Coastal Community Mobilization in the Aftermath of Man-made Disasters: A Case Study of Florida Gulf Coast Community Responses after the BP Deepwater Horizon Oil Spill in the USA

Angela B. Lindsey, Ph.D. and Muthusami Kumaran, Ph.D.
Department of Family, Youth & Community Sciences, University of Florida, USA

"There are no greater treasures than the highest human qualities such as compassion, courage and hope. Not even tragic accident or disaster can destroy such treasures of the heart."

- Daisaku Ikeda

Abstract

Coastal areas across the globe and people who live in them are vulnerable to a host of natural disasters including hurricanes, typhoons, and tsunamis. During the past several decades, coastal communities of the world have also been seriously affected by man-made disasters resulting in severe social, economic, and environmental damages. The 2010 Deepwater Horizon oil spill (DWH) was the worst man-made disaster for the Gulf coast communities of the US. Community residents and resource organizations in the Florida Gulf coast responded quickly to address social, economic, and environmental needs after this disaster. The purpose of this single case study is to determine these community responses. The research uses documents from community organizations and in-depth interviews with community leaders. Constant comparative analysis method was used to determine major and sub categories of community efforts. Results show that community efforts centered on collaboration, outreach, and grassroots mobilization for resiliency after the disaster.

Introduction

Coastal areas of the world are susceptible to weather and ocean related disasters such as hurricanes, typhoons and tsunamis. Climate change and its adverse effects have exacerbated the frequency and severity of these disasters on social, economic, and environmental wellbeing of coastal communities. Further, coastal communities across the world are increasingly affected by man-made disasters that have profound negative impacts on their livelihood and environment. Among the most serious man-made disasters in coastal communities are accidental petroleum oil spills that result in major damages to marine life and coastal environments. This article highlights coastal community mobilization and resilience in the aftermath of one such man-made disaster on Gulf of Mexico communities in the USA.

On 20 April 2010, the Deepwater Horizon (DWH) oil platform exploded off the coast of Louisiana in the USA, eventually spilling 4.9 million barrels of oil into the Gulf of Mexico. The oil reached more than 950 miles of Gulf Coast shoreline in states of Florida, Alabama, Mississippi, Louisiana, and Texas. This event has been called the worst environmental disaster to date in the US, and has surpassed the amount of oil spilled in U.S. waters by the Exxon Valdez in 1989.

Two days after the explosion, the platform sank to the bottom of the ocean, leaving a leaking well that poured oil into the Gulf of Mexico for 87 days. From the moment of the explosion, more than 47,000 responders (including the Coast Guard, BP officials, and government agencies) went into reaction mode in an effort to stop the oil (Austin & Laferrier, 2011). Meanwhile, surrounding Gulf communities watched nervously in hopes the oil would not affect individual communities and economies.

In the aftermath of the oil spill, more than 20,000 individuals were involved in the cleanup (Levy & Gopalakrishnan, 2010). However, the complexity of the issue reached beyond what was happening in the water alone. Many Gulf state communities were affected before oil showed up on the coastlines. Fishing and seafood harvesting from the affected coasts, which contribute to about $3 billion to the economy and provide one third of all seafood consumed in the US, were restricted even in areas that did not have oil on shore(Johnson, Clakins, & Fisk, 2012). Coastal communities impacted by the DWH oil spill were strongly tied to the Gulf for their livelihood.

The purpose of this paper is to examine a single case study in order to provide a more in-depth description of the response of Florida Gulf coastal communities following the DWH oil spill.

Research Methods

This study was a single-case design focusing on the DWH oil spill and the community response in Florida Gulf coast communities. The case study method was chosen due to the magnitude, complexity, and duration of the DWH oil spill. In addition, the case study method allowed for the researchers to look at different communities impacted as some communities had oil on their coasts while other did not have oil on their coast.

In order to identify and understand responses, community resource organizations (CROs) were used as the primary source of data. The involvement of many organizations at various levels provided an in-depth understanding of the efforts during the DWH oil spill. This understanding contributes to community resilience theory in response to man-made disasters. Several sources of primary and secondary data were used for this study. Primary data included in-depth interviews with community leaders in the Florida Gulf coast communities. Secondary data included documentation provided by community leaders in addition to documentation that was obtained from regional community meetings.

