(8 - 9 June 2009)

Prepared by:
CSIR
Natural Resources and the Environment
Stellenbosch

Prepared for:
C.A.P.E. Estuaries Programme

Date:
November 2009
Our strategic vision for the estuaries in the Cape Floristic Region is:

Our estuaries are beautiful, rich in plants and animals, they attract visitors, sustain our livelihoods and uplift our spirits.


Prepared by:
Susan Taljaard and Lara van Niekerk
CSIR, Natural Resources and the Environment
PO Box 320
Stellenbosch
7599

Tel: +27 21 888-2400
Fax: +27 21 888-2693

Email: staljaar@csir.co.za
lvnieker@csir.co.za

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# Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTENT</td>
<td></td>
<td>i</td>
</tr>
<tr>
<td></td>
<td>Abbreviations and Acronyms</td>
<td>ii</td>
</tr>
<tr>
<td></td>
<td>Acknowledgements</td>
<td>iii</td>
</tr>
<tr>
<td></td>
<td>Documents in Series</td>
<td>v</td>
</tr>
<tr>
<td><strong>SECTION 1: WORKSHOP OBJECTIVES</strong></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1.1</td>
<td>Introduction</td>
<td>2</td>
</tr>
<tr>
<td>1.2</td>
<td>Purpose of Workshop</td>
<td>3</td>
</tr>
<tr>
<td><strong>SECTION 2: BOUNDARIES OF ESTUARIES FOR PLANNING</strong></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><strong>SECTION 3: EVALUATION OF GENERIC FRAMEWORK FOR ESTUARY MANAGEMENT PLANS</strong></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>3.1</td>
<td>Situation Assessment</td>
<td>10</td>
</tr>
<tr>
<td>3.2</td>
<td>Vision and Strategic Objectives</td>
<td>12</td>
</tr>
<tr>
<td>3.3</td>
<td>Management Strategies</td>
<td>12</td>
</tr>
<tr>
<td>3.4</td>
<td>Estuary Zonation Plans and Operational Objectives</td>
<td>12</td>
</tr>
<tr>
<td>3.5</td>
<td>Management Action Plans</td>
<td>13</td>
</tr>
<tr>
<td>3.6</td>
<td>Implementation &amp; Monitoring</td>
<td>14</td>
</tr>
<tr>
<td>3.7</td>
<td>Estuary Forum</td>
<td>14</td>
</tr>
<tr>
<td><strong>SECTION 4: REVIEW OF DRAFT ESTUARY MANAGEMENT PLANS</strong></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>4.1</td>
<td>Review Criteria</td>
<td>16</td>
</tr>
<tr>
<td>4.2</td>
<td>Olifants EMP</td>
<td>17</td>
</tr>
<tr>
<td>4.3</td>
<td>Klein EMP</td>
<td>20</td>
</tr>
<tr>
<td>4.4</td>
<td>Heuningnes EMP</td>
<td>23</td>
</tr>
<tr>
<td>4.5</td>
<td>Breede EMP</td>
<td>26</td>
</tr>
<tr>
<td>4.6</td>
<td>Knysna EMP</td>
<td>29</td>
</tr>
<tr>
<td>4.7</td>
<td>Gamtoos EMP</td>
<td>32</td>
</tr>
<tr>
<td><strong>SECTION 5: FUTURE OF ESTUARY MANAGEMENT PLANS</strong></td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>5.1</td>
<td>Future Review Process</td>
<td>37</td>
</tr>
<tr>
<td>5.2</td>
<td>Budgets and Funding Models</td>
<td>38</td>
</tr>
<tr>
<td>5.3</td>
<td>Development of Estuary Health Monitoring Programme</td>
<td>39</td>
</tr>
<tr>
<td><strong>REFERENCES</strong></td>
<td></td>
<td>40</td>
</tr>
<tr>
<td><strong>APPENDIX A: WORKSHOP AGENDA &amp; WORKSHOP PARTICIPANTS</strong></td>
<td></td>
<td>42</td>
</tr>
<tr>
<td><strong>APPENDIX B: EVALUATION OF THE GENERIC EMP (QUESTIONNAIRES COMPLETED BY CONSULTANTS)</strong></td>
<td></td>
<td>45</td>
</tr>
<tr>
<td><strong>APPENDIX C: RECORD OF STAKEHOLDER COMMENTS AT WORKSHOP</strong></td>
<td></td>
<td>58</td>
</tr>
</tbody>
</table>
## Abbreviations and Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.A.P.E.</td>
<td>Cape Action Plan for the People and the Environment</td>
</tr>
<tr>
<td>CapeNature</td>
<td>Western Cape Nature Conservation Board</td>
</tr>
<tr>
<td>CERM</td>
<td>Consortium for Estuarine Research and Management</td>
</tr>
<tr>
<td>CFR</td>
<td>Cape Floristic Region</td>
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<tr>
<td>CMA</td>
<td>Catchment Management Agency</td>
</tr>
<tr>
<td>CMS</td>
<td>Catchment Management Strategies</td>
</tr>
<tr>
<td>DEAT</td>
<td>Department of Environmental Affairs and Tourism</td>
</tr>
<tr>
<td>DWAF</td>
<td>Department of Water Affairs and Forestry</td>
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<tr>
<td>EAWG</td>
<td>Estuarine Advisory Working Group</td>
</tr>
<tr>
<td>ECA</td>
<td>Estuarine Conservation Area</td>
</tr>
<tr>
<td>EFR</td>
<td>Ecological Flow Requirement</td>
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<td>EMP</td>
<td>Estuary Management Plan</td>
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<td>EPA</td>
<td>Estuarine Protected Area</td>
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<tr>
<td>EZP</td>
<td>Estuary Zonation Plan</td>
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<td>GEF</td>
<td>Global Environmental Facility</td>
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<td>ICARM</td>
<td>Integrated Coastal Area and River Basin Management</td>
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<td>ICM</td>
<td>Integrated Catchment Management</td>
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<td>ICZM</td>
<td>Integrated Coastal Zone Management</td>
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<tr>
<td>IDP</td>
<td>Integrated Development Plan</td>
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<tr>
<td>LMP</td>
<td>Linefish Management Protocol</td>
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<td>LUM</td>
<td>Land Use Management</td>
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<td>MAG</td>
<td>Management Advisory Group</td>
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<td>MAP</td>
<td>Management Action Plans</td>
</tr>
<tr>
<td>MCM</td>
<td>Branch: Marine and Coastal Management, Department of Environmental Affairs and Tourism</td>
</tr>
<tr>
<td>MLRA</td>
<td>Marine Living Resources Act (No. 18 of 1998)</td>
</tr>
<tr>
<td>MoU</td>
<td>Memorandum of Understanding</td>
</tr>
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<td>MPA</td>
<td>Marine Protected Area</td>
</tr>
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<td>NEMA</td>
<td>National Environmental Management Act (No. 107 of 1998)</td>
</tr>
<tr>
<td>NEMP</td>
<td>National Estuarine Management Protocol</td>
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<tr>
<td>NEWG</td>
<td>National Estuarine Working Group</td>
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<tr>
<td>NGO</td>
<td>Non-governmental Organisation</td>
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<tr>
<td>NPA</td>
<td>National Port Authority</td>
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<tr>
<td>NSBA</td>
<td>National Spatial Biodiversity Assessment</td>
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<tr>
<td>NWA</td>
<td>National Water Act (No. 36 of 1998)</td>
</tr>
<tr>
<td>NWRS</td>
<td>National Water Resources Strategies</td>
</tr>
<tr>
<td>RDM</td>
<td>Resource Directed Measures</td>
</tr>
<tr>
<td>RQO</td>
<td>Resource Quality Objectives</td>
</tr>
<tr>
<td>SANParks</td>
<td>South African National Parks</td>
</tr>
<tr>
<td>SDF</td>
<td>Spatial Development Framework</td>
</tr>
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<td>SEA</td>
<td>Strategic Environmental Assessments</td>
</tr>
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<td>SoE</td>
<td>State of the Environment</td>
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<td>WG</td>
<td>Working Group</td>
</tr>
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<td>WSDP</td>
<td>Water Services Development Plan</td>
</tr>
<tr>
<td>WUA</td>
<td>Water User Association</td>
</tr>
</tbody>
</table>
Acknowledgements

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**Project team:**
- Lara van Niekerk - CSIR (Project leader and Main Author)
- Susan Taljaard - CSIR

**C.A.P.E. Estuaries Task Team:**
- Dr Alan Boyd – MCM, DEAT
- Barbara Weston – DWAF
- Pierre de Villiers – C.A.P.E. Estuaries Programme Coordinator

**C.A.P.E. Estuaries Working Group:**
- Lara van Niekerk (Chair) - CSIR
- Peet Joubert – SANParks
- Jean du Plessis – CapeNature
- Dr Steven Lamberth – MCM, DEAT
- Dr Jane Turpie – Anchor Environmental Consultants
- Prof Janine/Dr Tommy Bornman – Nelson Mandela Metropolitan University (NMMU)
- Prof Tris Wooldridge/Mr S Deyzel – NMMU
- Ayanda Matoli – MCM, DEAT
- Wilna Kloppers - DWAF

**Workshop Participants and other Key Stakeholders:**
- Prof Tris Wooldridge - NMMU
- Steven Lamberth – DEA: Marine and Coastal Management
- Prof Janine Adams – NMMU
- Ayanda Matoli – DEA: MCM
- Dr Alan Boyd – DEA: MCM
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- Celesté Lesch – DEADP : Pollution Management
- Ludwe Sinuka – DEADP : Pollution Management
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Documents in Series

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>C.A.P.E. Estuaries Programme: The health status, conservation importance and economic value of Temperate South African estuaries and development of a regional conservation plan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C.A.P.E. ESTUARIES GUIDELINES</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Legislation pertaining to the Management of Environmental threats within estuaries</td>
</tr>
<tr>
<td>2</td>
<td>Guidelines for Sustainable Tourism in Estuaries of the Cape Floristic Region</td>
</tr>
<tr>
<td>3</td>
<td>Collection of Bait Organisms in Estuaries</td>
</tr>
<tr>
<td>4</td>
<td>Preliminary Zoning of the Human Use of C.A.P.E. Estuaries Based on Sensitivity Mapping and Carrying Capacity</td>
</tr>
<tr>
<td>5</td>
<td>Guidelines on promoting appropriate Water Quantity and Quality Management in Estuaries</td>
</tr>
<tr>
<td>6</td>
<td>Monitoring Programmes for implementation in South African Estuaries</td>
</tr>
<tr>
<td>7</td>
<td>Sustainable Fishing in Estuaries</td>
</tr>
<tr>
<td>8</td>
<td>Generating Education and Awareness of Estuaries in the Cape Floristic Region</td>
</tr>
<tr>
<td>9</td>
<td>Maximising the Economic Value of Estuaries</td>
</tr>
</tbody>
</table>
Section 1:
Workshop Objectives
### 1.1 Introduction

The C.A.P.E. Estuaries Programme was established to ensure the conservation and sustainable utilisation of the estuarine biodiversity in the Cape Floristic Region (CFR). The Programme follows a strategic, integrated approach to estuarine management. Cooperative governance is seen as a key requirement for the success of the project. To this end the proposed National Estuarine Management Protocol (NEMP) (under the National Environmental Management: Integrated Coastal Management Act 24 of 2008) aims at establishing broad alignment in estuarine management on a regional scale.

To pilot-test this strategic concept the C.A.P.E. Estuaries Programme was designed in accordance with the guidelines of the proposed NEMP. The comprehensive C.A.P.E. Estuaries Programme is the first of its kind in South Africa, perhaps internationally, and will be a test case for the incorporation of strategic decision-making into estuarine management.

#### Need for Integrated Estuarine Management:

<table>
<thead>
<tr>
<th>Estuaries constitute the interface between land and sea. They form a critical node in the overall planning process, which implies that conservation, development and water-resources planning need to take cognisance of their needs to ensure a sustainable future for all that depend on their goods and services. The most fundamental pitfall in achieving sustainable utilisation and resource protection is the fragmentation of estuarine management among the different national, provincial and local-government agencies.</th>
</tr>
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<tr>
<td>The National Environmental Management: Integrated Coastal Management Act (No 24 of 2008) explicitly states the requirement for a NEMP and individual EMPS. It is therefore anticipated that the generic framework for the development of an EMP, after further refinement, will eventually be embedded within this legislation and/or its supporting regulations. Furthermore, for the effective implementation of EMPS on the local level, these must also be officially incorporated into district and/or local integrated development plans (IDPs), a requirement under the Local Government: Municipal Systems Act (No. 32 of 2000).</td>
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The C.A.P.E. Estuaries Programme follows a phased approach. Phase I (2005 to 2009) focussed on the design and testing of the process delineated by the proposed NEMP in a number of pilot estuaries in the CFR. Phase II (2009 to 2014) will extend the Programme to include the more complex estuaries (from a management perspective) in the region. Phase III (2015 to 2020) will extend the Programme to all the remaining estuaries within the CFR.

Guiding the process is the strategic vision for estuaries in the CFR (CSIR, 2006):

*Our estuaries are beautiful, rich in plants and animals they attract visitors, sustain our livelihoods and uplift our spirits.*

This vision translates into a formal statement that reads as follows:

*The estuaries of the CFR sustain our spiritual and economic well-being through their biophysical attributes and production of goods and services, which are made possible by the maintenance of their biodiversity and ecosystem functions (integrity).*

The formal vision was developed to highlight to the scientists and managers of the CFR the aspects of our estuaries that we deemed important and to communicate these to the larger scientific community and funding bodies. The key aspects highlighted in the strategic vision of the CFR estuaries should be foremost in the minds of the stakeholders (local communities, authorities, town planners etc.) that are tasked with drafting the individual EMPS.
To assist with the preparation of individual estuary management plans (EMPs), the C.A.P.E Estuaries Programme developed a generic framework for EMPs (CSIR, 2007), as well as a series of guidelines documents that included:

- **Guideline 1:** Legislation pertaining to Management of Environmental Threats within Estuaries
- **Guideline 2:** Sustainable Tourism in Estuaries of the Cape Floristic Region
- **Guideline 3:** Collection of bait organisms in estuaries
- **Guideline 4:** Preliminary zoning of human use of C.A.P.E. Estuaries based on sensitivity mapping and carrying capacity
- **Guideline 5:** Promoting appropriate Water Quantity & Quality Management in Estuaries
- **Guideline 6:** Monitoring programmes for implementation in South African estuaries
- **Guideline 7:** Sustainable fishing in estuaries
- **Guideline 8:** Generating Education and Awareness of the Estuaries in the Cape Floristic Region
- **Guideline 9:** Maximising the economic value of estuaries

The documents can be accessed on [http://fred.csir.co.za/extra/project/CAPE_Estuaries/](http://fred.csir.co.za/extra/project/CAPE_Estuaries/).

To test the applicability of the generic framework for EMPs, the C.A.P.E Estuaries Programme commissioned six pilot studies on the following estuaries that commenced in 2007:

- Olifants;
- Klein;
- Heuningnes;
- Breede;
- Knysna; and
- Gamtoos.

To date Situation Assessments have been completed and draft EMPs have been developed for each of these estuaries by appointed consultants. As per the original plan, progress on the above had to be evaluated after about two years in order to identify key successes and learning points.

### 1.2 Purpose of Workshop

This purpose of the Workshop of 8 and 9 June 2009 was to convene the consultants that undertook the pilot studies and other key stakeholders discuss the following:

- Boundaries of estuaries (as relevant to EMPs);
- Review of generic framework for the development of individual EMPs;
- Review of draft EMPs of the six pilot estuaries;
- Future of EMPs (e.g. review process and funding models).

The agenda for the workshop is provided in Appendix A.

Learning from this evaluation process had to be communicated to local authorities and stakeholders involved in these types of processes. Furthermore, recommendations for future revisions to the generic framework for EMP had to be distilled. In this way the framework remains a “living” document to which all stakeholders can contribute as and when new information become available.

The outcome and decisions of the workshop on the above topics is presented in the following sections.
Section 2:

Boundaries of Estuaries for Planning
It is very important for any environmental management plan that the boundaries of the area to be managed are agreed upon and clearly demarcated.

In international scientific literature, an estuary is defined as “a semi-enclosed coastal body of water which has a free connection with the open sea and within which sea water is measurably diluted with fresh water derived from land” (Cameron & Pritchard 1963, Pritchard 1967).


“In South African an estuary is considered to be that portion of a river system which has, or can from time to time have, contact with the sea. Hence, during floods an estuary can become a river mouth with no seawater entering the formerly estuarine area. Conversely, when there is little or no fluvial input an estuary can be isolated from the sea by a sandbar and become a lagoon which may become fresh, or hypersaline, or even completely dry.”

In South Africa there are numerous Acts that govern the management and control of one or more aspects of estuaries and that are administered by different authorities. Each of these pieces of legislation interprets the definition of an estuary different which results in the different acts defining the boundaries of estuaries differently, as illustrated below:

<table>
<thead>
<tr>
<th>LEGISLATION</th>
<th>PROPOSED BOUNDARIES</th>
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<tbody>
<tr>
<td>National Water Act (No. 36 of 1998)</td>
<td>1:50 year flood line or 5 m MSL contour as defined under the RDM methods</td>
</tr>
<tr>
<td>National Environmental Management: Integrated Coastal Management (ICM) Act (No. 24 of 2008)</td>
<td>1000 m Coastal protection zone in Rural areas or 100 m Coastal protection zone in urban areas</td>
</tr>
<tr>
<td>National Environmental Management Act (1998), GN 386</td>
<td>1: 10 year flood line or within 32 m from the bank of a river or stream where flood line is unknown or 100 m from the high water mark of the sea</td>
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With the exception of the ICM Act 2008 (that allows for significant rural coastal protection zone), these acts exclude large parts of estuaries from their definitions, which left important estuarine habitats such as saltmarshes and floodplain vulnerable to uncontrolled development. Analyses of the zonation maps for the Heaningnes, Olfants, Gamtoos and Knysna clearly showed this deficiency in the current legislation.

