reduction (IDRC-GRF, 2014). Disaster experts have urged and encouraged media to take an active role at local, national, regional and global levels to contribute to raising public awareness and understanding, and also to disseminate risk, hazards and disaster information (IDRC-GRF, 2014). Furthermore, the experts in the IDRC have expressed the need for close cooperation with the academia and institutions of Science and Technology to help stimulate a culture of prevention and strong community involvement. IDRC has also highlighted the active role of social media to promote public education and awareness (IDRC-GRF, 2014).

Earlier this year the UN General Assembly released a compilation report on consultation towards the post-2015 framework for disaster risk reduction which included an overview of the period from March 2012 to May 2014 (UN-General Assembly, 2014). The findings of the biennial Global Assessment Reports (GAR) on Disaster Risk Reduction (DRR), and the deliberations of the United Nations General Assembly are addressed in the compilation report.

In 2011 UNISDR reported the progress made by some developing countries of Asia in the area of disaster risk reduction awareness among communities (UNISDR, 2011). It stated that countries such as Bangladesh, China, the Cook Islands, Fiji, India, the Marshall Islands, Mongolia, Nepal, Pakistan, PDR Lao, Samoa and the Solomon Islands have commonly used strategies for spreading awareness including the use of coordinated public awareness campaigns involving both print and electronic media. National governments of countries such as Bhutan, Pakistan and Nepal have adopted a strategy of designating the anniversaries of major past disasters in the country as days for building awareness of disaster related issues (UNISDR, 2011).

‘Disaster through a Different Lens’, a comprehensive report issued after the successful, preliminary, consultative meeting of UNISDR, held in Geneva in 2007 focused on the influence of the mass media as a powerful force in policy change (Leoni, 2011). Earlier, it was said that the responsible agencies and supporting agencies for implementing their respective role in disaster risk management need to be accountable to the targeted communities. A focus on media engagement is urged to help mainstream disaster related issues (UNISDR, 2011, 2013a, 2013c). Nepal has identified stakeholders and their role to execute the programs identified for the second phase of the Hyogo framework for action. Government Ministries will lead, but will be involved in national, district, VDC, and community-ward levels. In recent years, Nepal has demonstrated commitment to the use of science, technology and information systems for a better understanding of the issues and solutions required for disaster management. For example, the DISINVENTAR data collection system will be updated and shared through web portal (MOHA) with local media, FM stations and mobile phone networks so that the communities at risk obtain maximum benefit from the information. The establishment of the disaster risk reduction (DRR) web Portal at the Home Ministry will be linked with the DISINVENTAR Data (UNISDR, 2013b).

Currently, the Ministry of Home Affairs (MoHA) along with National Emergency Operation Centre is coordinating all disasters and emergency situations in the country under the regulation of the central disaster relief committee (IFRC-NRCS, 2011; NDRF/MOHA, 2013; NEOC-MOHA, 2014). The National Strategy for Disaster Risk Management (NSDRM) of 2009 proposes a council under the chairmanship of the Prime minister with a wider role and responsibilities aimed at all stages of disaster management in Nepal (NSDRM, 2009).

The role of government agencies is to support UN agencies, I/NGOs, Red Cross and Red Crescent, donors, civil society, private sector, academia, user groups, and the media (MoHA-Nepal-Government, 2013; UNISDR, 2013a). Government will adopt the current coordination mechanisms under “Flagship 4 & 5” initiatives and strengthen and institutionalise them within government systems. The Government will also implement a post-disaster assessment guidelines (UNISDR, 2013a). However there remain many issues to be addressed in response to the media coverage.
2. Literature Review

The literature review is divided into subsections as follows.

