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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**A CRITICAL EVALUATION ON THE EFFECTIVE IMPLEMENTATION OF THE
INTEGRATED COASTAL ZONE MANAGEMENT PLAN FOR THE SOUTH
AFRICAN COASTLINE:**

**A CASE STUDY OF THE BUFFALO CITY METROPOLITAN MUNICIPALITY;
EASTERN CAPE; SOUTH AFRICA**

By

THEMBANI WILBERFORCE MANYEFANE

South Africa

A dissertation submitted to the World Maritime University in partial fulfilment of the
requirements for the award of the degree of

MASTER OF SCIENCE

In

MARITIME AFFAIRS

(MARINE ENVIRONMENTAL & OCEAN MANAGEMENT)

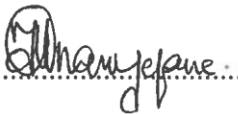
Year of Graduation

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DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

Signature: .....

Date: 22/09/2014.....

Supervised by: Professor Larry Hildebrand:

World Maritime University

Assessor: Professor Olof Linden:

World Maritime University

Co-assessor: David Vousden

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Firstly, I would like to praise my Creator, Jehovah God, for the strength and power of endurance that He gave me to remain steadfast and see me through all the obstacles that challenged me in this academic journey.

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To my family and friends that have been with me emotionally and spiritually at all times; you will always be in my heart and I will cherish the love you expressed to me through trying and good times.

ABSTRACT

Title of Dissertation: **A Critical Evaluation of the Effective Implementation of the Integrated Coastal Zone Management Plan for the South African Coastline: A Case Study of the Buffalo City Metropolitan Municipality; Eastern Cape; South Africa**

Degree: **Msc**

The dissertation is an investigation into how much has been achieved pertaining to the effective and precise implementation of key policy documents that govern integrated coastal zone management on the South African coastline.

The coastal zone of South Africa has been a secluded area set aside for a singular racial group in the Apartheid era and has benefitted them economically, socially and recreationally. The new political dispensation has ushered in an integrated process where other racial groups have been given access to the coast and the marine environment to utilize the space for cultural, educational, social and also economical purposes.

New, sustainable coastal development practises have been introduced as alternatives to the segregatory methods of the past which did not favour a cross section of the South African Society. These contemporary integrated coastal zone management processes are multi- sectoral in their approach and seek to improve the way in which decision makers craft their strategies in line with modern approaches as custodians of the coastal and marine environment.

The rapid movement of people towards the coast has put pressure on the natural resources and health of the marine environment. Land – based pollution is counting as a threat to the quality of estuarine habitats, marine living resources and tourism potential of the coastal zone. The research project therefore inquired as to how the policy document criteria of the *White Paper for Sustainable Coastal Development* were implemented as monitoring and evaluation indicators in achieving qualitative integrated coastal zone management at national, provincial and local authority level.

A few officers and practitioners in the marine and coastal zone management sector were asked, by means of research tools, to impart some of their practical experiences and observations regarding the policy documents. They had to air their views as to why some aspects of these documents were never put into practice and suggest the best options to improve such scenarios.

The research project concludes by providing sound recommendations as to how well best integrated coastal zone management can be executed at all levels of

marine environmental governance with the inclusion of constant monitoring and evaluation of current and newly introduced policy documents i.e. the *Integrated Management Act of 2008*.

KEYWORDS: Integrated Coastal Zone Management, Multi –sectoral, Sustainability, Integrated Management Act

TABLE OF CONTENTS

Declaration.....	ii
Acknowledgement.....	iii
Abstract.....	iv-v
Table of Contents.....	vi-viii
List of Tables.....	ix
List of Figures.....	ix
List of Abbreviations.....	ix
1. Introduction.....	1- 4
2. Problem Statement.....	5-8
3. Objectives.....	8-9
4. Study Area.....	10-11
5. Survey Design and Implementation.....	11-13
5.1. Questionnaire.....	13-14
5.2. Evaluation Framework.....	14
6. Literature Review	
6.1. Introduction.....	14-15
6.2. The African Perspective.....	15-16
6.3. The Abidjan Convention.....	16-17
6.4. The Nairobi Convention.....	17-18
6.5. The White Paper for Sustainable Coastal Development.....	18-24
6.6. The Eastern Cape Coastal Management Plan Draft.....	25-26
6.6.1. The Five Year Plan: Priority Areas and Implementation.....	26
6.6.2. Cooperative Governance.....	26
6.6.3. Coastal Planning and Development.....	27
6.6.4. Climate Change and Dynamic Coastal Processes.....	27
6.6.5. Land and Marine-based sources of Pollution.....	27
6.6.6. Estuaries.....	27
6.6.7. The Facilitation of Coastal Access.....	27-28

6.6.8.	Awareness, Education, Training, Capacity Building and Information.....	28
6.6.9.	Compliance, Monitoring and Enforcement.....	28
6.6.10.	Natural Resource Management.....	28
6.6.11.	Conclusion.....	28
6.7.	The Buffalo City Metropolitan Municipality Integrated Coastal Zone Management Plan	
6.7.1.	Introduction.....	29-31
6.7.2.	Implementation of ICZM Plans.....	31
6.7.3.	Monitoring and Review.....	31-34
7.	Evaluation of ICZM Plans.....	34-35
8.	Results /Evaluation Outcomes	
8.1.	Participants' Profiles.....	36-37
8.2.	Analytical Memo on Responses received from Participants.....	38-49
8.3.	Diagrammatical Representation of Evaluation Matrix.....	50-51
8.4.	Analytical Memo on Participants' Comments in Evaluation Matrix.....	52-56
9.	Discussion	
9.1.	Introduction.....	56
9.2.	Institutional Structures and Arrangements.....	56-57
9.3.	Capacity Building.....	57-58
9.4.	Public Education and Awareness.....	58
10.	Limitations.....	58-59
11.	Summary and Conclusion.....	59-60
11.1.	The Integrated Coastal Management Act – The Way Forward.....	60-62
12.	Recommendations.....	62
12.1.	The ICZM Balanced Scorecard – A Tool for Putting Integrated Coastal Zone Management into Action.....	62-63
12.2.	Effective Management Strategies – A Key to Improved ICZM Planning.....	63-64

12.3.	Capacity Building – Towards Effective Implementation of the ICM Act.....	64
12.4.	Information Sharing & Public Awareness and Education – The Essence of Integrated Coastal Zone Management.....	64-66
12.5.	A Global Approach to a Local Environmental Process.....	66
13.	List of References.....	67-68
14.	Appendices	
14.1.	Questionnaire.....	69-73
14.2.	Evaluation Checklist.....	74-75

LIST OF TABLES

Table 1	Summary of Data Collection Methods	12-13
Table 2	Participants' Profiles	36
Table 3	Analytical Memo: Participants' Responses	38-47
Table 4	Analytical Memo: Comments on Evaluation Matrix	52-53

LIST OF FIGURES

Figure 1	The South African Coastline	2
Figure 2	Buffalo City Metropolitan Municipality	4
Figure 3	Municipality signage of Beach Prohibition (in both English and Afrikaans)	11
Figure 4	CoastCare South Africa Logo	22
Figure 5	Example of Interpretive Signage	22
Figure 6	Cycle of Coastal Management	25
Figure 7	Coastal Management Programme Dev. Process	26
Figure 8	Diagrammatical Representation: Evaluation Matrix	50

LIST OF ABBREVIATIONS

ICZM	Integrated Coastal Zone Management
ICZMP	Integrated Coastal Zone Management Plan
BCMM	Buffalo City Metropolitan Municipality
ICM	Integrated Coastal Management
MPA	Marine Protected Area
DEA	Department of Environmental Affairs

1. Introduction

The Republic of South Africa is located in the southern tip of Africa and has a long coastline of about 3 300km. That coastline starts from the desert border with Namibia on the Atlantic coast, southwards around the tip of Africa and ends north of the border of Mozambique on the Indian Ocean. The South African coast can be described as the physical meeting place between the land and sea. It is a spectacular coastline with a rich national, cultural and natural heritage which is counted as having an enormous contributory benefit to South African society at large. (White Paper for Sustainable Coastal Development in South Africa, 2000)

The coast provides a place to live, work and relax, a source of food and a gateway to the world. It is thought of as a maritime space for three different but interrelated phenomena. Firstly, the coast is regarded as a biophysical place where land, sea and air meet and inter-connect and also where reefs, beaches, dunes, rocky headlands and wetlands support and maintain a rich collection of diverse coastal fauna and flora. Secondly, the coast is perceived as a social place where culturally diverse people meet, in pursuit of enjoyment and relaxation and in the process gaining spiritual value and peace. Lastly, the coast is an economic place where a number of commercial, recreational and subsistence activities are undertaken with the result of envisaged potential for future economic development.

The protection of the coastal environment is underpinned by the *Constitution of the Republic of South Africa, (No.108 of 1996)* and although it does not expressly refer to coastal management, the Constitution provides a framework for the management of the coast. (Goble, Lewis, Hill, & Phillips, 2014). The constitution highlights the need for co-operative governance and the need to develop the capacity of lower spheres of government, provincial government and local government.

The Eastern Cape coastline stretches over 600km and is comprised of the Sunshine Coast, the Border-Kei and Wild Coast regions. Two main cities, Port Elizabeth and East London, are dominant economic forces in the province through their port

activities and the manufacturing industrial sector. The surrounding rural areas are a contrast as these locations are economically depressed with widespread poverty and there exists a very poor infrastructure and very limited in-depth capacity to manage the coast. (Breetkze, Moore, & Mayer, 2013)

The East Coast of the Eastern Cape is influenced by the warm Agulhas Current of the Indian Ocean – which is also known as the “Coast of Diversity” as there are a few marine species but different in kind as opposed to the West Coast which is known as the “Coast of Plenty” and is influenced by the cold Benguela Current which through upwelling brings forth enough nutrients which sustain the large stocks of marine living resources found there. (ASCLME, 2012)



Figure 1. The South African Coastline. Source: en. wikipedia

The imposition of Apartheid in 1948 brought about a plethora of Acts and policies that further divided the South African population, mainly according to race. Apartheid, meaning ‘apartness’ or separateness, refers to the policy of separating people based on race and came into effect in 1948 and during that time the government set up 10 homelands, in accordance with the *Natives Lands Act (Act*

No.27 of 1913). The 'Whites only' sign had been put in most public places and amenities like toilets, parks, taxis, ambulances, cinemas, restaurants, church halls, town halls, schools universities and even beaches.[See Fig. 2].The effects of Apartheid planning are still evident today, with specified race or ethnicity groups predominantly occupying certain areas and the homelands were nominally self-governing tribal homelands, with most having their own nature conservation laws, several of which are still in force. (Goble, Lewis, Hill, & Phillips, 2014). The South African coastal landscape has been impacted significantly in that former 'white' areas are densely populated and former 'black' or homeland areas remaining underdeveloped, with limited access to economic resources or social services and inadequate infrastructure.

The new democratic, post-Apartheid South African government has implemented land reform policies, aimed at restitution, redistribution and tenure reform of land to secure land rights, but with challenges of limited budget, lack of policy direction, inadequate co-operation between government spheres and constraints imposed by the national land reform policy. (Goble, Lewis, Hill, & Phillips, 2014). In the process, there has been low levels of land reform and a high degree of uncertainty pertaining to ownership and development rights of land which in turn has resulted in lack of development. Most of the disputed land is along the coast and the future management of these localities need to balance access and land rights against coastal conservation needs.

The *Group Areas Act No. 41 of 1950* was legislation that forced the physical division between races through the creation of different residential areas for different races. Its implementation started in 1954 and it led to forced removals of people living in so-called 'wrong' areas and the complete destruction of communities e.g. Coloureds living in District Six in Cape Town. The *Reservation of Separate Amenities Act No. 49 of 1953* was also another act that further segregated and divided the South African population based on racial lines. The main function of the act was to legalize the racial segregation of public premises, vehicles and services and the only public premise that was excluded from the Act were roads and streets. The Act endorsed the fact that facilities for different races did not have to be equal and further made it legal not to supply segregated facilities, but also to completely exclude a section of

the population based on its race from vehicles, services or public premises. The end result of it all was that the best facilities were reserved for white people and those of other races were never improved and left inferior. Local municipalities utilized the opportunity to customize their by-laws which allowed for certain areas to be reserved for whites only. The South African Parliament voted to repeal the Act on the 20th of June 1990 and on the 15 of October of the same year the Act was finally repealed by the Discriminatory Legislation regarding *Public Amenities Repeal Act*.

Apartheid finally came to an end in 1994 through a democratically elected government which ushered in a new political, economic and social dispensation more especially to previously disadvantaged communities. Some parts of the South African coast were demarcated for the White minority population and other racial groups were not allowed to enter those areas by law and the new era demolished all of that.



Figure 2. Municipality signage for Beach Prohibition (in both English and Afrikaans) Source: <http://jewdownunder.wordpress.com>

2. Problem Statement

Coastal areas are important ecologically, as they provide a number of environmental goods and services and the peculiar characteristic of coastal environments is their dynamic nature which results from the transfer of matter, energy and living organisms between land and sea systems, under the influence of primary driving forces that include short-term weather, long-term climate, secular changes in sea level and tides. (FAO, 1998). These coastal areas frequently contain critical terrestrial and aquatic habitats, particularly in the tropics and such habitats together comprise unique coastal ecosystems that support a rich biological diversity and frequently contain a valuable assortment of natural resources.