At present the Methods for the ecological water requirements of estuaries developed under the National Water Act 1998 (RSA DWAF, 2008) best define the default ecological boundaries of an estuary that are also fairly easy to administer, recognising that there may be exceptions. The method defines the boundaries as follows:

- **Seaward boundary:** Estuary mouth (although there are systems where the “estuary” often expands to the nearshore marine environment and where this boundary definition may need to be reconsidered in future).
- **Upper boundary:** Extent of tidal influence, i.e. the point up to which tidal variation in
water levels can still be detected or the extent of saline intrusion, whichever is furthest upstream.

- Lateral boundaries along the banks: The 5 m above MSL contour.

The core (or geographical) boundary of an estuary is defined as the core planning area of an EMP from a spatial-planning perspective. The default core boundary for estuaries should therefore not just include open water areas but also the surrounding supporting landscape up to the 5 m MSL contour. The 5 m MSL contour holds the following planning advantages:

- The 5 m MSL contour is available from Chief Directorate: Surveys & Mapping, Mowbray, as a GIS layer or on black-and-white 1:10 000 orthographic maps
- The 5 m MSL contour includes all floodplain and estuarine vegetation as all estuarine-associated biota occur under the 5 m MSL contour, as this is as far as the influence of the ocean can be detected on land
- In most cases, the 5 m MSL contour allows for the inclusion of a buffer zone of terrestrial vegetation that represents the transition between terrestrial and coastal ecosystems
- Temporarily open closed estuaries can close at levels of between 2.5 and 3.5 m MSL
- The 5 m MSL contour allows for water-level increases due to back-flooding or wind action in most systems in the absence of 1:50 or 1:100 year flood lines
- The contour provides a buffer zone that can allow an estuary to retreat in the future in the event of sea-level rise due to climate change
- An accurate delineation of the high-water mark is not available for the entire South African coastline
- The 5 m MSL contour defines the assessment boundaries of Ecological Water Requirement determinations done under the NWA 1998
- The 5 m MSL contour is the default ecosystem boundary been used in the National Spatial Biodiversity Assessment and will therefore align the EMP with other planning initiatives.

Exceptions to this default core boundary definition are estuaries that occur in steep river valleys, such as the systems along the Tsitsikamma coast, the Wild Coast and KwaZulu-Natal. In such cases, planners are advised to follow a more inclusive approach and define a 500 m buffer zone from the high-water mark to delineate the core estuarine space.

An EMP must be drafted from the perspective of the ecological boundaries of the system. The review of the six pilot EMPs clearly showed that the legal boundaries did not protect the estuarine ecosystem sufficiently. Therefore the EMP must motivate for the correct ecosystem boundary and challenge the legal boundary if not is not sufficient for resource protection. This is an opportunity to address deficiencies in the legal system. This aspect should also be revisited in the National Estuarine Management Protocol and regulation flowing forth from it.

In addition to core boundary, a secondary (or planning) boundary should be identified that includes all development and activities in an area that may have a footprint in an estuary.

The following are proposed criteria for the selection of secondary boundaries:

- Catchment boundary;
- Development areas (residential, commercial and industrial) from which runoff and waste drain into the estuary;
• Development areas from where human disturbances affect the estuary, such as resorts and coastal residential developments and

• “Sense of place”: Estuaries provide communities with both tangible and intangible goods. Therefore, activities or developments that can reduce the value that a community attaches to the scenic beauty or spiritual well-being provided by an estuary should also be considered. The C.A.P.E. Estuaries vision clearly highlights the importance that the region places on these intangible benefits. For example, in some instances, local communities have indicated that planning boundaries should include the skyline so that planning in and around individual estuaries can be harmonised.

Specific recommendations related to the boundaries of estuaries were as follows:

• There was agreement that the +5 m MSL contour is an acceptable default benchmark for the core (or geographical) boundaries of an estuary (although there may be exceptions, e.g. estuaries occurring in steep river valleys). It is easily identifiable and more acceptable than the high water mark (a typical benchmark used to define boundaries in the coastal environment) that often excludes essential estuarine habitats.

• Following on the above, it was strongly recommended that the administrative definition (including geographical boundaries) of estuaries be confirmed and standardised across the different legislation and that this definition should be inclusive of all important estuarine habitats, including supra-tidal habitats (e.g. salt marsh and other flood plain habitats).

• Trained surveyors should be used to accurately determine these boundaries on a national scale and these should be gazetted, following pre-determined criteria. Participants strongly recommended that this issue be addressed by a working group comprising Department of Water Affairs (DWA), Department of Environmental Affairs (DEA) and the South African National Biodiversity institute (SANBI), the South African Environmental Observation network (SAEON) and estuarine ecological specialists.

• Where possible, the secondary boundary of an estuary should extend to the catchment, the most inclusive boundary. Here it is especially important that the secondary boundaries of the core set of estuaries earmarked for inclusion in the Biodiversity Conservation Network be well defined, as soon as possible, to be able to effectively control any development that may jeopardise the protection status of these systems.
Section 3:
Evaluation of Generic Framework for Estuary Management Plans
One of the aims of the workshop was to obtained feed-back and constructive criticism on the proposed generic framework for the development of individual EMPs (Figure 1), particularly from the team of consultants that were responsible for the development of EMPs on the pilot estuaries and already had experience in the application thereof.

![Diagram of the proposed generic framework](http://fred.csir.co.za/extra/project/CAPE_Estuaries/)

**Figure 1:** Proposed generic framework for the development and implementation of EMPs

In order to provide structure to this process, a questionnaire was prepared which each of the consultants had to complete. Completed questionnaires were received for four of the six consultants and are provided in Appendix B. This section summarises the feed-back received from the consultants as well as other workshop participants on the generic framework.

As illustrated in Figure 1, the generic framework consists of seven key components, namely:

- Situation Assessment and Evaluation;
- The setting of a Vision and Strategic objectives;
- The evaluation of Management Strategies to achieve the vision and objectives;
- The preparation of an Estuary Zonation Plan (EZP) and the establishment of Operational Objectives;
- The identification of Management Action Plans (MAPs);
- The Implementation of the MAPs; and
- Monitoring

Overarching to the above is the establishment of the local institution or Estuary forum.

The intension of this generic framework is to provide a structured approach for managing the wide range of activities and actions that occur within estuaries and their environs. To this end the documentation that was developed by the C.A.P.E Estuaries Programme to provide guidance in the application of this framework is fairly comprehensive (refer to http://fred.csir.co.za/extra/project/CAPE_Estuaries/). It is therefore possible that all the listed information requirements may not be available or the study/analysis of these components may be too costly to address when the process of developing an EMP is embarked on for the first time. However, the lack of such data and information should not be seen as a major constraint in the development and implementation of the framework. Following an adaptive
management approach, components within the framework should be addressed as comprehensively as possible with the available information and local expertise ("Do what you can and improve as you go along"). Refinement to the EMP can be made as and when information becomes available. Participants of the process should understand that this is a phased approach and a "living process" aiming at continued refinement.

General recommendations on the EMP process were as follows:

The need for appropriate tools to assist with the development of EMPs (especially the situation assessment) in a data poor environment was identified, for example, the development of a cause-effect type checklist. The inclusion of practical examples and information boxes in the guideline documentation will also be useful. Further, the minimum requirements for EMPs need to be articulated in alignment with relevant legislation such as the NWA 1998 and ICM Act 2008. The National Estuarine Management Protocol, required under the ICM Act 2008, needs to very clearly articulate such minimum requirements as such requirements are not explicit in other (existing) legislation and regulation pertaining to management of estuaries.

Workshop participants also stressed the importance of documenting the stakeholder participation process (who-when-where) in the EMP report as a specific section – this is critical information that give legitimacy (or not) to the process. Also, the earlier this participation occurs in the EMP development process the better.

Even though the roll-out process for EMPs appears to be well on its way at various levels of success and the pilot studies made a good effort to identify possible integration of national, provincial and local planning initiatives, it is strongly recommended that the broader national and/or regional legislation and guidelines be further developed to ensure alignment and effective implementation of EMPs down to local level. Also use of the guideline documentation (refer to http://fred.csir.co.za/extra/project/CAPE_Estuaries/) is important and its value and importance should be stressed (in future EMP developments).

It was also recommended that the C.A.P.E. Estuaries Programme be continued in its existing form utilising the co-operative governance approach and maintaining a central coordinating unit with a coordinator and project manager. The programme management had been successful and should continue.

### 3.1 Situation Assessment

The lack of information was identified as one of the main issues in the pilot studies, particularly in compiling the situation assessment, where many of the information listed in the guideline documentation were not available.

If compiled in an appropriate manner the situation assessment become a "tool" in itself for future management. For example, it can be used to highlight cause- and-effect relationship in and around a specific estuary. To ensure that the content of the situation assessment is appropriate, it is essential that estuarine scientists are part of the core team of consultancy/authority compiling the situation assessment. Central to any EMP is a sound understanding of the functioning and state of an estuary, as well as the underlining processes, drivers and possible responses. As a result these aspects cannot be dealt with in a superficial manner in the situation assessment. Qualified estuarine scientists are best equipped to provide guidance on these aspects down to site-specific level. Thus, where funding is limited it may be more valuable to reduce the scope of the situation assessment and rather have a combined work session with core specialists and lead agents to obtain a best possible overview of these aspects, as well as the opportunities and constraints to be considered as part of the EMP. Here Ecological Water Requirement Studies (also referred to as RDM studies) is of particular
importance, contains a wealth of information in terms of drivers of changes and site-specific ecological requirements.

In terms of establishing the present ecological state of an estuary, the Estuarine Health Index (as used in Ecological Water Requirement Studies – RSA DWAF, 2008) is a useful tool providing a standardised approach by which to quantify the degree of modification in an estuary from its reference state to the present. This index can be populated with very little information, but do require input from experienced estuarine scientist/s, for example the lowest confidence assessment would require input of at least one physical and one biological expert.

In terms of establishing the legal framework the C.A.P.E. Guideline 1 (Overview of estuarine legislation) is a useful tool. This overview can be used to emphasize national and provincial legal obligations and to highlight responsibilities. In addition, value is added by incorporating site-specific or local legislation such as bylaws and constraints of tenure. Note, while an EMP cannot outright challenge existing legislation, the situation assessment component can be used to propose amendments to by-laws, changes to SDF and IDP and in general draw the public and private sector’s attention to conflicts.

Very important in the situation assessment, is the identification of links to the IDP, where appropriate, as this would facilitate proper integration with these existing plans. In particular the situation assessment needs to articulate the opportunities and constraints of the estuary and its environs.

Care should be taken with the collation of information on existing management initiatives for the situation assessment: this often requires more than anticipated effort to get the relevant information.

Situation assessments in some of the pilot studies were particularly weak in identifying water quality issues and the importance of land-based pollution sources especially in urban areas. This inclusion of such issues should be stressed in future EMPs developments.

Specific recommendations on the Situation Assessment (SA) component were as follows:

- Future revisions of the generic Framework should provide more guidance on where the emphasis should be when compiling the SA, as the process will not always be applied by consultants trained in estuarine processes or management. Guidance is required on the scope of work in relation to available budget and confidence of results, similar to the process followed in the Ecological Water Requirement for Estuaries (RSA DWAF, 2008). It should also consider minimum requirements of the ICM Act 2008.
- SA should identify additional research required and not just monitoring – especially in light of climate change and the potential impacts of this
- More information/emphasis on current health status, fauna and flora, biophysical processes and functioning of the estuary (detailed summary of available information on fauna and flora, habitat maps, etc.)
- Pay more attention to local legislative and planning issues such as by-laws, land tenure and IDPs that affect the estuary
- Considering the level of detailed required in the SA, a number of components are missing: Stakeholder assessment, Institutional capacity assessment, Data assessment, Ecosystem services assessment, Biodiversity value-sensitivity analysis, Geohydrological assessment, Landscape and scenic value assessment, Recreational use assessment (but this will need additional budget)
- An assessment of Key threats and their drivers (cf. Kay & Alder) and Opportunities, is a more useful analysis than Opportunities and Constraints.
- Level of detail required for the different sections in the SA should be specified
- The Guidelines should make reference to useful participatory rapid assessment techniques.
3.2 Vision and Strategic Objectives

In the application of the generic framework, it became evident that the terms “Vision”, “Strategic Objectives” and “Management Strategies” (see next chapter) were sometimes used interchangeably.

Specific recommendations on the Vision and Strategic Objective component were as follows:

- The guideline documentation should better articulate the meaning/requirements for setting Vision & Strategic Objectives, e.g. by posing specific questions to be addressed.
- The term, “Strategic objectives”, is not adequately defined and unpacked.

3.3 Management Strategies

In the application of the generic framework, it became evident that the terms “Vision”, “Strategic Objectives” (see previous chapter) and “Management Strategies” were sometimes used interchangeably.

Specific recommendations on the Management Strategies component were as follows:

- The guideline documentation should better articulate the meaning/requirements in setting Management Strategies, e.g. by posing specific questions to be addressed.
- Categories are not practical. Suggested alternative:
  - Institutional (including Monitoring and evaluation (M&E) and social aspects like compliance, etc)
  - Water Quality and Flow
  - Priority Use and Management (living resources, mouth management, establishment of MPA, etc – estuary dependent)
  - Estuary and Land Use, Conservation and Development (pertaining to the water body and the land).

3.4 Estuary Zonation Plans and Operational Objectives

The EZPs prepared for the pilot estuaries largely addressed “traditional” estuary zonation, i.e. zoning the areas where different activities will be allowed or not, but most of the EZPs did not explicitly map specific values areas associated with the estuarine environment (e.g. heritage areas or areas of biodiversity importance). Although not critical for the development of the draft EMPS, it is important that one work towards more complete EZPs. Also, few of the draft EMPS defined quantifiable Operational Specifications. Again this is not a serious omission for the draft EMPS, but it will have to be addressed in follow-up refinements as measureable targets/limits is crucial for effective environmental management.
Specific recommendations on the Estuary Zonation Plans and Operational Objectives component were as follows:

- To prevent confusion between “Strategic Objectives” and “Operational Objectives”, it was recommended at the workshop that the latter terminology be changed to Operational Specifications.
- The guideline documentation should be more explicit regarding the requirements for the EZP and Operational Objective/Specifications.
- Need to articulate more clearly the difference between a strategy and an action. These are confused even in the generic guideline documents.
- Examples would be useful, e.g., a template for Logical Framework Approach (LFA – management by objectives approach to planning) would be useful.
- This gives the impression that the objectives are linked to the zones. Why talk about objectives after strategies when strategies are put in place to meet objectives?
- “Estuary Zoning Plan” would be more appropriate. Even more appropriate, aligned with land use management practice and the ICM Act by calling this a “Spatial Conservation and Development Framework” (SCDF, as an element for insertion in to the Municipal Spatial Development Framework), and also produce an Estuary Planning Scheme (as an overlay for insertion into the Municipal Zoning Scheme). The difference between these two is that a Framework is non-statutory, and a Scheme is statutory.
- A generic set of planning categories should be provided, so that there is consistency in the terminology used across all estuaries (e.g., terminology used in land-use planning and SDFs can be used as benchmarks). The Framework should identify these and provide associated Statement of Intent and suggested Estuary and Land Use Management Guidelines.
- It would make more sense, in terms of the logical framework, to have targets relating to the management strategies rather than the spatial plan.
- ICM Act requires preparation of a Coastal Planning Scheme. Demarcation of the zones relative to the estuary, and guidelines for land use within the Coastal Protection Zone, should be a component of every EMP because land use within this zone has a significant impact on estuarine health.

### 3.5 Management Action Plans

Most of the draft EMPs for the pilot estuaries, did not address management action plans (MAPs) in great detail, mainly as a result of the budgetary constraints of this first phase. In most cases MAPs were listed, but did not provide the details required for effective implementation.

Specific recommendations on the Management Action Plans component were as follows:

- The term “management action plans” is confusing, should just be management actions. These can then be linked more explicitly with strategies and objectives.
- Management actions should also be linked with discreet focussed deliverables and indicators and to a specified management agency of agent and a specified time frame in which they are to be implemented.
- The key to a successful and useful management plan is simplicity and brevity. This message needs to be brought across loud and clear in the guidelines.
- It would be useful to indicate the level of detail required in terms of actions. Provide generic staff competence/salary scales. Provide generic legal mandates/competencies as per SA legislation and provincial level delegations.
3.6 Implementation & Monitoring

None of the pilot studies reached the implementation and monitoring phases. The following important aspects, however, were highlighted at the workshop for future consideration:

**Local estuary forums** will be critical for effective implementation of EMPs. The generic framework should include an example of a generic constitution and nomination forms that could assist with the establishment of such forums.

Specific recommendations on the Implementation and Monitoring components were as follows:

- Not clear whether this should be separate section in the EMP, rather be integrated with the management actions. Each action should have a nominated agency responsible for its implementation
- Lack of clarity on how ‘Adoption’ is achieved in an intergovernmental situation like this
- All parameters for which monitoring is required must also have thresholds of potential concern which trigger management action (e.g. further monitoring, improved enforcement, etc.)

3.7 Estuary Forum

Most of the draft EMPs have not year established proper estuary forums at the time of this review workshop. As a result there were limited feedback on this aspect. However, there was generally agreement that such forums are essential for the effective implementation of EMPs.

Specific comments on the Estuary Forum component were as follows:

- Use of “Estuarine” is grammatically incorrect, should be Estuary Forum
- The Executive Committee is a smaller group of representatives, of both government offices and civil society stakeholders. This Committee needs a Chairperson and a Secretariat – at least one person who is employed to convene meetings and carry out the instructions of the Committee
- Note that some estuaries do not have the capacity in terms of stakeholder numbers or knowledge to run separate technical working groups
Section 4:
Review of Draft Estuary Management Plans
4.1 Review Criteria

To provide a structured approach for the review of the six individual EMPS on the Olifants, Klein, Heuningnes, Breede, Knysna and Gamtoos estuaries a review criteria were formulated which was agreed upon at the workshop (detailed plans are available from http://fred.csir.co.za/extra/project/CAPE_Estuaries/).

