

Biodiversity is the foundation of life-support systems on earth and underpins the delivery of ecosystem services (ES) important for human well-being. The loss of biodiversity worldwide, however, remains one of the most daunting challenges. Among the major causes of biodiversity loss is habitat loss due to transformation of land to agricultural, mining and urban areas. We applied the Integrated Valuation of Ecosystem Services and Trade-offs (InVEST) biodiversity modelling tool to assess the condition of habitats to support the delivery of ES in a biosphere reserve (BR) in South Africa. Results indicated that 72% of the surveyed habitats were of high quality to provide the necessary services. However, some of the habitats were found to be affected by threats as follows: low (0–20%) to moderate (20–32%) habitat loss was recorded in habitats adjacent to mining and plantation areas, and high (32–56%) to severe (56–95%) habitat loss was recorded in habitats in close proximity to urban and cultivated areas. At least 56% of the vegetation types found in the study area were threatened by transformation to agriculture, mining and urban areas. We strongly recommend that existing biodiversity policies and legislation should be enforced to avoid habitat loss and degradation.