At each interview, the researcher asked for supporting documents to share for the purpose of the research. Of the nine participants, eight provided the researcher with documents related to the questions asked during the interview. Compilation of all the documents resulted in 26 supporting documents from eight of the community resource organizations that participated in the study. These materials included both internal and external documents.

Data was analyzed using the constant comparative method to draw categories or themes from the social science data. Data was combined to ensure triangulation and to minimize the risk of analyzing each data source independently. Once all data was collected and combined, the researcher continued the analysis by allowing categories to emerge from the data and a coding sheet was developed.

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DWH Oil Spill Impacts

Economically, the Gulf of Mexico fishing and recreational industries were greatly damaged, some perhaps beyond repair. "While wide-scale government efforts were in place to reduce the risk of seafood tainted with oil from getting to market, Gulf Coast seafood processors were adversely affected by the spill; they reportedly cancelled orders and restaurants then informed patrons that they do not use Gulf seafood" (Sylves & Comfort, 2012, p. 85). Tourism went down as tourists canceled plans to the Gulf and made plans for vacations in other areas. News media coverage of tar balls on the beaches and a scarred coastline greatly impacted a once thriving tourism industry (Mabus Report, 2010). A decline in both tourism and the commercial seafood industry from the spill added to already mounting problems in Gulf communities including a real estate crash and rising unemployment rate. Due to recent storms and natural disasters, the area was already in recovery mode when the DWH oil spill happened. "Florida, already weak from the real estate crash, is more vulnerable to the oil's effects than other Gulf states because of its lack of a state income tax and strong reliance on the multibillion tourism industry" (Miller, 2010, para. 7). In addition, Florida, with the largest coastline of the five states bordering the Gulf, was the most susceptible to severe ecosystem damage caused by the oil.

The economic and environmental impacts of the DWH oil spill were assumed and expected; however, the psychological impacts on the people of the Gulf Coast communities were perhaps not quite as anticipated. Grattan, Roberts, Mahan, McLaughlin, Otwell, and Morris, 2011 studied the early psychological impacts of the DWH oil spill on residents in fishing communities in Florida and Alabama. Their 2011 study found "that people living in a Gulf Coast community with indirect impact had elevated levels of anxiety and depression similar to those of people living in communities where oil reached their shores" (p. 842). Not surprisingly, those who "suffered income losses as a result of the spill reported significantly more tension/anxiety, depression, anger, fatigue, confusion, and overall mood disturbance than their income-stable counterparts" (p. 842).

Community Resource Organizations Involved in the DWH Oil Spill

Community resource organizations are often defined for the services they provide for local communities. Berkowits and Wadud (2012) discuss that these organizations will work to fill a need and/or gap within a community. After the initial response and cleanup continued, the role of nonprofits became more evident, as nonprofits stepped up to assist their communities to recover from the potential long-standing impacts of the disaster.

Handy, Seto, Wakaruk, Mersey, Mejia, and Copeland (2010) found in their research that "nonprofits are perceived as being more trustworthy than for profits or government organizations" (p. 878). Understanding that trust of nonprofit organizations is higher, it is fair to assume that during an environmental crisis, community members may be more apt to go to local, trusted nonprofit sources for their information.

In addition to a higher level of trust, several studies (Kapucu, 2006; Simo & Bies, 2007) have discussed the importance of partnership and collaboration among nonprofit organizations, for-profit organizations, and governmental agencies during a crisis. Kapucu (2006) discussed that "effective response and recovery operations require partnership and trust between government agencies at all levels and between the public and nonprofit sector agencies" (p. 217). The article went

on to discuss that responding to a crisis involves all stakeholders in a community and cannot be left to governmental agencies alone (Kapucu, 2006). Therefore, the role of nonprofits in a crisis situation is crucial in all aspects including first response, dissemination of information, and cleanup.

