

# 1. INTRODUCTION

## 1.1 Purpose

The KwaZulu-Natal Department of Agriculture, Environmental Affairs and Rural Development (DAERD) and the City of uMhlathuze have jointly decided to develop an Environmental Management Framework (EMF) for the Richards Bay Port Expansion Area and Industrial Development Zone (IDZ). The Project is supported by the National Department of Environmental Affairs (DEA) with financial support from the Danish Government.

The EMF is developed in terms of Chapter 8 of the EIA Regulations of the National Environmental Management Act (1998) and its purpose is to support the decision-making process in respect of development activities that may potentially harm the environment.

To achieve this purpose the EMF:

- Identify, describe and assess the environmental attributes in a particular geographical area;
- State the conservation status and environmental management priorities of the area;
- Identify the kind of activities that would have a significant impact on these attributes and those that would not;
- Identify the kind of activities that would be undesirable in the area or in specific parts of the area; and
- Recommend guidelines for decision-making.

### The EMF streamlines the EIA Process

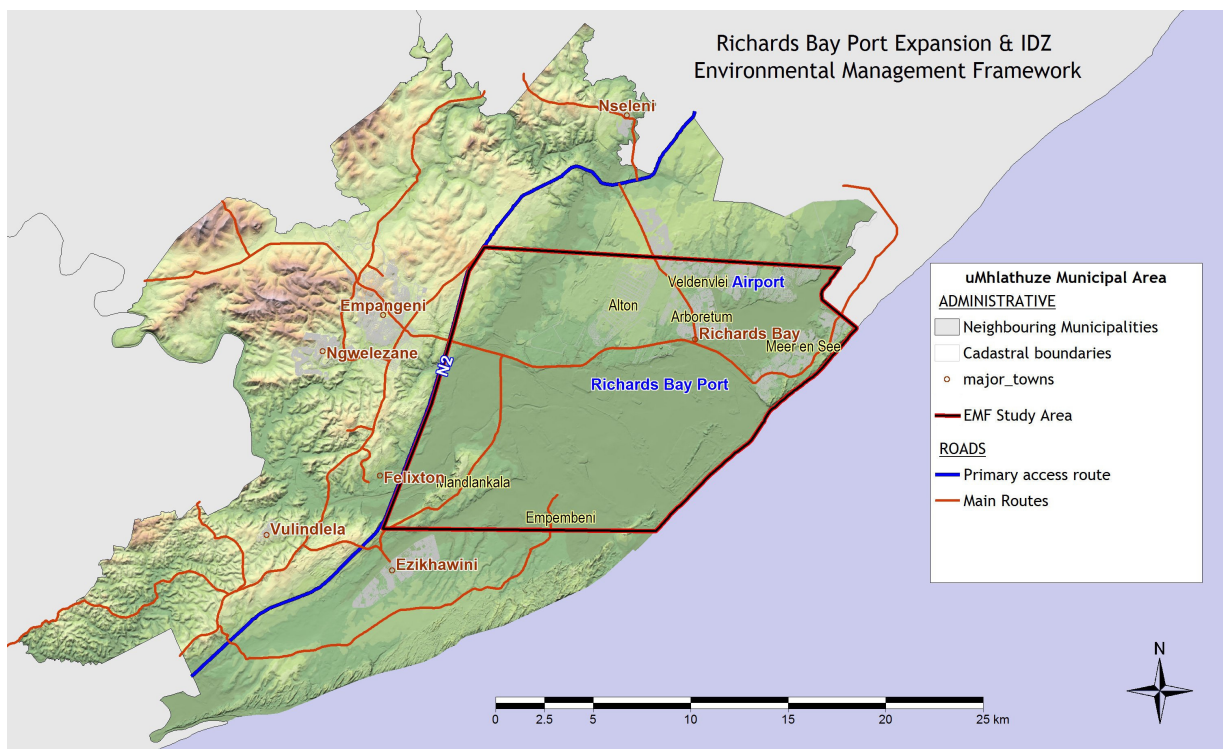
- *Providing the 'big picture' context for decision-making, including cumulative impacts.*
- *Specifying the appropriate level of assessment based on sensitivity of an area.*
- *Pro-actively identify high-risk areas.*
- *Providing guidance in terms of specific aspects requiring assessment.*
- *Identifying areas within which certain listed activities may be considered for exclusion from EIA.*
- *Identifying areas within which additional specified activities should be subjected to EIA.*

As an information tool the EMF integrates frameworks, policies and different government mandates. The large volume of data that was collected during the process is captured in a spatial format that is easy to access and understand.

