

ABSTRACT

Natural hazards at Portmore, Jamaica: Historical analysis and vulnerability

Over the last twenty years Portmore has grown from a collection of agricultural and fishing villages to a densely populated urban community. The population expansion has been reflected in a similar growth in environmental problems, one of which is the threat posed by natural hazards. The population is young and has recently settled an area which has a history of devastating natural disasters. Since disasters tend to repeat themselves, there is cause for concern about the possible impacts of a present day or future event. Several geological, physiographical and socio-economic and other factors make Portmore as a whole, and its different communities to varying degrees, vulnerable to natural disasters.

Sited close to a major river, on the alluvium of the St. Catherine Plain, on reclaimed land and unconsolidated coastal sands, Portmore is also in close proximity to an active seismic zone. It can therefore suffer seismic hazards of intense ground shaking and liquefaction. The low topography and coastal situation exposes the settlement to storm surge while the poorly constructed buildings of its traditional communities are highly vulnerable to wind damage during hurricanes. Though structural mitigation measures are now in use, the use of non-structural measures is limited and needs to be expanded.

Recent phenomenal population growth, high population density, closely spaced houses, low level of public awareness about the vulnerability of the settlement to natural disasters and complete confidence placed in structural mitigation measures are factors which

combine to increase the risk from natural disasters. A campaign of public education specifically aimed at Portmore residents, along with an effective evacuation plan are urgently needed in the area.