2.1. The role of the media in disaster management

The media including newspapers, radio, television and social media play a critical role in creating community awareness and disseminating information about disasters (Dixit et al., 2002; Dynes & Rodriguez, 2010; Rahman-zadeh, 2012). The media do not necessarily report or disseminate news in a negative way, but they follow disaster events very specifically (Dynes & Rodriguez, 2010). Media coverage of the triple disaster in Japan in 2011, the Indian Ocean tsunami in 2004, the Sichuan earthquake in China in 2008, Cyclone Nargis in Myanmar in 2008 and the earthquake in Haiti in 2010 created significant national and international public attention and, at times, alarm to the communities (Leoni, 2011). In the twenty-first century, the media is regarded as a fundamental component of human society. Most prevalently, the media play the role of guard dog or the fourth estate of a nation (Donohue, Tichenor, & Olien, 1995; Hachhethu, Kumar, & Subedi, 2009). This conception is derived from other perspectives, which include media as "(a) the role of watchdog, (b) the lapdog view of submissive media, and (c) the view of media as part of a power oligarchy" (Donohue, et al., 1995). This notion highlights that people need information from sources other than obtain and learn from direct contact with rather people in order to comprehend social reality (Shoemaker & Reese, 1996).

The information provided about the Seti flood in Nepal in 2012 and its immediate dissemination to the public through the media, helped many people stay alert. Preliminary information provided by the local media helped people capture live scenes of the debris flow and flood in their still and video cameras including cell phones and circulating information (Bhandary, Dahal, & Okamura, 2012). However the coverage of the impact of disasters has not necessarily assisted with management of these events nor has it contributed significantly to changes in public policy or legislation that may have resulted in a further reduction in the impact of these events on the health and wellbeing of the communities affected (Bhandary, et al., 2012; Chhetri, 2010).

A manual, 'Disaster through a Different Lens' focused on the influence of mass media as being a powerful force in policy change and, together with other stakeholders, bridging the information gap between communities and governments. In the manual, Leoni (2011) highlighted the effort that has been useful in generating ideas to bring all of the world’s media together in disaster risk reduction. It has been possible to incorporate media in disaster management from the first consultative meeting by building a 'Global Media Network on Disaster Risk Reduction'.

Future disaster reduction through development or improved development through disaster reduction, have been considered to be complementary agendas. From this point of view, the media plays a key role in integrating disaster issues into the mainstream development processes of the world (Collins, 2009).

With respect to the media’s role in society, the notion is very vague. It needs to be specified according to the event where media involvement is realised. For example, the mass media have been identified as the primary stakeholder, if not the sole source of information and knowledge about global warming, as well as other fields, such as disasters, politics, education, science, technology, and environment (Sinaga, 2011). In the political discourse, the media have been the dominating stakeholder, because they focus the agenda according to the frames or angles of social events, needs, and involvement (Semetko & Valkenburg, 2000).

The production of news relating to disasters is subject to the processes of institutional mediation, cultural inflection, and professional reflexivity, because the journalists themselves get involved in the dissemination of information about disaster response activities, the victims’ views and their demands, and the display of emotions (Panetti, Wahl-Jorgensen, & Cottle, 2012). The media’s role in disasters has also been described in certain specific ways. The media could be termed as a 'frame setter', because media reporting and stories draw the attention of the authorities, public, and emergency workers. All concerned agencies including the media become involved in the response during disasters (Vasterman, Yzermans, & Dirkzwager, 2005). The attention of various opinion leaders has been widely discussed and has emphasized the need for effective dissemination of information (Seid-Aliyeva, 2006).

The linkage with the society and social utility functions of the media are the most important elements, apart from their regular day-to-day job of disseminating information to the public (Nazari, Hassan, Parhizkar, & Osman, 2011). People often give confusing estimates of damage and they often judge damage to be either more preventable or attributable. The media generally give a detailed description of the damage caused by the disasters (Nazari, et al., 2011). These findings have clear implications for the way the media and public must engage in sharing the available information of disasters (Cowan, McClure, & Wilson, 2002).

