# **DEPARTMENT OF ENVIRONMENTAL AFFAIRS**

No. 336 4 May 2012

# NATIONAL ENVIRONMENTAL MANAGEMENT INTEGRATED COASTAL MANAGEMENT ACT, 2008 (ACT NO. 24 OF 2008)

# INVITATION TO COMMENT ON THE DRAFT NATIONAL ESTUARINE MANAGEMENT PROTOCOL

I, Bomo Edith Edna Molewa, the Minister of Water and Environmental Affairs, hereby in terms of section 33 (2) read with section 53 of the Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) publish for comment the draft National Estuarine Management Protocol.

Interested persons and organizations are invited to submit written comments on the draft National Estuarine Management Protocol as follows:

Written comments may be submitted to the Department by no later than 16h00 on **04 June 2012**, by mail, hand, e-mail or telefax transmission. Please note that comments received after the closing date may not be considered.

1.1.1 By mail Subject: <u>Draft National</u>	1.1.2 By hand Subject: <u>Draft National Estuarine</u>	1.1.3 By E-mail Subject: <u>Draft National Estuarine</u>
Estuarine Management Protocol	Management Protocol	Management Protocol
The Deputy Director -General Department of Environmental Affairs: Oceans & Coasts; P.O	The Deputy Director-General; Department of Environmental Affairs: Oceans & Coasts; East Pier 2; East Pier	estuaries@environment.gov.za Telephonic enquiries Mr Ayanda Matoti: +27 21 819 2476
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The draft protocol is also available for download from the Department's website, www.environment.gov.za

**BOMO EDITH EDNA MOLEWA** 

MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS

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# **GLOSSARY OF TERMS**

CPZ	Coastal Protection Zone
DAFF	Department of Agriculture, Fisheries and Forestry
DEA	Department of Environmental Affairs
DMR	Department of Mineral Resources
DWA	Department of Water Affairs
EMP	Estuarine Management Plan
ESD	Ecological Sustainable Development
ICM Act	Integrated Coastal Management Act, 2008 (Act No. 24
	of 2008)
IDP	Integrated Development Plan
MCC	Municipal Coastal Committee
MLRA	Marine Living Resources Act, 1998 (Act No. 18 of
	1998)
NBA	National Biodiversity Assessment
NEMBA	National Environmental Management Biodiversity Act
	(Act No. 10 of 2004)
NEMPAA	National Environmental Management Protected Areas
	Act (Act No. 57 of 2003)
NCC	National Coastal Committee
this Protocol	National Estuarine Management Protocol
NPA	National Port Authority
PCC	Provincial Coastal Committee
SAHRA	South African Heritage Resources Agency
SAR	Situation Assessment Report
SDF	Spatial Development Framework

# INTRODUCTION

1.

South Africa (SA) has more than 280 functional estuaries¹ that are distributed throughout a ± 3200 km coastline. Generally, estuaries are well known for their biodiversity and productivity, associated with which there are a range of environmental and socio-economic benefits. Examples include flood control, providing raw material for subsistence (building material), nursery areas for juvenile fish and commercial use. In South Africa, estuaries also provide shelter along an otherwise exposed coastline that has few natural embayments, therefore they often serve as nodes for habitation and development. Most South African estuaries have been altered from their pristine state due to human disturbances. The National Spatial Biodiversity Assessment (2004) classified about 25% of South Africa's estuaries to be in a fair condition and 15% to be in a poor condition. In general, the condition of estuaries has continued to deteriorate subsequently, due to habitat alteration, overexploitation of living resources and changes in water quantity and quality, amongst other reasons. Human impact activities need to be regulated and managed for estuaries to be adequately conserved and sustainable utilised.