Criteria addressed the following aspects:
- Situation Assessment
- Vision and Strategic Objective setting
- Management Strategies, Estuary Zonation Plans & Operational Specifications and Management Action Plans
- Estuary Forum.

**REVIEW CRITERIA**

1) With reference to the **Situation Assessment**:  
   - Was it accurate and relevant (e.g. highlighting issues/problems/constraints specific to the estuary);  
   - Was this information effectively communicated to key stakeholders to ensure informed decision-making (e.g. by involving technical experts in stakeholder workshops to clarify and contextualize issues of environmental or economic concern)

2) With reference to the **Vision and Strategic Objective setting**, was there proper stakeholder consultation for a robust outcome (e.g. broad enough representation, good facilitation in preferred language)

3) With reference to **Management Strategies, Estuary Zonation Plans & Operational Specifications (Objectives) and Management Action Plans**:  
   - Did the EMP address all key sectors (Conservation, Water, Living Resources and Land-use & Development) relevant to the specific estuary;  
   - Did the EMP integrate existing management initiatives (strategies, zoning plans management action plans) effectively in the different sectors relevant to the specific estuary, e.g.: Conservation (C.A.P.E. Estuaries conservation plan- Turpie & Clark, 2007; SANParks; Management Plans, CAPE Fine scale planning; Water (Ecological Water Requirement Determinations [RDMs], Catchment; Management Strategies, Water Services Plans); Living resources (Resource Management Plans, Fishery Sector Plans; Land-use & development [Integrated Development Plans [IDPs], Spatial Development Frameworks [SDFs], Agricultural Resource Management Plans)

4) With reference to the **Estuary Forum**, was the recommended structure provided by the generic framework applied appropriately, or where an alternative arrangement was applied, was that appropriate for the specific estuary?

The scoring guidelines were as follows:

1= Extensive revision  2= Significant revision  3= Moderate revision  
4= Minor revision  5= No revision
Each of the EMPs was evaluated based on the four criteria and a score allocated to each, as well as an overall score. Workshop participants were asked to individually score each of the criteria. Final scores were decided upon by the Working Group for this project (comprising of managers and scientists). Workshop participants also had to identify any “show stopper”, i.e. any aspect of the draft EMP that needed to be revised before implementation thereof could proceed.

Innovative approached and techniques that were used by the consultants in the development of each of the EMPs were also highlighted for consideration in future EMP developments and future revisions of the generic framework for EMPs.

### 4.2 Olifants EMP

The scores allocated to the Olifants EMP were as follows:

<table>
<thead>
<tr>
<th>COMPONENT/INSTITUTIONAL STRUCTURE</th>
<th>NUMBER OF VOTES PER RATING</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situational Assessment</td>
<td>3 11 4</td>
<td></td>
</tr>
<tr>
<td>Vision, Strategic Objectives &amp; Specifications</td>
<td>1 6 2 4</td>
<td></td>
</tr>
<tr>
<td>Management Strategies &amp; MAPs</td>
<td>5 6 4</td>
<td></td>
</tr>
<tr>
<td>Zonation Plans</td>
<td>2 6 1 4</td>
<td></td>
</tr>
<tr>
<td>Estuary Forum</td>
<td>1 4</td>
<td></td>
</tr>
</tbody>
</table>

Detailed comments from workshop participants and the working group in support of the above are summarized below for consideration by the consultants in future revision of the EMP. Specific actions that require priority attention was also highlighted.

**Situation Assessment (SA):**

General comments from Workshop participants:

- The SA need to consider other socio-economic issues
- The document need to provide more background on why some activities are not happening the system (e.g. mariculture in block E)

Detailed comments from Working Group:

- SA was very good as the study could draw on available information from a recent Environmental water requirement study (RDM), as well as a number of other studies.
- Information of the stakeholders was not included (such details to be included in the EMP’s SA and only in a stakeholder consultation report) where it is easily accessible - this EMPS had two multi-stakeholder meeting and a focus meetings.
- Duckweed in upper reaches is not a macroalgae (pg 3 of SA) it is categorized as a floating aquatic macrophyte
- Very detailed, providing the necessary background required for the EMP
- Invertebrates s - a good summary of available information
- Goods and services - description of exploitable resources available (fish), but bait organisms not covered - lack of available information.
- Nursery value of the estuary well covered.
- Has included the valuable information documented in the RDM
- Very detailed, providing the necessary background required for the EMP.
- Inverts - a good summary of available information.
- Goods and services - description of exploitable resources available (fish), but bait organisms not covered - lack of available information.
- Nursery value of the estuary well covered.
- Has included the valuable information documented in the RDM.

**Vision, Strategic Objective & Specifications:**

General comments from Workshop participants:
Document should link the Specifications (or Operational Objectives) to the Strategic Objectives. At the moment these are linked further down to specific Action Plans, i.e. the specifications should be more generic so that individual management action plans can support common specification.

The Vision should be broader than just the water area.

Detailed comments from Working Group:

- Vision clear, obtained from single stakeholder meeting in January 2008.
- The community defining this is probably stable from year to year however at other estuaries dynamic nature of user groups will influence the vision. The time lag between the Vision and then implementation of the management plan would be a problem.
- Key Result Area: should different terminology be used compared to other Management Plans?
- Annual Business plans to be developed by Estuary Management Agency & Estuary Manager in consultation with Estuary Management forum
- Six management objectives clear and identify strategies needed to meet the objectives. To what extent are these generic? Recognising that the relative objectives can shift in terms of their rankings between estuaries.

Management Strategies & MAPS:

General comments from Workshop participants:

- The EMP should link up with the CapeNature Stewardships Programme
- No-take zones should be no-take zones there should not be exception
- While there is no interaction with a forum, the EMP has had stakeholder consultation
- How easy to implement no power craft: no registered launch sites
- What about a management strategy for diamond mining?
- Role of local management committee in management needs to be clarified?
- Need more detail in action plans. Should be working with relevant authorities on MAPs
- The EMP needs to link more with to existing management initiatives (e.g. Working from Water: Best practices for Agriculture)
- Some form of protected area for juvenile fish is critical, needs to be considered as a priority action

Detailed comments from Working Group:

- Figure 2 Strategies to achieve management objectives very busy.
- Page 10 “It is important that the provincial and municipal planning documents [SDFs and IDPs] include the setback line in planning” Is this currently the case?
- Pg. 14, 6.5. Specific detail on required research missing.

Zonation Plans:

General comments from Workshop participants:

- Zone D must be a no go bait collection zone.
- No fly zone – also look at parasails
- Reconsider areas earmarked for mariculture (particularly not to stagnant zones)
- Leaving out terrestrial areas (supra-tidal marsh) can be a problem i.e. sticking to high water mark (farmers at the moment have exemption to plough to the high water mark)
- Too many zones maybe difficult to implement
- Final consultation have not been done on zonation
- Salt factory (very low key at the moment), maybe more room of such activities
- Look at terrestrial protection areas.
- Simplify fishing zones
- Too rigid in terms of the REI if nursery is liked to lower salinity, the zone is mid-salinity. REI is above 22 ppt (based on fish abundance rather than salinity)
- Justification for MPA also need to include vegetation (salt marshes) , not only fish and inverts
- Zone E: is biological trashed part of estuary, prioritised for rehabilitation
- Make sure that you communicate any changes to stakeholders before making them!
- Zonation should be simplified (imagine all the sign post)

Detailed comments from Working Group:

- Page 6, management plan, Zone C and E are probably unsuitable for any mariculture ventures due to the fluctuating salinity and high nutrient concentrations. Water quality impacts goods and services, insufficient emphasis on this aspect.
- The benefits of the proposed Marine Protected Area are described in terms of the invertebrates and
fish, however this will also conserve important and pristine intertidal and supratidal salt marsh areas.

- It is proposed that the west bank remain undeveloped to maintain views and the wilderness sense of place. Two farms cover this area and there is already agricultural activity on the west bank.
- Fig. 7. Figure 3 No trampling / grazing on salt marsh, this should be included. Salt marsh areas should be included in protected areas.
- Establishment of a bait sanctuary – need the baseline information to finalise this recommendation. This should, where possible, link in with the nursery functions of the estuary for estuarine dependent marine fish species. Currently, the only sanctuary suggested for invertebrates is in the lower estuary that is important for birds. If this is proclaimed, might put additional pressure on other areas that would be targeted by bait collectors.
- Currently, Zone ‘D’ is fixed as a nursery areas for fish. This may not be the ideal area for a proclaimed nursery area as the REI will move up or down the estuary according to seasonal river flow patterns. During summer, REI is likely to be further upstream when estuarine dependent fish species are most abundant. Is it possible to have Rotational Sanctuary areas?

**Estuary Forum:**

General comments from Workshop participants:

- Try to follow the correct approach but circumstances made it difficult (see below)
- At the moment Olifants forum is a group of nominated concerns that take part in decision making
- Do not have capacity to go to WG concept only “Working Persons”
- Must still include fishers (at moment they do not want to come on board because their issues are not addressed (biggest issue to be solved)
- Bring in mediation if necessary
- Main management authority (Cape Nature linked to stewardships, Local Municipality, district Municipality)

Detailed comments from Working Group:

- Well described.
- Inputs good but outputs not there yet.

**Any show-stoppers?** None

**Innovative approaches and techniques used in EMP:**

General comments from Workshop participants:

- Summary of Situation Assessment
- Very useful in terms of tables in MPA
- Good use of available RDM knowledge (used the data from RDM very well)
- Use the monitoring guidelines and specifications
- Socio-economic indicators
- Emphasized positive aspects of systems
- Estimated budget
- Issue-based assessment was smart (i.e. prioritised what was important)
- Stakeholder consultation process documented

Detailed comments from Working Group:

- Figure 1 Management objectives indicating equal importance - good
- Figure 2 indicates conflicting strategies to achieve management objectives
- Page 8, Management plan, incorporation of the 1 km development set back zone around the estuary
- Good size document 20 pages + appendices, focus on key issues
- Situation Assessment; good use of illustrative photographs of the estuary
- Monitoring protocols, ecological specifications and thresholds of potential concern were included from the DWAF RDM report. Important that these are accepted as is and new ones are not developed as part of the Estuary Management Plan process
4.3 Klein EMP

The scores allocated to the Klein EMP were as follows:

<table>
<thead>
<tr>
<th>COMPONENT/INSTITUTIONAL STRUCTURE</th>
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<th>Final</th>
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<td>Situation Assessment</td>
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<td>Management Strategies &amp; MAPs</td>
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<tr>
<td>Estuary Forum</td>
<td>9</td>
<td>5</td>
</tr>
</tbody>
</table>

Detailed comments from workshop participants and the working group in support of the above are summarized below for consideration by the consultants in future revision of the EMP. Specific actions that require priority attention was also highlighted.

**Situation Assessment (SA):**

General comments from Workshop participants:

- SA was weak on its biophysical assessment, e.g. It is a temporarily open/closed system and the linked to mouth dynamics needed further expansions as this is a major issue.
- Poaching is a major issue in the Klein Estuary - this was completely lost in document and therefore not highlighted further into strong management actions
- Further research is required to verify the invertebrate species list presented in the SA (a general problem for South Africa)
- The document has no good summary of its health. A better understanding of health would have help to focus manage intervention, e.g. flow, water quality, fishing. There needs to be a clear link between major issues and potential effects on the ecology.
- The ecological description weak because no estuarine ecologist on team. The leaning to be had from this is that it is important to have an estuarine ecologist as part of the situation assessment.
- Socio-economic part of SA needs restructure to give it better context and show how it all comes together.

Detailed comments from Working Group:

- SA is very detailed in some areas, but nevertheless lacks sufficiently detailed baseline information for use as a benchmark against which to monitor change and also detailed spatial information which can be used to identify sensitive/important areas and help with zonation. There is a lack of information on threats
- It could be better structured for easier reading. The title “social systems” should be changed to something about users or stakeholders. The title “Extractive resource use, goods and services” and separate section on “landscape value” reveals lack of clarity on the part of the authors about ecosystem services, and should be linked with one another and the previous description of the beneficiaries. Section on Goods & Services – Very short, but adequate, given lack of study there. The statement “using methodology adapted from international models” is incorrect. The section would have benefited from gathering some first-hand information on recreational and tourism use, to improve the estimate of this value. The section on “landscape value” should be discussed under ecosystem services, as this refers to aesthetic value of the estuary. References to the combined value of the Bot and Klein (e.g. p107) – is this not our estimates for the Bot/Kleinmond system? Kleinmond is not the Klein
- Comprehensive approach, but some detail lacking on biophysical aspects. Team needs an estuarine ecologist and brief assessment of health and present status. Need for expert opinion when data poor situations
- Research requirements are not listed
- No mention of extractive activities, implementation of the Marine Living Resources Act
- Bannman, vegetation/habitat maps some overlap e.g. Phragmites versus reeds & sedges, Salicornia and Sarcocornia should be referred to as intertidal salt marsh. Map for planning purposes should not include species names
- Vision statement: no indication of a desired future state (no challenge in the statement, bridging of present and future to serve as a critical image for change) – able to direct effort.
- There is no description of the biophysical environment. The EMP really centres on the human aspects, no strategy to manage ecosystems functioning, etc. mouth dynamics, etc.
- P85 – do mud prawn occur in the Klein?
- On what grounds were the various zones demarcated? E.g. sanctuary zone at the mouth?

**Action:** Consult with relevant estuarine expertise and work out a way forward

### Vision, Strategic Objective & Specifications:

**General comments from Workshop participants:**
- Vision and strategic objectives do not show where you want to be
- Ecological Health assessment not done
- Vision not statement of intent
- Revisit 4 visionary statements and use the words of the people to formulate vision
- Sustainable resource use did not carried strongly enough into strategic objectives

**Detailed comments from Working Group:**
- “Targeted outcomes” are good as well as the 12 strategies addressing issues requiring priority attention
- Stakeholders well described, but not clear how they were involved in Vision and Objective setting (not discussed in the EMP)

### Management Strategies & MAPS:

**General comments from Workshop participants:**
- Sustainable resource use did not carried strongly enough into management action
- Extremely dense to be user-friendly to manager on the ground – difficult to find your way through the document from an manager’s perspective – streamline
- Environmental awareness and training component? (we used user value as a mean of achieving this)

**Detailed comments from Working Group:**
- The EMP uses a logical framework approach. Not a lot of emphasis on biodiversity conservation, just a mention of setting aside sections of the estuary for management of biodiversity. The zonation and land use around the estuary is provided in a series of 3 appendices (spatial cons/dev plan, estuary zonation plan, spatial estuarine biodiversity assessment) rather than being presented up front as a core part of the strategy. This is OK, but risks getting too little attention; the spatial biodiversity assessment should have been part of the situation assessment, and linkages to the zonation plan should be made more explicit. The cons/dev plan for land around the estuary is probably broader than mandated; it uses Turpie & Clark 2007 to set the development targets. The document is very long and detailed, but the tables are well laid out and comprehensive. It is possibly a bit too dense, a summary of the main actions would help
- Missing biophysical aspects. Too much information
- Strategies and action plans well described

### Zonation Plans:

**General comments from Workshop participants:**
- Zonation plan outside estuary is good, ecological elements within estuary need to be included
- Zonation plans used as a planning tool in this plan. However, all the zonation maps should become an integral part of the EMP to fit with the philosophy it is being used in this context (requires restructuring of document – put those in Chapter 1 under heading “Zonation plan”)
- Zonation: Possibly zone (demarcate) mouth area for recreation (future use?)
- Page 80, Table 8 – check the proposed sanctuary zones are higher than available habitat types?
- Table 8, page 80. Why are some of the total areas smaller than that contained in the sanctuary area? E.g. total area of Phragmites is smaller than area given for proposed Sanctuary area

**Detailed comments from Working Group:**
- GIS maps in these reports were of a high standard.
- To include: trampling and compaction of salt marsh, Point source inputs for water quality monitoring and identification areas for rehabilitation.
- Zonation should include ecosystem processes. Management plan must link to IDP, manager will be the champion and not the estuarine ecologist. Swimming area re-instated near mouth with general water quality guidelines.
### Estuary Forum:

General comments from Workshop participants:

- Good support and implementation right up there, despite struggle initially!
- Meeting planned for 24 June 2009
- Local authority will probably be implementing authority
- WWF is putting in money forward
- Coordinating the Bot and Klein forums once EMPs have been sorted out is recommended in order to minimize possible stakeholder fatigue, especially on the side of the authorities, e.g. scheduling of meeting on the same day
- Opportunity to use expertise from bigger systems to later support Onrus EMP (joint forums)
- Can maybe consult or collaborate with retired people to provide some information

<table>
<thead>
<tr>
<th>Detailed comments from Working Group:</th>
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<tr>
<td>Overstrand Municipality to lead. Well described.</td>
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<tr>
<td>Idea of a single forum for Klein/Onrus/Bot is sound</td>
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<table>
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<tr>
<th>Any show-stoppers?</th>
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<tr>
<td>None</td>
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### Innovative approaches and techniques used in EMP:

General comments from Workshop participants:

- Presentation had a lot of suggestions for improvement
- Land-use component of the EMP was very good. The spatial analysis of the catchment is good way forward for broader planning?
- Analysis of planning tools done nicely in SA (can go as examples into generic framework)
- The manner in which information on existing managed initiatives were package were very good and provides a way in which outdates information can be readily replace ensuring that the Situation Assessment stays a living document.
- The stakeholder consultation process was very good. What worked well was stating with a small stakeholder group and working it from there. Often it was impossible to get every one on board at the same time so it is very important that the forum must be attractive as this will encouraged other to join later
- The document had clear strategic objective with time lines. Phrasing the objectives as questions were also innovative and helped to put everybody on the same page.

