Natural Disasters in Haiti

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ABSTRACT

Haiti is the most disaster-prone country and it is also the poorest country in the western hemisphere. Throughout history, the Republic of Haiti has experienced huge natural disaster our including earthquake, flood and Hurricane. Environmentalist says that Haiti is exposed to such disaster because it is located in between the Caribbean Sea nod the Atlantic Ocean. The warm air coming from theses ocean cause storm. The Republic is also located in the zone of the tectonic plates which makes it prone to the earthquake as well. The international community is helping Haiti to mitigate the effects and the occurrence of the natural disaster. The United nation is actively involved in managing the casualties of disasters in the country.

**Description of Haiti**

The Republic of Haiti is a country located in Central America between the Caribbean Sea and the North Atlantic Ocean. It is in the south of CUBA and in the west of the Dominican Republic. It makes the one-third of the Hispaniola Island. The land of Haiti is mountainous and it’s an Indian name for the country which means “the land of the mountains. The mountains in Haiti reach up to 8000 feet and the country is destroyed tremendously by 2008 tropical storm and later hot up a 7.0 earthquake (Bilham, 2010).

Haiti has been hit by numerous natural disaster throughout its history. Its strategic location is in the Caribbean makes it more prone to natural disasters.It comes in the tropical storm and hurricane territory. The global climate change has also a worse impact on Haiti. Since 1998 the country has been hit by almost ten hurricanes and various tropical storms causing huge casualties. The country has also been hit by a major earthquake in the year 2010 resulting in the massive loss of lives and property especially in the areas of Port-au-Prince. The different types of natural disaster along with the problem of social erosion in Haiti makes it the poorest country in the western world (Bilham, 2010).

Its estimated population is 10,788,440 and the country is also facing access rate of mortality due to AIDS that had lowered the life expectancy and increased the mortality rate. The population growth rate is 1.31% estimated in the year 2018 and its death rate of 7.5 dies per 1000 people. The fertility rate is 2.66 children born from each woman. The country has a very high risk of infectious diseases like Hepatitis E, Hepatitis A, and typhoid. Dengue fever is also very common in Haiti. Zikia virus is also been found among the locals and it possessed a threat to the people living in the neighboring countries as well (Cia.gov, 2019)

Haiti, Western hemisphere’s poorest country is always been at risk of natural disasters. The country is highly vulnerable to earthquake and tropical storms. Storms have killed livestock and arable land making the country dependent on foreign aids and imported foods. The country is also having political instabilities and due to that, the country is not recovering from poverty.

**Hazard Events**

**Earthquake:**

Haiti had experimented on many massive earthquakes and the 2010 earthquake was the worst in the world. Haiti was ravaged by an earthquake e of a 7.0 magnitude on 12 January 2010.

Cause of the earthquake is that HAITI is in the zone of tectonic plates and the conservative plate’s slippage occurred resulting in the massive earthquake. Thus the country was ravaged by an earthquake e of a 7.0 magnitude on 12 January 2010 and the local time was 16:53.the epic center of the earthquake was 25 km west of the capital city of Port-au-Prince and most of the people have services and business in that area (BBC Bitesize, 2019).

**Inventory Assets in the Areas Affected by an earthquake:**

The disaster killed 230, 00 people and 300,000 were severely injured. 1.3 million Of the local people were homeless and several numbers of hospitals were collapsed by the 2010 earthquake.

The earthquake 2010 had a huge impact on the economy of the country, resulting from the collapse of 30,000 commercial buildings, the main clothing industry of the country was damaged, port and airport damaged and all the local business were collapsed. Most of the effects of the earthquake were primary and immediate. Those were the injuries and death from the falling of huge buildings. The secondary effect of the hazard was the outbreak of cholera that happened many months later. The effect of this particular earthquake was bad because not all the buildings were not earthquake proof and those were built very poorly. Unluckily the epic centric of the earthquake was also near to the capital city and there were very fewer resources to rescue the injured people.

 The earthquake shrank the gross domestic product of Haiti by 5.1 percent. It completely damaged all the road and made it difficult to reach to the people and rescue them. As the earthquake epicenter was near to the capital city so it killed 25 percent of the government officials, 60 percent of government buildings, and 80 percent of the educational institutes. It increased the poverty of the country even more and 54 percent of the population lived in absolute poverty even before the earthquake (Ferris, 2010). The international aid received by Haiti to cope the consequences of this hazard is displayed in the [Appendix A.](#APPENDIX_A)

**Estimated losses:**

* The disaster killed 230, 00 people with overall damage of 7.8 billion dollars.
* 188,383 number of homes affected and 105, 000 homes completely destroyed.
* 4,992 schools were affected and 3,978 completely destroyed.
* 8 hospitals were completely destroyed and 22 were damaged (Cohen, 2011).