It is not surprising that the media plays a significant role in disaster education and awareness as well. The investment for this purpose is not adequate, even in developed countries, given that emergency managers typically operate with limited resources. In 2007, a survey of USA emergency management professionals found that the average county public communication budget is only $290 per annum, with 175 counties having no communication budget at all (Liu, 2007). This means that, even in the US, the media’s priority with respect to disaster education was nominal. Now, the situation has changed.

The media play a central role during the initial period after a large disaster and crisis managers at different levels are often dependent on the media to both receive and give information (Bennett & Martin, 2002; E. L. E. Quarantelli, 2002). Media coverage also raises awareness among people in non-impacted regions and countries, and stimulates...
relief aid and donations (E. L. Quarantelli, 1996; Olofsson, 2011).

For the last 50 years, human society has acquired knowledge from the media (Neuman & Guggenheim, 2011). Many people might think that the Internet would be the best option to gain information during a disaster, but this notion of depending on web materials is always vulnerable in a crisis (Neuman & Guggenheim, 2011). People from all over the world mostly rely on the radio and television during disasters. During a crisis, other media may do a better job at delivering breaking news than the Internet (Goldsborough, 2002). People throughout disaster-affected countries, without easy access to television or radio, try to find out what is happening through their computers, often without success (Neuman & Guggenheim, 2011).

During the floods in Brisbane, Australia, the media assisted people by drawing the attention of authorities to focus on response activities (Bruns, Burgess, Crawford, & Shaw, 2012; Nathan, 2011). It is now generally acknowledged that the 24-hour news cycle and competition to break stories reduces the time for real analysis and fact checking. Communicating risk has been identified as one of the major components of risk management (Nathan, 2011).

The strength of the media has traditionally been in their simplification of complexity (Nathan, 2011). Response activities from both the public and the government are positively associated with the number of people affected, media coverage, and the level of political and civil freedoms prevailing (Feeny & Clarke, 2007). Reporters are engaged in disaster zones to get the story, with or without cooperation, but sometimes people are not concerned about the negative impact of news and information disseminated in a rush or in a time of crisis (Moskovitz, 1999).

Research on the role of the media in disaster preparedness and the sustainable development of society in Azerbaijan highlighted that people who are well informed and educated, even if living in hazard-prone zones, can reduce the consequences of disaster and help to rebuild a healthy society (Seid-Aliyeva, 2006).

A study of the media and disasters by Wenger (1985) reveals that two parties involved in responding to disasters, such as neighbours, have great expectations of each other, even if they hate each other, and will go beyond their usual values or tolerance levels. There are always positive and negative aspects of disaster reporting.

During disasters, the media works tirelessly using enormous resources, however, the reporting may not always be accurate. During Hurricane Katrina, the media helped people to unite. Unlike some developing countries, which have the impact of superstitions and myths regarding natural disasters, this was not the case in the Katrina-affected community, so it did not disturb organisations and the media responding to the disaster (Tierney, Bevc, & Kuligowski, 2006). In empirical research into the New Orleans catastrophe in 2006, Beaudoin (2007) has drawn some ideas about media effects and public safety in a time of crisis.

A multiple method used to examine the practices through which journalists constructed newspaper stories about Stony Creek, Ontario, revealed that there are three themes important to the media. These are the process, environmental degradation and technology (Wakefield & Elliott, 2003). News coverage increased during the heightening of the controversy. Interestingly, reliance on the print media was sometimes impeded by a distrust of the material contained within. This finding has considerable implications for risk communication policies and environmental management related decisions (Wakefield & Elliott, 2003). Wakefield and Elliott’s study (2003) was a quantitative content analysis of risk communication, which was conducted to explore the role of local media, in a real world context, and in the creation and interpretation of media messages.

A survey in the USA, based on local mass media covering disaster events, revealed that, for electronic media, the size of the organisation is important in influencing its degree of coverage and the amount of change that occurs in its normal structure (Wenger & Quarantelli, 1989). However, the print media undergoes fewer alterations to their normal story structure and processing than the electronic media.

