



3. Community Radio in Rural Crisis Communication: Investigating Information Flow During Natural Disasters and Health Emergencies

Deepali Verma

Assistant Professor, SSMFE, Sharda University, deepali.verma@sharda.ac.in

Dr. Sonali Srivastava

Assistant Professor, SSMFE, Sharda University, srsonali@gmail.com

Abstract

In rural areas, where access to mainstream media and communication infrastructure is often limited, community radio plays an important role in disseminating information during any crisis. This study examines the role of community radio in managing information flow during natural disasters and health emergencies, focusing on its effectiveness in the pre-disaster, disaster, and post-disaster phases. Using a mixed-methods approach, the research combines qualitative. The research includes case studies and a comprehensive analysis of the importance of the existing community disaster management system. The findings reveal that community radio plays an important role in raising awareness about risks, providing real-time updates during crises, and supporting recovery efforts through localized and culturally relevant messaging. However, challenges such as limited technical capacity, funding constraints, and lack of training for broadcasters hinder its full potential. The study concludes with recommendations for integrating community radio into national disaster management frameworks, enhancing technical capacities, and fostering sustainable funding models to strengthen its role in rural crisis communication. These insights underscore the importance of leveraging community radio as a resilient and inclusive medium for empowering rural communities during emergencies.

Keywords: Rural crisis, community radio, health emergencies, natural disaster

Introduction

When media and communication technology literate society has not reached the remote villages of developing countries, community radio is the only means to spread important information. Because it can be localized, culturally sensitive, and easy to access, it is a must-have tool to help the vulnerable during disasters and disease outbreaks (Namita, n.d.; UNDRR, n.d.). In contrast to most mass media, which are often characterized by a hierarchal flow of information, KCR empowers the provision and receipt of information from the grassroots since the listeners are also participants. Community radio acts as a disaster measure in four capacities: before, during, and after the disaster (Shaw et al., 2021). Concerning disaster response, from giving out early warnings



in different local languages to giving constant updates on evacuation and relief, community radio informs these hard-to-reach and disadvantaged communities (Panwar & Tarun, 2020). For example, in 2004, when the tsunami in the Indian Ocean struck the Tamil Nadu area, several community radio stations offered crucial help in sharing an evacuation warning and organizing the response efforts (Namita, n.d.). Likewise, in another cyclone-prone country like Bangladesh, these stations have helped the communities by sensitizing them on measures to take during a calamity and during cyclone-related disasters (Zone4Solutions, 2022). Nonetheless, considering its efficiency, the prospect of community radio is still undeveloped because of several problems. The funding is also scarce, and lack of technical facilities and no prior training develop the broadcaster to face emergencies effectively (The Daily Pioneer, 2022; Shaw, 2013). Furthermore, since it fails to be enshrined within the national focal points for disaster risk reduction, it has bounded relevance in a comparative context.

This paper aims to examine the operations of community radio in controlling information dissemination in crises in rural regions. Assimilating case examples and research data on using community radios for disaster risk reduction in countries like India, Nepal, and the Philippines has established the study's low-cost but effective role in constructing resilience. Fresh approaches to existing challenges in funding for sustainability and policy integration of community radio will improve its technical capacity to become critical in rural crisis communication (Panwar & Tarun, 2020; Shaw et al., 2021). The study also focusses the importance of understanding and enhancing the position of community radio in disaster risk reduction plans to ensure that nobody is forgotten in emergencies.

Many studies have highlighted the growing significance of community-based communication systems in strengthening disaster resilience. According to Kanjilal et al. (2025), community radio serves as an important platform for fostering resilience by enabling timely information dissemination, promoting local participation, and facilitating collective action during emergencies. Similarly, Ross et al. (2024) emphasize that effective disaster risk reduction depends not only on technological infrastructure but also on social learning and the transmission of local knowledge within communities. Community radio supports this process by creating opportunities for dialogue, knowledge sharing, and community engagement.

Research also suggests that communication plays a central role in enhancing community resilience during crises. Sun et al. (2024) found that hybrid communication networks combining local media and community participation significantly improve a community's capacity to respond to and recover from disasters. Likewise, Okeukwu-Ogbonnaya et al. (2024) note that resilient communities are characterized by strong communication systems that facilitate information exchange, trust-building, and coordinated action during emergencies.

