

A critical analysis of the NEM: ICMA

as it pertains to development within the coastal protection zone of proclaimed fishing harbours in the Western Cape



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INTRODUCTION

South Africa has a magnificent 3 000 km coastline, with the Western Cape Province hosting the longest section of approximately 1 000 km. Our coastline supports a myriad of economic activities, such as fisheries, tourism-related developments, recreational facilities and residential development. However, the combination of rapid development and lenient coastal management regulations has resulted in the following “issues of concern” (DEAT State of the Environment Report 2006):

- Increasing uncontrolled coastal development, leading to habitat degradation and changing land-use patterns
- Substantial increase in the amount of wastewater discharged into the marine environment

It is clear there is a need to address the inappropriate exploitation of the South African coastline. The current buzz word is “Integrated Coastal Management” (ICM), but what is ICM? Briefly, ICM “promotes the use of defensible scientific information in conjunction with the principles of cooperative governance in order to achieve sustainable coastal development” (Celliers *et al* 2009).

The primary aim of this article is to offer a brief, critical analysis of the National Environmental Management: Integrated Coastal Management Act (Act No 24 of 2008), which was enacted on 1 December 2009 in Government Notice 32765 (referred to here as NEM: ICMA), with specific reference to its application to the coastal protection zone (CPZ) within proclaimed fishing harbours (PFHs). The article also aims to consider its effectiveness and associated shortcomings in the context of coastal development within the CPZ of PFHs in the Western Cape.

There are currently twelve listed PFHs in the Western Cape. Three of these – Hout Bay, Gordon’s Bay and Struisbaai – are used to illustrate how coastal development within PFHs is being affected.

PRINCIPLES OF COASTAL MANAGEMENT

The NEM: ICMA is informed by the principles of the National Environmental Management Act (NEMA, Act no 107 of 1998, as amended) as adapted for the coastal zone in the nationally adopted White Paper for Sustainable Coastal Development in South Africa (DEAT 2000, cited in Celliers *et al* 2009). The principles of the NEM: ICMA are summarised in Table 1.

UNDERSTANDING THE COASTAL PROTECTION ZONE (CPZ)

The CPZ forms an integral part of the assessment of development within PFHs. Celliers *et al* (2009) explains that the CPZ consists of a continuous strip of land, starting from the high water mark (HWM) and extending 100 metres inland in developed urban areas zoned as residential, commercial, or public open space, or 1 000 metres inland in areas that remain undeveloped or that are commonly referred to as rural areas (Figure 1).

There are, however, some provisions to justify certain adjustments to this zone. The CPZ is established to manage, regulate and restrict the use of land that is adjacent to coastal public property, or that plays a significant role in the coastal ecosystem.

PROBLEM STATEMENT

Given the description of the CPZ, a problem emerges for development, since PFHs are always located within 100 m of the HWM. To assess the effectiveness of the NEM: ICMA, Saddler (2008) lists key perspectives from which the criteria for a critical analysis of the effectiveness of such an Act can be derived:

- Effectiveness and performance are interlocking ‘measures’ of success of the NEM: ICMA.
- An effectiveness review asks if the process and elements of approach function satisfactorily.

Table 1 National Environmental Management Act principles as adapted for the coastal zone of South Africa (taken from DEAT 2000, cited in Celliers *et al* 2009)

PRINCIPLE	DESCRIPTION
National asset	The coast must be retained as a national asset, with public rights to access and benefit from the opportunities provided by coastal resources.
Economic development	Coastal economic development opportunities must be optimised to meet society's needs and promote the well-being of coastal communities.
Social equity	Coastal management efforts must ensure that all people, including future generations, enjoy the rights of human dignity, equality and freedom.
Ecological integrity	The diversity, health and productivity of coastal ecosystems must be maintained and, where appropriate, rehabilitated.
Holism	The coast must be treated as a distinctive and indivisible system, recognising the interrelationships between coastal users and ecosystems, and between the land, sea and air.
Risk aversion and precaution	Coastal management efforts must adopt a risk averse and precautionary approach under conditions of uncertainty.
Accountability and responsibility	Coastal management is a shared responsibility. All people must be held responsible for the consequences of their actions, including financial responsibility for negative effects.
Duty of care	All people and organisations must act with due care to avoid negative impacts on the coastal environment and coastal resources.
Integration and participation	A dedicated, coordinated and integrated coastal management approach must be developed and conducted in a participatory, inclusive and transparent manner.
Cooperative governance	Partnerships between government, the private sector and civil society must be developed to ensure co-responsibility for coastal management and to empower stakeholders to participate effectively.