Many organizations were heavily involved in the different aspects of the DWH oil spill. Within the Florida Panhandle, community organizations were working to address immediate problems, but also working to lessen future financial burdens of community members. Examples of community organizations included Florida Extension offices, state governmental agencies, faith-based nonprofit organizations, local affiliates of nationwide nonprofit organizations, umbrella disaster preparedness/ response organizations, and local environmental groups.

Results

Collaboration:

Consistently, data showed elements of collaboration used by CROs to respond to DWH oil spill including combining services and resources. Working together to meet the goals of the organizations and the community was a common thread within the data. One interviewee said, "we were collaborating before the spill and will continue to collaborate" (Interview 8, personal communication, August 15, 2012).

Echoing that statement, one regional community meeting participant said, "The nonprofits united to help communities. We sat together as a community to look at addressing the challenges and the issues" (Regional community meeting, personal communication, April 26, 20102). Strength in unity, including not only nonprofit organizations, but also nonprofit organizations coupled with agencies, was used to describe strengths during the DWH oil spill (Field notes, April 2012).

Collaboration of different organizations including other agencies and government officials was discussed in regards to the immediate response to the DWH oil spill. The following selected excerpts from in-depth interviews highlight the community collaborative attempts after the disaster:

We co-convened a group of the leaders of social services [in our area]. All of the major parts of the social service system that sort of hold the system up. We convened pretty soon after [the DWH oil spill]. We co-created strategies in all of those areas to deal with service issues and with communication. (Interview 2, personal communication, August 17, 2012).

We started having meetings. Then we had the first meeting of what we called [emergency management team]. This was the first meeting that you would see under a traditional disaster recovery effort to say perhaps these partners - we need to coordinate how we're going to respond to this. (Interview 5, personal communication, August 15, 2012)

Within many of these groups that banded together for response and recovery, pre-determined roles for marketing/communication were defined. For instance, one document from a collaborative group stated that the role of the marketing and communications was to develop messages that not only kept communities informed but worked to ease fears and contribute to community resiliency.

Of the organizations that came together for immediate response, many had not worked together in past, but their work in response to DWH oil spill was encouraging for future collaborations. Several organizations relied on the collaborations with their community partners to communicate about the services they provided to the community.

A great deal of planning went into determining venues for distributing fact sheets and getting information out to the stakeholders once the oil well was capped.

Community leaders spoke of reaching out and collaborating personally with other organizations. "I am in the community almost every day at some kind of meeting and updating them not only on what the topic is but what's going on at our [organization]. So they know" (Interview 8, personal communication, August 15, 2012).

Collaboration beyond county lines was also discussed as a great tool for disseminating information and learning from other areas. "We have [partners] in seven counties and the most remarkable thing is that they are now supporting each other. There's movement toward kind of a regional response capability" (Interview 2, personal communication, August 17, 2012).

Information Sharing:

In addition to collaborating to meet the needs of the community and communicating, CROs utilized disaster management software to understand what each organization was doing, to share resources and information. Each CRO in the region and across counties was encouraged to sign up. This software allowed for up-to-date communication and regular updates for users. It also provided reports, resources, and mapping technology. One organization stated of the system, "It was frankly never designed for this kind of instance, but it provided a vehicle for sharing of information" (Interview 4, personal communication, August, 17, 2012).

Others looked to meetings in other areas and with completely different organizations or agencies as an

opportunity to share information. "I went to every single meeting. I would go to meetings and show up and make sure that they get the information" (Interview 6, personal communication, August 16, 2012).

Utilization of Existing Networks:

In addition to forming new partnerships, data showed that existing networks were utilized. This was also true for groups that had come together to work on natural disasters in the area. In addition, one regional community meeting participant discussed the role of networks in meeting the needs of the community: "We improved our ties with the Division of Emergency Management and the Coast Guard. We developed new partnerships at the state and federal levels and also with universities and different organizations" (Regional Forum, personal communication, April 26, 2012).

Working together and establishing trust with organizations was mentioned as key in meeting goals for the recovery following the DWH oil spill. In addition, improved relationships and strengthening ties also benefited many of the organizations. Many interviewees mentioned that networks had already been established because of work on previous disasters in the Florida Gulf coast. These networks made the process of obtaining and sharing information much easier. "Communication [on a local level], including the grassroots individuals in the community as well as the organizations in the community, like local churches was good because everyone was out there working day to day" (Regional Forum, personal communication, April 26, 2012).