Estuarine management is complex because estuaries are subject to marine, riverine and terrestrial influences. For example, because they are situated at the endpoint of catchment areas, they are affected by many detrimental activities that take place upstream. Challenges to estuarine management include both the need to halt on-going degradation and to rehabilitate where feasible, with the overall goal of achieving ecologically sustainable use of estuarine resources into the future. Estuarine management is thus a dynamic process that requires careful planning and implementation of management decisions, through development and implementation of a National Estuarine Management Protocol ("Protocol"), as set out below.

<sup>&</sup>lt;sup>1</sup>As defined in the Act "Estuary" means a body of surface water- (a) that is part of a water course that is permanently or periodically open to the sea; (b) in which a rise and fall of the water as a result of the tides is measurable at spring tides when the water course is open to the sea; or (c) in respect of which the salinity is measurably higher as a result of the influence of the sea.

# 2. PURPOSE OF THE PROTOCOL

The National Environmental Management: Integrated Coastal Management Act (Act No. 24 of 2008) ("the ICM Act") which was promulgated in December 2009, requires estuaries of the Republic to be managed in a co-ordinated and efficient manner, in accordance with a National Estuarine Management Protocol ("the Protocol"). Section 33(2) of the ICM Act empowers the Minister responsible for Water and Environmental Affairs to prescribe a National Estuarine Management Protocol that will provide guidance for the management of estuaries through the development of individual estuarine management plans. The plans seek to achieve greater harmony between physical processes and human activities in estuaries by protecting essential estuarine ecological processes and diversity while accommodating orderly and balanced estuarine resource utilization.

More specifically, in terms of section 33 of the ICM Act the purpose of the national estuarine management protocol is to:

- (a) Determine a strategic vision and objectives for achieving effective integrated management of estuaries;
- (b) Set standards for the management of estuaries;
- (c) Establish procedures or provide guidance regarding how estuaries must be managed and how the management responsibilities are to be exercised by different organs of state and other parties;
- (d) Establish minimum requirements for estuarine management plans;
- (e) Identify who must prepare estuarine management plans and the process to be followed in doing so; and
- (f) Specify the process for reviewing estuarine management plans to ensure that they comply with the requirements of this Act.

# 3. STRATEGIC VISION AND OBJECTIVES

# 3.1 VISION

The national vision for estuarine management is as follows:

The estuaries of South Africa are managed in a way that benefits the current and future generations.

## 3.2 OBJECTIVES

In order to recognize and protect the unique environmental, economic, and social aspects of each estuary, it is important to establish strategic objectives. The strategic objectives for effective integrated management of estuaries include:

- 3.2.1 To conserve, manage and enhance sustainable economic and social use without compromising the ecological integrity and functioning of estuarine ecosystems;
- 3.2.2 To maintain and/or restore the ecological integrity of South African estuaries by ensuring that the ecological interactions between adjacent estuaries, between estuaries and their catchments, and between estuaries and other ecosystems, are maintained;
- 3.2.3 To manage estuaries co-operatively through relevant organs of state across all spheres of government; and to engage the private sector and civil society in estuarine management;
- 3.2.5 To protect a representative sample of estuaries (such protection could range from partial protection to full protection) in order to achieve overall estuarine conservation targets as determined by the National Biodiversity Assessment of 2011 and the subsequent updates.
- 3.2.6 To generate awareness, education and training that relate to the importance and value of South African estuaries;
- 3.2.7 To minimize the potential detrimental impacts of predicted climate changes through a precautionary approach to development in and around estuaries and with regard to the utilization of estuarine habitat and resources.

# 4. STANDARDS FOR ESTUARINE MANAGEMENT

Estuarine management should aim at best practice in terms of the use and management of estuaries, based on a sound understanding of their functioning and guided by principles of ecological sustainability and co-

operative governance. A holistic approach is required, in that management has to focus on more than just a broadly defined system, it also needs to consider specific resource sectors and take into account interrelationships between land, rivers and the sea.