- A performance review focuses on the results and outcomes.
- Related concepts include efficiency, fairness and efficacy (Is this the best approach to do the job?).
- New attention given to frameworks and measures for undertaking systematic, empirically-based evaluations of effectiveness of the EIA (Environmental Impact Assessment) at different levels and for particular components.

LEVELS OF EFFECTIVENESS REVIEW

Saddler (2008) proposed various levels of effectiveness criteria upon which to evaluate EIA effectiveness. This approach has been adapted in this article to consider the effectiveness of the NEM: ICMA:

- **Meta-evaluation** – relative success and utility of the NEM: ICMA as a legislative tool for managing the impact of proposals on the coastal environment
- **Macro-evaluation** – effectiveness and performance of ICM systems established by particular countries or international agencies
- **Micro-evaluation** – role and contribution of the ICM approach and components to specific proposals, value added at specific stages
- **At each level** the anatomy of the NEM: ICMA's effectiveness can be dissected in relation to institutional, methodological and practical dimensions.

In order to achieve the level of assessment required to arrive at an objective determination of the NEM: ICMA's effectiveness, the above approach is advisable. However, owing to limited resources, the critical analysis in the following sections of this article is of a subjective nature. Where possible, literature is cited to provide a more objective view.

PROCLAIMED FISHING HARBOURS: A CONTEXTUAL OVERVIEW

The MLRA (Marine Living Resources Act No 18 of 1998, as amended) defines a fishing harbour as “a declared fishing harbour contemplated in Section 27(1)”, which reads as follows: “Subject to subsection (2), the Minister may by notice in the *Gazette* declare a harbour, or a defined portion of a harbour or a defined area of the sea and the seashore, to be a fishing harbour: (2) If the Minister desires to declare a commercial harbour or a portion of such harbour to be a fishing harbour, he or she shall obtain the prior approval of the Minister of Transport. (3) The Minister may, in consultation with the Minister of Finance, determine the fee payable in respect of the use of a fishing harbour or the facilities available in such a harbour.”

The Western Cape currently has twelve PFHs: Lamberts Bay, St Helena, Laaiplek, Saldanha Bay, **Hout Bay**, Kalk Bay, **Gordon’s Bay**, Hermanus, Gansbaai, Arniston, Stilbaai and **Struisbaai** (DEAT 2008).

CASE STUDY

PFHs are governed by the National Department of Public Works (NDPW), with the assistance of Marine and Coastal Management performing functional management duties.

Anyone familiar with the PFHs in the Western Cape will generally conclude that the infrastructure (buildings, roads, bulk services) is often in a state of disarray. This conclusion is supported by the Fishing Harbours Transitions Project, whereby DEAT and the NDPW initiated an assessment to “unlock economic potential within these harbours, in particular, those options related to tourism and economic development” (DEAT 2008). DEAT (2008) states that the following key factors have been considered in the assessment:

- Economic changes
- Changes in fish stocks
- Impact on local/surrounding community
- Infrastructure development
- Socio-economic impact

Table 2 Case study PFHs and related development applications (2002 – 2013)

PFH	Proposed development
Hout Bay	Crayfish and fish meal processing plant
Gordon’s Bay	Crayfish holding and tourism-related facility
Struisbaai*	Multi-functional retail, fractional ownership and hotel development

*NOTE: The proposed site is privately owned, but within the immediate PFH precinct