The 1992 Earth Summit Agenda 21(Chapter 17) report spells out clearly as to how coastal areas contain diverse and productive habitats important for human settlements, development and local subsistence. Currently, more than half of the world's population lives within 60 km from the shoreline and there is a great possibility of the number rising to three quarters by the year 2020. In many parts of the world the population's poorest people live on the coast and all resources gained from the ocean are significant for the survival of these local communities and indigenous people. (Thia-Eng, Kullenberg, & Bonga, 2008). The Exclusive Economic Zone (EEZ) of these coastal states serves as conservation and development terrains that benefit coastal livelihood initiatives. The Earth Summit exposed that despite national, sub regional, regional and global efforts towards the management of marine and coastal resources but the ultimate goal of successful sustainable development has not been achieved yet. Instead, the coastal environment and resources are under extensive and rapid degradation and erosion in various regions of the world. (Thia-Eng, 2006)

According to Maccarone *et al* (2014) Integrated Coastal Zone Management (ICZM), as defined by the European Union, is expected to result in actions that will lead coastal communities to develop economies that can bring their areas to life by managing natural resources in a sustainable manner. ICZM is a process of governance and consists of the legal and institutional framework necessary to ensure that development and management plans for coastal zones are integrated

with environmental (including social) goals and are made with the participation of those affected. (Post & Lundin, 1996). Furthermore, the purpose of ICZM is to maximize the benefits provided by the coastal zone and to minimize the conflicts and harmful effects of activities upon each other, on resources and on the environment. The rich and abundant marine living resources and natural heritage of the East Coast of the Eastern Cape warrants a need for well-designed and professional execution of the integrated coastal zone management plan. Currently the coastal zone has potential to produce diverse and productive marine ecosystems which depicts the local community's way of life in their dynamic processes. The South African marine and coastal resources are a rich and diverse national asset which provides important economic and social opportunities for the human population. (State of the Environment Report : Marine and Coastal Resources, 2006).

The marine and coastal environment and its associated resources contribute considerably to the South African economy in terms of employment, recreation and tourism. Since the 1980s, the four major coastal cities of Cape Town, Port Elizabeth and Durban have shown the fastest economic growth of all cities in the country. (Breetkze, Moore, & Mayer, 2013). In 2000, the estimated value of the direct benefits derived from all coastal goods and services in South Africa was approximately R168 billion, with indirect benefits contributing a further R134 billion. (White Paper for Sustainable Coastal Development in South Africa, 2000). The people have therefore developed a strong reliance on these significant resources for commercial opportunity and gain, food, recreation and transport and with such potential ,the marine and coastal environment needs to be safeguarded as it has facilitated job creation and general economic upliftment in coastal regions.

South Africa is signatory to a number of important international treaties and conventions. These are:

- (i) The International Convention for the Prevention of Pollution from Ships (MARPOL)
- (ii) The United Nations Convention on the Law of the Sea (more especially the management of straddling and migratory fish stocks)

- (iii) The Convention on Biodiversity
- (iv) The Bonn Convention (on conservation of migratory species, including seabirds) and;
- (v) The London Convention (on regulating the dumping of waste at sea)

The South African natural environment is governed nationally by a wide range of relevant legislative acts which start from the *Constitution of the Republic of South Africa (1996)*, the *Environmental Management Act (No 107 of 1998)*, the *Environmental Conservation Act (No.73 of 1989)* and lastly the most significant one for marine and coastal resources, the *Marine Living Resources Act (No 18 of 1998)*. All of the above conventions and legislation seek to fulfil one objective; and that is “to ensure the sustainability of natural resources around the coast and to secure the future livelihoods of coastal communities” (State of the Environment Report : Marine and Coastal Resources, 2006).

The management setup in South Africa is such that legislative objectives are achieved through the division of government structures into three spheres: national, provincial and local government, as a means of streamlining and dividing management roles and responsibilities. The three spheres of government have legislative and executive authority in their own spheres and national government is responsible for the implementation of laws and policies at a national level, dealing with issues that are of concern to the whole country. The country has nine provincial legislatures, which are authorized to pass on provincial legislation on issues included in specified ‘functional areas’, so as to ensure better management of individual and their resources. Co-ordination, monitoring and support of local municipalities is the responsibility of the provincial government within each province. Local authorities are largely responsible for daily management relating natural resource management, land use planning, land development, catchment management, coastal and drainage engineering, local economic development, environmental assessment, strategic planning, housing and service delivery, environmental health and tourism promotion. (Goble, Lewis, Hill, & Phillips, 2014). However, the coastal environment has been subjected to severe pressures of human origin because of the mismanaged and uncontrolled usage of marine resources which has led to resource loss, degradation and exploitation. “These

pressures have driven an overall decline in marine productivity, creating significant socio-economic opportunity costs.” (State of the Environment Report : Marine and Coastal Resources, 2006)

3. Objectives

Many coastal countries are affected by environmental problems that trigger the need for ICZM programme. These different kinds of coastal problems, or opportunities can be the desire to increase the economic benefits flowing from the use of coastal zone resources, serious resource depletion problems, increasing pollution of the coastal and ocean environment, loss of or damage to productive coastal ecosystems, increasing losses of life and property from natural coastal hazards and disasters, perceived economic opportunities associated with new forms of development in the coastal zone and conflicts of interest among user groups. (Thia-Eng, 2006).

Integrated coastal zone management therefore steps in as a globally utilized approach for the management of the coast and its resources; emerging predominantly in response to the failures of sectoral management and in spite of national and international instruments relating to coastal management, coastal management initiatives often fail as people living in the coastal area have a limited understanding of the economic, cultural and aesthetic value that a sustainably managed coast can provide. (Goble, Lewis, Hill, & Phillips, 2014).

South Africa, having almost 3 000km of coastline, is one such country grappling with sustainability of coastal resource use and the South African coastal environment offers a wide range of social and economic resources, which are exploited for traditional uses, such as subsistence harvesting of shellfish and religious ceremonies, and recreational activities, such as diving, swimming and fishing. (Goble, Lewis, Hill, & Phillips, 2014). Moreover, South Africa is considered to be the third most bio diverse country in the world, with its coast being home to the Maputaland-Pondoland-Albany hotspot which supports a range of endemic, threatened fauna and flora and the value of this area is further highlighted by the world heritage status it has been afforded, as part of the iSimangaliso Wetland Park. (Goble, Lewis, Hill, & Phillips, 2014)

The importance of the coast and its resources is underpinned by the declaration and management of a number of Marine Protected Areas (MPA); namely the Pondoland MPA, Table Mountain National Park MPA, Bird Island MPA and Stilbaai MPA and unique to South Africa, coastal management and planning has been shaped by the historical spatial-political planning of Apartheid, which has resulted in current access and development being unevenly distributed along the coast. (Goble, Lewis, Hill, & Phillips, 2014). There arose a need to carefully manage the South African coast and that led to the development and enactment of the *Integrated Coastal Management Act (Act No.24 of 2008)* in December.

It must therefore be understood that the “goal of Integrated Coastal Zone Management (ICZM) is to improve the quality of life of human communities who depend on coastal resources while maintaining the biological diversity and productivity of coastal ecosystems”. (Breetkze, Moore, & Mayer, 2013). This involves the specific improvement of the bio-physical condition of the coastal area and also the specific improvement in the quality of human populations in the coastal area. This therefore means that the ICM process should involve and include government interacting with the community, management with scientists and public opinion with sectoral interests in the preparation and implementation actions that are informed by investment projections for development with the conservation of environmental qualities and functions.

The research therefore sought to determine as to whether the existing Integrated Coastal Zone Management plans and policies are functional in terms of their roll-out and how successful they are and if not what the shortfalls are and what future alterations can be utilized to grant them effective. Additionally, the process also checked collective, coherent, co-operation between the lead agents (i.e. provincial environmental affairs department-coastal management), municipalities, NGOs, civil society and women’s groups regarding the implementation of ICZMs. Moreover the research tried to measure the impact these plans are at aiming to achieve the alleviation of poverty, as a means of improving coastal livelihoods.

4. Study Area

The Buffalo City Metropolitan Municipality is centrally positioned in the Eastern Cape Province of South Africa and is bounded to the south east side of the country by the Indian Ocean coastline. The Eastern Cape Province is counted as the second largest province, in terms of land area, in South Africa – it covers 169, 580 square kilometres which is 13.9 % of South Africa's total land area. (Breetkze, Moore, & Mayer, 2013). The province has the third largest population of South, at approximately 6 562 053 million people, with an increase of 283 402 persons or 4.5% since 2001. (Statistics, 2012). Being a predominantly rural province, the majority of people depend on subsistence agriculture for survival and is also a province of great natural diversity with a long and largely unspoilt and undeveloped coastline. To address the problems of poverty, poor infrastructure and lack of basic services, the Eastern Cape entered a phase of rapid development, particularly in the sectors of tourism, mining, forestry, agricultural and coastal development. (Mbengashe, 1996).

There are two major urban metropolitan municipalities within the Province, the Nelson Mandela Metropolitan (NMMM) and Buffalo City Metropolitan (BCMM) Municipalities. BCMM is the key urban centre of the eastern part of the Eastern Cape and it consists of a commercial corridor starting from the port city of East London to the east, through the township of Mdantsane and ending in Dimbaza in the west. The Buffalo City Metropolitan land area has a coastline which is 68 km long and is spread within 2.515 square km of land area. East London functions as the dominant economic centre of the region, whilst Bhisho is the Provincial Administrative Centre.



Figure 3. Buffalo City Metropolitan Municipality (Inset: Map of South Africa).

Source: www.weather-forecast.com

5. Survey Design and Implementation

Two research tools were implemented in drawing data from participants as a means of obtaining qualitative results in answering the research objectives outlined in Table 1 below. The main aim for choosing this type of research methodology was to gather as much in-depth understanding of the human behaviour of the participants pertaining to the implementation of the ICZM Plan and other pathways of decision-making and the reasons that govern such behaviour. The validity of the data was ensured by means of triangulation, where the research problem had been approached from different angles and different research techniques had been used at the same time.

Table 1. Summary of Data Collection Methods

#	PARTICIPANT(S)	TYPE OF TOOL	OBJECTIVE	TIME FRAME
1	Coastal Management	Questionnaire/	Successes and	June/July

	Officials (Office bound)- Buffalo City Metropolitan Municipality	Evaluation Checklist	shortfalls of existing Integrated Coastal Management Plan of the Buffalo City Metropolitan Municipality	2014
2	Wildlife and Environmental Society of South Africa (Non- Governmental Organisation)	Questionnaire/ Evaluation Checklist	Current status quo on regional ICZM Plan /Execution of future plans for qualitative outputs	June/July 2014
3	Marine and Coastal Environmental Educators – Two Oceans Aquarium & South African Environmental Observation Network (SAEON)	Questionnaire/ Evaluation Checklist	Practical on-the- ground observations and experiences on ICZM Plan implementation/ Alterations and remedies for improved execution of plan	June/July 2014
4	Coastal Management Scientists (East London Museum – Biodiversity; Malacology, Fish Monitoring &	Questionnaire/ Evaluation Checklist	Field notes on practical engagements with ICZM Plan/Execution of	June/July 2014

	Ornithology		ICZM Plan	
5	Department of Environmental Affairs Coastal Management Section – Eastern Cape Head Office	Questionnaire/ Evaluation Checklist	Hands-on observations on practical implementation of ICZM Plan/ SWOT analysis remarks, comments and future recommendations for improvement	June/July 2014

The following methods were used to answer the objectives listed in the research proposal:

5.1. Questionnaire

The questionnaire sought to elicit core responses regarding the research objectives. The questionnaire endeavoured to determine whether the existing ICZM plans and policies are 'functional' in their roll-out and execution and the success output they are coming up with. The tool also investigated the current shortfalls and identify future alternative strategies that can be employed in cases of inadequacy. Furthermore, the questionnaire was used to measure the impact these plans and policies are having on civil society in terms of alleviation of poverty and the improvement of coastal livelihoods through the implementation of coastal projects. The questionnaire was also used to check collective, coherent, co-operation between the lead agents (i.e. provincial environmental affairs department-coastal management), municipalities, NGOs, civil society and women's groups regarding the

implementation of ICZM plans. The targeted audience in relation to this tool were coastal management officials like beach managers and compliance and enforcement municipal officials within the Buffalo City Metro Municipality area. The questionnaire was sent out to all participants as a survey to ascertain opinions on the overall effectiveness of the ICZM plan which is place, in anticipation that they responded accordingly to their specific areas of expertise and beyond their scope including other personal observations and experiences.

5.2. Evaluation Framework

The essence of the research project was to critically evaluate the implementation of the Integrated Coastal Zone Management Plan in a local context within the Buffalo City Metropolitan Municipality. The tool which was implemented in this instance was an evaluation checklist which was comprised of relevant criteria which are reflective of the key concepts of the policy in question. These criteria are institutional and legal development, public involvement including education and awareness, monitoring and research, recreational facilities and amenities, governance and capacity building, natural resource management, pollution control and work management. The criteria are adapted from both the *Eastern Cape Coastal Management Programme: 2013 Update* and the *Buffalo City Municipality Integrated Coastal Zone Management Plan of 2005*. All the data that was collected using this tool was analyzed and processed using a pie chart to give a diagrammatical representation of the responses obtained.

6. Literature Review:

6.1. Introduction

Integrated coastal zone management (ICZM) can be defined as a continuous and dynamic process by which decisions are made for the sustainable use, development, and protection of coastal and marine areas and resources. (Cicin-Sain & Knecht, 1998). Integrated coastal management is also a process that recognizes the distinctive character of the coastal area, itself a valuable resource and the importance of conserving it for current and future generations. ICZM brings together

all those involved in the development, management and use of the coast in a framework that facilitates integration of their interests and responsibilities. (Kaiser, et al., 2005)

The goals of integrated coastal zone management are to achieve sustainable development of coastal and marine areas, to reduce vulnerability of coastal areas and their inhabitants to natural hazards, and to maintain essential ecological processes, life support systems, And biological diversity in coastal and marine areas. This process is multipurpose oriented: it analyzes implications of development, conflicting uses, and interrelationships among physical processes and human activities, and it promotes linkages and harmonization between sectoral coastal and ocean activities. (Cicin-Sain & Knecht, 1998).