Comparison of coverage of disaster news in the USA and Japan was found to be similar in many ways. Cross-societal comparison of disaster reporting underlines that those disasters are treated as major news stories. Cross-media differences in utilisation and exposure, at time of the disasters, are similar (E. Quarantelli & Wenger, 1991). Aside from these similarities, there are differences as well. In the USA, all media houses have equal responsibility, but, in Japan, NHKTV as the government media house, is legally bound to disseminate information and inform the public during disasters. Similarly, in the USA, many mass media representatives do not view themselves as being part of the community emergency response effort (E. Quarantelli & Wenger, 1991).

2.2. The media’s framing of disaster stories

The concept of news framing refers to the “principles of selection, emphasis, and presentation composed of little tacit theories about what exists, what happens, and what matters” (Gitlin, 2003). Frames constitute ways of organising ideas into meaningful categories and privilege some aspects over others (R.M Entman, 1993). The framing of disasters and environmental issues is now regarded as an important aspect of disaster reporting in the world. Boykoff and Roberts (2007a, 2007b) identified a trend towards the framing of anthropogenic climate science, within a sample of USA national press and television news coverage between 1995 and 2006, as being contentious. The main aspect of framing the news varies differently from topic to topic. The coverage of SARS in China, for example, probably has a very different core frame reporting system, compared to international news and current affairs. The frames are extended by the changing patterns of news-making processes (Chyi & McCombs, 2004). A qualitative content analysis of newspaper coverage on SARS in China has shown that the inter-
action of increasing external pressure and internal self-awareness forced the Chinese government to change its crisis management strategies (Meng & Berger, 2008). The massive reporting of SARS drew the attention of the world and the government was portrayed as the stakeholder most responsible for responding to this catastrophe.

An understanding of how the news media frames crisis stories is important to crisis managers and public relations practitioners in determining the appropriate crisis response strategies and messages (An & Gower, 2009). News directors, editors, and reporters must make decisions based upon the crises in the community. Likewise, people and society have limited experience with disasters, so it is uncertain to understand and predict what will happen in the future (Scanlon, 2009). When disasters strike, the people look to the media to find the answers. Button (2010) describes this role as "the outcomes of important questions – who is to blame, who is to be compensated, who suffers disproportionate risks, and who should be involved in essential decisions to overcome the crisis". The media decides which stories are the most newsworthy and how the media packages information and participates in the construction of reality. Likewise, how the media informs us about the ideological elements that seek to maintain the status quo of the community in the wake of a disaster (Button, 2010).

There are other examples of how the media portray disasters. A study of the reporting of the Indian Ocean tsunami in Swedish newspapers conducted by Olofsson (2011) shows that the tsunami was framed as a Swedish disaster, almost exclusively focusing on Swedish and Swedish victims in Thailand. There was a division between ‘us’ and ‘them’ with regard to the issue of nationalism after the catastrophe. The conclusion of this qualitative content analysis was that mediated frames of catastrophes are influenced by stereotypes and nationalistic values (Olofsson, 2011).

Bissell (2011), studying the news coverage of the BP oil spill of 2010 in the USA, found that news stories from four news outlets over a 3½ month time-frame indicated that the most frequently used source was official, and that conflict and responsibility frames were mostly used.

Liu (2009), in a study of media releases issued by state emergency management agencies (SEMAs) in the USA, found that SEMAs released more information about disaster planning than disaster response. The human interest frame was employed in less than one per cent of the media releases and, hurricane Katrina was the most frequently quoted disaster in the releases. Likewise, a study conducted by Morse and Miles (2007) found that, out of four capital types (natural, human, social, and built) as a frame of reference associated with Hurricane Katrina and Hurricane Rita (2005), natural capital received relatively less attention in the media coverage. On the other hand, the ‘attribution of responsibility’ frame was the most predominantly used in crisis news coverage of some USA media in 2006 (Cho & Gower, 2006).

