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**Spatial Analysis of Locational Vulnerability of Fish Drying Cottage Industry of Kudawella,
Sri Lanka**

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Abstract

Informal fishing industries in Sri Lanka are in vulnerable areas and their industrial locations are risky. Fish Drying cottage industry of Kudawella is fast growing and spreading in the recent years within the village and to the outside. The industry has informal economy and perfectly competitive market characteristics which enables free entrance and exit and less legal bindings. Although the industry generates a significant direct and indirect employment opportunities and income, it has also created social, economic and environmental vulnerabilities. Vice versa, the industry has become vulnerable due to various social, economic and environmental factors too. Therefore, it the study aims to spatially identify the vulnerability of fish drying cottage industry. The study identified the factors affecting the vulnerability of the industry by conducting a literature survey and were evaluated through observations and the experience of the researchers. 381 industry locations and the relevant 9 criteria maps were mapped by using Open Street Mapping and ArcMap 10.8, such as proximity to the harbour, accessible roads, environmentally sensitive areas, access to the major tourist attraction in the village; “Hummanaya” the blowhole, the coast, Tsunami reservation, social infrastructure and population density and selection for projects conducted by the government. For the weighted overlay analysis, each criterion was weighted based on their relative contribution to the vulnerability of the industry. The resulting map showed that higher portion of the village a higher percentage of existing number of manufactures are moderately vulnerable while a 4.2% of land in the village is severely vulnerable for the industry. However, no manufacturing site was found to be severely vulnerable within the concerned period. The village is an Urban Development Authority declared urban area which is having economic potential due to factors such as existence of the Blowhole and abundancy of coastal and shallow water resources. Therefore, the study suggests the decision makers to make decisions to upgrade informal sector to ensure to avoid vulnerable locations of Industry and they can earmark suitable locational area to ensure the sustainable utilization of land.

Keywords: Cottage industry, Fish drying, GIS, Sustainable land use, Weighted overlay analysis