Therefore, community radio should be viewed not merely as a medium of information dissemination but as an important institution for building social capital, community resilience, and



disaster preparedness, particularly among vulnerable populations (Kanjilal et al., 2025; Ross et al., 2024).

The Role of Community Radio in Crisis Management: Pre-Disaster Phase

During the pre-disaster phase, community radio is very useful in sensitizing rural and other vulnerable communities to impending natural disasters and health crises. Due to its location specificity, cultural relevance, and affordability, essential information gets to the uncovered populations. This phase involves prevention and control, and again, community radio is used to pass messages to the people and create consciousness (Zone4Solutions, 2022; UNDRR, n.d.).

Broadcasting Early Warnings

Local radio stations successfully broadcast early warning information suitable to local dialects and traditions. Unlike most conventional media, which may not reach the remote parts of the country because of poor physical infrastructure, community radio guarantees that such warnings go even to the last decimal point (Panwar & Tarun, 2020). For instance, in December 2004, when the tsunami hit, Tamil Nadu's Anna Community Radio gave all alerts and the kind of precautions to be taken by the people, and all chances of loss of lives were minimized. Likewise, cyclone-affected areas of Bangladesh, community radios have played a crucial role in disseminating weather information and evacuation directions in local languages. Community radio-based early warning systems are even more essential in areas with low literacy levels (Namita, n.d.). These stations make the information easily understandable for each population segment as it is presented in simple language and cultural terms. Besides, it also helps to save lives and create confidence in a particular community towards the broadcasters.

Disseminating Preparedness Information

Community radios are of immense importance, especially in disseminating information on how best to prepare for disasters. They aired shows on preparing for disasters regarding food supply, water, drugs, and even first aid. During disasters, these programs may contain advice from experts on preventing impacts, for example, preventing water from gaining access to houses or making buildings resistant to movements that cause earthquakes. For instance, in India the first season of monsoon is a common promotion of floods through community radios. Such features include guidance on how to select safe shelters, preparing contact information that might be useful in an emergency, and, especially important in rural households, precautions in safeguarding livestock. After the 2015 Gorkha earthquake in Nepal, programs produced and broadcasted by the community radios focused on raising people's awareness about how to construct secured houses to withstand earthquakes. Moreover, the paper showed that the former was more inclined to Annex D's action than the latter when a DL was assumed to represent a regular audience member.

Public Awareness Campaigns

One of the pre-disaster roles of community radio is to create disaster awareness, that is, to inform people of the available information regarding disasters. Using talk shows, drama, and call-ins, these stations sensitize communities on possible risks and ways of averting them (Shaw et al.,



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2021). That way, the community radios are accredited and more effective because the respective campaigns involved leaders and experts within the community (Zone4Solutions, 2022). For instance, FM YY, Kobe Japan, started after the Great Hanshin Awaji Earthquake in Kobe, Japan, is an example that shows how community radio can be used to extend information and knowledge on disaster risk reduction (DRR). Besides, it conducts frequent public awareness programs for different segments of the public. Likewise, during the UTTRAKHAND FLOODS in 2013, at Mandakini Ki Awaaz, the radio team constantly tried to educate the public about the landslides and precautions needed while living in that area.

Organizing Emergency Drills

Community radios also help put into practice safety concerns by preparing community safety drills. This involves modeling possible disasters, for example, an earthquake or a cyclone, and teaches those involved how to handle such situations. In this way, community radios maintain that many people participate and get an education during such instructions broadcast during drills. Community radios supported emergency drills that have reduced response timings in the Cuddalore district of Tamil Nadu. These drills may involve the presentation of first aid measures and evacuation precautions. Such initiatives equip given individuals or a group of individuals and build up the community or social capital in situations where such disasters are hitherto experienced.

Localized Communication for Inclusivity

Another advantage of community radio is that it can easily broadcast in local languages or dialects, Unlike the commercial ones, which have standardized formats of programs to air. It embraces everyone in preparedness, meaning that communities of concern like women, children, the elderly, and people with disabilities are also included. For instance, since the COVID-19 outbreak, all community radios across India relayed health messages that encouraged protective measures such as mask-wearing and social distancing in local languages. It also enhances and eradicates myths or misconceptions, which tend to go around during calamities. The community radios instill confidence in the listeners when passing information from accredited sources.

