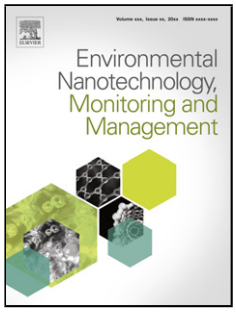

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Authors: Pamela Tendaupenyu, Matawa Farai, Christopher Hilary Dennis Magadza

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SPATIAL DISTRIBUTION OF SURFACE SEDIMENT NUTRIENTS OF A SUBTROPICAL HYPEREUTROPHIC LAKE; LAKE CHIVERO, ZIMBABWE.

Tendaupenyu, Pamela[a], Matawa, Farai[b] and Magadza. Christopher Hilary. Dennis[c]*

[a]Department of Biological Sciences, University of Zimbabwe, P. O. Box MP 167 Mount Pleasant, Harare, Zimbabwe.
[b]Geo-Information and Remote Sensing Institute, Scientific and Industrial Research and Development Centre (SIRDC), 1574 Alpes Road, Hatcliffe, Harare, P. O. Box 6640, Zimbabwe, Zimbabwe. fmatawa@sirdc.ac.zw, +263 772 434 126.
[c]Tropical Resources Ecology, University of Zimbabwe, P. O. Box MP 167 Mount Pleasant, Harare, Zimbabwe. magadza.christopherhd@gmail.com, +264 775 505 999
*corresponding Author: pamelatendaupenyu@gmail.com, +263 772 348 648

HIGHLIGHTS

- For all models developed, cross validation results showed bias acceptable for the creation of prediction surfaces.
- Kriged surfaces for all nutrients except for nitrates indicated highest nutrient concentration within the depositional central and north eastern parts of the lake.
- Nitrates indicated high concentrations in the shallow shoreline areas of the lake.
- The prediction maps generated a visual picture of trends of the lake wide distribution of nutrients, necessary for targeted sediment contamination remediation activities in Lake Chivero.

Abstract
In this paper, we use ordinary kriging, a geostatistical method to create prediction surfaces for 11 nutrients in the surface sediments of Lake Chivero, Zimbabwe within a GIS environment. Interpolation utilised 120 sampling points in the lake. Although a normal distribution in the data is recommended for kriging, non-normal data was preferred for all datasets in this study. For all models developed, cross validation results showed bias acceptable for the creation of prediction surfaces. Also, the correlation between Coefficient of Variation (CV %) of the different data sets