The term “Coastal Management” was first conceptualized in the United States and came into common use with the implementation of the United States Coastal Zone Management Act of 1972. This was an Act of Congress which was passed in 1972 as a means to encourage all coastal states to develop and implement coastal zone management plans (CZMPs). The Act was therefore established as a United States National Policy to preserve, protect, develop and where possible, restore or enhance the resources of the Nation’s coastal zone for present and future generations. Relevant programmes were then designed to set up a basis for protecting, restoring and establishing a sense of responsibility in preserving and developing the nation’s coastal communities and resources, more especially those that are under pressure of being depleted. The vision of the ICZMP was to ensure that America’s coast and oceans, including the Great Lakes and island territories, are healthy and thriving for present and future generations, whilst the vision was to ensure that the conservation and responsible use of the coastal and ocean resources is maintained.

6.2. The African Perspective

Integrated Coastal Zone Management (ICZM) can be defined as a process where the coast is managed in an integrated approach, incorporating all aspects of the coastal zone, with the inclusion of political and geographical boundaries, with the objective of achieving sustainability of the area and its related components. (Thia-

Eng, 2006). The concept was constructed at the Earth Summit of 1992 in Rio de Janeiro and the core elements were set out in the proceedings of the summit Chapter 17 of Agenda 21. Chapter 17 specifically deals with the *Protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and the protection, rational use and development of their living resources*. (Doody, 2001). In Agenda 21 signatories to the Convention on Biological Diversity committed their governments to action for the sustainable development of coastal areas and the marine environment. The growth in coastal populations, including the fact that many of the World's poorest people are concentrated on or near the coast and the recognition that its resources and environment are being 'rapidly degraded', were identified as the basis for action.

There have been efforts from an international level to improve coastal zone management and guidelines for further advancement have been developed by the Organisation for Economic Co-operation and Development, the World Bank, the World Conservation Union and the United Nations Environment Programme. (FAO, 1998). The African continent has also joined forces with the rest of the world and focused its efforts in co-operation towards a co-ordinated effort to manage the coastal zones of the coastal states by participating through two United Nations Environmental Programme conventions, which are the Abidjan Convention for the Co-operation in the Protection and Development of the Marine and Coastal Environment in the West and Central African Region and the Nairobi Convention on the Protection, Management and Development of the Marine and Coastal Environment in the East Africa Region.

6.3. The Abidjan Convention

The Convention encourages its member states to exercise full measure in preventing, combating, reducing and controlling pollution as a means of ensuring sound coastal zone management of natural resources in the Convention area. All member states are then called upon to work together with relevant international, regional and sub-regional organizations with the purpose of collaborating towards establishing and adopting recommended practices, measures and procedures set up to combat pollution. The pollution spoken hereof is from normal or accidental

discharge from ships; discharge from rivers, estuaries, coastal establishments; dumping from ships and aircrafts; pollution from activities relating to the exploration and exploitation of the sea-bed and from coastal erosion caused by human intervention as in land reclamation and coastal engineering.

The member states (Angola, Benin, Cameroon, Cape Verde, Congo (Democratic Republic of), Congo (Republic of), Côte d'Ivoire, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mauritania, Namibia, Nigeria, Sao Tome e Principe, Senegal, Sierra Leone, South Africa and Togo) to the Convention have a further responsibility of ensuring that their respective Marine Protected Areas are taken care of in terms of their fragile and sensitive ecosystems and endangered species found therein. According to the Convention there should be constantly collaborate on matters pertaining to scientific research and assessment of pollution in the Convention area. South Africa, together with Angola and Namibia, forms part of the Benguela Large Marine Ecosystem which is in agreement in the establishment of an integrated, multi-sectoral approach in the management of its Large Marine Ecosystem (LME). All member states have incorporated their respective national environmental policies and legislation in strengthening the Convention. There has been an inclusion and incorporating of the relevant provisions of the United Nations Convention on the Law of the Sea, the Convention on Biological Diversity, the United Nations Framework Convention on Climate Change and also other relevant international conventions.

6.4. The Nairobi Convention

The Nairobi Convention was established in 1985 as an answer to the protection of the uniqueness and the necessity for action to the threatened East Africa Region. The main objective of the Convention is to provide a regional legal framework that seeks to coordinate the efforts of its member states towards planning and development of relevant programmes that strengthen their capacity to manage, develop and protect the marine and coastal environment in a sustainable manner. The Convention was also formulated for the purpose of inter-governmental deliberations that are based on firm and better approaches in solving regional environmental problems and strategies needed to address them. The Republic of

South Africa, once more, together with Mauritius, the Seychelles, Kenya and Tanzania are core member states to the Convention.

The Convention therefore becomes a cornerstone in discussions relating to tourism as an important industry to all member states and currently threat to the marine environment because of an interest in the exploration and exploitation of oil and gas reserves in the Region which has a devastating effect on critical and sensitive habitats such as coral reefs, mangroves, beaches and sea grass meadows. There are coastal urban hotspots in these countries and they too are faced with challenging ecological problems of poor planning and unregulated land use projects made worse by poor regulatory frameworks of the respective member states.

In general, integrated coastal management (ICM) promotes the use of defensible scientific information in conjunction with principles of cooperative governance in order to achieve sustainable coastal development. ICM is seldom achievable in the presence of 'command-and-control' or 'top-down' prescriptive government. Successful ICM is often characterised by extensive public consultation and democratic decision-making, a concept that is also entrenched in the Constitution of South Africa and a theme which also runs throughout the ICM Act. (Celliers, Moore, & Malan, A User-friendly Guide to the Integrated Coastal Management Act of South Africa, 2009).

Coastal management in South Africa has experienced a number of paradigm shifts or different phases since the 1970s, each with different policy approaches and management practices. This "evolution" of ICM has culminated in a legal tool or Act of Parliament that recognises the ecological, social and economic interactions within the ocean and land interface. Moreover, coastal management efforts in South Africa have undergone a dramatic transformation in recent decades: from a bureaucratic and biophysical focus towards an approach rooted in participation, empowerment and the promotion of sustainable coastal livelihoods. (Glavovic & Boonzaier, 2007)

6.5. The White Paper for Sustainable Coastal Development

It was only in the 1980s that there was a focus on coastal management at a national level in South Africa. The guiding document driving progress in coastal management

in South Africa has been The *White Paper for Sustainable Coastal Development in South Africa* (DEAT, 2000). The document defines Coastal Development as “A continuous and dynamic process that unites government and the community, science and management, sectoral and public interests in preparing and implementing an integrated plan for the protection and development of coastal ecosystems and resources”. According to the White Paper the goal of coastal management to radically improve the quality of life of human communities which are solely dependent on coastal resources, while a balance is maintained between the biological diversity and productivity of delicate coastal ecosystems. Furthermore, coastal management should also spell out the effective implementation of coastal policy, through a continuous cycle of improvement based on ongoing implementation, review and revision.

The White Paper defines Sustainable Coastal Development as “enhancing the capacity of current and future generations to realise their human potential, within the context of maintaining diverse, healthy and productive coastal ecosystems”. The White Paper is the product of an extensive and integrated process of public participation, research and analysis. Initiated in May 1997, this process was based on the active participation of over 5,000 people from all spheres of government, the private sector, and civil society. This White Paper builds upon the *Coastal Policy Green Paper*, distributed in September 1998, and the *Draft White Paper for Sustainable Coastal Development in South Africa*, distributed in March 1999. Policy Committee members represented national government, the four coastal provinces, as well as business, labour community-based organisations, environmental non-governmental organisations and the sport and recreational sector.

The White Paper was founded on a national vision for the coast that includes the socially justified sharing of benefits derived from a resource-rich coastal area without compromising the ability of future generations to access those benefits. (Glavovic, 2006). It is also founded on a shared national vision for the coast that deliberately confronts the legacy of apartheid and provides a value framework for reconciling short-term development needs with the longer-term sustainability imperative and furthermore outlines a set of principles, goals and objectives, and more specific guidelines, to translate the vision into practical reality. (Glavovic, 2006). The White

Paper has distinctively outlined a Plan of Action for the implementation of the policy. In the first instance the White Paper highlights the value of the coastal ecosystems as cornerstones for human developments. This is manifested by it being the Paper being people-centred and in the process stressing the important contribution that sustainable coastal development can contribute towards reconstruction and development. Moreover, the White Paper has a view that the coast is a system and is of the opinion that the holistic way of thinking by promoting ICM is a better option. Lastly, the White Paper promotes a new facilitative style of management that involves shared responsibility and cooperation with different stakeholders and is responsive to the diversity of the coast and learns from experiences gained in the process. (Glavovic B. C., The evolution of coastal management in South Africa: Why blood is thicker than water, 2006)

6.5.1. Institutional and Legal Development

The implementation of the White Paper Plan of Action is poised around four strong policy pillars. These are Institutional and Legal Development, Information, Awareness Education and Training, and Projects. The implementation of the policy is being coordinated by the national Department of Environmental Affairs (DEA) under the umbrella of CoastCare, which is a partnership programme involving the public and private sectors, and was funded mainly by the British Government until mid-2005 when their tenure for coastal management support came to an end. In as far as institutional and legal development is concerned the DEA has been instrumental in setting up coordination structures for coastal management in all the coastal provinces and these have been improved by the establishment of Provincial Coastal Coordinating Committees and the appointment of Provincial Coastal Coordinators. There was a legal commitment on the part of DEA to draft a National Coastal Management Bill which had the full support of coastal provinces but the Director – General (DEA) at the time required substantial redrafting and by mid-2005 the Bill had not been submitted to Cabinet.

6.5.2. Information Sharing

On the information management front there was an internet-based CoastCare Information Centre (virtual library) established which served the purpose of providing

access to information previously distributed across many different organisations. There was also initiation of a CoastKeepers' Community Monitoring project which involved volunteers who monitored nation-wide coastal areas and these exercises included biophysical and socio-economic observations which were contributions to the periodic 'State of the Coast' reports. In addition, a computer-based decision-support system was developed to assist local authorities in formulating decisions in cases of issuing permits for potentially harmful activities in sensitive coastal areas. Another human dimension of information management was that of coastal management through the Sea and Coast research programme and it complemented more biophysical oriented research carried through the Marine Biophysical Programme.

6.5.3. Awareness, Education & Training

The awareness, education and training element of the Plan of Action of the White Paper had the aim of sensitizing broader society to the value of the coast, its development potential and the need to protect the sensitive ecosystems as a means to sustain the flow of coastal goods and services. (White Paper for Sustainable Coastal Development in South Africa, 2000). The major marketing campaign, for the short term, was directed by DEA through the CoastCare programme which was in consultation with the all four coastal provinces and relevant stakeholders like NGOs involved in coastal awareness work. The main objective at the time was to highlight stronger awareness on the new coastal management policy and its proposed implementation. The focus terrain of the campaign was strictly coastal areas but would also target inland region audiences. Politicians were also targeted initially as those that would be fed with increased coastal awareness as key decision-makers in their respective local communities. Other means of information dissemination were newsletters, publications and interpretive signage.



Fig 4. CoastCare South Africa Logo

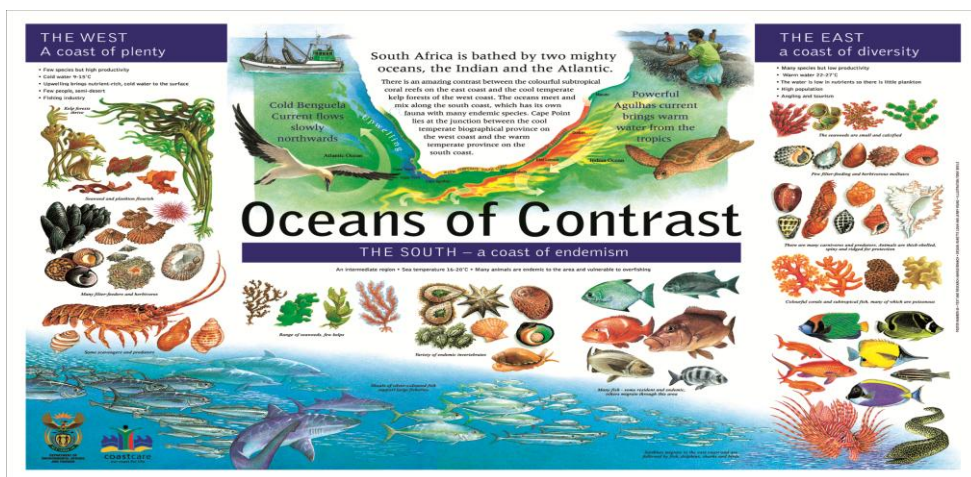


Fig. 5. Example of Interpretive Signage (Coastline of South Africa)

The effective and successful implementation of the Policy was going to be achieved by means of a well structured and organised education and training programme that develops skill, understanding and knowledge in coastal management. A broad needs assessment would be undertaken to ascertain, in the short term, the necessary requirements and priorities for education and training which were affecting all major role-players and stakeholders at a national, provincial and local level. Education and training programmes were the responsibility of DEA's CoastCare programme in collaboration with Coastal Co-ordinators in all provinces in consultation with key role-players such as NGOs involved in coastal education and training. An example of one NGO involved with such an initiative is WESSA (Wildlife and Environmental Society of South Africa). The target audience for such

programmes were staff members of national and provincial lead agents and members of emerging management structures for local demonstration projects. (White Paper for Sustainable Coastal Development in South Africa, 2000).

The education and training programme was a mixture of both formal and informal sessions catering for all role-players at a national, provincial and local level in all coastal areas. The programme was going to be shaped specifically for political role-players, civil society organisations and local government officials at a local level. These officials are constantly involved everyday in coastal management activities which are service delivery, marine spatial planning and other forms of strategic planning around Integrated Development Plans. The programme was going to be designed to fit into the existing National Qualifications Framework giving more attention to rural and under-resourced areas of the coastline and in the process promoting career development opportunities in coastal management. (White Paper for Sustainable Coastal Development in South Africa, 2000).

