

Assessment of the inland wetland ecosystem types in South Africa: Threats and protection

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Abstract

Ecosystem threat status (ETS) and ecosystem protection levels (EPLs) are headline indicators that can assess freshwater ecosystems at a country-wide scale. A spatial layer of freshwater, inland wetland ecosystem types of South Africa was combined with a range of spatial data sets to model their ecological condition. The ETS and EPL of each ecosystem type were determined using the area of that type in good ecological condition relative to a biodiversity target, which represented 20% of the total area of that ecosystem type. Thresholds were applied to distinguish four ETS categories ranging from Least Concern to Critically Endangered, and four EPL categories ranging from Not Protected to Well Protected. A total of 79% of the 135 of South African inland wetland ecosystem types were found to be threatened, of which 83 (62% of the number of types) are Critically Endangered, 12 (9%) are Endangered, 12 (9%) are Vulnerable and 28 (21%) of Least Concern. Of the 135 inland wetland types, 61% were Not Protected, with 6% being Well Protected, 3% Moderately Protected, and 30% Poorly Protected. Protected and Ramsar sites hosted only 7% of the total area of inland wetlands, which means that the Aichi Biodiversity Target 11 for 2020 (17%) was not met.