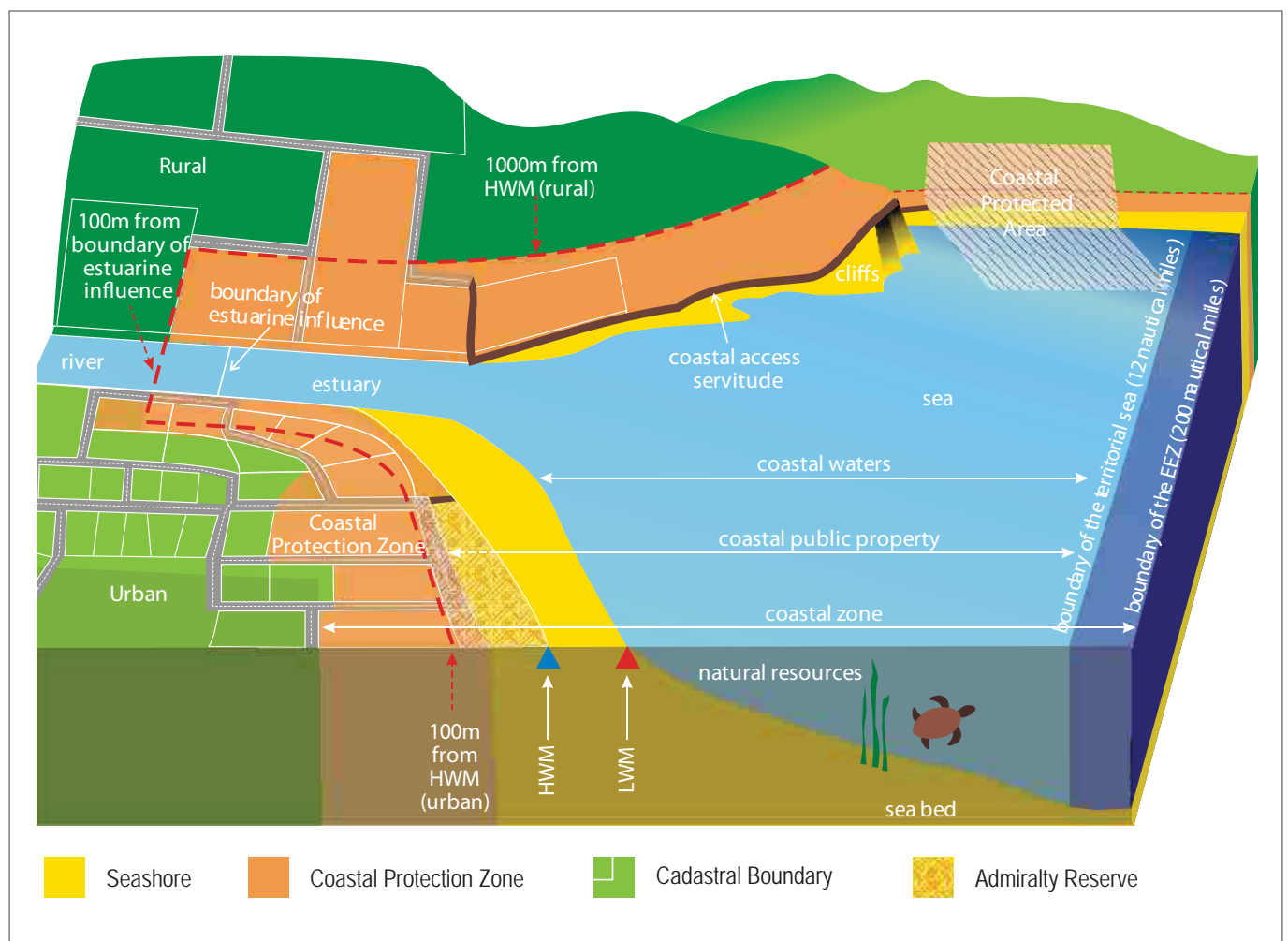


Figure 1: The coastal zone of South Africa (Celliers et al 2009)

NOTE: The term “high water mark” means the highest line reached by coastal waters, but excluding any line reached as a result of (a) exceptional or abnormal floods or storms that occur no more than once in ten years, or (b) an estuary being closed to the sea (NEM: ICMA 2008)

- Tourism development
- Real estate
- Legal issues

Although the assessment has been concluded, the results have not been made available to the public. It cannot be stressed enough that, inasmuch as development within PFHs is required (by virtue of the fact that the DEAT and the NDPW have initiated the Fishing Harbours Transition Project), the potential exists to impact on the environment, more specifically within the CPZ.