Currently, the Department of Water Affairs is responsible for the management of country's water resources (rivers, estuaries, etc.) through implementation of Resource Directed Measures (RDM) which include the classification and setting the Reserve and Resource Quality Objectives for water resources (RQO). The classification system involves a process whereby a water resource is being codified into a Management Class (Class I; II or III). The selection of a Management Class reflects the importance given to protection and development of a given resource. The classification system, thus, provides a framework to be used by all parties in the management and use of water resources. The Protocol will therefore take into consideration a management class that has been assigned to the estuary, for example, "Class I" resources should be prioritized for protection.

To ensure the effective implementation of a strategic vision and objectives, it is important that these translate into meaningful management standards and/or guidelines at a local level. The following management standards are prescribed:

- 4.1 An estuary must be managed according to the allocated management class and the set of both resource quality and quantity attributes. In the absence of the allocated class, an estuary must be managed in its current state and/ or improved state in order to achieve national biodiversity targets as outlined in National Biodiversity Assessment of 2011 and the subsequence updates. The assessment includes a list of national priority estuaries, their current health; recommended extent of protection and degree of undeveloped margins.
- 4.2 An estuary must be managed to avoid, minimize or mitigate significant negative impacts that include but are not limited to reduced water flows and loss of habitat or species. This will require the participation of Departments responsible for utilization of estuarine resources.
- 4.3 Promoting the integration of land use planning and natural resource management outcomes with estuarine management outcomes.
- 4.4 Management actions should be based on sound scientific evidence and, where lacking, the precautionary approach should prevail.

4.5 The adoption of risk management approaches to address issues such climate change and associated impacts, must be promoted.

# 5. RESPONSIBLE AUTHORITY FOR DEVELOPING ESTUARINE MANAGEMENT PLANS

Certain aspects of estuarine management (i.e. water quality and quantity, marine living resources) are managed by different government departments and other organs of state. The Department will play a crucial role in terms of providing strategic guidance for developing estuarine management plans.

Most estuarine systems are contained within the boundaries of a single municipality, and some occur totally or partly within areas that are currently protected or are likely to be protected in future. Local government generally has closer involvement with estuaries than is the case for other spheres of government, and it is local people that usually benefit most from the goods and services that estuaries provide. The Municipal Systems Act (Act No 32 of 2000) requires all municipalities to develop and implement IDPs that promote participation of communities and liaison with other spheres of government. Considering the above and taking into account Sections 33, 34, 45; 47 and 49 of the ICM Act (dealing with the Estuarine Management Protocol, Estuarine Management Plans and Coastal Management Programmes respectively), the following are prescribed in terms of responsibilities for the development of estuarine management plans (EMP's):

- Where an estuary falls entirely within the jurisdiction of a single municipality, the municipality must develop and implement an EMP;
- Where an estuary falls within the jurisdiction of more than one local municipality, the district municipality in consultation with the affected local municipalities must develop and implement the EMP. The district municipality may in writing agree with the relevant local municipality/ies that the latter shall be responsible for developing and implementing the EMP. Copies of such agreements must be submitted to the relevant provincial environmental department for integrated coastal management within 30 days of them being concluded;
- 5.3 Where an estuary crosses the boundaries between provinces, the Department, in consultation with the provincial Lead Agencies for ICM, must develop and implement the EMP;
- 5.4 Where an estuary falls entirely within a protected area or World Heritage Site, the management authority mandated to manage the area must develop the EMP;
- 5.5 Where an estuary is adjacent to a protected area, and/or an estuary is identified for protection as part of any future protected area expansion, the management authority responsible for the protected area should, in consultation with the affected municipality, develop and implement the EMP;

- 5.6 Where an estuary falls within the jurisdiction of more than one district municipality, the provincial environmental department shall, in consultation with the affected district municipalities, develop and implement the EMP;
- 5.7 Where an estuary is in a proclaimed harbor or port, the Department, after consultation with the NPA or other managing organ of state for a port or harbour and relevant municipalities, must develop and implement the EMP;
- The Department shall be responsible for developing and implementing an EMP for the following estuaries that are of national and/or international significance (i.e Ramsar sites): Heuningness, Kosi Bay, Orange, St Lucia, Verlorenvlei, Swartkops and Tsitsikama.

