

KOUGA LOCAL MUNICIPALITY

**SECOND GENERATION COASTAL
MANAGEMENT PROGRAMME**

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KOUGA LOCAL MUNICIPALITY 2ND GENERATION COASTAL MANAGEMENT PROGRAMME

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LIST OF ABBREVIATIONS

AIS	Alien Invasive Species
CBA	Critical Biodiversity Area
CML	Coastal Management Line
CMP	Coastal Management Programme
CSIR	Council for Scientific and Industrial Research
CWDP	Coastal Waters Discharge Permit
DEA	Department of Environmental Affairs
DEDEAT	Department of Economic Development, Environmental Affairs and Tourism
DFFE	Department of Forestry, Fisheries and the Environment
DFFE: O+C	Department of Forestry, Fisheries and the Environment: Oceans and Coasts
DMMP	Dune Maintenance Management Plan
DWS	Department of Water and Sanitation
EAF	Estuary Advisory Forum
EFZ	Estuarine Functional Zone
EIA	Environmental Impact Assessment
ESA	Ecological Support Area
EMP	Estuarine Management Plan
EMI	Environmental Management Inspectorate
HWM	High-Water Mark
ICMA	Integrated Coastal Management Act 24 of 2008
IDP	Integrated Development Plan
KLM	Kouga Local Municipality
LSDF	Local Spatial Development Framework
MCC	Municipal Coastal Committee
NCCAS	National Climate Change Adaptation Strategy
MEC	Member of the Executive Council
Min Tech	Ministerial Technical Committee
MLRA	Marine Living Resources Act 18 of 1998
MMP	Mouth Management Plan
MPA	Marine Protected Area
MSA	Municipal Systems Act 32 of 2000
NBA	National Biodiversity Assessment 2025
NCC	National Coastal Committee
NCMP	National Coastal Management Programme
NEM: BA	National Environmental Management: Biodiversity Act 10 of 2004
NEM: PAA	National Environmental Management: Protected Areas Act 57 of 2003
NEMA	National Environmental Management Act 107 of 1998
NEMP	National Estuary Management Protocol
NHRA	National Heritage Resources Act 25 of 1999
PCC	Provincial Coastal Committee
PES	Present Ecological State
PLS	Public Launch Sites
PPP	Public Participation Process
REC	Recommended Ecological Category
RMA	Relevant Management Authority
SANBI	South African National Biodiversity Institute
SBDM	Sarah Baartman District Municipality
SDF	Spatial Development Framework



SEA	Strategic Environmental Assessment
SPLUMA	Spatial Planning and Land Use Management Act (Act No. 16 of 2013)
WG8	Working Group 8 (Oceans and Coasts) of Min Tech



GLOSSARY OF TERMS

“admiralty reserve” means any strip of land adjoining the inland side of the High-Water Mark which, when the ICM Act took effect, was state land reserved or designated on an official plan, deed of grant, title deed or other document evidencing title or land-use rights as “admiralty reserve”, “government reserve”, “beach reserve”, “coastal forest reserve” or other similar reserve;

“biodiversity” or **“biological diversity”** has the same meaning ascribed to it as in the Biodiversity Act;

“blue economy” means marine-based economic development that leads to improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities;

“coastal access land” means land designated as coastal access land in terms of section 18(1), read with section 26, of the ICMA;

“coastal activities” means activities listed or specified in terms of Chapter 5 of the NEMA which take place –

- a) in the coastal zone; or
- b) outside the coastal zone but have, or are likely to have, a direct impact on the coastal zone;

“coastal environment” means the environment within the coastal zone;

“coastal management” includes-

- a) the regulation, management, protection, conservation and rehabilitation of the coastal environment;
- b) the regulation and management of the use and development of the coastal zone and coastal resources;
- c) monitoring and enforcing compliance with laws and policies that regulate human activities within the coastal zone; and
- d) planning in connection with the activities referred to in paragraphs (a), (b) and (c);

“coastal management line” means a line determined by a MEC in accordance with section 25 of the ICM Act in order to demarcate an area within which development will be prohibited or controlled in order to achieve the objectives of the ICMA.

“coastal management objective” means a clearly defined objective established by a coastal management programme for a specific area within the coastal zone which coastal management must be directed at achieving;

“coastal protected area” means a protected area that is situated wholly or partially within the coastal zone and that is managed by, or on behalf of, an organ of state, but excludes any part of such a protected area that has been excised from the coastal zone in terms of section 22 of the ICMA;

“coastal protection zone” means the coastal protection zone contemplated in section 16 of the ICM Act;

“coastal public property” means coastal public property referred to in section 7 of the ICMA;

“coastal resources” means any part of-

- a) the cultural heritage of the Republic within the coastal zone, including shell middens and traditional fish traps; or
- b) the coastal environment that is of actual or potential benefit to humans;

“coastal waters” means-

- a) internal waters, territorial waters, exclusive economic zone and continental shelf of the Republic referred to in sections 3, 4, 7 and 8 of the Maritime Zones Act 15 of 1994, respectively; and
- b) an estuary;

“coastal zone” means the area comprising coastal public property, the coastal protection zone, coastal access land, coastal protected areas, the seashore and coastal waters, and includes any aspect of the environment on, in, under and above such area;

“competent authority” means a competent authority identified in terms of section 24C of the NEMA;

“cultural heritage” means any place or object of aesthetic, architectural, historical, scientific, social or spiritual value or significance;

“development”, in relation to a place, means any process initiated by a person to change the use, physical nature or appearance of that place, and includes-

- a) the construction, erection, alteration, demolition



- or removal of a structure or building;
- b) a process to rezone, subdivide or consolidate land;
- c) changes to the existing or natural topography of the coastal zone; and
- d) the destruction or removal of indigenous or protected vegetation;

“dynamic coastal processes” means all natural processes continually reshaping the shoreline and near shore seabed and includes -

- a) wind action;
- b) wave action;
- c) currents;
- d) tidal action; and
- e) river flows;

“effluent” means -

- a) any liquid discharged into the coastal environment as waste, and includes any substance dissolved or suspended in the liquid; or
- b) liquid which is a different temperature from the body of water into which it is being discharged;

“environment” means “environment” as defined in the NEMA;

“environmental authorisation” means an authorisation granted in respect of coastal activities by a competent authority in terms of Chapter 5 of the NEMA;

“estuary” means a body of surface water-

- a) that is permanently or periodically open to the sea;
- b) in which a rise and fall of the water level as a result of the tides is measurable at spring tides when the body of surface water is open to the sea; or
- c) in respect of which the salinity is higher than fresh water as a result of the influence of the sea, and where there is a salinity gradient between the tidal reach and the mouth of the body of surface water;

“Exclusive Economic Zone” means the Exclusive Economic Zone of the Republic referred to in section 7 of the Maritime Zones Act 15 of 1994;

“harbour” means a harbour proclaimed in terms of any law and managed by an organ of state;

“high-water mark” means the highest line reached by coastal waters, but excluding any line reached as a result of -

- a) exceptional or abnormal weather or sea conditions; or
- b) an estuary being closed to the sea;

“littoral active zone” means any land forming part of, or adjacent to, the seashore that is -

- a) unstable and dynamic as a result of natural processes; and
- b) characterised by dunes, beaches, sand bars and other landforms composed of unconsolidated sand, pebbles or other such material which is either unvegetated or only partially vegetated;

“low-water mark” means the lowest line to which coastal waters recede during spring tides;

“MEC” means the member of the Executive Council of a coastal province who is responsible for the designated provincial lead agency in terms of the ICM Act;

“municipality”-

- a) means a metropolitan, district or local municipality established in terms of the Local Government: Municipal Structures Act 117 of 1998; or
- b) in relation to the implementation of a provision of this Act in an area which falls within both a local municipality and a district municipality, means –
 - i. the district municipality; or
 - ii. the local municipality, if the district municipality, by agreement with the local municipality, has assigned the implementation of that provision in that area of the local municipality;

“National Estuarine Management Protocol” means the national protocol concerning the management of estuaries contemplated in Section 33 of the ICMA;

“organ of state” has the meaning assigned to it in section 239 of the Constitution;

“pollution” has the meaning assigned to it in section 1 of the NEMA;

“port” means a port as defined in the National Ports Act 12 of 2005;

“protected area” means a protected area referred to in section 9 of the Protected Areas Act 57 of 2003;

“Protected Areas Act” means the National Environmental Management: Protected Areas Act 57 of 2003.



2003;

“provincial lead agency” means a provincial organ of state designated by the Premier of the province in terms of section 38 of the ICM Act as the lead agency for coastal management in the province;

“public launch site” means a site listed by notice in the Gazette in terms of the Management of Public Launch Sites in the Coastal Zone Regulations, 2014, (GN. No R 497 of 27 June 2014) as a site where a vessel may be launched by members of the public in the coastal zone, but excludes a privately used launch site;

“sea” means -

- a) the high seas;
- b) all coastal waters; and
- c) land regularly or permanently submerged by seawater, including-
 - i. the bed, subsoil and substrata beneath those waters; and
 - ii. land flooded by seawater which subsequently becomes part of the bed of coastal waters, including the substrata beneath such land;

“seashore” subject to section 26 of the ICM Act, means the area between the Low-Water Mark and the High-Water Mark;

“small scale fishers” means persons that fish to meet food and basic livelihood needs, or are directly involved in harvesting/processing or marketing of fish, traditionally operate on or near shore fishing grounds, predominantly employ traditional low technology or passive fishing gear, usually undertake single day fishing trips, and are engaged in the sale or barter or are involved in commercial activity.

“small scale fishing community” means an established socio-cultural group of persons who are, or historically have been, fishermen and - women, including ancillary workers and their families; have shared aspirations and historical interests or rights in the harvesting, catching or processing of marine living resources; have a history of shared Small Scale fishing activity but, because of forced removals, are not necessarily tied to particular waters or geographic area; and were or still are operating near or in the seashore or coastal waters where they previously enjoyed access to marine living resources, or continue to exercise their rights in a communal manner in terms of an agreement, custom

or law; and who regard themselves as a community;

“special management area” means an area declared as such in terms of section 23 of the ICMA;

“the Act” refers to the National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008 and includes any regulation made in terms of this Act);

“universal access” a system of access that accommodates the many different needs of people;

“vessel” means a waterborne craft of any kind, whether self-propelled or not, but does not include any moored floating structure that is not used as a means of transport by water;

“waste” means any substance, whether or not that substance can be re-used, recycled or recovered-

- (a) that is surplus, unwanted, rejected, discarded, abandoned or disposed of;
- (b) that the generator has no further use of, for the purposes of production, reprocessing or consumption; and
- (c) that is discharged or deposited in a manner that may detrimentally impact on the environment;

“wetland” means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.



EXECUTIVE SUMMARY

The coastline of the Kouga Local Municipality (KLM) is one of the municipality's most valuable environmental, social and economic assets. Extending from the Gamtoos River Mouth in the west to Oyster Bay in the east, the coastal zone supports a diverse range of ecosystems, estuaries, protected areas, tourism destinations, coastal settlements, recreational activities, fisheries and cultural heritage resources. These assets contribute significantly to local livelihoods, economic development and quality of life.

At the same time, the coastal zone is increasingly exposed to pressures associated with urban expansion, infrastructure development, population growth, pollution, habitat degradation, competing resource-use demands and the growing impacts of climate change. Coastal erosion, flooding, sea-level rise, estuarine degradation, illegal activities, waste management challenges and increasing development pressure within sensitive coastal environments highlight the need for coordinated and proactive coastal management.

The National Environmental Management: Integrated Coastal Management Act No 24 of 2008 (ICMA) requires coastal municipalities to prepare and implement Coastal Management Programmes (CMPs) that are aligned with the National Coastal Management Programme (NCMP) and the relevant Provincial CMP. The KLM CMP previously formed part of the Sarah Baartman District Municipality CMP adopted in 2019. In accordance with the requirements of the ICMA, this document represents the Second-Generation KLM CMP and the municipality's first stand-alone CMP.

The development of the CMP was informed by a comprehensive review of the first-generation CMP, an assessment of the current state of the coastal environment, a review of relevant legislation, policies and planning instruments, site observations and an extensive stakeholder engagement process.

Stakeholder engagement undertaken throughout the municipality identified a range of recurring concerns relating to:

- Coastal governance
- Estuary management
- Coastal access
- Illegal activities
- Pollution
- Infrastructure maintenance
- Dune management
- Climate change impacts
- Environmental awareness
- Coordination between stakeholders and government institutions.

The vision of the CMP is to promote a resilient, healthy and productive coastal environment that supports sustainable development, protects ecological integrity, provides equitable access to coastal resources and contributes to the social and economic wellbeing of present and future generations.



To achieve this vision, the CMP establishes a strategic framework for integrated coastal management within the municipality over the next five years. The programme is aligned with the NCMP (2025), the Eastern Cape Coastal Management Programme (2025) and other relevant national, provincial and municipal planning frameworks.

The CMP is structured around seven priority management themes identified through the Situation Assessment, stakeholder engagement process and review of national and provincial priorities:

- Compliance, Enforcement and Institutional Governance
- Integrated Estuary Management
- Coastal Spatial Planning and Climate Change Adaptation
- Coastal Pollution and Waste Management
- Equitable Public Access and Coastal Use Management
- Coastal Research, Monitoring and Information Systems
- Education, Awareness and Community Stewardship.

These themes collectively address the most significant coastal management challenges facing the municipality and provide a framework for prioritising actions, allocating resources and measuring implementation progress.

Several cross-cutting priorities emerged during the development of the CMP. These include:

- Strengthening the Municipal Coastal Committee (MCC) and intergovernmental coordination mechanisms
- Improving implementation of the KLM Coastal Management By-law
- Advancing the development and implementation of Coastal Management Lines (CMLs)
- Improving estuary governance and implementation of Estuarine Management Plans (EMPs)
- Addressing pollution and illegal dumping
- Improving public access management
- Integrating climate change adaptation into planning and development decisions
- Strengthening environmental awareness and stewardship among coastal communities.

Implementation of the CMP will be coordinated through the MCC and supported by relevant municipal departments, provincial and national government departments, research institutions, civil society organisations, coastal user groups and other stakeholders. Recognising municipal capacity and resource constraints, the CMP has been designed to integrate with existing municipal planning and budgeting processes, thereby improving implementation feasibility and long-term sustainability.

The CMP includes a detailed implementation framework that assigns responsibilities, identifies implementation timeframes and establishes measurable indicators for monitoring progress. Annual implementation reporting is proposed to facilitate adaptive management, support accountability and enable ongoing refinement of actions where required. In accordance with the ICMA, the CMP will be reviewed and updated at least once every five years.

Successful implementation of this CMP will strengthen coastal governance, improve environmental resilience, support sustainable economic development and contribute to the long-term protection and responsible use of Kouga's coastal resources. The programme provides a practical roadmap for



achieving integrated coastal management within the municipality and for ensuring that the benefits derived from the coastal zone are sustained for current and future generations.



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1 INTRODUCTION

1.1 PROJECT BACKGROUND

The coastline of the Kouga Local Municipality (KLM) is a strategically important environmental, social and economic asset that supports coastal settlements, tourism, fisheries, biodiversity conservation and a range of recreational activities. At the same time, the coastal zone is subject to increasing pressure from development, infrastructure expansion, pollution, climate-related risks and competing land and resource-use demands. These pressures necessitate a coordinated and forward-looking approach to coastal management to ensure the long-term sustainability, functionality and accessibility of coastal resources.

Integrated coastal management in South Africa is governed by the National Environmental Management: Integrated Coastal Management Act 24 of 2008 (ICMA), which gives effect to the constitutional right to an environment that is protected for the benefit of present and future generations. The ICMA establishes a framework for cooperative governance across all spheres of government and requires the preparation and implementation of Coastal Management Programmes (CMPs) to guide the sustainable use, protection and management of the coastal zone.

The first-generation CMP for the KLM was finalised and adopted in 2019 as part of the Sarah Baartman District Municipality (SBDM) CMP. In terms of Section 48 of the ICMA, municipal CMPs must be reviewed at least once every five years and amended where necessary to ensure continued relevance and effectiveness. Therefore, the current process constitutes the preparation of the second-generation CMP for the KLM and the development of a stand-alone municipal CMP.

1.2 CONTEXT OF COASTAL MANAGEMENT PROGRAMMES IN SOUTH AFRICA

The ICMA requires coastal district and local municipalities to prepare CMPs that are aligned with the National Coastal Management Programme and the relevant provincial CMP. National and provincial CMPs provide strategic direction and policy priorities, while municipal CMPs are intended to address local-scale planning, implementation, coordination and enforcement within the coastal zone.

The Eastern Cape Coastal Management Programme (2013 update) provides the current provincial policy context for coastal management within the KLM and is undergoing review. The second-generation KLM CMP will align with updated national and provincial priorities while responding to locally specific challenges and opportunities identified through assessment and stakeholder engagement.

1.3 THE PURPOSE OF THE UPDATED COASTAL MANAGEMENT PROGRAMME

The purpose of the Second-Generation KLM CMP is to provide a strategic framework for the coordinated, integrated and sustainable management of the municipal coastal zone over the next five-year planning cycle. Prepared in accordance with the requirements of the ICMA, the National Coastal Management Programme (2025) and the Eastern Cape Coastal Management Programme (2025), the CMP seeks to promote the conservation, sustainable use and effective governance of coastal resources while supporting social and economic development objectives.

The CMP is informed by a comprehensive review of the first-generation KLM CMP, a detailed Situation Assessment, stakeholder engagement processes and an assessment of current and emerging coastal management challenges within the municipality. The programme establishes a shared vision for the



KLM coast and identifies strategic priorities, objectives and actions required to address key coastal issues and opportunities.

Specifically, the CMP aims to:

- Provide a long-term vision and strategic direction for coastal management within the Kouga Local Municipality.
- Promote integrated and cooperative governance across municipal departments, organs of state, coastal stakeholders and local communities.
- Protect, conserve and enhance coastal ecosystems, estuaries, biodiversity and coastal public property.
- Facilitate sustainable coastal development and land-use planning that takes account of environmental constraints, climate change risks and the Coastal Management Line.
- Improve compliance with coastal legislation, policies and municipal by-laws through strengthened governance, monitoring and enforcement mechanisms.
- Promote equitable public access to the coast and support the sustainable use of coastal resources and amenities.
- Reduce pollution and other pressures affecting coastal and estuarine ecosystems.
- Strengthen research, monitoring and information management systems to support evidence-based decision-making and adaptive management.
- Foster environmental awareness, education and community stewardship of coastal resources.

The CMP is structured around seven priority themes that reflect the key coastal management challenges and opportunities within the municipality, namely:

- Compliance, Enforcement and Institutional Governance
- Integrated Estuary Management
- Coastal Spatial Planning and Climate Change Adaptation
- Coastal Pollution and Waste Management
- Equitable Public Access and Coastal Use Management
- Coastal Research, Monitoring and Information Systems
- Education, Awareness and Community Stewardship.

For each priority theme, the CMP identifies management objectives, strategic actions, implementation responsibilities, timeframes and monitoring indicators. Together, these components provide a practical implementation framework to guide municipal decision-making, facilitate coordinated action among stakeholders and support the achievement of integrated coastal management objectives within the KLM.

The CMP is intended to be a living document that will be implemented, monitored and periodically reviewed to ensure that management responses remain effective and responsive to changing environmental, social, economic and governance conditions affecting the KLM coast.

1.4 THE KOUGA LOCAL MUNICIPALITY COASTAL MANAGEMENT PROGRAMME DEVELOPMENT PROCESS

The development of the KLM CMP followed the following general process:

- An initial framework for coastal management in the KLM was developed, which outlined the key components of an integrated CMP. This formed the structure of the CMP.
- A draft scoping report and situation analysis of the coastal zone and coastal management along the KLM coastline was prepared.
- Through a series of stakeholder workshops, coastal issues and potential future needs were identified.



- A preliminary list of indicators for coastal management was derived from the issues identified as well as consultation with the existing SBDM CMP (2019), in which the KLM CMP is included, and the updated Eastern Cape Provincial CMP (2025). This was done in order to monitor the progress of the implementation of the CMP to achieve management objectives.
- Finally, specific coastal management actions for the KLM CMP were identified, from which implementation plans were developed.

1.5 FRAMEWORK OF THE SECOND-GENERATION KLM CMP

The framework for the second-generation KLM CMP is based on the first-generation CMP, the Eastern Cape CMP (2025) as well as the updated NCMP (2025). It is important that the second-generation KLM CMP aligns closely with the Provincial and National CMPs.

The framework aims to provide a holistic and structured guideline as to how to undertake the situation analysis, and to identify coastal issues and future needs:

- The **vision** of the KLM CMP was developed to not only reflect the ecological aspects of the coastal zone but to also reflect its social, economic and cultural aspects.
- The **objectives** of the KLM CMP were formulated in order to achieve the KLM's vision for coastal management.
- The **strategies** and **associated actions** in the first generation SBDM CMP, in which the KLM CMP was included, were grouped into the following themes:
 1. Natural, archaeological and cultural diversity and resource management
 2. Coastal pollution
 3. Coastal development

However, after reviewing the first-generation CMP, the Provincial CMP, the NCMP and the outcomes of the stakeholder engagement process for the second-generation KLM CMP, the need to reorganise the themes became evident.

The Second-Generation KLM Coastal Management Programme (CMP) is structured around seven priority themes identified through the situation assessment, stakeholder engagement and alignment with the National Coastal Management Programme (2025) and the Eastern Cape Coastal Management Programme (2025).

The prioritisation reflects institutional urgency, implementation feasibility and the need to strengthen governance systems as a foundation for effective coastal management. While all themes are interdependent and essential to long-term sustainability, the ranking recognises that improved governance, compliance and coordination are prerequisites for successful implementation across all other areas.

The seven priority themes are as follows:

1. Compliance, Enforcement and Institutional Governance: In order to ensure effective implementation of coastal management objectives and compliance with applicable legislation, compliance, monitoring and enforcement mechanisms must be strengthened within the Kouga Local Municipality. This includes clarifying institutional roles and responsibilities, operationalising the Municipal Coastal Committee, strengthening intergovernmental coordination, and facilitating the designation and training of Environmental Management Inspectors and Peace Officers. Effective



implementation of the adopted Kouga Coastal Management By-law (2025), alignment with the Coastal Management Line (CML) process and improved enforcement visibility within the coastal zone are critical components of this priority. The development of monitoring indicators and reporting systems will enable the Municipality to track progress, support State of the Coast reporting and undertake adaptive management in future CMP review cycles.

2. Integrated Estuary Management: In order to protect and restore the ecological functioning of estuarine systems, integrated estuary management must be implemented in accordance with the National Estuarine Management Protocol. This includes the finalisation and implementation of Estuarine Management Plans, strengthened oversight of estuarine functional zones and freshwater inflows, and improved coordination between land-use planning, water resource management and biodiversity conservation. Attention must also be given to catchment-related pressures, including sedimentation, pollution and post-disturbance impacts such as wildfire-related erosion. Monitoring and adaptive management are required to address development, habitat and pollution pressures and to safeguard the long-term ecological and socio-economic value of estuaries.

3. Coastal Spatial Planning and Climate Change Adaptation: In order to reduce risk and promote sustainable coastal development, coastal spatial planning and climate adaptation measures must be integrated into municipal planning instruments and decision-making processes. This includes the incorporation and enforcement of Coastal Management Lines and setback requirements, and the integration of sea-level rise, erosion, flooding and wildfire-induced dune destabilisation risks into the SDF, LSDFs and land-use decision-making. Climate-related risks, including shoreline retreat, storm surge and secondary risk multipliers such as wildfire, must inform infrastructure investment and development approvals. Strengthening climate risk integration will enhance resilience, protect coastal public property and reduce future environmental and financial liabilities.

4. Coastal Pollution and Waste Management: In order to safeguard coastal water quality and ecosystem health, pollution prevention and waste management within the coastal zone must be strengthened. This includes addressing illegal dumping, improving stormwater management, documenting and monitoring wastewater discharge points and mitigating pollution risks to beaches and estuaries. Alignment with municipal waste management and stormwater planning instruments, together with targeted interventions at identified pollution hotspots and improved monitoring coverage, will support improved environmental quality, tourism resilience and public health outcomes.

5. Equitable Public Access and Coastal Use Management: In order to ensure safe and equitable access to coastal public property while protecting sensitive dune and estuarine environments, coastal access must be planned and managed effectively. This includes formalising and rationalising access points, rehabilitating environmentally damaging routes, maintaining infrastructure and regulating vehicle use and public launch sites. Integrated access management must balance recreational use with ecological protection, safety considerations and community needs, in accordance with the ICMA and the Municipal Coastal Management By-law.

6. Coastal Research, Monitoring and Information Systems: In order to support informed decision-making and adaptive management, research, monitoring and information systems must be strengthened. This includes implementing consistent monitoring programmes for shoreline change, estuarine condition and biodiversity health, improving access to spatial and environmental data, and fostering partnerships with academic and research institutions. The development of measurable indicators and reporting mechanisms will enhance transparency, support evidence-based planning and contribute to State of the Coast reporting obligations.



7. Education, Awareness and Community Stewardship: In order to promote responsible coastal use and long-term behavioural change, education and awareness initiatives must be strengthened. Targeted campaigns improved and standardised signage, and engagement with communities, user groups and coastal stakeholders will support voluntary compliance with coastal legislation and promote shared stewardship. Education initiatives should include awareness of coastal sensitivity, invasive species impacts, wildfire-related risks, pollution prevention and the provisions of the Municipal Coastal Management By-law. Building a culture of environmental responsibility will contribute to reducing pressures on sensitive coastal environments and supporting effective CMP implementation.

The above framework provides a structured, implementation-oriented basis for the Second-Generation KLM CMP. The prioritisation reflects the need to strengthen institutional governance and enforcement capacity while addressing critical ecological systems, climate-related risks and socio-economic pressures within the coastal zone. Together, these themes support a precautionary, adaptive and ecosystem-based approach to integrated coastal management within the KLM.

