



Spatial Planning in eThekweni Municipality (Durban), South Africa

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Short title: Spatial Planning in eThekweni Municipality (Durban), South Africa

Key Message: Need for valuation of environment goods and services of open spaces to redefine their role in the city's functioning.

Suggested citation: TEEBcase by R. Boon (2010) Spatial Planning in eThekweni Municipality (Durban), South Africa, available at: TEEBweb.org.

1. What was the problem?

Open space planning in Durban began in the 1970s and has evolved from a focus on the protection of conservation-worthy areas to a more holistic understanding which focuses on the contribution of open space to sustainable urban development. The change in approach was driven by two factors: the democratisation of South African society and the global prioritisation of sustainable development. In Durban, after the first democratic elections in 1994, local government leadership prioritised social and economic development over conservation objectives which were not well understood and whose benefits to previously disadvantaged people were less tangible. This shift in emphasis came with significant tensions and threatened to undo much of the good environmental work done over the preceding decades. As a result open space planners began to investigate the role of ecosystems in contributing towards the new development objectives of the city.

2. What was done to solve it? How were ecosystem services considered?

The search for a new way of presenting the role of nature in a developmental city was particularly influenced by the paper 'The value of the world's ecosystem services and capital' by Costanza *et al.* published in Nature in 1997, which valued the ecosystem goods and services (EGS) provided for "free" by the world's ecosystems. These EGS are seldom considered in traditional accounting. Although there has been much debate regarding the approach used by Costanza *et al.* in estimating the value of EGS, it was felt that what Durban needed was to establish the broader role of the city's natural resource base, and to calculate an "orders of magnitude" estimate of the economic value of ecosystems. By redefining the role of open spaces in Durban, especially in terms of meeting the basic needs (e.g. water, firewood and food) of poor people, who did not have access to adequate infrastructure or municipal services, and in providing valuable services like water supply, regulating disturbances and recreational opportunities, it was possible to demonstrate that the city's open space system was significant in meeting people's basic needs and improving quality of life. This was in contrast to the growing popular view that nature conservation was elitist and focused on the needs of nature over those of people.

3. What was needed to solve the problem in terms of data, resources and capacity?

The value of the Durban's open space system was first estimated in 1999 and the results were used to help obtain political approval for the open space plan of the time. The most recent estimate was done in 2003 using the spatial layer produced in 2002. The Municipality has taken a pragmatic approach to these estimates so needs have been relatively limited. In 1999 the Municipality still used external consultants to prepare its open space plan. A member of the team had experience in resource economics and he prepared the first estimate. The second calculation was done in-house. The municipality has an open space layer for the municipal area in GIS shapefile format. Each homogenous area has its own polygon with a land-use/ecosystem/habitat type assigned to it. The first step was to allocate the municipal land cover class to one of the biomes used by Costanza *et al.* Direct allocation was not always possible and a correction factor was sometimes applied. Using the value per hectare from Costanza *et al.* and the area of each habitat type, it was possible to calculate the total value of each land cover type per annum and the total for all land cover types combined. The replacement value of EGS supplied by Durban's 2002 open space system was conservatively estimated at \$ 0.41 billion per annum. This excluded the value of the tourism sector, which was estimated to have a turnover of \$ 0.44 billion per annum (2001). In comparison the eThekweni Municipality's 2001/2002 operating budget was \$ 0.87 billion and capital budget was \$ 0.37 billion, demonstrating that open space plays a significant role in the day to day functioning of the city.

4. What resulted from taking an ecosystem service perspective? Did the approach influence public management or result in policy uptake?

It is not possible to say what the results of taking an ecosystem service perspective have been as there has been no rigorous attempt to measure the impact. In addition, since the late 1990s South African environmental law and policy has undergone major reform and general public awareness has grown. However, at the local government level in Durban there are indications that the approach has had a positive impact in the way the environment is perceived, e.g.:

1. EGS and environmental sustainability feature prominently throughout the Municipality's Integrated Development Plan, which is its strategic business plan as well as in high level spatial development plans.
2. In the past few years municipal leadership and local politicians have taken a number of tough decisions to protect the environment.
3. Whilst many municipal departments have remained static in terms of staff and budget, the Environmental Planning and Climate Protection Department has grown from two staff members in the mid 1990s to 28 in 2010.
4. The Municipality is investigating how to value municipal-owned open spaces and include them on its asset register, to thus make better provision for ongoing management.
5. The Municipality is developing a methodology and implementation framework in order to prepare a Strategic Environmental Assessment of its high level spatial plans. The intention is to develop a methodology and framework which integrates an ecosystems goods and services approach to environmental assessment into the planning process in order to strengthen sustainability considerations.

5. What else was necessary for it to be influential?

Local government open space planners have had to practice conceptual flexibility and shift from a "conservation" to a "sustainable development" focus as societal priorities have changed. The Constitution of the Republic of South Africa (1996) assigns the responsibility for nature conservation, in the narrow sense, to national and provincial spheres of government. Although the use of resource economics has assisted in narrowing the divide between ecological priorities of environmental planners and the human upliftment priorities

of politicians and some senior officials, this has not meant that the open space plan and its implementation is no longer challenged. This suggests that it will be necessary for decision makers to develop a deeper understanding of sustainability issues before biodiversity issues are fully mainstreamed.

References:

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Acknowledgement: Dr Amrei von Hase (amreivonhase@gmail.com) for reviewing the case