

EXPOSING UNDERLYING RISK: DISASTER RISK AWARENESS IN INFORMAL COASTAL SETTLEMENTS WITH LOW DISASTER THREATS

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ABSTRACT

The Philippines is one of the most vulnerable countries to natural hazards. The country lies along the typhoon belt and within the Pacific ring of fire and is highly exposed to hydro-meteorological hazards as well as tsunamis. However, located on the western seaboard, the province of Palawan is less exposed to both types of hazards. Puerto Princesa City, although situated within a bay that is vulnerable to storm surges, has not experienced a direct typhoon or tsunami in recent times. In areas like these, how is disaster risk integrated into governance?

Current disaster risk reduction studies usually focus on high risk – high probability areas. While frameworks ask for a holistic understanding of risk, policies are focused to address high hazard probability. Low probability does not mean disasters will not happen. The present thesis looks into factors that could reduce currently hidden or unknown risk. In this research, the risk is hidden due to the perception of low hazard probability. This leads to less risk sensitive development, thus increasing the exposed elements and vulnerability. In areas that have a perception of low susceptibility to storm surges and tsunamis, how do communities integrate disaster risk and implement disaster preparedness activities?

This concept is particularly crucial when it comes to climate change because its effects on coasts have a degree of uncertainty. Knowing the issues affecting them allows strategies that may help reduce potential but currently unknown climate and disaster risks. Thus, the research undertook the following specific questions: 1) What is the local hazard assessment and is it reflective of data from the national level? 2) Are local people aware of the risk to storm surges

and tsunamis in the area where they live? And 3) What are the measures taken by informal communities in areas with low risk to prepare themselves for the possibility of storm surges and tsunamis?

The research looked at disaster risk in areas with low threat or experience to storm surges and tsunamis. The research used multi-layer safety and disaster awareness decay over time as its key concepts to provide a lens to understand the problem and to generate possible solutions and recommendations

The main research objective is to understand how disaster risk is addressed in areas that are only slightly susceptible to natural hazards. The research undertook 3 specific objectives to address this. First was to validate existing local disaster risk profile and determine hazard and exposure. Second is to profile disaster risk awareness of communities in areas with slight exposure. Third was to assess local government and community response capability to infrequent hazards.

The research found that validating the existing local disaster risk profile with national hazard scenarios showed that the local government have focused more on hazard probability than exposure and vulnerability. The houses in the informal communities in this research are on an elevation lower than the height of possible low magnitude storm surges or tsunamis. When taking future population growth and settlement sprawl into consideration, these communities are at an increasing exposure to storm surges and tsunamis. This is because settlements are not planned with disaster risk in mind. Second, the research profiled disaster risk awareness of communities in areas with low storm surge and tsunami threat. This lead to knowing that disaster risk awareness in two communities are low, though there is some degree of awareness in the third community, which experienced a disaster in 2008. The questionnaire survey results and the key informant interviews indicated that storm surges are perceived as not

being threatening, though tsunamis were believed to be so. This is due to the association of storm surges with typhoons, while tsunamis are considered a shock event. Finally, the research assessed local government and community response capability with infrequent hazards and found that most respondents have not participated in an evacuation drill in the last 5 years. This is due to the lack of sense of urgency to do so. Moreover, about Tropical Depression Noul's damage in 2008, the memory of the disaster is not properly recorded and disseminated. Thus, awareness -which could create a sense of urgency- is rapidly degrading with time.

Overall, the research aimed to understand how disaster risk is addressed in areas that are only slightly susceptible to natural hazards. The study found that incomplete understanding of risk, particularly the interplay of hazard, exposure and vulnerability, increases the possibility of disasters happening in areas that perceive themselves to have low susceptibility. Second, there is a need for disaster managers to learn about previous disasters within their locality and use these as examples to their local communities. Finally, disaster risk assessment, especially at the local level, should be retrospective, introspective, and prospective, with the aim to increase the resilience and overall long-term sustainability of coastal communities.

Key words: disasters, coastal hazards, storm surge, tsunami, typhoons