The eight Situation Assessment themes presented in Chapter 4 were consolidated into the seven priority objectives set out in Chapter 7. Table 1.1 below shows where each assessment theme is carried forward. Most themes map directly to a single objective; coastal livelihoods and poverty alleviation is treated as a cross-cutting theme, and biodiversity planning and coastal research is distributed across the research, estuary and spatial-planning objectives.

Table 1.1: Crosswalk between the eight Situation Assessment themes (Chapter 4) and the seven priority objectives (Chapter 7).

Situation Assessment theme (Chapter 4)	Priority objective (Chapter 7)	Notes on consolidation
Theme 1: Coastal access	Objective 5: Equitable Public Access and Coastal Use Management	Direct
Theme 2: Estuary management	Objective 2: Integrated Estuary Management	Direct
Theme 3: Coastal spatial planning and climate change	Objective 3: Coastal Spatial Planning and Climate Change Adaptation	Direct
Theme 4: Coastal pollution	Objective 4: Coastal Pollution and Waste Management	Direct
Theme 5: Education, awareness and information	Objective 7: Education, Awareness and Community Stewardship	Education and awareness elements map here; the information element is carried by Objective 6.
Theme 6: Coastal livelihoods and poverty alleviation	Cross-cutting (no standalone objective)	Addressed mainly through Objective 5, with contributions from Objectives 2 and 4.
Theme 7: Biodiversity planning and coastal research	Objective 6: Coastal Research, Monitoring and Information Systems	Research and monitoring elements map here; biodiversity protection is integrated into Objectives 2 and 3.
Theme 8: Compliance and enforcement	Objective 1: Compliance, Enforcement and Institutional Governance	Direct; expanded to include institutional governance.



2 LOCALITY AND EXTENT OF THE COASTAL ZONE

2.1 DEFINING THE COASTAL ZONE

The ICMA provides a uniform national definition of the coastal zone, clearly delineating its spatial components and associated management responsibilities. Effective coastal management depends on a clear understanding of the extent and constituent elements of the coastal zone, as this determines the applicability of legislative controls, management tools and institutional mandates.

In terms of the ICMA, the coastal zone comprises the following components:

- Coastal public property.
- The coastal protection zone.
- Coastal access land.
- Coastal waters.
- Coastal protected areas.
- Special management areas.

The spatial extent, constituent elements and responsible authorities associated with each component of the coastal zone are illustrated in Figure 2.1 and summarised in Table 2.1.

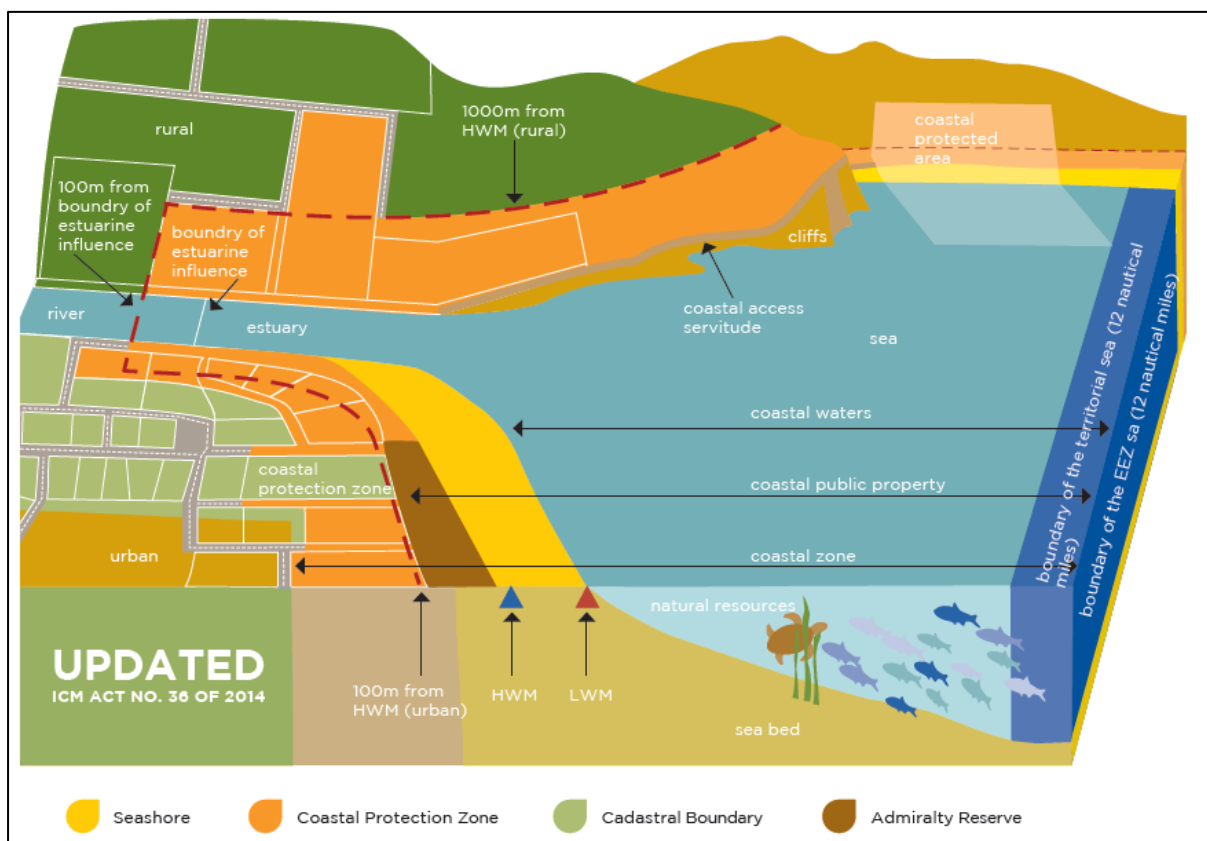


Figure 2.1: Components of the coastal zone as defined by the ICMA (adapted from Western Cape CMP, 2016)



Table 2.1: Definition of the coastal zone in terms of the ICMA

FEATURE	CONSTITUENTS	CHARACTERISTICS	RESPONSIBLE AUTHORITY
Coastal Public Property	- Coastal waters. - Land submerged by coastal waters, including land flooded by coastal waters that becomes part of the bed of coastal waters and the substrate beneath such land. - Any natural island within coastal waters. - The seashore, including that of natural or reclaimed islands and reclaimed land. - Subject to Section 66A, any admiralty reserve owned by the State. - Any land owned by the State that is declared as coastal public property under Section 8. - Land reclaimed in terms of Section 7C. - Natural resources on or in coastal public property.	- Reflects a shift from resource-centred to people-centred management. - Aims to improve public access, protect sensitive coastal ecosystems and maintain natural coastal processes.	The State (all three spheres of government).
Coastal Protection Zone	- Sensitive coastal areas, as defined in the Environment Conservation Act 73 of 1989. - Littoral active zone not forming part of coastal public property. - Coastal protected areas not classified as coastal public property. - Rural land units within 1 000 m of the high-water mark (HWM) zoned agricultural or undetermined. - Urban land units wholly or partly within 100 m of the HWM. - Coastal wetlands, lakes, lagoons or dams within specified distances of the HWM. - Privately owned land below the HWM. - Admiralty reserves not forming coastal public property. - Land vulnerable to inundation by a 1:50 year flood or storm event.	- Protects ecological integrity, natural character and socio-economic value of adjacent coastal public property. - Reduces exposure to coastal hazards and dynamic coastal processes. - Maintains natural functioning of the littoral active zone and overall coastal productivity.	The State (all three spheres of government).
Coastal Access Land	Land designated as such in terms of Section 18(1) of the ICMA.	Ensures public access to coastal public property through designated access routes and servitudes.	Municipality, in terms of Section 29 of the ICMA.
Coastal Waters	The internal waters, territorial waters, exclusive economic zone and continental shelf of the Republic referred to in Sections 3, 4, 7 and 8 of the Maritime Zones Act 15 of 1994, respectively, including estuaries.	Enables State control of activities in coastal waters in the interests of all South Africans.	National Government.
Coastal Protected	Protected areas wholly or partly	Managed under the	National or Provincial



FEATURE	CONSTITUENTS	CHARACTERISTICS	RESPONSIBLE AUTHORITY
Areas	within the coastal zone and managed by, or on behalf of, an organ of state, excluding areas excised in terms of Section 22 of the ICMA.	Protected Areas Act. • Intended to complement and strengthen the coastal protection zone.	conservation agencies.
Special Management Areas	• Areas declared as such in terms of Section 23 of the ICMA.	• May restrict or prohibit activities to achieve CMP objectives, support community-based management, promote sustainable livelihoods, or conserve coastal ecosystems.	National government (may appoint a management authority).
Estuaries	• Estuarine Functional Zone (EFZ) as defined in the National Estuaries Layer (SANBI BGIS). • EFZ typically approximated as the 5 m topographical contour above mean sea level, subject to site verification.	• Highly productive ecosystems providing biodiversity, habitat and catchment–coast connectivity. • Require integrated, estuary-specific management approaches.	National, provincial or local government, or conservation agencies.

2.2 THE EXTENT OF THE KLM COASTAL ZONE

The KLM coastal zone extends from the Van Stadens River in the east to the Tsitsikamma River in the west (Figure 2.2). This stretch of coastline includes the coastal settlements of Jeffreys Bay, St Francis Bay, Cape St Francis and Oyster Bay and represents a significant component of the municipality's tourism, recreation and environmental asset base.

For the purposes of the second-generation CMP, the KLM coastal zone includes coastal public property, the coastal protection zone and designated coastal access land, as defined in the ICMA and summarised in Table 2.1. These components collectively define the spatial area within which coastal management responsibilities and interventions will be applied through the CMP.

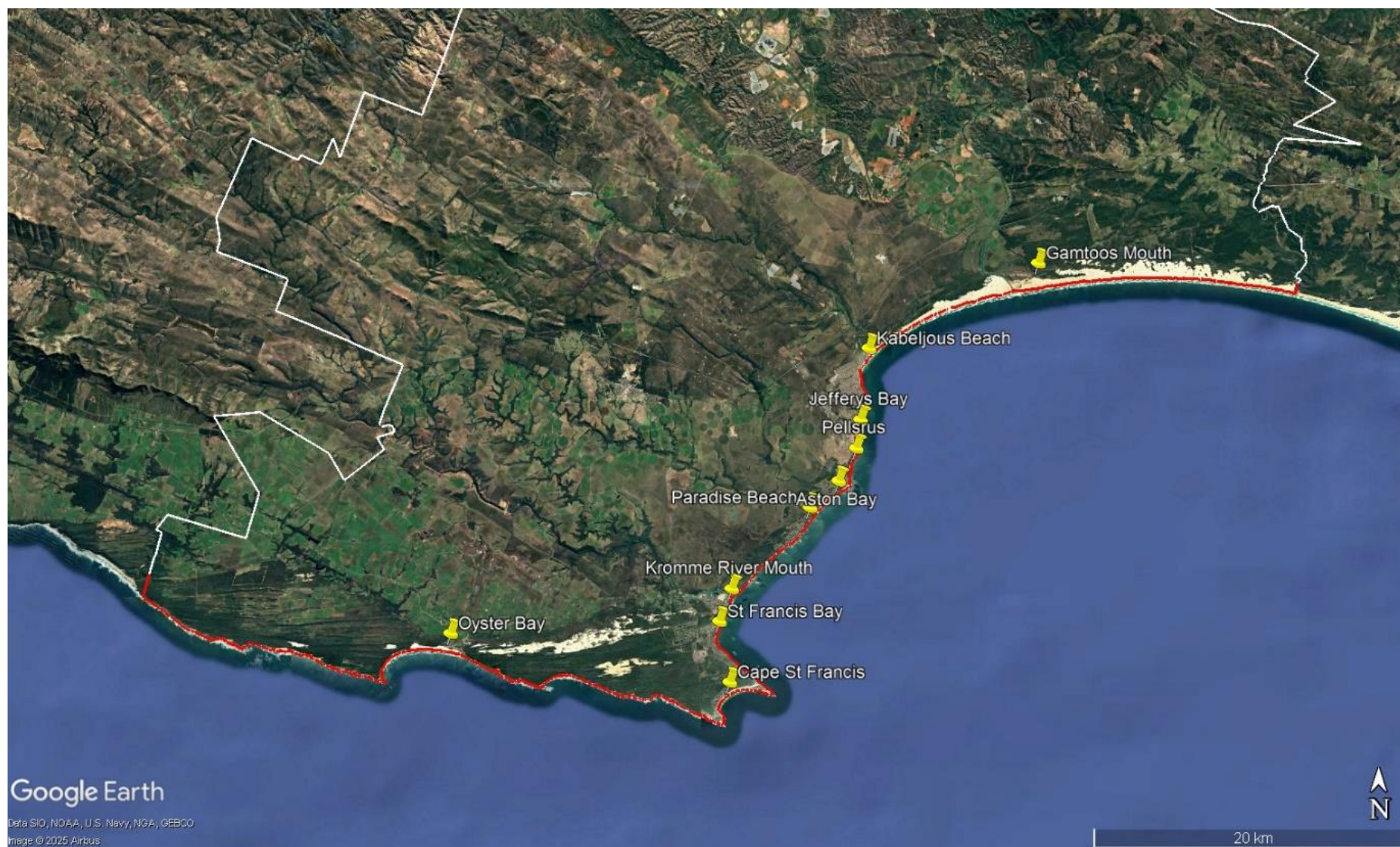


Figure 2.2: Locality map indicating the extent of the KLM's coastline (highlighted in red) and main coastal settlements.



3 LEGISLATION AND POLICY REVIEW

Coastal management is inherently multi-sectoral and is governed by a complex suite of legislation and policy instruments across all spheres of government. The breadth and complexity of this framework present ongoing challenges for consistent and effective implementation, particularly at local government level.

3.1 LEGISLATION

Coastal management in South Africa is governed by a comprehensive legislative framework that spans national, provincial and local spheres of government. This framework gives effect to the constitutional environmental right and establishes the legal basis for integrated coastal management, environmental protection, spatial planning and enforcement within the coastal zone.

For municipalities, including the KLM, this legislative framework defines both mandatory functions and enabling powers relevant to coastal planning, regulation and management. The purpose of this section is not to reproduce detailed legal provisions, but rather to identify the key legislation that informs and underpins the Municipal CMP and to clarify its relevance to municipal coastal management responsibilities.

The primary legislation guiding coastal management at municipal level includes the Constitution of the Republic of South Africa, the ICMA and the Spatial Planning and Land Use Management Act (SPLUMA). Together, these Acts establish the principles of sustainable development, cooperative governance, environmental protection, equitable access to coastal resources and risk-informed spatial planning.

Local government's authority to manage coastal matters is derived principally from Schedules 4B and 5B of the Constitution, which assign functions such as beaches, municipal planning, public amenities, stormwater management, waste management, local tourism and public places to municipalities. These constitutional mandates are operationalised through enabling legislation, including the Municipal Systems Act and Municipal Structures Act, which require municipalities to integrate coastal management considerations into IDPs, SDFs and municipal By-Laws.

NEMA provides the overarching environmental governance framework, including sustainable development principles, environmental management tools and enforcement mechanisms. The ICMA builds on this framework by specifically regulating the use, protection and management of coastal public property, coastal waters and the coastal protection zone and by requiring the preparation, review and implementation of CMPs at national, provincial and municipal levels. The ICMA further introduces instruments such as coastal access land, coastal management lines, estuarine management planning and coastal protection notices, all of which are directly relevant to municipal coastal management.

A range of sector-specific legislation further influences coastal management within the KLM, including legislation relating to environmental impact assessment, waste management, water resources, biodiversity conservation, protected areas, heritage resources, fisheries, air quality and vehicle access in coastal areas. While responsibility for authorisation and enforcement under these Acts may rest with national or provincial authorities, municipalities play an important role in spatial planning alignment, compliance monitoring, reporting of contraventions and cooperative governance.

Table 3.1 summarises the key legislation applicable to coastal management in the KLM, with a focus on the aspects most relevant to municipal planning, implementation and enforcement functions.

**Table 3.1: Key legislation relevant to coastal management in the KLM**

Legislation	Primary purpose	Relevance to municipal coastal management (KLM)
Constitution of the Republic of South Africa, 1996	Establishes environmental rights and allocates functional responsibilities across spheres of government.	Assigns municipal responsibility for beaches, municipal planning, stormwater, waste management, public amenities, local tourism and public places (Schedules 4B and 5B). Provides the constitutional basis for municipal coastal management functions.
Local Government: Municipal Systems Act 32 of 2000	Provides the framework for municipal governance, planning and service delivery.	Requires integration of coastal management into the IDP and supports the development and enforcement of municipal By-Laws relevant to the coastal zone.
Local Government: Municipal Structures Act 117 of 1998	Defines municipal powers and functions.	Confirms local government responsibilities relevant to coastal planning, infrastructure provision, waste management and tourism promotion.
Local Government: Municipal Finance Management Act 56 of 2003	Regulates municipal financial management and accountability.	Provides the framework for budgeting, funding and financial controls required for implementing coastal management actions and infrastructure programmes.
National Environmental Management Act 107 of 1998 (NEMA)	Establishes principles for environmental management and cooperative governance.	Requires sustainable development principles to be incorporated into municipal planning and decision-making; provides enforcement mechanisms and compliance tools relevant to coastal management.
National Environmental Management: Integrated Coastal Management Act 24 of 2008 (ICMA), as amended	Provides the primary legal framework for integrated coastal management.	Requires preparation, review and implementation of Municipal CMPs; regulates coastal public property, coastal protection zones, estuaries, coastal access and coastal management lines.
ICMA: Coastal Waters Discharge Permit Regulations (2018)	Regulates the discharge of effluent into coastal waters.	Municipalities are responsible for identifying and reporting non-compliant discharges and aligning stormwater and wastewater management with coastal water quality objectives.
ICMA: Dumping at Sea Regulations (2016)	Regulates dumping activities in coastal waters.	Municipal role relates to monitoring, reporting illegal dumping and cooperative enforcement with DFFE.
National Estuarine Management Protocol (NEMP)	Provides guidance for coordinated estuary management through Estuarine Management Plans (EMPs).	Informs municipal participation in estuary planning, access management and coordination with provincial and national authorities.
NEMA: Environmental Impact Assessment Regulations (as amended)	Regulates environmental authorisation for listed activities.	Requires municipal participation in EIA processes to ensure alignment with spatial planning, coastal risk management and municipal development objectives.
NEM: Control of Use of Vehicles in Coastal Areas Regulations (2014)	Regulates vehicle access in sensitive coastal environments.	Municipal role includes monitoring, reporting contraventions and supporting enforcement by DFFE.



Legislation	Primary purpose	Relevance to municipal coastal management (KLM)
NEM: Management of Public Launch Sites in the Coastal Zone Regulations (2014)	Regulates registration and management of public launch sites.	Identifies KLM as the management authority responsible for operation, maintenance and preparation of operational plans for registered launch sites.
Marine Living Resources Act 18 of 1998 (MLRA)	Regulates the conservation and use of marine living resources.	While enforcement rests with DFFE, municipal coordination, reporting of illegal activities and support for access management are relevant.
National Environmental Management: Protected Areas Act 57 of 2003	Provides for declaration and management of protected areas.	Applies to local authority nature reserves and informs land-use planning adjacent to protected coastal areas.
National Environmental Management: Biodiversity Act 10 of 2004	Provides for biodiversity conservation and sustainable use of biological resources.	Informs biodiversity planning, management of Critical Biodiversity Areas and alignment with spatial planning instruments.
National Environmental Management: Waste Act 59 of 2008	Regulates waste management and pollution prevention.	Guides municipal waste management practices affecting coastal and estuarine environments.
National Water Act 36 of 1998	Regulates protection and use of water resources.	Relevant to estuaries, stormwater management, wastewater discharges and catchment-coastal linkages.
Spatial Planning and Land Use Management Act 16 of 2013 (SPLUMA)	Establishes a national framework for spatial planning and land-use management.	Requires coastal considerations, environmental sensitivity and risk to be incorporated into SDFs, land-use schemes and development decision-making.
National Heritage Resources Act 25 of 1999	Protects cultural and heritage resources.	Relevant to management of coastal heritage sites, archaeological resources and heritage-based tourism planning.
Criminal Procedure Act 51 of 1977	Regulates enforcement and prosecution procedures.	Provides the legal basis for peace officer designation, inspections, notices and prosecution of By-Law and environmental offences.



3.2 NATIONAL AND PROVINCIAL POLICIES AND PROGRAMMES

A range of national and provincial policies and programmes inform coastal management within the KLM. These instruments provide strategic direction, set priorities for coastal protection and sustainable use and guide alignment between municipal planning, provincial implementation and national objectives.

At a national level, policies focus on integrated coastal management, climate change adaptation, biodiversity conservation, pollution management and public access to the coast. Provincial policies translate these priorities into regionally specific strategies relevant to the Eastern Cape context, including biodiversity planning, climate response and waste management.

Collectively, these instruments establish the strategic and policy context within which the KLM CMP is developed and implemented.

Table 3.2 provides a summary of the National and Provincial policies and programmes that are relevant to coastal management in the KLM.

Table 3.2: National and Provincial policies and programmes relevant to coastal management

Policy / Programme	Sphere	Relevance to the KLM CMP
Draft National Coastal Management Programme (2025)	National	Sets updated national priorities and objectives for integrated coastal management, informing the thematic structure of the CMP.
National Coastal Management Programme (2015)	National	Provides the overarching framework for municipal CMPs, including coastal access, estuary management, pollution and enforcement.
National Estuarine Management Protocol (2021)	National	Guides coordinated estuary management and informs municipal participation in EMPs.
National Coastal Access Strategy	National	Supports equitable public access to coastal public property and informs coastal access planning.
National Strategy for Coastal Awareness, Education and Training	National	Provides direction for education and awareness initiatives within the coastal zone.
White Paper for Sustainable Coastal Development (2000)	National	Establishes foundational principles for integrated coastal management in South Africa.
National Climate Change Adaptation Strategy (NCCAS)	National	Informs climate risk integration into coastal planning and management.
National Waste Management Strategy (2020)	National	Guides waste minimisation and pollution control relevant to coastal and estuarine environments.
Policy for the Small-Scale Fisheries Sector (2012)	National	Provides context for small-scale fisheries livelihoods addressed within the CMP.
Eastern Cape Coastal Management Programme (2014)	Provincial	Translates national coastal priorities to the provincial context and informs municipal alignment.
Eastern Cape Biodiversity Conservation Plan (2019)	Provincial	Identifies CBAs and ESAs that inform spatial planning and biodiversity management in the coastal zone.
Eastern Cape Climate Change Response Strategy (2011)	Provincial	Provides regional climate adaptation context relevant to coastal risk management.
Eastern Cape Provincial Integrated Waste Management Plan (2022–2026)	Provincial	Guides waste management practices affecting the coastal zone.

3.3 SARAH BAARTMAN DISTRICT MUNICIPALITY POLICIES AND PROGRAMMES

The KLM operates within the broader planning and governance framework of the SBDM. District-level policies and programmes provide strategic coordination across local municipalities, particularly in



relation to disaster risk management, waste management and coastal planning. These instruments inform alignment between the KLM CMP and district-level priorities, ensuring consistency across administrative boundaries.

Table 3-3 provides a summary of the SBDM policies and programmes that are relevant to coastal management in the KLM.

Table 3.3: Sarah Baartman District Municipality policies and programmes

Policy / Programme	Relevance to the KLM CMP
SBDM Coastal Management Programme (2019)	Provides district-level coastal priorities and context for municipal CMP alignment.
SBDM Integrated Development Plan (2022–2027)	Sets district development priorities relevant to coastal infrastructure, disaster risk and economic development.
SBDM Disaster Risk Management Plan (2021)	Informs coastal hazard preparedness, flooding and climate-related risk response.
SBDM Integrated Waste Management Plan (2024)	Guides waste management practices affecting coastal and estuarine systems.
SBDM Climate Change Response Framework (2014)	Provides district-scale climate adaptation context relevant to coastal planning.

3.4 KOUGA LOCAL MUNICIPALITY POLICIES, PROGRAMMES AND BY-LAWS

At the local level, the KLM CMP must be fully integrated with existing municipal policies, sector plans and By-Laws. These instruments provide the operational and regulatory mechanisms through which coastal management objectives are implemented in practice.

Alignment with municipal planning instruments ensures that coastal considerations are embedded in land-use decision-making, infrastructure provision, environmental management and enforcement activities.

Table 3-4 below provides a summary of the KLM policies, programmes and By-Laws that are relevant to the implementation of the KLM's coastal management mandate.

Table 3.4: Table 3-4: KLM policies, programmes and By-Laws

Policy / Programme / By-law	Relevance to the KLM CMP
Kouga Integrated Development Plan (2022–2027)	Primary strategic planning instrument guiding municipal priorities and projects.
Kouga Spatial Development Framework	Integrates coastal constraints, biodiversity priorities and risk into spatial planning.
Kouga Land Use Scheme (2021)	Regulates land use and development within the coastal zone.
Kouga Climate Change Strategy (2022)	Guides climate adaptation and resilience measures relevant to coastal areas.
St Francis Bay Draft LSDF (2024)	Provides local-scale spatial guidance for coastal development and conservation.
Jeffreys Bay Draft LSDF (2024)	Addresses coastal growth pressures, access and environmental sensitivity.
Integrated Waste Management Plan (2024)	Guides waste management and pollution prevention affecting the coast.
Integrated Economic Growth Strategy (2024)	Identifies opportunities for coastal livelihoods and local economic development.
Disaster Risk Management Plan	Informs response to coastal hazards such as flooding and storm surge.
Coastal Management By-law	Provides the regulatory framework for coastal activities, access, protection and enforcement.



Policy / Programme / By-law	Relevance to the KLM CMP
Spatial Planning and Land Use Management By-law	Supports implementation of SPLUMA within coastal areas.
Public Amenities By-law	Regulates use and management of public coastal spaces.
Solid Waste Disposal / Waste Management By-laws	Address waste control and pollution prevention in coastal areas.
Stormwater Management By-law	Regulates stormwater systems that discharge into the coastal zone.
Heritage Plan (2015)	Guides protection and management of coastal heritage resources.