The envisaged objective was to incorporate the programme into the current Curriculum 2005, which was implemented in schools then, and educators were to be involved in the crafting of this amalgamation of coastal education content to mainstream education. There was commitment to translate the entire education and training programme, as preparation of guidelines the implementation of the Policy, into the four dominant coastal languages (English, Afrikaans, IsiXhosa and IsiZulu) and thereafter to be distributed widely amongst coastal managers at local, provincial and national level.

6.5.4. Projects relating to Policy Implementation

The coastal policy implementation efforts have since 2000, been driven to a large degree by the inclusion of practical interventions to transform coastal poverty into sustainable coastal livelihoods. (Glavovic & Boonzaier, 2007). Two main project-based programmes focused their particular attention on alleviation of coastal poverty. The first one is The Working for the Coast Programme which was funded by the Poverty Relief Fund and the second one is The Sustainable Coastal

Livelihoods Programme which focused its attention on priority provincial and local-scale projects to promote sustainable coastal livelihoods. According to Glavovic and Boonzaier (2007) poverty is severe in the Eastern Cape with almost 40% of households were living in poverty and 77% of children living in poor households. The main cities of Port Elizabeth and East London attract migrant workers mainly from the rural areas as the region is predominantly rural, incorporating the former Ciskei and Transkei homelands.

The Working for the Coast Programme was part of the national Special Public Works Programme and was structured to provide workers with a minimal daily wage remuneration for a maximum of 2 years. The Programme recruited women, the youth and disabled people and provided jobs and training for poor coastal communities as a means to secure a safe and clean coast. Within one year upon launching the Programme its impact had covered almost 60% of the coast and there was activity in 55 project sites. 1270 or more people had be employed, with a total contribution of more than 150 000 days of work, having collected and disposed of more than 80 000 bags of waste and having received over 14 500 hours of training. (Glavovic & Boonzaier, *Confronting coastal poverty: Building sustainable coastal livelihoods in South Africa*, 2007). On the other hand, the Sustainable Coastal Livelihoods Programme facilitated the structuring of the Provincial Coastal Coordinating Committees and the Provincial Coastal Coordinator positions. The first 2 years of the Programme were marred with obstacles ranging from flaws in the initial programme design, poor conceptualization of what pro-poor stands for and an inappropriate and inflexible process of selecting meaningful projects. Later on the Programme was revised to improve on its weaknesses and focussing more on lesson-learning and integrating the Sustainable Livelihoods approach into policy and the sharing of best practice.

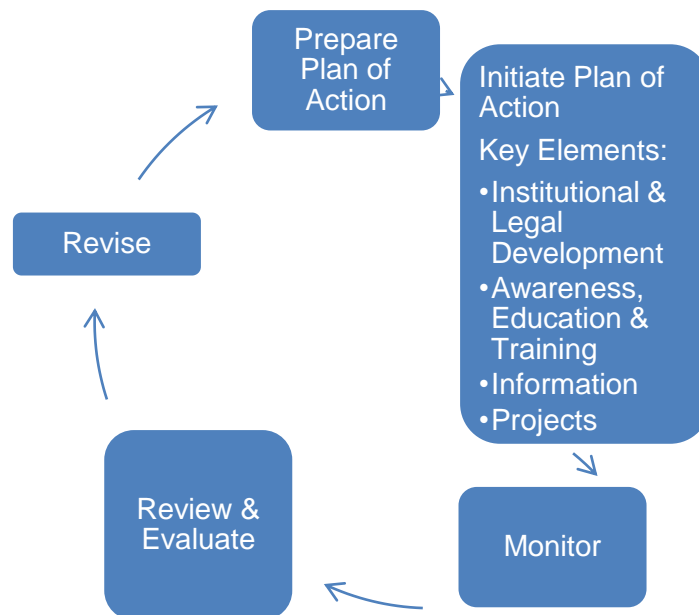


Fig. 6. Cycle of Coastal Management

6.6. The Eastern Cape Coastal Management Plan Draft

According to the Eastern Cape Coastal Management Plan Draft (CMP), Integrated Coastal Management (ICM) is a process for the management of the coastal area using an integrated and inclusive approach, taking cognisance of all aspects of the coastal zone, including geographical and political boundaries, in an attempt to achieve sustainable development. (Breetkze, Moore, & Mayer, 2013). The Plan's paramount goal is that of improving the quality of life of human communities who depend on coastal resources, for their livelihoods whilst at the same, maintaining the biological diversity and productivity of coastal ecosystems. The ICM process also seeks to integrate current governmental activities with the community, the sciences with management and sectoral with public in preparation and implementation of actions that combine investment in development with the conservation of environmental qualities and functions. The key themes of action of the CMP are informed by the White Paper for Sustainable Coastal Development and are proposed as the implementation framework for CMPs and the approach was adopted for the inaugural version of the Eastern Cape CMP in 2004. This process was in line with the structure of the draft Guide to the development of CMPs in South Africa under the auspices of the Oceans and Coasts Branch of the

Department of Environmental Affairs in 2012, and the implementation framework has been amended to reflect priority areas of implementation for the current Integrated Coastal Management cycle.

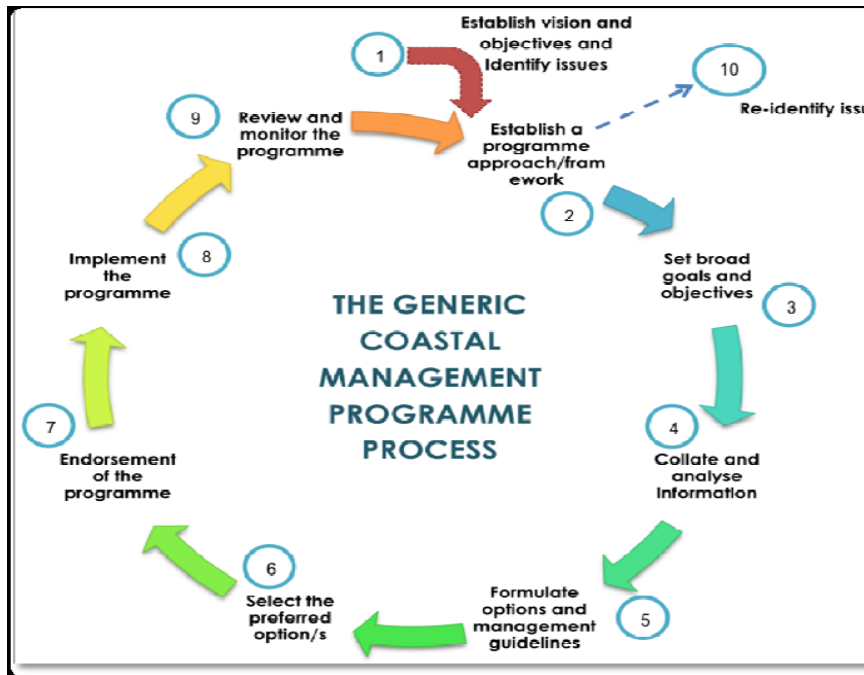


Fig. 7. The coastal management programme development process (Oceans and Coasts Branch of the Department of Environmental Affairs, 2012)

6.6.1. The Five Year Plan : Priority Areas and Implementation

This envisaged plan is constituted of detailed direction for achieving the coastal management vision during the present Integrated Management cycle. Priority areas are as follows: Cooperative Governance, Coastal Planning and Development, Climate Change and Dynamic Coastal Processes, Land and Marine-based sources of Pollution, Estuaries, the Facilitation of Coastal Access, Awareness Education Training Capacity Building and Information, Compliance Monitoring and Enforcement, and Natural Resource Management.

6.6.2. Cooperative Governance

This particular priority area features the participation of all stakeholders, coastal governance and co-responsibility. Integrated, co-ordinated decision making is enhanced together with planning and management.

6.6.3. Coastal Planning and Development

Emphasis in this priority area is on local economic development opportunities and approval procedures. Focus is also on the identification and exploitation of coastal sustainable livelihood opportunities. Holistic planning and development processes are encouraged with emphasis on sustainable and equitable spatial development trends in the coastal zone. Local economic development refers mainly to coast-dependent activities, port and related facilities, public facilities, mariculture and aquaculture, tourism, leisure and recreation and lastly mining.

6.6.4. Climate Change and Dynamic Coastal Processes

The Eastern Cape coastline like any other is in a state of constant change due to climatic and geographic factors. This priority area therefore responds to the dynamic coastal process through increased resilience of natural and social systems and phased retreat of infrastructure in high risk areas.

6.6.5. Land and Marine-based sources of Pollution

The coastline faces challenges of pollution either from a land or marine base. The priority area focuses specifically on the reduction and response to land and marine based sources of pollution in the coastal zone with a strong adherence to the waste management hierarchy of reduce, reuse and recycle.

6.6.6. Estuaries

Features of this priority area are that there should be an establishment and implementation of a strategy to improve the management and protection of estuarine resources. Sufficient financial resources should be secured to fund and implement identified actions, research projects, initiatives and advisory forums.

6.6.7. The Facilitation of Coastal Access

The emphasis here is on the promotion and the management of access to coastal public property together with the promotion and facilitation of equitable access to coastal resources and coastal public property. There is also the recognition of the importance of access preservation and the promotion of custodianship and stewardship of the coastal zone.

6.6.8. Awareness, Education, Training, Capacity Building and Information

The significance of this priority area is that of facilitation of knowledge production and exchange together with promoting knowledge sharing of coastal issues and to instil a sense of ownership of the coastal zone amongst all stakeholders.

6.6.9. Compliance Monitoring and Enforcement

The focus here is basically facilitation of compliance with applicable coastal legislation and the promotion of the environmental management inspectorate and facilitation of environmental management inspectors.

6.6.10. Natural Resource Management

This priority area emphasizes the proper and efficient maintenance of ecosystem integrity and health. Attention is also given to assess and effectively manage coastal protected areas including marine protected areas and the identification and rehabilitation of damaged and degraded coastal ecosystems and habitats.

6.6.11. Conclusion

The Eastern Cape coastal zone manifests itself as a diverse natural and social environment and therefore managing this unique complex and sensitive coastline poses challenges that need “strategic objective setting, definitive and implementable goals and ongoing monitoring of indicators to ensure effectiveness and improve efficiency” (Breetkze, Moore, & Mayer, 2013). The intention of the updated CMP is for it to function as an integrative planning and policy instrument and also to be able to manage the diverse variety of activities that are happening in the coastal zone

without compromising environmental integrity and economic development in the area. The ultimate objective of the plan is to make an important input into the progress of integrated coastal management in the Eastern Cape.

6.7. The Buffalo City Metropolitan Municipality Integrated Coastal Zone Management Plan

6.7.1. Introduction

Several definitions of Integrated Coastal Zone Management (ICZM) have been used, with the most common being “ ICZM is a dynamic, continuous, iterative, and multi-disciplinary used to promote sustainable development of the coastal environment” (Buffalo City Municipality Integrated Coastal Zone Management Plan, 2005). The Buffalo City Metropolitan Municipality has a coastline which is 68km long which is comprised of open space areas and estuarine ecosystems situated within the city limits of the main City of East London. The nature of the coastline poses as a valuable asset for future economic development and social upliftment for the locals. The management of this coastline therefore needs to be sustainably driven in order for it to produce its full potential in the long term. It is around those deliberations that an integrated coastal management plan was drafted as a vehicle of carrying those aspirations forward. The overall aim of the Integrated Coastal Zone Management Plan (ICZMP) was “ to identify and prioritise existing environmental pressures, provide specific management recommendations to deal with these pressures, and establish an appropriate framework for improved management of the BCM coastline” (Buffalo City Municipality Integrated Coastal Zone Management Plan, 2005)

The Integrated Environmental Management Programme (IEMP) was launched in July 2004 by the Buffalo City Municipality as a means to address a number of coastal environmental issues featured in the Integrated Development Plan (IDP) which warranted serious management intervention. The establishment of the BCM IDP was for the fact that numerous sections of the coastline were under threat because of regulation and this resulted in environmental degradation and loss of valuable natural resources and biodiversity in the process. The BCM ICZMP as a

local coastal zone management plan has built on and aligned itself with the national White Paper for Sustainable Coastal Development as the principles and objectives of the two documents are alike and feed into common long term goals. The main guiding principle of the BCM ICZMP was “to ensure that the relevant coastal legislation is addressed, and that there is coordination between the different spheres of government” (Buffalo City Municipality Integrated Coastal Zone Management Plan, 2005). This approach will always be necessary as it assists in alleviating human pressures on the coastal zone which possesses a sensitive natural environment and conservation requirements.

The ICZMP is anchored by the four pillars of sustainability which are interlinked and interdependent on each other and can guarantee sustainable development in the long term. Economic sustainability concerns itself with job creation opportunities and the facilitation of access to productive resources. Institutional sustainability emphasizes the concrete development of partnerships between government, the private sector and civil society. Social sustainability is more concerned with shared public responsibility and the upliftment and empowerment of disadvantaged communities. Lastly, ecological sustainability is involved with the protection of marine and coastal resources and the proper functioning of ecosystems.

The BCM ICZMP is underpinned by the principles as outlined in the National Environmental Act which are applicable to coastal zone management. The first principle relates to the coastal zone being managed and regulated in an integrated and co-ordinated manner. Furthermore, participation by members of the public in decision-making is highly encouraged and in the process the coast must be treated as a distinct and indivisible system which in its management must promote consistent co-operation between the entire range of coastal role players. The second principle relates to the coastal public property as being the common heritage of the inhabitants of South Africa and reasonable access to the coastal area is reserved for them and many more generations to come. Thirdly, it is the responsibility of coastal managers that coastal public property is protected and conserved for the benefit of all civil society. Fourthly, the ecological, economic and cultural value of the coastal zone needs to be taken into consideration when coastal

management decisions are taken as these have a bearing on the legal status of the coastal public property.

