

The City of Cape Town surrounding the Table Mountain National Park: An historical reflection of the evolving relationship between an urban settlement and ecological processes

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Ecosystem services have emerged as a framework to examine the human relationship with the environment. The significance, and popularity, of this model is demonstrated in the Millennium Assessment and the proliferation of emerging literature in the past ten years on the topic. The basic framework is very structured, separating services out into supporting, provisioning, regulating and cultural services. Key criticisms have emerged in response to the ecosystem services approach. The literature notes a limited engagement in long temporal scales in ecosystem services research, and analyses are criticized for being conspicuously a-historical. In order to understand our current systems, and to inform management in to the future, we need to understand past drivers and the role of human agents. The second limitation is engaging with ecosystem disservices, which is cited as potentially hampering environmental management. Finally, there is a persistent paucity of ecosystem services research in the urban context, and none of substance that adopts a temporal scale. The City of Cape Town, in South Africa, presents an interesting case. It is a biodiversity hotspot, has significant social issues around development disparities due to South Africa's apartheid history, and also has a relatively short urban history. Here we look at the history of Cape Town and its engagement with its natural environment, in particular as presented by Table Mountain, with consideration to what it means in terms of current ecosystem service models and in how cities engage in ecosystem disservices.

This paper takes the audience through key points in the history of the establishment of the City of Cape Town. This historical reflection shows how the functioning ecology and emerging ecosystem services have been exploited, over-exploited, interrupted, and managed through time according to variable needs and cultural values and expectations.

In conclusion the temporal analysis is suggested as a surrogate for current developmental disparities, and a means to informing engagements with different cultural perceptions, expectations and needs in modern South Africa.

This study suggests the ecosystem service models are too static and caricatured to capture the complexity of landscape engagement. The case study taken demonstrates clear back loops and firm linkages between cultural and provisioning and supporting services, not the unidirectional flow presented in many ecosystem service frameworks.

The failure to explicitly engage in ecosystem disservices in ecosystem services research is short sighted. Historical reflection shows a trend to the creation of self-serving, benign urban environments which may be counter to successful functioning of urban ecologies. What may be viewed as the uncomfortable side of elements of the natural environment could be important component links in ecosystem functioning.

In conclusion, as we move forward in designing and creating cities to accommodate a growing urban population, we need to think through the complexities of what urban nature means. If we are to cope with future challenges and threats we need to forge a single ecological culture. What might that single ecological vision be, and how much discomfort are we prepared to endure to see its creation?