4 SITUATION ASSESSMENT

The Situation Assessment for the KLM coastline has been structured to align with the 2025 NCMP's state of the coast reporting indicators. A literature review was undertaken to ascertain the current state of the KLM coast in terms of the State of the Coast Reporting indicators. A site assessment was also conducted on the 14th and 15th August 2025 to verify the literature review.

4.1 THEME 1: COASTAL ACCESS

The coastal zone of the KLM supports a diverse range of recreational, economic and cultural activities and is a central aspect of the local tourism economy. Coastal access involved activities such as swimming, surfing, shore-based angling, boating, hiking, cycling, wildlife viewing and nature-based tourism. It also supports seasonal commercial fisheries, including the chokka (squid) fishery between Oyster Bay and Cape St Francis, which contributes to local employment and regional economic activity.

The KLM coastline comprises extensive sandy beaches, rocky and mixed shorelines, estuarine environments and dynamic dune systems. These landscapes are environmentally sensitive and geomorphologically active, requiring careful management of public access to balance recreational demand with ecological protection.

Access is generally well established at the primary coastal nodes of Jeffreys Bay, St Francis Bay and Cape St Francis where infrastructure, road connectivity and tourism services are concentrated. Outside of these nodes, access is more limited due to private land ownership, protected areas, farming land, sensitive dune systems and infrastructure constraints. Large portions of the coastline are not suited to intensive access development, as recognised in the KLM Spatial Development Framework (SDF).

Through the scoping phase, the outcomes indicate that coastal access challenges are less about the absence of planning tools and more about the uneven distribution, capacity, condition and management of access infrastructure relative to demand.

4.1.1 Existing Coastal Access Patterns

The main coastal nodes are accessible via the national and regional road network (N2, R102 and R330). Oyster Bay is the only settlement between the Tsitsikamma Estuary and Van Stadens with direct tarred road access to the coast.

Public access between the Tsitsikamma Estuary and Oyster Bay is limited due to private land, protected areas and challenging terrain. Between Oyster Bay and Cape St Francis, vehicle access is largely restricted, with most movement occurring along the shoreline on foot or by bicycle.

Access to Paradise Beach is dependent on the Seekoei Estuary causeway, which is periodically flooded, temporarily isolating parts of the coastline and increasing pressure on alternative routes. Maintenance and upgrades to this causeway are underway (Figure 4.1).



Figure 4.1: Maintenance and repairs currently underway on the causeway crossing the Seekoei estuary

Overall, coastal access is spatially concentrated, with peripheral areas experiencing constrained or informal access patterns.

4.1.2 Formal and Informal Pedestrian Access

Formal pedestrian access points are typically associated with public parking areas, amenity nodes and structured beach facilities. Eight principal public parking and amenity nodes provide marked pedestrian entrances, with some including ablutions and boardwalks. Formal boardwalks and hardened access structures exist at selected locations (e.g. Kabeljous Beach, Albatross Beach and other key nodes), intended to channel pedestrian movement and reduce disturbance to dune systems (Figure 4.2 and Figure 4.3).



Figure 4.2: Hardened boardwalks at Kabeljous Beach



Figure 4.3: Hardened boardwalk and signage at Kabeljous Beach

However, only approximately eight formal beach entry points are distributed along the KLM coastline, which is disproportionate to the intensity and extent of recreational use.

A wheelchair-accessible boardwalk at Kabeljous Beach exists but is currently non-functional due to sand burial, highlighting maintenance challenges in dynamic dune environments.

In contrast to the limited number of formal access points, more than 100 informal pedestrian routes have developed across dune systems and undeveloped coastal land. These include dune-top footpaths, cut-throughs from residential areas, informal stairways and shortcut trails.

The scoping assessment identified:

- At least 17 informal dune-top footpaths in Oyster Bay (Figure 4.4).
- Approximately 51 informal routes between Cape St Francis and St Francis Bay.
- Approximately 49 informal tracks between Paradise Beach (Figure 4.5) and Aston Bay.
- High concentrations between Pellsrus and the Kabeljous Estuary mouth (Figure 4.6).



Figure 4.4: Informal access points in Oyster Bay

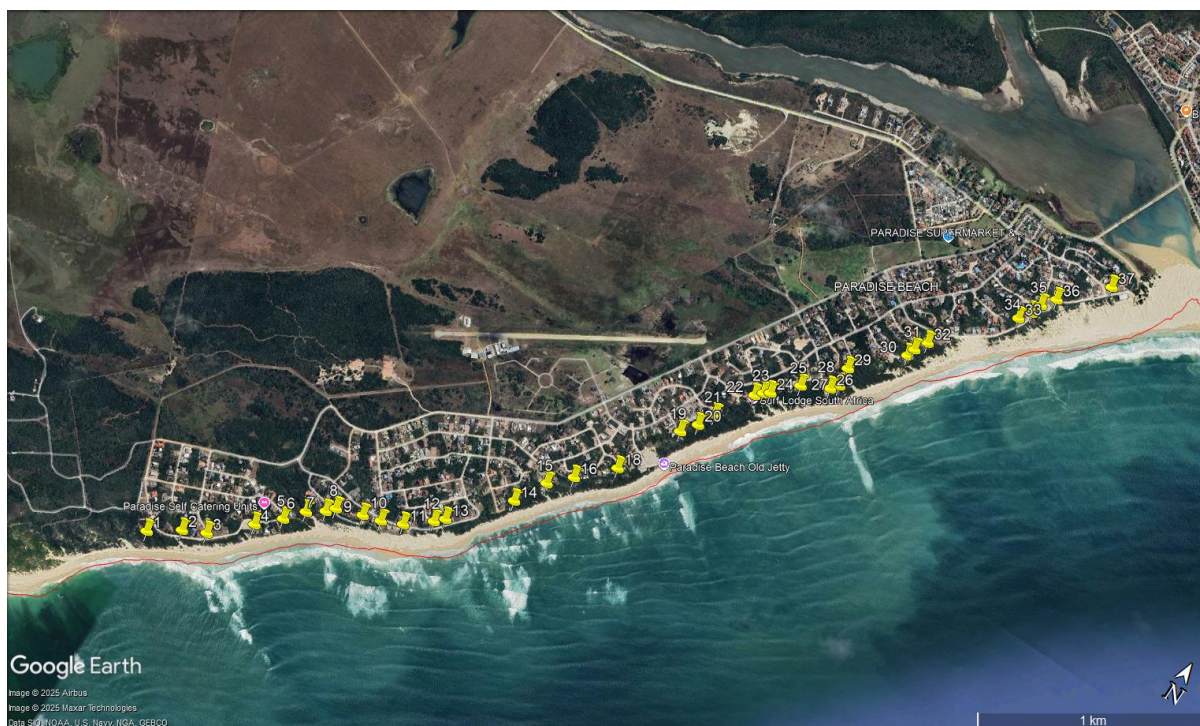


Figure 4.5: Informal access points in Paradise Beach

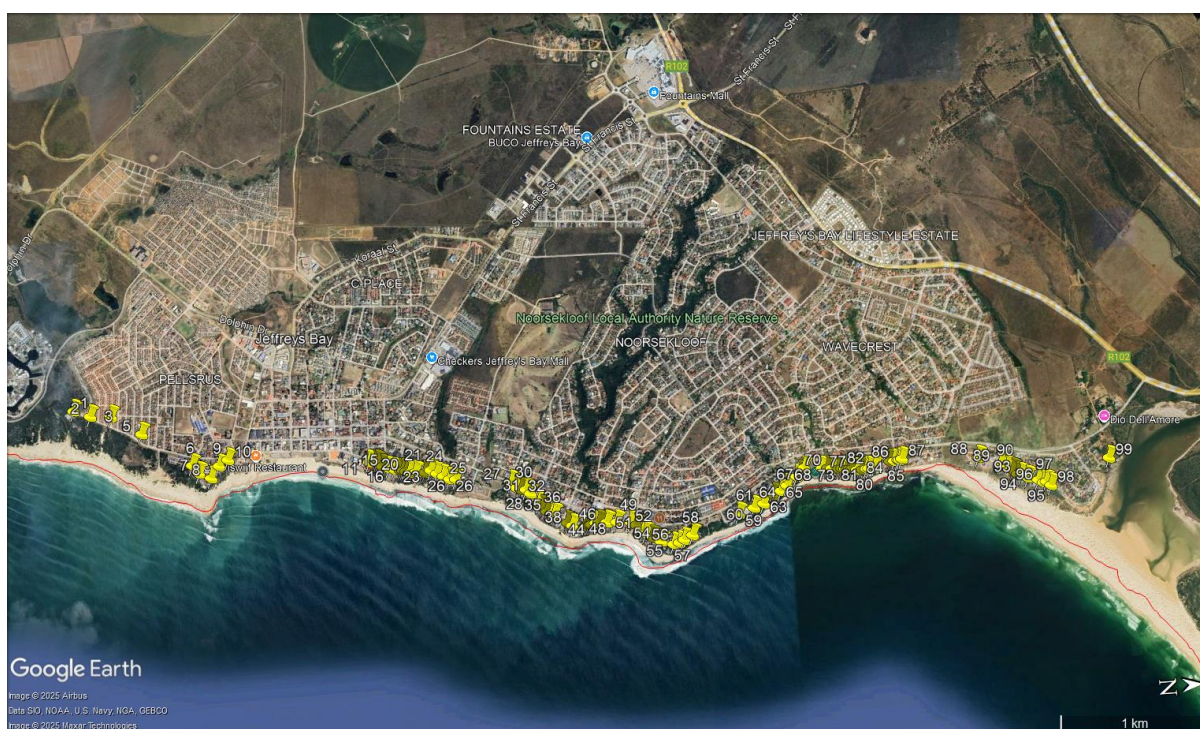


Figure 4.6: Informal access points in Jeffreys Bay

These informal routes are a primary driver of dune degradation (Figure 4.7). They remove vegetation cover, destabilise foredunes, increase wind scour and contribute to blowouts and erosion. The high number of informal routes reflects:

- Limited formal access points.
- Uneven infrastructure distribution.
- Inconsistent maintenance.
- Convenience-driven behaviour.
- Limited enforcement and awareness.



Figure 4.7: An example of where an informal footpath is exacerbating dune erosion

The uneven distribution between formal and informal access represents one of the most significant access management challenges in the KLM.

4.1.3 Coastal Public Amenities and Infrastructure

Public amenities facilitate structured and safe access but vary significantly in quality, capacity and condition.

Parking and Road Access

Formal parking areas are located at major nodes including Jeffreys Bay Main Beach, Pellsrus, Seal Point Boulevard, Marina Martinique, Kabeljous and Gamtoos estuary mouths. However:

- Several parking areas are undersized relative to peak-season demand.
- Some are poorly surfaced or affected by sand inundation.
- Infrastructure located within dynamic dune systems requires ongoing maintenance.
- Flooding of the Seekoei causeway affects connectivity.

Ablution Facilities

Ablutions are generally associated with formal nodes, but several are in poor condition or lack adequate water supply and lighting. Some are located within shifting dune systems, increasing maintenance burdens. Informal access routes lack facilities, contributing to unmanaged environmental impacts.

Waste, Signage and Safety Infrastructure

Waste infrastructure is limited to high-use nodes and is inconsistent elsewhere. Informal access points generally lack bins, contributing to litter accumulation in dune systems.

Signage relating to environmental sensitivity, access rules and safety is inconsistent in location and quality.

Safety infrastructure includes:

- Permanent lifeguard tower at Cape St Francis (Figure 4.8).
- Seasonal lifeguard services at key beaches.



- Pink rescue buoys at certain swimming beaches.

However, coverage is uneven, and smaller beaches and informal access points lack safety infrastructure.



Figure 4.8: Permanent lifeguard tower at Cape St Francis beach

Environmental Maintenance Authorisation

An Environmental Maintenance Management Plan (MMP) authorisation has been issued for the coastal area between Kromme and Kabeljous beaches, and also for Cape St Francis Bay. This provides a framework for routine maintenance, limited upgrades, sand removal and estuary-related interventions, including parking reconfiguration at Aston Bay. This authorisation is a key enabling mechanism for structured access management.

4.1.4 Public Launch Sites and Boating Access

Public launch sites are critical for fishing and boating activities but are limited relative to the coastline length.

Gazetted Launch Site

There is only one gazetted Public Launch Site (PLS) in terms of the ICMA, located at Jeffreys Bay Main Beach. This site experiences congestion and safety challenges due to:

- Vehicles traversing soft sand.
- Shared use by pedestrians and surfers.
- Limited visibility at the access route.

Stakeholders have expressed concern about limited launch provision elsewhere, particularly in Oyster Bay.

Harbour and Estuarine Facilities

Port St Francis (privately owned) provides structured harbour facilities for commercial and recreational vessels. Additional formal or semi-formal launch ramps exist within estuarine and canal systems (Kromme, Marina Martinique, Kabeljous and Gamtoos).

Despite regulatory controls, informal launching occurs intermittently in some areas, indicating unmet demand or congestion at formal facilities. Therefore, launch site distribution and configuration are a safety, environmental and user-conflict issue.



4.1.5 Vehicle Use in the Coastal Zone

Vehicle use is regulated under national legislation, but unauthorised vehicle tracks have been observed, particularly in Oyster Bay dune systems (Figure 4.9) and reportedly at Gamtoos River Mouth. Vehicle impacts include:

- Fore-dune destabilisation.
- Increased erosion.
- Habitat disturbance.
- Risks to sensitive species such as the African Black Oystercatcher.
- User conflict and safety concerns.



Figure 4.9: Illegal tracks noted in 2023 satellite imagery in Oyster Bay.



Figure 4.10: A vehicle illegally driving in the coastal zone

As an outcome of the scoping stakeholder engagement process, the issue appears to be linked to enforcement capacity and clarity around authorised activities rather than the absence of regulation.

4.1.6 Recreational Use and User Interaction

The KLM coastline supports diverse recreational activities:

- Surfing (national and international significance at Jeffreys Bay).
- Swimming and beach recreation.
- Shore-based and estuarine fishing.
- Kayaking, canoeing and sailing.
- Hiking and cycling along coastal trails.
- Wildlife viewing.



- Camping and day-use recreation.
- Horse riding and cultural tourism.

Recreational intensity is seasonal and spatially concentrated. High-use beaches experience infrastructure pressure and user conflict, particularly during peak holiday periods. Stakeholders reported increasing interaction between surfers, swimmers, paddlers, cyclists and vehicles in constrained spaces. These interactions reflect growing intensity and diversification of coastal use rather than isolated behavioural issues.

4.1.7 Planning and Governance Context

Coastal access is facilitated through the Land Use Scheme, LSDFs and development control mechanisms. Beaches and estuarine fringes are generally zoned as Public Open Space, enabling public access. However, informal access routes persist despite planning intent, indicating a gap between spatial policy and physical outcomes. The Coastal Management By-Law provides authority to regulate vehicle use, designate access points and manage public amenities, but implementation and enforcement remain constrained.

The key challenge is therefore governance and implementation capacity rather than regulatory absence.

4.1.8 Key Issues and Risks

The principal issues identified include:

- Proliferation of informal access routes.
- Uneven distribution and limited capacity of formal infrastructure.
- Vehicle intrusion into sensitive environments.
- Concentration of launch facilities creating congestion and safety risks.
- Seasonal user conflict in high-intensity areas.
- Ecological sensitivity of dune and estuarine systems.
- Gap between planning intent and implementation.
- Community perceptions of unequal access provision.

These access-related pressures intersect with biodiversity conservation, estuary management, spatial planning, pollution control and enforcement capacity.

4.2 THEME 2: ESTUARY MANAGEMENT

Although the KLM contains a relatively small number of estuarine systems, these systems are ecologically significant and highly sensitive to cumulative pressures. Estuaries within the municipality perform critical ecological and socio-economic functions, including:

- Habitat provision for fish, birds and invertebrates.
- Nutrient cycling and productivity.
- Flood attenuation and sediment trapping.
- Support for recreational and subsistence fisheries.
- Tourism and recreation (boating, birdwatching, angling).
- Cultural and heritage value.

The effective management of estuaries requires coordination across water resource management, spatial planning, biodiversity conservation, pollution control and fisheries governance. In South Africa, this coordination is achieved through the development and implementation of Estuarine Management



Plans (EMPs) in accordance with the National Estuarine Management Protocol (NEMP) under the ICMA framework.

The National Biodiversity Assessment (NBA, 2025) identifies seven estuaries within the KLM (Figure 4.11). These systems vary in ecological condition, biodiversity value and management complexity. The overall pattern indicates that while some systems remain relatively intact, several are in a degraded ecological state due to interacting anthropogenic pressures.

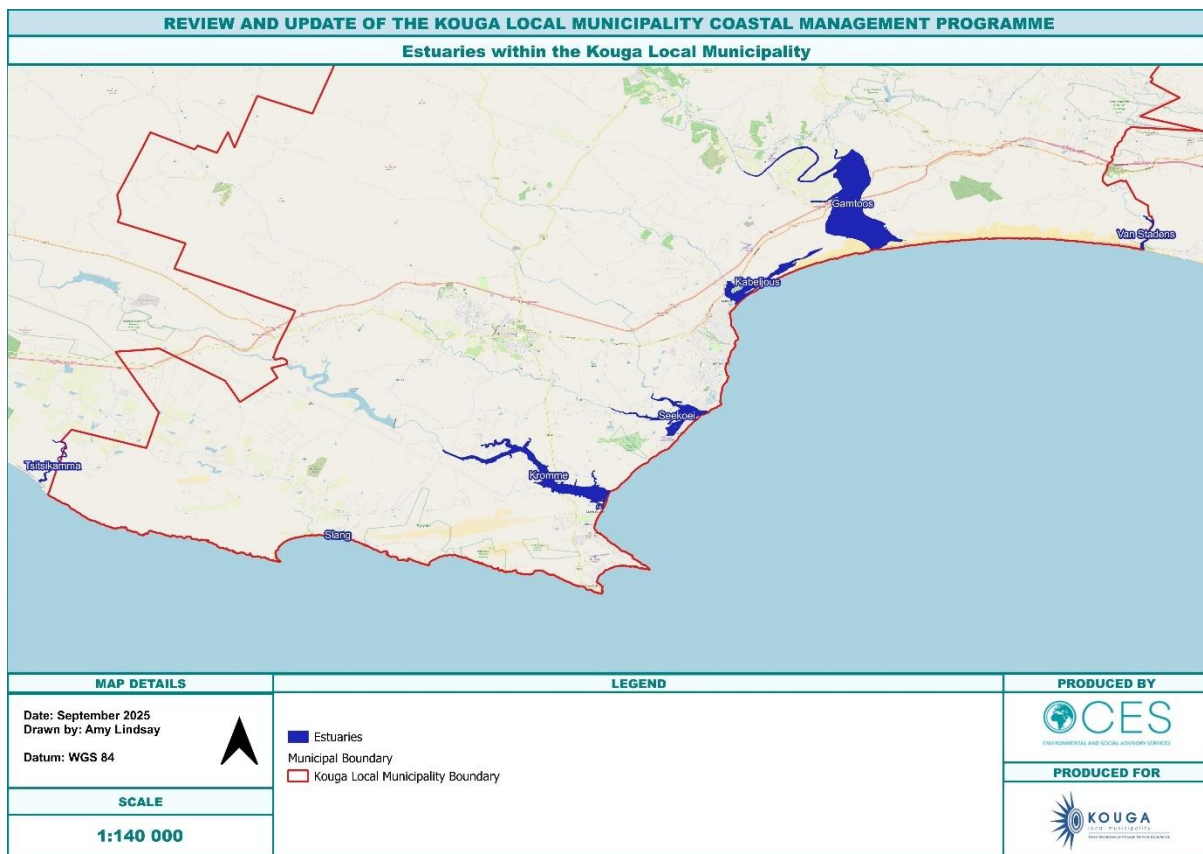


Figure 4.11: Estuaries located within the KLM (National Biodiversity Assessment, 2019)

4.2.1 State of Estuaries

The estuaries within the KLM form part of the warm temperate estuarine bioregion and include the Slang, Kromme, Seekoei, Kabeljous and Gamtoos estuaries, with the Tsitsikamma and Van Stadens estuaries occurring along the municipal boundary.

According to the NBA (2025), ecological condition ranges from Category B (largely natural) to Category E (seriously modified). The following broad trends are evident and are detailed in Table 4.1:

- Kromme and Seekoei estuaries are the most modified systems within the KLM with PES ratings of D to E in parts), reflecting the cumulative effects of altered freshwater inflows, habitat transformation, pollution and infrastructure development.
- Kabeljous and Slang estuaries are moderately modified, with PES ratings of C and C/D respectively and are subject to ongoing pressures associated with water quality, habitat loss and invasive species.
- Tsitsikamma, Van Stadens and Gamtoos estuaries remain in relatively good overall condition, with PES ratings of B or B/C. However, these systems continue to experience significant anthropogenic pressures, including catchment transformation, habitat loss, invasive species and recreations use, which require ongoing management intervention.



Table 4.1: State of the estuaries in the KLM (PES - Present Ecological State; REC - Recommended Ecological Category) (National Biodiversity Assessment, 2025)

Estuary	Estuary Type	PES	REC	Biodiversity Importance Rating	Biodiversity Priority Rating	Pressure	Restoration measures needed
Tsitsikamma	Small Temporarily Closed	B	B	Low to average	Priority (National)	Moderate flow pressure. Moderate pollution pressure.	Restore/protect base flows. Improve river water quality.
Slang	Small Temporarily Closed	C/D	C	Low to average	None.	Very high pollution pressure. High habitat loss pressure. Moderate cumulative pressure.	Improve river water quality
Kromme	Permanently Open	D	D	High <i>Presence of Zostera capensis beds.</i>	Priority (SA/CAPE)	Very High flow pressure. Very High pollution pressure. High habitat loss pressure. High fishing effort pressure. High cumulative pressure. High invasive aliens: fish. Marina development has altered natural mouth and open surface water area.	Restore/protect baseflows. restore flood attenuation ability, rehabilitate riparian areas/wetlands. control recreational activities. remove/reduce fishing pressure/bait collection. investigate eradication of alien fish.
Seekoei	Large Temporarily Closed	D/E	D	High	Priority (SA/CAPE)	High flow pressure. High pollution pressure. Very High habitat loss pressure. High fishing effort pressure. High cumulative pressure. High invasive aliens: fish. Bridges, causeways and jetties have impacted the area of intertidal salt marsh. The causeway near the mouth has resulted in flooding of habitat that would naturally have been intertidal salt marsh.	Restore/protect base flows. Improve river water quality. Restore connectivity/hydrodynamic functioning. Improve mouth management. Rehabilitate riparian areas/wetlands. Remove alien vegetation.
Kabeljous	Large Temporarily Closed	C	C	Important	None.	Moderate flow pressure. Moderate pollution pressure.	Restore/protect base flows. Improve river water quality. Remove alien vegetation.



Estuary	Estuary Type	PES	REC	Biodiversity Importance Rating	Biodiversity Priority Rating	Pressure	Restoration measures needed
						Moderate habitat loss pressure. High invasive alien: fish. High invasive alien: plants. Moderate cumulative pressure.	Investigate eradication of alien fish.
Gamtoos	Predominantly Open	B/C	B	High Important Bird Area	Priority (SA/CAPE)	Moderate flow pressure. Moderate pollution pressure. High habitat loss pressure. High fishing effort pressure. Very High invasive aliens: fish. Almost the entire catchment has been converted to agriculture and cattle farms. Nearly 90 % of salt marsh at Gamtoos has been lost to vegetable cultivation and cattle grazing.	Restore/protect baseflows. Manage/reduce stormwater & drainage from flood plain. Improve river water quality. rehabilitate riparian areas/ wetlands. Remove alien vegetation. Control recreational activities impacting on birds. Remove/reduce fishing pressure/ bait collection. investigate eradication of alien fish.
Van Stadens	Large Temporarily Closed	B	B	Low to average Important Bird Area	Priority (SA/CAPE)	Moderate flow pressure. High invasive species: plants pressure.	Restore/protect base flows. Remove alien vegetation



Across systems, the dominant pressures include:

- Altered freshwater inflows due to upstream impoundments and abstraction.
- Pollution from urban and agricultural sources.
- Habitat transformation within estuarine functional zones.
- Infrastructure development (bridges, causeways, jetties).
- High fishing effort and bait collection.
- Invasive alien plant and fish species.

In the Gamtoos Estuary, nearly 90% of salt marsh habitat has been lost to agricultural transformation. In the Seekoei Estuary, causeway construction and infrastructure have altered intertidal salt marsh processes and hydrodynamics. In the Kromme Estuary, marina development has modified mouth dynamics and open water extent.

The overall condition pattern reflects system-wide ecological decline, particularly in systems subject to intensive catchment modification and coastal development pressure.

4.2.2 Estuarine Management Plans (EMPs)

Estuarine Management Plans are the primary mechanism for coordinated estuarine governance in South Africa. Within the KLM, EMP coverage is incomplete and uneven.

Gamtoos Estuary

A draft EMP was prepared in 2008 but has not been finalised or formally adopted. The draft plan includes a zonation plan (sanctuary areas, conservation buffers, rehabilitation zones and recreational use areas) and recognises development and habitat transformation pressures within the estuarine functional zone (Figure 4.12). However, without formal adoption and implementation, the plan's regulatory and coordination value remains limited.

An EMP was developed for the Seekoei Estuary in 2018 and was updated in 2024, and outlines management objectives related to:

- Mouth dynamics;
- Freshwater inflows;
- Wetland connectivity;
- Recreational use management;
- Monitoring of ecological condition.

The Seekoei EMP includes management actions and monitoring components. However, the extent of implementation and ongoing monitoring is not clearly documented. This highlights a recurring issue across estuaries: plan preparation without consistent implementation and reporting.