Furthermore, there should always be a procedure to maintain the productivity, health and diversity of coastal ecosystems which were previously degraded and be restored to a sensible natural state. The principles also prescribe that preference must be given to local communities and in particular previously disadvantaged communities, when allocating access rights, who are solely dependent on coastal resources for their livelihoods. There is an additional commitment to promote the well-being of residents in coastal communities by undertaking coastal economic development opportunities.

The BCM ICZMP was constructed on the basis of fundamental strategic objectives:

- (i) Conservation and development areas had to be spatially defined without the further fragmenting of existing natural coastal areas or negatively affecting landscape quality.
- (ii) Aesthetic and ecological aspects of coastal development had to be considered for meeting sustainability requirements
- (iii) Civil society has a basic right of equitable access to the coastal environment
- (iv) BCM has a responsibility of providing suitable facilities and the necessary infrastructure to all its residents and visitor who appreciate coming to the coast
- (v) Appropriate and effective tourism strategies should be put in place as a means of promoting the uniqueness of the BCM
- (vi) There should be a strict water quality control system which meets existing legal requirements within estuaries and near shore coastal environments
- (vii) Pollution within the coastal zone should be prevented by means of appropriate infrastructure and monitoring
- (viii) The achievement of practical, useful and realistic management guidelines should be through cost effective implementation

6.7.2. Implementation of the ICZMP

The BCM ICZMP was divided into six distinct but closely related sections or action plans. These action plans are institutional structuring and coordination; spatial planning and development; estuarine management; management of recreational activities; conservation of protected areas and consumptive resource use. The action plans were each given time frames within which they should be completed, a priority rating and the suggested departments and structures that should be responsible for implementation. (Buffalo City Municipality Integrated Coastal Zone Management Plan, 2005). The Coastal Management Unit (CMU) was going to be responsible for ensuring that the relevant departments carry out all the actions timeously. An example of the Action Template was as follows:

ACTION	RESPONSIBILITY	PRIORITY	TIME FRAME
Establish an education and awareness programme in conjunction with the ICZMP	CMU : Coastal Education and Public Engagement Superintendent	HIGH	Medium

6.7.3. Monitoring and Review

The key to the implementation of any significant policy is the effectiveness of its monitoring and review cycle. The BCM ICZMP had a monitoring and review cycle in place and its function was to make sure that the actions outlined in the document as well as the Coastal Action Plans were implemented with a provision of identifying problem areas that require revision where necessary. As a qualitative means of monitoring implementation the following key performance indicators were used:

- (i) Institutional – report on capacity for enforcement of coastal legislation
- (ii) Land development – adoption of spatial planning guidelines and implementation

- (iii) Public involvement – public education and awareness
- (iv) Monitoring and research – resource monitoring and awareness
- (v) Recreational facilities and amenities - Blue Flag Beaches, Coastal recreational events, recreational boating
- (vi) Estuary management – report on number of proactive estuary management initiatives active within BCM

“State of Coasts” indicators were also used as instruments for monitoring and review and they were:

- (i) General Coast Indicator
- (ii) Indicators of the Marine Environment
- (iii) Indicators of the Terrestrial Environment
- (iv) Institutional Indicators

An example of the State of Coasts Indicator is as follows:

Indicator Name	Description
Indicators of the Marine Environment	
Exploitation of intertidal resources	Reports on the exploitation levels of selected marine species
Marine protected areas	Reports on the locality, size & status of MPAs
Pollutant loading entering the marine environment	Reports on the location, volume and quality of land based pollution sources in the marine waters
Concentration of heavy metals in sediments/biological tissue	Reports of the heavy metal concentrations in marine sediments within the BCM- Port of East London
<i>E. coli</i> concentration in marine waters at recreational beaches	Reports on the water quality of popular beaches which will be compared to Department of Water Affairs guidelines
Litter and debris collected per year	Reports on the quantity of litter & debris collected per year from the beaches

Ship traffic	Reports on the number, type & frequency of ships entering the East London Port per year
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7. Evaluation of ICZM Plans

Evaluation is an activity undertaken to determine the extent to which a given programme or plan is meeting its goals and the process activity may be continuous, ongoing process in which measures of programme performance are obtained and systematically compared with programme goals and objectives, or it may be undertaken periodically during the programme's lifetime. (Cicin-Sain & Knecht, 1998). Every country evaluating the potential of an ICZM – type programme will have its own special approach to conservation of resources and will be facing its own array of coastal issues and the first priority has to be getting ICZM on the local and national political agenda and getting favourable action on a mandate for resource conservation. (Clark, 1996)

Fundamentally, evaluation should be aimed at assessing the extent to which the ICZM plan is addressing and solving the problems that caused the plan to be created in the first place. Operational monitoring and assessment is an integral part of the ICZM process and should begin when the plan begins. An adequate post-implementation time period should be allowed for the programme to reach maturity and a set of indicators should be created for measuring performance. (Clark, 1996). In terms of periodic evaluation, a time frame of about five years should be sufficient for the effects of the Plan effort to begin to be apparent. Clearly, it should be possible to evaluate the effectiveness and performance of any ICZM Plan at the end of a ten-year period and the lack of measurable results at this point should call into question the Plan's effectiveness. (Cicin-Sain & Knecht, 1998).

The evaluation process should compare measured outcomes with the stated goals of the ICZM Plan and outcome indicators should be obtained by observation, monitoring and measurement of each of the Plan's goals. The monitoring efforts must be sufficiently comprehensive to determine not only whether or not the goals are being met but also, if they are not, what has gone wrong with the assumptions or

methodology so that appropriate midcourse corrections can be made. Transparency during the evaluation process is key as the same type of information should be made available for all areas in which the ICZM Plan seeks to achieve goals. Accountability is also vital as the public has the right to hold the Plan accountable for results consistent with its intended goals. The Plan should make all information relevant to the interested public available for judgements to be made as to the accountability and overall performance.

The development of performance indicators is based on the understanding that ICZM is a complex management system and its effectiveness depends on the capacity of the coastal managers to develop and implement environmental protection or management measures which adequately consider political, economic and social trade-offs (Thia-Eng, 2006) Performance indicators therefore measure achievements in processes, in reducing environmental stresses, and in ensuring the continuation of environmental management efforts; they also measure changes in environmental conditions before and after management interventions.

8. Results/Evaluation Outcomes

8.1.

Table 2. Participant Profiles:

Personal Information	PARTICIPANTS									
	1	2	3	4	5	6	7	8	9	10
1.Designation	Environmental Officer: Specialised Production	Principal Natural Scientist	Education Outreach Officer	Scientist(Malacology)	Manager	Assistant Director	Senior Project Manager : Conservation Projects	Fieldworker	Education Officer	Regional Manager
2.Organisation	Department of Agriculture, Forestry and Fisheries-National	East London Museum – Provincial; Eastern Cape	South African Environmental Observation Network	East London Museum-Provincial; Eastern Cape	Department of Environmental Affairs-Provincial;Eastern Cape	Department of Environmental Affairs-Eastern Cape	Wildlife and Environmental Society of South Africa (Border –Kei Region)	Wildlife and Environmental Society of South Africa (Border – Kei Region)	Wildlife and Environmental Society of South Africa (Border – Kei Region)	Wildlife and Environmental Society of South Africa (Border – Kei Region)
3.Sector	Government	Government	Semi-government	Government	Government	Government	NGO	NGO	NGO	NGO
4.Job Experience (Years)	10	26	7	26	16	10	12	08	05	16
5.Highest Academic Qualification	Post Graduate Diploma in Maritime Studies	Masters of Science Degree	Senior Teachers 'Diploma	Masters of Science	Honours: Environmental Management	Masters' Degree-Environmental Science	Post Graduate Diploma: Environmental Management	Matric (Standard 10- High School Graduate)	Honours Degree : Environmental Science	Masters Degree : Environmental Education

The participants in the research project have been sourced mainly from the government and non- governmental organisation (NGO) sectors. On average these officials have 13, 6 years of experience among themselves in the field of coastal zone management either as scientific practitioners or marine and coastal environmental educators. Most of the participants hold managerial or partial management positions and have one way or another have taken decisions in policy implementation processes directly or indirectly at one point in their careers. Most of them possess a post graduate academic qualification except for one which holds a senior teachers' diploma and the other is a high school graduate, which gives the inputs they have given more credibility in terms of quality and depth of reasoning and articulation added to the research.

8.2.

Table 3. Analytical Memo on Responses received from Participants:

POLICY THEMES	PARTICIPANTS									
	1	2	3	4	5	6	7	8	9	10
1. Involvement in White Paper Implementation	Principles of White Paper still relevant in ICM Act	Good opportunity to address issues affecting coastal planning; use and future sustainability options	The White Paper was aimed at senior management	—————	No need to review White Paper since ICM Act sets out there should be National Coastal Management Programme, which is meant to address issues that White Paper is supposed to be addressing	Establish planning guide and facilitate development and sustainable use of coastal zone; balance between development of under-developed high poverty zone and protection of environment which is nationally and internationally recognized as being of exceptional value and importance; development of nodes that have outstripped the provision of infrastructure which has led to sewerage pollution and dumping of waste; illegal mining of building sand resulting in scaring sections of	—————	————— →	————— →	Have seen document but never engaged intensively with it

						coast- outsiders contractors taking advantage with little or no benefit to local communities				
2. Information Sharing	Use-friendly guides developed/ translated into different languages-simplified White Paper for easy reading /understanding	As an institution, the East London Museum received all the CoastCare information	Never read the White Paper; not sure of what it entails; should have been distributed to all parties that deal or participate in coastal issues	—————	There were programmes run from White Paper, such as coastal livelihood programme, appointment of dedicated staff, CoastCare, provision of signage across the country etc.	Consultation with key stakeholders was efficient	Awareness of the White Paper has evolved post review process	→	→	CoastCare pamphlets were effective in this regard
3. Awareness, Education & Training	Will to implement principles of White Paper-standing item in agenda of Provincial Coastal Committee; seeks to drive coastal management agenda forward	Without the assistance of NGO's this aspect would not achieve the original Awareness, Education and Training goals	No education at all hence a forum is suggested	—————	There is focus on implementing ICM Act and Coastal Management Programmes, therefore no need to go back to White Paper as it was basis for having ICM Act	Time and resources are constraints	On-line bombardment of information leads to potential recipients not necessarily optimising the opportunity of engaging due to overload of information. More targeted drops should be personalised to ensure individuals or organisations are aware of process and encouraged,	→	→	The "Adopt-A-Beach "project was a very effective approach on marine environmental awareness

							supported and trained throughout process			
4. Improvement of Plan of Action	Continuous dialogue on coastal management and gradually introduced in school curriculum	Better liaison between government departments at all levels: National, Provincial, Local; including the private sector	Eastern Cape Forum should be established so that all those involved in coastal issues receive relevant information; forum should include consultants, NGOs, government departments, institutions of higher learning etc.	_____	Through implementation of ICM Act	Co-opt a private body to conduct and implement the action efficiently	[SAME AS ABOVE]	→	→	Periodical refresher workshops and constant monitoring and evaluation
5. Projects aligned to White Paper	No proper monitoring and evaluation; most projects collapsed; no adequate mentorship to community members managing projects	Socioeconomic and political imbalances created a less than suitable scenario for long-term viability of projects implemented; some have been successful with NGO input/guidance; set achievable goals aligned to	Not aware of such initiatives; diversify project leaders first; put monitoring and evaluation programmes in place	_____	CoastCare is still providing jobs and assisting in coastal management through Social Responsibility programmes which took over from CoastCare; work is still continuing but there is still room for improvement	Construction of badly planned new roads into coastal zone has done extensive damage to environment; many roads unsustainable as they become unusable very quickly, with authorities not having maintenance budget to keep	Coastal livelihoods along the coastline e.g. the Wild Coast are still relatively new and success of these projects will only show in the future; some past research projects have	→	→	Working for the Coast projects assisted a lot in job creation for communities living by the coast

		proper education/interpretation of legislation				them drivable; budget availability	struggled to maintain momentum after study period / funding has ended; continue to invest into youth programmes e.g. Eco-schools, coastal – based youth groups; invest into long term education and training at local, provincial and national government level; grass roots community approach and build into effective conservation oriented initiatives; long term (15-20 year) funded projects on the coastline that are inclusive of spin –off opportunities with revenue return to			
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							affected communities through employment and small business developments			
6. Institutional and Legal Development	ICM Act has institutional/legal development as mentioned in White Paper	Improved institutional capacitation and implementation	No comment	_____	ICM Act is now in place flowing from White Paper, which is now only the point of reference	Destruction of coastal indigenous forest is proceeding at an alarming rate	_____	→	→	Legal framework of the policy has been weak in terms of implementation
7. Cooperative Governance	Sometimes over-lapping mandates from different spheres of government; cooperation is key to avoid duplication of work	Other challenges are still being addressed and a committed focused effort is lacking	Politics seem to be dominant	_____	There are cooperative structures in place and they are working well	Different organs of state push their own agenda on the same environment; difficult to balance environment and development	Slow empowerment process and not quickly achievable objectives; cooperative governance often challenged by differing needs of representative parties therefore dramatically different priorities are tabled; certain stakeholders feeling marginalised when their priorities are ridden by political or other parties; some parties	→	→	No coherence on the part of government structures