**Alternative Mitigation Actions**

Mitigations are the sustained action taken in order to eliminate the long-term effect of the hazard event. It also includes the preventive measures bore the occurrence of the disaster. The goal of this mitigation action is to decrease the number of causalities and losses. Mitigation actions should be environmentally friendly and should help to lessen down the economic and social losses caused by the hazard event. It should also lessen down the occurrence of the disaster in the first place (Baxter, 2013).

**Primary mitigation Actions:**

The country has taken any pre-earthquake measures and the deficiency of the public health facilities was lacking so the earthquake had huge medical impacts. The post-earthquake health measures were as before the earthquake only 50 percent of the population were vaccinated to prevent infectious diseases and after earthquake WHO has set a goal to make it 90 percent (Baxter, 2013). Immediately following were medical teams to treat the wounded. They worked with the rescue teams as amputation procedures were done in the field for victims with trapped or crushed limbs. It is estimated that there will be 200,000 Haitians that have lost at least one of their limbs from the earthquake (Baxter, 2013).

Medical teams throughout the world reached for the immediate rescue thousands of people and it is estimated that 200,000 people lost their limb due to this disaster. 1000 humanitarian organization including UN agencies provided relief programs in Haiti. (Baxter, 2013).

The medical supplies and emergency water were supplied by the neighboring republics. And those countries also provide heavy machinery for digging and rescuing people. Iceland provided the rescue team and the International Committee of the Red Cross provided temporary field. Hospitals. GIS provided satellite maps and images to assist the aid organizations. Haiti also received monetary funding throughout the world. Small farmers were reset and the school buildings were rebuilt.

**Secondary mitigation Actions:**

The United States incorporation with the United Nation helped to manage the after-effects of the earthquake. The government of the United States fixed social media technologies like the wikis for knowledge sharing. The US government used social media to cooperate response agencies like the U.S. State Department, U.S. Agency for International Development (USAID), and the armed force of the USA. Floating hospitals in ships were operated by the US Navy. The United Nation send 9000 troops to Haiti as a relief force. The US state Department controlled the diplomatic issues insider the country and managed the supplier of personals (Yates & Paquette, 2010).

**Hurricane:**

Hurricane is a tropical cyclone mostly with an intense blow of wind and particularly occurs in the Caribbean. The energy in the Hurricane comes from the warm water heated up by global warming (Gilbert, 2018).The hurricane seasons of the Atlantic Oceans are from June to November and this is the time when the tropical storms changed into huge hurricanes. That is what happened in Haiti on October 4, 2016, when a major Hurricane hit the shores of Haiti with a massive storm, 145 mph wind, and torrential rain. The Hurricane is named as Hurricane Matthew and it hit most of the Caribbean and the United States. It was the largest disaster in Haiti after the earthquake in 2010. It was a category 4 hurricane and the storm passed through the Tiburon peninsula and covering up the eastern coast completely. The wind blew with a speed of 230km/h and brought huge torrential rain (BBC News, 2019).

**Inventory Assets in the Areas Affected by Hurricane Matthew:**

Many numbers of people were killed as a result of this storm. The Hurricane destroyed the main road connecting the capital city with the southern coast. The damages were more in the areas near to the hurricane track. The wind tore out the cathedral of St. Louis King of France, dozens of businesses, sidewalks, downed power line, building, and trees. The community was isolated due to this storm and the urban areas especially Jérémie and Les Cayes were more affected. The market and other services were no longer available after the storms. The damage to water sources was huge and the agricultural sector was completely damaged causing food shortage in the region (Gilbert, 2018). The track of the Hurricane displayed in the picture given in [Appendix A.](Appendix-A)

**Estimated losses:**

* 877 people died
* 1.4 million People were in instant need of aid.
* 200,000 homes were ruined
* The economic loss of USD2.8 billion was experienced by Haiti (BBC News, 2019).

**Alternative Mitigation Actions**

The humanitarian organizations, donors and the local government responded to the damages made by the hurricane. The Global emergency response allowed a huge scale response to the targeted communities of La Gonâve and the Nippes (Gilbert, 2018).

