

Research work on Nairobi Dam, Kenya and its tributaries revealed Poor negative correlation between Phosphorous (Hydrolysable + PO<sub>4</sub><sup>3-</sup>) and NO<sub>3</sub><sup>-</sup>-Nitrogen, giving a regressionline of  $y = -0.2176x + 2.1471$  with R<sup>2</sup>= 0.1876 on water sampled over a period of one and half years.

On the other hand, there was poor positive correlation between Phosphorous (Hydrolysable + PO<sub>4</sub><sup>3-</sup>)and Potassium ( $y = 2.142x + 32.964$ , R<sup>2</sup>= 0.0815) during the same sampling period. The positivephosphorous-potassium intercept, however, showed that phosphorous was more limiting than potassium. Overall, a pronounced positive correlation was found between Total Kjeldahl + NO<sub>3</sub><sup>-</sup>-Nitrogen and Potassium contents in water sampled from the water hyacinth zone, giving a regression line of  $y = 0.6484x + 18.309$  with R<sup>2</sup>= 0.4801. This demonstrated that nitrogen was more limiting than potassium.

Combining the two results suggested that the limiting element was either nitrogen orphosphorous. However, when the linear regression-correlation approach among the three nutrients (N, P, K) was employed, the best correlation was found between Hydrolysable + PO<sub>4</sub><sup>3-</sup>-Phosphorousand Total Kjeldahl + NO<sub>3</sub><sup>-</sup>-Nitrogen ( $y = 6.1118x + 8.424$ , R<sup>2</sup>= 0.5244). This final positivecorrelation and the corresponding regression equation both suggest that withrespect to Nitrogen and

Potassium, Phosphorous was the most limiting element, i.e., it gave a negative intercept. It got exhausted first and was responsible for the proliferation of the water hyacinth in the aquatic environment studied. Any future eradication and control of water hyacinth in the eutrophic Nairobi Dam will have to deal with phosphorous nutrient.