Natural Disaster Management in Haiti

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Introduction

Earthquakes are one of the most frightening and devastating natural disasters that a person can experience. They occur in several areas all around the globe and strike without any prior warning. The effects of earthquakes can be life-threatening and destructive, and they also affect the infrastructure and economy of a country. Earthquakes can bring critical fatalities and damage in populated regions. Several other natural hazards are also caused by earthquakes, which may be equally and at times more destructive, like volcanic eruptions, landslides, tsunamis, or floods (Bilham, 2010). There are a number of reasons behind earthquake strikes, and most of them depend on the topographical features of an area. However, in the past few years, there have been a lot of major strikes by earthquakes, and one of the most evident reports was of the Haiti earthquake. Before the earthquake hit Haiti, it was ranked 145th of 169 countries on the United Nations Human Development Index. In January 2010, Haiti was hit by a massive earthquake, which was recorded at 7.0 Mw, and it brought intense damage to the area (Levy et al., 2010). It was marked as the most destructive and powerful earthquake in the past two hundred years. The earthquake did not only cause massive damage to the buildings and houses but also cost many human lives in Haiti. However, it also provided Haiti a chance to prepare itself for the future in order to deal with a deadly disaster like this and prevent such an extreme level of destruction.

Disaster Management

Haiti is a small country located near the peninsula of the Republic of the Dominican. To the residents of this country, January 12, 2010, was just another day, and people had no idea that their lives were just going to turn upside down in a matter of time. It was around 5 pm when the deadly earthquake hit Haiti. The earthquake was about 6.2 miles in depth and was almost 10 miles to the south of Haiti (Calais et al., 2010). The earthquake killed almost 316,000 and injured innumerable people.

Medicine Sans Frontier is a non-profit organization that has been a part of Haiti for over nineteen years now. It played a very significant role during the time when Haiti was left in a state of destruction after the earthquake. MSF had aimed to provide all the possible medicinal help that Haiti needed before and after the earthquake; therefore, it struggled to provide a wide range of medical services to the people of Haiti. The organization was developed to help the underprivileged people, who comprised half of the total population of Haiti, as they were not able to avail themselves of basic

medical facilities (Hayes et al., 2010). Those people were not even prepared to deal with such a high-scale natural disaster as an earthquake. Moreover, more than 60 percent of the already available medical facilities were destroyed during the earthquake. Most of the medical personnel and staff either lost their lives in the tragic event or left the country after the earthquake. At that time, a lot of extraordinary measures were required to be taken in order to provide as much help and assistance as the organization could to the Haitians (Farfel et al., 2011). MSF decided to relocate the medical camps and all the available facilities to safer places, especially where the maximum number of people could avail themselves of them and get easy access to them.

Haiti did not have enough financial resources to manage the critical situation as people had lost all or a major portion of their belongings, and the remaining resources were not enough to start the recovery process (Shultz et al., 2013). However, MSF was able to manage some key resources by getting financial aid from different states, and the response of the supporters and helpers was overwhelming at that time. The earthquake affected the whole Haitian population, left them in utter shock, and threatened their future (Voigt et al., 2011). Haiti is an underdeveloped nation with a high rate of unemployment and a low literacy rate; therefore, facing such a deadly natural hazard was a crucial challenge (Hough et al., 2010). This earthquake made many people homeless, and they were left with no choice and were forced to migrate to overpopulated areas. People had to live in unsanitary conditions, which further caused several medical issues and welcomed toxic diseases among the residents. The victims not only suffered physically, but a lot of these people went through post-traumatic stress disorder, which was another severe outcome of this natural disaster. This terrifying event triggered several cases of psychological disorders, which were reported in a majority of people and in different age groups.

The camp life and mishandling of refugees provided an opportunity for social malpractices as women were sexually assaulted in the refugee camps, and there was no one to justify or report these illegal acts, which accelerated the depression attacks, particularly in the women (Liu et al., 2011). According to a close calculation, about a quarter of the population suffered from these depressive mental aftershocks, which means that a long time span and expert treatments were required for their complete recovery.