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<thead>
<tr>
<th>Detailed comments from Working Group:</th>
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<tr>
<td>Terminology and simplification good e.g. Management action plan (Who does what?). Allows all stakeholders to understand objectives.</td>
</tr>
<tr>
<td>Outcomes of the management plan clearly displayed graphically in Figure 2. Easier to achieve a few broad outcomes.</td>
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<td>Pg. 9 Table 2 Job grading codes</td>
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<td>Pg. 12 Figure 4 good way of indicating proposed co-management arrangements</td>
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<td>Pg. 98 Figure 3 Estuary zoning poster. Good display of important information for the public</td>
</tr>
<tr>
<td>Situation Assessment: Lessons learnt approach advocated</td>
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<tr>
<td>Action items highlighted to carry through to EMP</td>
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<tr>
<td>Analysis of planning process and fact sheets was very good</td>
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4.4 Heuningnes EMP

The scores allocated to the Heuningnes EMP were as follows:

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<td>Zonation Plans</td>
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<td>Estuary Forum</td>
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Detailed comments from workshop participants and the working group in support of the above are summarized below for consideration by the consultants in future revision of the EMP. Specific actions that require priority attention was also highlighted.

**Situation Assessment (SA):**

**General comments from Workshop participants:**
- Mouth dynamics and management aspects discussed in SA need to be addressed. This is a crucial aspect that will ripple throughout the objectives and strategies to be selected
- Excluded Soetendalsvlei – should identify the link to Heunigenes in SA
- Estuary had various levels of monitoring over the years that did not come through in the SA (try to get the info but could not be easily located)
- Gate permits can help to identify and monitoring use of the systems (go back as far as possible – find the CapeNature person that’s got this info)
- Catch data can be provided by Steve Lamberth
- Information base: Chris Goigher (invertebrate data), John Grindley (Soentendalsvlei)
- All section of SA must be filled out – not adequate reference to literature (must bigger story to be told on this system)
- Good and services needs to be expanded especially (no detail on use)
- Protected area and conservation important need to be expanded
- Pollen analysis (paleo) has been done for Soetendalsvlei to determine whether salt marsh was there historically
- Estuarine health assessment missing that is required to give context to the rest of an EMP
- Confusion around REI zone?

**Detailed comments from Working Group:**
- Not much imagination went into this one. Headings followed those of the TORs closely, which is OK, but most of the emphasis went on a very general summary of legislation, without the relevance to this estuary being explained.
- The ecology and management of the estuary should be described in more detail. Most of the other sections require more fleshing out.
- The section on goods and services is brief but adequate given the lack of information. Nevertheless, rough estimates are available and should be cited. Visitor statistics are also available, as is a study on the recreational fishery, I believe.
- The section on protected area potential fails to describe the conservation importance of the estuary, or to mention the recent findings that the estuary extends well beyond the current protected area boundary.
- The report does not make adequate use of the literature on the estuary and does not provide a sufficiently comprehensive description of the baseline (or pointers to available information) to aid in management.
- Weak on bio-physical processes and assessment of present status of the estuary.
- Biodiversity Conservation important but no detail on biota.
- Pg. 46 Water quality, are there any DWAF water quality monitoring sites. Proposed list of chemical analysis too comprehensive?
- Mouth dynamics, Soetendalsvlei should have been included.
- Some of local knowledge missing. Catch monitoring system missing. Mouth monitoring data
also available.

- Gate permits can provide information on activities (hiking, fishing). Inadequate references to available information (e.g. Grindley, Gaigher). Conservation importance and significance of the estuary missing
- Threats to estuary - very little factual detail on the invertebrates, bait collecting, zonation, flow issues and mapping of critical issues relating to the above. All hinges originally on the lack of a Situation Assessment document;
- Estuary needs an RDM study (no focus on the River Estuary Interface region)
- Assessment and evaluation of the estuary is not sufficiently detailed to provide a foundation for the EMP. This is a major shortfall that does not allow or provide a foundation on which to base an EMP. Absent information includes the biophysical environment, current health and importance, degree of exploitation, visual representation of various important features (page 17 of guideline document).

**Action:** Must be redone taking the above into account

### Vision, Strategic Objective & Specifications:

#### General comments from Workshop participants:

- Use generic Cape vision, did not internalise this to be specific to Heuningnes (check this)
- Strategic objectives need to be clarified (there are two sets?)
- Everything is a list – give some better structure and context
- Mouth dynamics must be addressed at the strategic level, it will have implication for the strategic objectives
- Must be a joint decision by stakeholders on the way forward and then work from there.

#### Detailed comments from Working Group:

- Strategic Objectives are 99% same as those for CAPE, but followed by a set of objectives specific to the estuary (a bit confusing). Needs better lay-out
- EMP developed after various stakeholder and authority engagements. This assessment put a lot of emphasis on this important aspect
- Pg. 14-15 Key objectives a – v could be categorized under a few broad headings e.g. Boundaries, public awareness, co-operative management
- Conflicting activities contained in Vision

**Action:** Needs to be expanded and improved as suggested above BUT in consultation with different stakeholders

### Management Strategies & MAPS:

#### General comments from Workshop participants:

- General and largely associated with the terrestrial realm. Strategic Objectives of the CFR copied out of the guideline document.
- If the strategic objectives change these might be re-visited to match
- Mouth dynamics must be addressed at the strategic level, it will have implication for management strategies
- Must be a joint decision by stakeholders on the way forward and then work from there...
- Address low lying development that is a problem at the moment
- Dredging for policy in the estuary – at least define the need for such a policy
- Exploitation of Living Resources – no details provided

#### Detailed comments from Working Group:

- Management strategies need to be linked to the objectives, not just a long list.
- The zonation plan is not practical or desirable (with about 75% being no-go for any form of use), and does not maximise the value of the estuary. Very confusing description of the zonation plan with yet more objectives. Two red colours in the plan difficult to distinguish buffer from development area. In the actions, need clarity on who is responsible for what. There are no indicators, deliverables or time frames or budget.
- Specific areas requiring rehabilitation could have been indicated graphically.
- Pg. 19 rationale for maintenance of sand banks implies that Heuningnes is a permanently open estuary [should this be the case?] Plan never really indicated the opportunities and constraints
- Pg. 50 h Research needs: Determine freshwater requirements and importance of the river-
estuary interface zone.
- Research needed to investigate perceived salinisation and loss of wetland habitat. Many estuaries historical floodplains which are saline and thus support halophytes (salt marsh) (can use pollen and diatoms to establish whether this is correct)
- SWOT analysis – done

**Action:** Needs to be expanded and improved as suggested above BUT in consultation with different stakeholders

**Zonation Plans:**

General comments from Workshop participants:
- All areas was “no-go” (based on current land-use)
- Soetendalsvlei should be included
- Take “wetland” as primary boundary (put a 32 m buffer around)
- 5 m contour as secondary boundary (no significant or long-term agricultural activity in low lying areas)
- Put on map different scenarios and take proposed zonation to stakeholder
- Legal issue: Boundary across river that hampers tourism access
- Review “Title deed” to allow limited tourism in estuary
- Must solve issues around obligation to keep mouth open
- Low lying development is a problem

Detailed comments from Working Group:
- Zonation: did not include Soetendalsvlei

**Estuary Forum:**

General comments from Workshop participants:
- No form at this stage
- Meeting set up for 24 June 2009
- Include fishing clubs fly-fishing, canoe company to broaden stakeholder base

Detailed comments from Working Group:
- The estuary management forum would eventually form the estuary management authority. It was proposed that the current Cape Nature facilities near the estuary mouth be expanded to become the Estuary Management Office.
- Honorary ranger system proposed, which could already use HROA (Heuningnes Riparian Owners Association)

**Any show-stoppers?**

**Yes, SA must be revised but as part of next phase**

**Innovative approaches and techniques used in EMP:**

General comments from Workshop participants:
- Using Local media (newspaper) to communicate about process
- Historical context is good
- Summary of site-specific local bylaws and legislation
- Demographics of stakeholders was done well
- Bioregional land-use categories

Detailed comments from Working Group:
- Pg. 14 identification and highlighting of conflicting objectives
- Inclusion of climate change
- Use of Bioregional Planning Categories (e.g. core areas, agricultural areas, buffer areas)
- Good approach to linking land-use, development and relevant legislation.


4.5 Breede EMP

The scores allocated to the Breede EMP were as follows:

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<td>Zonation Plans</td>
<td>4</td>
<td>5</td>
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<tr>
<td>Estuary Forum</td>
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</table>

Detailed comments from workshop participants and the working group in support of the above are summarized below for consideration by the consultants in future revision of the EMP. Specific actions that require priority attention was also highlighted.

**Situation Assessment (SA):**

General comments from Workshop participants:
- Siltation is maybe a perception (its actually sediment dynamics moving sand)
- Massive erosion in agricultural areas must have strong link with CMA
- Get notes from Jane’s feed-back to fast to capture NB!
- Lots’ of ecological information available on systems [e.g. RDM] not been used
- Bits and pieces that are confusing around ecological aspects
- Commercial fishing allows on catch and release basis – contradicting?
- No clarity on real issues versus perceptions (e.g. siltation)
- Protected areas potential not addressed in context of others (national context)
- Lists, no elaboration. No ecological functioning or Health assessment. Lack of information, no use made of RDM study. Importance of this estuary in relation to others. Significant additions need to be done.

Detailed comments from Working Group:
- The Situation Assessment needs to provide a much fuller description of the system and issues, it is very inadequate as it stands, and has barely scratched the surface. It makes no reference to the literature on that system. It does not describe the baseline and does not provide a sufficiently detailed resource to be useful to managers.
- The EMP is not adequate as it stands. It needs to provide guidance on where zones should be and a zonation map, and how regulations are to be implemented. As it stands all the real work is left for someone else to do.
- Provides overview of legislation, management, goods and services, etc but most of this is just lists, without any explanation or elaboration on the more important elements. There is little comment on issues specific to the estuary, such as local development frameworks etc. The section on goods and services is very thin, rough estimates are available and could be cited, and an effort could have been made to quantify the level of recreation in the estuary. There is no description of the ecological functioning and biota of the system, or its conservation importance.
- None of the literature on the estuary is cited.
- Proposed monitoring, vision and objectives should not be part of this report.
- Municipal demarcation boundary a problem; center of river between Swellendam and Hessequa.
- Incorrect terminology under Chemical Pollution (pg 27).
- Adequate level of detail but actions, specific detail was not transferred to the Estuary Management plan which was very generic
- 2.2 Goods and services provided by the estuary. These are generic as are the ecological services. Nothing to underpin the EMP.
- There is no detailed information on the bio-physical environment. No information therefore, to develop the management plan.
- Not written by estuarine specialists – see Fig. 5 legend.
- No details on any aspect of exploitation, heritage sites, disposal or discharge sites.

Page 26
adjacent land-use information, etc. In short, have not followed the guideline document, although brief mention is made of the RDM study

**Action:** significant additions to be done

### Vision, Strategic Objective & Specifications:

#### General comments from Workshop participants:
- Vision does not give impression of desired future state
- Rephrase strategic objective and key objectives, some are actions
- Not fully inclusive – no HDP representation (people living on the farms)
- Long lists of objectives need to be better group to make it more practical
- Objectives actions rather than objectives. Section needs to be rephrased
- Vision and Mission Statements need revision

#### Detailed comments from Working Group:
- The key objectives of the (one) strategic objective read like actions, rather than objectives. Need to rephrase this section entirely.
- The strategies need to be linked to the objectives and explained a bit, rather than just listed. Zonation includes use zones and habitat types, which is a bit like apples and pears. The zonation plan is not well argued or articulated. It is very vague in places and not very practical (e.g. “rock habitat should be protected and access restricted”). The action plan is set out by zone rather than corresponding to the strategic objectives. Some of the actions are completely impractical (e.g. no bait from another estuary allowed to be used in the Breede). No attention to education and awareness.
- Two stakeholder workshops were held and written inputs were received on the Vision, as indicated in the Situation Assessment document
- Pg. 5 Categorize objectives

### Management Strategies & MAPS:

#### General comments from Workshop participants:
- How will you dish out the work from management action plans, e.g. the cob issue, night fishing?
- Focus actions better
- Long lists of management actions need to be better group to make it more practical
- Action plans confusing, not clear – it’s set out by habitat/zone not activity
- Focused actions are required
- Not allowed to use bait from another system – how do you enforce this?
- Structure not flowing, need restructuring
- No biota description how are you going to manage – what are the resource utilisation plans if you do not know what you’ve got

#### Detailed comments from Working Group:
- Detailed comments from Working Group:
- Management Strategies too general.
- Strategies / Action plans confusing also need to be categorized.
- Zonation plan was developed through the public participation process.
- Zonation map and other in the Situation Assessment should be in the Management Plan document?
- Current single figure insufficient for management plan document.
- Freshwater input sites (tributaries) provide refuge areas and important ecotones in terms of salinity and therefore biodiversity. Must be protected even in terms of conservation.
- Threats to Goods & Services: add grazing and trampling on the salt marsh.
- Pg 27. Determine freshwater requirements, this has already been done.
- Pg. 28. Monitoring plan, was detail available from the RDM study that could have been included?
- Is the Mission statement appropriate?
- Management Plan lacked detail
- There are no details regarding the management plan – no information to base a plan on
- No indication of biota and how these should be ‘managed’. Bait control mechanisms? - statements on bait collection (page 20) vague.
- Commercial fishing (page 20) refers to catching of cob, should only be allowed on a
catch and release basis – then it is not commercial (in the estuary)

**Action:** Must be rewritten

### Zonation Plans:

General comments from Workshop participants:

- Followed habitat – too fragmented
- Too complex, but do not over simplify to make management easier for biodiversity perspective
- Zoning Nice to manage from a habitat perspective (habitat map), but must change into zonation to make it practical
- Difference between no-go and no disturbance?
- Biodiversity protected demarcation must be in national context (Aidan)
- Protect a system, not a part of the system (NB! Expressed as a rule not necessarily a physical demarcations or sign posts
- Cob fishing: Specialists must get involved to solved this issue generically (country-wide issue)

**Action:** Deal with this as soon as possible

### Detailed comments from Working Group:

- An Estuary Zonation Plan (EZP) was established through public participation process. Zones were not based on the requirements of the estuary, but rather on opinion of individuals. Clear that no estuarine specialists had any involvement. Confusion between the REI zone and the freshwater dominated reach, as well as the marine dominated reach which is said to extend from the REI to the sea (page 10 of the EMP document).

### Estuary Forum:

General comments from Workshop participants:

- Watch the chairperson – might have vested interest
- Hesequa Environmental Advisory Forum as overarching body with sub-committees
- Money generated from system must be ploughed back into system
- Lower Breede is main management authority what about accountability particularly regarding funding - it does not represent the wider community
- We only facilitate the people must take responsibility we should not prescribed only advice
- Allow dynamics of interaction to determine the future, but set or advice on non-negotiable limits
- Need to empower local authorities and community on the ground to deal with hidden agendas themselves
- Monitoring of forums will be required to make sure that they work effectively? Will have to formalize that process maybe guidelines and regulations under ICM Act 2008
- Forum far developed but Coloured community must be involved (adult education drive) – must involve them through formal community groups. How do we get them involved – through the municipal system maybe?

**Detailed comments from Working Group:**

- Institutions that are available not described in terms of capacity in management plan

### Any show-stoppers?    Yes, SA & Zonation Plan to be revised

### Innovative approaches and techniques used in EMP:

General comments from Workshop participants:

- Constitution and nomination forms
- Breede forum was given enforcement power
- How they put the forum and conservancy (or a group of people) together (probably quit unique system because of the money)
- Conservancy model
- Employed people for dedicated day-to-day management (got funding for this
- Guidelines for how you did it will help others
4.6 Knysna EMP

The scores allocated to the Knysna EMP were as follows:

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<td>Zonation Plans</td>
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<tr>
<td>Estuary Forum (not established)</td>
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Detailed comments from workshop participants and the working group in support of the above are summarized below for consideration by the consultants in future revision of the EMP. Specific actions that require priority attention was also highlighted.

**Situation Assessment (SA):**

General comments from Workshop participants:
- MCM is monitoring Knysna (fish) – data given to SANParks (but SANPark staff not willing to be part of monitoring surveys)
- SA good in legislation and planning, but not description of biota – detail info is available (as a result deficiency in Management plan (RDM report summarised this well, get the specialist studies)
- Also look at available grey literature on the estuary (e.g. Nicky Hanekom and Ian Russell)
- Need a broader catchment view for context with maps (as was done for Klein)
- Central depository of data and information (SAEON)
- Chris Mulder offered data base (not really data, mainly the EIA for Thesen Island and related stuff)
- Better describe the current zoning and how the system is managed at present, also identify current gaps
- Specific legal review was done for estuary - should be included (info with SANParks)
- Heritage issues must be expanded on (and indicated on zonation plan) (e.g. old drift, wrecks)

Detailed comments from Working Group:
- A good situation assessment, good coverage on legislation and planning context, does include a biophysical description, but given the amount of information on the system, this section was weak and could provide a much better overview. It is also incomplete, and needs to include fish and birds. Section on goods and services not set out in those terms because of heavy use of earlier CES report in which values are described by type of value, which is fine, but perhaps the link needs to be made. Exploitation of living resources, which should really be described under the previous section, a fault of the TORs, is very comprehensively described, as is water requirements and protected area potential.
- Adequate, pity the results from the RDM study were not available for incorporation.
- Description of biota missing, needed for zonation planning
- Database for development activities and related legislation
- There is a need to distinguish between the Estuary section and the Bay section. Currently lumped together as the Estuarine Bay? They need to be managed differently.
- The report was undertaken prior to the RDM study which potentially can add considerably to the situation assessment. Need to work this RDM report into the document
- Current invertebrate description thin - lacks detail. This information is required for various purposes, e.g. zonation, bait protection, etc. There is a lot of literature available, plus what is available in the RDM. The bait fishery is summarised in 5.2.3.