Key to the success of each estuarine management plan will be the commitment from all spheres of government in order to ensure development and implementation of management plans. To promote the successful development and implementation of estuarine management plans:

- (a) The Provincial Lead Agencies for the ICM Act must as part of coastal management programme identify a priority list of estuaries within the Province that need conservation and effective management. This should include a schedule of municipalities that should develop these EMPs and their capacity to do so.
- (b) The Provincial Lead Agency must inform the Department about the capacity needs of the municipality in order to develop and implement such priority EMPs.
- (c) The Department may provide technical, management support to capacitate the municipality when such need arises. This will also depend on the importance of that particular estuary in meeting biodiversity targets and the strategic objectives of the Department.
- (d) The identified responsible authority to develop the EMP needs to budget accordingly for the development and implementation of these plans

# 6. MINIMUM REQUIREMENTS FOR ESTUARINE MANAGEMENT PLANS

Although each plan will have specific and differing targets and indicators, the following components shall be included in all EMPs:

- An executive summary of the Situation Assessment Report (SAR) that highlights the key information that would inform and/or influence the management decisions within the estuary;
- 6.2 A geographical description of the estuary with spatial references, clearly identifying the boundaries of the system including the landward boundary within the current limits of the coastal zone as determined in the ICM Act:

- 6.3 The local vision and management objectives that give effect to the strategic vision and objectives of the protocol;
- 6.4 Stipulation of the *reserve* for water quantity and quality and the classification of water resource into the Management Class if this has been determined for an estuary, as required under the National Water Act (Act No. 36 of 1998). If such a reserve has not been determined the EMP shall contain a strategy for engaging with the DWA to determine a reserve.
- 6.5 A detailed integrated monitoring plan (covering compliance, research and baseline monitoring to determine the effectiveness of the EMP), including details of responsibilities and the frequency of monitoring.
- Details of intended spatial zonation of the estuary specifying activities that may or may not take place in different sections of the estuary, and indicating:
  - (a) which organs of state will need to be consulted given the type of zonation that is proposed; and
  - (b) which organs of state will need to enact the relevant laws to implement the proposed zonation (for example if a no-fishing zone is proposed then either DAFF or the Department will be required to consider declaring a closed area or an MPA under the MLRA, respectively);
- 6.7 A list of management objectives and activities, that, at minimum addresses the following: conservation, social issues, land-use and infrastructure development, water quality and quantity, exploitation of living resources, and any other activities that will be required to maintain and or improve the condition of the estuary.;
- 6.8 A list of performance indicators for gauging progress with respect to achieving the objectives of the EMP; and
- 6.9 Details of the institutional capacity and arrangement required for managing different elements of the EMP, taking into account different departmental mandates

Where possible, the EMP must be in line with the National Coastal Management Programme, Provincial Coastal Management Programme and/or Municipal Coastal Management Programme.

# 7. PROCEDURE FOR DEVELOPING AN ESTUARINE MANAGEMENT PLAN

The development of estuarine management plans should follow three (3) step process that involves a scoping phase, an objective setting phase and an implementation phase.

# 7.1 SCOPING PHASE

This phase involves collating and evaluating available information about the estuary that can assist with establishing the status of the estuary and inform management planning. Generally, such information is available in the form of maps and reports from various government agencies and research institutions. It is imperative that local knowledge is considered during this phase. The information should be collated in the form of a Situation Assessment Report (SAR). At minimum, the SAR must:

