Towards a classification of Tanzanian rivers: a bioassessment and ecological management tool. A case study of the Pangani, Rufiji and Wami– Ruvu river basins

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River classification is important for reporting ecological status and for the general ecological management of river systems by partitioning natural variability. *A priori* river classification by abiotic variables and validation of classifications obtained using aquatic macroinvertebrates from reference sites for selected Tanzanian rivers was done in 2010–2012. A classification framework for Tanzanian rivers based on ecoregions and geomorphologic features is proposed. This gives 12, 36 and 144 river types for the whole country derived from ecoregions, ecoregion–slope classes and ecoregion–landforms, respectively. The proposed classifications were validated in the Pangani, Rufiji and Wami–Ruvu river basins using aquatic macroinvertebrates. Results suggested that macroinvertebrate assemblages reflect the differences among river types in all three regional classifications. Ecoregion–landform classification showed greater significant differences among macroinvertebrate assemblages, whereas classification by ecoregion–slope class resulted in a moderate number of river types, which include sufficient reference sites for ecological assessment.

Keywords: ecoregion, geomorphology, macroinvertebrate, regional classification, river type