## 1.2 Location and choice of the study area

The study area is located in the north-eastern parts of KwaZulu-Natal in the uMhlathuze Local Municipality (KZN282). It forms part of the Uthungulu District Municipality and is bordered by the uMlalazi Local Municipality to the south-west, the Ntambanana Local Municipality to the north-west, the KwaMbonambi Local Municipality and the Indian Ocean to the east. The uMhlathuze Local Municipality functions as a district node and dominant commercial centre in the District Municipality.

The study area (**Figure 1**) has been chosen because of its inherent environmental sensitivity and the fact that existing and future development needs associated with port expansion and industrial development place severe pressures on the receiving environment. The strategic significance of the Port of Richards Bay in the national economy and the IDZ in terms of encouraging international competitiveness in the manufacturing sector is a key driving factor for local sustainability. The aim of the EMF is to produce a user-friendly information tool with guidelines for assisting future decision-making processes.



**Figure 1: The EMF Study Area**

### 1.3 Summary of Process

There were 3 critical phases in the process of developing the EMF, each of which produced tangible products to ensure transparency and stakeholder participation in EMF development:

The **Status Quo Phase** provided context and background to the study and aimed to identify the status of environmental and socio-economic attributes. It was mainly concerned with *"What is happening?"* This phase was completed with the delivery of a Status Quo Report.

The **Desired State of Environment Phase** analysed the information emanating from the status quo, and together with stakeholder input, defined *"What should ideally be happening in the future?"* The study area was divided into management zones based on environmental attributes, opportunities and constraints; and the environmental priorities of the study area were defined. This phase was completed with the delivery of a Desired State of Environment Report.

➔ This draft EMF Report, which forms part of the **EMF and Strategic Environmental Management Plan (SEMP) Phase**, aims to abbreviate the Status Quo, the Desired State and the Opportunities and Constraints, and establishes management guidelines as recommendations on *"How best development should proceed"*. This phase will conclude with a final EMF Report which will be submitted to the MEC for adoption after public scrutiny.

### 1.4 Summary of Public Participation Process

The process of compiling an EMF is a highly technical one based on scientific data recorded in a spatial database or GIS tool. Generally speaking the level of public participation is weak. For this study a deliberate attempt was made to involve the public, interest groups and stakeholders. The process raised several challenges, including an apparent reluctance to attend meetings. During the Status Quo phase an innovative Participatory GIS methodology was introduced which allowed members of the

public to draw attention to, and give information regarding, environmental features which they regard as important. This contributed to the ground-truthing of information from other sources as well as providing new information.

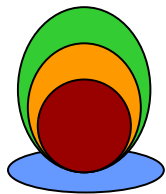
After adjusting the methodology being used to try and overcome the apparent reluctance of the public to attend meetings valuable information was received during the Desired State of the Environment phase from those affected, particularly those who are often excluded. In summary this information indicated a high level of desire for apparently mutually contradictory outcomes of any development, viz. the creation of jobs alongside the preservation of access to environmental goods and services. It is suggested that the only satisfactory meta-narrative that allows these two to be reconciled is one that proposes to:

1. Promote, or at least not reduce ecosystem functioning across the whole study area;
2. Promote labour intensive production processes, with appropriate skills development;
3. Take advantage of potential down stream beneficiation of existing products generated in the area;
4. Promote sustainable use of the natural resource base;
5. Promote, or at least not restrict, access to natural resources;
6. Promote, or at least not further militate against, social cohesion; and
7. Contribute to joint action on environmental issues by other enterprises in the area.

The Full Report on Public Participation is reflected in **Addendum 1** to this report.

## 2. VISION and GUIDING PRINCIPLES FOR THE EMF AREA

### 2.1 Vision



The starting point for defining the desired future for the study area is **sustainability**. The icon was used throughout the process to remind stakeholders of the sustainable development model adopted by national government. This requires a healthy environment (green) for social well-being (orange) which is a prerequisite for economic prosperity (red). The economic system, social system and ecological systems are integrated via the governance system (blue) that holds all the other system together via a legitimate regulatory framework. The aim of the EMF was to define the extent to which *environmental protection* as a policy goal can contribute to sustainable development and to integrate this environmental identity with the mandates of other government departments by proposing a set of parameters for steering the decisions of stakeholders towards agreed outcomes.

The point of departure in defining the future environmental identity of the study area is contained in the uMhlathuze Municipality's Integrated Development Plan and Transnet's Sustainability Framework. These documents reflect the long-term vision for sustainable development in the study area, balancing social, economic and environmental interests. The Municipality's Spatial Development Framework and Transnet's Port Development Framework depict this vision spatially and their intent is to steer all stakeholders towards the implementation of specific outcomes.

