

Hidden Costs of Catastrophe: Socioeconomic Outcomes After Venezuela' Most Severe Landslide

Objective

This research study will investigate the modern day condition of La Guaira (formerly Vargas) after the 1999 landsliding disaster that claimed thousands. The results will be in the form of a content analysis of face to face interviews, with data collected from political, economic, and social lenses. The purpose of this study is to answer how have the people of La Guaira rebuilt since the tragedy? What scars remain in the socioeconomic atmosphere of the region?

Project Background and Significance

The 1999 Vargas tragedy was a natural disaster in northern Venezuela that caused the deaths of tens of thousands and millions of dollars of communities and homes (Larsen, 2001). The cause of the disaster was initiated by torrential downpour in the region. Cities and towns were mainly situated on alluvial fans and coastlines while being next to massive mountains. Excessive rain caused a displacement of soil which eventually led to the massive debris flow that affected the region (USGS, 2016). The scale of destruction is immeasurable and a true death count is not established, it is theorized to be in the 10,000-30,000 range. This tragedy brought to light vulnerabilities in land use, environmental policies, and disaster preparedness. Since then, the region has been healing, with local governments and communities reforming these vulnerabilities (Puente-Sotomayor, 2021). The region was renamed to La Guaira in 2019 and is experiencing some economic turnaround despite national and recovery challenges. However, worries of rapid settlement, deforestation, and unfinished projects contribute to an inconsistent long-term recovery. Taking a look at these factors through a social, economic, and political lens

in the modern-day would give insight into how the region is doing in terms of combating and recovering from these factors.

While analyzing different sources found on scholarly websites, it was found that there was a lack of research surrounding how the La Guaira region is in the mid 2020s. This is important because no research has been done in the past 10 years regarding the socioeconomic landscape. This study aims to fill the gap in research that has not updated the public and scientific community of how the region is doing. Therefore, the research question brought upon this study is, what socioeconomic challenges have yet to be resolved since the 1999 Vargas Landslide disaster. It is theorized that, based on prior news reports, that the region is healing, but there are still some issues that need to be addressed by local governments, particularly in where infrastructure is built (FEMA, n.d.). The general point of this is, that the situation is not over, and needs reexamination after taking into account the multitude of these different factors.

Research Methods

This study chooses to use interviews as its methodology. This is because this research project is situated around understanding different people and their lives (VT, 2023). The subjects of the interviews must be La Guaira residents, who have either witnessed the catastrophic event, or have felt its effects since. This topic is predicted to be sensitive among residents, so it is important to find an interviewee pool before-hand. All the questions are framed as open-ended response queries. In each interview, the individuals will be asked to state some of their experience with the tragedy, the effects of it, before transitioning to designed interview questions on different socioeconomic concepts.

The interview subjects will be interviewed with a sequence of twelve questions to address the climate of the Venezuelan state. Each interview will be recorded for transcript purposes with

pre-identified permission from the individuals. The timeframe for each interview will range, but it is aimed to get around 30 minutes to 1 hour of footage. Some bounds that must be considered in the interview process is the language barrier, a consistent way to reliably translate between both languages must be had in order to conduct this research. After the interviews are conducted, a reliable way to qualitatively analyze them is required. A content analysis and decision matrix curated from the pool of interviews would best solve this issue. From there, we can determine which strains are most felt among the population. Our sample size of individuals will be explored upon approval of this project. Because of the longer interviews, the method of “information power” for data collection will be able to be applied in this context (Malterud, 2016).

The timeline for the report is throughout a 6 month period. January 2026 will see the design of the interview questions, creation of a pool of interviewees, and frame of research report to be published in a journal of sociology. After completion of these tasks, a planning of the trip is next– vaccines, tickets, passports, and extra cash must be prepared for the trip. When all is ready, the trip will last one week during early March. This timeframe is important as to not overspend money, but to achieve our sample size. Upon returning, analysis of the data and conclusions will take the next several months before having the ability to be peer reviewed.