However, some argued that although some networks already existed, they often did not include smaller organizations within a larger community. "That's probably our biggest challenge, is a communications network that is effective to all sub-committees within our larger community" (Regional Forum, personal communication, April 26, 2012).

Crisis/Issues Management:

The first step for many of the organizations was to gather information from other areas and other organizations that had been through similar disasters. Their hope was to learn from the experience and to gain insight on next steps. Organizations also sought the counsel of leading researchers in disaster management for assistance in response and recovery to the DWH oil spill. Although some interviewees mentioned that emergency plans that they had in place did not apply to the DWH oil spill, others stated that they were able to apply some of their plans to the situation. Some commented that they felt their efforts after the DWH oil spill was to make it up as they went along and would be a road map for future similar disasters.

Several references to Emergency Operation Centers' public information officer indicated that organizations had crisis communication plans and were trying to follow them to the best of their ability. "We collaborated with the public information officer in [specific] County. We communicated pretty broadly to the public, including our own partner organizations" (Interview 4, personal communication, August 17, 2012).

Other communication steps included sending out press releases, holding teleconferences and keeping in contact with other organizations (Interview 7, personal communication, August 17, 2012).

As part of an effort to communicate with their stakeholders, several organizations set up hotlines to verify and take in new information. "[Verifying information] became part of the issue that's just keeping the reliable information out there, encouraging people to call the hotline and don't announce. I mean wait for verification" (Interview 1, personal communication, August 14, 2012). Others took several steps to insure that stakeholders could reach them and provide feedback. "We really, really take communication seriously, very seriously. We never want to be accused of not communicating or not getting the message out" (Interview 7, personal communication, August 17, 2012).

Developing messages that resonate with their publics was a strategic effort that several organizations utilized to overcome barriers. In order to overcome the barrier to not having accurate information to share with their stakeholders, some organizations worked independently to research information and develop messages.

Others spoke about developing messages in the future. "We had to talk about making the message simpler so that everybody can understand the message and also making it relative" (Regional Forum, personal communication, April 26, 2012). Other messaging concerns focused on communicating accurate information. "Translating the research into practice as in putting it in a context 'what does this mean'. You know, in a way people are going to use it" (Regional Forum, personal communication, April 26, 2012). Others spoke on accurate messages. "To improve how accurate the information we are communicating is. It's not just a matter of improving the communication channels and the levels of trust, but also that information we are communicating is clear and relevant" (Regional Forum, personal communication, April 26, 2012).

Public/community Relation:

Many of the organizations spoke of public relations efforts they used to communicate with their stakeholders and overcome communication barriers.

Although news media was considered a very large barrier for many, several of the organizations spoke about their strong relationships with local news media as strength in helping to reach their stakeholders. "I think the [local media] did a reasonable job. Especially our local newspaper, I mean they didn't want to give anyone more anxiety than they already had. They would print what they were given from the PIO" (Interview 1, personal communication, August 14, 2012).

In regards to media relations, discussion of media training and learning how to work more effectively with the news media was a common solution to overcoming barriers. "We need to try to get ahead of the news. To try to get ahead of what's being reported by them" (Regional Forum, personal communication, April 26, 2012). Other thoughts included, "I think it's more than just the scientist [learning to work with the media], but also the organizations need to have people and staff who work on social media websites and working with the TV stations and newspapers" (Regional Forum, personal communication, April 26, 2012).

In addition, existing communication efforts through community news letters were increased after the DWH oil spill or were improved to focus more on the impacts of the DWH oil spill. Other participants focused on sharing information through the Web. "We set up a website and our page on our website, and as our results came in we posted them" (Interview 6, personal communication, August 16, 2012).

As shown, some organizations added to their current communication efforts during this time; however, several indicated that a lot of their communication with stakeholders was done one-on-one over the phone. "Just being within the structure and responding to general questions about it. I was to talking to more and more people at [after the DWH oil spill]," (Interview 3, personal communication, August 20, 2012).