There have been other studies of the role of social media in disaster events that have suggested suitable frameworks to deal with disasters (Lang & Benbunan-Fich, 2010). For example, a study of the use of social media in disasters has made a bold step to formalise the use of social media by proposing a framework based on four modules: (1) selection, (2) facilitation, (3) deliberation, and (4) aggregation. The utility of the proposed framework is exemplified via case studies of social media use in two disaster situations; one following the Virginia Tech tragedy, a man-made disaster, and the other during the 2009 British blizzard, a natural disaster (Lang & Benbunan-Fich, 2010).

The majority of research, in the area where media and disasters collide, focuses upon the media’s role as transmitters of official warnings, preparedness, bulletins, and recovery information to the masses (Cowan, et al., 2002; Ploughman, 1995; E. L. Quaratelli, 1996). Aside from these roles, the media can also expose the losses of economy and human capital and urge the formulation of policy.

Other studies have shown that "while natural disasters can have adverse and long-lasting effects on human capital, there is much that policy can do about it" (Baez, De la Fuente, & Santos, 2010). Some developed nations have increased spending for disaster management, including in the media sector. However, a global assessment report relying on four case studies, in de la Fuente’s 2009 study conducted in Colombia, Mexico, Nepal, and Indonesia, reveals that, in all countries except Colombia, post-disaster spending was significantly greater than pre-disaster spending (Williams, 2011).

2.3. Nepalese media in disaster management

In an earlier section, we mentioned that the Nepalese media has developed very rapidly, but the coverage by these media has not effectively reflected the people’s problems, or has supported disaster management strategies. There have not been any particular studies with regard to the media and disasters in Nepal, but limited studies have been conducted focusing on the role of the media in general political, human rights, business, and environment related issues. However, the role of risk communication is urged in various types of programs, policies, and documents relating to disaster risk reduction strategies. Nepal has not been capable of operating effective media activities, due to the lack of proper policy, guidelines, and capability. National level policy documents have focused on communication and awareness in general, but there is no substantiation about how mass public awareness could be raised in response to disasters (Chhetri, 2010).

There have been criticisms over the lack of suitable Media Infrastructure in Nepal. In 2011, USAID in Kathmandu said that key media infrastructure is vulnerable to disasters and there is a lack of attention to disaster risk reduction (USAID-Nepal, 2011). Journalists expressed their need to have more technical knowledge about disaster risk reduction or specialised journalism approaches to upgrade the capacity to disseminate information and news on disasters. This report said that FM radio stations are partnering with local and international non-governmental organizations (NGOs) to broadcast public messages on preparedness for recurrent hazards.
There has been another concern about these radio stations. Local FM Radio is available in most of the regions in Nepal but Radio stations; themselves are vulnerable to lightning strikes, which render the entire system inoperable. Organizational contingency or recovery plans are lacking according to all media respondents. (USAID-Nepal, 2011).

On the other hand, established in 1996, the Disaster Preparedness Network (DPNet-Nepal) is a loose association of individual organisations within the development sector in Nepal, which are concerned with disaster management objectives. DPNet has more than 100 institutional members involved in the disaster risk reduction program. Some media outlets and their activities are also included in the program and policies of DPNet-Nepal (DPNet Nepal, 2011). Yet, there is a lack of proper framework to include the media in disaster management in Nepal.

Since the restoration of multi-party democracy in 1990, the Nepalese media have been considered as the watchdog, promising to liberate politics from pre-political and anti-political impulses. However, previously the media was mostly controlled by the government and news priority used to reflect government policy. The king, other royals, prime minister, and political parties were the priority for the media; this trend lasted until 2005. The priority of news was based on the importance of the event. Parliamentary proceedings and court verdicts considered to be of national importance were a priority for news reporting (Mainali, 2002).