**Action:** At least provided summary of natural system as in RDM specialist reports

**Vision, Strategic Objective & Specifications:**

General comments from Workshop participants:
No individual vision (still to be done)
Strategic objective in fact actions (need strategic objectives)
Only a document with action no context or links to a vision or strategic objectives
Do not only adopt SANParks strategic objectives, those might be too narrow only focusing on their mandate (possible a grey assumption SANParks are working with other – but check)

Detailed comments from Working Group:
- It is not included, but an overall objective is given. The EMP needs to define objectives.
- Vision will reflect that of the Garden Route National Park, currently no specific Vision for Knysna
- Range of stakeholders included as indicated in the Situation Assessment.
- Strategic objectives are absent

Action: Use CAPE EMP format as template for EMP report, including operational plans (under SANParks) as a separate chapter

Management Strategies & MAPS:
- SANParks might only write the plan out of their perspective (biodiversity protection), excluding other management requirements as proposed by EMP framework
- SANParks have contributed to IDP and SDF for the area (wish lists and strategies for estuary are in these doc’s)
- Without objectives or management strategies, no context to management actions (why are they doing what they do?)
- No recognition of other initiatives/threats to the system that are under the control of other authorities (this must be integrated in the spirit of the EMP)
- SAMS not directly involved even though the estuary functions as a harbour (resulting in issues like smuggling, custom access, etc)
- What about mariculture – there must be some strategy/policy to deal with this in estuary (MCM jurisdiction)
- Also incorporate national process for application of licence for mariculture (Steven)
- WQ issues was not taken care of and how this will be managed (nutrients, sediments, etc)
- Must be an action plan related to WWTW and stormwater management (DWAF and municipality) (this comment applies to all EMPs where this is an issue)
- Must be an action plan to control quality issues related to agriculture (e.g. CMA) (this comment applies to all EMPs where this is an issue)
- Dredging for policy in the estuary – at least define the need for such a policy

Detailed comments from Working Group:
- There are no strategies, only actions, so it is not clear what strategy is being followed. The document could have a clearer structure. It is not clear who is responsible for the overall picture, e.g. defining the zonation plan. There are no targets [dates] or indicators. The zonation plan seems unreasonable in places, e.g. restricting motorised vessels to land owners rather than having a no-wake zone in the top of the estuary.
- Pg. 11 Figure 3 Indicate in legend what the different Management Areas are.
- Pg. 16 Human activities include 1) Prevention of trampling and compaction of salt marsh areas and 2) Catchment degradation, increase in sediment and nutrient inputs.
- Little attention given to Water quality & quantity and Land-use & development aspects.
- Management plan to cover water surface area only
- Other catchment plans would cover the catchment / terrestrial aspects but the Management Plan needs to be assessed in terms of the CAPE programme
- RMOSS – Land use, infrastructure and Development Operational Plans are included here.
- Table of Contents missing
- Page 8, Potential areas for rehabilitation include old airstrip adjacent to George Rex drive, removal of old causeways, seawalls that are no longer serving their purpose.
- B1: Maintenance of plant communities: Human Resources would need to include a GIS specialist
- Pg 37, Long-term monitoring would need to include catchment run-off sites, tributaries that enter the estuary to capture changes in sediment and water quality. Also inputs from Knysna wastewater treatment plant
- Pg 40, Second bullet is incorrect “reduction in freshwater inflow has reduced nutrient input”. Other point sources have increased nutrient input
Proceedings: EMP Review Workshop
8-9 June 2009

- Pg 40. Research requirements: Include 1) response of salt marsh to changes in climate particularly inundation and salinity changes, 2) Influence of point source inputs on eelgrass beds and macroalgal abundance 3) Role of reeds as a nutrient filter and importance of groundwater and freshwater seepage areas in maintaining biodiversity and refuge sites
- Currently there is a very zoo centric approach. Knysna had the second largest intertidal salt marsh areas in South Africa and need to be protected

### Zonation Plans:

**General comments from Workshop participants:**
- Zone A2 sail boarding not allowed because it is biological sensitive area based from outcome of RDM
- Sail board slivered in over last 5 years, never plan to allow this [Peet]
- Ashmead channel have jetties in channel – owners can come at low speed to main channel
- Zone A4 also sensitive and the true estuary part – also important nursery area[channel anyway too narrow for skiing so maybe take it out of that zone]
- Should be sanctuary/protection zones (e.g. parts of A3) because one of most important systems in country
- Lay-out of management plan is complicated
- (Carrying capacity can be management by closing slipways once quota has been reached)
- Biological sensitivity maps overlaid by a zonation/activity map NB!
- DEAT (Biodiversity) and SANParks signed/in process of signing agreement where DEAT gives money (R15 million per annum) for management of protected areas including Knysna (for proper monitoring, compliance enforcement, etc) – must be linked to management plans
- Critical that biodiversity mapping for the buffer zone be included [Cathy]
- 100 m buffer not enough, but this will be managed by other?
- RDM identified the upper reaches as a separate entity (Zone B) – different set of issues linked to zonation (e.g. freshwater requirements)
- Mariculture zoning to be addressed (maps what is where and possible expansion?)
- Management Plan do not address adjacent wetland, this is a problem (conservation zoning)
- Heritage sites not mapped (e.g. old drift, wrecks)

**Detailed comments from Working Group:**
- Quiet B: no wake zone rather than just allowing power boating
- Zone A2: should be zoned as low activity area, no sail boats because of birds, Sail boarding recent, never considered in original plan. Bait sanctuary areas Zostera beds and birds back because of access restricted by Thesen Island
- Zoning for use and not protection.
- Zone A3 important estuary zone should be zoned for protection. A3 now impacted because of access via railway bridge
- Aquaculture in Zone A3 zone
- Needs to align itself in the RDM study. The data contained in the RDM will influence statements and considerations in the EMP document
- Zonation maps?.
- Scale needs to show details.Zonation (B zone, Fig 2) in upper estuary [above N2 bridge] will contribute to the nursery function of the estuary [effectively the REI component of the system
- Zonation maps would benefit from the detail provided in the RDM document
- Protection of invertebrate intertidal areas not adequately addressed
- Closed areas seem small, relative to estuary
- Should also consider no-go zones for any activities – these should rotate on a time basis. Just too much actively on the Knysna system in general. These no-go zones would help address the nursery function of the main basin.
- Under Operational Objectives (section 3.3, must consider habitats and communities with regards to invertebrates – sections B3. Only refers to bait organisms. This could link with no-go areas. Also helps protect bird communities. See Table 2 – again refers only to bait organisms with regards to Operational Objectives.

### Estuary Forum:

**General comments from Workshop participants:**
- Work together with SanParks (after a bit of conflict)
- SANParks is managing authority so plan had to fit into their plans
• Parks Forum not as open as proposed for Estuary Forum (must therefore be broadened to include others if it is to fulfill the role of an Estuary Forum
• City Manager or Major should be included in forum (or a delegated representative/s) – someone that can provide input and decisions related to their mandate “on the spot” (envisioned to get them on board, they are aware of this process)
• Level of involvement of subsistence fishers (issue needs to be sorted out: perception is that subsistence fishers are the same – not so we have recreational fishers with some that sell their fish)?
• Rich leisure (recreation) versus poorer community (subsistence) is an issue because of access to the latter?
• EIA’s of Knysna go for national approval not provincial (DEADP should be involved more on the ground)
• SANParks appointed person to coordinate and control compliance monitoring type issues [Pee]?*
• Training courses on monitoring to SANParks staff (formal recognition if they were involved in monitoring)
• Roles and responsibilities of authorities must be sorted out and coordinated
• Public works also involved linked to mariculture
• Forum must consider and discuss EIA’s to facilitate coordination and communication
• There is number of forums active in the Knysna area – these need to be drawn together into an estuary forum or otherwise be incorporated in to one of these bodies

Detailed comments from Working Group:
• Pg. 31 Summary tables, flow diagrams could have been used to show links between and responsibilities of different management authorities
• All not consulted. Forum not in place yet

Any show-stoppers?  Yes, in particular SA, Vision, Objectives, Strategies and Zonation Plan to be revised

Innovative approaches and techniques used in EMP:
General comments from Workshop participants:
• Attempt to integrate SANParks plan with EMP was good
• Inclusion of carrying capacities for different zones

4.7 Gamtoos EMP

The scores allocated to the Gamtoos EMP were as follows:

<table>
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<th>COMPONENT/INSTITUTIONAL STRUCTURE</th>
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<td>6</td>
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<tr>
<td>Vision, Strategic Objectives &amp; Specifications</td>
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<td>1</td>
</tr>
<tr>
<td>Management Strategies &amp; MAPs</td>
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<tr>
<td>Zonation Plans</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Estuary Forum</td>
<td>7</td>
<td>2</td>
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</tbody>
</table>

Detailed comments from workshop participants and the working group in support of the above are summarized below for consideration by the consultants in future revision of the EMP. Specific actions that require priority attention was also highlighted.

Situation Assessment (SA):
General comments from Workshop participants:
• Must present the SA to stakeholders make them aware of issues
• Research done on estuary not incorporated (Bate), e.g. importance of REI zone did not come out (Bate) in the skiing area that can be used as motivation for not doing it (e.g. reconsider
### Detailed comments from Working Group:

- The Situation Assessment is good, but should provide a more detailed description of the biota and the goods and services. The information on exploitation and use is good. A habitat map should be included in the SA.
- Some primary scientific literature missing.
- Biological assessment is less than 1 page, with only brief descriptions of major groups (fish, birds, inverts, bait). There is no information on the functional aspects and how the foodweb is driven (no reference to freshwater flow patterns, salinity distribution, seasonality, the importance of the RE1, etc).
- A little information available on the exploitation of Living Resources, mainly fish.
- Again, the report demonstrates that no estuarine specialists were involved in drawing up the situation assessment.
- The absence of RDM study clearly disadvantages the situation assessment.
- The RE1 and its role on an important nursery area is not dealt with.
- More information on the potential impact of fishing competitions in the estuary needed.
- Estuarine functioning is not part of the report – therefore difficult to establish management strategies that would address the overall health of the estuary.
- Page 45 – only refer to river RDM 7.9% of MAR!! This is dangerous from the estuaries perspective.
- Gamtoos is ranked 8th for nursery function among temperate systems – highlights the necessity for the EMP to place much emphasis on factors that drive the nursery function.
- One of the core groups of temperate estuaries required to meet the targets for biodiversity protection.

### Vision, Strategic Objective & Specifications:

#### General comments from Workshop participants:

- Vision is a statement of intentions rather than desired state for estuary (take out “we strived to”…)
- The vision is more of a statement of intention, should rather try to reword it as the envisaged state of the estuary.

#### Detailed comments from Working Group:

- Management Plan does not indicate stakeholders involved. This information is in the SA and should be summarised in the EMP.

### Management Strategies & MAPS:

#### General comments from Workshop participants:

- Requirements (skiing) is in conflict with ecological sensitivity (bank erosion)
- Water quality and quantity must still be addressed (although it was covered in SA)
- WQ is very important issue and must be included
- Can take a harder line on fishers via forum
- Night ban will work here, because of high effort rather than closing an area in the estuary (Steven)
- Fishing issues difficult to dictate from “local” forum level it needs national intervention
- Management actions are not only limited to TPCs (probably because TPC should be resource based and not issue-based) needs reshuffling – not only TPC triggers actions
- Blind-arm and access issues need to be included
- Management strategies must addressed agricultural return-flow must be improved (e.g. REI report of Bate)
- Establishment of sanctuary zone/s should be a management strategy (may also apply to other of the estuary management plans)
- Jet-skiing and waterskiing not permitted at all (suck up water thus effect on larvae and safety)
Detailed comments from Working Group:

- The EMP is good, but should include targets [dates] for implementation or management actions. Incorrect legislative instruments proposed for controlling exploitation. No budget provided. A bit too woolly, e.g. management of sanctuaries and conservation zones?
- Pg. 6 Why not other strategies addressed in E2P? Under point 5 it is stated that the E2P could not include water quantity & quality, education and awareness.
- Pg. 7. last paragraph. Activities that would need to be controlled include “cattle grazing and trampling of salt marsh and floodplain habitats”
- Pg. 10 The Gamtoos is a narrow channel-like estuary. No skiing should take place in the proposed zones 1 and 2. Bank stability is important and this would result in erosion. The wake free zone should include the entire upper reaches of the estuary. Four areas on the east bank are already identified as requiring rehabilitation due to erosion therefore it would be foolish to allow activities that encourage this
- Gamtoos is surrounded by agricultural activities, some of these taking place in river channels. The Management Plan does not discuss the possible rehabilitation of these areas. No detail is provided on which components of the land consist of private farms. i.e. what would it take to provide a decent buffer area? How many properties would be influenced by the 100 m riparian zone
- Management strategies must address agricultural return-flow, information available in at least 3 WRC reports
- Add to research requirements: 1) Management of agricultural return-flow, nutrient input and algal blooms including likelihood of toxic dinoflagellate blooms; 2) Structure and function of the supratidal salt marsh areas. Salinisation and response to future climate change; 3) If a detailed fishery survey is proposed then this needs to be linked to past studies, none of these are mentioned in the document
- Table 3 – Management Action Plans and Objectives E3. Although monitoring of bait removal is important, it is the damage done when collecting that is more critical (trampling)
- Management strategies – must include a RDM study. This is fundamental to a proper EMP. Very obvious if a RDM has not been done on a particular estuary, or if the RDM has not been referred too.

Zonation Plans:

General comments from Workshop participants:

- Excluded little tributaries and wetlands (that are on private farmland) - should be covered if 5 m contour is used a boundary
- Explicitly indicate which of these wetlands are degraded or earmarked for rehabilitation
- Are there grazing areas? Indicate where?
- Make mouth zone broader (rather than the indicated GIS mapped area) to allow for natural variability in mouth position as this is a very mobile area.
- What about sanctuary zone further up in estuary for fish even though there is no a specific site where fish naturally concentrate or group, rather as a complimentary intervention to just managing of fishing pressure
- Consider a total ban (versus closed) around mouth area because it is so dynamic
- Propose a sanctuary in upper reaches
- Blind arm should be a no-go zone because of birds (especially a no-dig area)
- Identify mobile dune areas that are still there (from conservation perspective)
- Maybe look at simplifying the specifications for different zones
- What about 1 km buffer zone rather than 100 m? That will allow one to have control over housing development in the area (e.g. ribbon development versus nodal) Make it more explicit upfront of what you think must happen in that area – do not leave it up to the management authorities

Detailed comments from Working Group:

- Zonation plan must consider rehab areas related to tributaries and river channels.
- 1 km coastal protection zone, restrict from turning into housing developments
- No skiing - Page 10, zone 2. This area is relatively shallow and temporarily becomes part of the REI – high rainfall season that also overlaps with peak recruitment into the estuary (those that use the estuary as nurseries).

Estuary Forum:

General comments from Workshop participants:

- Be careful of being biased to fishers (reduced to a number of representatives)
• Be careful that biased attendance not agenda-driven issues
• Subsistence fishers living on farms (maybe a grey area – they arrive in cars) (did address this in SA)?
• Who will be management agency (to be determined)

Detailed comments from Working Group:
• Pg 32. In terms of the Estuary Management Institution it is unclear what already exists and who is already working together, who is the proposed lead agency for Estuary Management?

Any show-stoppers? None

Innovative approaches and techniques used in EMP:

General comments from Workshop participants:
• Legislation review summarised in table format was good (easily accessible)
• Clear objectives (e.g. sustainable livelihood for political awareness and awareness and education) with balanced scientific rigor
• Prompting people to make their own decisions, rather than being prescriptive!
• Stakeholder management in this mini-war zone was good and people are enthusiastic
• Fright factor of closing fishery worked well to get people on board!
• Awareness and training well integrated
• IDP and SFD must be reflected in their management strategies

Detailed comments from Working Group:
• Figure 7.1. Situation Assessment. Good presentation of land-use activities and potential impacts
• Subsequent figures good representation of fishing and bait collecting efforts
Section 5:

Future of Estuary Management Plans


### 5.1 Future Review Process

An important issue discussed at the workshop, was the approach that should be followed in future reviews of EMP developed as part of the C.A.P.E Estuaries Programme and, ultimately under the ICM Act 2008.

The current process used an open review workshop format: Consultants that developed the EMPs for the pilot estuaries each prepared a presentation on their approaches and experiences. Workshop participants were then given time to ask questions for clarification. Thereafter all participants, covering a wide range of expertise, from estuarine ecology to governance, were given the opportunity to provide constructively critique each of the plans. To provide structure to this process and to be able to provide a formal Record of Decision (RoD), a review criteria were developed – agreed upon by all participants – and each EMP was scored accordingly. A final scoring was deferred to the Technical Woking Group which comprises of managers and scientists.

There was general agreement that future review processes should follow a similar approach, as the complexities involved in estuarine management cannot be reviewed by one or two individuals. An expert review workshop, was considered a successful model that provided a balanced evaluation of the EMPs (not all participants found the presentations equally useful and keeping time and financial constraints in mind it might be more useful to stress the importance of preparation by all participants versus the presentation of the individual project approaches and findings in time consuming manner). Reviews need to be conducted after completion of the Situation Assessment and the development of the draft EMP, but prior to the EMP being rolled out for implementation. The Situation Assessment could possibly be reviewed by the C.A.P.E Estuaries Programme co-ordinator, with limited input form other specialists and managers, as this part of the process needs a quick turn around time.

While the open, workshop forum provides a broad review of EMPs, such a forum cannot necessarily review the finer details relating to the functioning or issues of individual systems.

