ABSTRACT

This study investigated the growth, mortality and recruitment of *Lates niloticus* in Lake Victoria basis on length–frequency data collected during the period 2014-2015. The asymptotic length (L_∞) had a value of 124 cm TL, growth curvature (K) of 0.22 year^{-1}, total mortality (Z) of 0.96 year^{-1}, a natural mortality (M) of 0.42 year^{-1}, a fishing mortality (F) of 0.54 year^{-1}, an exploitation rate (E) of 0.57 and a growth performance index ( ) of 3.53. Logistic selection model showed that 50% of fish of 46.09 cm TL encountering the gear are retained. There were two peak recruitment periods, a minor one in March and a major one in July, accounting for 12.04% and 22.04%, respectively, of the total fish catch. The Beverton and Holt's relative yield-per-recruit model indicated the indices for sustainable yields are 0.32 for optimum sustainable yield ($E_{0.5}$), 0.60 for maximum sustainable yield (E_{max}) and 0.51 for economic yield ($E_{0.1}$). Compared to previous findings, there is a great decline in the sizes of Nile perch stocks in Lake Victoria. Thus, managing the fishery requires strict adherence to the slot size of 50–85 cm TL, and restrictions on illegal gear and methods, by the devolved governments through monitoring, control and surveillance in liaison with the Beach Management Units (BMUs).