							may not have governance capacity to participate equally in stakeholder engagements and can result in their representation being less effective than is ideal			
8. Coastal Planning & Development (Drivers)	National, provincial and local government departments; strike a balance between human needs and the environment	Improved planning; access to coast; better understanding of the use of coastal resources; quicker turn-around between applications for developments and the issuing of Record of Decision	Have not seen any initiatives	_____	Department of Economic Development, Environmental Affairs and Tourism; there is now Provincial Coastal Management Programme and Provincial Coastal Committee as indicators to that	Department of Economic Development, Environmental Affairs and Tourism; people to be capacitated	NGOs and civic associations- Nahoon Point Nature Reserve Development; Eastern Cape Parks and Tourism Agency- custodian of MPAs; strategy to back development agency projects with a long term view to conservation and not short term injection projects all too common in South Africa; State to invest in marine	→	→	Local municipal authorities should be the ones taking the lead but there is too much political interference

							conservation more strategically through deliverables			
9. Climate Change & Dynamic Processes	Multi-stakeholder forums meeting timeously for plans to minimize negative effects; Green Economy encouraged by government	A revised Integrated Environmental Management Plan has recently been tabled for discussion by local authority (Buffalo City Metropolitan Municipality); limited coastal developments	Not exposed and not able to comment; there may be programmes but not aware of		Implementation through Independent Development Programmes, EIAs along the coast are required to address climate change issues	To be part of the integrated development plans; each project proposal to be inclusive of climate change matters	There is a lot of talk on the subject but less action; South African Climate Change Mitigation Strategy- not enough real ground covered and no meaningful project based action to date in the area; development of the Buffalo City Metro Municipality partnership strategy; surface level awareness and action days e.g. tree planting-lack true impact for change	→	→	It is still a new concept and more deliberations need to take place to familiarise officials and the public with it
10. Land-based Pollution	National Programme of Action developed to	Local authority has a bad track record in this regard; issues of	Influx of people going to beaches on summer holidays;leave litter	Sewerage goes directly into the sea; lot of waste washed up on to	There is a national policy just revised to address land-based marine	Permits with conditions are issued along the coastline	Not effectively enough; annual event is held –	→	→	A cause for concern but slow or minimal action towards

	inform organisations about effects of agricultural activities, sewerage and other pollutants on marine environment; ICM Act used a regulatory tool	marine outfalls was raised in 1992 and to date situation has worsened	unattended	beach in Nahoon Point Nature Reserve coming from nearby pipeline; sometimes terrible smell at Nahoon Beach depending on direction of wind	pollution		awareness activity with some effect; schools awareness through Eco-Schools and other inputs; some civic and NGO motivated awareness drives and action based projects in place or being developed			curbing it
11. Coastal Access to Marine Resources	ICM Act in place for handling all related issues	Better education and understanding of coastal resource utilization	Through licensing; there is no law enforcement	—————	Specific Strategy and guidelines have been developed	Through permitting and licensing	MPA forum-engaging with local communities in areas where conflict is particularly high; partnerships within tourism sector are geared towards joint venture arrangements with local communities	→	→	Current legislation is protecting living marine resources for sustainability
12. Monitoring & Enforcement	Each government sphere has compliance	It is ad hoc to non-existent	There are government officials employed to do that	A couple of officers who cover very large area who are	New director just appointed	Doing visits; road-blocks; inspecting sites	Poorly-inadequately resourced compliance as	→	→	More effort in terms of manpower should be

	section and mandates stated in relevant legislation			supposed to be carrying out these tasks; but area too big and too few staff; most of the time no compliance monitoring or enforcement done; officers not employed by Buffalo City Metro Municipality-only officers the municipality employs are involved with monitoring activities on estuaries e.g.boats			it related to Human Resource and capacity on the ground to be effective; around some MPAs there is more heightened compliance efforts as these fall into the duties of the Eastern Cape Parks and Tourism Agency			brought in to win the battle against exploitation of living marine resources
13. Marine Protected Areas	Well managed; communities living adjacent MPAs complaining of not being given opportunity to harvest resources	Limited removal of organisms recreation and otherwise	Closed for specific time	If member of public sees someone fishing in MPA for example, he/she does not know whom to contact; sometimes there is no one on duty it seems	Managing authorities have been appointed	Quotas and no-go areas	There is difficulty as local community and government sector are often in conflict with regards opinion as to access rights over marine resources	→	→	Provincial and national government are doing their best in preservation and protection of MPAs
14. Additional Comments on ICZMP	_____	Implementation is not effective and requires a renewed	Communication via forum so that everyone involved can have a say	Increase number of staff and make sure they are properly	There is no Integrated Coastal Management Zone Plan; ICM	Unplanned spread of settlements into areas of high environmental	Build capacity- at all levels of public and private sector	→	→	The White Paper is still a valid document in terms of its

		commitment by all parties concerned		trained in identification of marine species and legal aspects e.g. arresting, rights of transgressor etc.	Act provides for development of Coastal Management Programmes at National, Provincial and Local level; Eastern Cape has its Provincial Coastal Management Programme which is now being implemented	importance and sensitivity has the potential to destroy tourism and biodiversity conservation asset for the Eastern Cape; therefore local area plans are key to avoid such harm to pristine environment	role players; invest into school education programmes; Drive Expanded Works Programmes to meet positive conservation objectives and not be prioritised by pure job numbers			content through the Plan of Action ; coupled with the ICM Act the two are effective documents to improve ICZM if implemented correctly
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—————▶ = Responses were discussed jointly by participants

The questionnaire that was sent out to participants required them to respond to a set of questions which would elicit as to how much or none they comprehend regarding the policy document such as the *White Paper* and other related document concerning integrated coastal zone management. The participants are from slightly different institutions and organizations but collectively work towards the conservation and preservation of the marine environment. The level of understanding of the various components of the *White Paper* or *Integrated Coastal Zone Management Plan* of the local municipal authority varied from one participant and the other and that was reflected by the inputs they supplied in responding to the research tool.

There were just over 40% of the participants that were involved in the implementation of the *White Paper* and the rest did not necessarily practically deal with the document on that level other than seeing or knowing of its existence. In as far as information sharing is concerned the participants mentioned that the *CoastCare* pamphlets and factsheets were very effective in disseminating information on principal aspects of integrated coastal zone management. Participants mentioned that the involvement of NGOs like the *Wildlife and Environmental Society of South Africa (WESSA)* played a major role when it came to awareness, education and training through practical projects like the “*Adopt-A-Beach*” project that included members of the public and school children alike. The improvement of the *Plan of Action* of the *White Paper* can occur through close working relations among the 3 tiers of government i.e. local, provincial and national. This is what the participants had to conclude as a means of improvement on the part of the policy document.

There was mention made of quite a number of projects aligned to the *White Paper* such as *Working for the Coast* and other coastal livelihoods projects involving shellfish harvesting. The common deterrent, which inhibited growth and development of such projects, was that of lack of mentorship and skills transference to the custodians of these projects. There was strong feeling that for sustainability of such projects qualitative training should be accompanied by consistent mentorship to achieve better results in the future. The *Integrated Coastal Management Act* was mentioned as the substitute for the *White Paper* and all institutional and legal development issues are the responsibility of the new Act. Participants also indicated

that before the Act the *White Paper* did not reflect much on the subject and was seen as a weakness on the part of the document. An observation was made that all levels of government were not working coherently and their mandates overlapped at times resulting in duplication of activities and outcomes at times.

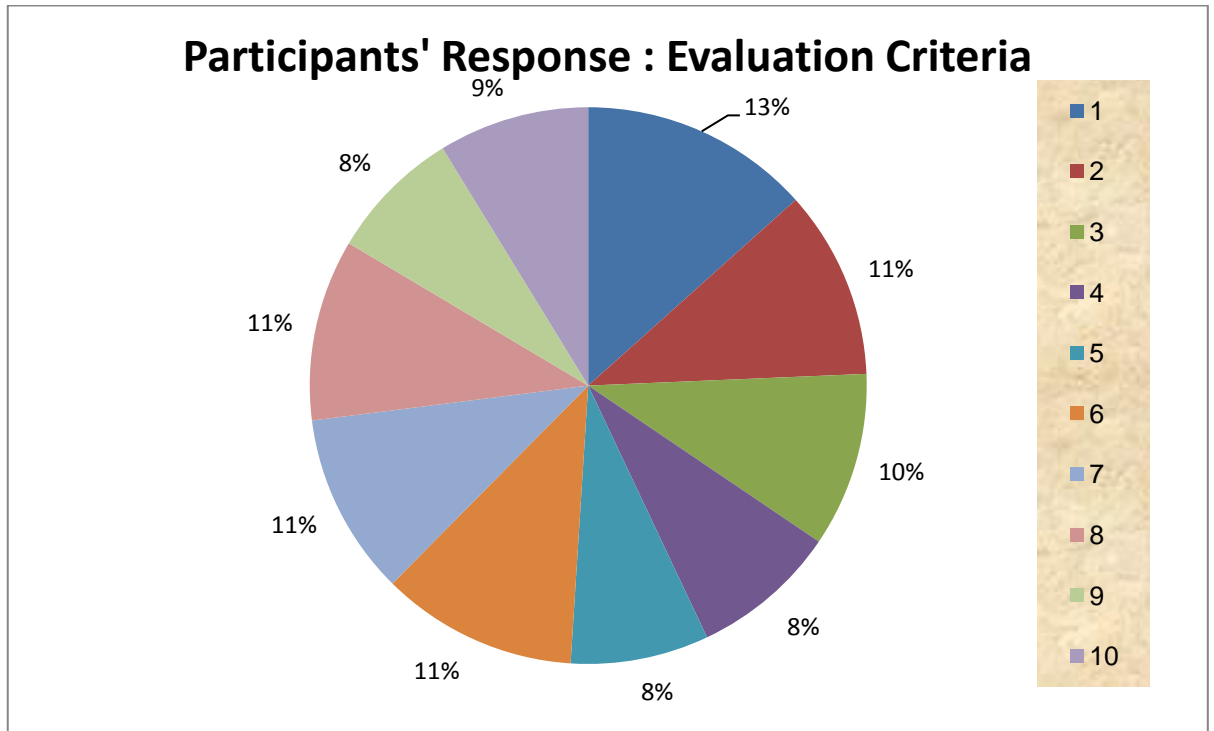
Government agencies like the Department of Economic Development, Environmental Affairs and Tourism and the Eastern Cape Parks & Tourism Board (for MPAs) were mentioned as the drivers of coastal planning and development in relation to the policy document. NGOs in some instances also played a part in pushing this agenda forward. Climate change and dynamic coastal processes was seen by participants as a challenging concept with plenty of discussions around the issue with less action thereafter. Generally the issue of land-based pollution was depicted as a threat to the marine environment but the strategies towards minimizing it are not seen as effective enough for the long-term.

Participants echoed that marine living resources should be protected through relevant current legislation and those that harvest must be monitored through permits and licensing in order to control the issue of coastal access to marine resources. Participants commented that monitoring and enforcement can only be achieved through recruitment of relevant qualified personnel. There was a strong feeling that local MPAs were well managed through the agencies responsible i.e., Eastern Cape Parks and Tourism Board and also through current legislation which demarcates these areas as no-go terrains or bag limit areas for harvesting marine resources.

Additionally participants voiced that there is still more to be done in terms of conquering the challenges faced by integrated coastal zone management as an ocean governance phenomenon. Lack of capacity building and ongoing projects like the Expanded Works Programme need to be supported by government as these are job creation elements for the public at large.

8.3.

Fig. 8. Diagrammatical Representation of Evaluation Matrix:



EVALUATION CRITERIA:

- 1- Exercising Institutional & Legal Development
- 2- Information Sharing
- 3- Awareness, Education & Training
- 4- Projects relating to Policy Implementation
- 5- Compliance, Monitoring & Enforcement
- 6- Coastal Planning & Development
- 7- Natural Resource Management
- 8- Facilitation of Coastal Access
- 9- Climate Change & Dynamic Coastal Processes
- 10- Land & Marine-based Sources of Pollution

The evaluation criteria selected above are priority areas and key action plan concepts of the *White Paper for Sustainable Coastal Development* and the *Eastern Cape Coastal Management Programme: 2013 Update*. The reason for fusing the evaluation criteria from the two documents was to gather a wide spectrum of responses from the participants and also determine some commonalities or differences between the policies as one is focused on a national agenda and the other one is more emphatic on a provincial level.

The evaluation matrix required participants to assign a value for each of the evaluation criteria according to their individual interpretation of the significance of each criterion. The pie chart therefore gives an average percentage of all the scores of the participants put together. Exercising institutional and legal development scored the highest (13%) which can be interpreted as a criterion which the participants valued the most as important and warrants the most attention in terms of implementation. Coastal planning and development, natural resource management and facilitation of coastal access scored evenly (11%) giving them equal weight in terms of significance for policy implementation purposes. Awareness, education and training had an average of 10% showing the need for more emphasis on this criterion of the policy document as it involves a broad spectrum of role-players as part of a multi-sectoral approach towards integrated coastal zone management.

Land and marine-based pollution is weighed at 9% on average by the participants as it is a serious factor to the health and stability of the marine environment. The results show that it is not ranked as highly as the other evaluation criteria in as much that it raises concerns once it severely damages the biological and health component of marine ecosystems and habitats. The reason could be that it is not given the necessary attention it deserves and is only given attention when physical and chemical results show in the water quality, affecting endemic and migratory species in the area. Projects relating to policy implementation, compliance monitoring and enforcement, climate change and dynamic coastal processes are all weighed evenly at 8% each attaching these with the lowest score maybe these are more challenging to contain and attend to in terms of implementation and others are less known as to how they manifest themselves in the long-term e.g. climate change.

8.4.