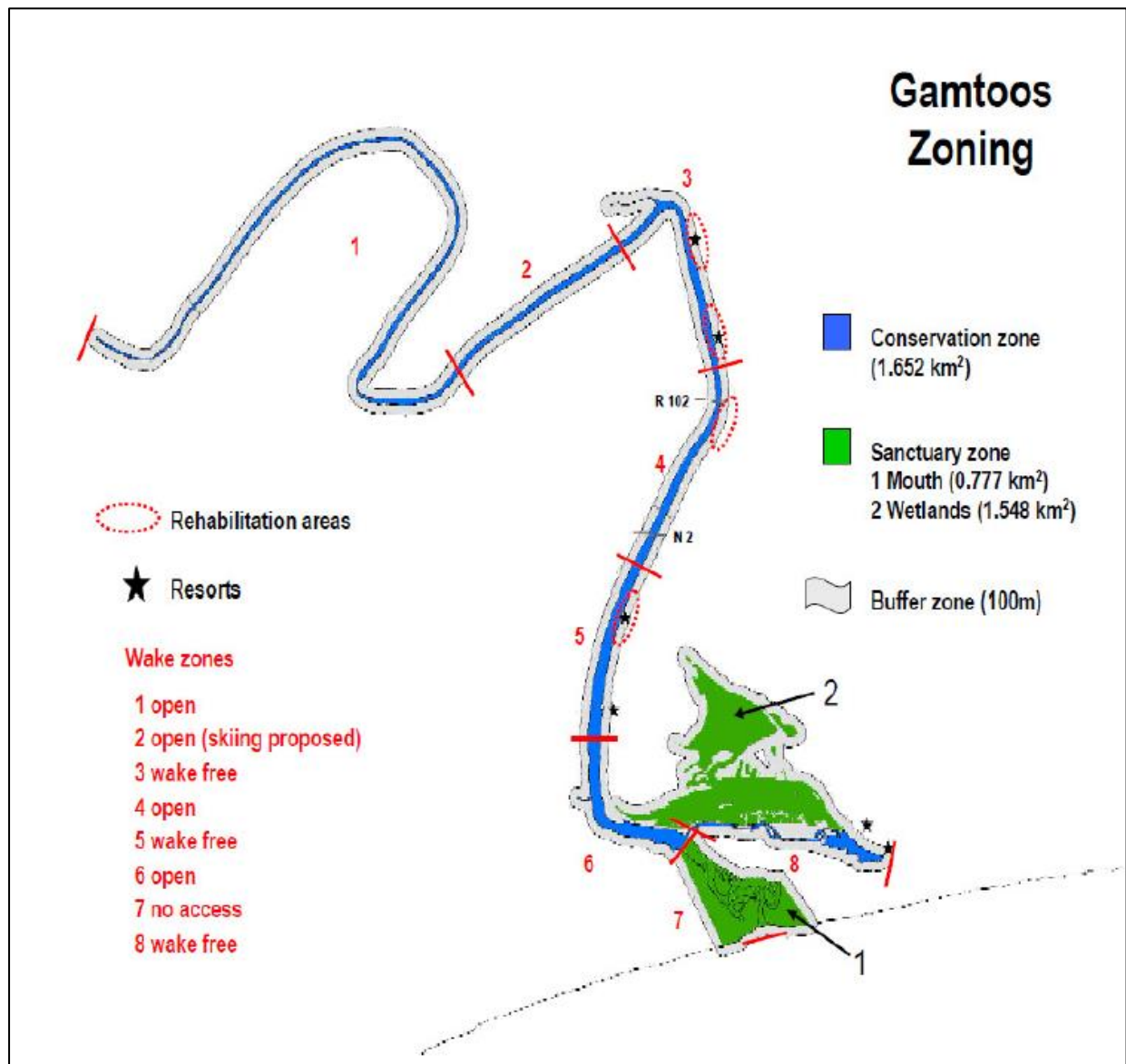


Figure 4.12: Gamtoos Estuary Zonation Plan, showing the proposed sanctuary areas, the conservation area inclusive of the 100 m riparian buffer zone, wake zones (including a preliminary skiing zone) and priority rehabilitation sites (Gamtoos Draft Estuarine Management Plan – Enviro-Fish Africa (Pty) Ltd, 2008).



Figure 4.13: Map of the Seekoei Estuary showing boundaries and points of interest.

Other Estuaries

The Kromme Estuary has an Activity Zone Map developed by the Kromme River Joint Committee, which provides spatial guidance for activities but does not constitute a comprehensive EMP aligned with the NEMP framework (Figure 4.14).

Other estuaries within the municipality do not have formally adopted EMPs.

The absence of fully implemented EMPs across all estuaries results in uneven management responses to shared pressures such as flow alteration, pollution and recreational intensity.

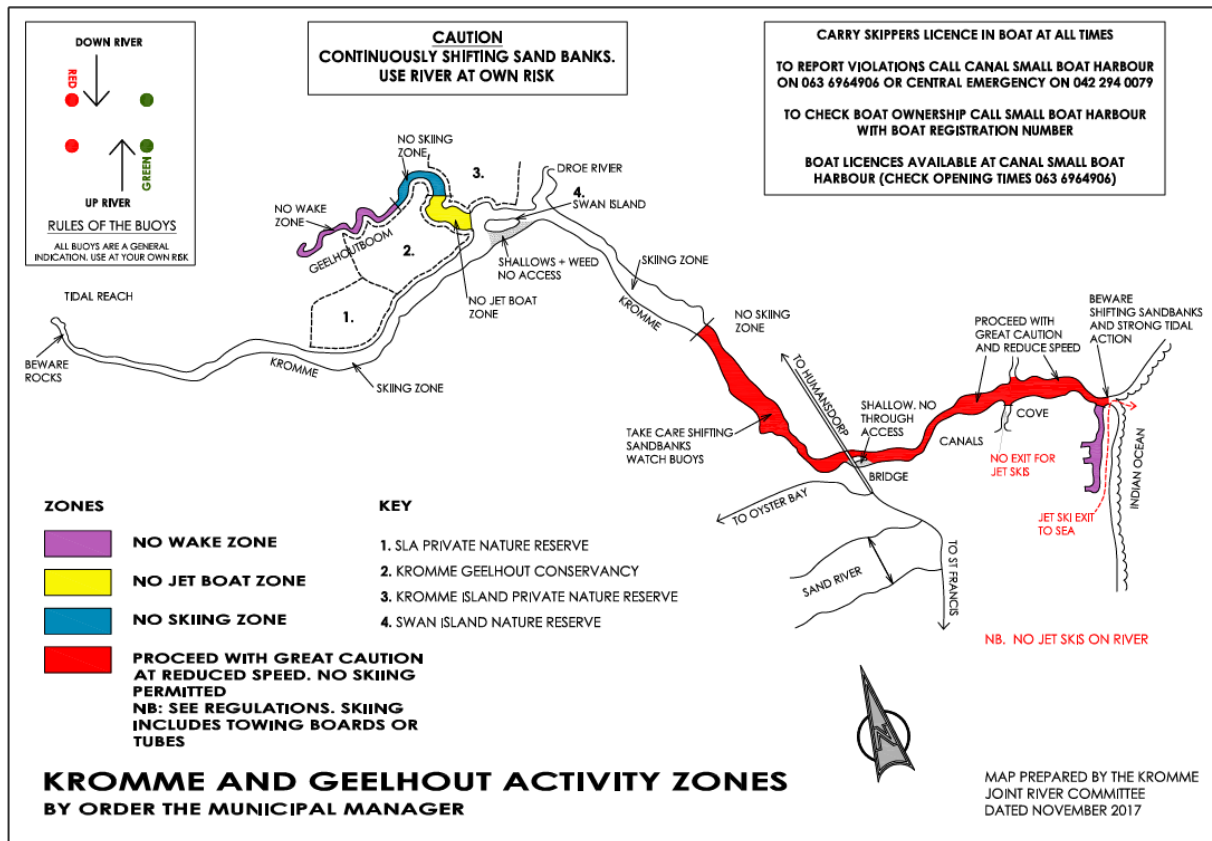


Figure 4.14: Activity Zone map for the Kromme and Geelhoutboom rivers

4.2.3 Protected and Priority Estuaries

Several estuaries within the KLM are recognised as protected or priority systems due to their biodiversity importance.

Tsitsikamma Estuary

- Present Ecological State: Category B.
- Partially protected within Huisclip Local Authority Nature Reserve.
- Supports diverse biotic communities and functions as a regional reference system.
- Vulnerable to flow modification and pollution despite current condition.

Kromme River Estuary

- Permanently open system of high conservation value.
- Identified as part of a priority ecological corridor.
- Contains sensitive habitats including *Zostera capensis* beds.
- Recognised as environmentally sensitive in the KLM SDF.
- Activity zoning exists but no formal EMP adopted.

Seekoei Estuary

- Degraded (Category D trending to E).
- Partially protected within Seekoei River Nature Reserve.
- Important wetland and waterfowl habitat.
- Heavily modified by infrastructure and altered hydrology.

Kabeljous Estuary

- Fair condition (Category C).



- Partially protected within Kabeljous River Nature Reserve.
- Important nursery area for fish and supports wetland biodiversity.
- Associated wetlands (Papiesfontein) have high ecological and cultural value.

Gamtoos Estuary

- Large and biologically diverse system.
- Partially protected within Gamtoos River Mouth Local Nature Reserve.
- Forms part of an Important Bird Area.
- Extensive habitat transformation within catchment and estuarine zone.
- Draft EMP not finalised.

Van Stadens Estuary

- Good condition (Category B).
- Important Bird Area.
- Subject to moderate flow and invasive plant pressure.

The protected and priority estuaries represent a spectrum of ecological condition and management complexity. Even degraded systems retain high biodiversity value and ecological importance, reinforcing the need for restoration-oriented management.

4.2.4 Governance and Coordination Challenges

The key estuary management challenge within the KLM is not the absence of policy, but uneven implementation and coordination. Estuary management responsibilities are shared between:

- National government (e.g.: DWS and DFFE).
- Provincial authorities (e.g.: DEDEAT).
- Local government (land use planning, public amenities, by-law enforcement).

In the absence of fully implemented EMPs and structured intergovernmental coordination mechanisms, management responses remain fragmented.

Therefore, the municipality's role is primarily facilitative and integrative, ensuring that spatial planning, pollution management, access control and enforcement align with estuarine ecological objectives.

4.2.5 Key Issues and Risks

The principal issues affecting estuaries within the KLM are systemic and cumulative:

- **Altered Freshwater Inflows:** Upstream dams, abstraction and catchment modification have altered baseflows and salinity regimes in systems such as the Kromme, Seekoei and Gamtoos. Reduced inflows affect sediment transport, mouth dynamics, productivity and habitat availability.
- **Infrastructure-Induced Hydrodynamic Change:** Bridges, causeways and jetties have modified tidal exchange and intertidal habitat extent. In the Seekoei, the causeway has altered salt marsh dynamics and flood patterns.
- **Habitat Loss and Transformation:** Agricultural expansion, urban encroachment and infrastructure development have reduced estuarine functional zones. The Gamtoos system has experienced significant salt marsh loss.
- **Water Quality Pressures:** Urban runoff, agricultural return flows and wastewater-related inputs contribute to declining water quality in several systems, influencing ecological health and recreational use.



- **Recreational and Fishing Pressure:** High recreational use during peak periods contributes to bank erosion, disturbance of birds and pressure on fish and invertebrate resources, particularly in accessible estuaries such as Gamtoos, Kabeljous and Seekoei.
- **Invasive Alien Species:** Invasive fish and plant species are significant pressures in several systems, altering habitat structure and ecological functioning.
- **Cumulative Impacts:** The interaction of flow modification, habitat loss, pollution and recreational intensity amplifies degradation over time. Smaller and already modified systems are particularly vulnerable to cumulative stress.

4.3 THEME 3: COASTAL SPATIAL PLANNING AND CLIMATE CHANGE

Coastal spatial planning provides the primary mechanism through which land use, infrastructure development and environmental protection within the KLM coastal zone are guided over time. It establishes the spatial framework for balancing development demand, environmental sensitivity and public safety within a dynamic shoreline environment.

Climate change intensifies existing coastal processes, including shoreline erosion, storm surge, coastal flooding, dune mobility and sediment redistribution. These processes increasingly affect residential areas, tourism assets, municipal infrastructure and service networks located within low-lying and erosion-prone coastal zones.

Spatial planning and climate adaptation are interconnected. Municipal planning instruments, which include the SDF, LSDFs, Land Use Scheme and Coastal Management Line (CML), serve as the primary tools through which climate-related risk is integrated into development decision-making.

This theme assesses existing coastal development patterns, shoreline dynamics, climate hazard information and the ongoing CML delineation process, establishing the spatial and risk context required for adaptive coastal management.

4.3.1 Role of Spatial Planning in Coastal Management

Spatial planning functions as the coordinating mechanism that:

- Directs development away from environmentally sensitive and high-risk areas.
- Identifies land suitable for development, conservation or managed use.
- Guides infrastructure investment and disaster risk reduction.
- Integrates climate hazard information into land-use decisions.

In the coastal context, spatial planning must account for:

- Dynamic sediment systems.
- Erosion-prone shorelines.
- Estuarine functional zones.
- Flood-prone lowlands.
- Long-term sea-level rise projections.

Within the KLM, coastal spatial planning is guided by a number of planning tools, including the Municipal SDF, LSDFs and zoning schemes. These tools translate national coastal management objectives into local development controls.

However, the effectiveness of spatial planning depends on alignment with environmental authorisations, the Coastal Management By-Law, infrastructure planning, enforcement and intergovernmental coordination.



4.3.2 Existing Coastal Development Patterns and Spatial Constraints

Development Concentration

Coastal development within the KLM is concentrated within established settlements:

- Jeffreys Bay
- St Francis Bay
- Cape St Francis
- Paradise Beach
- Aston Bay
- Pellsrus
- Oyster Bay

These nodes accommodate permanent residential areas, holiday homes, tourism infrastructure and municipal services. Large sections of coastline outside these nodes remain undeveloped and comprise agricultural land, protected areas and environmentally sensitive dune systems.

Historical Development Patterns

Much of the built environment predates contemporary coastal risk awareness. As a result:

- Infrastructure and properties are located close to active shorelines and often within the Littoral Active Zone (LAZ)
- Development has occurred within dune systems and estuarine margins.
- Setback distances are limited in older suburbs.
- Opportunities for landward retreat are constrained.

In certain areas, ad hoc dune manipulation and informal coastal protection measures have been implemented by private property owners in response to erosion risk. These interventions have further altered natural sediment processes.

Spatial Constraints

Key spatial constraints include:

- Mobile dune systems and headland-bypass dune fields.
- Narrow coastal plains.
- Estuarine flood-prone areas.
- Sediment transport corridors.

Development adjacent to the Kromme, Seekoei, Kabeljous and Gamtoos estuaries intersect with estuarine functional zones and flood risk areas. These constraints limit future expansion and complicate adaptation responses.

4.3.3 Shoreline Dynamics and Coastal Change

The KLM coastline is highly dynamic, shaped by:

- Longshore sediment transport.
- Wind-driven dune mobility.
- Episodic storm events.
- Sediment supply from rivers.
- Headland-bypass dune systems.

The main sediment pathways of the KLM coastal zone are illustrated in Figure 4.15.



Figure 4.15: The main sediment pathways of the KLM coastal zone (van der Waal, 2024).

Sediment System Modification

Historically, dune fields such as Oyster Bay, Thysbaai and Santareme facilitated west-to-east sediment transfer. However:

- Urban development and dune stabilisation have reduced dune mobility.
- Hard infrastructure has altered sediment pathways.
- Upstream dams have reduced fluvial sediment supply.

These factors have contributed to:

- Progressive beach narrowing.
- Increased erosion in some areas, and especially St Francis Bay, where beaches eroded over 70m and effectively disappeared.
- Sand inundation of infrastructure in others.

Observed Shoreline Change

Historical imagery demonstrates measurable landward shoreline movement over decades in parts of Jeffrey's Bay and St Francis Bay Figure 4.16. The morphodynamics study undertaken for the Dune Maintenance Management Plan (DMMP) confirms:

- Sandy shorelines are inherently dynamic.
- Erosion and accretion patterns vary spatially.
- Sand inundation and erosion may occur simultaneously in different locations Figure 4.17 and Figure 4.18).



Figure 4.16: Historical images for the Jeffreys Bay main beach from 1942 to 2023. The blue arrows are all equal size and indicate a substantial reduction in beach width.



Figure 4.17: Examples where sand inundation is affecting properties and infrastructure located within the LAZ.



Figure 4.18: An example of coastal erosion where the foredune is being eroded by storm surges

The study recommends high-resolution monitoring, including:

- Aerial and LiDAR imagery.



- Digital terrain models.
- Fixed-point photography.
- Repeated beach profile surveys.

Understanding shoreline dynamics provides the physical foundation for climate risk assessment and CML delineation.

4.3.4 Climate Change Drivers and Coastal Hazard Context

Climate change–related sea-level rise, together with changes in storm intensity and wave climate, is projected to increase both short-term and long-term coastal erosion risk along the KLM coastline.

Short-term erosion risk modelling simulates shoreline response to extreme storm events, incorporating wave run-up, storm surge and local coastal characteristics. The results indicate that sections of Marina Martinique, St Francis Bay and Jeffreys Bay contain infrastructure located within high and very high short-term erosion risk zones (Figure 4.19 and Figure 4.20). During severe storm events, these areas may experience rapid beach erosion and temporary or permanent loss of foredune stability, increasing exposure of adjacent properties and infrastructure.

Long-term erosion risk modelling, based on projected shoreline retreat associated with sea-level rise, indicates that portions of the existing built environment fall within medium to very high long-term recession risk areas (Figure 4.21). Unlike short-term storm-related erosion, long-term shoreline retreat represents a progressive and largely irreversible landward shift of the shoreline over extended timeframes. This has significant implications for spatial planning, infrastructure investment and long-term development viability within affected coastal nodes.



Figure 4.19: Short-term coastal erosion risk lines along a section of Marina Martinique.

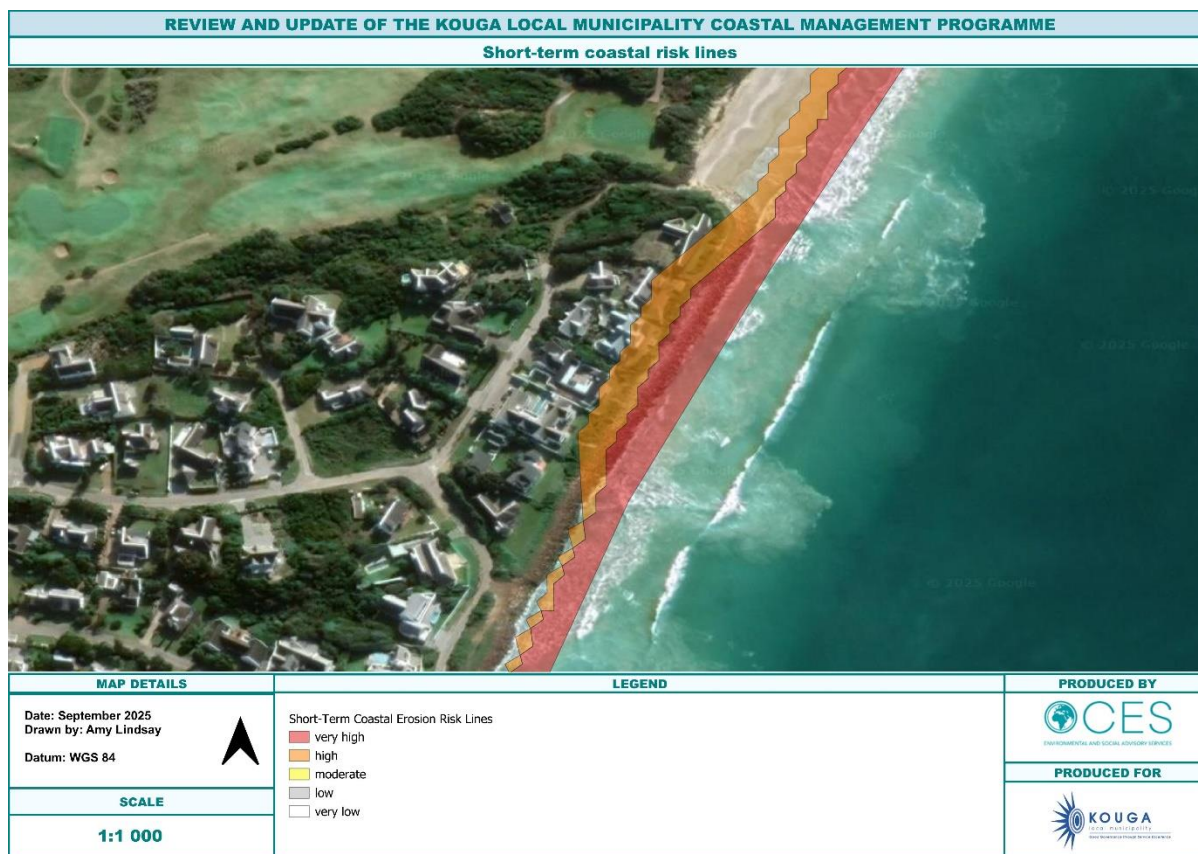


Figure 4.20: Short-term coastal erosion risk lines along a section of St Francis Bay.

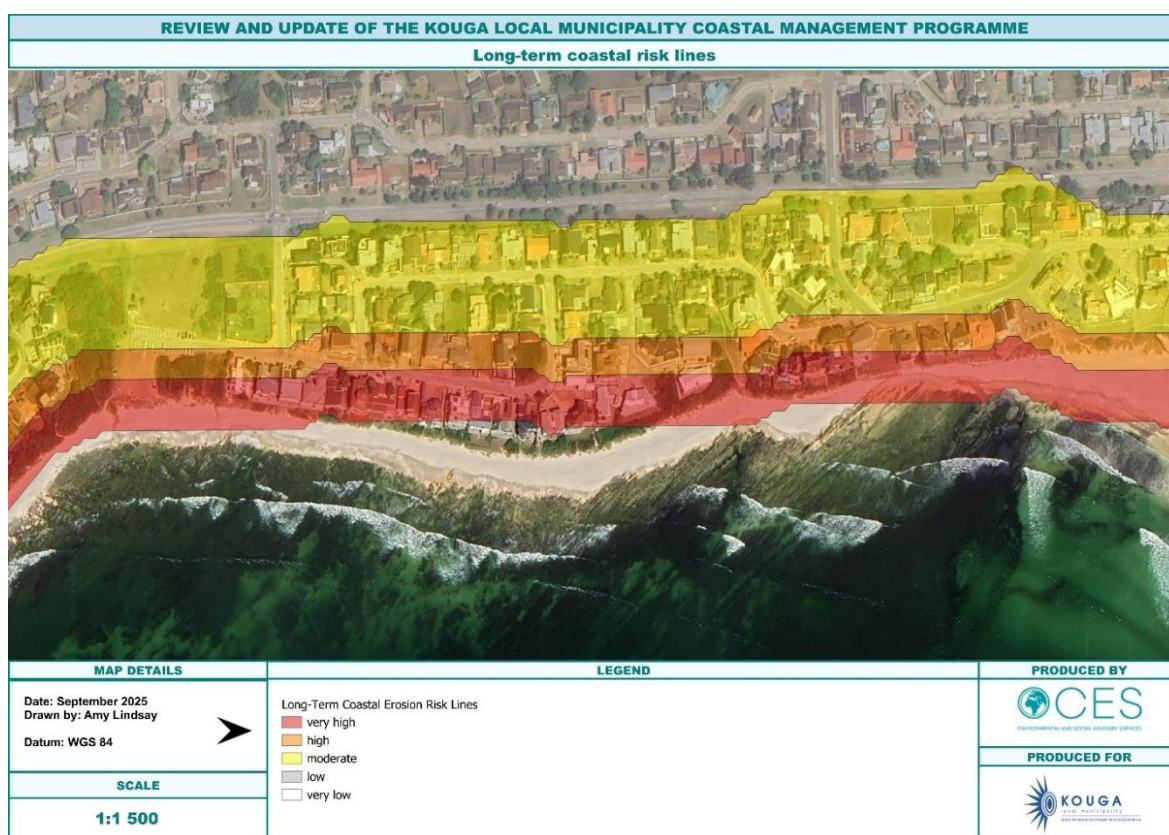


Figure 4.21: An example in Jeffreys Bay where infrastructure is located within long-term coastal erosion risk areas.



Together, these findings highlight the importance of integrating both event-driven and progressive erosion risk into spatial planning and Coastal Management Line delineation processes.

Coastal Flooding

Flood hazard modelling incorporating storm surge, wave run-up and sea-level rise indicates:

- High and very high flood risk zones in Cape St Francis, St Francis Bay (Figure 4.22) and parts of Jeffreys Bay.
- Increased vulnerability in low-lying estuary-adjacent areas.
- Interaction between stormwater discharge and flood hazards.



Figure 4.22: Infrastructure at Cape St Francis that is located in very high, high and moderate coastal flood hazard risk zones.

Municipal Risk Context

The KLM IDP identifies coastal erosion and flooding as priority risks affecting infrastructure and economic activity. Stakeholders have noted:

- Increased storm-related damage.
- Loss of recreational beach space.
- Escalating maintenance costs.
- Uncertainty regarding future development viability.

Hazard lines serve as strategic planning tools rather than site-specific regulatory boundaries but are essential for risk-informed spatial decision-making.

4.3.5 Wildfire as a Climate-Related Coastal Risk Multiplier

Recent significant wildfire events within the KLM have highlighted the growing relevance of fire risk within the broader context of coastal spatial planning and climate change adaptation. Although wildfire response and suppression fall primarily within the mandate of disaster management and fire



protection authorities, the ecological and geomorphological consequences of fire events have direct implications for dune stability, estuarine health and long-term coastal resilience.

Therefore, wildfire should be recognised as a climate-related risk multiplier within the coastal zone, that interacts with existing coastal processes and hazard exposure.