The open review process should therefore be complemented with formal written reviews from selected individual, e.g. an in-depth peer review by one scientific and one manager that have knowledge of the system, guided by very specific criteria and context.

Workshop participants further recommended that the Working Group (WG), established as part of the C.A.P.E, Estuaries Programme, be formalized (with a well defined mandate) and that the group be used routinely in EMP reviews. This WG should meet twice a year to assist with technical challenges facing the roll out of EMPs under the C.A.P.E Estuaries programme. Further, the DEA and DWA should formally establish a National Estuarine Working Group (NEWG) comprising managers and scientist’s representative of all the coastal regions to assist with the national roll out of EMPs under the ICM Act 2008. This NEWG should be assisted by a legal specialist to ensure compliance with current legalisation. It should operate on a national level so as to standardize the review process and assist with knowledge dissemination between the different regions and spheres of government. To facilitate the establishment of the NEWG, the C.A.P.E. Estuaries Programme should include KwaZulu-Natal representatives in its next review to assist with the standardization and coordination of managed processes on national scale. A large number of the issues discussed at this review workshop were not region specific and future reviewers will benefit from a cross fertilisation of ideas and approaches. It is further recommended that the national roll-out of the programme to the KwaZulu-Natal region will benefit from an inclusion of some of the C.A.P.E. Estuaries representatives on its review panel to incorporate some of the learning gained in the pilot phase.
5.2 Budgets and Funding Models

The budget of about R 200 000-00 that was available for the development of each of the draft EMPs on the six pilot estuaries were considered fair. However, additional budget was definitely necessary for proper establishment of the estuary forums and for long-term implementation.

It was therefore agreed that future draft EMP developments under the C.A.P.E Estuaries Programme will be allocated a similar budget; but that a contingency fund will be available in instances where site specific unforeseen issues arise that require additional meetings or stakeholder interactions. Funding for education and awareness programmes around the value and management needs of estuaries should also be considered in future.

The pilot studies mostly relied on funding from the C.A.P.E Estuaries Programme. However, co-funding models, where authorities that have responsibilities in terms of estuarine management (either national, regional or local) contribute to the EMP development process, should be encouraged. In addition to national and local government, funding can also be sourced from conservation agencies and NGOs such as WWF. The Breede Conservancy provides another example where the local conservancy (made up of interested and affected parties) contribute to the overall development of the plan. This approach will ensure buy-in from the contributing authorities or institutions and is also a more sustainable model for long-term implementation (municipalities are often not aware of the importance and benefits they derive from estuaries in their jurisdiction. A road show should be developed that stress the benefits derive from sound management of this resource and their legal obligations to do so)

It will also be more cost effective (both from a financial and human resources perspective) to develop overarching EMPs for estuaries within a municipal area. The number of systems to be included in such an overarching EMP will obviously depend on the capacity of local government, the complexity of the ecological systems and the diversity of activities that might need to be managed. Systems with very complex issues may still individual attention in the initial stages of EMP development process.

In addition to funding, effective implementation of EMPs in the CFR region will rely on sound institutional arrangements at all levels of government. These include the following:

- A local estuary management institution, such as an Estuary Forum or an Estuary Advisory Committee, to ensure local stakeholder engagement and compliance
- The establishment of an Estuary Advisory Committee under the auspices of the Western Cape Provincial Coastal Committee (similar to those of the Eastern Cape and KwaZulu-Natal). This ensures that issues not dealt with on a local level are highlighted and, if need be, brought to the notice of the relevant departments or ministers

For future development of EMPs under the ICM Act 2008, DEA is considering a funding model were larger municipalities will be required to source or provide most of the funding or the development of the EMP, while the department will support the smaller local authorities that lack sufficient resources.
Funding for EMPs of systems located in Protected Areas, for example can be provided from funding models dedicated towards the protection of biodiversity. Further it is recommended that the development of EMPs for estuaries of high biodiversity importance should be funded by national government to ensure a high level of protection and prevent further degradation.

The effective management of a natural resource requires knowledge of what is being managed and insight into the condition of the resource. There is currently no cost-effective manner in which to do this for the estuaries of the CFR. It is therefore strongly recommend that an Estuary Health Programme be developed. The programme should be cost-effective and involve a practical long-term field measurement programme that provides data to assess the health status of estuaries. An essential component to be addressed as part of this programme is the design and maintenance of a national estuary database.

**5.3 Development of Estuary Health Monitoring Programme**

The effective management of a natural environment requires knowledge of what is being managed and insight into the condition of the environment. There is currently no cost-effective manner in which to do this for the estuaries of the CFR. It is therefore strongly recommend that an Estuary Health Programme be developed. The programme should be cost-effective and involve a practical long-term field measurement programme that provides data to assess the health status of estuaries. An essential component to be addressed as part of this programme is the design and maintenance of a national estuary database.

In support of effective implementation a central database for estuaries is essential and in this regard the C.A.P.E. Estuaries Programme and responsible government authorities should liaise with SAEON.
References


Appendix A:

Workshop Agenda & Workshop Participants
Agenda

C.A.P.E. Estuaries Programme
Estuary Management Plan Review Workshop

8 & 9 June 2009

Day 1: Monday, 8 June 2009

9:30 – 10:00  Tea/Coffee
10:00 – 10:30  Introduction to Generic Framework for an Estuary Management Plan (EMP)
10:30 – 12:00  Evaluation of the Generic Framework for EMPs based on feed-back from EMP Consultants
12:00 – 12:30  Final approval of Evaluation Criteria for individual EMPs

12:30 – 13:30  Lunch
13:30 – 15:30  Evaluation of individual EMPs (15 min presentation + 45 minutes discussion/ plan)
   • Olifants (15 min presentation by Anchor Environmental Consultants)
   • Klein (15 min presentation by iRAP)
15:30 – 16:00  Tea/Coffee
16:00 – 17:00  Evaluation of individual EMPs (15 min presentation + 45 minutes discussion)
   • Heuningnes (15 min presentation by HillLand Associates)

Day 2: Tuesday, 9 June 2009

8:30 – 10:30  Evaluation of individual EMPs (15 min presentation + 45 minutes discussion/ plan)
   • Breede (15 min presentation by Bohlweki)
   • Knysna (15 min presentation by CES)
10:30 – 11:00  Tea/Coffee
11:00 – 12:00  Evaluation of individual EMPs (15 min presentation + 45 minutes discussion)
   • Gamtoos (15 min presentation by Enviro-Fish Africa)
12:00 – 12:30  Recommendations to government on future review processes for EMPs
12:30 – 13:00  Recommendations on potential funding models for the development of EMPs in the future
13:00 – 14:00  Lunch
14:00 – 15:00  Summary of workshop outcomes & the Way forward
15:00  Closure
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<th>E-MAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof Tris Wooldrige</td>
<td>NMMU</td>
<td>041 5042425</td>
<td><a href="mailto:Tris.Wooldridge@nmmu.co.za">Tris.Wooldridge@nmmu.co.za</a></td>
</tr>
<tr>
<td>Steven Lamberth</td>
<td>DEA: MCM</td>
<td>021 4023159</td>
<td><a href="mailto:lamberth@deat.gov.za">lamberth@deat.gov.za</a></td>
</tr>
<tr>
<td>Prof Janine Adams</td>
<td>NMMU</td>
<td>041 5042429</td>
<td><a href="mailto:janine.adams@nmmu.co.za">janine.adams@nmmu.co.za</a></td>
</tr>
<tr>
<td>Ayanda Matoti</td>
<td>DEA: MCM</td>
<td>021 4023478</td>
<td><a href="mailto:amatoti@deat.gov.za">amatoti@deat.gov.za</a></td>
</tr>
<tr>
<td>Dr Alan Boyd</td>
<td>DEA: MCM</td>
<td>021 4023307</td>
<td><a href="mailto:ajboyd@deat.gov.za">ajboyd@deat.gov.za</a></td>
</tr>
<tr>
<td>Jean du Plessis</td>
<td>CapeNature</td>
<td>082 4962522</td>
<td><a href="mailto:jdpa@telkomsa.net">jdpa@telkomsa.net</a></td>
</tr>
<tr>
<td>Peet Joubert</td>
<td>Nature Management Services</td>
<td>083 6304594</td>
<td><a href="mailto:seahorseknysna@gmail.com">seahorseknysna@gmail.com</a></td>
</tr>
<tr>
<td>Tandi Breetzke</td>
<td>Bohlweki-SSI</td>
<td>082 8737400</td>
<td><a href="mailto:tandib@ssi.co.za">tandib@ssi.co.za</a></td>
</tr>
<tr>
<td>Cathy Avlerinos</td>
<td>Hilliard Associates</td>
<td>082 5586589</td>
<td><a href="mailto:cathy@hillard.co.za">cathy@hillard.co.za</a></td>
</tr>
<tr>
<td>Nigel Wessels</td>
<td>Bohlweki-SSI</td>
<td>072 4041199</td>
<td><a href="mailto:nigelw@ssi.co.za">nigelw@ssi.co.za</a></td>
</tr>
<tr>
<td>Dr Barry Clark</td>
<td>Anchor Environmental Consultants</td>
<td>021 68553400</td>
<td><a href="mailto:barry.clark@uct.ac.za">barry.clark@uct.ac.za</a></td>
</tr>
<tr>
<td>Dr Jane Turpie</td>
<td>Anchor Environmental Consultants</td>
<td>021 6855400</td>
<td><a href="mailto:jane.turpie@uct.ac.za">jane.turpie@uct.ac.za</a></td>
</tr>
<tr>
<td>Celesté Lesch</td>
<td>DEADP: Pollution Management</td>
<td>021 4834099</td>
<td><a href="mailto:slesch@pgwc.gov.za">slesch@pgwc.gov.za</a></td>
</tr>
<tr>
<td>Ludwe Sinuka</td>
<td>DEADP: Pollution Management</td>
<td>021 4834737</td>
<td><a href="mailto:lsinuka@pgwc.gov.za">lsinuka@pgwc.gov.za</a></td>
</tr>
<tr>
<td>Barbara Weston</td>
<td>DWA: RDM</td>
<td>012 3368221</td>
<td><a href="mailto:Westonb@dwaf.gov.za">Westonb@dwaf.gov.za</a></td>
</tr>
<tr>
<td>Willemien Swanepeol</td>
<td>Overstrand Municipality</td>
<td>028 3138100</td>
<td><a href="mailto:wswanepoel@overstrand.gov.za">wswanepoel@overstrand.gov.za</a></td>
</tr>
<tr>
<td>Wilna Kloppers</td>
<td>DWA: Western Cape</td>
<td>021 9507141</td>
<td><a href="mailto:wilna@dwaf.gov.za">wilna@dwaf.gov.za</a></td>
</tr>
<tr>
<td>Sue Matthews</td>
<td>Freelance writer; WRC</td>
<td>083 3815432</td>
<td><a href="mailto:suemat@iafrica.com">suemat@iafrica.com</a></td>
</tr>
<tr>
<td>Nampumelelo Thwala</td>
<td>CapeNature</td>
<td>021 8668039</td>
<td><a href="mailto:nthwala@capenature.co.za">nthwala@capenature.co.za</a></td>
</tr>
<tr>
<td>Sono Sandiswe</td>
<td>DEA: MCM</td>
<td>021 4023634</td>
<td><a href="mailto:ssono@deat.gov.za">ssono@deat.gov.za</a></td>
</tr>
<tr>
<td>Vernon Gibbs-Halls</td>
<td>Eden Municipality</td>
<td>072 6705108</td>
<td><a href="mailto:gibbsbhal@gmail.com">gibbsbhal@gmail.com</a></td>
</tr>
<tr>
<td>Naomi Richardson</td>
<td>Coastal and Environmental Services</td>
<td>072 3286623</td>
<td><a href="mailto:n.richardson@cesnet.co.za">n.richardson@cesnet.co.za</a></td>
</tr>
<tr>
<td>Aidan Wood</td>
<td>Enviro-Fish Africa (Pty) Ltd</td>
<td>082 8694939</td>
<td><a href="mailto:tagfish@telkomsa.net">tagfish@telkomsa.net</a></td>
</tr>
<tr>
<td>Jenny Whitehead</td>
<td>iRAP Consulting</td>
<td>083 6616621</td>
<td><a href="mailto:irap@worldonline.co.za">irap@worldonline.co.za</a></td>
</tr>
<tr>
<td>Kathy Leslie</td>
<td>iRAP Consulting</td>
<td>083 3255615</td>
<td><a href="mailto:wleslie@iafrica.com">wleslie@iafrica.com</a></td>
</tr>
<tr>
<td>Pierre de Villiers</td>
<td>CapeNature (C.A.P.E. Estuaries Programme)</td>
<td>083 23629224</td>
<td><a href="mailto:estuaries@capenature.co.za">estuaries@capenature.co.za</a></td>
</tr>
<tr>
<td>Lara van Nierkerk</td>
<td>CSIR</td>
<td>021 8882491</td>
<td><a href="mailto:lvnieker@csir.co.za">lvnieker@csir.co.za</a></td>
</tr>
<tr>
<td>Susan Taljaard</td>
<td>CSIR</td>
<td>021 8882494</td>
<td><a href="mailto:staliaar@CSIR.co.za">staliaar@CSIR.co.za</a></td>
</tr>
</tbody>
</table>
Appendix B:

Evaluation of the Generic EMP

(Questionnaires completed by consultants)
1. The framework identifies six main components/tasks to be executed as part of an EMP (i.e. Situation Assessment & Evaluation, Vision and Strategic Objectives, Management Strategies, Estuary Zonation Plan and Operational Specifications (Objectives), Management Action plans, Implementation, Monitoring). Are these sufficient?

- Olifants - Yes
- Knysna – Yes
- Gamtoos – Yes
- Breede – Yes
- Heuningnes: There should be a category for additional research required and not just monitoring – especially in light of climate change and the potential impacts of this. The research items will have an implication on the ongoing monitoring as well as on the management implications.
- Klein - CM Act requires preparation of a Coastal Planning Scheme. Demarcation of the zones relative to the estuary, and guidelines for land use within the Coastal Protection Zone, should be a component of every EMP because land use within this zone has a significant impacts on estuarine health.

2. Within the component “Situation Assessment & Evaluation”, please comment on the following:

Are the specifications for this component (as set out in draft document) correct?

- Olifants - Situation assessment should serve as a reference document and baseline description for managers and stakeholders and should provide justification for all aspects of the management plan, and a bench mark for future changes in the system. Therefore need more information/emphasis on current health status, fauna and flora, biophysical processes and functioning of the estuary (detailed summary of available information on fauna and flora, habitat maps, etc.). Should also pay more attention to local legislative and planning issues such as by-laws, land tenure and IDPs that affect the estuary.
- Knysna - Perhaps misinterpreted the specifications / guidelines, but not enough emphasis was placed on the issues requiring management per different sector. Each was adequately described, but should have ended with a section saying this is fine, this needs attention, and this has been completely ignored from a management perspective, and needs to be urgently addressed.
- Gamtoos – Yes
- Breede – Yes
- Heuningnes - Yes
- Klein - 1. At the level of detail being targeted in the given list, a number of components are missing: Stakeholder assessment, Institutional capacity assessment, Data assessment, Ecosystem services assessment, Biodiversity value-sensitivity analysis, Geohydrological assessment, Landscape and scenic value assessment, Recreational use assessment.
  2. However, consultants should not be expected to carry out this kind of Assessment unless adequate budgets are allocated. With the budget that was available for the Klein, the Situation Assessment should have been done as a consultative ‘Issues Identification’ process with minimal desktop research (i.e. a much more strategic approach).
  3. The list as given in the GEMP is poorly categorised (e.g. Land-use and planning is part of Socio-Economic environment but Conservation planning is not).
  4. An assessment of Key threats and their drivers (cf. Kay & Alder), and Opportunities, is a more useful analysis than Opportunities and Constraints.
Are the guidelines provided in the documentation adequate for the execution of this component?

<table>
<thead>
<tr>
<th>Location</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olifants</td>
<td>Level of detail for all sections should be specified</td>
</tr>
<tr>
<td>Knysna</td>
<td>Feel that the specialists perhaps did not use the guidelines, resulting in issues above. So the answer to the question could be yes, but then the guidelines were not used.</td>
</tr>
<tr>
<td>Gamtoos</td>
<td>Yes</td>
</tr>
<tr>
<td>Breede</td>
<td>Yes</td>
</tr>
<tr>
<td>Heuningnes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Klein: No reference to participatory / rapid assessment techniques. The Guidelines are all very broad, do not help the consultant at the level of detail that is called for in the EMP, do not provide any real tools. The ‘institutional’ aspect is removed, addressed in another chapter of the Framework document. It appears that the intention in the GEMP Framework is that the assessment should be carried out by the institutions (no reference to consultant role). Very confusing. A methodological / process-based approach would perhaps be a better way of communicating the Framework. Specification of outputs could take the form of suggested Tables of Contents.

What challenges did you encounter during the execution of this specific component/task?

<table>
<thead>
<tr>
<th>Location</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olifants</td>
<td>Difficult to decide how much detail to include in the absence of suitable guidelines</td>
</tr>
<tr>
<td>Knysna</td>
<td>No real issues in this section, problems came later when it was time to write the management actions, and the management issues had not really been identified (Living Resources section was different – Aidan identified what needed to be done).</td>
</tr>
<tr>
<td>Gamtoos</td>
<td>Access to and lack of relevant information.</td>
</tr>
<tr>
<td>Breede</td>
<td>No comment</td>
</tr>
<tr>
<td>Heuningnes</td>
<td>No comment</td>
</tr>
</tbody>
</table>

Klein - Too much volume, too little budget. Conflicting requirements of GEMP Framework and Terms of Reference, both of which called for way more than the budget could handle, resulting in a shotgun approach instead of a strategic one. Unavailability of key officials (Local Municipality planning / land use management, and Water Catchment management agency.

3. Within the component “Vision and Strategic Objectives”, please comment on the following:

Are the specifications for this component (as set out in draft document) correct?