Haiti already had a high poverty rate, and the earthquake added fuel to the fire. Already, there was an acute shortage of educational institutes in Haiti, and the earthquake destroyed those fewer existing organizations. However, the value of education in Haiti at that time can never be taken for granted because it played a really significant role in creating awareness among the people. According to experts' reports from the United States, this was the largest earthquake tragedy in the last 65 years (O. Eberhard et al., 2010). In order to help Haiti, the United States sent troops to control the current situation, and not only that, but it also provided food and shelter to the victims of the earthquake (Green Rebekah, 2010). The troops took extraordinary measures and developed and implemented strategies to bring stability and settlement after the disaster. Many people lost their loved ones, and families broke down due to several deaths and casualties; some even got lost in the hustle and bustle and could not be found later. These troops helped in locating these unidentified

bodies and provided shelter to the refugees.

Review of Main Causes

The fact cannot be denied that the prevention of earthquakes is impossible. There are no hard and fast rules to be followed to stop earthquakes, but extraordinary measures can be taken to minimize their disastrous effects and devastating situations. The researchers have identified certain reasons behind the occurrence of the highest level of destruction caused by the Haiti earthquake (Neis, Singler, and Zipf, 2018). Some of these are listed below.

- The two sides of the fault line moved past each other at a very suitable time, and most of it was around the boundary. That is why when one layer slid past another, there was a shaking of the earth, which was almost 10 meters deep. It was quite enough to cause this level of destruction in Haiti.
- Haiti's buildings were really old and had tended to crumble already, and it took a shake like the 2010 earthquake for the buildings to collapse to the ground, causing massive destruction. Every other earthquake is different from the other one, depending on the location of the occurrence (Singh, Waseem Mehdi, and Manish Sharma, 2010). The intensity of the earthquake was really high, as it was recorded at a magnitude of 7.0, and that makes sense regarding the huge devastation.
- With an earthquake that is so deep as in Haiti, there is a chance that the earthquake energy will change and go through the earth's crust before it is able to reach the surface of the earth. There is a possibility that in this situation, there was not that much shaking, but it was observed to cause more damage than expected.

Unfortunately, Haiti has a poor economy; therefore, it does not have enough supplies, the latest technologies, and strong foundations for the buildings in the country, which is why the damage was too much for Haiti to handle and manage the aftermath of the disaster. Due to the lack of environmental awareness and the non-availability of innovative machinery and tools to handle any natural disasters, Haiti was not able to manage this destructive situation (History Encyclopedia 2017).

Haiti could not manage the massive number of victims who were left famished and homeless with zero access to food resources and shelter. Haiti's government faced severe problems in providing basic facilities to the citizens, while the nation was absolutely not prepared for such a huge level of damage. Figure 1.1 shows the aftereffects of the Haiti earthquake even after three years. The 7.0 Mw earthquake that struck Haiti was of the same strength as the Loma Prieta earthquake that struck San Francisco during the 1989 World Series (Cavallo, Powell, and Becerra, 2010). However, Haiti's earthquake was closer to the surface as it was 6.2 miles below the surface and just 10 miles away from the capital of Port-au-Prince, and that's why its impact was much stronger and damaging.



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Figure 1.1 Haiti after three years of earthquake.

Resilience to the Future Events

In order to prevent such a devastating situation like the one after the earthquake of 2010, the country needs to take necessary precautionary measures, which can be helpful in case of a heavenly hazard in the future. Haiti did not have enough assistance and resources of its own, which is why it had to seek help from the United States in order to save the people at that time (Figure 1.2) (Goggins, Mascaro, and Mascaro, 2012). Los Angeles helped Haiti at the time of the earthquake and sent its best armed forces to rescue lives.

Haiti was overwhelmed by the burden of debt, so again, there lay a financial problem in maintaining its future prevention strategies (Margesson and Taft-Morales, 2010). The government managed to increase the clean water supply for the Haitian population and provided the shelters, which were constructed according to the instructions by the experts, which would help protect them against a collapse in case of any natural disaster in the future.