Interaction between wildfire, vegetation and coastal systems

The KLM coastal zone includes extensive dune systems, coastal thicket mosaics, riparian corridors and estuarine functional zones. These ecosystems perform critical functions, including stabilising sediments, buffering infrastructure from wind and storm impacts, supporting biodiversity and maintaining hydrological connectivity between catchments and the marine environment.

Vegetation within dune systems plays a particularly important stabilising role. However, both invasive alien species and certain dense indigenous vegetation types may contribute to elevated wildfire risk where fuel loads accumulate, particularly at the urban–dune interface.

Invasive alien plant species, including *Acacia* and *Eucalyptus* species commonly occurring in disturbed coastal areas, are associated with:

- Increased biomass and fuel continuity.
- Higher flame intensity and rate of spread.
- Altered natural fire regimes.
- Rapid post-fire regeneration that perpetuates fire–invasion cycles.

Within dune systems and riparian corridors, alien-dominated vegetation can intensify fire behaviour, increasing damage to adjacent infrastructure and amplifying post-fire erosion. The disturbance created by fire may further facilitate invasive species establishment, reducing long-term ecosystem resilience.

Even indigenous vegetation may contribute to heightened fire risk where dense coastal thicket or shrubland occurs immediately adjacent to residential development, particularly where natural fire return intervals have been altered, or vegetation has matured without appropriate ecological management. In high-wind coastal environments, fire spread across dune crests and headland-bypass systems can be rapid and unpredictable.

The expansion of development into historically dynamic dune systems has, in some areas, increased exposure at the urban–dune interface. This spatial relationship between vegetated dune systems and built infrastructure introduces an additional layer of climate-related risk that must be considered within coastal spatial planning processes.

Post-fire impacts on coastal dynamics

Wildfire-induced loss of vegetation cover within dune systems reduces root binding and surface roughness, increasing susceptibility to:

- Wind erosion.
- Sand mobilisation and blowout formation.
- Landward dune migration.
- Accelerated sediment transport.

In areas where dune systems form part of regional sediment transfer corridors, repeated fire disturbance may influence longer-term shoreline behaviour. In addition, burnt catchments are more vulnerable to erosion during subsequent rainfall events, contributing ash, nutrients and fine sediments to estuaries such as the Kromme, Seekoei, Kabeljous and Gamtoos. These inputs may affect water quality, fish nursery habitats and wetland functioning.



Therefore, wildfire interacts with other coastal risk drivers, including shoreline erosion, estuarine sedimentation and infrastructure exposure.

Climate change context

Climate projections for the Eastern Cape indicate increased climate variability, including extended dry periods interspersed with intense rainfall events. Such conditions may elevate wildfire frequency and intensity, particularly where invasive vegetation has accumulated.

Within this context, wildfire represents a secondary but significant climate-related driver that amplifies erosion, sediment transport and ecological degradation within the coastal zone. Recognising this interaction strengthens the adaptive capacity of coastal planning instruments and aligns with the ecosystem-based adaptation principles embedded in the National Coastal Management Programme (2025) and the Eastern Cape Coastal Management Programme (2025).

Implications for spatial planning and coastal management

While the Coastal Management Line (CML) delineation process is primarily informed by erosion and flood hazards, post-fire dune destabilisation should be recognised as a contributing factor influencing coastal risk in certain areas.

Within the scope of the CMP, wildfire risk should inform:

- Avoidance of further development within fire-prone vegetated dune and thicket areas.
- Protection and maintenance of natural coastal buffers that reduce wind erosion and sand mobility.
- Prioritised clearing of invasive alien vegetation within dune systems, estuarine buffers and coastal public open spaces.
- Integration of fire risk considerations into biodiversity and invasive species management.
- Monitoring of estuarine sedimentation and water quality following significant fire events.
- Identification of post-fire dune rehabilitation needs and stabilisation interventions.
- Coordination with municipal disaster management structures and Fire Protection Associations to ensure that coastal ecological considerations inform fire planning and response strategies.

Vegetation management interventions must remain ecologically informed to avoid inappropriate clearing that could in itself destabilise dune systems. Therefore, a balanced, ecosystem-based approach is required, integrating biodiversity conservation with climate resilience and hazard reduction.

Wildfire events within the KLM illustrate the interconnected nature of vegetation dynamics, climate variability and coastal process stability. Although wildfire suppression lies outside the direct mandate of the CMP, its ecological and geomorphological consequences directly influence dune stability, estuarine functioning and infrastructure exposure. Recognising wildfire as a climate-related coastal risk multiplier, particularly in relation to vegetation management at the urban–dune interface, strengthens the strategic relevance of the CMP and supports a precautionary, adaptive and ecosystem-based approach to coastal spatial planning.

4.3.6 Coastal Management Line (CML) Delineation

Section 25 of the ICMA enables the establishment of Coastal Management Lines (CML) to guide development in vulnerable coastal areas. CMLs:

- Identify areas exposed to coastal hazards.
- Inform land-use planning and development control.
- Are not automatic prohibitions on development.
- Function as risk-informed spatial references.



Lessons from Other Municipalities

Experience elsewhere indicates that:

- Biophysical-only approaches encounter public resistance.
- Socio-economic context must be integrated.
- Early stakeholder engagement improves acceptance.
- CMLs must align with existing planning instruments.

The KLM CML process is informed by:

- Shoreline change data.
- Climate hazard modelling.
- Existing development patterns.
- Local socio-economic conditions.

CML effectiveness depends on integration into zoning schemes, SDF updates and the Coastal Management By-Law.

The delineation of CML for the KLM has been undertaken as part of the review of the KLM CMP. This comprehensive Kouga Coastal Management Spatial Data Framework attached as Appendix A.

The establishment of the CML has been informed by:

- Observed shoreline change
- Climate change hazard assessments
- Existing development patterns and
- Local socio-economic context.

The aim is to establish a transparent, evidence-based CML for longer-term coastal planning and risk management, balancing the protection of coastal public property, natural processes and ecological systems against existing land-use rights, settlement patterns and socio-economic factors.

The resulting CML will ultimately need to be incorporated into municipal spatial planning instruments such as land-use schemes and coastal planning maps, as required by the ICMA.

Summary of the KLM CML

The following provides a summary of the methodology used to develop the KLM CML.

The determination of the CML was informed by the following legislation:

- SPLUMA (Spatial Planning and Land Use Management Act, Act 16 of 2013).
- NEMA (National Environmental Management Act, Act 107 of 1998)
- ICMA / NEM:ICMA (National Environmental Management: Integrated Coastal Management Act, Act 24 of 2008)
- PAIA (Promotion of Access to Information Act, Act 2 of 2000)

The development of the CML was done with strict adherence to relevant South African geospatial planning standards such as the SASDI (South African Spatial Data Infrastructure). The key geoprocessing tools that used to develop the CML spatial data products were Geographical Information Systems (GIS) software including ArcGIS Pro and QGIS. The software solutions provide various geoprocessing tools that were applicable to the CML development.

Spatial data sources were obtained from the Surveyor-General Eastern Cape, Municipal Demarcation Board, South African National Hydrographic Office and Geospace International Pty Ltd, with



bathymetric and tide-related information referenced to SANHO sources where relevant (South African National Hydrographic Office, n.d.; South African National Hydrographic Office, 2026).

The main criteria and data sources used in the CML delineation are summarised in Table 4-2 below.

Table 4.2: Key Data Variables for Geo Processing Modelling of the CML.

Tidal Level	Height (m)	Description
HIGHEST ASTRONOMICAL TIDE (HAT): (CHART DATUM)	2.44m	The highest level reachable under average weather. (https://www.sanho.co.za/Default.htm)
LAND LEVELING DATUM	0.836	LAND LEVELLING AS PER https://www.sanho.co.za/Default.htm
HAT FOR KOUGA AREA	$2.44 - 0.836 =$	1.60M Used the 2m contour
MHWS (Mean High Water Springs)	1.86 metres. CD	LLD/MSL): MHWS is +1.03 metres.
Storm Surge (1:10 yr)	+0.45 m	Typical storm surge additive for the Eastern Cape.
Storm Surge (1:100 yr)	+0.75 m	Extreme event surge.
Total (HAT + 1:100 Surge)	2.89 m	The "extreme" high water level (excluding waves).
Reference Datum	Elevation for MSL	Elevation for MSL
Land Levelling Datum (LLD)	+0.20 m	0.00 m

Sea Level Rise Modelling

Sea-level rise (SLR) modelling for Kouga Municipality, including Jeffreys Bay, St Francis Bay, and Oyster Bay, is required to assess future coastal exposure and support long-term Coastal Management Line planning. The SLR line provides a forward-looking spatial layer for identifying areas that may become increasingly vulnerable to inundation, erosion, storm surge, and estuarine backwater effects.

Storm-surge modelling workflow

The SPEAR storm-surge modelling workflow was used as an applied implementation reference for geoprocessing coastal hazard layers (GitHub, n.d.; United Nations Office for Outer Space Affairs, UN-SPIDER, n.d.). Based on the national methodology established by the DFFE, a baseline calculation of 2.35m successfully isolates the combined dynamic water level for a 1:100-year storm event under current conditions.

Figure 4.23 below shows the delineated CML for an area in Cape St Francis.

The map delineates the draft Coastal Management Line (CML) in relation to erf, farm, and public place boundaries. Measures were taken to safeguard properties along the Cape St. Francis coast by leveraging public open space (Erf 2007, Sea Vista, SG Diagram No. 7865/89). However, under current sea-level parameters, certain private properties remain affected by the CML alignment.



Figure 4.23: CML at a 1:3000 scale in Cape St Francis

Figure 4.24 below shows the delineated CML for the Kabeljous River Mouth.

The raw dataset derived from the 1x1m DEM raster needed to be edited to ensure that a continuous line appears. The method used was to select features and to identify the main continuous line and delete lines to inland and seaward from the continuous CML. Further smoothing was applied by using the vector geometry geoprocessing tool at 4x interactions at 0,75 offset and maximum angle of smooth at 180 degrees.



Figure 4.24: CML at a 1:4500 scale at the Kabeljous River Mouth

Areas adjacent to river mouths present elevated risk profiles within the CML model, which indicates potential flooding and hazard exposure for surrounding properties and transport routes, such as the Kabeljous River mouth and abutting erven.

Additional factors

To ensure the Kouga Coastal Management Line (CML) aligns rigorously with the full DFFE risk-modelling framework, there are a few additional factors, spatial variations, and future allowances to account for in the final raster calculations.

Coastal Protection Zone (CPZ) delineation

According to Section 16 of the ICMA, the coastal protection zone consists of a continuous strip of land starting from the HWM and extending inland for a default distance of either 100 m or 1 000 m, depending on land-use circumstances and sensitive coastal features (Republic of South Africa, 2008; Law Library, 2025).

- **Urban Areas (100m Buffer):** Any land unit situated wholly or partially within 100 meters inland from the High-Water Mark (HWM) that was zoned for residential, commercial, or industrial use when the Act came into force.
- **Rural/Agricultural Areas (1km Buffer):** Any land unit situated wholly or partially within 1 kilometre (1,000 meters) inland from the HWM that was zoned for agricultural, undetermined, or conservation use, or was not part of a lawfully established urban area.

The urban and rural classification was based on cadastral spatial data provided by the Surveyor-General. Farm portions were used to define rural segments, while erven and allotments were used to define urban segments. This distinction informed the application of the 100 m and 1,000 m Coastal Protection Zone buffers and was aligned with the Subdivision of Agricultural Land Act 70 of 1970



(Republic of South Africa, 1970). Appendix A describes the implications of the CPZ on the various categories of land portions.



Figure 4.25: Modelled Coastal Protection Zone for the Kouga Coastline. Source: Annemarie Fish, Geomatics Professional: Geographical Information Science GPr GISc 1221, derived from Chief Surveyor-General (2025) cadastral data

CML Sea Level Rise Buffer

To project the high-risk hazard boundary over a 100-year planning horizon, a long-term sea-level rise (SLR) buffer of +1.0 m was added to the baseline extreme water level calculation, in accordance with national coastal vulnerability assessment standards and provincial CML modelling protocols (Department of Environmental Affairs, 2018; Western Cape Department of Environmental Affairs and Development Planning, 2014).

The combined modelling threshold of 3.35 m represents a cumulative hazard vulnerability ceiling $1.60\text{ m HAT} + 0.75\text{ m Storm Surge} + 1.0\text{ m SLR}$. This elevation profile satisfies the risk overlay procedures recommended for local government planning horizons by the national Department of Forestry, Fisheries and the Environment (DFFE, 2019), adapting standardized extreme-event parameters formulated for the South African coastline (Western Cape DEA&DP, 2014; Lück-Vogel, 2019).

Figure 4.26 below shows the CML Sea Level Rise Buffer for the KLM. The geoprocessing results of the CML SLR buffer are provided in Appendix A.

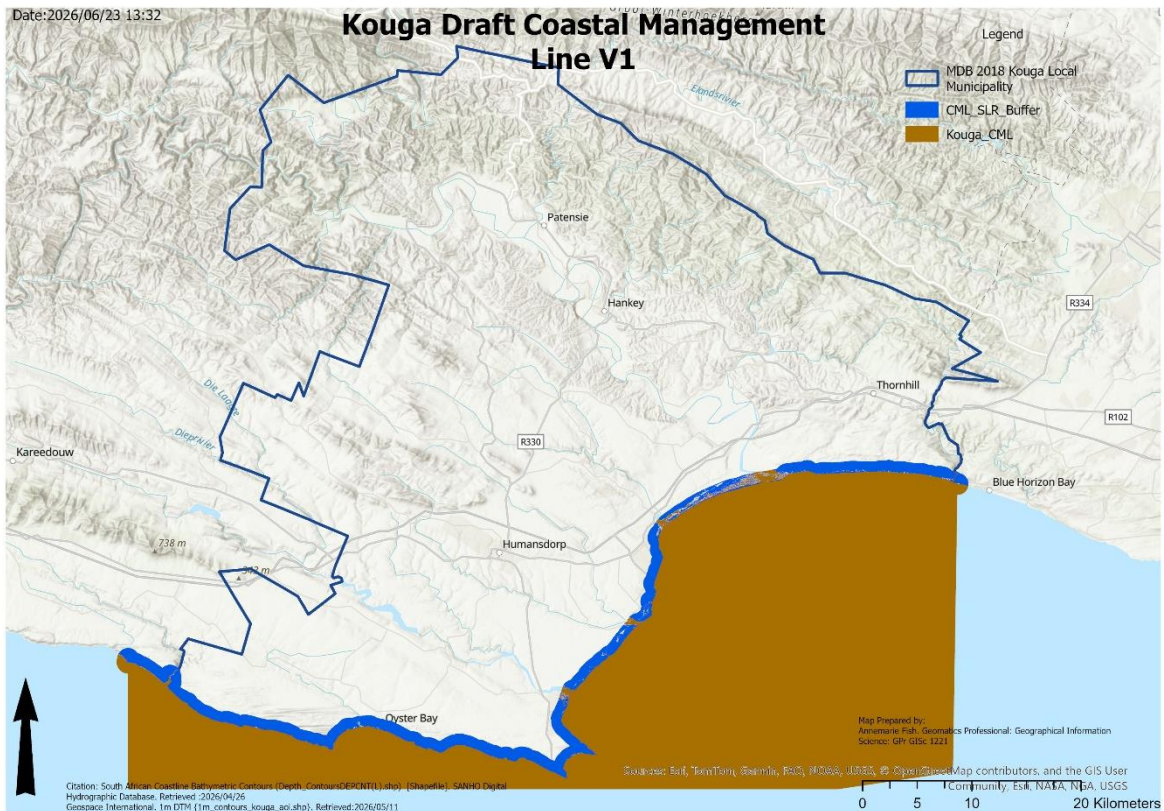


Figure 4.26: CML Sea Level Rise Buffer

CML Safety Buffer

When developing a Coastal Management Line (CML), the Safety Buffer is a dedicated, additional horizontal setback added to the modelled extreme water line. While the extreme water line handles the immediate, vertical wave runup and storm surge forces, the Safety Buffer is specifically designed to provide a physical cushion against long-term, chronic shoreline erosion and localized coastal instability.

In sandy areas like the Kougas Local Municipality (encompassing highly dynamic coastal segments like the St Francis Bay spit and the Jeffreys Bay beachfront, this buffer typically ranges from 10 meters to 30 meters.

- The 10m Buffer: Typically reserved for semi-stable or recovering sandy systems with low erosion rates 0.1m/yr, providing a 100-year safety window.
- The 30m Buffer: Applied to high-energy, chronic erosion hotspots where the beach is actively shrinking at a faster rate (e.g., 0.3 m/yr or more), ensuring houses built today remain safe from the migrating high-water mark for decades to come

Why a Sandy Coastline Requires a Fixed Safety Buffer? Unlike rocky headlands, sandy coastlines are highly dynamic and morphologically unstable. They are governed by continuous sediment transport balances. A safety buffer of 10m to 30m is injected into the to account for several distinct physical phenomena:

- **Cyclical Dune Slumping:** During an extreme event (such as the **May 2026 storm surges**), heavy wave action scours the base of the frontal dune system. This creates an unstable, vertical sand cliff. Over the days following the storm, this cliff naturally collapses or "slumps" landward as the sand seeks its natural angle of repose. The safety buffer ensures that a building sitting behind the initial storm-wash line doesn't collapse during this secondary structural adjustment.



Erosion Category	Average Annual Rate	50-Year Total Retreat	Recommended Safety Buffer	Total Points
Low / Semi-Stable	Less than 0.1 m per year (less than 10 cm per year)	0 m to 5 m	10 m	2885
Moderate	0.1 m to 0.2 m per year (10 cm to 20 cm per year)	5 m to 10 m	15 m to 20 m	625
High / Severe Hotspot	0.3 m per year or more (30 cm per year or more)	15 m or more	30 m	391

Figure 4.27 below shows the CML Safety Buffer for the KLM. The geoprocessing results of the CML SLR buffer are provided in Appendix A.

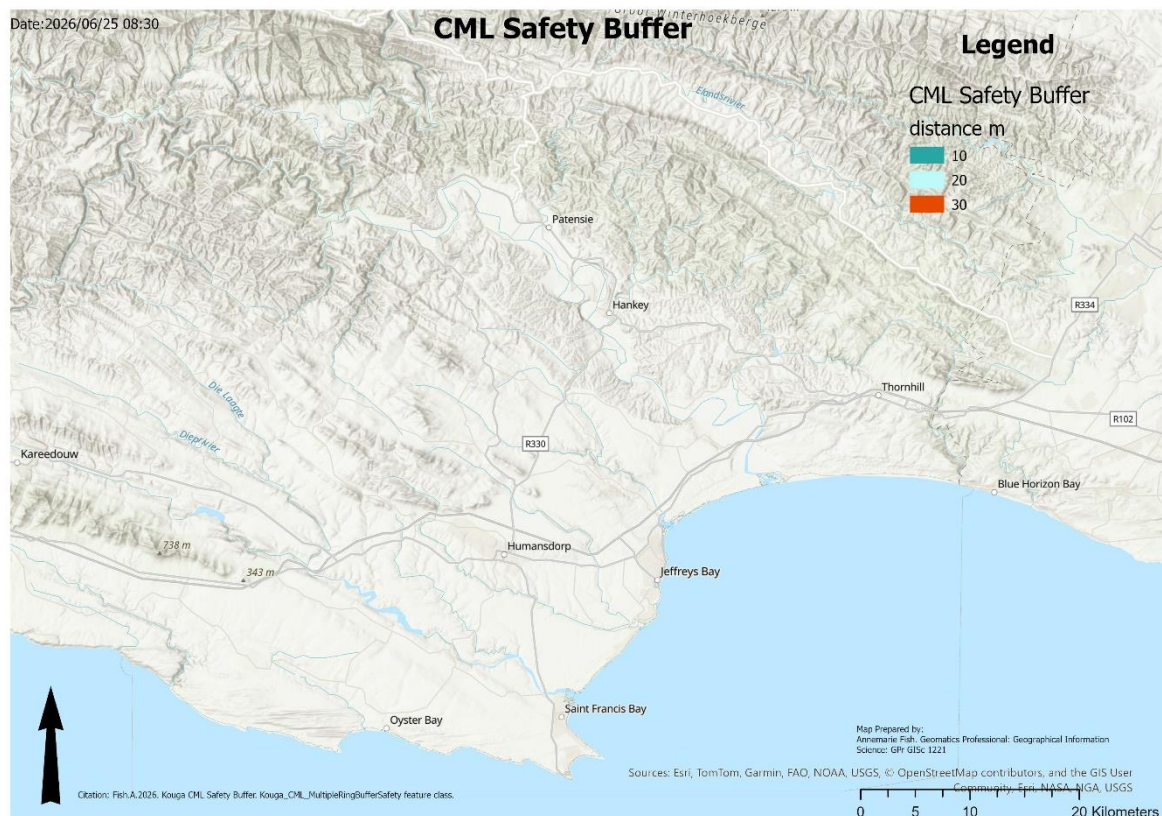


Figure 4.27: CML Safety Buffer

4.3.7 Regulatory and By-Law Context

The Coastal Management By-Law supports spatial planning by:

- Recognising the dynamic nature of the coastal zone.
- Regulating encroachments and coastal protection structures.
- Requiring CML incorporation into planning maps.
- Controlling activities that interfere with natural coastal processes.

The By-law gives effect to the principles of integrated coastal management by recognising the dynamic nature of coastal and estuarine processes and establishing controls over activities that may interfere with natural coastal functioning by regulating development, structures and land-use activities within the coastal zone that have the potential to exacerbate coastal erosion, flooding, dune instability or environmental degradation. The By-law includes provisions relating to the protection of coastal ecosystems, the management of encroachments into the coastal zone, and the control of unauthorised coastal protection structures.



Of particular relevance to coastal spatial planning is the By-law's recognition of CMLs as spatial planning instruments. Where a CML has been established in terms of the ICMA, the By-law requires that such lines be delineated on municipal land-use scheme and coastal planning maps. This provides a mechanism for integrating climate-related coastal risk information into statutory spatial planning and development decision-making. It further reinforces the principle that activities and structures within the coastal zone should not interfere with natural dynamic coastal processes unless appropriately authorised.

While the Coastal Management By-law provides the regulatory basis for managing activities within the coastal zone, its effective application depends on alignment with spatial planning instruments, the CML delineation process and broader coastal governance arrangements.

4.3.8 Key Issues and Risks

The primary risks associated with coastal spatial planning and climate change within the KLM include:

- **Legacy Development in High-Risk Areas:** Existing infrastructure and private properties are located within erosion-, flood- and storm surge-prone zones, limiting long-term adaptation options.
- **Increasing Infrastructure Exposure:** Municipal roads, stormwater systems and coastal amenities face growing exposure to sea-level rise, extreme storms and associated damage and maintenance costs.
- **Altered Coastal Processes:** Historical dune stabilisation and infrastructure placement have disrupted natural sediment systems, contributing to shoreline instability and localised erosion, especially at St. Francis Bay.
- **Wildfire as a Risk Multiplier:** Recent fire events, intensified by invasive alien vegetation and dense urban–dune interfaces, increase dune destabilisation, post-fire erosion and sedimentation impacts on estuaries. Climate variability may further elevate fire frequency and severity.
- **Development Pressure in Sensitive Areas:** Continued demand for residential and tourism development in constrained coastal nodes increases long-term exposure to coastal hazards and ecological degradation.
- **Climate Uncertainty:** Uncertainty regarding the timing and magnitude of climate-related impacts complicates forward planning and reinforces the need for precautionary, adaptive approaches.
- **CML Implications:** Implementation of a Coastal Management Line in the KML intersects with established development patterns and property rights, requiring transparent and evidence-based application.
- **Cumulative Vulnerability:** The combined effects of historical development, altered coastal processes, climate change and wildfire increase overall system vulnerability and reduce resilience.

4.4 THEME 4: COASTAL POLLUTION

Coastal pollution within the KLM arises predominantly from land-based activities associated with urban settlement, agriculture, wastewater and stormwater infrastructure and recreational use. These sources interact with estuaries, beaches and nearshore marine environments, affecting ecological integrity, public health and tourism assets. Pollution pressures are closely linked to spatial development patterns and infrastructure capacity. Impacts are often episodic and intensify during:

- High rainfall events.
- Peak holiday periods.
- Storm conditions.



- Infrastructure failure or overload.

Stakeholder engagement and site inspections highlighted recurring concerns regarding sewage-related incidents, declining water quality, solid waste accumulation and the cumulative effect of multiple pollution sources on estuaries and coastal waters. These concerns align with findings from previous CMP processes and reflect systemic pressures rather than isolated incidents.

4.4.1 Existing Sources of Coastal Pollution

Pollution pathways within the KLM coastal zone include both point-source and diffuse inputs, primarily originating from land-based activities.

Wastewater and Effluent Discharges

Effluent-related pollution arises from:

- Wastewater Treatment Works (WWTWs).
- Sewer reticulation systems and pump stations.
- Septic and conservancy tanks.
- Agricultural return flows.
- Informal or failing sanitation systems.

Pollutants include nutrients, faecal bacteria, pathogens, pharmaceuticals and household chemicals. Stakeholders raised concerns regarding sewer overflows, leaking infrastructure (Figure 4.28) and conservancy tank failures, particularly in older coastal suburbs and low-lying areas. In some instances, inappropriate operation or bypassing of septic systems may contribute to intermittent effluent release into estuarine and marine environments.



Figure 4.28: Sewerage seeping into the coastal zone along the Jeffreys Bay beach

Stormwater Discharges

Stormwater systems transport runoff from urban surfaces directly into estuaries and onto beaches. These systems convey:

- Litter and plastics.
- Hydrocarbons.
- Sediments.
- Microbial contaminants.



During heavy rainfall or infrastructure malfunction, sewer overflows may enter stormwater systems, resulting in direct discharge of contaminated water to the coastal zone (Figure 4.29 and Figure 4.30). The full inventory and condition of stormwater discharge points along the KLM coastline are not comprehensively documented, limiting strategic planning and cumulative impact assessment.