The Haitian Red Cross Society revealed a help in the hygiene promotion and a need for humanitarian intervention in water, food and nonfood items, health and shelter. After the Hurricane Mathew Haiti lacked clean water and sanitation. The supply of water along with lifesaving aids were the emergency needs after the disaster. World Vision International-Haiti delivered water, hygiene kids and water treatment tabled to the people. An emergency appeal was launched by the IFRC to need assistance to support the affected population. (SMCC) Strengthening Movement Coordination and Cooperation signed an agreement with the ICRC and IFRC for the operation of the Hurricane Matthew. The agreement provided a join strategy and 28.2 million were donated by all the partners (Gilbert, 2018).

 The world showed a great response to the Hurricane and 551,473 humanitarian serving were seen and 246,154 beneficiaries were served in the most affected areas of Haiti. Sud, Nippes, and Grande-Anse. The resources from the emergency services, private funding, and the funding of humanitarian organizations were used to provide drinkable water and food. The emergency program was controlled by the World vision International structure operating in Haiti. The first response phase includes was to meet the needs of the Vulnerable groups including women and children. Food and drink item, shelter and medical aid was provided. These were provided by the help of the programs like food assistance and emergency relief programs (Hurricane Matthew Response One Year Report October 2016 – September 2017, 2017).

The second phase includes the updated response and strategies to the Hurricane Matthew which focused the long term recovery of the women and children. It also focused on building resilience in the locality. It also focused on empowering leaders, child protection organizations and local authority. The second phase focused on rehabilitation works in national as well as regional level by the help of UN agencies, NGOs and government authorities. (Hurricane Matthew Response One Year Report October 2016 – September 2017, 2017)

**Flood:**

Flood is the overflow of water in a huge about and Hattie has dry and barren lands so it experiences most of the flood. This island has been prone to flood from ages. Deforestation is very huge in Haiti so the country has the number of floods than other Caribbean countries.

In September 2004, the northern part of Haiti experienced a flood due to the Tropical Storm Jeanne, starting from the Central Plateau and flowed to Cap Haitian. The Hurricane Jeanne lasts shortly and the winds flow was 75 miles per hour and rainfall of 9.7 inches. It also spread towards the Eastern part of the country. The northern city of Gonaives was completely covered by the flood (Colindres, Jain, Bowen, Mintz, &Domond, 2007).

**Inventory Assets in the Areas Affected by Hurricane Matthew:**

The major area of Gonaives remained under water and 80 percent of its urban population was affected by the flood. Port-au-Prince and Fond Verettes were impacted by the flood and mudslides. Transportation through the land was not possible and the road between the Capital city of Port-au-Prince and Fond Verettes was cut off. The flood killed 2500 people and thousands of people were displayed (Colindres et al., 2007).

**Estimated losses:**

* 2500 people died
* 5000 families evacuated.
* 25,000 are in need of nonfood and food assistance (Smith & Hersey, 2008).

**Alternative Mitigation Actions:**

The International organization and communities lead by the United Nations response very quickly to manage the destruction caused by the flood. The United Nations Disaster Assessment and Coordination Team (UNDAC) went to Haiti to coordinate the activities of the donor. The national government along with NGOs, the IFRC and the Defense authorities involved in the relief effort. Food, water, and shelter were provided by these agencies. Multinational Interim Force (MIF) controlled the causalities and controlled the increase in the number of death (Smith & Hersey, 2008).

**Man-made Hazard in Haiti**

Haiti is experiencing an increasing rate of desertification as a result of that the country faced huge floods lately. Desertification is the degradation of land caused by the climatic issue as well as human activities. In Haiti desertification is caused by deforestation. Once the country was highly covered by forests and the number of the floods were very rare and now just 20 percent of the land is appropriate for agriculture (Williams, 2011).

Haiti is experiencing a very high level of environmental degradation which results in the number of disasters including flood. The desertification in Haiti is being controlled by the programs like USAID's Agroforestry Outreach Program, which is involved in forestation of the major areas of the country. The present Afforestation program in Haiti is funded by USAID and implemented by the Pan American Development Foundation (Williams, 2011).

**Conclusion**

Haiti is the poorest country in the Western Hemisphere because of its high population, corrupt government and lack of abilities to cope with the natural disasters. Haiti experience Hurricane, earthquake and flood due to its strategic location and the action of man kinds. The country experiences a huge loss of lives and property as a result of the 2010 earthquake, 2004 flood, and Hurricane Matthew. But the international community, humanitarian organizations, and NGOs along with the United Nations are trying their best to improve the socio-economic conditions.

[Appendix A](#APPENDIX_A)

Track position of Hurricane Matthew



Aid received by Haiti to cope the consequences of earthquake 2010



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