Moreover, they should be properly aware of environmental changes and how every citizen should play their part in future disasters (Bayard, 2010). They are working hard to increase the literacy rate in

Haiti, and therefore, the idea of being more supportive of one another should be promoted. Training the refugees and setting up medical camps has played a significant role in history, and Haiti should make further improvements in the provision of such mobile facilities (Yates and Paquette, 2011). The earthquake was not just a disaster; it was indeed a wake-up call for Haiti to realize that even before the earthquake, it was among the underdeveloped countries. Haitians who live abroad sent money more often than usual after the earthquake, which helped increase Haiti's GDP to almost five times that of earlier times.

After the earthquake, Haiti was able to work for its economy, as it was not stable even before the earthquake had hit this country.

Conclusion

January 2010 was the year that changed the lives of too many people in Haiti. The earthquake of 7.0 Mw magnitude changed the nation's vision and made them extraordinarily conscious of their future plans. After all these years, the people of Haiti are still trying to recover from the massive loss of 2010 (DesRoches et al., 2011). There are many organizations and fundraisers that are still working to make sure that the people of Haiti get all the basic needs that they deserve but lack because of the earthquake that took place a long time ago. The 2010 earthquake affected Haiti socially, economically, and financially and caused massive life threats to people who suffered from post-traumatic stress disorder. However, after a huge amount of suffering, the consequences were able to help Haiti realize the significance of a developed plan that should be implemented in order to avoid any future troubles in case of natural disasters. It would not be right to say that the citizens of Haiti are now well prepared for any natural disaster; however, they do know that they need to be better, work hard to maintain the economy and stay united if they are determined to fight against anything that can be a threat to them in the form of a natural disaster.

References

Science, Live, and Planet Earth. "The Devastating Haiti Earthquake: Questions and Answers." Live Science. N.p., 2017. Web. 31 July 2017.

Haiti | History, Geography, & Culture." Encyclopedia Britannica. N.p., 2017. Web. 30 June 2017.

BBC – KS3 Bitesize Geography – Plate Tectonics: Revision, Page 3." Bbc.co.uk. N.p., 2017. Web. 30 July 2017.

"Haiti – Earthquake (MDRHT008)." Human Rights Documents online, doi:10.1163/2210-7975_hrd-9813-2014059.

Green, Rebekah, and Scott Miles. "Social Impacts of the 12 January 2010 Haiti Earthquake."

Earthquake Spectra, vol. 27, no. S1, 2011, doi:10.1193/1.3637746.

“Launching a national surveillance system after an earthquake–Haiti, 2010.” Psyc EXTRA Dataset, doi:10.1037/e664712010-002.

“Supporting Education in Haiti: A Directory of Civil Society Organizations Working in the Education Sector in Haiti: Earthquake Recovery Update.” Psyc EXTRA Dataset, doi:10.1037/e541232012-001.

Lundahl, Mats. “After the Earthquake: What Future for Haiti?” Poverty in Haiti, 2011, pp. 227–271., doi:10.1057/9780230304932_13.

Bilham, R. (2010). Lessons from the Haiti earthquake. *Nature*, [online] 463(7283), pp. 878-879. Available at: https://www.nature.com/articles/463878a [Accessed 11 Mar. 2018].

Calais, E., Freed, A., Mattioli, G., Amelung, F., Jónsson, S., Jansma, P., Hong, S., Dixon, T., Prépetit, C. and Momplaisir, R. (2010). Transpressional rupture of an unmapped fault during the 2010 Haiti earthquake. *Nature Geoscience*, [online] 3(11), pp. 794-799. Available at: https://www.nature.com/articles/ngeo992 [Accessed 11 Mar. 2018].

Hayes, G., Briggs, R., Sladen, A., Fielding, E., Prentice, C., Hudnut, K., Mann, P., Taylor, F., Crone, A., Gold, R., Ito, T. and Simons, M. (2010). Complex rupture during the 12 January 2010 Haiti earthquake. *Nature Geoscience*, [online] 3(11), pp. 800-805. Available at: https://www.nature.com/articles/ngeo977 [Accessed 11 Mar. 2018].

