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**APPLICATION OF GIS TO MITIGATE SOIL EROSION
IN UPPER KOTMALE AREA**

A PROJECT REPORT PRESENTED BY
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To the Board of Study in Earth Sciences of the
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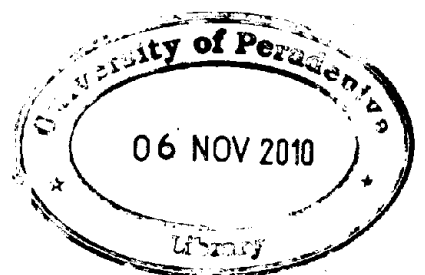
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ABSTRACT

The watershed is a physical entity geographically defined by an important natural resource, water. The way in which the water in the upper parts of the watershed are used, affects the ways in which it can be used downstream, and they affect the associated land resources.

The study area consists the Upper Kotmale Oya catchment. The main objective of this study is to develop a model to identify the soil erosion potentials (prone areas) in the Upper Kotmale Oya catchment area. And the secondary objective is to identify the various soil erosion risk levels and, through that, to identify appropriate soil and water conservation methods to reduce the sedimentation of the Upper Kotmale Oya catchment area. The study is based mainly on secondary data. Using GIS software packages, overlay operations were performed on available data to identify the areas with high risk levels.

The results output revealed the Kalugale, Kelegoda, Mihindupura Grama Niladhari divisions identified as most prone to soil erosion areas. Proposed land use management plan explains the appropriate land use management in the study area. Proposed land use planning must to be applied for optimum use of catchment resource while minimizing adverse impacts.