As mentioned earlier, the CPZ criteria applied to *urban areas* cover a distance inland of 100 metres measured from the high water mark. This essentially means that almost all development within PFHs would result in development within the CPZ as defined in the NEM: ICMA (Section 17, Act No 24 of 2008). This reality results in a host of challenges, since no provision has been made for “harbour infrastructure and/or precincts”. This is the central and most fundamental issue that needs to be addressed with regard to the NEM: ICMA.

The CPZ paradigm – a constrictive dilemma

In the context of PFHs, an issue consistently arises when wanting to develop a fishing-related industry, such as a fish processing plant or a crayfish holding facility. This is further extended to tourism-related infrastructure and hospitality services. Table 2 summarises both the PFH and its related development proposals between 2002 and 2013.

The crux of the development dilemma resides with one common characteristic which applies to each of the case studies listed in Table 2. Inasmuch as the harbours in question have been proclaimed as “fishing harbours” in accordance with the MLRA, immense resistance to development from the general public occurred for each development proposed. Ironically, both the Hout Bay and Gordon’s Bay proposed developments are consistent with the very nature and intent of a PFH. It stands to reason that each of the proposed developments warranted an EIA that is more substantive and detailed than a Scoping Checklist and Scoping Report in terms of the Environment Conservation Act (Act No 73 of 1989, GN 1183, 5 September 1997, as amended) or a Basic Assessment in terms of the National Environmental Management Act (Act No 107 of 1998, GN 386, 21 April 2006, as amended).

In undertaking the requisite EIA, public engagement (or opposition) consistently manifested itself as a major hurdle in terms of resolving conflict, which in essence cascaded to the decision-making authorities having to weigh up the respective anticipated environmental impacts with that of fishing-related development within PFHs.

This dilemma continues to prevail, since the NEM: ICMA emphasises the need to ensure public engagement when planning to construct certain types of infrastructure within the CPZ (limited in this case to urban areas, thus 100 metres from the high water mark in a landward direction). The requirement of having to undertake an EIA in terms of Section 63 (1) of the NEM: ICMA is necessary to aid the developer in understanding the potential impacts that the proposed development could have on the receiving environment and *vice versa*. Also, this approach, in theory, assists the decision-making authority (in the Western Cape: the Department of Environmental Affairs and Development Planning) to arrive

at an informed decision whether to authorise the development or not. It is further noted that, even if an environmental authorisation (formerly known as a Record of Decision in terms of the Environment Conservation Act) is granted, a number of other additional legislated processes may be required, such as the re-zoning of the proposed site, permits for the release of effluents and/or air emissions, and so on.

A constrictive dilemma emerges for each of these case studies. In general, development is simply not supported by residents in close proximity to PFHs. Development is halted due to extended EIA processes, which almost inevitably trigger appeals, and in the case studies considered might be followed by an application for judicial review.

COASTAL MANAGEMENT PROGRAMMES AND COASTAL PLANNING SCHEMES: THE BEGINNING OR THE END?

When considering coastal management solutions, the NEM: ICMA provides two innovative tools which can aid ICM. The first tool is termed a Coastal Management Programme (CMP), which is defined as “the national or a provincial or municipal coastal management programme established in terms of Chapter 6 (NEM: ICMA, 2008)”. Celliers *et al* (2008) state that CMPs are developed in all three spheres of government, as illustrated in Figure 2.

The provincial CMPs must be established to be consistent with the National CMP, and the municipal CMPs must be

Table 3 Assessment of the effectiveness of the NEM: ICMA (adapted from Sadler 2008)