During Disaster Phase: Real-Time Response

Community radio stations are very useful during the disaster phase since they give real-time information on the event and serve as a courtesy to the communities concerned. During emergencies, other forms of media are affected due to power failure or destruction of telecommunication infrastructures. However, community radios can operate using battery-powered transmitters and localized structures. Since they can communicate in regional languages and accents, vital information gets to even the minority during catastrophes. Another important area where community radios have been most useful during disasters is providing real-time information on disaster effects, emergency exits, and relief measures. For example, as the disaster that struck Japan in 2011, an earthquake followed by a tsunami, FM YY, which is a community radio set up after the Great Hansin-Awaji Earthquake of 1995, played an important role in



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informing the affected people about the locations of shelters, food supplies and availability of medical assistance. FM YY worked with the local authorities and the relief agencies to ensure that the affected residents received the correct information at the right time, bearing in mind that communication was disrupted. There is also the benefit of direct logistical support and indirect support, such as providing psychosocial services invariably through disseminating reassuring and relevant information. This reduces panic and offers comfort to populations that are in distress. For instance, with floods looming large in the North Eastern state of Assam, Radio Brahmaputra has programs with leaders and counselors, and the latter reassure and guide the listeners. To name but a few, suicide prevention hotline services not only help with eradicating anxiety but also build the unity of those who have become victims of such disasters. On their part, community radios are always between relief agencies and the people during disasters. They engage in two-way communication by getting first-hand information from residents using the call-in program or the field reporters. The highlighted rolls this information to relief organizations in order to give priority to the delivery of aid. In the Kerala floods in India (2018), listeners, through community radios, raised the alarm and directed emergency rescues to areas where people needed to be picked up. At this grassroots level of coordination, this improved the relief work's effectiveness.

Post-Disaster Phase: Recovery and Rehabilitation

In most cases, especially after a disaster, community radios are vital in rehabilitation. Performance in this phase may entail continued engagement to deal with chronic needs, including infrastructure repairs, income-generating sources, and psychological support. Concerning the role of community radios, major tasks include giving regular information to the public on relief distribution logistics, Wash, and relevant reconstruction activities. For instance, during the floods in Bihar- India, the community radios gave details on how beneficiaries could get cash bails or food hampers from government-aided programs. They also broadcasted directions on how to be clean in order to avoid getting sick in flood-hit regions. Finally the important part is guidance after the tragedy by culturally competent programming. The community radios involve or consult psychologists or sociologists to prepare programs that deal with mental health issues that anybody displaced by a disaster may face. For example, Programs aired by Anna Community Radio after the 2004 Indian Ocean tsunami contained survivor stories and expert advice on mourning. These broadcasts show people how to grieve while at the same time promoting hope and strength. Community radios also play a role in creating awareness of available recovery strategies through public participation in discussions. It allows the communities to organize call-ins and panel discussions with local leaders, where they will also be sharing further experiences and lessons learned from the disaster. These recovery processes enable the residents to be involved and ensure that the exercises are made to meet the residents' needs.

Case Studies Highlighting the Impact of Community Radio on Disaster Preparedness

In this respect, CR has been established as a revolutionary instrument in disaster awareness and mitigation, especially among deprived communities that have no access to normal means of



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communication. Anna Community Radio in India, Radio Brahmaputra in Assam, and FM YY in Japan are discussed below to explain how stations have supported disaster risk reduction, response, and recovery processes.

Anna Community Radio (India)

In the 2004 Indian Ocean tsunami, one of the worst disasters, the Anna Community Radio, based in Chennai, India, was a major event. When it started as the first community radio station in India, it illustrated the potential of local communications in crises. This station gave adequate alerts about the approaching tsunami and distributed important information and instructions on the applicable escape routes and measures. Such an approach eased panic and served to save lives. When the Tsunami hit the coast, Anna Community Radio was established as a central point for rescue and reconstruction. They informed the public about the places offering relief, the available services, and measures to avoid spreading diseases. In the same manner, many survivors found solace in the fact that they could air their complaints, and an environment and a sense of togetherness were created. A valuable particular about the station was that it used local languages, which ensured that messages received a raw ear from affected vulnerable groups. Considering the role of media, especially radio was to support and facilitate immediate disaster relief, the propagation of Anna Community Radio was not only limited to the immediate aftermath of the calamity. Special emphasis was placed on mainstreaming community radio into national disaster management systems. Realizing this, the Ministry of Information and Broadcasting extended the support of similar projects in other coastal areas to improve disaster management.