<table>
<thead>
<tr>
<th>Location</th>
<th>Comment</th>
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<tbody>
<tr>
<td>Olifants</td>
<td>Yes</td>
</tr>
<tr>
<td>Knysna</td>
<td>Yes</td>
</tr>
<tr>
<td>Gamtoos</td>
<td>Yes</td>
</tr>
<tr>
<td>Breede</td>
<td>Yes</td>
</tr>
<tr>
<td>Heuningnes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Klein - The term, “Strategic objectives”, is not adequately defined and unpacked.
Are the guidelines provided in the documentation adequate for the execution of this component?

<table>
<thead>
<tr>
<th>Location</th>
<th>Response</th>
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<tbody>
<tr>
<td>Olifants</td>
<td>Yes</td>
</tr>
<tr>
<td>Knysna</td>
<td>Yes</td>
</tr>
<tr>
<td>Gamtoos</td>
<td>Yes</td>
</tr>
<tr>
<td>Breede</td>
<td>Yes</td>
</tr>
<tr>
<td>Heuningnes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Klein - Conflict between the contractual requirements and the TOR/GEMP regarding methodology. GEMP and TOR implied that objectives should be set after the Assessment (once key issues are identified, which makes sense). The Programme Co-ordinator wanted Objectives and Vision as an outcome of the First meeting with Stakeholders (which is when scoping of issues should occur). Confusing. Insufficient guidelines for objective setting process.

What challenges did you encounter during the execution of this specific component/task?

<table>
<thead>
<tr>
<th>Location</th>
<th>Response</th>
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</thead>
<tbody>
<tr>
<td>Olifants</td>
<td>None, but it might be a good idea to specifically ask stakeholders to choose between different options or mixes in terms of levels of conservation and development on their system, otherwise the vision statements remain descriptions of utopia and not all that helpful.</td>
</tr>
<tr>
<td>Knysna</td>
<td>Specific to Knysna, but final Vision and Strategic Objectives were that of SANParks and not that arrived at the end of the stakeholder workshop.</td>
</tr>
<tr>
<td>Gamtoos</td>
<td>Stakeholder understanding of what these components are is poor. Needed a lot of prompting.</td>
</tr>
<tr>
<td>Breede</td>
<td>None</td>
</tr>
<tr>
<td>Heuningnes</td>
<td>Conflicting strategic objectives – specifically on the Heuningnes Estuary where the historic farming practices have resulted in the mouth management and dune stabilization to prevent the mouth from closing and thereby keeping an open mouth system for the past 60 years. However, there is now a salinity build up in the inland water bodies that are becoming hypersaline through reduced freshwater flow (catchment management) and future climate change implications relating to sea water ingress up the estuary may increase the salinity build up affecting the farming practices in the floodplains.</td>
</tr>
<tr>
<td>Klein</td>
<td>Lack of clarity about what was being called for.</td>
</tr>
</tbody>
</table>

4. Within the component “Management Strategies”, please comment on the following:

Are the specifications for this component (as set out in draft document) correct?

<table>
<thead>
<tr>
<th>Location</th>
<th>Response</th>
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<tbody>
<tr>
<td>Olifants</td>
<td>Yes</td>
</tr>
<tr>
<td>Knysna</td>
<td>Yes</td>
</tr>
<tr>
<td>Gamtoos</td>
<td>Yes</td>
</tr>
<tr>
<td>Breede</td>
<td>Yes</td>
</tr>
<tr>
<td>Heuningnes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Are the guidelines provided in the documentation adequate for the execution of this component?

<table>
<thead>
<tr>
<th>Location</th>
<th>Response</th>
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</thead>
<tbody>
<tr>
<td>Olifants</td>
<td>Need to articulate more clearly the difference between a strategy and an action. These are confused even in the generic guideline documents.</td>
</tr>
<tr>
<td>Knysna</td>
<td>Yes</td>
</tr>
<tr>
<td>Gamtoos</td>
<td>Yes</td>
</tr>
<tr>
<td>Breede</td>
<td>Yes</td>
</tr>
<tr>
<td>Heuningnes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Klein: Examples would be useful. A template for Logical Framework Approach (LFA – management by objectives approach to planning) would be useful. See comments on Operational Objectives in Question 5. (Targets etc should relate to strategies, not to the Zoning Plan, which is a spatial tool). Each of the Management Strategies should have a statement describing the targeted outcome of the strategy.

What challenges did you encounter during the execution of this specific component/task?

<table>
<thead>
<tr>
<th>Location</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olifants</td>
<td>None</td>
</tr>
<tr>
<td>Knysna</td>
<td>Fine – enough management strategies provided in guidelines, complimented by those of SANParks.</td>
</tr>
<tr>
<td>Gamtoos</td>
<td>Aspects of living resource exploitation – user groups not easy to satisfy, e.g. closed areas or fishing restrictions (dusky kob)</td>
</tr>
<tr>
<td>Breede</td>
<td>No comment</td>
</tr>
<tr>
<td>Heuningnes</td>
<td>Riparian landowners who have a title restriction covering any potential tourism development in the nature reserve – this leads to potentially conflicting management strategies and public users who wish to enjoy the resources.</td>
</tr>
<tr>
<td>Klein</td>
<td>Lack of existing data and information, poor stakeholder responses to requests for information, feedback.</td>
</tr>
</tbody>
</table>

5. Within the component “Estuary Zonation Plan and Operational Specifications (Objectives)”, please comment on the following:

Are the specifications for this component (as set out in draft document) correct?

<table>
<thead>
<tr>
<th>Location</th>
<th>Response</th>
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</thead>
<tbody>
<tr>
<td>Olifants</td>
<td>This gives the impression that the objectives are linked to the zones. Why talk about objectives after strategies when strategies are put in place to meet objectives.</td>
</tr>
<tr>
<td>Knysna</td>
<td>Yes</td>
</tr>
<tr>
<td>Gamtoos</td>
<td>Yes</td>
</tr>
<tr>
<td>Breede</td>
<td>Yes</td>
</tr>
<tr>
<td>Heuningnes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Klein: In correctly named. “Estuary Zoning Plan” would be more appropriate. Even more appropriate, align with land use management practice and the ICM Act by calling this a “Spatial Conservation and Development Framework” (SCDF, as an element for insertion in to the Municipal Spatial Development Framework), and also produce an Estuary Planning Scheme (as an overlay for insertion into the Municipal Zoning Scheme). The difference between these two is that a Framework is non-statutory, and a Scheme is statutory. Add launch sites, jetties and piers, landside recreation nodes. “Operational objectives” – better term in relation to the EZP would be “Guidelines”. These should
be described for each of the zones etc in the EZP/SCDF.
Unclear how grouping into the Conservation, Social... etc categories could be achieved in this context. This should be moved to the Management Strategies section. It would make more sense there, in terms of the logical framework, to have Targets relating to the management strategies rather than the spatial plan. Categories need careful consideration (see 6.)

Are the guidelines provided in the documentation adequate for the execution of this component?

Olifants - Yes
Knysna – Yes
Gamtoos – Yes
Breede – Yes
Heuningnes - Yes
Klein - No guidelines provided. I suggest that a generic set of Planning Categories should be provided, so that there is consistency in the terminology used across all estuaries. The Framework should identify these and provide associated Statement of Intent and suggested Estuary and Land Use Management Guidelines (see Klein EMP, Table 9 – this is consistent with Land Use Management Planning Guidelines, including Western Cape Bioregional Spatial Planning Categories).

What challenges did you encounter during the execution of this specific component/task?

Olifants - Getting all stakeholders to agree on a common zonation plan
Knysna - There was an existing (but only loosely enforced) zonation plan – tried to change it to make. Low Intensity Use) was prescribed by SANParks for the Knysna Estuary in zoning of Wilderness National Park
Gamtoos - Defining the “estuarine area” – which legislation/guideline is best to use.
Breede – No comment
Heuningnes - Operational objectives such as retaining the open mouth policy will now trigger listed activities in terms of NEMA and will need authorisation prior to being implemented. The conflicting objectives between maintaining the open mouth and planning for climate change implications.
Klein - Lack of data and information

6. Within the component “Management Action Plans”, please comment on the following:

Are the specifications for this component (as set out in draft document) correct?

Olifants - The term “management action plans” is confusing. Should just be management actions. These can then be linked more explicitly with strategies and objectives. In most of the EMPs, management action plans are tacked on the end of the document which makes it very difficult to follow and even more difficult (I’m sure) for a manager to implement. Management actions should also be linked with discreet focussed deliverables and indicators and to a specified management agency of agent and a specified time frame in which they are to be implemented. In the absence of this implementation of the management actions (and hence the EMP) cannot be properly assessed.

Most of the EMPs I have read are way too detailed and convoluted even for me to follow. The key to a successful and useful management plan is simplicity and brevity. This message needs to be brought across loud and clear in the guidelines

Knysna – Yes
<table>
<thead>
<tr>
<th>Gamtoos – Yes</th>
<th>Breede – Yes</th>
<th>Heuningnes – Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klein - “…operational objectives set in terms of the EZP”. As above, the objectives should be set as Targets of the Management Strategies, not the EZP. Categories are not practical. Suggested alternative: Institutional (including Monitoring and evaluation (M&amp;E) and social aspects like compliance, etc) Water Quality and Flow Priority Use and Management (living resources, mouth management, establishment of MPA, etc – estuary dependent) Estuary and Land Use, Conservation and Development (pertaining to the water body and the land).</td>
<td></td>
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</tr>
</tbody>
</table>

**Are the guidelines provided in the documentation adequate for the execution of this component?**

<table>
<thead>
<tr>
<th>Olifants - Not really, the detail required came from advice from Pierre.</th>
<th>Knysna – Yes</th>
<th>Gamtoos – Yes</th>
<th>Breede – Yes</th>
<th>Heuningnes - Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klein - It would be useful to indicate the level of detail required, in terms of actions. Provide generic staff competence / salary scales. Provide generic legal mandates / competencies as per SA legislation and provincial level delegations.</td>
<td></td>
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</table>

**What challenges did you encounter during the execution of this specific component/task?**

<table>
<thead>
<tr>
<th>Olifants - Ensuring that the document remained succinct and easy to follow.</th>
<th>Knysna - Found resource plan (required staff and total cost) quite difficult, SANParks will have to confirm.</th>
<th>Gamtoos - Prioritising issues prior to the EMP workshop was problematic. Determining manpower requirements and costs is not possible for most MAPs.</th>
<th>Breede – No comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heuningnes - It would be more effective to define and set up the MAPs during implementation or at least after the establishment of the EMF – so that the necessary resources (human and financial) can be planned and allocated. The stakeholders seem reserved about the lack of funding and the failure to be able to achieve all the objectives set.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Klein - Too much time spent on desktop research during the Situation Assessment meant that the lead consultant carried most of the load for developing the Management Action Plans, and subsidised this. Key roleplayers should ideally be responsible for development of the Action Plans.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. Within the component “Implementation”, please comment on the following (if applicable):

Are the specifications for this component (as set out in draft document) correct?

<table>
<thead>
<tr>
<th>Location</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td>Olifants</td>
<td>- It is not clear in the guidelines that this does not need to be a separate section in the EMP and should really be integrated with the management actions. Each action should have a nominated agency responsible for its implementation.</td>
</tr>
<tr>
<td>Knysna</td>
<td>- N/A</td>
</tr>
<tr>
<td>Gamtoos</td>
<td>- Yes</td>
</tr>
<tr>
<td>Breede</td>
<td>- Yes</td>
</tr>
<tr>
<td>Heuningnes</td>
<td>- Yes</td>
</tr>
<tr>
<td>Klein</td>
<td>- Lack of clarity on institutional arrangements</td>
</tr>
</tbody>
</table>

Are the guidelines provided in the documentation adequate for the execution of this component?

<table>
<thead>
<tr>
<th>Location</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olifants</td>
<td>- It is not clear in the guidelines that this does not need to be a separate section in the EMP and should really be integrated with the management actions. Each action should have a nominated agency responsible for its implementation.</td>
</tr>
<tr>
<td>Knysna</td>
<td>- N/A</td>
</tr>
<tr>
<td>Gamtoos</td>
<td>- Yes</td>
</tr>
<tr>
<td>Breede</td>
<td>- Yes</td>
</tr>
<tr>
<td>Heuningnes</td>
<td>- The guidelines give no indication of where the funding will come from for human and financial capital. The programmes and legislation is all in place, but the funding, specifically for a small estuary like the Heuningnes which does not have a “town” and its infrastructure from which to draw. CapeNature and private land owners are the only parties actively involved.</td>
</tr>
<tr>
<td>Klein</td>
<td>- Lack of clarity on how ‘Adoption’ is achieved in an intergovernmental situation like this – if it is at all possible!</td>
</tr>
</tbody>
</table>

What challenges did you encounter during the execution of this specific component/task?

<table>
<thead>
<tr>
<th>Location</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olifants</td>
<td>- No comment</td>
</tr>
<tr>
<td>Knysna</td>
<td>- No comment, not addressed</td>
</tr>
<tr>
<td>Gamtoos</td>
<td>- No comment</td>
</tr>
<tr>
<td>Breede</td>
<td>- No comment</td>
</tr>
<tr>
<td>Heuningnes</td>
<td>- This phase is only just beginning so the challenges are still to come.</td>
</tr>
<tr>
<td>Klein</td>
<td>- Unavailability and lack of feedback from key officials (Local Municipality planning / land use management, and Water Catchment management agency) means that the Draft EMP cannot be comprehensively revised nor adopted.</td>
</tr>
</tbody>
</table>

8. Within the component “Monitoring”, please comment on the following (if applicable):

Are the specifications for this component (as set out in draft document) correct?

<table>
<thead>
<tr>
<th>Location</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olifants</td>
<td>- All parameters for which monitoring is required must also have thresholds of potential concern which trigger management action (e.g.; further monitoring, improved enforcement, etc.)</td>
</tr>
</tbody>
</table>
Knysna - Followed specs / guidelines – comment from Angus was monitoring programme too comprehensive (Roll’s Royce’) to be realistic

Gamtoos – Yes
Breede – Yes
Heuningnes – Yes
Klein – No comment

Are the guidelines provided in the documentation adequate for the execution of this component?

Olifants - All parameters for which monitoring is required must also have thresholds of potential concern which trigger management action (e.g.; further monitoring, improved enforcement, etc.)

Knysna - Followed specs / guidelines – comment from Angus was monitoring programme too comprehensive (Roll’s Royce’) to be realistic

Gamtoos – Yes
Breede – Yes
Heuningnes – The plan states the problem relating to funding for ongoing monitoring and indicates the legislative background, but in reality funding for an estuary that is not a priority for DWAF in terms of reserve studies, or for DEAT as it is not a major line fishing area or where NEMA is not likely to be used as there is no development pressure which would require authorisation and the subsequent implementation of an ongoing management plan, leaves the financial burden open to being forgotten and as at present being carried by the CapeNature Reserve who can not within their current budget be expected to carry all the costs which would be required for implementation of the MAP.

Klein – no comment

What challenges did you encounter during the execution of this specific component/task?

Olifants – No comment

Knysna - Followed specs / guidelines – comment from Angus was monitoring programme too comprehensive (Roll’s Royce’) to be realistic

Gamtoos - Absence of baseline data. Setting of TPCs was too generalised and not estuarine specific.

Breede – None

Heuningnes - Anticipate the challenge being motivating for the funding required when it could be viewed as not being “justified” as there are so few users.

Klein – no comment

9. The generic framework for EMPs requires the establishment of a local estuary forum, comprising a chairperson, executive committee and larger forum. Do you agree with this structure?

Olifants - Yes

Knysna - Forum vital, SANParks disputing this as not prescribed by NEM:PAA and not yet in National Estuarine Monitoring Protocol, but for any large complex system with different role players involved in management a forum is vital.

Gamtoos – Yes
Breede – No comment

Heuningnes - Yes

Klein - Use of “Estuarine” is grammatically incorrect, should be Estuary Forum. There is a need for clarity of terms, and consistent use of terminology in all parts of SA. Names aside, I agree that there should be an Estuary IAP group – open to anyone – that can be consulted by, and receives report back from, the (Executive) Committee. The Committee is a smaller group of representatives, of both government offices and civil society stakeholders. This Committee needs a Chairperson and a Secretariat – at least one person who is employed to convene meetings and carry out the instructions of the Committee.

10. In your opinion should the representatives of the local management authority be integrated into the EMP process? Provide motivation for your view.

Olifants - Yes. They are mandated in terms of the Coastal Management Act to develop management plans for estuaries within their areas of jurisdiction and to ensure adequate control over use of coastal resources.

Knysna- Yes, provide early insight into management challenges faced. SANParks, although perhaps not from the very outset, have had continuous involvement in the development of the plan.

Gamtoos - Yes, many decisions regarding estuarine specific issues will need their direct input and they can help facilitate the securing of funds and supply of manpower/equipment.

Breede – Yes, as they should be involved, from a legislative perspective, in terms of mandatory estuarine conservation functions

Heuningnes – Yes, they are essentially going to be responsible for making sure that the MAPs and objectives can and more importantly will be implemented. The sooner they are involved the better.

Klein - It is absolutely essential. They should, in fact, be leading the process, with assistance from conservation and resource management agencies. They have the mandate for land use management, and this is where most of the estuarine health impacts arise. They have a vested interest, in terms of the indirect contribution that environmental services provided by the estuaries makes to their revenue base.

11. The generic framework for EMPs requires the establishment of smaller technical working groups to attend to day-to-day management instead of involving the larger forum at this intensive scale (i.e. to maximise stakeholder involvement but limiting stakeholder fatigue). In your opinion, is this a workable solution?

Olifants - Yes

Knysna – No, May not have expertise available to smaller systems. Better to have an estuary manager who can consult with experts when needed. Can delegate responsibility of each section to members of the public, not necessarily skilled but they are the best watch dogs, particularly in Knysna.