CRITERIA	DESCRIPTION	SUBJECTIVE OPINION	RATIONALE
Meta-evaluation	Relative success and utility of the NEM: ICMA as a legislated tool for managing the impact of proposals on the coastal environment	Yes	Although in its infancy in terms of recorded cases, the legal framework appears to be consistent with international best practice, as well as the South African Constitution and the principles of the NEMA. Section 63 (1) of the NEM: ICMA calls for an EIA which will add value to decision-making for development within the coastal environment and, more specifically, within the CPZ.
Macro-evaluation	Effectiveness and performance of ICM systems established by particular countries or international agencies	Yes	As stated above, the NEM: ICMA is aligned with international best practice and will go a long way towards protecting development within the coastal environment. However, when considering development within harbours (in this case PFHs), the NEM: ICMA is not clear on how it will address development issues.
Micro-evaluation	Role and contribution of ICM approach and components to specific proposals, value added at specific stages	Partial	The NEM: ICMA is well structured and resonates consistently within the legal framework of South Africa. The value-adding component, however, remains a point of contention with regard to development specifically within a PFH. The NEM: ICMA could have provided specific requirements for development within PFHs, as they are by design considered a protected area, as opposed to exposed natural coastlines. Value-adding at specific stages is viewed as a critical factor in terms of the effectiveness and appropriateness of the NEM: ICMA. No distinction is provided in the NEM: ICMA to allow for streamlined development applications in this regard. It is a further concern since an EIA will, in most cases, be required. Public Participation will remain the central most significant issue in terms of development within a PFH. Much emphasis is placed on the CMP and CPS tools which, if compiled appropriately, may result in a beneficial effect on prospective development within a PFH. The issue of public participation needs to be controlled and the NEM: ICMA does not allow for a strictly regulated public engagement that meets the development needs within PFHs.
Dimensional Effectiveness	At each level, the anatomy of the NEM: ICMA effectiveness can be dissected in relation to institutional, methodological and practical dimensions	Yes	Upon review of the NEM: ICMA it seems apparent that well-structured responsibilities have been legislated, which includes cooperative governance from national, provincial through to municipal levels. Methodologically the NEM: ICMA provides for sound consideration of planning and natural environmental conditions, which will prove valuable for coastal development in general, especially for exposed coastlines. However, this seems to rely on the CMPs and CPSs for effectiveness in relation to PFHs.

established to be consistent with both the provincial and national CMPs (Celliers *et al* 2008). Chapter 6, Part 7, titled “Coastal Planning Schemes”, has reference.

Section 56 (1) defines a Coastal Planning Scheme (CPS) as “A scheme that facilitates the attainment of coastal management objectives by:

- (a) defining areas within the coastal zone or coastal management area which may:
 - (i) be used exclusively or mainly for specified purposes or activities; or
 - (ii) not be used for specified purposes or activities; and
- (b) prohibiting or restricting activities or uses of areas that do not comply with the rules of the scheme.”

Section 56 (3) states: “A coastal planning scheme may be established and implemented for an area within the coastal zone by:

- (a) the Minister, after consultation with the MEC and with any authority that is responsible for managing an area to which the planning scheme applies, if the planning scheme applies to:
 - (i) an area of coastal public property and is established to protect and control the use of marine living resources or to implement national norms or standards...”

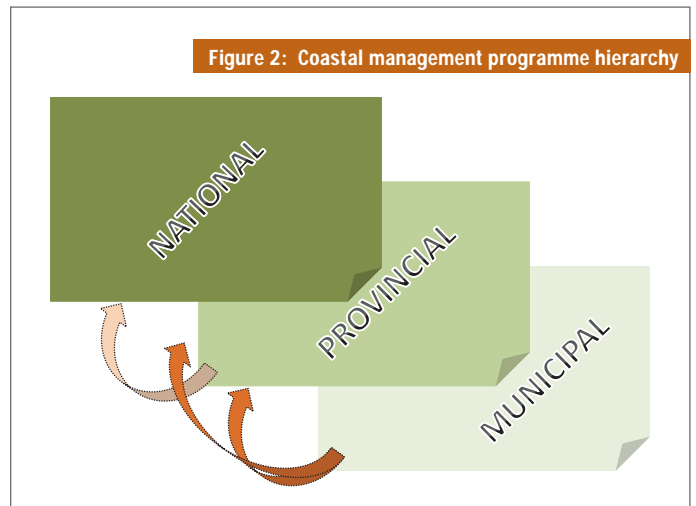
CMPs and CPSs appear to be useful tools in terms of reaching the objectives of the NEM: ICMA as defined in Section 2 of the Act (No 24 of 2008). The cornerstone of both these tools includes public participation in accordance with the principles of cooperative governance as set out in the NEMA (Act No 107 of 1998, as amended) (Celliers *et al* 2008).