Radio Brahmaputra (Assam)

Radio Brahmaputra: Based in Dibrugarh, Assam experiences yearly floods. They have feared tackling the numerous issues occasioned by instances of natural disasters. It serves women, tea garden workers, indigenous people, and others through broadcasting in many local languages like Assamese, Bhojpuri, Bodo, and Shadri. In promoting awareness among the communities, Radio Brahmaputra carries out awareness popularization campaigns prior to the occurrence of floods. It has an outreach in disseminating programs that cover flood-protective agriculture, safe water use, surviving structures during and after flood incidents, and safer houses from natural calamities. With the cooperation of UNICEF and other governmental organizations, the station also helps people who have reached her with information on health questions like protection from waterborne diseases during a flood. In flood situations, Radio Brahmaputra gives news in detail on the affected areas and the measures taken for relief and evacuation. Indeed, it uses call-ins to gather information from residents as well as helping in broadcasting the information to other groups and people to ensure coordination of the helping activities. For example, during the Left Party in Assam in 2019, the complex was significant in coordination with flood Relief Drives and arranging medical facilities for essential cases, chiefly pregnant women and children. Based on interviews conducted with radio station officials immediately after the event, the station plays a vital role in post-disaster rehabilitation by directing the survivors to the agencies that offer help and constantly informing



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them about further developments in the rehabilitation process. They have much enhanced community coping mechanisms response and brought into light the pipe-line of community radio in disaster risk communication.

FM YY (Japan)

FM YY started its operation in Kobe after the 1995 Great Hanshin Awaji earthquake as a temporary disaster radio but changed to a community radio station. It has a nob that cuts across disaster risk reduction and preparedness. FM YY is a good example of how community radio can be used to build up resistance to natural disasters, especially those involving earthquakes. The station has been reporting earthquake awareness programs specifically for the community. These are things like instructions on where to find emergency kits, evacuation drills, and measures that have been put on the structural plans of houses. FM YY also works with municipal authorities to spread early warning messages through media, including J-ALERT. In emergencies, the FM YY acts as an informative network during communication systems breakdown. For instance, it offered immediate updates during future earthquakes and typhoons in Japan. Due to its delivery to the immigrant community and the other communities in Kobe, it ensured that everyone gets a shot in disaster communication. FM YY has succeeded, and similar organizations have been started worldwide. Their incorporation into Japan's national disaster preparedness framework prompted this author to emphasize the value of community radio in creating strong and vibrant communities.

Challenges Faced by Community Radio

As a communication mechanism, community radio helps minority groups mainly during disasters of any form, including current health-related calamities. Nevertheless, the opportunities that community radio stations offer are hundreds of folds, but many challenges hinder them from delivering on their mandates (The Daily Pioneer, 2022). They include funding difficulties, technicalities, lack of training for the broadcasters, and policy extrapolation issues. That is why it is imperative to eliminate those above-mentioned obstacles to help the community radio organization reach its potential in disaster mitigation and other aspects of community development (Shaw, 2013).

1. Funding Constraints

The other major problem that affects the community radio stations is the problem of finance. Most stations are forced to rely on external support through donations, support from international NGOs or agencies, and slices from government budgets, if any. For instance, most community radios in India get funding from organizations such as UNESCO or the Media Development and Diversity Agency (MDDA). However, this funding is often inadequate to underwrite general overheads such as equipment maintenance payments, workers' salaries, and transmission costs. The financial difficulties are being compounded by limitations in revenue from advertising. Community radios in most countries mean that they cannot operate for profit making; hence, they can hardly get their main source of income from advertising. For example, in Tanzania, they are barred by regulations from using commonality radio to place advertisements for major commercial establishments, so



they depend on donations/charity or sponsorships. Such financial vulnerability results in breaks within the transmission of services or the shutdown of stations.

Kanjilal et al. (2025) observe that financial sustainability remains one of the primary obstacles affecting the long-term viability of community radio stations, particularly in rural and resource-constrained regions. Limited funding often restricts technological upgrades, staff development, and the expansion of outreach activities.

