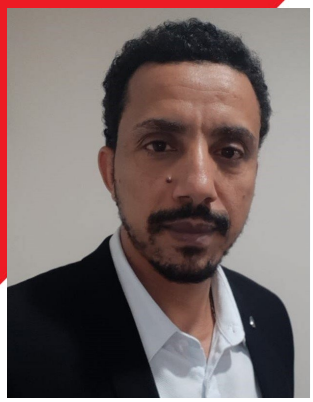

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https://scholar.google.com.au/citations?user=gBiRk6MAAAAJ&hl=en

Summary

Climate and land use change are key features of landscape disturbance and non-stationarity in natural environments. Long term (centennial) numerical modelling of coupled catchments and receiving waters has not been attempted before because it has not been computationally possible and from difficulty in input data reconstruction. In this study, I am using paleoclimate proxy databases across New Zealand and Australia to generate millennium-scale rainfall and temperature data to model changes in lake water quality. The study models the source-to-sink interaction in lake catchments to simulate millennial dynamics. The modelling involves coupling hydrological model with hydrodynamic-ecological models to explore the dynamic interactions of environmental variables and assess flow and water quality responses to upstream disturbances.

Research Expertise

- Hydrology/ Hydrogeology
- Catchment management
- Water quality modelling
- GIS and remote sensing
- Climate change
- Palaeohydrological/limnological modelling