Celliers *et al* (2008) summarise Section 53 (1) of the NEM: ICMA titled “Public participation” as “the public consultation process generally includes three steps, viz consultation with the appropriate government officials (generally the Minister, MEC or municipal official), reasonably accessible publication or broadcasting of intent, and finally, notification in the *Government Gazette*”. The notice in the *Government Gazette* must provide sufficient information, in order for the public to submit written representations or objection to proposed actions within a period of 30 days (Celliers *et al* 2008).

The success of CMPs and CPSs can be viewed from both a proactive/optimistic and a conservative/pessimistic perspective. This is qualified by the reality that development applications within PFHs have been met with significant opposition (Hout Bay – Bluefin Holdings, 2002/5; Gordon’s Bay – ViakorSewe, 2004/5; and Struisbaai – Golden Falls Trading 193, 2006/10) from interested and/or affected parties (I&APs). Involving people in the design and implementation of policies and strategies for environmental management is crucial on both ethical and sustainability grounds (Furtado *et al* 2000 cited in Holmes-Watts 2008).

Each of the three case studies revealed ‘ethical dilemmas’ consistent with Fuggle & Rabie (2009) – “conflict furthermore arises from diverse needs and perspectives such as: anthropocentrism versus ecocentrism (Barrow 2005 cited in Fuggle & Rabie 2009), or protectionism versus quality of life sentiments.” *Quality of life sentiments* have resonated consistently throughout the EIAs that were conducted for each of the case studies, which contributes a cautionary optimistic ‘thumbs up’ to public engagement as required by the NEM: ICMA (note, this opinion is reserved within the context of developing within a PFH only).

Figure 2: Coastal management programme hierarchy



Owing to I&AP opposition, as confirmed in the aforementioned three case studies, the question remains to what degree development within PFHs will be supported or impeded.

The NEM: ICMA does not specifically acknowledge PFHs as areas that are proclaimed for the purposes of fishing-related activities, and relies on the MLRA, Section 27 (1) to establish a proclaimed fishing harbour. The NEM: ICMA provides two tools to aid ICM, in the form of CMPs and CPSs. However, history shows that public engagement is, for the most part, anti-development. Earlier in this article it was mentioned that a government initiative, the Fishing Harbours Transition Project, is currently under way to upgrade PFHs. However, in light of the requirement in terms of Section 63 (1) of the NEM: ICMA

that calls for an EIA, public engagement may raise its head as the ‘Achilles heel’.

Although this assumption may be viewed as nonsensical, it appears that in each of the case studies the very essence for which a PFH was created is in many instances being controlled by the general public and surrounding residents as a consequence of the need to undertake an EIA.

Table 1 refers to “Social Equity”, a principle of the NEM: ICMA (as adapted from the NEMA principles), which reads as follows: “Coastal management efforts must ensure that all people, including future generations, enjoy the rights of human dignity, equality and freedom” (DEAT 2000). It is submitted that this principle holds true for exposed coastlines, namely natural coastlines, and not necessarily for PFHs.

Users within a PFH are protected to a large degree from storm surges and/or coastal processes such as tidal fluctuation. Upon review of the NEM: ICMA, it is evident that no cognisance has been taken of fishing harbour infrastructure, which means that any development within a PFH is subject to the same legal process(es) as required for a fully-exposed development within a natural coastal system.

The effectiveness of these CMP and CPS tools with regard to their influence on development within PFHs will be questioned. To date, no CMPs are available, as the NEM: ICMA only came into effect on 1 December 2009, and a period of four years (Sections 44, 46, 48 of the NEM: ICMA) has been allowed for each respective level of government to compile a CMP (NEM: ICMA 2008). Table 3 lists each of the effectiveness criteria, and assesses the degree of NEM: ICMA effectiveness.

CONCLUDING REMARKS

Glazewski (2005) stated that there is a worldwide trend to promote the notion of integrated coastal management in coastal states. In order to achieve integrated coastal management it has been proposed that the following main functions are key: “**area planning, promotion of economic development**, stewardship of resources, **conflict resolution**, protection of public safety and proprietorship of public submerged lands and waters” (Cicin-Sain & Knecht 1998, cited in Glazewski 2005).