Expected Outcome

After the several months of planning, the trip itself, and the couple months of drawing conclusions, the final result will be a research peer-reviewed paper to be published in a scientific sociology journal. A poster for the viewing of undergraduate students and staff at UCF will be produced. The end effect that this project aims to have is education. It is aimed to have a proper update on the La Guaira region and how it is recovering from the 1999 Vargas tragedy. It is hoped that the interviewees will tell content full recounts and crucial data about modern-day life

in Venezuela. After the interviews and analysis of the study data and subsequent decision matrix, the study will validate or disprove the hypothesis that, when taking a look for factors of unstable regeneration through a social, economic, and political lens, it will likely be proven that the array of issues, such as national conditions, delayed projects, and unenforced regulations will likely wear on the population of La Guaira in some manner .

I think the UCF community can get a lot of use out of this, it is educative about the world. It would advocate for the reporting of news that is not in the news media/public's general eye. It is a little less of a known subject besides being a witness to it, knowing someone who was, or being from the region. The report is also a valid commentary on the dangerous effects of natural disasters, giving more insight on how immeasurable they are, and how their effects can go on for generations. The final product is intended to be an education piece for all of the above mentioned tasks targeting UCF students and faculty. For the purpose of the general sociology and economics field, taking a view into different cultures, finance issues have the benefit of learning from them. This research can be used as comparison for similar natural disaster events, as well as hopefully revealing patterns of regeneration for future review by other scholarly works.

Literature Review

Federal Emergency Management Agency (FEMA). (n.d.). Identifying locations of past

landslides: Examples of landslide mitigation through planning.

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Larsen, M. C. (2001, January 3). The Venezuela debris flow and flash flood disaster. U.S.

Geological Survey. <https://pubs.usgs.gov/fs/fs-0103-01/fs-0103-01.pdf>

Malterud, K., Siersma, V. D., & Guassora, A. D. (2016). Sample size in qualitative interview studies: Guided by information power. *Qualitative Health Research*, 26(13), 1753–1760.

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Puente-Sotomayor, F., Egas, A., & Teller, J. (2021). Land policies for landslide risk reduction in Andean cities. *Habitat International*, 107, 102298.

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Research Methods Guide: Interview research. (2023). Virginia Tech University Libraries.

<https://guides.lib.vt.edu/researchmethods/interviews>

U.S. Geological Survey. (2016). Debris-flow and flooding hazards caused by the December 1999 storm in coastal Venezuela, with a discussion of mitigation options. U.S. Geological Survey.

<https://pubs.usgs.gov/of/2001/ofr-01-0144/>

Preliminary Work and Experience

Before the idea of this project, I have previously worked with a Professor from the University of Washington to create a similar style interview survey. The study and research report was discussing a different part of South America: the Andean Mountains region. There, many other disasters have happened that have claimed thousands of lives, similar to Vargas. The study was conducted to find the most cost-effective technical solution for getting accurate data days before a landslide disaster event occurs. This way, officials will know ahead of time and hopefully get civilians out of the area. We found that infrasound would best suit the Andean region. Its capability to be away from the city, detecting multiple kinds of natural disasters, and cheap installation/maintenance proved to be the best choice. After the interviews, a qualitative matrix was formed to pick the best technology. After having experience with this previous project, my understanding of the research process will be beneficial for the interview phase, in

addition to the drafting of the final research paper to be submitted. Additional notes; the prospective faculty mentor with this project is Dr. Angela Vergara, with her experience in the sociology and humanities scope fit this project.

IRB Statement

This research study requires review of the IRB because of interview methodology within a politically tense region. It is important to register to maintain the confidentiality of individuals. An anonymous, consensual collection of data will be leveraged to sustain a commitment to the safety and privacy rights of human subjects.

Budget

\$664 - Roundtrip ticket to Simon Bolivar International Airport (CCS).

Through Spirit, a lower-cost travel airplane agency

\$525 - One week cheap car rental from Caracas

\$75/day through select dealers from airport

TOTAL AMOUNT REQUESTED: \$1,189

All other costs will be covered by saved money from a part-time job at an energy company for the past year.