Table 4. Analytical Memo on Participants' Comments in Evaluation Matrix:

Evaluation Criteria	PARTICIPANTS									
	1	2	3	4	5	6	7	8	9	10
1.Exercising Institutional & Legal Development	Continuous efforts to strengthen institutional and legal developments in all 3 spheres of government	Additional competency need to effect legalities	My institution respects the law	_____	_____	Administering legislative requirements	Lacking correlative training	→	→	Inadequate in terms of implementation
2.Information Sharing	Public/Private partnership platforms have been created to share relevant information	_____	Yes, through conferences and national events	_____	_____	Different mandates	_____	_____	_____	Can be greatly improved with more funding and commitment
3.Awareness, Education & Training	Lack of well-coordinated plan, stakeholders involved still work in silos	NGO assistance supports government	That's my mandate	_____	_____	Empowerment services established to make people aware	_____	_____	_____	Department of Education and institutions of higher learning need to come on board to achieve effective awareness
4.Projects relating to Policy Implementation	Lack of mentoring, Marine & environmental skills shortage	This could be improved	Not at my capacity as education officer	_____	_____	Lack of human resources	_____	_____	_____	There is a need for mentorship for projects to be sustainable and remain in operation to achieve set goals

5.Compliance Monitoring & Enforcement	Need to make legislation water-tight as transgressors still get away	Lack of enough certified officers along the coast	I personally comply when doing coastal and marine activities	Too few officers, not always someone on duty e.g. reporting transgressions	_____	Many transgressors	_____	_____	_____	Technical support needs to be improved as a motivating factor to officers involved in this work
6.Coastal Planning & Development	Effective	Has improved coastal protection	Not involved at all	_____	_____	Not our sole mandate	_____	_____	_____	Collective coherent planning is key to have a uniform approach at local, provincial and national level
7.Natural Resource Management	Effective	Stable to negative	Partly, most of time is co-ordinated by superiors	No operational budget for nature reserves within BCM (Nahoon Point & Nahoon Estuary)	_____	Mandate of the department	_____	_____	_____	More effort needs to be drawn in for sustainability since this is national heritage
8.Facilitation of Coastal Access	Effective	Good	Partly, through fieldtrips	_____	_____	National legislation	_____	_____	_____	Proper legislative processes are needed to achieve this
9.Climate Change & Dynamic Coastal Processes	A lot is done to address this	Not enough research undertaken to benchmark effects	Not involved at all	_____	_____	Not clearly understood by people	_____	_____	_____	More information and training is essential in creating awareness on the issue

10.Land & Marine-based Sources of Pollution	Effective	Marine outfalls non-compliant	Via outreach	Sewerage goes into sea and waste and/or smell at prime beaches	_____	Small portion of coastline	_____	_____	_____	It is a cause for concern but drastic action to curb it is slow and sometimes too late
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The responses given by the participants was that of equating the respective evaluation criterion with a number from 1 to 5. [See Appendices: Evaluation Matrix]. The weight given to each evaluation criterion was justified with a comment so as to validate the weight given in each instance. The responses varied according to the exposure each participant has on the policy documents and how each one has managed to work with them and maybe have implemented some portions of the document in a work related scenario. There is evidence also to depict that some participants never had the opportunity of handling the document and therefore are not able to fully respond to the research tool in a qualitative manner.

In the case of exercising institutional and legal development, participants expressed that there is a need for all levels of government to work together and constantly train officials on the subject. The area of information sharing proves to be inadequate according to the responses received as it shows that not everyone from the public was influenced through valuable information on the subject of integrated coastal zone management. When it comes to awareness, education and training the feeling was that not all role-players were on board, quoting the Department of Higher Education being not effective as was expected.

The participants spotted a lack of mentorship and skills transference in relation to projects attached to policy implementation of the *White Paper* as most of them were not sustainable because of the factors already mentioned. The element of compliance, monitoring and enforcement has always lacked adequate personnel to drive this objective and that is exactly what participants mainly pin-pointed as cause for concern in achieving the aspirations of the policy document. The sphere of coastal planning and development is not exposed to everyone involved in integrated coastal zone management and therefore the responses given were short of depth and understanding of the subject. Natural resource management seeks for dedicated officers and administrators to act as custodian of the country's natural heritage and participants have supplied a variety of inputs on the subject not showing firm understanding of the process as the bottom line.

Participants once more were not coherent on giving responses pertaining to facilitation of coastal access as this is a technical matter and needs someone who

has adequate exposure to the concept. The concept of climate change and dynamic coastal processes is fairly new to most individuals and therefore lack of in depth knowledge and participation in decision making on the subject was very conspicuous from the participants. The participants were not clear also in their responses except for two scientists who have practical experience on land and marine-based pollution from their local municipal authority.

9. Discussion

9.1. Introduction

The execution and sustainability of ICZM implementation is largely dependent on sound multi-actor institutions and networks to facilitate integration, coordination and implementation of the process, reflected in the support elements of the model and meaningful opportunities for public participation and the establishment of long-term partnerships between government, business, civil society and the scientific and professional communities are vital for people-centred ICZM. (Taljaard, et al., 2012). Three key support elements of ICZM have been identified and these are: institutional structures and arrangements, capacity building, and public education and awareness.

9.2. Institutional structures and arrangements

The most effective implementation of an integrated coastal zone management model is the one that is ultimately driven by people and the most important route to achieving implementation is sound institutional structures that include all relevant actors and that facilitate partnerships and collaboration between different sectors in government, business, civil society and the scientific and professional communities. (Taljaard, et al., 2012). These institutional structures involve cross-sectoral institutions which facilitate collaboration and partnerships between the different sectors in government, business, civil society and the scientific and professional communities including multilevel sector-based institutions which facilitate communication of strategies and actions between different tiers of government in a top-down but also a bottom-up fashion within a single sector. (Taljaard, et al., 2012)

Significant value to ICZM implementation is added when there is collaboration across sectors and cross-sectoral institutions, which then satisfies the multi-faceted nature of ICZM. Collaboration in urban areas that are within coastal marine environments utilize cross-sectoral management institutions which demonstrate greater involvement of other actors such as business, civil society and the scientific and professional communities that are potentially affected by, or can provide support for management decisions. The need for cross- sectoral collaboration is essential within various tiers of government as it facilitates integration and coordination within platforms such as national, provincial or local coastal committees. Communication of strategies and actions can be ensured through multilevel institutional structures, either through a top-down or a bottom-up manner within a specific sector. (Taljaard, et al., 2012). Practically this can be achieved when local tiers of government, actively involved in implementation, are ideally positioned to test the effectiveness and applicability of the policies, legislation and best-practice guidelines developed at the national or regional levels. It therefore becomes imperative that local institutions are consulted by higher tiers of government to improve the policy and legal frameworks as part of the adaptive management approach. (Taljaard, et al., 2012)

9.3. Capacity building

The issue of capacity building manifests itself as a social threat to sustainable coastal management, more especially in developing countries like South Africa, as there is a constant lack of or diminishing capacity and expertise, particularly at local municipal level, with associated ripple effects on the effectiveness and efficiency of management institutions. (Taljaard, et al., 2012). A lack of continuity can result in more suffering on the part of government authorities when they cannot retain sufficient expertise to fulfil their roles and responsibilities. The implementation of ICZM can be successfully sustained through effective capacity-building mechanisms which form a critical support element in the long-term. In order for capacity building to flourish, a long term strategy is needed which includes the establishment of partnerships between responsible authorities and training institutions e.g. universities, which are aimed at providing a workforce with qualified personnel who are appropriately trained through dedicated environmental management training programmes. (Taljaard, et al., 2012). One way of ensuring continuity is to establish,

through government institutions, strategies for skills retention and the deployment of effective mentorship programmes for new recruits.

9.4. Public education and awareness

The general public becomes a firm support base for an ICZM programme to survive in the long-term and the key is a strong, public information and education programme. (Taljaard, et al., 2012). The active involvement of and education of civil society, the creation of awareness and a sense of responsibility for environmental issues among ordinary people becomes a key support component in a people-centred approach to environmental management. There are a variety of activities and initiatives that are utilized to facilitate public education and awareness; and these can be physically involving civil society e.g. eradication of alien invasives, beach clean-ups etc. At times topical environmental issues can be used promote social equity for economically marginalised people through job creation and training opportunities e.g. Working for the Coast programme. (Taljaard, et al., 2012). The only deterrent here is that public education is always undermined and often undervalued for its ability to support environmental issues.

10. Limitations

The research project has been based mainly on qualitative survey methodology and that required participants to respond through the questionnaire and an evaluation matrix which was sent electronically (email) to them in South Africa. The research tapped into a specialized, specific audience as integrated coastal zone management issues are not necessarily dealt with by a broad spectrum of individuals and specialists in the environmental management sphere. This approach which seeks to gain data from participants has its own challenges as participants differ, according to many factors, in the manner in which they respond to such communication. A few responded immediately after the email reached and supplied sound and reasonable data but others had to be given constant reminders for them to respond and there were clear signs from some that the research tools were filled in with haste and not much time was dedicated in addressing some of the questions at hand.

The topic at hand seemed not to be a familiar one to most of the participants as evaluation of policies is not necessarily their mainframe of job description in the different sectors that they operate in. It was clear then from their responses that they has never dealt with most policies dealing with ICZM and even if they saw a document of that nature, most merely glanced through it. Appropriate responses came mainly from the coastal management officer from the Department of Economic Development, Environmental Affairs and Tourism (Eastern Cape Province). These officials portrayed, through responses received from them, that they possess sound and confident experience in working with such documents and can constructively comment of the strong and weak points of the policies themselves.

11. Summary and Conclusion

As important as evaluations are in measuring the success of ICZM programmes and modifying them in view of the results, evaluation is the least developed phase of the ICZM process, in terms of both methods and practice. (Cicin-Sain & Knecht, 1998). The implementation phase of the ICZM process includes the actions that must be taken to put the programme into operation. These actions include start-up activities such as enactment or amendment of legislation, preparation or revision of regulations and procedures, formal establishment of new institutions or inter agency mechanisms and securing of additional personnel. Typical challenges that are normally faced by decision makers at this stage are securing the necessary legislative and legal changes, obtaining adequate financial resources for rolling out these programmes, plus identifying and filling policy gaps. Moreover, if the time taken to evaluate the policy has been too lengthy since the ICZM plan was formulated, then institutional changes become very difficult to put in place because of bureaucratic inertia and resistance to change.

In the operation phase, the emphasis of the ICZM programme is based on coordination, harmonization, conflict resolution, integration of coastal and ocean policy, filling of management gaps, monitoring and assessment of performance. A wide variety of management tools and techniques are available to the ICZM programme during this phase, including zonation, establishment of set-back lines and exclusionary zones, establishment of protected areas, special area planning,

acquisitions, easements, development rights, mitigation and restoration and issuance of coastal permits.

The future well-being of the coastal zone therefore depends on two kinds of action: those that are based on an adequate understanding of the problem (i.e., we know what needs to be done and can proceed to find ways of doing it) and those for which we lack a clear understanding of the problem (i.e., those for which more fundamental work is needed. (Mann, 2000). There has been many problems related to the ocean: cleaning up pollution, stopping habitat destruction and creating new habitat where appropriate, controlling overexploitation of resources and making preparations for the expected sea-level rise. The conflicts of interests between different users of the coastal zone has so far been the main obstacles to taking the appropriate actions. The most reasonable resolution of these conflicts requires a high degree of innovative social, political and legal activity that can be utilized. (Mann, 2000)

11.1. The Integrated Coastal Management Act – The Way Forward

Coastal management in South Africa has been fragmented across different departments and spheres of government with all their different, often conflicting mandates and management objectives. It is because of this background that there has always been a need for dedicated coastal management legislation and the development of the Integrated Coastal Management (ICM) Act. The development of the Act went through a number of phases, starting with a Green Paper (*Towards Sustainable Coastal Development in South Africa*) in 1998, which identified the need for a coastal policy and laid the foundation for the development of a White Paper (*The White Paper for Sustainable Coastal Development*) in 2000. (Goble, Lewis, Hill, & Phillips, 2014). The White Paper recognized that the coast needed to be managed as a system and not by the sectors of users who benefit from the opportunities it provides. On the other hand, the ICM Act promotes a more holistic or ecosystem based approach whereby the coast is managed as a unit, encompassing all elements that have historically been fragmented and addressed by the various statutes. Moreover, the ICM Act has aligned itself with international Ecosystem-

Based Management (EBM), which is categorized as management that considers ecological systems and promotes inter-sectoral coordination without focussing on single, species or ecosystem functions in isolation.

The ICM Act closely follows the objectives of the National Environmental Management Act and seeks to adopt a people-centred, pro-poor approach to coastal management, with a consistent focus on preserving, protecting, extending and enhancing the status of coastal public property as being held in trust by the State on behalf of all South Africans including future generations, in order to secure equitable access to the opportunities and benefits of coastal property. (Goble, Lewis, Hill, & Phillips, 2014). Key objectives of the ICM Act are to provide a regulatory framework that supports the holistic integrated approach to coastal management outlined in the *White Paper*; enhance the ability of each sphere of government to perform their coastal management functions; and enable the development of a coherent national coastal planning system to regulate the development and use of the coast. (Celliers, Rosendo, Coetzee, & Daniels, 2012). The conservation of the coastal environment has been promoted through the adoption of this management approach, and it seeks to maintain the natural character of coastal landscapes and seascapes respectively. Significantly for the ICM Act, is to recognize that the development and use of natural resources in the coastal zone must be socially and economically justifiable, as well as ecologically sustainable. After the enactment of the ICM Act, the *White Paper* remains the *de facto* National Coastal Management Programme until such time that a new programme is developed and gazetted.

