ASSESSING THE FLOOD HAZARD IN THE KURUNEGALA DISTRICT

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According to the *Hazard Profiles* of Sri Lanka, the flood is the most destructive hazard in the country. In this study only, the hazard component of the risk equation was assessed for floods for Kurunegala district. The overall objective of the study was to assess the flood hazard and its significance in the Kurunegala district which is in the fourth place in the reported number of flood events in Sri Lanka. The study aimed to identify the flood hazardous Grama Niladari Divisions (GNDs) in the district, based on the intensity and probability of flood events. Secondary data on the previous flood events and the affected number of persons were collected for the period of 2008–2016. Data analysis was done using univariate data analysis techniques such as variance, mean, standard deviation and percentile calculations using Microsoft Excel. The spatial data analysis was done using GIS techniques. From the total of 1610 GNDs in the district, floods have occurred in 323 GNDs within the study period. Six flood events with a probability of 0.75 have been reported only in Dummalasuriy GND. Likewise, five events with a probability of 0.63 have been reported in Hettipola, Nammuwawa and Kattimahana GNDs. In 27 GNDs, four flood events have been reported with a probability of 0.50, while 48 GNDs have reported three flood events with a probability of 0.38, 97 GNDs have reported two events (P-0.25) and 147 GNDs have reported one event (P-0.13). The maximum number of flood-affected persons was reported as 2282 in Gatulawa in Bingiriya Divisional Secretory Division (DSD) while 1982 people were affected in Makeliyawa in Kobeigane DSD. In addition to that, people have been affected in various GNDs such as Marandagolla (1540), Kadigawa-track 03 (1517), Molaeliya (1342), Mallawapitiya (1300), Ebawalapitiya (1037), Urapoththa (1023) and Kattimahana (1011). According to the percentile calculation, 99% of all the flood-affected persons are below 1534.48, while 90% are below 345.4, 75% are below 173, and 50% are below 70. Consequently, in most of the flood hazardous GNDs, a lesser number of people have been affected while in limited GNDs, a higher number of people have been affected. However, the entire district was studied by GNDs on behalf of flood hazard, based on probability and intensity. This result will benefit the disaster managers to select the priority areas in finding solutions to floods and researchers to develop a methodology for flood hazard assessment.

***Keywords*:** Affected people, Flood, Hazard, Risk.