Figure 4.29: A stormwater discharge onto Jeffreys Bay main beach



Figure 4.30: Stormwater infrastructure located along Paradise Beach

Solid Waste and Marine Debris

Solid waste enters the coastal environment through:

- Littering in high-use recreational areas.
- Illegal dumping (Figure 4.31).
- Inadequate waste collection services.
- Marine debris deposited during storm events.

Common waste items include plastics, packaging, fishing gear and general refuse. Stakeholder engagement identified recurring solid waste problems in areas such as Pellsrus and high-use beaches



during peak holiday periods. Waste accumulation degrades visual amenity, affects tourism and poses risks to marine and estuarine fauna.



Figure 4.31: Illegal dumping occurring in the coastal zone at Pellsrus

Marine-Based Pollution

Marine-based sources include:

- Hydrocarbon leakage from fishing vessels and harbour operations.
- Small-scale fuel handling incidents.
- Boat maintenance-related discharges.

While large-scale spills are uncommon, chronic low-level contamination poses risks to water quality and marine organisms, particularly within Port St Francis and associated marina environments.

Other Pollution Pressures

Additional localised pressures include:

- Light pollution affecting coastal and estuarine fauna.
- Noise from vessels and urban activity.
- Minor hydrocarbon and metal contamination from agricultural and boat maintenance activities.

Although less visible than sewage and litter, these sources of pollution contribute cumulatively to ecological disturbance.

4.4.2 Pollution Hotspots and Spatial Patterns

Pollution risk is spatially concentrated around:

- Jeffreys Bay.
- St Francis Bay.
- Paradise Beach.
- Pellsrus.
- Marina Martinique.
- Gamtoos Estuary.

These areas coincide with:

- Higher population density.
- Seasonal tourism influx.
- Ageing or capacity-constrained infrastructure.
- Estuary mouths and stormwater outlets.



Estuaries function as accumulation zones for pollutants transported from upstream catchments. Confined systems such as the Seekoei, Kabeljous and Kromme estuaries are particularly vulnerable, as reduced flushing capacity prolongs water quality impacts. Pollution is often most visible following rainfall events and peak holiday periods, when wastewater systems are under strain and recreational activity is high. These temporal dynamics influence public perception of declining coastal water quality.

Indicative pollution risk mapping undertaken during the 1st Generation CMP identified coastal segments historically associated with elevated vulnerability (Figure 4.32 to Figure 4.34). Although these maps do not represent current verified incidents, they provide contextual insight into areas where infrastructure, land use and hydrological pathways intersect to increase pollution risk.

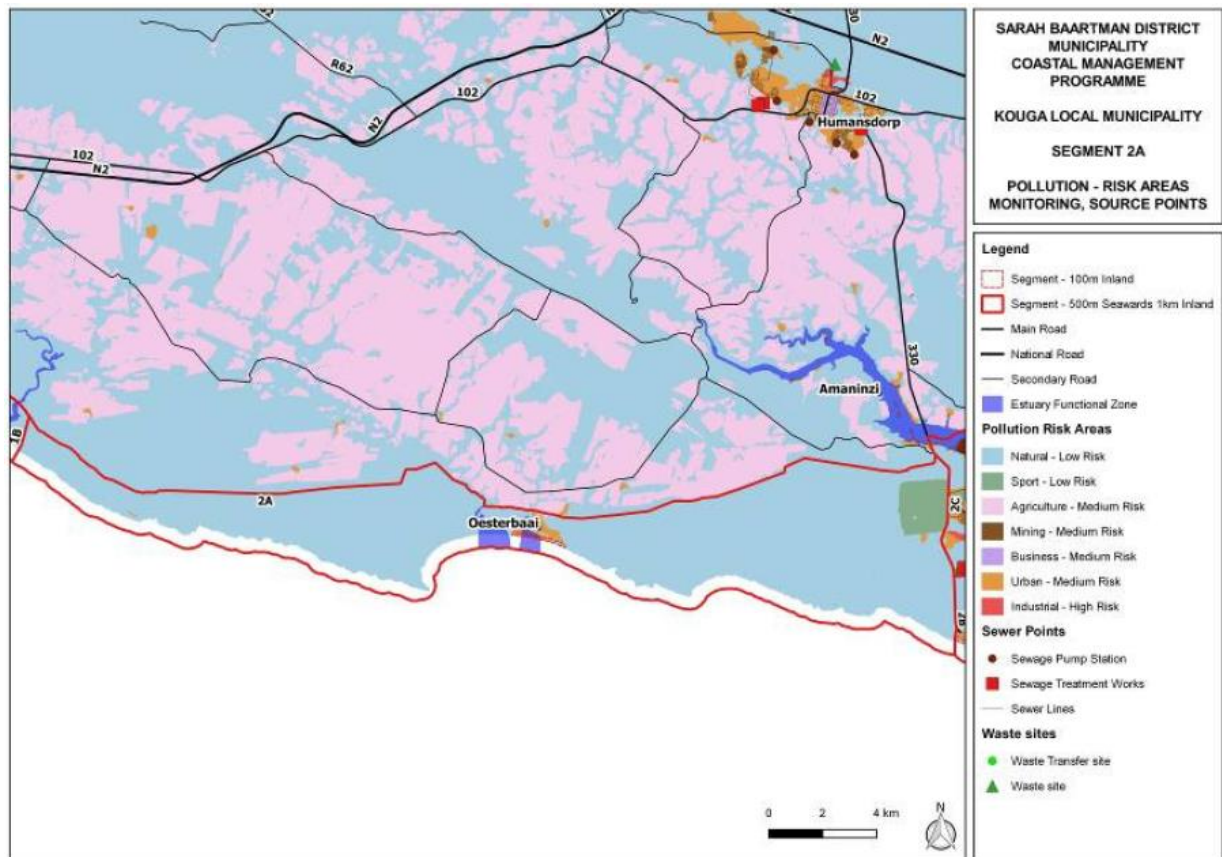


Figure 4.32: Indicative pollution risk areas identified in the development of the 1st Generation CMP along Segment 2A

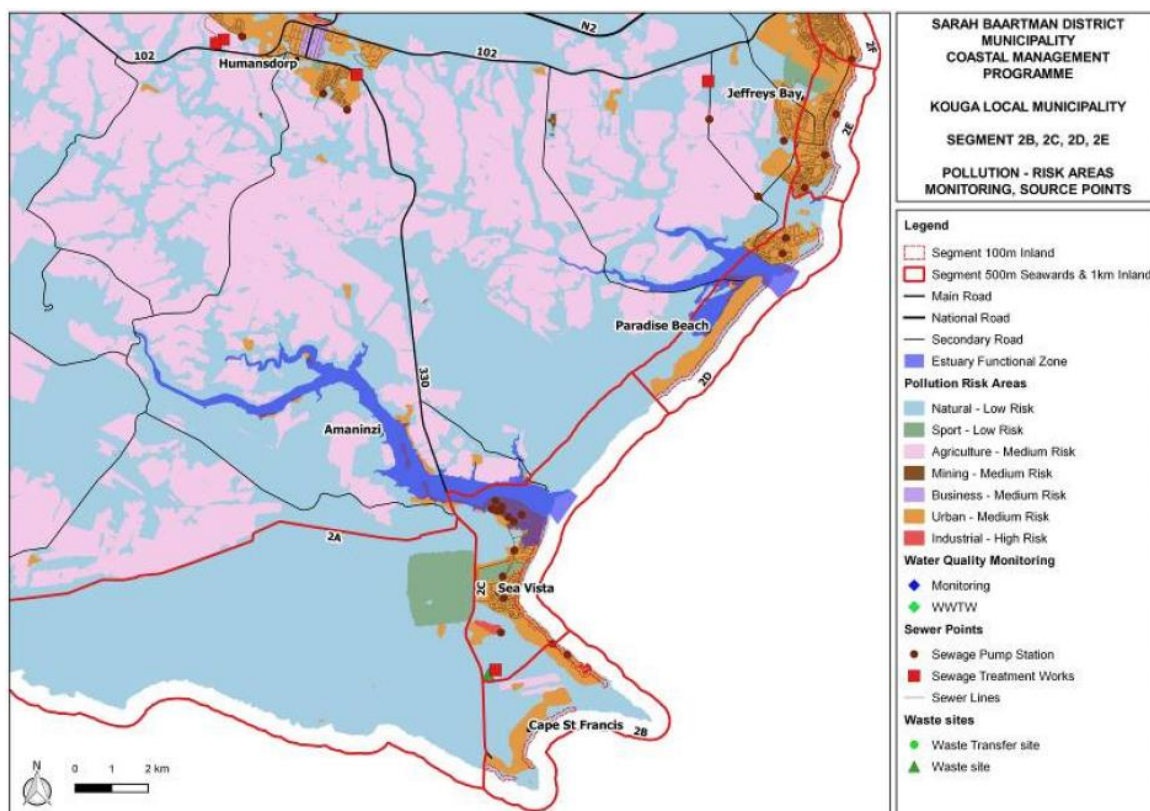


Figure 4.33: Indicative pollution risk areas identified in the development of the 1st Generation CMP along Segments 2B – 2E

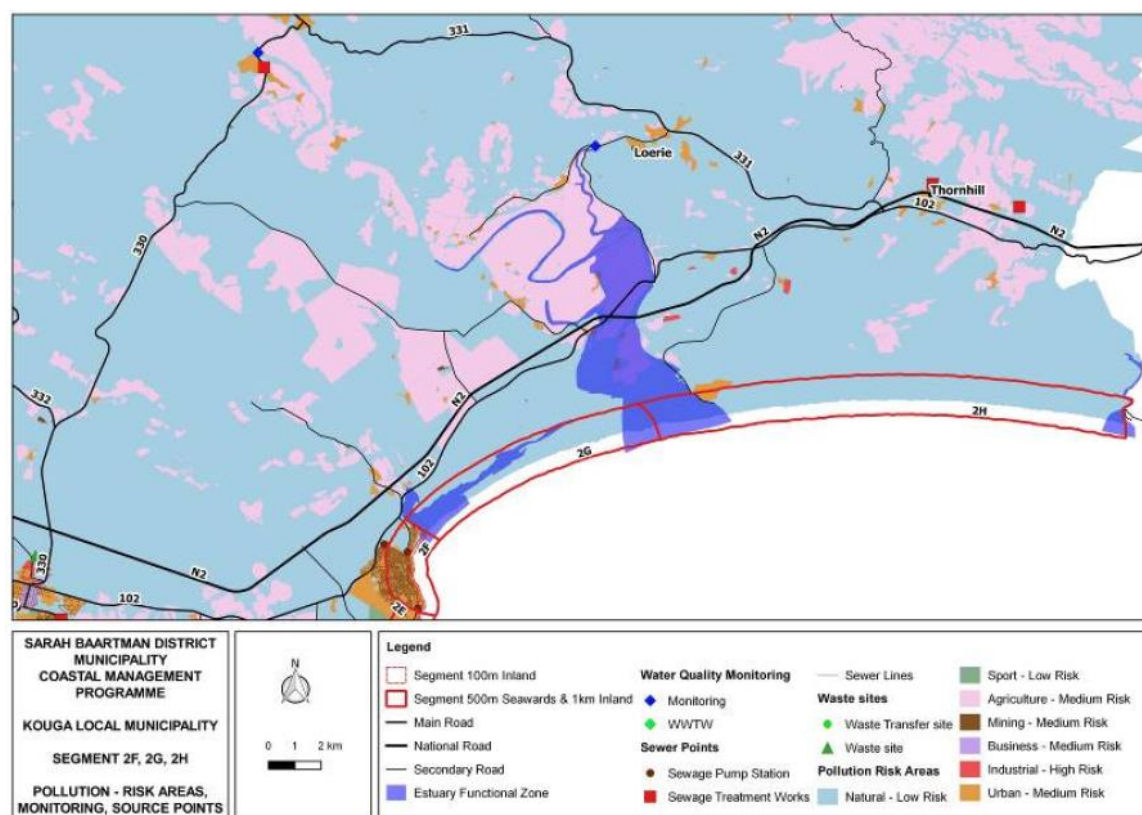


Figure 4.34: Indicative pollution risk areas identified in the development of the 1st Generation CMP along Segments 2F – 2H



4.4.3 Existing Pollution Monitoring and Management Context

The KLM undertakes several pollution monitoring and management activities, including:

- Water quality monitoring at selected beaches and estuaries.
- Upgrades and maintenance of WWTWs.
- Sewer and stormwater system maintenance.
- Installation of polishing wetlands.
- Routine beach cleaning and community clean-up initiatives.
- Collaboration with provincial and national authorities.



Figure 4.35: Recycling facilities located at the entrance to the one of the beaches along the KLM coastline.

Monitoring is generally focused on public beaches and known discharge points, often aligned with Blue Flag compliance requirements and intergovernmental partnerships. However, several limitations were identified:

- Monitoring coverage is uneven across the coastline.
- Data on discharge locations and infrastructure condition is fragmented.
- A consolidated inventory of pollution sources is lacking.
- Integration of monitoring data into spatial planning is limited.

While current management efforts provide a baseline, improved system-wide documentation and coordinated data management would strengthen pollution risk mitigation.

4.4.4 Key Issues and Risks

The principal issues associated with coastal pollution within the KLM include:

- **Incomplete Understanding of Pollution Pathways:** The absence of a comprehensive inventory of stormwater and wastewater discharge points limits the ability to assess cumulative impacts and prioritise interventions.
- **Infrastructure-Related Pollution Incidents:** Ageing or capacity-constrained sewer and stormwater infrastructure contributes to episodic contamination, particularly during rainfall and peak tourism periods.
- **Solid Waste Accumulation:** Inadequate waste infrastructure and inconsistent maintenance result in litter entering dune systems, beaches and estuaries.



- **Estuarine Vulnerability:** Estuaries act as pollutant sinks, amplifying and prolonging ecological impacts within confined systems.
- **Seasonal Amplification:** Population influx during holiday periods places additional pressure on waste and wastewater systems.
- **Cumulative Interactions:** Pollution interacts with other coastal pressures, including habitat degradation, erosion and recreational intensity, compounding risks to ecosystem health and coastal amenity.

4.5 THEME 5: EDUCATION, AWARENESS AND INFORMATION

Education, awareness and access to information are recognised as essential enabling components of effective coastal management. The National Coastal Management Programme (NCMP) and the National Strategy for Coastal Awareness, Education and Training (CAET) emphasise that informed and engaged coastal users are central to improving how coastal resources are utilised and protected. CAET is grounded in environmental education principles and requires coordinated action by government, civil society, research institutions and local communities. Its purpose is not only to increase knowledge, but to foster responsible behaviour, stewardship and participation in coastal governance.

Within the KLM, coastal education and awareness initiatives exist but are fragmented and unevenly documented. While there is recognition of the importance of environmental information and public engagement, evidence of a structured, municipality-wide coastal awareness framework is limited. This theme assesses existing mechanisms for information sharing, education initiatives and coordination structures, and identifies gaps that may constrain effective coastal stewardship.

4.5.1 Access to Coastal Information and Data

National Oceans and Coastal Information Management System (OCIMS) provides a national platform for the collection and dissemination of spatially referenced ocean and coastal data. While OCIMS is accessible nationally, there is currently no dedicated municipal coastal information portal consolidating:

- Estuarine functional zones.
- Wetlands and buffers.
- Critical Biodiversity Areas.
- Archaeological and heritage sites.
- Flood lines.
- Sediment corridors.
- Coastal Management Lines (once adopted).

The absence of a centralised municipal information platform limits accessibility and transparency for planners, researchers, Environmental Assessment Practitioners and the public.

Stakeholder engagement indicated strong interest in improved access to reliable, spatially referenced coastal information, particularly where development, environmental sensitivity and climate risk intersect. Developing a web-based municipal coastal information portal aligned with OCIMS would primarily support informed decision-making and public awareness rather than regulatory enforcement.

4.5.2 Biodiversity Information and External Partnerships

The South African National Biodiversity Institute (SANBI) provides biodiversity data, mapping and decision-support tools relevant to coastal management. Although SANBI does not directly implement



education programmes within the KLM, its datasets and guidance are integral to awareness initiatives focused on:

- Biodiversity priority areas.
- Ecological process zones.
- Estuarine and wetland sensitivity.
- Cultural and archaeological resources.

There is opportunity for stronger collaboration between the municipality, SANBI and local conservation NGOs to leverage existing resources and avoid duplication. Engagement with established conservation networks could strengthen local capacity for awareness campaigns and biodiversity education.

4.5.3 Formalised Coastal Education and Awareness Campaigns

A comprehensive inventory of formalised coastal education initiatives within the KLM is not currently available. Existing activities are largely:

- Project-based.
- Linked to Blue Flag beach programmes.
- Associated with beach clean-ups.
- Driven by NGOs or community groups.

The absence of a structured municipal framework is identified as a key gap. Rather than creating entirely new programmes, the priority lies in coordinating, documenting and aligning existing initiatives under shared objectives.

Future awareness campaigns could focus on:

- Coastal ecosystem functioning.
- Pollution prevention.
- Responsible recreational use.
- Fisheries awareness.
- Cultural and heritage sensitivity.
- Climate change and coastal risk.

Targeted engagement of schools, youth groups, tourism operators and resource user groups would strengthen inclusivity and long-term behavioural change.

4.5.4 Training and Capacity Building

National and provincial departments periodically implement training initiatives related to biodiversity, water quality, fisheries management and compliance. Within the KLM, participation in such initiatives appears to be episodic rather than embedded within a structured municipal capacity-building programme.

Training priorities include:

- Municipal officials involved in land-use planning and infrastructure management.
- Environmental compliance staff.
- Coastal committee members (once established).
- Community representatives and resource users.

Embedding coastal awareness within municipal training processes would improve the consistent application of environmental sensitivity and climate risk considerations in decision-making.



4.5.5 Signage as an Awareness Tool

Signage is a visible and practical mechanism for communicating coastal sensitivity, safety information and regulatory requirements. Within the KLM:

- Signage exists at certain beaches and access points.
- Coverage is inconsistent.
- Messaging varies in quality and clarity.
- Some signage is outdated or poorly maintained.



Figure 4.36: Educational signage located at a number of beach access points along the KLM coastline



Figure 4.37: Information boards provided at a number of beaches providing safety warnings and outlining prohibited activities in terms of the By-Laws

Stakeholders identified priority locations for improved signage, including:

- Oyster Bay.
- Cape St Francis.
- St Francis Bay.
- Pellsrus.
- Seekoei Estuary mouth.
- Marina Martinique.
- Jeffreys Bay launch sites.
- Gamtoos Estuary.

A standardised signage framework that addresses design, messaging, placement and maintenance would improve consistency and effectiveness. Signage should address:

- Environmental sensitivity.
- Prohibited activities.
- Safety warnings.
- Launch site rules.
- Activity zonation where applicable.

4.5.6 Coastal Forums and Coordination Structures

The Coastal Management By-Law provides for the establishment of a Municipal Coastal Committee, intended to include representatives from:

- Municipal departments.
- Government authorities.
- Ward councillors.
- Industry and agriculture.
- Community organisations.
- Research institutions.
- Conservation managers.

At this time a Coastal Committee is in the process of being established but is not yet operational. The absence of a fully functioning committee limits structured communication, coordination of awareness initiatives and information sharing. Proposed intergovernmental forums involving the municipality, district and provincial authorities are not yet formalised. Operationalising these forums would significantly strengthen education, awareness and coordinated coastal governance.



4.5.7 Fisheries Community Engagement

Fisheries Community Development Workers (FCDWs) can play a key role in:

- Communicating fisheries regulations.
- Promoting sustainable harvesting.
- Reducing user conflict.
- Supporting community-based awareness.

At present, it is unclear whether FCDWs are actively operating within the KLM. Stakeholders emphasised the value of visible, community-based fisheries engagement, particularly in areas with seasonal fishing activity. The lack of clarity regarding FCDW presence represents an information gap rather than a confirmed absence.

4.5.8 Libraries and Community Information Hubs

Public libraries, including the Jeffreys Bay (Sea Vista) Public Library, function as accessible community information centres. They present opportunities to:

- Host coastal education displays.
- Provide digital access to OCIMS and municipal spatial data.
- Facilitate environmental talks and workshops.
- Disseminate educational materials.

While not currently utilised in a structured coastal awareness capacity, libraries offer a low-cost and inclusive platform for expanding access to information.

4.5.9 Additional Education Initiatives

Other potential awareness initiatives include:

- School-based environmental education programmes.
- Beach and water safety campaigns.
- Recreational zonation awareness to reduce user conflict.
- Fisheries competition guidelines and best practice awareness.

Stakeholders expressed interest in improved communication around overlapping recreational activities, particularly where surfing, fishing, boating and swimming occur in shared spaces. Currently, these initiatives are fragmented and would benefit from integration into a broader coastal awareness framework.

4.5.10 Key Issues and Risks

The principal issues associated with education, awareness and information within the KLM include:

- **Limited Formalisation:** There is no consolidated, municipality-wide coastal education and awareness programme.
- **Fragmented Information Access:** Coastal data and planning information are dispersed across platforms and institutions.
- **Uneven Public Awareness:** Awareness of ecological sensitivity, heritage value and coastal regulations varies significantly across user groups.
- **Inconsistent Signage:** Signage provision is uneven, limiting its effectiveness as an educational and safety tool.
- **Emerging but Non-Operational Coordination Structures:** The Coastal Committee and intergovernmental forums are not yet fully operational.



- **Capacity Constraints:** Limited structured training opportunities constrain shared understanding among officials and communities.
- **Reliance on Voluntary Initiatives:** Many awareness efforts rely on NGOs and temporary funding, affecting sustainability.

4.6 THEME 6: COASTAL LIVELIHOODS AND POVERTY ALLEVIATION

Coastal livelihoods and poverty alleviation are central to sustainable coastal zone management within the KLM. The coastal zone supports a range of economic activities that contribute to household income, employment and local economic development, including:

- Commercial and recreational fishing.
- Tourism and eco-tourism.
- Water sports and surf-related industries.
- Agriculture in coastal catchments.
- Boat building and seafood processing.
- Emerging aquaculture initiatives.

Nodes such as Jeffreys Bay and St Francis Bay function as internationally recognised hubs for surfing and marine-based tourism, generating employment across hospitality, events, retail and service sectors. Port St Francis supports the chokka (squid) fishery and associated light industry, representing an important seasonal employment source.

Despite these economic opportunities, unemployment and poverty levels remain relatively high in certain coastal settlements, including Oyster Bay, Sea Vista, Paradise Beach and Pellsrus. Socio-economic vulnerability intersects with environmental risk, infrastructure constraints and uneven access to economic opportunities.

A balanced approach to coastal development is required that integrates environmental protection with livelihood enhancement, while ensuring that benefits derived from coastal resources are more equitably distributed.

4.6.1 Economic Contribution and Demographic Context

Contribution to Provincial and Local Economy

The coastal zone contributes to provincial and local GDP through:

- Tourism and hospitality.
- Commercial and recreational fisheries.
- Agriculture and agri-processing.
- Alternative energy (including wind farm investments).
- Light industrial activities.
- Marine and boating-related services.

Eco-tourism linked to biodiversity, archaeological heritage and scenic coastal landscapes represents a significant growth opportunity. Activities such as surfing, hiking, birdwatching and nature-based tourism support income generation, particularly within Jeffreys Bay and St Francis Bay.



Demographic Profile and Vulnerability

Several coastal settlements experience:

- High unemployment levels.
- Limited infrastructure and services.
- Seasonal income patterns.
- Restricted access to formal economic opportunities.

Previously disadvantaged communities, women and youth have been identified as priority beneficiaries of local economic development (LED) and socio-economic investment programmes.

At the same time, increased demand for housing and services in higher-income coastal nodes creates pressure for expansion into environmentally sensitive areas, reinforcing the need for spatially responsible development.

4.6.2 Livelihood Support Initiatives and Funding Mechanisms

The KLM has identified multiple programmes aimed at supporting livelihoods and poverty alleviation, including:

- Wind Farm Socio-Economic Investment Programmes.
- Environmental Protection and Infrastructure Programme (EPIP).
- Drought mitigation projects (Section 30A of NEMA).
- Local Economic Development (LED) initiatives.
- Communal food gardens.
- Aquaculture feasibility investigations.
- Eco-Tourism Development Plan initiatives.
- Public camping and recreational facilities.

Many of these initiatives combine environmental management objectives (e.g. alien clearing, rehabilitation) with employment creation, supporting both ecological improvement and income generation. However, successful implementation depends on coordination, skills development, and alignment with long-term coastal sustainability objectives.

4.6.3 Ports, Harbours and Coastal Industrial Activity

Port St Francis

Port St Francis is the only port facility within the KLM coastal zone and represents a critical livelihood node. The port supports:

- Commercial and seasonal chokka fishing.
- Recreational fishing and boating.
- Boat building.
- Seafood processing.
- Associated tourism and hospitality services.

The port is embedded within a mixed-use coastal environment that includes residential development, resorts, agriculture and eco-tourism activities (Figure 4.38).