The Nepalese media have been increasingly effective in exposing the negligence of decision-makers since the democratic system has been in place. In a book titled ‘Mass Media, Trust and Governance in Nepal’, Dev Raj Dahal (2002) highlighted the newspapers’ reporting patterns. He explained that Nepalese media reported widespread hunger in the remote districts of Humla-Jumla, which caused the death of 550 persons in 1998. At that time of major epidemics, journalists were pressing the government for an immediate intervention to address the affected people in the countryside.

Nepal is rich in community radio, but the role of community radio stations is not well identified in regard to disasters. However, Radio Sagarmatha, as the first south Asian community radio station, includes programming on social development themes, ranging from HIV/AIDS control and teaching English by radio to earthquake safety and disasters in general (Bhattarai & Ojha, 2010). This type of media responsibility has extended to other community radio stations in Nepal, which are run under the umbrella, guidance, and collaboration of Radio Sagarmatha.

Pradhan (2007), in a report published by the International Centre for Integrated Mountain Development (ICIMOD), highlighted that the media can play a positive role by informing people in disaster stricken areas, where portable radios may well be the only medium left in operation. In addition, the media can arouse public compassion to help, not only compatriots, but also people from other nations in times of disaster. A critical role for the media needs to be defined in preparedness for all phases of disasters, because the involvement of the media can help people learn what to do when disasters strike (Pradhan, 2007).

In the Nepalese context, disaster related issues have yet to be reflected strongly in the media. Sometimes news about a crisis is reported negatively, however, the media plays an important role in informing people about crises and they mitigate various rumours by providing accurate and credible information to the public (Gurung, 2011).

A survey study titled 'Journalism in Transition: Media, Information Flows and Conflict in Nepal' (Gurung, 2011) found that the media have both negative and positive impacts on the public. Often, the community does not go to the authorities directly, but tries to solve an issue by themselves, no matter how serious it is. If well managed, media can provide information relating to the crisis or disaster that has happened in the community (Gurung, 2011).

Furthermore, the increase in the use of social media has been significantly effective in disseminating information (Dixit, et al., 2002; Lang & Benbunan-Fich, 2010). In Nepal, social media’s role has gradually increased; however, traditional media, such as radio and newspapers, are generally people’s first choice.

The government and policymakers in Nepal may have not realised the role of media in keeping people well-informed during a disaster (Pradhan, 2007). The National Strategy for Disaster Risk Management (NSDRM, 2009) talks about the role of most stakeholders in disaster risk reduction. However, the role of the media has not been specifically mentioned in the NSDRM document. This document is a ‘road map’ that provides long-term guidance in the area of disaster risk management planning and implementation in Nepal.

The need for and importance of private or community sectors’ involvement in collaboration on large, social issues, such as disasters, epidemics, and environmental problems, is a must. Corporate, social responsibilities of the media houses and media professionals have been a major challenge for disaster risk reduction in Nepal. However, there are opportunities as well (Karki, 2002). The most important challenge is to address the lack of public awareness, and the inability to demand corporate social responsibility initiatives from enterprises such as media outlets or agencies.

3. Theoretical Understanding of Media Messaging in Disasters

Theoretical understanding of the development of the press and social responsibilities of the modern media outlets to the public contribute to an understanding of the operational policies of the media in regard to the management of disasters. This approach is more practice oriented and includes its own self-regulatory arrangements that accord with its responsibility to the public (Siebert, Peterson, & Schramm, 2000). In a review of the evolution of agenda setting theory using studies from 1972 to 2004, McCombs points out three dimensions of media agenda setting as attention, prominence and valence (McCombs, 2005).
On the other hand the concept of media framing helps audiences understand, interpret the issues, events and stories. Framing also involves selecting and highlighting features of events or issues and making connections between them for the purpose of promoting a particular interpretation, evaluation and solution (R.M Entman, 1993; R.M. Entman, 2003,p.417). That is, journalists filter the information and disseminate it to the public in a way which is intended to create a certain meaning (Lowery & DeFleur, 1995,p.327). Framing promotes problem definition, causal interpretation, moral evaluation, and treatment recommendations for the item described (R.M Entman, 1993,p.52; R.M. Entman, 2003).

