

A botanical importance rating of selected Cape estuaries

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Abstract

A formula has been developed which allows a single numerical botanical importance score to be calculated for estuaries. The formula includes the area cover of each estuarine plant community type, its association with the estuary, its condition and the plant community richness. This study focused on temporarily and permanently open estuaries along the Cape coast, which for convenience was divided into four regions: Western Cape, South-Western Cape, Southern Cape and South-Eastern Cape. Thirty three temporarily and permanently open estuaries were studied and rated according to importance within the whole Cape coast, regional importance (i.e. Southern Cape or South-Eastern Cape), as well as against other estuaries of their type (i.e. temporarily or permanently open). The Olifants Estuary on the west coast received the highest importance score for the whole Cape coast. It has extensive marshes in its lower reaches that are in good condition. Reed and submerged macrophyte beds are also a feature of this estuary. Two False Bay estuaries, the Lourens and the Sir Lowry's Pass, had the lowest scores. These estuaries are severely impacted as a result of residential and industrial proximity, and rehabilitatory steps would be necessary to restore any botanical significance to them. Not all the regions' estuaries were used to obtain these scores and more need to be included to make the importance rating relevant to all estuaries along the whole South African coast. This rating can be used to identify estuaries which are worthy of receiving a high conservation status.

Introduction

There are an increasing number of people utilising the South African coastline. This is creating a need to evaluate estuarine and coastal resources and to determine sensitive areas where careful planning and management must take place (Begg, 1984; Allanson, 1992). Important estuaries should be identified and development in their surrounds (including impoundments) and in the catchment should be declared unacceptable if the estuarine environment is not to be degraded.

Any individual estuary can be identified as important for a number of different reasons. It may have especially large salt marsh areas; it may have a rare bird species present; another might have unique hydrological features or it might be an important recreational estuary. These botanical, zoological, physical and socio-economic factors all contribute towards the importance of an estuary and the Consortium for Estuarine Research and Management (CERM) is working towards incorporating all these attributes into an overall importance rating for South African estuaries (CERM, 1994). We

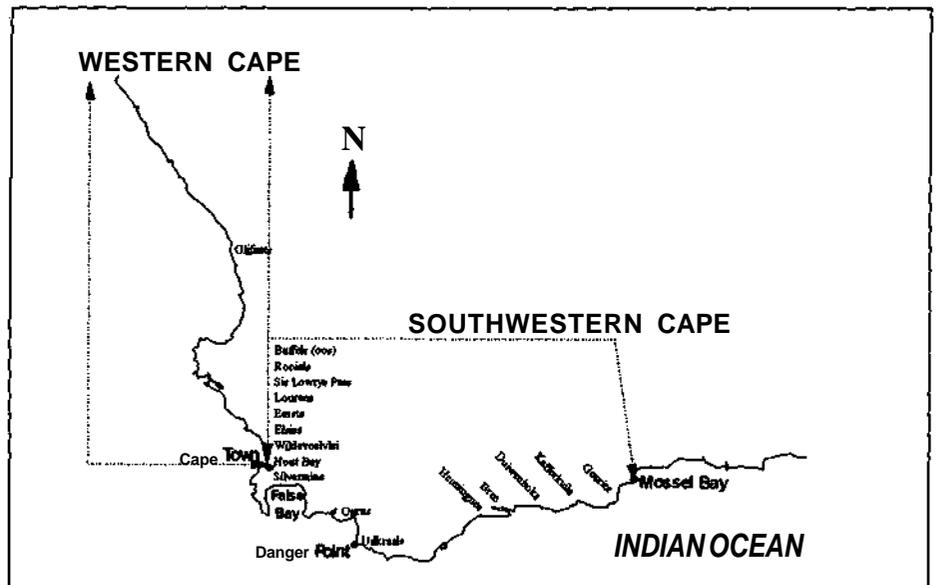


Figure 1
A diagrammatic representation of the West and South-Western Cape. The approximate location of the estuaries used in the scoring system is shown.

believe that in most cases the condition and extent of the plant communities can determine the overall ecological condition of an estuary.

This study focused on the botanical importance of Cape estuaries from the Quko (double mouth) Estuary on the south-east coast, to the Olifants Estuary on the west coast (Figs. 1 to 3). The estuaries were rated according to their importance within the

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