- 7.1.1 Describe legislative instruments that are currently applicable to the effective management of the estuary, including existing and planned management strategies/plans (i.e. catchment management strategies, IDP, SDF, Coastal Management Programmes etc), and their relevance to the proposed management or the development of an EMP;
- 7.1.2 Identify the current management arrangements (if any) for the estuary, assess their strengths and weaknesses, and, considering these, propose effective governance arrangements within the ambit of existing legislation and mandates that are in line with the strategic vision and objectives stipulated in the Protocol;
- 7.1.3 Specify the reserve for the estuary if it has been determined (or identify the need for determining a reserve) and estimate the present ecological state of the estuary where possible. This should be done by using the Estuarine Health Index as applied in Ecological Water Requirement Studies Department of Water Affairs and Forestry, 2008. This is a standardized approach for estimating the degree of modification of an estuary from its reference state to present;
- 7.1.4 Provide a detailed understanding of the structure (abiotic and biotic components), functioning and state of the estuary, including the underlying processes and drivers;
- 7.1.5 Identify the goods and services or human use activities and their impacts or potential impacts on the ecological state of the estuary.
- 7.1.6 Describe in a socio-economic context (demographic, economic profile etc) the level/s of dependence of local communities on the estuary. This will include assessment of the opportunities and constraints within the ecological system (including potential carrying capacity for activities), taking into account its current and recommended ecological state and limits of acceptable change where available.

The SAR will be compiled from existing data and should highlight any major information gaps. The draft SAR should be made available to all interested and affected parties for comment.

# 7.2 OBJECTIVE SETTING PHASE

The SAR provides a good basis for setting a realistic and achievable vision and list of objectives for a particular system based on limits of acceptable change and carrying capacity, current/potential goods and services provided by the estuary, current/potential threats, and opportunities and constraints that the socio-

ecological system provides. The objectives should generally be qualitative\_statements of the values defined in the local vision. The objectives should consider among others:

- (a) the conservation and utilization of living resources (taking into account the priority conservation list of estuaries identified in the National Biodiversity Assessment of 2011 and subsequent updates.);
- (b) management of water quality and quantity;
- (c) land use and infrastructure planning;
- (d) climate change;
- (e) education and awareness; and
- (f) compliance and enforcement

The local vision and objectives must be aligned with the strategic vision and objectives of the Protocol. This must be demonstrated by stating the relevant strategic objectives of the Protocol that are relevant to the estuary, together with the related local objective/s that will give them effect.

# 7.3 IMPLEMENTATION PHASE

- 7.3.1 For implementation, a range of options for management actions should be identified in order to achieve the objectives. These management actions, which shall be translated into project plans by the responsible authority, should at minimum address the following key sectors:
  - (a) the conservation and utilization of living resources (taking into account the priority conservation list of estuaries identified in the National Biodiversity Assessment, 2011 and subsequent updates.);
  - (b) management of water quality and quantity;
  - (c) land use and infrastructure planning;
  - (d) climate change;
  - (e) education and awareness; and
  - (f) compliance and enforcement

Projects need to be prioritized and must include:

- (a) a monitoring plan (including key indicators) to measure effectiveness of actions;
- (b) a work plan (schedule) specifying when each action will be carried out and by whom; and
- (c) a resource plan (staff and finances) required to carry out the above.

# 7.3.2 Public Participation

A vital part of the process of developing EMPs is stakeholder involvement in the above 3 phases. This requires that stakeholders are educated about the estuary and to have an adequate understanding of the opportunities and constraints within which a particular estuary can operate as a multifunctional ecological system. Each estuarine management plan must therefore be subject to a public participation process as required by section 53 of the ICM Act.

The effective implementation of an EMP will require the assistance and cooperation of all spheres of government and multiple organs of state. To ensure integration and effective implementation, co-operative governance including the passing of relevant new laws by organs of state may be required in some cases. This could for example include adjusting the boundaries of the CPZ (a function of an MEC) or protecting particular species in an estuary. It is therefore essential that prior to the publication of an EMP for public comment, the responsible authority must identify all interested and affected organs of state (as provided for in section 53(1)(a) of the ICM Act) and engage with them concerning the proposed EMP and the obligations that it may impose on them.