Gamtoos - Some estuaries do not have the capacity in terms of stakeholder numbers or knowledge to run separate technical working groups. A single group, comprising the executive, can fulfil this function at the Gamtoos.

Breede – Yes

Heuningnes – Yes, it is generally the small technical working groups that actually get things done as opposed to larger forums which are “talk-shops” but generally don’t achieve things on the ground. Report back to the larger forums is all that is needed.
12. Do you feel that the support from government (represented by the CAPE coordinator) was an important aspect to the EMP roll out process? Please Motivate.

Olifants -

Knysna - Yes, to guide process and ensure CAPE goals are met, and the end product works in whatever format it turns out to be.

Gamtoos - Yes – his participation was vital in that it showed stakeholders that CAPE was serious about the project. His enthusiasm was obvious and I think contagious.

Breede - Yes, by way of guidance in terms of legislative perspective and cross-pollination from other estuary efforts.

Heuningnes - Yes

Klein - Essential! Other stakeholders (including local authorities) all have a particular vested interest in one or other aspect – property value, water quality, fishing, conservation, economic development, etc. It’s very important that there is someone who represents ‘the estuary’s interests, and this gap needs to be filled by the CAPE Estuaries Programme. Unless there is an agency whose sole mandate is to look after estuaries, they will once again fall through the cracks in the legislation and institutional structures (as threatening now with the split between Environment and Fisheries).

Also, there is much that is common to all estuaries and their management. Someone (i.e. the CAPE Estuaries Programme) needs to develop an information resource (described in 14. below) that can be drawn on in the process of developing EMPs for all estuaries and it is therefore very important that EMP development across the region continues to be co-ordinated and supported by this Programme.

13. What criteria did you apply in the selection of stakeholders for inclusion in the forum and its sub-structures (e.g. using organisational representation versus specific individuals)?

Olifants - 1) Representatives were required to demonstrate that they had the support and backing of their constituencies. 2) Only major stakeholder groups were included to minimise number of representatives on the forum. 3) Candidates wishing to serve on the forum were required to demonstrated that they represented a significant group of stakeholders not catered for by another representative or group.

Knysna - CES has database of prominent stakeholders from public – those who we knew would comment were engaged with (many form part of existing forums and working groups such as WESSA, Catchment Management Forum, etc).

Gamtoos - Mostly organisational representatives, although some individual landowners are included.

Breede - Local presence and knowledge, and enthusiasm.

Heuningnes - In particular it will be the individuals that will make the forums work – selection should be based on the people who are going to actually make things happen – be they individuals or representatives of organisations.

Klein - Guided by the Programme Coordinator, we used organisational representation. However, we are worried that a ‘BREAC’ type situation could result, where the Committee is dominated by one sector of civil society, on no other basis than that they are socially more advantaged (they have time, education, land holdings etc). ‘He who shouts loudest’ ends up holding sway. We believe that a ‘Portfolio’ based approach may have merit. The IAP group could elect individuals into Portfolio positions and one could thereby ensure that there is an appropriate and representative spread of interests on the Committee, based on the specific issues that need to
14. To set-up an EMP what in your opinion are viable time scales, human resource allocations and financial resources (e.g. travelling, stakeholder involvement).

Olifants - Time scale: 1 year; Team: Biophysical estuary specialist(s) with experience in and knowledge of conservation planning, person with experience in natural resource management and development on management plans, stakeholder liaison person; Budget: R300 000 minimum (including implementation phase).

Knysna - Never got to set up EMP so difficult to say. Our budget was sufficient, although did not include any detailed on-site mapping. What it will cost SANParks I am not sure – they have already acquired the staff they need, but I am not sure what that cost – best to ask them.

Gamtoos - 6 months seems viable. Expertise should include someone for water (quality/quantity), socio-economics, living resources/conservation and mapping. A situation assessment field trip is vital. Additional workshops are the EMP (Vision setting) workshop; Draft EMP discussion workshop and at least 4/5 EMF meetings (these can take place after the 6 month period).

Breede - 6 months, 200 total consultant days, R200 000

Heuningnes - There must be funding (time and travel) for the individual and NGO representation unless the representatives are occupying salaries positions where they are fulfilling their function. Meeting initially every second month would ensure that programmes get off the ground and run smoothly – after this meetings could be reduced to quarterly.

Klein - We suggest a more strategic approach to the Situation Assessment, where issues are identified in workshops with the IAP group, and the Consultant has access to detailed and up-to-date (not generic!) information resources supplied by the Estuaries Programme

The Estuaries Programme should support the development of a 'central database' of information on, and tools for, estuary management. This should include
a. information about institutional arrangements, legal mandates, provincial delegations
b. RDM – status, procedures and typical set of RQOs,
c. MLR management and enforcement (actual practices as opposed to theoretical),
d. Alignment of estuary conservation, zoning and management with best practice in Municipal
land use management systems, stewardship, marine conservation approaches,
e. etc.

The Situation Assessment would involve a 'scoping' exercise to gather the specific local information that is needed in order to identify the priority issues at that particular estuary. This would then trigger the use of certain components of the central information resource base, and so a Situation Assessment could be assembled within the constraints of the budgets that we've worked with to date. (However, the central database information would need to be much more detailed than the current Generic Guidelines, and there would need to be an ongoing process of keeping it up-to-date).

In the course of preparing the Situation Assessment, a lot of effort also needs to be put into identifying and bringing the important roleplayers on board, so that they and the consultant can ‘co-author’ the Management Action Plans. The mobilisation of political and social support is by far the most important activity during the preparation of an EMP. Without this, the best intentions will come to naught.

It should be possible to get to the stage of having an Estuary Forum / Executive Committee up and running and armed with an EMP within 14 months of a contract being awarded. Current budgets need to be increased by approximately 50%.

A separate fund should be created for travel and disbursement claims, as it is impossible for a consultant to accurately predict, and unfair that the consultant should foot the bill when additional meetings are required.

Also important to make budget available for printing hard copies of the Draft EMP, as this is much
more user friendly than electronic versions, and stakeholders will be more willing to provide feedback if they receive hard copy.

15. Any other comments/suggestions to improve the generic framework for EMPs

**Olifants** – 1) Implementation phase is essential and should be integrated more firmly into the Planning process to ensure that management plans do not just decorate a shelf somewhere; 2) Review process was poor. This needs to be strengthened and integrated more firmly into the planning process. Various documents should be reviewed as they are produced before being released into the public domain. Stakeholders should not be exposed to products that have not been reviewed else this leads to substandard products being released into the public domain and potentially multiple versions of a document in circulation at any one time.

**Knysna** - Rather than one GEMP, may be better to have different models/templates for different systems. Such as a small system with no plan/formal management structure (such as many of those on the Wild Coast), a larger system with municipal managers and resources but little focus on estuarine management, through to largest systems with existing plans (and even Protected Environments and National Parks) – each one of those should have a different template which can be used when most appropriate.

**Gamtoos** - Minimum requirements for stakeholder participation may be required – where do you draw the line in terms of how many individuals need to be involved. May need a different approach for rural estuaries with rural communities, e.g. Mbashe and Mtentu. Will have to wait and see how the process goes over the next 6 months.

**Breede** – No comment

**Heuningnes** - More emphasis on the sourcing of funding for the implementation and specifically where government funding is allocated, how much and how does the working forum ensure that the funding is there when needed for monitoring and implementation.

**Klein** - I believe that Anchor Environmental took the right approach to the Situation Assessment for the Olifants – identification of issues.

Strongly recommend that a Logical Framework Approach to EM planning is promoted, so that there are strong linkages between objectives, strategies, targets and management action plans. (For an example, see Bot-Kleinmond Draft EMP: Part A – Objectives). The process for drawing this up requires a rigorous, linear approach:

1) First, identifying the Objectives (Goal and Purpose)
2) Then identifying the Strategies (aka Outputs),
3) Next identifying the Activities needed for each of the Strategies.
4) Followed by the Assumptions relating to 1) and 2).
5) the Targets and Indicators, Means of Verification for 1) and 2).
6) and finally, the Resources and Inputs for each of the Activities (3). These are the Management Action Plans.

Certain terms need to be corrected in the GEMP, because the adjective “Estuarine” has been used inappropriately in places where the noun “Estuary” should be used. (The same mistake applies to the ICM Act):

- Estuary Management Plan (equivalent - ‘Biodiversity Management Plan’)
- Estuary Forum (equivalent – ‘Town Forum’)

Core Boundary for EMP (page 5 of Generic Framework): Disagree with the 5m contour. This is not always appropriate (cliff edges) and seldom available on GIS datasets. Suggest application of the ICM Act – Coastal Protection Zone for Core Boundary.

Secondary boundary (page 6): Suggest estuarine catchment for spatial planning purposes, but an issues-based approach for strategies.
Appendix C:

Record of Stakeholder comments at Workshop
Monday, 8 June 2009

Feed-back on generic framework for EMP:

Barbara Weston: Add a WG to evaluate and review development in the estuary

Pierre de Villiers: Where there is not a lot of capacity WG made up of one person (do what ever you can)

Janine Adams: Situation assessment is collation of available information or do you need new work?

Barry Clark: SA resource for future management of resource, i.e. a guide for management? Make it more clearer that it is bit of both

Peet Joubert: Managers do not know everything – we need good reference or a non-trained person to take thing forward

Jane Turpie: Variability mostly in SA - more guidance of where to put the emphasis.

Jane Turpie: To much emphasis to legal review (which is actually more generic) – need to focus on specific issues for an individual estuary.

Lara van Niekerk: More than anticipated effort to get info on existing management inititiave

Tris Wooldridge: Do not underestimate value of SA. Lack of information of how estuaries functioned – NB as a basis for management of a natural resource! Therefore make sure there are estuarine specialists on board

Tris Wooldridge: Use RDM studies in SA! Clear guideline to identify drivers of change

Barbara Weston: SA very important! Guidelines on cause-effect, i.e. what activities cause what effects in the estuary. User-friendly guide as a first estimate to assess severity of activities that are present in estuary.

Thandile Breetzke: Guidance on grading of SA, from Volksie to Mercedes – something like the levels of RDM (linked to minimum requirements in ICM Act)

Peet Joubert: what are the basis and the solutions – it must reflect a phases approach. Must be linked to IDP

Cathy Avierinos: Guidance and emphasize feed-back from monitoring into SA to improve

Alan Boyd: Establish minimum requires for EMP (it’s in the Act)

Lara van Niekerk: Not planning for planning state – must be linked to what we want for the resource (strategic objectives, zoning, resource objectives).

Ayanda Matotti: Maybe process to complicate that is why stakeholders do not participate? Start WG as soon as possible to bring technical people that will implement on board

Jean du Plessis: Combine WG and forum must be clever - you can improve matter by doing this right

Aidan Wood: Too much emphasis of management strategies – maybe jumped to gun – should be addressed in operational objectives
Janem Turpie: Confusion around strategies/objectives this must be better described in the generic EMP framework NB!

Barry Clark: Linking Zoning plan and linked to Operational objectives

Peet Jouber: NB Information blocks or note boxes – people are not as clever as you may think!

Janem Turpie: Vision → Strategic objectives → Specifications (we want link into Zonation plan, where appropriate)

↓
Management Strategy
↓
Zonation Plan
↓
MAPs
↓
Monitoring

Pierre de Villiers: Plan should challenge existing legislation – this will not work. You have to work within he status quo at least initially. My approach was to attach to reality in this round of EMPs.

Steve Lambeth: Purpose of plans is to come up with site-specific realistic and sensible boundaries (get surveyors to determine boundaries accurately and gazetted). This will standardize on boundaries based on all sorts of criteria (serious recommendation for this workshop to be sorted out by DWAF, DEAT and SANBI, SAEN plus ecological specialists)

Wilna Kloppers: Motivate if the legal boundary is not sufficient – challenge it and maybe we can make it work if that is correct.

Peet Joubert: Find what is best and challenge legislation where necessary.

Cathy Avierinos: Catchment approach (i.e. more inclusive boundaries) or defining for each estuary - via surveying - will be best.

Barbara Weston: National conservation NB, specially get boundaries right for those.

Jean du Plessis: NB to set actual boundaries to standardize – the first price.

Alan Boyd: Better to use 5 m contour than high water mark!

Barry Clark: Management action plans – struggled with term. Must show the link from management strategies to MAP – should not be decoupled and presented as something separate! Also link through to which Strategic Objective it addresses

Susan Taljaard: A management strategy may address more than one strategic objective or more than one management strategy can apply to single strategy.

Pierre de Villiers: Terminology re local management institutions must be standardized to prevent confusion!

Barbara Weston: Catchment strategy must incorporate EMP and vice versa. We have a good opportunity with the Breede catchment.

Alan Boyd: ICM Act must be explicitly linked to generic EMP framework, also in terms of the institutional structures (organs of state plus others - under protocol section of Act)

Lara van Niekerk: Monitoring also need to include monitoring of management process!
Barry Clark: Implementation phase must be more integrated - implementation is bigger than just the roll out - it’s happens all the time (maybe we need not list it as a separate component (it’s part of all the elements)

Pierre de Villiers: Prioritize and then follow up and make it happened!

Thandi Breetzke: What to we (KZN) use as basis for Vision – use Vision in National estuaries report as basis (Protocol will better formalize national vision) (maybe we can add examples of vision in generic framework)

Aidan Wood: Vision must be focused and be realistic and to the point!

Ayanda Matoti: Did we give stakeholders enough time - guide on time lines in generic framework that will be realistic will help. Better guidelines on stakeholder consultation.

Janine Adams: Guidelines for stakeholder consultation is with DWAF

Jenny Whitehead: It is “estuary” management plan not “estuarine” management plan (salt shaker example)

Susan Taljaard: There is confusion about the use of strategic Objectives (i.e. unpacking the vision into aspects that define “when will we know that we achieved the vision versus Management Strategies (i.e. what are we going to do to achieve the Vision & strategic Objectives. Must try to clarify this in method

Vision → Strategic Objectives → Measurable targets (specifications) for resource (practical and measurable)

Management Strategies → Critical limits (specifications) for development/activities

Strategic Objectives + Management Strategies → Development of Zonation Plan (different zones will have specification/target values/limitation attached) + Specifications (measureable targets and critical limits)

Strategic Objectives + Management Strategies → Estuarine Zonation + Operational Specifications → Management Action Plans

All management action plans need to comply with EZP and Operational Specifications (MAPs will largely occur at sector level and if specifications applying to the “common” resource are left to be determine at this lower sectoral levels there can be conflict!

Janine Adams: Central database for estuaries – take this up with Angus (SAEON)

**Tuesday, 9 June 2009**

Barry Clark: Include generic constitution and nomination forms in generic framework.

Alan Boyd: Use the Series of guideline documents that were provided with the generic framework – stress what role these should play in future

Barbara Weston: Other tools developed to assist with situation assessment (e.g. in data poor areas) (e..g. cause-effect type tool)

Celeste Lesch: Land-based pollution sources need a bit more emphasis especially in urban areas

Thandi Breetzke: Protocol is very important NOT Regulations
Recommendations on future review

Pierre de Villiers: Expert review workshop approach as we did here is good

Steve Lamberth: Estuarine working group must be better formalized and used in review process with selected peer reviewers (once we pass the pilot tests)

Barry Clark: Pierre has overview of what makes a good situation assessment (as screening), more tricky when it comes to EMP where this workshop forum probably works better, but we might need quicker response.

Thandi Breetzke: Also include KZN in next review, should standardize or coordinate process on national scale, not region specific

Lara: Move to a formal national estuarine working group that are nationally representative that operate on a national level so as to standardize the review process

Pierre van Niekerk: Short-term use current workshop approach

Barry Clark: Cut down on the presentations, focus more on the review – reviewers need to have time to read before workshop

Steve Lamberth: Regional reviewer workshops, e.g. review KZN systems in KZN

Alan Boyd: Series of guideline documents can be used to standardize EMPs

Jane Adams: Workshop forum was good but did not review the details. This can be done by having formal written comments by selected reviewers.

Susan Taljaard: Keep in mind budgetary constraints. Maybe in-depth peer review (one scientific and one manager that have knowledge of the system under review) with very specific criteria and context in which it should be reviewed.

Steve Lamberth: Management/scientific combined working group that have representative from regions (have more of a specific region when plans of that region are being reviewed).


Barbara Weston: Also consider licensing authority committees for each of region to coordinate license application across department in a particular area.

Alan Boyd: Working Group meets twice a year.

Pierre de Villiers: Next time we also invite legal people to comment

Barbara Weston: Legal template from EMP
Funding – How much?

Barry Clark: R200 000 is fair, but implementation

Naomi Richardson: Tag on education programmes

Pierre de Villiers: Stick with R200 000, but might be exceptions

Lara van Niekerk: Allow for additional disbursements (contingency)

Funding – who should pay?

Barry Clark: Co-funding model is good, can also include funding organizations (WWF)

Lara van Niekerk: National and local government joint funding.

Lara van Niekerk: Breede conservancy – interested and affected parties contribute

Ayanda Matoti: Do we have capacity in local authorities to do this?

Lara van Niekerk: Government lead agent does this buying in specialists

Jane Turpie: Do need consultants because estuarine specialists in few, but be more effective by doing all within a municipal area at the same time (funding may be limiting factor)

Thandil Breetzke: Density in urban centers might be a problem for the above because of diversity of the people around individual estuaries.

Pierre de Villiers: If you do a batch is fine if all goes well, but if things go wrong it can e a disaster.

Alan Boyd: Must brainstorm on what funding models will work and what not (help smaller municipalities and let larger ones contribute more…). Protected areas can come from specific budget

Pierre de Villiers: National priority estuaries can be funded by government

Cathy Avierinos: Funding to sustainable implementation in long –term!

Vernon Gibbs-Halls: Municipalities may not be aware of importance – link to IDP and do a road show to introduce the concept and the legal obligations.