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## LAND USE, RUNOFF AND SLOPEWASH IN THE OPA RESERVOIR BASIN, SOUTHWESTERN NIGERIA

**A. Adediji**

*Department Of Geography, Obafemi Awolowo University, Ile-Ife, Nigeria*

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### ABSTRACT

*This study aimed at examining the effect of land use/vegetation types and slope on slopewash in the interstream surfaces of 19 first order basins within the Opa Reservoir catchment. Runoff and soil loss on slope (slopewash) in the studied basins were monitored for one year using Gerlach Troughs. The results of this study showed that the slopewash (soil loss on slope) was highest in the built-up basins (with mean specific yield of 30.07 t/km<sup>2</sup>/yr). This was distantly followed by field crops, cocoa dominated, and forested basins with mean specific yield of 18.04 t/km<sup>2</sup>/yr, 16.88 t/km<sup>2</sup>/yr, and 14.20 t/km<sup>2</sup>/yr, respectively. Also, soil loss from the valley slopes of the studied basins correlated significantly with runoff (R) and slope angle (Sa) with r-values of 0.799 and 0.413 and a = 0.05, respectively. This implied that runoff was the most important predictor of soil loss on slopes in this part of the world. Thus, to prevent deleterious slope wash in this part of the world, runoff should be minimized on slopes through planting of cover crops.*

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### CONTACT:

A. Adediji  
Department Of Geography  
Obafemi Awolowo University  
Ile-Ife, Nigeria

**E-mail:** Email:remiadediji2003@yahoo.co.uk

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