

Estuaries

The WRC provided tools to guide local authorities in effectively integrating the management of estuaries within their jurisdiction into their IDPs.

Estuary Management as Part of Integrated Development Plans (IDPs)

The potential value of estuaries

Estuaries are valuable economic, social and ecological resources that have desirable attributes and supply a range of goods and services to society.

Depending on their management, estuaries generate measurable value and can contribute substantially to human welfare. Valuation of this 'natural capital' is accomplished using a suite of methods designed to arrive at the total economic value of an estuary. Total economic value is made up of values attributable to direct use (e.g. fishing, recreation, residential), indirect use (e.g. uses that depend on ecosystem functioning such as water purification, fish nurseries etc.) and non-use (e.g. biodiversity protection).

Increases in direct-use values of the estuary, such as when increases in development in and around estuaries take place, would generally cause a decline in indirect and non-use values. Because of such trade-offs, development could compromise the total value of the estuary if the resulting enhancement of direct-use value is not enough to balance the overall decline in value attributable to loss of indirect and/or non-use values.

Notwithstanding this, there is great potential for enhancing the total value of estuaries for the benefit of the municipality and local communities through sound management coupled with appropriate development.

Under threat

Just as it is possible to enhance estuary value, so could mismanagement or neglect cause a downward spiralling of estuary value. The main issues threatening the value of estuaries are:

- Habitat alteration or loss;
- Changes in estuary mouth dynamics;

- Over-exploitation of living resources;
- Sedimentation and siltation;
- Loss of system variability;
- Disturbance due to recreational activity;
- Changes in salinity or nutrient status;
- Increased turbidity; and
- Increased water pollution.

The occurrence of these physical threats is attributable to issues of inadequate governance and/or poor management, often also linked to inappropriate development.

Part of the wider environment

Estuaries are generally small, local resources but are not self-contained. They are affected not only by immediate use, but also by what is allowed to happen in the broader environment, especially in the upstream catchment area of the estuary, where activities might give rise to many of the aforementioned issues that impact negatively on the total value of the estuary.

Effective management

Owing to their small size, estuaries, together with their catchments, regularly occur within a single municipality.

Local government, therefore, has a key role to play in the management of estuaries. For management of these public resources to be effective, it should:

- *Be undertaken cooperatively* by local government, residents, interest groups and the private sector;
- *Address activities in the larger catchment area.* This is within local government's power, since municipalities have been given the legal responsibility to exert significant influence over the kind of catchment activity that might impact on estuaries.
- *Integrate the various planning tools that are able to contribute to sound estuary management.* In

particular, conservation planning, water resources planning and any local estuary planning procedure which may already exist, should be incorporated into the IDP process.

Through integration into the core governance, management and development process (IDP) of the municipality, estuary management would be placed within the framework of cooperative governance and achieve the desired state of being development and implementation-orientated, strategic and consultative.

Current reality is that, with the exception of the few largest municipalities, estuary management is not being addressed in IDPs, especially in the Eastern Cape.

Support for local government

Local governments, particularly coastal municipalities that are rural in nature, have little current capacity relating to environmental management in general and estuary management in particular. What capacity and resources do exist, are understandably focused on the delivery of essential services. Moreover, municipalities are often poorly informed and confused about the division of environmental responsibilities.

A cooperative governance agreement between national, provincial and local government that includes financial and capacity-building support, would be a positive step towards clarifying obligations.

This could also provide valuable stimulus for the creation and filling of posts of municipal environment manager, who could champion the development of an environmental policy and integration of environmental concerns into the planning processes of the various municipal sectors on an ongoing basis.

Further support to struggling municipalities could come from a well-designed mentorship programme, whereby large, well-capacitated municipalities, such as eThekweni and Buffalo City that have already made good progress in managing estuaries, could assist less-capacitated municipalities in planning the optimal use of estuarine resources.

Key recommendations

The following recommendations are geared to ensuring that estuary management is taken into account in municipal processes, specifically those comprising Integrated Development Planning.

- Government officials should recognise that the challenge of instituting estuary management is primarily social and political, with the sourcing and application of technical support for the process likely to be a lesser hurdle. The starting point is to engage with councillors, municipal officials and local stakeholders, the objective being the initiation of a process of joint learning and obtaining collective buy-in to a concept that might initially be foreign to the frame of reference of municipal roleplayers.
- In this process of engagement, the tangible benefits obtainable from the goods, services and attributes that the estuary supplies need to be stressed. The focus should be on economic development opportunities, increased revenues and job creation from estuary-orientated residential, recreational and commercial development. An example could be the establishment of biodiversity enterprises (community-owned or partnership-based, involving communities, private sector and/or government).
- The issues of estuary governance, management and protection should be addressed only after the municipality has recognised that estuaries have economic value and need to be managed appropriately. A useful scheme that research has produced allows the fitting together of the different planning regimes (conservation, catchment management, water resource planning, development etc) with this process of integration being informed by environmental valuation procedures pertaining to estuaries.
- The use of a facilitated IDP process, as the framework for cooperative management of estuaries, must be strongly promoted. This concept is well understood by municipalities (business as usual) and has all the attributes needed to promote sound estuary management. In adopting the framework, it is important that every activity relating to an estuary be firmly embedded in the IDP. Such activity is then likely to be adequately resourced and given necessary political support.

- Municipal roleplayers should be assisted to gain access to useful learning tools and course material developed and tested through research and being further refined through application.
- Government officials should remain sensitive to their responsibilities, especially within the supporting roles of central and provincial governments. The roles and responsibilities of government (all levels) are summed up in the following table:

Sphere of Government	Roles and Responsibilities
Local Government	Prepare an IDP Adopt an IDP Provide support to poorly capacitated municipalities Ensure coordination and alignment between district and local municipalities
Provincial Government	Coordinate training Provide financial support Provide general IDP guidance Monitor the process in the province Facilitate coordination and alignment between district municipalities Facilitate alignment of IDPs with Sector Department policies and programmes Assess IDPs Provide relevant information on Sector Department's policies, programmes and budgets Contribute sector expertise and technical knowledge to the formulation of municipal IDPs in the allocation of resources at the local level
National Government	Issue legislation and policy in support of IDPs Issue IDP guidelines Provide financial assistance Provide a national training framework Establish a Planning and Implementation Management Support System Provide relevant information on Sector Department's policies, programmes and budgets Contribute sector expertise and technical knowledge to the formulation of municipal policies and strategies Be guided by municipal IDPs in the allocation of resources at local level

More information:

To obtain the WRC Report, *Profiling Estuary Management in Integrated Development Planning in South Africa with Particular Reference to the Eastern Cape* (**Report No 1485/1/07**) or *Estuaries and IDP: A Manager's Guide* (**TT 294/07**); contact Publications at Tel: (012) 330-0340, Fax: (012) 331-2565; or E-mail: orders@wrc.org.za; or Visit: www.wrc.org.za

