Farzana Ahmed

This poster describes using Participatory Geographic Information Systems (PGIS) to create locally tailored datasets for better hazard planning and mitigation. The focus area is Southeast Texas, where communities on the U.S. Gulf Coast confront a variety of natural hazards and industrial threats. We focus on how PGIS might improve equity and minimize social vulnerability. The study dives into the issues that marginalized communities confront and compares the efficiency of PGIS as a technique for supporting the development of social vulnerability indices that represent community realities. We analyze the need to thoroughly understand social vulnerability, considering elements such as socioeconomic position, cultural features, and institutional qualities. We also examine claims that social vulnerability elements should be included in Geographic Information System (GIS) frameworks to improve hazard mapping accuracy. Furthermore, we discuss the obstacles and possibilities that come with using PGIS in disaster mitigation measures. Our study recognized that the absence of comprehensive meteorological and climate data is a significant barrier along with the complexity of working with various populations confronting multiple hazards. In addition, our poster describes the potential to use PGIS in community-led hazard mapping and management activities by including local populations in data collection and assessment. Lastly, we emphasize the need to understand vulnerability to develop more effective and inclusive disaster management plans. Overall, PGIS is a helpful technique for promoting informed decision-making, aiding hazard mitigation measures, and resolving resource inequities