A register including the names and addresses of all persons who submitted written comments or attended meetings during the public participation process shall be compiled. A comments and response report shall be prepared and made available to all participants after the public participation process.

## 7.3.3 Approval and Adoption

Once the responsible authority has given due consideration to any comments received during the public participation process, it must obtain formal approval for the EMP as follows:

- (a) Where an EMP has been developed by provincial conservation agencies, or a local and/or district municipality, the MEC of the relevant Provincial environmental department shall approve the EMP;
- (b) Where an EMP has been developed by the provincial environmental department or the national conservation agency, the Minister of the national department shall approve the EMP;
- (c) The relevant approval authority must acknowledge receipt of the draft EMP within 21 days of receiving such request for approval.
- (d) Within 90 days of the acknowledgement of receipt, the relevant approval authority shall conduct a technical review of the EMP to determine whether it meets the requirements of the Protocol and other relevant sections of the ICM Act including section 52.

Once approved the EMP shall be formally adopted by the responsible authority and signed by the head of the responsible authority. For effective implementation of an adopted EMP on the local scale, the following is prescribed:

- (a) Where an EMP has been developed by a municipality, it may officially be incorporated into the broader Municipal Coastal Management programme as prescribed in section 49 of ICM Act or as part of IDPs as required by the Municipal Systems Act, 2000 (No. 32 of 2000).
- (b) Where an EMP has been developed by the provincial environmental department or provincial conservation agency, the EMP may be incorporated into the Provincial Coastal Management Programme.
- (c) Where an EMP has been developed by the Department, the EMP may be incorporated into the National Coastal Management Programme.

The Provincial and Municipal coastal committees shall serve as the forums for monitoring the implementation of EMPs and reporting on progress and achievements related to estuarine management.

# 8. REVIEW OF ESTUARINE MANAGEMENT PLANS

It will be necessary to monitor outcomes to ensure that the EMP is achieving its objectives and targets. Generally, monitoring involves ongoing "baseline monitoring" to measure the general health of the estuary and "event monitoring" to record impacts of human activities and whether they comply with legislation, or monitoring of the impacts of natural events.

It is also necessary to review monitoring data to assess effectiveness of the EMP in meeting its management targets. EMPs must be reviewed at least every 5 years from the date they are adopted, but may also be reviewed at any other time. Such review shall include assessment of:

- (a) The effectiveness of the EMP and success with meeting its objectives, taking into consideration information from monitoring during the preceding years;
- (b) Environmental changes (if any) at a local or a wider scale that could affect the estuarine resources or the implementation of the EMP; or
- (c) Changes (if any) to legislation, land-use planning, goals or policies that may require the EMP to be amended.

Based on these findings, it may be necessary to amend an EMP, even to the extent of revising its objectives. Following such review, the responsible authority shall either modify or re-endorse the EMP and shall engage in public participation in terms of section 53 of the ICM Act, before the amended EMP can be approved in terms of the approval process outlined above in paragraph 6.3.3.

# 9. INSTITUTIONAL STRUCTURES AND ARRANGEMENTS

Effective institutional structures and arrangements are crucial support elements for the successful implementation and co-ordination of actions in terms of the Protocol and the subsequent estuary management plans. No new institutional arrangements are proposed by the Protocol. Chapter 5 of the ICM Act details the institutional arrangements that would, once implemented, contribute to co-operative coastal governance in South Africa. These arrangements are made at national, provincial and municipal levels and the embodiment of co-operative coastal governance is vested in coastal committees. Section 25, 39 and 42 of the ICM Act deal with the establishment and functions of the National, Provincial and Municipal coastal committees respectively. The Provincial and Municipal coastal committees shall serve as the forums for monitoring the implementation of EMPs and reporting of progress and achievements related to estuarine management. The existing and/or planned individual estuary forums can be regarded as additional advisory bodies for facilitating the implementation of the action plans identified in the EMPs and to foster continuous stakeholder engagement.