In this review, framing theory is understood as a second level agenda setting theory. McCombs in a recent study has suggested that in the language of the second level of agenda setting, “framing is the selection of thematically related attributes for inclusion on the media agenda when a particular object is discussed” (McCombs, 2005). As media content often relies on framing of the story, framing theory is an important approach to understanding the content identified from the media reporting and therefore is an important theoretical base for the research relating to media engagement in disaster risk reduction. Framing theory is an appropriate and relevant paradigm by which the studies of media contents are conducted. Similarly, prevention, preparedness, response, recovery (PPRR), “the comprehensive approach” is another fundamental concept of disaster and emergency management promoted in Australia and elsewhere (Cronstdedt, 2002). Media frames used in the Nepalese media subject to test the compatibility with PPRR cycle.

4. Discussion

This review identifies gaps in knowledge and progress towards the implementation of the Post Hyogo framework of Action (2005-2015) in Nepal. In light of the significant impact of disasters in the past, the lack of substantive action and effective operation of the media in disasters concerning. Nepal has identified three priority areas including building community resilience, sustainable development and climate change induced disaster risk reduction. However the role of the media as a supporting agency has been mentioned without identifying any particular framework of media engagement during disasters. The first priority identifies the lists of stakeholders identified but the actions required include very limited responsibility of the media.

Within their respective mandate and scope, organizations including the Disaster Management Division of MoHA, and the National Emergency Operation Centre (NEOC) shall work as support agencies in disaster response management (NDRF/MOHA, 2013). At present, the list of supporting agencies includes media bodies such as the Press Council, Federation of Nepalese Journalists (FNJ), Nepal television (NTV), Radio Nepal, Telecommunications Authority and relevant professional groups.

The gap between policy and action lies in the ability of Nepal to act effectively and to incorporate an appropriate model or framework for media activities into the disaster risk reduction strategy. The Nepalese media is increasingly covering the news as it relates to current affairs, politics, business, technology and arts. Mostly disasters are reported under the current affairs beat (subject of reporting). In spite of the substantial occurrence of disasters, the media in Nepal has a limited focus on disasters in electronic, online or print outlets. It means there has been little public and agency attention to, or discussion of, the disaster risk reduction strategy and improved operations by the media throughout the phases of PPRR cycle.

Documents relating to the government priorities have highlighted mechanisms to improve communication which are already being put in place including the creation of a new MOHA portal on DRM. However, the major challenge lies in further strengthening traditional and new media to undertake systematic work supported by the National Risk Reduction Consortium (NRRC) cross-Flagship communications group. The responsible and supporting agencies need to be responsible to the targeted communities (UNISDR, 2013a). Hence the focus is on enhancing media engagement in disaster risk management and for the responsible agencies including media to be held accountable to the communities.

Disasters have a significant impact in Nepal because human, economic, environmental and social infrastructures are vulnerable. Effective management of disasters can reduce their impact on the health and wellbeing of the community (M.B.P Chhetri, 2003). Disaster management capability is still developing in Nepal and there is the opportunity to enhance media involvement in disaster risk management as well.

Given the limited literature relating to media involvement in disaster management in Nepal, this study aimed to improve disaster communication by describing the way in which the media shapes the news. The media needs to be proactive and pay more attention to all angles or frames when preparing and disseminating information (Poudel, et al., 2014). Government agencies working in disaster management in Nepal circulate limited informative messages in their own way through the mass media in order to make people aware of natural disasters. However the coverage is low and not effective, because of the alternate focus of the journalist who is responsible for other ‘beats’ (M. B.P Chhetri, 2003).