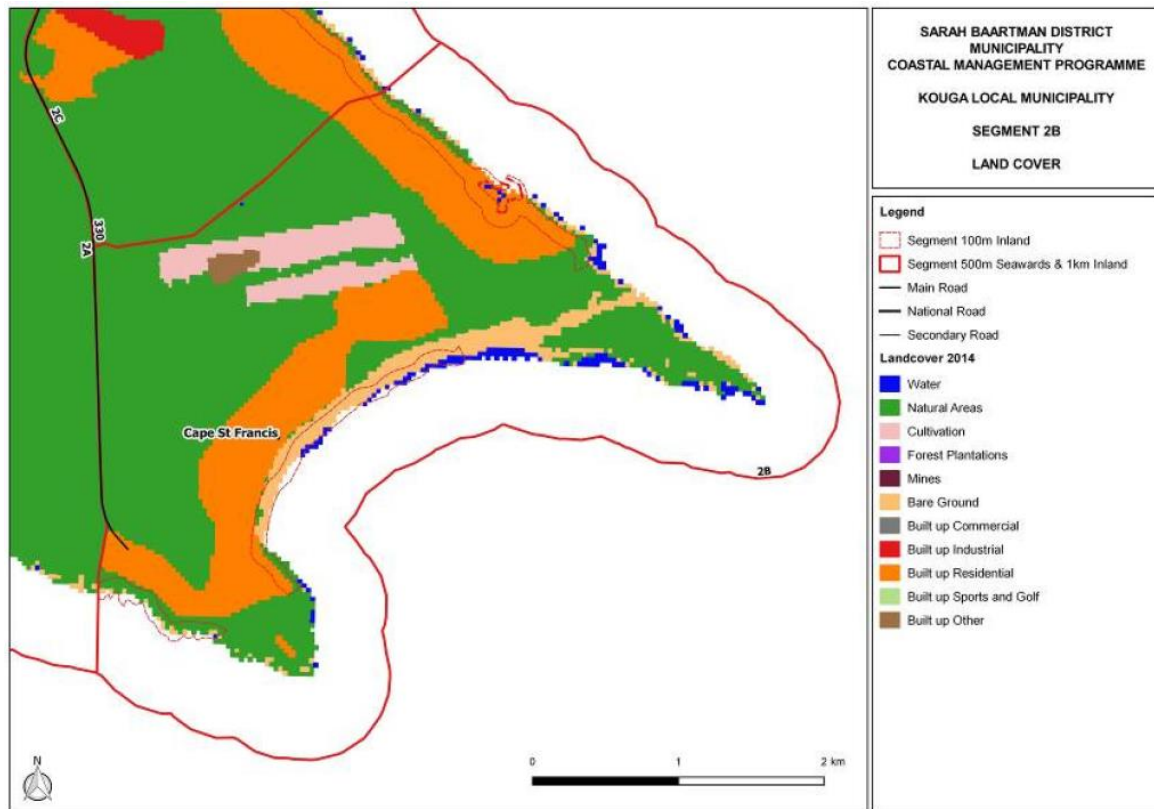


Figure 4.38: Land Cover map for Segment 2B (note that cattle rangelands are included under 'natural areas' and 'bare ground' is dunes).

Environmental considerations associated with port activities include:

- Hydrocarbon leakage risks.
- Organic waste and effluent from fish processing.
- Interaction with adjacent marine and recreational environments.

The port represents a convergence point of fishing, tourism, light industry and community livelihoods.

4.6.4 Tourism Assets and Economic Opportunities

The KLM coastline contains a diverse portfolio of tourism assets, including:

- Surfing beaches of international significance.
- Estuarine and marine recreational opportunities.
- Hiking and coastal trails.
- Birdwatching and biodiversity attractions.
- Protected areas and nature reserves.
- Caravan parks and camping facilities (Figure 4.39).



Figure 4.39: Jeffreys Bay caravan park and campsite, managed by KLM, is a popular tourism destination

Tourism remains a strategic economic driver, but several constraints were identified:

- Seasonality of income.
- Uneven distribution of economic benefits.
- Infrastructure limitations.
- Environmental sensitivity restricting expansion.
- Stakeholders highlighted opportunities to expand:
- Community-based eco-tourism.
- Heritage tourism routes.
- Local guide training.
- Public space upgrades.
- Cultural tourism initiatives.

Tourism development is best positioned as low-impact and environmentally compatible, ensuring that expansion does not undermine ecological integrity.

4.6.5 Cultural Heritage as a Livelihood Asset

The coastal zone contains significant heritage assets that contribute to local identity and tourism potential.

Jeffreys Bay

Heritage features include:

- Surf Museum.
- Shell Museum.
- “Geelstert” fishing boat.
- Historic fishermen’s graves (Pellsrus).
- “Bo Blok” fishing houses.
- Pell’s grave site.
- Archaeological shell middens.
- Gamtoos Narrow Bridge.

St Francis Bay and Cape St Francis

- Cape St Francis Lighthouse.
- Archaeological sites near St Francis Bay.



Oyster Bay

- Ancient stone fish traps associated with Khoekhoen communities.
- These heritage assets provide opportunities for:
- Heritage-based tourism routes.
- Guided cultural experiences.
- Community storytelling and identity-building.
- Local employment linked to conservation and interpretation.



Figure 4.40: The “Geelstert” fishing boat



Figure 4.41: Old Pellsrus Graves - The grave site is on the sand dunes on Duine Road. The graves are of the early fishermen of Jeffrey’s Bay and their families



Figure 4.42: “Bo Blok” houses- These are the original houses built in Pellsrus and were used by the local fisherman.

The Heritage Plan emphasises balancing protection with appropriate use, ensuring that development enhances rather than degrades heritage value.

4.6.6 Aquaculture Development

Aquaculture has been identified as a potential livelihood diversification opportunity within the KLM. Feasibility investigations are underway to assess environmental, social and economic viability in areas such as Cape St Francis, St Francis Bay and Jeffreys Bay.

Aquaculture could:

- Create employment.
- Improve food security.
- Reduce pressure on wild fisheries.
- Support small enterprise development.

However, development would require:

- Environmental impact assessments.
- Water use authorisations.
- Coastal water discharge permits.
- Skills development and technical support.
- Careful alignment with tourism and ecological sensitivity.

Aquaculture represents an opportunity but must be carefully managed to avoid unintended ecological impacts.

4.6.7 Small-Scale and Recreational Fisheries

Small-scale and recreational fisheries remain critical livelihood and subsistence activities in the KLM. Activities occur along the open coastline and within estuaries such as:

- Kromme.
- Seekoei.
- Kabeljous.
- Gamtoos.



For some households, fishing provides supplementary or seasonal income and contributes to food security.

Key management considerations include:

- Ecological condition of estuaries and coastal waters.
- Availability and condition of launch and access infrastructure.
- Competition for space with tourism and recreation.
- Pollution and habitat degradation.
- Clarity and communication of fisheries regulations.

Stakeholders raised concerns regarding overfishing, limited compliance visibility and economic precarity within fishing communities. Supporting sustainable fisheries requires integration of:

- Education and awareness initiatives.
- Improved coordination with fisheries authorities.
- Promotion of responsible harvesting practices.
- Appropriate access infrastructure improvements.

4.6.8 Key Issues and Risks

The principal issues associated with coastal livelihoods and poverty alleviation include:

- **Livelihood Vulnerability in Hazard-Prone Areas:** Low-income communities are often located in areas exposed to erosion, flooding and storm surge, increasing vulnerability to climate-related impacts.
- **Uneven Access to Infrastructure:** Limited or poorly maintained access infrastructure constrains equitable participation in livelihood opportunities.
- **Environmental Degradation:** Pollution and habitat loss reduce ecosystem productivity, undermining fishing and tourism livelihoods.
- **Seasonality of Income:** Tourism and fisheries employment are highly seasonal, contributing to income instability.
- **Pressure on Fisheries:** Declining environmental quality, user conflict and limited compliance presence affect fish stock sustainability.
- **Constraints on Diversification:** Opportunities such as eco-tourism and aquaculture are constrained by skills gaps, access to capital and regulatory requirements.

4.7 THEME 7: BIODIVERSITY PLANNING AND COASTAL RESEARCH

Biodiversity planning and applied coastal research provides the scientific and spatial foundation for sustainable coastal management within the KLM. The coastal zone supports a high diversity of terrestrial, freshwater and marine ecosystems, many of which are of regional, national and international conservation significance.

Effective biodiversity management requires:

- Identification and protection of priority conservation areas.
- Integration of biodiversity information into spatial planning.
- Ongoing ecological monitoring and research.
- Institutional capacity to enforce environmental legislation.

Within the KLM, biodiversity planning is embedded in the Spatial Development Framework (SDF) and Land Use Management System and informed by provincial and national biodiversity assessments. However, implementation capacity, coordination and data integration remain key challenges.



4.7.1 Protected Areas and Biodiversity Priority Zones

Formal Protected Areas

The KLM coastal zone contains a network of formally gazetted protected areas under the National Environmental Management: Protected Areas Act (NEM:PAA), including thirteen terrestrial reserves and one additional reserve (Rocky Coast Nature Reserve) awaiting proclamation.

These reserves protect:

- Coastal dune systems.
- Dune thicket mosaics.
- Coastal forest remnants.
- Estuarine habitats.
- Wetland systems.

Examples include:

- Oyster Bay Private Nature Reserve.
- Cape St Francis Provincial Nature Reserve.
- Seal Point Local Authority Nature Reserve.
- Seekoei Nature Reserve.
- Noorsekloof Nature Reserve.
- Gamtoos River Mouth Local Nature Reserve.

Together, these areas provide a core conservation network that underpins ecological functioning and climate resilience within the municipality.

Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs)

Beyond formally protected reserves, extensive areas within the KLM coastal zone are classified as:

- Critical Biodiversity Areas (CBAs).
- Ecological Support Areas (ESAs).

as identified in the Eastern Cape Biodiversity Conservation Plan (2019).

Notable examples include:

- The Papiessfontein wetlands between the Kabeljous and Gamtoos estuaries.
- The globally significant headland-bypass dune fields at Cape St Francis.

These areas play a critical role in maintaining:

- Habitat integrity.
- Ecological connectivity.
- Sediment transport processes.
- Climate adaptation capacity.

Although incorporated into the SDF (Figure 4.43), many CBAs and ESAs remain outside formal protection and are vulnerable to land-use change and incremental degradation.

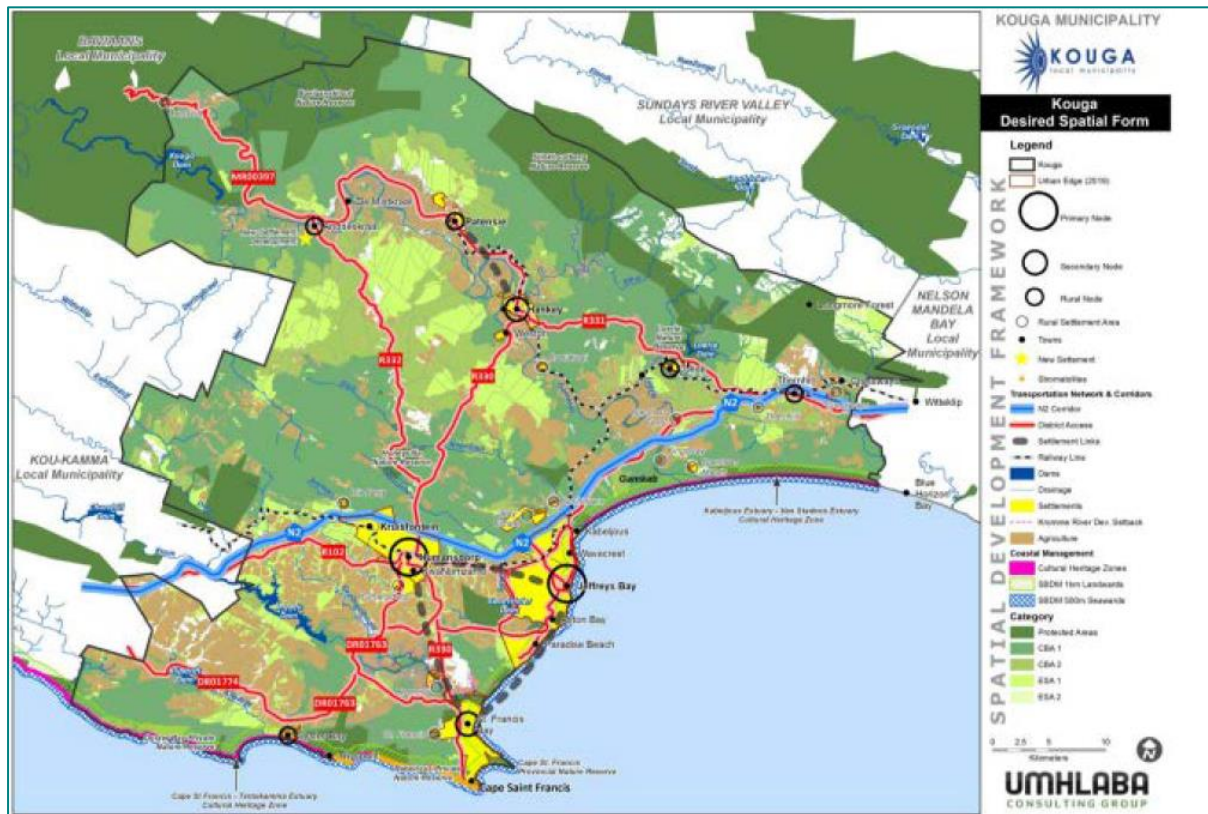


Figure 4.43: Spatial Development Plan for the KLM incorporating protected areas and CBAs

National Freshwater Ecosystem Priority Areas (NFEPA's)

Freshwater systems intersecting the coastal zone, which include the Tsitsikamma, Kromme, Seekoei, Kabeljous and Gamtoos rivers, form part of the National Freshwater Ecosystem Priority Areas (NFEPA's).

These systems:

- Maintain ecological connectivity between inland catchments and the marine environment.
- Support estuarine productivity.
- Contribute to biodiversity resilience.

Their protection is essential for sustaining downstream coastal ecosystems.

Garden Route Key Biodiversity Area (KBA)

The entire KLM coastline falls within the Garden Route Key Biodiversity Area (KBA) (Figure 4.44), an internationally recognised area meeting multiple criteria under the Global Standard for the Identification of KBAs. The presence of the KBA elevates the international conservation significance of the KLM coastline.

The KBA supports:

- Globally threatened species.
- Endemic and geographically restricted taxa.
- Threatened ecosystems.

Management responsibility is shared between:

- Garden Route Biosphere Reserve authorities.
- Eastern Cape Parks and Tourism Agency.
- Municipal and provincial authorities responsible for land-use and compliance decisions.

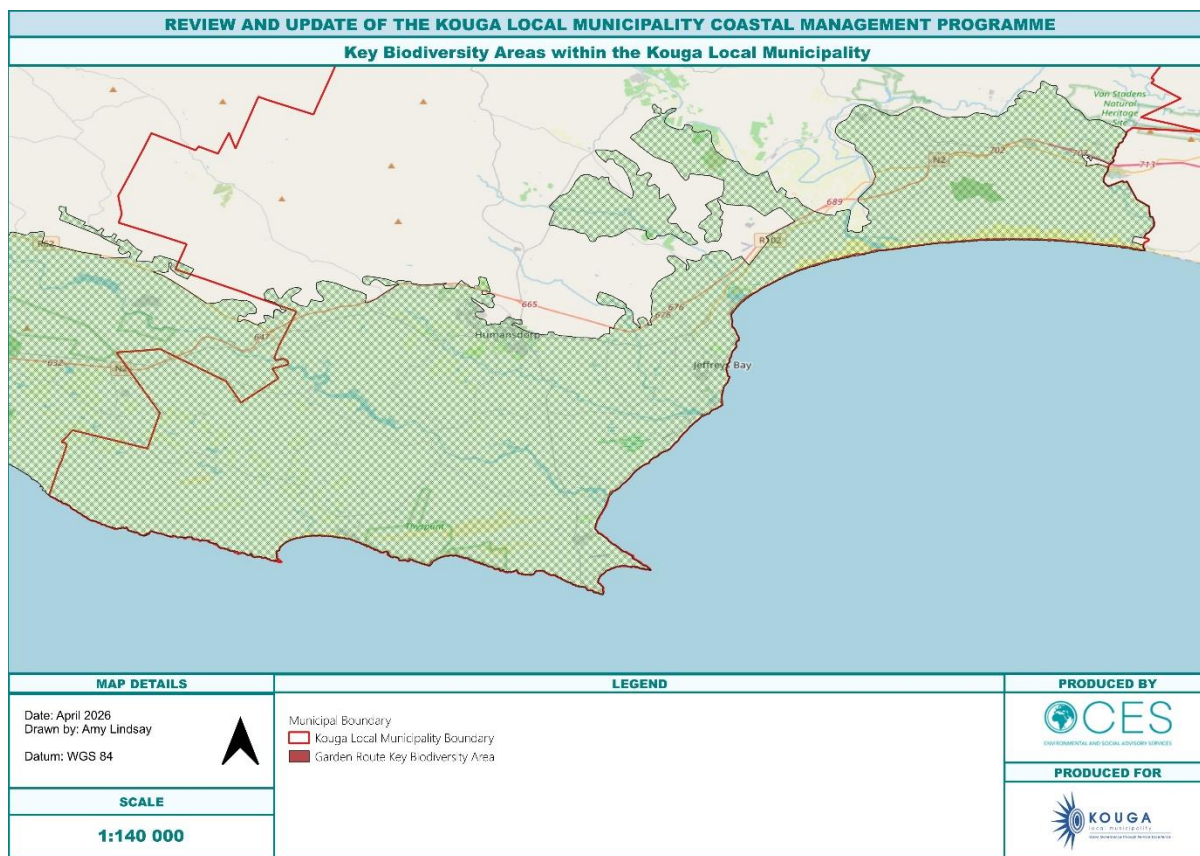


Figure 4.44: Key Biodiversity Areas within the KLM.

4.7.2 Alien Invasive Species (AIS) Management

Invasive alien species represent a significant biodiversity threat within the coastal zone, affecting:

- River corridors.
- Wetlands.
- Dune systems.
- Public open spaces.

Although AIS management is referenced in the municipal IDP, the KLM does not currently have:

- A dedicated Alien Invasive Species Management Plan (which has already been developed).
- A clearly defined budget allocation.
- A long-term monitoring framework.

Potential alignment with EPWP funding and external grants has been identified, but implementation proposals remain limited. Given the ecological sensitivity of biodiversity priority areas, strengthened AIS management is a critical planning need.

4.7.3 Coastal Research and Monitoring

Applied research and monitoring provide essential evidence for adaptive coastal management.

Priority Research Areas

Stakeholder engagement and existing planning processes identified priority research areas including:

- Estuarine sedimentation and mouth dynamics.
- Biodiversity condition and ecological trends.
- Application of the Estuarine Fish Community Index.



- Bathymetric surveys of key estuaries.
- Sediment transport and dune mobility studies.
- Climate change impact assessment.

Research outputs are particularly important for informing:

- Spatial planning decisions.
- Coastal Management Line delineation.
- Estuary management interventions.
- Biodiversity conservation strategies.

Institutional Research Partnerships

The establishment of a Coastal Committee (in progress) provides an opportunity to facilitate research collaboration with institutions such as:

- Nelson Mandela University.
- Rhodes University.

Partnerships with academic institutions can support:

- Technical expertise.
- Long-term monitoring.
- Student research linked to municipal priorities.

However, reliance on external research capacity highlights the need for clearer mechanisms to translate research findings into municipal decision-making processes.

Information Management and Data Access

The municipality has initiated development of an online data portal to improve access to spatial and environmental information.

At present:

- Biodiversity and research data are fragmented across institutions.
- Consolidated, locally relevant spatial datasets are limited.
- Public access to ecological information is constrained.

Improved integration of biodiversity data into municipal planning tools would strengthen evidence-based decision-making and transparency.

4.7.4 Institutional Structures and Compliance Context

The effectiveness of biodiversity planning depends not only on spatial designation but also on compliance and enforcement. Key institutional considerations include:

- Integration of CBAs and ESAs into development application processes.
- Enforcement of land-use conditions within biodiversity priority areas.
- Alignment between municipal planning, provincial conservation authorities and national environmental legislation.
- Establishment of estuary and wetland management structures.

The proposed Estuary and Wetland Management Committee could strengthen oversight of sensitive systems and improve integration between research, planning and compliance. However, institutional coordination challenges remain, particularly where responsibilities are shared across municipal, provincial and national spheres.



4.7.5 Key Issues and Risks

The principal issues and risks associated with biodiversity planning and coastal research within the KLM include:

- **Incomplete Protection of Priority Areas:** Many CBAs and biodiversity process areas remain outside formal protection and are vulnerable to land-use change.
- **Limited AIS Management Capacity:** The absence of a dedicated AIS management plan constrains effective control of invasive species.
- **Fragmented Data Access:** Biodiversity and research information is dispersed, limiting integrated planning.
- **Inconsistent Long-Term Monitoring:** Research priorities have been identified, but systematic, long-term monitoring remains limited.
- **Institutional Coordination Constraints:** Emerging management structures are not yet fully operational, limiting oversight of sensitive systems.
- **Reliance on External Expertise:** Dependence on academic partnerships requires improved mechanisms to embed research outputs within municipal processes.

4.8 THEME 8: COMPLIANCE AND ENFORCEMENT

Effective compliance and enforcement are fundamental to achieving the objectives of integrated coastal management within the KLM. A wide range of legislation governs activities in the coastal zone, including environmental management, land-use planning, fisheries regulation, pollution control and public access management.

Enforcement responsibility is distributed across municipal, provincial and national authorities, creating a multi-layered and sometimes fragmented compliance landscape. While the legislative framework is comprehensive, stakeholder engagement during the CMP scoping process consistently identified compliance and enforcement as one of the most significant areas of concern.

Stakeholders reported:

- Perceived inadequate enforcement visibility.
- Unclear lines of authority.
- Delayed or inconsistent response to infringements.
- Continued occurrence of illegal activities within the coastal zone.

These concerns highlight implementation and coordination challenges rather than legislative gaps.

4.8.1 Environmental Management Inspectorate (EMI)

Environmental Management Inspectors (EMIs) are designated in terms of the National Environmental Management Act 107 of 1998 (NEMA) and its Specific Environmental Management Acts (SEMA). EMIs are empowered to:

- Investigate environmental offences.
- Issue compliance notices.
- Initiate criminal enforcement proceedings.

Within the Eastern Cape, EMIs are designated across multiple entities, including:

- Department of Forestry, Fisheries and the Environment (DFFE).
- Department of Economic Development, Environmental Affairs and Tourism (DEDEAT).
- Department of Water and Sanitation (DWS).
- South African National Parks (SANParks).



- South African National Biodiversity Institute (SANBI).
- Eastern Cape Parks and Tourism Agency (ECPTA).

Through the Local Authority EMI Project, municipalities have been enabled to designate EMIs to enforce environmental legislation within their jurisdiction. However, it remains unclear how many EMIs are actively based within the KLM or SBDM.

While EMI designation strengthens enforcement capability, municipalities retain enforcement authority through their constitutional mandate and By-Laws regardless of EMI status. Stakeholder feedback suggests that perceived limited EMI capacity contributes to inconsistent enforcement outcomes and reduced deterrence.

4.8.2 Fisheries Compliance and Enforcement

Fisheries enforcement falls under the Marine Living Resources Act 18 of 1998 (MLRA) and is administered by DFFE. Fisheries Control Officers (FCOs) are responsible for:

- Monitoring fishing permits and quotas.
- Enforcing closed seasons and size limits.
- Addressing illegal harvesting practices.

It is currently unclear whether FCOs are permanently stationed within the KLM. Stakeholders raised concerns about limited visible fisheries enforcement presence at key estuaries, launch sites and fishing access points.

The MLRA also provides for Honorary Marine Conservation Officers, who support monitoring and reporting on a voluntary basis. This mechanism appears underutilised within the KLM and may offer opportunities to strengthen community-based compliance visibility.

Limited fisheries enforcement presence intersects directly with livelihood pressures and environmental sustainability concerns.

4.8.3 Municipal Coastal Management Functions

In terms of the Integrated Coastal Management Act 24 of 2008 (ICMA), the KLM is responsible for:

- Developing and implementing a municipal CMP.
- Regulating land use within the coastal zone.
- Protecting and rehabilitating coastal ecosystems.
- Managing public access and coastal amenities.
- Monitoring compliance with coastal legislation.
- Facilitating stakeholder engagement and awareness.

Although the legislative mandate is clear, stakeholder engagement highlighted constraints related to:

- Limited staffing.
- Competing municipal service delivery priorities.
- Fragmented institutional responsibilities.
- Budgetary limitations.

Effective execution of coastal management functions therefore depends heavily on intergovernmental coordination and resource availability.



4.8.4 Coastal Committees and Collaborative Governance

The KLM Coastal Management By-Law (2025) provides for the establishment of a Coastal Management Committee to support integrated governance and CMP implementation. The Committee is intended to:

- Promote interdepartmental coordination.
- Provide advisory input.
- Monitor CMP implementation.
- Facilitate stakeholder dialogue.

The Committee is in the process of being established but not yet formally operational. Similarly, the establishment of an Estuary and Wetland Management Committee has been recommended in previous planning processes, but no formal structure is currently operational.

Kromme Joint River Committee (KJRC)

The Kromme Joint River Committee provides an example of collaborative governance within the municipality. Operating under a memorandum of agreement with the KLM, the KJRC:

- Manages boating activities on the Kromme River.
- Collects permit fees to fund river management.
- Coordinates with DEDEAT, DWS and DFFE.
- Utilises a designated Peace Officer for enforcement support.

This model demonstrates the potential value of structured, locally grounded enforcement partnerships.

4.8.5 Municipal Enforcement Authority

The KLM derives enforcement powers from:

- Section 156(2) of the Constitution (authority to make and enforce By-Laws).
- The Municipal Systems Act 32 of 2000 (authority to impose fines and penalties).
- The ICMA (regulating coastal zone activities).
- The Criminal Procedure Act 51 of 1977 (appointment of Peace Officers).

Peace Officers may:

- Conduct inspections.
- Issue fines.
- Investigate offences.
- Effect arrests under prescribed conditions.

The Coastal Management By-Law provides additional mechanisms, including compliance notices and remedial directives. However, the number of designated Peace Officers and enforcement personnel currently active within the KLM is not clearly documented. Stakeholders reported that limited visible enforcement presence undermines the effectiveness of existing regulatory tools.

4.8.6 Key Issues and Risks

The principal issues associated with compliance and enforcement within the KLM coastal zone include:

- **Unclear Institutional Capacity:** Limited clarity exists regarding the number, location and functional roles of EMIs, FCOs and Peace Officers operating within the municipality.
- **Limited Visible Enforcement Presence:** Stakeholders perceive enforcement presence at key access points, estuaries and launch sites to be insufficient.



