

A water balance model for lake Victoria

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Preliminary results of a water balance model for lake Victoria are presented here. Previous water balance studies, using a simple water balance equation, have not provided a satisfactory explanation for the sudden rise in the lake level during the period 1961- 1964. In this study a water balance model has been developed to carry out the water balance of the lake and come up with a possible explanation for this sudden rise in the lake level during this particular period. The model was calibrated for the period 1971- 1976. The evaporation component was estimated using the modified complementary relationship evaporation model (Morton's model). The evaporation estimated using Morton's model was found to be satisfactory. The water balance model was verified over the period 1950-1970. A comparison of the estimated and observed lake levels showed a good agreement. From the water balance model results it was observed that a possible major cause of the unexpected rise in the lake levels during the period 1961 – 1964 was due to increase in rainfall over the lake during that period.