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**ASSESSMENT OF GEOGRAPHICAL RISK AND VULNERABILITY
OF COASTAL COMMUNITIES OF THE GALLE MUNICIPAL
COUNCIL AREA FOR TSUNAMI**

**A PROJECT REPORT PRESENTED BY
DAMINDA SOLANGAARACHCHI**

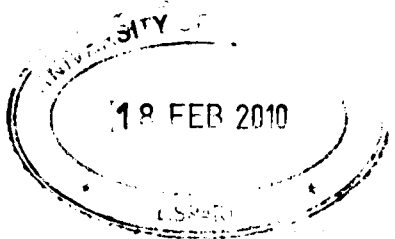
**to the Board of Study in Earth Sciences of the
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ABSTRACT

Sri Lanka experienced its worst natural disaster on the 26th of December 2004 and has been extremely hard-hit in terms of loss of life, infrastructure, and economic assets. Official figures indicated that more than 31,000 people in Sri Lanka were dead, approximately 6,300 remained missing, number of damaged houses at more than 130,000, of which more than 99,000 have been completely destroyed. One of the principal coastal cities devastated was the historic port city of Galle. Galle is the most important city among the heavily affected cities, being the largest city in the southern coastal belt.

After the Tsunami impact it has become apparent that the country's disaster management strategies need to be strengthened through the implementation of mitigation and preparedness options to enhance the community's resilience to natural events such as Tsunami.

The degree to which population are vulnerable to hazards is not solely dependent on proximity to the source of the threat or the physical nature of the hazard. Socio economic factors and community resilience also play a significant role in determining vulnerability and risk.

This study is an attempt to develop a conceptual model for the analysis, measurement, and mapping of Tsunami risk using hazard, social vulnerability and community resilience. Three quantitative indicators are developed: a hazard index based on geomorphologic and recent Tsunami data, social vulnerability index based on census data and community resilience index based on primary data collected from the communities. These indices are combined to determine spatial patterns of risk in the study area.

The resulting maps were used to determine the extent that the communities are exposed to Tsunami conditions and the critical facilities that exposed.