Community Mobilization

Several organizations came together and utilized existing volunteer programs to reach out to the community. The volunteers were trained and then were sent out into the community to help clean up the beaches, provide information and essentially just talk to community members. This group also passed out surveys to gauge the community and their needs for these organizations. In improving communication with their audiences, some CROs tried to understand what their communities were going through. "Listening is the first step to communication. If you have a way to get to the people and you build community, you'll have a lot

better communication" (Regional Forum, personal communication, April 26, 2012). Other organizations went a step further and developed informal research surveys that assessed the needs and psychological effects of their stakeholders. "It wasn't random sampling, but it allowed people to voice their fears and their thoughts and what not and a lot of people were a little irritated about information" (Interview 7, personal communication, August 17, 2012).

Using the information gathered from their independent research, organizations spoke of developing programs that allowed their stakeholders to provide them with feedback and information. They were able to tailor their communication efforts based on the feedback they received. "We also knew what the citizens want. That's one thing we did have. We had good communications with citizens. They were sending in their ideas, their requests. That's kinda what we could do at the local level" (Interview 7, personal communication, August 17, 2012).

CROs that had a member base of smaller organizations, spoke of the importance of being out in the community and talking to members. "The important thing here is just to get out and talk to folks, visit them. They will be so appreciative that someone has come to visit with them and just talk to them" (Interview 1, personal communication, August 14, 2012). Some developed peer-to-peer programs to reach unique audiences.

Several of the organizations took initiative and quickly developed programs that put people in their target publics into action. As a result, community members felt a great need to do something they can to address local issues. They were looking to CROs to fulfill this need. Some organizations were out in the community personally distributing information and talking with people on the beach. Organizations also reached out to the community through community events and fairs. This allowed them to talk one-on-one with community and provide them with information regarding their services. One organization hosted a forum regarding the DWH oil spill. The forum consisted of both scientific and health experts and the public was invited.

Conclusion

The CROs involved in this study utilized several efforts to meet the needs of their communities following the DWH oil spill. Collaboration and grassroots tactics were perhaps the two most significant categories in the data. Collaborative efforts of CROs are in line with Kapucu's (2006) discussion of collaboration efforts during crisis situations. Many of these groups collaborated

because of their past experience and trust in one another. However, some had never collaborated before, but came together because of the uniqueness of the situation. Several organizations suggested that this new collaboration was a positive step for working together in the future.

Gajda (2004) discussed that organizations often collaborated to combine resources. The collaborative groups formed during DWH oil spill worked together to fulfill needs within the community and partnered for communication purposes. In fact, several CROs only communicated through partner organizations to disseminate messages out to the communities. They also utilized these channels to correct inaccurate information and to send out correct messages.

Similar to the collaborative efforts practiced by these organizations, CROs developed programs that targeted two-way symmetrical communication. Grunig (1992) explained that two-way symmetrical communication strives to understand and communicate to publics. CROs understood the importance of working in the community and communicating messages face to face. Therefore, they empowered volunteers to talk with tourists and residents on the beaches, and they provided public forums, set-up booths at local fairs and festivals, and developed outreach materials. CROs made it a priority to be out in the communities they serve. Along the same lines, they worked to understand and listen to their stakeholders and learn of their needs and concerns. Developing two-way communication efforts allowed for them to determine the inaccurate messages and to provide accurate information face-to-face. This tactic was used to overcome several barriers including unable to control information and the amount of inaccurate information.

The data also indicated that CROs performed independent research in order to learn of the needs of their community. Upon learning of the spill, many organizations researched other areas such as California and areas impacted by the Exxon Valdez spill and other organizations that had been through similar disasters. From these organizations, they learned what to expect, as well as best management practices. In addition, several organizations did independent surveys of their communities to determine needs and psychological effects.

Future research should include discussing resiliency following man-made versus natural disasters. Literature supports the statement that communities come together after a natural disaster, but less so after a man-made disaster. Results of this research show that although this was a man-made disaster, CROs did come together to pull resources and assist with recovery efforts. Given this information, more research needs to be done on how CROs react to man-made disasters versus natural disasters, and how their efforts differ in bringing affected communities and their members together.

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