Farfel, A., Assa, A., Amir, I., Bader, T., Bartal, C., Kreiss, Y. and Sagi, R. (2011). *Haiti earthquake 2010: a field hospital pediatric perspective*. [online] Available at: https://link.springer.com/article/10.1007%2Fs00431-011-1423-8#citeas [Accessed 11 Mar. 2018].

Hough, S., Altidor, J., Anglade, D., Given, D., Janvier, M., Maharrey, J., Meremonte, M., Mildor, B., Prepetit, C. and Yong, A. (2010). Localized damage caused by topographic amplification during the 2010 M 7.0 Haiti earthquake. *Nature Geoscience*, [online] 3(11), pp. 778-782. Available at: https://www.nature.com/articles/ngeo988 [Accessed 11 Mar. 2018].

Liu, J., Le, H., Chen, Y., Chen, C., Liu, L., Wan, W., Su, Y., Sun, Y., Lin, C. and Chen, M. (2011). Observations and simulations of seismo ionospheric GPS total electron content anomalies before the 12 January 2010M7 Haiti earthquake. *Journal of Geophysical Research: Space Physics*, 116(A4), p.n/a-n/a.

O. Eberhard, M., Baldridge, S., Marshall, J., Mooney, W. and J. Rix, G. (2010). *The M W 7.0 Haiti Earthquake of January 12, 2010: USGS/EERI Advance Reconnaissance Team Report*. [online] www.researchgate.net. Available at:

Neis, P., Singler, P. and Zipf, A. (2018). *Collaborative mapping and Emergency Routing for Disaster Logistics – Case studies from the Haiti earthquake and the UN portal for Afrika*. [online]

www.researchgate.net. Available at:

Cavallo, E., Powell, A. and Becerra, O. (2010). Estimating the Direct Economic Damages of the Earthquake in Haiti*. *The Economic Journal*, 120(546), pp.F298-F312.

Bayard, D. (2010). Haiti Earthquake Relief, Phase Two — Long-Term Needs and Local Resources. *New England Journal of Medicine*, 362(20), pp. 1858-1861.

Yates, D. and Paquette, S. (2011). Emergency knowledge management and social media technologies: A case study of the 2010 Haitian earthquake. *International Journal of Information Management*, 31(1), pp. 6-13.

DesRoches, R., Comerio, M., Eberhard, M., Mooney, W. and Rix, G. (2011). Overview of the 2010 Haiti Earthquake. *Earthquake Spectra*, 27(S1), pp.S1-S21.

Singh, R., Waseem Mehdi and Manish Sharma (2010). Complementary nature of surface and atmospheric parameters associated with Haiti earthquake of 12 January 2010. *Natural Hazards and Earth System Science*, 10(6), pp. 1299-1305.

Voigt, S., Schneiderhan, T., Twele, A., Gähler, M., Stein, E. and Mehl, H. (2011). Rapid Damage Assessment and Situation Mapping: Learning from the 2010 Haiti Earthquake. *Photogrammetric Engineering & Remote Sensing*, 77(9), pp. 923-931.

Levy, G., Blumberg, N., Kreiss, Y., Ash, N. and Merin, O. (2010). Application of information technology within a field hospital deployment following the January 2010 Haiti earthquake disaster. *Journal of the American Medical Informatics Association*, 17(6), pp. 626-630.

Shultz, J., Marcelin, L., Espinel, Z., Madanes, S., Allen, A. and Neria, Y. (2013). Haiti Earthquake 2010: Psychosocial Impacts. *Encyclopedia of Natural Hazards*, pp. 419-424.

Goggins, S., Mascaro, C. and Mascaro, S. (2012). Relief work after the 2010 Haiti earthquake. *Proceedings of the ACM 2012 conference on Computer Supported Cooperative Work – CSCW '12*.