This article focused on a critical analysis of the NEM: ICMA as it relates to development within PFHs, and the text in bold in the preceding paragraph reaffirms the three key issues that impact on development within PFHs in the Western Cape.

The true challenge posed to development prospects within PFHs remains with the demarcation of the CPZ and the effectiveness of the CMPs and CPSs. In each of the above-mentioned case studies, development within a PFH was met with significant resistance from the public. The key point is that development is hampered within PFHs for the very reason they were created. The answer to the question of whether the NEM: ICMA has missed an opportunity to be effective and successful as it pertains to PFHs, is considered to rest with the application of the CMPs and CPSs.

Fuggle & Rabie (2009) make reference to the phenomenon that “prevailing management efforts are failing to mitigate the impacts of coastal population growth and development intensification”. This reality has spawned the creation of acts such as the NEM: ICMA, and the paradigm shift to ICM has merit. However, the NEM: ICMA falls short of providing adequate insight to development within the PFHs of the Western Cape,

which is considered to be a fatal flaw. This is further exacerbated by the current trend in South Africa to develop within the “urban edge”, thus promoting densification. The result is a conflict between the need to develop within a PFH and the resistance from local residents, who do not support development that will affect the sense of place and heritage to which they have become accustomed.

ACKNOWLEDGEMENTS

The author would like to thank Dr Elretha Louw and Jody Boshoff of Aurecon for their review of this article.

BIBLIOGRAPHY / REFERENCES

- Barrow, C J 2005. *Environmental Management and Development*. London: Routledge, 265.
- Breetzke, T, Celliers, L & Moore L 2009. From White Paper to National Coastal Management Programme and Beyond. Unpublished report.
- Celliers, L, Breetzke, T, Moore, L & Malan, D 2009. A user-friendly guide to the integrated coastal management act of South Africa. Department of Environmental Affairs and SSI Engineers & Environmental Consultants. Cape Town.
- Cicin-Sain, B & Knecht, R W 1998. *Integrated and Coastal Management Concepts and Practices*. Washington DC: Island Press.
- Department of Environmental Affairs and Tourism (DEAT) 2000. White Paper for Sustainable Coastal Development in South Africa.
- Department of Environmental Affairs and Tourism (DEAT) 2005. *South Africa Environment Outlook. A report on the state of the environment. First National State of the Environment Report*. Pretoria: Government Printer.
- Department of Environmental Affairs and Tourism (DEAT) 2006. *South Africa Environment Outlook. A report on the state of the environment. Second National State of the Environment Report*. Pretoria: Government Printer.
- Department of Environmental Affairs and Tourism (DEAT) and National Department of Public Works (NDPW) 2008. Fishing Harbours Transition Project [Online] <http://www.deat.gov.za/.../Web%20%20Fishing%20Harbours%20Transition%20Brief.pdf> (Retrieved 12 August 2010).
- Fuggle, R F & Rabie, M A 2009. *Environmental Management in South Africa*, 2nd ed. Cape Town: Juta.
- Furtado, J I, Belt, T & Jammi, T 2000. *Economic development and environmental sustainability: Policies and principles for a durable equilibrium*. Washington, DC: World Bank.
- Glavovic, B C 2006. The evolution of coastal management in South Africa: Why blood is thicker than water. *Ocean & Coastal Management*, 49(12): 889–904.
- Glazewski, J 2005. *Environmental law in South Africa*, 2nd ed. Durban: Butterworths, 297–301.
- Holmes-Watts, T & Watts, S 2008. Legal frameworks for and the practice of participatory natural resources management in South Africa. *Forest Policy and Economics*, 10: 435–443.
- Kidd, M 2008. *Environmental Law*. Cape Town: Juta.
- Saddler, B 2008. The anatomy of EA effectiveness: Trends, directions and lessons from international experience. *Proceedings, Conference on 10 years of Environmental Impact Assessments in South Africa, 24–25 November 2008, Cape Town*.
- Smith, A 2002. *Happy Wanderers Risk Assessment*. Unpublished report. □

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