



## **EVALUATE THE CAUSES OF MALWATTHU OYA FLOOD: A HISTORICAL STUDY ON WESSAGIRIYA GN DIVISION**

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### **Abstract**

Flooding is one of the most destructive natural hazards which cause high-intensity rainfall events massive floods and the condition is common in some parts of Sri Lanka. This study has been conducted on the Malwathu Oya flood which is Flowing through the Wessgiriya Grama Niladhari Division in Anuradhapura District. Malwathu Oya basin is the second-largest catchment among the river basins in Sri Lanka (3284 km<sup>2</sup>), and one of the most widely used sources of water for irrigation, water supply and other diversions in the North Central province. The river basin experiences water scarcity during the dry periods and the downstream areas of the catchment are flooded during the wet period. The main objective of the study was to assess the causes of the Flooding of the Malwathu Oya River. Accordingly, the primary and secondary data were explored to achieve the study objectives. Based on that, the Study is presented the flood characteristics identified through the Massive Floods that Occurred from 2014 to 2015 and find out the causes of the Malwathu Oya Flood. Therefore, the primary data were obtained from Observation, Questionnaire, Systematic Interview, Focus Group Discussion (FGD) and Secondary Data were collected from the Divisional Secretariat Division, Department of Irrigation, Department of Meteorology, Disaster Management office. Based on the result of the study examined the causes of malwattu oya flood is that surrounded lowest land, the structure of the soil, weaknesses of water reservoir dams, some human activities that trigger the flood, high level of runoff, the connection between the Malwattu Oya river basin and nachanthuva reservoir, unplanned drainage system, soil excavation, an excessive settlement near to river basin, etc. Therefore this study is significant to reduce the future flood hazard in the study area.

**Keywords:** Malwattu Oya, flood, causes, river catchment, seasonal change

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