The ICM Act explicitly outlines the institutions that must facilitate co-operative coastal governance as well as co-ordinated integrated planning. The only flaw so far is that the Act does not specifically provide detail in respect to the institutional structures required to perform the necessary duties of all the spheres of government (national, provincial and municipal). On the other hand, the Act includes a definition and delineation of the coastal zone, the structure of institutions of ICM and the development of specific coastal management instruments such as coastal management programmes, estuary management plans, and how such instruments should interface with other statutory tools such as Integrated Development Plans

(IDPs) which local authorities are obliged to prepare in terms of the *Municipal Systems Act (MSA) Act 32 of 2000*. (Celliers, Rosendo, Coetzee, & Daniels, 2012). The ICM Act also facilitates coordination, and reduces conflicts between existing sector-based legislation and as a specific legal instrument under NEMA, that deals with the coastal environment, the Act creates a mechanism for orchestrating a co-ordinated coastal management approach using diverse legal instruments. (Celliers, Rosendo, Coetzee, & Daniels, 2012)

11. Recommendations

The gradual evolution of coastal management in South Africa has finally culminated in the ICM Act plays out as an act of impressive determination, having to consider the fact that the conversion of the accepted ICM policy ,i.e. the White Paper, to law was delayed for nearly a decade (2000- 2008). The ICM Act manages to draw together many of the sector-based laws under the umbrella of the *National Environmental Management Act (NEMA; Act 107 of 1998)* and is firmly entrenched as a management paradigm for the South African coastal area. (Celliers, Rosendo, Coetzee, & Daniels, 2012). This process only implies that the policy development cycle has been shaped and does not necessarily indicate that there are any positive signs towards the improvement of the state of the coast. There are recommendations that must be considered to pave a brighter future for qualitative coastal management practise in South Africa:

12.1. The ICZM Balanced Scorecard – A Tool for Putting Integrated Coastal Zone Management into Action

The implementation of policies and instruments for effective management of coastal natural resources is increasingly complex whilst it is aimed at the transformation of ecological awareness. Integrated Coastal Zone Management as defined by the European Union is poised at implementing actions that will lead coastal communities to develop economies that can bring areas to life by managing natural resources in a sustainable manner. The definition has direct applications to the South African context as coastal livelihoods can be uplifted through effective integrated coastal zone management principles. The Balanced Scoreboard (BSC) model, proposed by Kaplan and Norton in 1992 has been adopted as a tool for the strategic support and

management of ICZM plans e.g. municipal plans, district plans and regional plans. The BSC model is based on the Protocol on Integrated Coastal Zone Management in the Mediterranean (Convention on the Protection of the Marine Environment and the Coastal Region of the Mediterranean), which was signed in Madrid on 16 January 2009 and came into force on 24 March 2011.

The BSC is a useful integrative tool for aligning several phases of the ICZM plan to the strategic objectives planned by the European policy for ICZM and the model collects, orders, analyses and evaluated both the responses from the DPSIR model and the strategic information from the policy and governance system. (Maccarrone, Filicitto, Buffa, Mazzola, & Buscaino, 2014). At a municipal level, in this instance the Buffalo City Metropolitan Municipality, it is possible to create an integrated system that uses information, from the DPSIR model, elicited from public entities and stakeholders, to be utilized in a centralized system in evaluating trends and results in the policy development of the local ICZM plan. The BSC can be considered to be a useful tool for supporting the governance for how an ICZM plan is put into action and also the success of an ICZM plan driven by a BSC is strongly influenced by the ability of the management to interpret the needs and resources of the local coastal system. (Maccarrone, Filicitto, Buffa, Mazzola, & Buscaino, 2014). It is therefore necessary to utilize key principles of the BSC towards improvement of integrated coastal zone management in the Buffalo City Metropolitan Municipality and other neighbouring coastal regions in the area.

12.2. Effective Management Strategies- A Key to Improved ICZM Planning

Holistic management of all components of coastal biodiversity and social management should be at the forefront of the qualitative implementation of guidelines in the ICM Act. A need for strict articulation and balancing of management roles should prevail for the Act to be effective. The Act also ushers in decentralization with more power vested on provincial and local authority roles and responsibility. Local authorities should therefore take up the challenge of implementing the new statute and ensure better management of the South African coast and decision-makers need to equip themselves with the specific knowledge on

a diversity of topics, some of which are beyond their expertise but essential for informed decision making.

12.3. Capacity Building- Towards Effective implementation of the ICM Act

Capacity development is embedded throughout the process of ICZM programme development and implementation. The broad lack of expertise in the Eastern Cape Province and in particular Buffalo City Municipality, around sound integrated coastal zone management and planning, has been ongoing for decades and it is time it be aggressively changed. There are already concerns that capacity of local government to meet the requirements of the ICM Act is lacking in dealing with service delivery and increasing development pressure. The situation is so alarming that in most local authorities there are no persons responsible for environmental management due to financial constraints and the implementation of an additional unfunded mandate has not been received favourably, in fact with mixed reactions rather.

The ICZM framework and process is regarded as a very effective enabling mechanism that, in all its stages, promotes development of technical and management skills, raises awareness, builds consensus and involves all possible stakeholders. Throughout the process, policymakers are able to strengthen their knowledge of policy challenges and better appreciate the use of scientific information. A new breed of integrated coastal zone management experts need to be developed, through training, as means to curb the existing back log. Coastal managers and sector agencies also benefit from ICZM programmes, strengthening their technical capabilities in areas such as risk assessment, integrated information management systems, resource valuation and monitoring strategies.

12.4. Information Sharing & Public Awareness and Education – The Essence of Integrated Coastal Zone Management

The public, including the general public but especially local populations and resource users, must be aware of the importance of protecting and managing coastal resources and be able to participate in the management process. Adequate

participation in this process, coupled with legal and institutional frameworks, will contribute to the long-term success of policy measures and a significant public input by stakeholders is especially important at local level. The ICM Act has so far being criticised for its lack of guidance towards implementation and less emphasis on interpretation. The *ICM Act: the User Friendly Guide to the ICM Act*, the *ICM Act Enforcement Manual* and the *National Estuaries Protocol* are all guideline publications that are available to streamline and assist authorities in conjunction with the public and civil society in an approach to jointly through collective efforts in realizing the objectives of the Act and other related integrated coastal zone management matters. There should be a further move towards developing guidelines a Coastal Management Programme, guidelines for the establishing of coastal committees and a guideline for the determination of coastal management lines, with a range of others on the table for future development which clearly indicates that there is a strong need and urgency to facilitate or assist authorities with the implementation and objectives of the ICM Act.

Public education offers a means of communication with people, enabling a process focussed on transmitting information to raise awareness, increase knowledge, introduce appropriate practices, and change attitudes and behaviour and it is important in the ICZM process because it contributes to the creation of a well-informed public that is knowledgeable about coastal environment activities and issues, including potential threats to coastal and marine environments. (Thia-Eng, 2006). Public education programmes are incorporated through all stages of the ICZM process, from the identification of problems to the implementation of management strategies. In the initial stage, public education must facilitate consensus building on priority problems, clarify perspectives and local interest, and generate a more receptive mood toward policy changes. During the implementation phase, public education programmes must encourage users, interest groups and the media to contribute information and participate in ICZM projects and activities. This leads to the creation of long-term commitment among the community and to wise use of coastal resources. Planners and managers should avoid waiting too long to begin public education activities and discontinuing such activities once the planning stage is over. In a local Buffalo City Metropolitan Municipality context public

education programmes on the coast and marine environment must reach all sectors of society: from school-going children, higher education students and elderly members of the community. Effective programmes like the “Adopt-A- Beach” Project (CoastCare) should be re-kindled so as to encourage broader awareness of coastal and marine education related matters.

12.5. A Global Approach to a Local Environmental Process

Integrated coastal zone management planning is an international phenomenon and each country globally seeks the best strategies and implementation tools to achieve its objectives in mastering this aspect of the marine environment. It therefore becomes imperative for developing countries like South Africa to look up to the global community in search of use of decision support tools as different tools are appropriate under different conditions with no single tool being universally applicable for a region or application. For the Buffalo City Metropolitan Municipality to benefit from such tools, the local authority needs to develop unique tools that will support coastal authorities with the implementation of the ICM Act and decision making.

Urban coastal ecosystem management can be undertaken using the ICZM approach and framework, despite the magnitude of the destruction of coastal habitats, despite the magnitude of the destruction of coastal habitats, degradation of coastal environments, growth of the coastal population and economic pressures in these areas. Political will and incremental success from strategic management interventions will assist to win public support and ensure stakeholder buy-in. The envisaged result is a working model for ICZM, of the Buffalo City Metropolitan Municipality, which will significantly contribute, not only to a national image, but an international outlook as an environment-friendly municipality, conducive to human living and industrial investment.

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14. Appendices

14.1. QUESTIONNAIRE

PARTICIPANT SURVEY:

Implementation of the Integrated Coastal Zone Management Plan in South Africa: Evaluation of the existing policy is an important process in the cycle of its implementation and review. The objective of this research project is to gather as much relevant information and reflections as to how effective such policies are in the short, medium and long term. Please assist in evaluating the effective implementation of the Integrated Coastal Zone Management Plan on the South African Coastline(National, Provincial, or Local level) as they apply to your circumstances, by filling in the questionnaire and returning it to **Them bani Manyefane** at s14082@wmu.se by the **15th of July 2014**. Your participation in this regard is highly appreciated.

PERSONAL INFORMATION:

- i) Name _____ of _____ Participant
: _____
- ii) Organisation _____ :

- iii) Sector _____ e.g. _____ Public/Private/Government
: _____
- iv) Designation _____
: _____
- v) Number of years experience in your field of work: _____
- vi) Highest _____ Academic _____ Qualification
: _____

No.	QUESTION	YES	NO
1	Were you ever involved in the process of reviewing the implementation of the White		

	Paper at any period of your interaction with coastal zone management issues?		
1a	If you have, share the experience. If not, explain why you think it has never happened :		
2	Information management pertaining to the White Paper was an internet-based CoastCare Information Centre (virtual library) established to serve the purpose of providing access to information which was distributed across many different organisations. In as far as Information Sharing is concerned has the White Paper delivered on this aspect?		
2a	Elaborate, with examples, on your reflection on the matter:		
3	Awareness, Education and Training is key in implementation and furthering of the White Paper objectives. Do you feel that this attribute of the Action Plan is diligently carried out with the best possible outcomes?		
3a	Explain more as to how you perceive the issue:		
3b	How best can this aspect of the Plan of Action be improved:		
4	Specific community projects were aligned to the White Paper for improvement of coastal		

	livelihoods towards poverty alleviation. In your opinion were these projects successful enough to ensure positive results?		
4a	Substantiate your response in this regard:		
4b	How best can these projects be designed in the future to guarantee positive results?		
5	The White Paper Plan of Action incorporated legal environmental aspects in its drafting to render it a strong policy. Do you think that the White Paper has fulfilled its obligations pertaining to Institutional and Legal Development?		
5a	Please provide details as to why you think that way:		
6	Integrated Coastal Zone Management Plans emphasize cooperative governance through participation of all stakeholders, coastal governance and co-responsibility. In your view is it achievable?		
6a	Why do you think that the current state of affairs pertaining to cooperative governance is the way it is? :		
7	Are initiatives towards Coastal Planning and Development visible in your coastal area?		
7a	Who are the drivers of the process and what indicators are there to show		

	as testimony?:		
7b	What improvements can you suggest as long term plans pertaining to this process?:		
8	Climate Change and Dynamic Processes are topical issues in managing the coast. Is your local authority paying the necessary attention to geographical phenomena?		
8a	How are Climate Change and Dynamic Processes being facilitated to address these issues?:		
8b	What is being practically done to address these issues?:		
9	Land-based marine pollution is a threatening concern for coastal ecosystems currently. Is this environmental risk being addressed in your coast?		
9a	Relate how the issue is being received and appropriately dealt with:		
10	Are there any specific strategies to improve and protect local estuaries?		
10a	How effective are those strategies in terms of their implementation?		

11	Are there any practical initiatives towards redressing the past in relation to facilitating coastal access to marine resources and coastal public property?		
11a	How are these progressive steps being implemented?		
12	How is compliance monitoring and enforcement, through coastal legislation, carried out in your stretch of the coastline?		
13	Are there any Marine Protected Areas (MPAs) in your coast?		
13a	How are the natural living marine resources managed in the MPAs?		
14	Provide any additional comments on the effective implementation of the Integrated Coastal Zone Plan in your part of the coast, and also forecasting future implementation and improvement in this regard:		

14.2. EVALUATION CHECKLIST

<p>PARTICIPANT EVALUATION MATRIX : <u>Implementation of the Integrated Coastal Zone Management Plan in South Africa:</u> Evaluation of the existing policy is an important process in the cycle of its implementation and review. The objective of this research project is to gather as much relevant information and reflections as to how effective such policies are in the short, medium and long term. Please assist in evaluating the effective implementation of the Integrated Coastal Zone Management Plan on the South African Coastline(National, Provincial, or Local level) as they apply to your circumstances, by filling in the evaluation matrix and returning it to <u>Them bani Manyefane</u> at s14082@wmu.se by the <u>15th of July 2014</u>. Your participation is highly appreciated.</p> <p><u>PERSONAL INFORMATION:</u></p> <p>i) Name _____ of _____ Participant : _____</p> <p>ii) Organisation _____ : : _____</p> <p>iii) Sector _____ e.g. _____ Public/Private/Government : _____</p> <p>iv) Designation _____ : _____</p> <p>v) Number of years of experience in the field of work: _____</p> <p>vi) Highest Academic Qualification _____ : _____</p>								
No.	Evaluation Criteria	Score description	Score					Reason(s) for scoring
			1	2	3	4	5	
1	Exercising Institutional and Legal Development	(1)Weak (2) Poor (3) Moderate (4) Good (5) Excellent						
2	Information Sharing							
3	Awareness, Education and Training							
4	Projects relating to Policy Implementation							
5	Compliance							

	Monitoring and Enforcement								
6	Coastal Planning & Development								
7	Natural Resource Management								
8	Facilitation of Coastal Access								
9	Climate Change & Dynamic Coastal Processes								
10	Land & Marine-based Sources of Pollution								