The Impact of Land Use Type and Distance Downstream on the General River Health and Water Quality in the Eerste River, Stellenbosch, Western Cape, South Africa

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Purpose of the Project Humans need water for everyday life such as cooking, to grow food, for the manufacturing of goods and sanitation. South Africa is classified as a water-stressed country, which means water resources should be carefully managed. The aim of this investigation was to determine whether the water quality of the Eerste River decreased with increasing distance from the source. The hypothesis was that the water quality of the Eerste River will be better closer to the source of the river and deteriorate further downstream with increasing distance from the source. Method followed: The miniSASS method of using macroinvertebrates as the indicator of river health and water quality was used. Eleven sites along the Eerste River were selected and the macroinvertebrates were sampled. At each site, a visual assessment was completed, and a description of the land use was used. Results It was found that the water quality did not deteriorate with greater distance from the source. Our results have shown that land use changes and human activities did influence the water quality at each site. Conclusion The hypothesis was therefore rejected, and it was concluded that the land use at the sampling sites had a greater influence on the water quality than the distance from the source of the river.

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