2. Technical Limitations

Several technical factors also work against community radio stations. The small scale and the limited financial resources of community radio stations compound many of the problems experienced. Most of the stations use old and unsuitable equipment to relay these signals, compromising the quality of the signal being transmitted. For instance, in areas affected by natural calamities where communication infrastructures are already affected, weak transmitters and small generators endanger broadcasts when they fail. Further, the exclusion of hi-tech facilities averts the potential of digital tools that would help extend the coverage of community radios. Although digital technologies represent the potential for content creation and involve the audience, many stations cannot afford new technologies or do not know about innovation incorporation into their work. For this reason, this technological gap hinders the ability of community radios to challenge or expand its media domain against the dominant media.

3. Broadcaster Training

Another important factor hindering the effective functioning of community radio stations is that the broadcasters have not gone through any professional training. Disaster communication is about correcting the message and getting that information out as quickly as possible, and many broadcasters are not trained in this. For instance, in case of a flood or an earthquake, the broadcasters have to be able to give early warnings, tell how the public can evacuate, or be ready to answer any questions that may be asked without eliciting fear in the people. These have led to training gaps in technical competencies required for running equipment or developing quality materials. Most CR staff in India's rural areas are unpaid, and many are inexperienced (Panwar & Tarun, 2020). This lack of capacity has weakened the capacity of stations to respond sufficiently during emergencies and challenges or credibility as sources of information.

Vandrevala et al. (2024) highlight that effective emergency communication requires trust, credibility, and continuous community engagement. Inadequate training, limited professional capacity, and insufficient institutional support can undermine the ability of community radio broadcasters to deliver accurate and timely information during crises. These challenges are compounded by technological limitations and unequal access to digital communication infrastructure, which reduce the overall effectiveness of community radio in disaster preparedness and response.

4. Policy Integration



This is because most community radio stations exist outside the framework of the national disaster management systems and thus have limited influence. However, even though scaled up technologies such as CRS play a key function in disaster preparedness and response, most governments do not accredit community radios as key players in DRR strategies (UNDRR, n.d.; Shaw et al., 2021). For instance, the Government of India enacted the Disaster Management Act of 2005, which focuses on community-based approaches in disaster management, yet there are no provisions developed for the use of community radios as part of the act's framework for implementation. Such a shift means that there is no institutional engagement, leading to lost chances in partnering between the community radios and government organizations in case of disasters.

Ruslanjari et al. (2024) emphasize that local communication systems are most effective when they are formally incorporated into disaster risk reduction policies and supported by government institutions. However, community radio stations in many developing countries continue to operate on the periphery of official disaster management structures.

Addressing these challenges through sustainable funding mechanisms, capacity-building initiatives, technological modernization, and stronger policy integration is essential for maximizing the contribution of community radio to disaster risk reduction and community resilience (Kanjilal et al., 2025; Vandrevale et al., 2024).

Addressing the Challenges

To overcome these challenges and enhance the effectiveness of community radio stations:

1. **Sustainable Funding Models:** Governments should revise regulations to allow community radios greater flexibility in generating revenue through local advertising or sponsorships. Partnerships with NGOs and private sector stakeholders can also provide financial stability.
2. **Technical Upgrades:** Investments in modern broadcasting equipment and digital technologies are essential for improving the quality and reliability of broadcasts. Donor agencies could support these efforts by providing grants for technological upgrades.
3. **Capacity Building:** Training programs should be developed to equip broadcasters with disaster communication techniques, content production, and technical operations skills. Collaborative initiatives with academic institutions or media organizations could facilitate this capacity-building process.
4. **Policy Inclusion:** Governments should formally integrate community radios into national disaster management frameworks by recognizing them as critical communication tools during crises. Simplifying licensing procedures and offering regulatory incentives would encourage more communities to establish stations.

Conclusion



While community radio has immense potential to empower marginalized communities and manage disasters, persistent challenges such as funding constraints, technical limitations, inadequate training, and weak policy integration undermine its effectiveness. Addressing these issues requires a coordinated effort involving governments, international organizations, NGOs, and local communities. By investing in sustainable funding models, modernizing infrastructure, building broadcaster capacity, and integrating community radios into disaster management policies, stakeholders can ensure that these vital communication platforms continue to thrive and serve as lifelines during emergencies.

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