Correspondence in forest species composition between the Vegetation Map of Africa and higher resolution maps for seven African countries

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ABSTRACT

Question

How well does the forest classification system of the 1:5,000,000 vegetation map of Africa developed by Frank White correspond with classification systems and more extensive information on species assemblages of higher resolution maps developed for Ethiopia, Kenya, Malawi, Rwanda, Tanzania, Uganda and Zambia?

Methods

We reviewed various national and sub-national vegetation maps for their potential in increasing the resolution of the African map. Associated documentation was consulted to compile species assemblages, and to identify indicator species, for national forest vegetation types. Indicator species were identified for each regional forest type by selecting those species that, among all the species listed for the same phytochorion (regional centre of endemism), were listed only for that forest type. For each of the national forest types, we counted the number of indicator species of the anticipated regional type. Floristic relationships (expressed by four different ecological distance measures) among national forest types were investigated based on distance-based redundancy analysis, permutational multivariate analysis of variance (PERMANOVA) using distance matrices and hierarchical clustering.