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A comparative eco-hydrologic study of perennial and non-perennial streams of a headwater catchment

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Non perennial streams (NPS) account for almost half of the stream length in many headwater catchments. NPS are important due to their high storage capacity of storm water before flooding. Also, they provide habitats for several species. The main objective of this study was to investigate eco-systems associated with NPS, one of least studied freshwater ecosystems.

This was carried out by way of a comparative study between NPS and perennial streams (PS), in stream reaches connecting to Walawe River. Water quality in both stream types seemed to be more or less the same. However, some morphological features and vegetation showed significant differences. NPS showed less plant diversity, abundance and primary production relative to PS. This was further validated by seedling tests. Low intervention by plants is important when it comes to flood control. Further studies are recommended on this platform for NPS's eco-hydrologic roles as a flood controlling ecosystem.

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