The environmental interests of the area are defined as follows for the short term (50 years):

The uMhlathuze Council portrays a future where "*natural resources and sensitive environmental areas are preserved and protected*", while Transnet illustrates a future where "*biodiversity is conserved within the port boundaries and surrounds by the protection of important ecosystems and habitats and the re-creation of threatened ecosystems*".

These images of the future for the study area formed the basis for the desired state of environment of the EMF.

## 2.2 EMF Principles

Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) sets out a suite of principles that give detail to the Bill of Rights in Chapter 2 of the Constitution, 1996 (Act No. 108 of 1996). These principles aim to guarantee each South African the right to sustainable development, and they underscore the need for each organ of state to consider important environmental factors before development decisions are taken. This suit of principles was used as a basis to derive a set of common principles for the study area that are more relevant to the dynamics, nature and context of the study area. They were introduced during the early phases of the project as a guide for each role-player involved in the EMF development process to articulate their own perspectives of the desired state of environment. The following principles were selected to guide decisions in the EMF area.

PRINCIPLES FOR THE EMF AREA	
<b>Sustainable development</b>	<ul style="list-style-type: none"> <li>• Meet basic requirements for the functioning of the hydrological system.</li> <li>• Meet biological conservation targets in the area.</li> <li>• Protect or use the natural resource base optimally and sustainably to ensure long term benefits.</li> <li>• Promote development that would secure long term sustainable income.</li> </ul>
<b>Pro-poor</b>	<ul style="list-style-type: none"> <li>• No activity that impacts negatively on the poor in any manner or way should be allowed in the area.</li> <li>• Planned activities should be biased towards the poor even if it requires intervention from the state.</li> </ul>
<b>Capture value</b>	<ul style="list-style-type: none"> <li>• Public policy and investment should support the creation of competitive advantages for local communities and to ensure that service infrastructure is maintained and developed.</li> </ul>
<b>Support local economic development</b>	<ul style="list-style-type: none"> <li>• Develop local skills for new employment opportunities.</li> <li>• Obtain supplies for enterprises locally or through local agents.</li> <li>• Form partnerships with local entrepreneurs.</li> </ul>
<b>Focus on what is important, appropriate and possible in the area</b>	<ul style="list-style-type: none"> <li>• Make sure that development initiatives and conservation proposals are feasible.</li> <li>• Ensure that conservation initiatives contribute to national and provincial targets or to the development potential (tourism etc) of the area.</li> <li>• Ensure that mitigation and off-set proposals are technically and ecologically feasible.</li> </ul>
<b>Internalise externalities</b>	<ul style="list-style-type: none"> <li>• Implement the polluter pays principle in its widest meaning.</li> <li>• Development decisions must promote eco-efficiency</li> <li>• Avoid burdening public (or common) goods with private (or internal) costs</li> </ul>

These principles were further refined during the strategic assessment.

## 2.3 Management Approach

The EMF supports the management approach that has already been adopted by the City of uMhlatuze. This approach recognises that sustainability will only be achieved through landscape ecology management that takes the structure of the landscape into account as well as the spatial processes that interact with the structure.

According to this approach ecological systems provide services that are critical to the functioning of the life-support system that contribute directly and indirectly to human wellbeing, and they therefore have economic value. The study area contains *an environmental asset system* that consists of a number of interlinked ecosystems that supply different services to the uMhlatuze Municipal Area. This system must be managed to retain its capacity over the long-term. Decision-making must place a strong emphasis on managing landscape-level risks.

The overall value of environmental services supplied by the natural areas in the uMhlatuze Municipality have been estimated as approximately R1.7 billion per annum. The results of these previous studies are incorporated here to underscore the management approach.

Environmental Services	Estimated annual value (millions)	Environmental services	Estimated annual value (millions)
Atmosphere regulation - CO <sub>2</sub> , etc	R 23,39	Pollination - legume and fruit crops	R 1,53
Climate regulation - urban heat sinks	Unknown	Disease and pest control	R 9,74
Flood and drought management	R 244,11	Refugia - for wildlife and nursery for fisheries	R 15,90
Water regulation - timing, rate	R 137,39	Food production	R 30,18
Water supply – volume	R 297,92	Raw materials - housing, medicinals, craft	R 20,90
Erosion control	R 16,10	Genetic resources – chemicals	R 2,33
Soil formation	R 0,65	Recreation	R 37,73
Nutrient cycling	R 714,90	Cultural	R 67,20
Waste treatment - assimilation and dilution	R 137,74	<b>Annual total value (millions)</b>	<b>R 1,757,72</b>

**Figure 2: The Value of Environmental Services in the uMhlatuze Municipal Area**