In Nepal, both electronic and print media houses are reporting disaster management news and information, but these efforts have not been well managed and have not optimised access to information during disasters (Chhetri, 2011; NSDRM, 2009; Pradhan, 2007). There is need for an appropriate policy and disaster management framework or model for news production to regulate the media sector in the event of disasters. A disaster-prone country like Nepal should seize this opportunity to bring the media into the national efforts for disaster management. The media should be focused on the emerging demand for more ‘enlightening’ and ‘helpful’ information so that disaster managers and experts will benefit by selling the message of disaster reduction as an opportunity.

On the basis of understanding media framing in DRR,
this paper addresses the implementation of the next phase of the Hyogo Framework for Action (HFA) in Nepal as it seeks to streamline the development of plans. However, media involvement in disseminating real time information is limited. It is important to develop a policy in collaboration with Telecommunication, Media and Journalists for effectively using the reach of media and telecommunication network for information collection, sharing and dissemination for the communities at risk (UNISDR, 2013b). These findings contribute to the actions taken by the Nepal government and the United Nations office for disaster risk reduction (UNISDR) to upgrade the DisInventar data collection system and improve information sharing and prominence.

‘Disaster through a Different Lens’ Leoni (2011), issued after the successful, preliminary consultative meeting of UNISDR held in Geneva in 2007, focused on the influence of mass media as being a powerful force in policy change: bridging the information gap between communities and governments. A recent meeting of the Joint Civil Society in Switzerland highlighted the strengths and shortcomings of the current HFA (HFA/UNISDR, 2014a, 2014b). The draft position paper submitted by the Co-Chairs of the Post HFA Preparatory Committee recommended to promote national strategies to strengthen public education and awareness, risk information and knowledge through campaigns, social media, community mobilization and other available means (Pre zero draft IDRC-GRF, 2014). The draft proposed to continue promoting the use, application and affordability of, and access to, information and communication. The draft report proposed to improve access to space-based technologies and remotely-sensed earth observations (Pre zero draft IDRC-GRF, 2014). It is important to recall these suggestions when developing a post-2015 DRR Framework (HFA/UNISDR, 2014a, 2014b).

5. Conclusion

Media play a vital role in educating the public about disasters, warning of hazards, gathering and transmitting information about affected areas, alerting government officials, relief organizations, and the public to specific needs, and facilitating discussions about disaster preparedness and response. Although the media and disaster mitigation organizations do not necessarily have similar aims, without compromising the independence and integrity of either, much can be done to communicate essential information to the public to save lives and properties. Therefore, disaster mitigation organizations should seek to provide reliable information to the media, as soon as possible, in a concise and readily understandable form, and linked, where possible, to newsworthy events.

There have been limited studies conducted to describe the current status of the coverage of natural disasters in Nepal. For example, the preliminary findings on the reporting of NTV suggests that the media need to be more effective in reporting disasters in a balanced way and disaster management programs and policies need to be focused mostly on ‘human interest’, ‘responsibility’ and ‘economic consequences’ related issues with balanced reporting throughout the phases of PPRR cycle (Poudel, et al., 2014).

Media organizations should be encouraged to evaluate their reporting about disasters and, where appropriate, to work with disaster management stakeholders to improve the quality, accuracy, and reliability of disaster reporting. This is a time for media to take an active role at local, national, regional and global levels contributing to increased public awareness and understanding, and disseminating risk, hazard and disaster information in a simple, easy-to-understand and accessible manner. It is also a time to adopt specific disaster risk reduction communication policies; support early warning systems and stimulate a culture of prevention and strong community involvement.

Disaster management organizations should seek to develop working relationships with the media based on mutual trust and the recognition of differing characteristics, goals, and needs. Media and disaster mitigation organizations should take advantage of opportunities to work together, to provide relevant training for reporters and field personnel, to enhance disaster preparedness, mitigation and relief efforts and ensure the timeliness, quality, and accuracy of reporting about disasters.

This study provides some initial lessons for government, community and media to help improve the framing of disaster messages. Significantly, the review of the available literature including government documents highlights the prominence that should be given to flood, landslides, lightning, earthquake and climate change related disasters in Nepal.

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