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Resilience of Art Cities to Flood Risk

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Introduction

Natural disasters' consequences have been increasing in recent decades, and floods are one of the most common and harmful phenomena on the planet. Floods wreak havoc on cultural treasures, which are increasingly threatened by climate change. International disaster risk reduction frameworks look at the relationship between culture, risk reduction, and resilience in order to promote risk management and conserve cultural assets. Cultural legacy can be characterised as either tangible or intangible. The word cultural heritage shall now relate to tangible cultural heritage.

Communities and art cities' post-disaster resilience is largely dependent on cultural heritage. "The ability of a system, community, or society exposed to dangers to resist, absorb, accommodate, and recover from the impacts of a hazard," according to one definition of resilience. Quantitative flood resilience assessments are frequently based on indicators or simulations that evaluate system performance during or immediately after an occurrence, starting with flood models .Conceptual and theoretical frameworks, on the other hand, are more widely used and highlight difficulties in operationalizing resilience and urban areas to name a few instances, are frequently studied for resilience.

Machine learning approaches have recently been used to forecast climate resistance using socioeconomic factors Models that assess resilience in terms of medium to long-term recovery dynamics are uncommon in the literature, particularly in the context of CH. CH is a unique asset that makes modelling vulnerabilities, exposed values, and recovery costs in a "standard “risk assessment approach difficult. The physical aspects of heritage assets, such as building quality and conservation, play a role in their vulnerability. Firstly, linking water depth to a relative or absolute physical loss, which is commonly expressed by vulnerability stage–damage curves, is a fundamental challenge in flood vulnerability modelling. Because it's difficult to quantify exposure and vulnerability, flood risk assessment for cultural heritage has mostly been done qualitatively, by categorising and ranking assets in terms of vulnerability and performing exposure analysis at the national or site level.

About the Study

Since the Sendai Framework just recently recognised the promotion of resilient CH as one of the wide priority action areas, flood vulnerability models for CH, that is, stage–damage functions are scarce in the literature. Few countries have attempted to categorise cultural assets, identify risk factors, and place them in the context of historical knowledge and customs. To enable rapid response, boost capacity, and ensure an effective recovery, pre-preparedness and contingency plans should be prepared in addition to a thorough awareness of risk. Understanding the resilience of a community that is heavily reliant on cultural tourism is crucial in this setting.

The goal of this study is to look into the relationship between resilience, indirect effects, and risk in flood-prone cities, that is, in areas where there is a large concentration of CH that attracts visitors and feeds the local economy. Because no method is currently able to provide an exhaustive measure of the economic losses to CH, the work introduces a proxy for socio-economic value of exposure and a new depth-idleness vulnerability function for CH based on a review of post-flood reports in art cities or cultural attractions, without the goal of describing the intangible total value of CH and vulnerability in terms of direct losses [1-5].

Conclusion

The socio-economic proxy for CH value adopted is connected to both non-use values, such as social appreciation, and extractive use values, such as revenues, and is unable to fully capture other components of CH value, such as spiritual, symbolic, and historical values. Because time is an inherent aspect of resilience, the depth-idleness function connects vulnerability and capability. The depth-idleness function is employed as an input for the regression model proposed in this paper, which simulates the recovery dynamic as the number of people returning to cultural attractions. Resilience is measured by the time it takes to return to a specific proportion of the number of visits in the pre-event circumstances. Limits on pandemics.

References

1. Akter, Aysha, and Shoukat Ahmed. "Potentiality of rainwater harvesting for an urban community in Bangladesh." *J Hydrol* 528 (2015): 84-93.
2. Christian Amos, Caleb, Ataur Rahman, and John Mwangi Gathenya. "Economic analysis and feasibility of rainwater harvesting systems in urban and peri-urban environments: A review of the global situation with a special focus on Australia and Kenya." *Water* 8 (2016): 149.
3. Liang, Xiao, and Meine Pieter van Dijk. "Economic and financial analysis on rainwater harvesting for agricultural irrigation in the rural areas of Beijing." *Resour Conserv Recycl* 55 (2011): 1100-1108.
4. Siddiqui, Rumana, and Saima Siddiqui. "Assessing the rooftop rainwater harvesting potential in urban residential areas of Pakistan: A case study of model town, Lahore, Pakistan." *ISSN International Centre* (2019): 11-19.
5. Alam, R., G. Munna, M. A. I. Chowdhury and M. S. K. A. Sarkar et al. "Feasibility study of rainwater harvesting system in Sylhet City." *Environ Monit Assess* 184 (2012): 573-580.

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