- **Fragmented Mandates:** Overlapping municipal, provincial and national responsibilities create uncertainty regarding enforcement roles and escalation pathways.
- **Emerging but Non-Operational Governance Structures:** The Coastal Management Committee and Estuary and Wetland Committee are not yet fully operational.
- **Municipal Capacity Constraints:** Staffing limitations, budget pressures and competing service delivery priorities constrain enforcement consistency.
- **Risk to Public Confidence:** Perceived inconsistent enforcement may reduce voluntary compliance and erode trust in coastal governance systems.



5 ROLES AND RESPONSIBILITIES FOR COASTAL MANAGEMENT

5.1 LEGISLATIVE AND INSTITUTIONAL CONTEXT

The ICMA provides the overarching legislative framework for the coordinated and sustainable management of South Africa's coastal zone. The ICMA assigns specific functions and responsibilities to national, provincial and municipal spheres of government in accordance with the principles of cooperative governance set out in Chapter 3 of the Constitution of the Republic of South Africa, 1996.

In terms of the ICMA, a municipality refers to a metropolitan, district or local municipality established in terms of the Local Government: Municipal Structures Act 117 of 1998. Where an area falls within both a district and a local municipality, the district municipality is generally responsible for implementing the relevant provisions of the ICMA, unless such responsibilities have been assigned to the local municipality by agreement.

The constitutional authority of municipalities to regulate and enforce coastal matters derives primarily from:

- Section 156 of the Constitution, which empowers municipalities to administer local government matters listed in Schedules 4B and 5B and to make and enforce By-Laws.
- Section 229 of the Constitution, which provides fiscal powers.
- The Municipal Structures Act.
- The Municipal Systems Act.

Within this framework, the KLM, in coordination with the SBDM and the Eastern Cape Provincial Government, is required to implement the provisions of the ICMA that fall within its assigned functional area.

The roles and responsibilities outlined below reflect the current legislative framework and are aligned with the updated National Coastal Management Programme (2025) and the updated Eastern Cape Coastal Management Programme (2025).

5.2 MANDATORY ROLES AND RESPONSIBILITIES IN TERMS OF THE ICMA

The ICMA assigns defined implementation responsibilities to municipalities within the framework of cooperative governance. These responsibilities are not discretionary; they arise directly from the constitutional mandate of local government and the provisions of the ICMA. For the KLM, the core mandatory functions relate to:

- Preparation, adoption and implementation of a Municipal Coastal Management Programme (CMP).
- Integration of coastal management objectives into the IDP, SDF and land-use planning instruments.
- Facilitation of equitable public access to coastal public property.
- Application of the Coastal Protection Zone and coastal boundary provisions.
- Incorporation and implementation of gazetted Coastal Management Lines.
- Monitoring of coastal environmental condition and contribution to State of the Coast reporting.



- Ensuring legally compliant public participation processes; and
- Enforcement of municipal Coastal Management By-Laws.

These responsibilities must be exercised in alignment with the National Coastal Management Programme (2025) and the Eastern Cape Coastal Management Programme (2025), and in coordination with national and provincial authorities.

The specific statutory provisions and associated support roles of other organs of state are summarised in Table 5.1 below.

Table 5.1: The roles and responsibilities of the KLM in coastal management in terms of the ICMA

ASPECT	RELEVANT SECTION/S IN THE ICMA	BRIEF DESCRIPTION OF MUNICIPAL ROLE AND RESPONSIBILITY	PRIMARY SUPPORTING/ COORDINATING AUTHORITIES
Municipal Coastal Management Programme (CMP)	48, 49, 52, 55	➤ Prepare, adopt, implement and periodically review a Municipal CMP aligned with the NCMP (2025) and EC CMP (2025). ➤ Integrate CMP into the IDP and SDF. ➤ Monitor implementation and report on progress.	DEDEAT (MEC), DFFE, SBDM
Alignment of Plans and Policies	51, 52	➤ Ensure that municipal plans, policies and programmes affecting the coastal zone (including the IDP, SDF, Land Use Scheme and sector plans) are consistent with the Municipal CMP and aligned with provincial and national coastal management programmes.	DEDEAT, DFFE
Access to Coastal Public Property (CPP)	18–20	➤ Identify, designate and manage coastal access land; ensure equitable public access. ➤ Reflect access land in planning instruments and By-Laws. ➤ Withdraw or amend access points where necessary following due process.	DEDEAT, DFFE
Coastal Management Lines (CMLs)	25	➤ Participate in or initiate the delineation of CMLs. ➤ Incorporate gazetted CMLs into municipal land-use schemes and zoning maps. ➤ Apply CMLs as spatial planning tools in development decision-making.	DEDEAT (Gazetting Authority), DFFE
Coastal Protection Zone (CPZ) and Coastal Boundaries	17, 26–31, 62	➤ Apply land-use legislation within the CPZ in a manner that gives effect to ICMA objectives. ➤ Reflect coastal boundaries in municipal planning maps. ➤ Ensure development does not compromise ecological integrity or natural coastal processes.	DEDEAT, DFFE, ECPTA
Land-Use Planning and Development Control	62 (read with SPLUMA)	➤ Regulate development within the coastal zone through the Land Use Scheme and development application processes.	DEDEAT, DFFE



ASPECT	RELEVANT SECTION/S IN THE ICMA	BRIEF DESCRIPTION OF MUNICIPAL ROLE AND RESPONSIBILITY	PRIMARY SUPPORTING/ COORDINATING AUTHORITIES
		➤ Integrate climate change, erosion and flood risk into spatial planning; protect sensitive coastal ecosystems.	
Monitoring and State of the Coast Reporting	59, 93	➤ Monitor the state of the coastal environment within the municipal area. ➤ Contribute data to provincial and national reporting cycles. ➤ Support adaptive management through indicators and reporting systems.	DEDEAT, DFFE
Public Participation and Consultation	53	➤ Ensure adequate public participation in exercising powers under the ICMA, including CMP development, CML processes and designation of access land.	DEDEAT
Compliance and Enforcement (Municipal Mandate)	ICMA (various), Constitution s156(2)	➤ Enforce municipal Coastal Management By-Laws. ➤ Appoint and empower Peace Officers. ➤ Conduct inspections and issue compliance notices. ➤ Coordinate with EMIs and Fisheries Control Officers where mandates overlap.	DFFE (EMIs, Fisheries), DEDEAT, SAPS
Coastal Committees and Cooperative Governance	42, 44 (read with NCMP 2025)	➤ Establish and operationalise a Municipal Coastal Committee. ➤ Participate in provincial coastal committees. ➤ Promote intergovernmental coordination and stakeholder engagement.	DEDEAT, DFFE, SBDM
Pollution Management and Coastal Waters Discharges	69–72	➤ Monitor and report unlawful discharges to coastal waters. ➤ Coordinate responses to pollution incidents. ➤ Align municipal infrastructure management with ICMA discharge requirements.	DFFE (Coastal Waters Discharge Permits), DWS
Estuary Management (Supporting Role)	33–35 (read with National Estuarine Management Protocol)	➤ Support development and implementation of Estuarine Management Plans. ➤ Integrate estuarine functional zones into spatial planning. ➤ Facilitate local coordination structures.	DEDEAT (Lead Authority), DFFE, DWS
Climate Change and Risk Integration	7, 17, 25	➤ Integrate climate change adaptation and coastal risk considerations into spatial planning and CMP implementation. ➤ Apply precautionary and adaptive management principles.	DEDEAT, DFFE



5.3 COLLABORATIVE PARTNERSHIPS FOR COASTAL MANAGEMENT

In order to effectively achieve integrated coastal management in the KLM, cooperative governance must be promoted. This requires that methods and approaches be developed to ensure the optimal involvement of all coastal stakeholders in decision making processes that are highlighted in the KLM CMP are achieved. In alignment with the updated NCMP (2025) and updated EC CMP (2025), the KLM is required to promote cooperative governance through:

- Active participation in provincial and intergovernmental coastal management forums.
- Coordination with DFFE, DEDEAT, DWS and ECPTA on enforcement, monitoring and planning matters.
- Establishment and operationalisation of a Municipal Coastal Management Committee.
- Integration of coastal objectives into municipal sector plans, including the IDP, SDF, LED and infrastructure plans.
- Transparent communication and information sharing with stakeholders.

Collaborative partnerships should prioritise:

- Community engagement and awareness.
- Conflict resolution mechanisms.
- Capacity strengthening within municipal structures.
- Alignment of coastal management objectives with socio-economic development priorities.
- Integration of scientific research into decision-making processes.

5.4 DEVELOPMENT OF BYLAWS

Section 156 of the Constitution of the Republic of South Africa, 1996, read with Parts B of Schedules 4 and 5, confers legislative and executive authority on municipalities in respect of, inter alia, municipal planning, beaches and amusement facilities, local amenities, public places, and related matters. Section 11 and Section 12 of the Local Government: Municipal Systems Act 32 of 2000 empower a municipal council to exercise its legislative authority by adopting and promulgating by-laws to give effect to its functions.

In fulfilment of its mandate under the ICMA, KLM has adopted the Kouga Coastal Management By-law (2025) enacted in terms of Section 12 of the Municipal Systems Act and Section 50 of the ICMA.

The By-law provides the KLM with the necessary regulatory and enforcement framework to implement integrated coastal management within its area of jurisdiction. It gives effect to the ICMA at local level and supports the implementation of the Municipal Coastal Management Programme (CMP).

Key Functions of the Coastal Management By-law

The By-law:

- Establishes the Municipality's mandate in integrated coastal management and provides for the establishment and functioning of a Coastal Management Committee (Chapter 3).
- Gives legal effect to the Municipal Coastal Management Programme and regulates its review, amendment and implementation (Chapter 4).
- Regulates protection of the coastal zone, including:
 - Protection of natural coastal processes.
 - Control of encroachments.
 - Regulation of unauthorised sea defences.
 - Pollution prevention and duty of care provisions (Chapter 5).



- Regulates specific activities within the coastal zone, including:
 - Fishing activities.
 - Use of vehicles on beaches.
 - Defining bathing and surfing zones.
 - Behavioural controls.
 - Regulating animals in the coastal zone (Chapter 5 – Regulation of Certain Activities).
- Provides for designation and management of coastal access land and coastal facilities (Chapter 6).
- Regulates public launch sites and vessel launching requirements (Chapter 7).
- Provides enforcement mechanisms, including:
 - Compliance notices.
 - Impoundment of vessels and vehicles.
 - Offences and penalties (including admission of guilt fines).
 - Recovery of municipal remedial costs (Chapter 8 and Schedule 1).

Relationship with the CMP

The Coastal Management By-law serves as the primary legal instrument through which the KLM implements the strategic objectives and actions contained in this CMP. In particular, the By-law:

- Ensures that activities inconsistent with the CMP may be prohibited or regulated.
- Enables enforcement against encroachment, unauthorised coastal structures, and environmental harm.
- Regulates public access and use of beaches in a manner consistent with sustainable coastal management.
- Provides the statutory basis for regulating development and land use within the coastal zone, including the delineation of coastal management lines on zoning maps.

The CMP must be implemented in conjunction with the By-law, and where necessary, actions identified in the CMP must be operationalised through enforcement, compliance monitoring and regulatory measures in terms of the By-law.

Review and Alignment

In terms of the By-law, it must be reviewed at least every five years or as required. The CMP review cycle should remain aligned with this legislative review process to ensure continued legal and strategic coherence between planning and regulatory instruments.



6 VISION AND PRIORITIES

6.1 THE KOUGA LOCAL MUNICIPALITY VISION FOR THE COASTLINE

South Africa's Constitution sets out the objectives of local government, which provide the foundation for coastal governance within the KLM. These objectives are:

- To provide a democratic and accountable government for local communities.
- To ensure the provision of services to communities in a sustainable manner.
- To promote social and economic development.
- To promote a safe and healthy environment.
- To encourage the involvement of communities and community organisations in the matters of local government.

These constitutional imperatives underpin the KLM's IDP, which emphasises sustainable service delivery, inclusive economic growth, environmental stewardship and accountable governance. The coastal zone represents one of Kouga's most significant environmental, social and economic assets, and its management must directly contribute to achieving these broader municipal development objectives.

The preparation of the Second-Generation KLM CMP provides the opportunity to articulate a clear and locally relevant vision for the coastline that aligns with the IDP, the updated NCMP (2025), and the updated EC CMP (2025), while responding to the specific risks and opportunities identified through the Situation Assessment and stakeholder engagement process.

The vision for the Kouga coastline is largely based on the vision for the SBDM, and articulated as follows:

A resilient, well-governed and economically vibrant coastline where natural coastal processes, estuaries and biodiversity are protected and restored; where development is risk-informed and climate-adaptive; where coastal livelihoods and tourism are sustained within ecological limits; and where all communities enjoy equitable access to a safe, clean and well-managed coastal environment — now and for future generations.

This vision reflects Kouga's distinctive coastal character, including its dynamic dune systems, estuarine environments, rich and varied biodiversity and landscapes, internationally recognised tourism assets and fishing communities. It recognises the increasing influence of climate change, coastal erosion, flooding and cumulative development pressures, and places institutional governance, ecological integrity and equitable access at the centre of coastal management.

The guiding principles for coastal management within the Kouga Local Municipality are aligned with those set out in the National Coastal Management Programme and the Eastern Cape Coastal Management Programme. These principles reinforce cooperative governance, ecosystem-based management, precautionary and adaptive planning, and the balancing of environmental protection with sustainable socio-economic development within the coastal zone.



6.2 THE KOUGA LOCAL MUNICIPALITY PRIORITIES FOR COASTAL MANAGEMENT

The Situation Assessment (Chapter 4) describes the current state of the Kouga Local Municipality (KLM) coastal zone, including its beaches, estuaries, dune systems, biodiversity assets, infrastructure, and areas exposed to coastal erosion, flooding and climate-related risks. The assessment, together with inputs received through stakeholder engagement processes undertaken in Jeffreys Bay, St Francis Bay, Cape St Francis, Oyster Bay and surrounding settlements, has informed the identification of key risks, governance gaps and management priorities.

The KLM does not have the institutional capacity or financial resources to address all coastal challenges simultaneously. Sound coastal management practice therefore requires prioritisation, focusing available resources on those matters that present the greatest ecological risk, socio-economic consequence or governance urgency. The second-generation CMP adopts a structured “cycle of improvement” approach, strengthening governance systems while progressively addressing priority ecological and development pressures.

Seven priority themes for coastal management in the KLM have been identified and are listed in order of importance, reflecting stakeholder inputs, institutional urgency and alignment with the National Coastal Management Programme (2025) and the Eastern Cape Coastal Management Programme (2025):

Priority 1: Compliance, Enforcement and Institutional Governance

Goal: To strengthen institutional governance, compliance and cooperative coastal management systems in order to ensure effective implementation of coastal legislation, policies and the Kouga Coastal Management By-law.

Effective governance is the foundation upon which all other coastal management objectives depend. Without clear roles, coordinated decision-making and visible enforcement, implementation of spatial planning controls, estuary management, pollution mitigation and biodiversity protection will remain constrained.

This priority seeks to:

- Operationalise and support the Municipal Coastal Committee.
- Clarify institutional roles and responsibilities within the coastal zone.
- Strengthen enforcement capacity through designation and training of Peace Officers and coordination with EMIs and Fisheries Control Officers.
- Improve compliance monitoring and reporting systems.
- Enhance intergovernmental coordination with DFFE, DEDEAT and DWS.

Strengthened governance systems will improve accountability, support adaptive management and build public confidence in coastal management processes.

Priority 2: Integrated Estuary Management

Goal: To protect, restore and sustainably manage the ecological functioning of estuaries within the KLM in accordance with the National Estuarine Management Protocol.



Estuaries within the KLM provide critical ecological, economic and social functions, yet are subject to cumulative pressures from altered freshwater inflows, pollution, habitat transformation and recreational intensity. Effective estuary management requires coordinated planning across catchment management, spatial planning, water quality management and biodiversity conservation.

This priority seeks to:

- Support the finalisation, adoption and implementation of Estuarine Management Plans (EMPs).
- Integrate Estuarine Functional Zones (EFZs) into municipal spatial planning instruments.
- Improve coordination between freshwater inflow management, pollution control and land-use decision-making.
- Support rehabilitation of degraded estuarine habitats and control of invasive species.
- Strengthen monitoring and adaptive management of estuarine condition.

Integrated estuary management will safeguard biodiversity, support tourism and recreational activities, fisheries due their importance in acting as breeding and nursery areas and enhance climate resilience.

Priority 3: Coastal Spatial Planning and Climate Change Adaptation

Goal: To embed risk-informed, climate-adaptive and ecosystem-based principles into municipal spatial planning, infrastructure planning and coastal decision-making processes through promulgating a Coastal Management Line in order to reduce vulnerability to coastal hazards, protect ecological infrastructure and support sustainable coastal development.

The KLM coastline is exposed to a range of coastal hazards, including shoreline erosion, coastal flooding, storm surge impacts, sea-level rise, dune migration, alterations to sand movement due to the loss of functional headland bypass dune systems and dynamic sediment processes. Historical development patterns, together with increasing development pressure in coastal areas, have contributed to elevated levels of risk in certain coastal settlements and infrastructure nodes, largely through historically inappropriately located developments. Climate change is expected to further exacerbate these risks through rising sea levels, increased storm intensity and changing coastal processes.

Stakeholder engagement undertaken during the review of the first-generation CMP identified coastal erosion, sand inundation, development within coastal risk areas, dune degradation and significant erosion events, inadequate protection of natural coastal buffers, significant coastal erosion and the loss of beaches and the need for stronger integration of climate change considerations into municipal planning and decision-making as key concerns. In addition, the review of the first-generation CMP highlighted the absence of approved CMLs as a significant implementation gap requiring priority attention.

The delineation of CMLs is currently underway within the KLM. However, the Coastal Management Spatial Data Framework attached as Appendix A identified several data gaps and information requirements that must be addressed before the CMLs can be finalised and subjected to public consultation. Therefore, the development and implementation of scientifically defensible CMLs remains a key priority for the municipality and will provide an important mechanism for managing coastal risk, guiding future development and supporting climate change adaptation.

This priority seeks to:



- Finalise, adopt and implement Coastal Management Lines (CMLs) and integrate these into municipal spatial planning, land use management and infrastructure planning processes.
- Incorporate coastal hazard information, including erosion, flooding, storm surge and sea-level rise projections, into development planning, decision-making and municipal asset management.
- Prevent inappropriate development within high-risk, environmentally sensitive and dynamic coastal areas, including estuarine functional zones.
- Protect and maintain ecological infrastructure, natural coastal processes, sediment pathways and dune systems that contribute to shoreline stability, biodiversity conservation and climate resilience.
- Promote nature-based solutions and ecosystem-based adaptation measures to strengthen resilience to coastal hazards and climate change impacts.
- Improve the availability and use of coastal spatial information, monitoring data and risk assessments to support evidence-based planning and adaptive management.
- Recognise and manage wildfire as a climate-related risk within coastal dune systems and urban–dune interface areas.

Risk-informed and climate-responsive planning will reduce long-term financial liabilities, improve disaster risk preparedness, protect coastal public property and ecological infrastructure, and enhance the resilience of coastal communities, livelihoods and municipal infrastructure to the impacts of climate change.

Priority 4: Coastal Pollution and Waste Management

Goal: To prevent, reduce and manage pollution within the coastal zone to safeguard water quality, ecosystem health and public wellbeing.

Land-based pollution sources, including stormwater discharges, wastewater failures and solid waste accumulation, pose risks to beaches, estuaries and nearshore marine environments. Pollution pressures undermine tourism assets, fisheries productivity and ecological integrity.

This priority seeks to:

- Improve identification and documentation of stormwater and wastewater discharge points.
- Strengthen routine monitoring of coastal and estuarine water quality.
- Enhance coordination between coastal management and municipal infrastructure services.
- Address illegal dumping and litter accumulation in high-use areas.
- Align waste management planning with coastal protection objectives.

Improved pollution control will support public health, environmental sustainability and tourism competitiveness.

Priority 5: Equitable Public Access and Coastal Use Management

Goal: To ensure safe, equitable and environmentally responsible access to coastal public property while protecting sensitive coastal ecosystems and supporting sustainable recreational, subsistence and commercial coastal uses.

The KLM coastline supports a diverse range of recreational, subsistence and commercial activities, including swimming, surfing, paddling, boating, fishing and tourism-related activities. However, the uneven distribution of formal access points, proliferation of informal access routes, increasing recreational use and tensions between different uses (swimming, surfing, fishing etc.) and competing



demands on coastal space have contributed to dune degradation, safety concerns and user conflicts in certain areas.

This priority seeks to:

- Formalise and rationalise public coastal access points to reduce environmental impacts and improve accessibility.
- Rehabilitate and close environmentally damaging informal access routes and degraded dune areas.
- Improve the distribution, maintenance and accessibility of public coastal amenities.
- Strengthen the management of public launch sites, develop additional launch sites, improve the management of vessel activities and associated infrastructure.
- Improve the management of recreational coastal activities and address user conflicts through appropriate planning, stakeholder engagement and education initiatives.
- Investigate mechanisms to improve safety and reduce conflicts between coastal user groups, including the future development of beach user management guidelines and, where appropriate, the delineation of user zones at priority beaches.
- Promote safe and responsible use of coastal public property while maintaining equitable access for all users.
- Balance recreational and economic coastal uses with ecological protection, public safety and the conservation of sensitive coastal and estuarine environments.

Improved access and coastal use management will promote equitable access to coastal public property, enhance user safety, reduce conflicts between coastal user groups and support the long-term protection of coastal ecosystems.

Priority 6: Coastal Research, Monitoring and Information Systems

Goal: To strengthen research partnerships, monitoring systems and data management in order to support evidence-based decision-making and adaptive coastal management.

Effective implementation of the CMP requires access to reliable information regarding shoreline change, estuarine condition, biodiversity health, coastal hazards, pollution trends and management performance. Given municipal resource constraints, emphasis will be placed on coordinating and integrating existing information sources rather than establishing extensive new monitoring programmes.

This priority seeks to:

- Strengthen the collection, management and accessibility of coastal information and spatial datasets.
- Improve integration of coastal risk, environmental and monitoring information into municipal decision-making processes.
- Strengthen partnerships with academic institutions, government departments and research organisations.
- Identify priority knowledge gaps that may require future investigation.
- Support adaptive management through improved reporting, information sharing and evidence-based planning.

Improved monitoring and information systems will enhance transparency, strengthen decision-making and support long-term coastal resilience.

**Priority 7: Education, Awareness and Community Stewardship**

Goal: To promote responsible coastal use, voluntary compliance and shared stewardship through strengthened education, awareness and community participation initiatives.

Long-term coastal sustainability depends on informed behaviour, active stakeholder participation and a shared sense of responsibility for the coastal environment. Awareness of dune sensitivity, pollution impacts, estuary functioning, fisheries regulations, coastal hazards and climate risks varies across user groups and communities.

This priority seeks to:

- Improve public awareness of coastal legislation, municipal by-laws and responsible coastal behaviour.
- Strengthen environmental education and stewardship initiatives through partnerships with schools, community organisations and user groups.
- Improve communication regarding coastal risks, environmental sensitivities and management interventions.
- Promote community participation in coastal clean-ups, monitoring initiatives and conservation activities.
- Strengthen internal municipal awareness of coastal management responsibilities and obligations.

Enhanced education and stewardship will improve compliance, reduce environmental degradation and foster shared responsibility for coastal management outcomes.



7 IMPLEMENTATION FRAMEWORK

The vision for the KLM coastline, together with the seven priority themes identified in Chapter 6, provides the strategic direction for coastal management within the municipal area. In order to translate this vision into measurable outcomes, a structured and practical implementation plan is required.

This chapter sets out the implementation framework for the Second-Generation KLM CMP. The framework has been developed in accordance with the governance-first approach outlined in Section 1.5 of this CMP and is informed by:

- The findings of the Situation Assessment (Chapter 4).
- The performance review of the First-Generation CMP (Chapter 5 of the Scoping Report).
- Stakeholder inputs received during the scoping and engagement processes.
- Alignment with the draft National Coastal Management Programme (2025) and the draft Eastern Cape Coastal Management Programme (2025).

The implementation plan is structured around the seven priority themes and translates each priority into targeted strategies, actions, measurable output indicators, timeframes and clearly assigned responsible authorities. The actions identified are designed to be practical, implementable and aligned with the statutory mandate of the KLM in terms of the ICMA.

7.1 METHODOLOGY FOR ACTION IDENTIFICATION

In developing the implementation actions, the following principles were applied:

- **Institutional realism:** Actions are framed to be achievable within the current and projected institutional capacity of the KLM.
- **Prioritisation of enabling systems:** Governance, monitoring and coordination mechanisms are prioritised as foundational enablers of long-term coastal management effectiveness.
- **Phased implementation:** Actions are sequenced over the five-year CMP cycle to allow for progressive strengthening of systems and capacity.
- **Carry-forward of relevant actions:** Unresolved or partially implemented actions from the First-Generation CMP have been reviewed and incorporated where appropriate.
- **Integration of stakeholder concerns:** Actions respond directly to issues raised during stakeholder engagement, including enforcement visibility, estuary management gaps, pollution concerns and uneven coastal access management.
- **Alignment with municipal planning instruments:** Where possible, actions are embedded within existing municipal processes such as IDP reporting cycles, SDF reviews and departmental operational plans.

7.2 BUDGET APPROACH AND FUNDING CONSIDERATIONS

The CMP is a strategic planning instrument and does not in itself constitute a financial commitment. However, to enhance implementation feasibility and transparency, each action is accompanied by an indicative budget category.

Rather than prescribing fixed monetary allocations, which may become outdated or inconsistent with annual municipal budgeting processes, the implementation plan classifies actions according to the following budget categories:

- **Existing Operational Budget:** Actions that can be implemented within current staffing and operational resources.



- **Low Cost:** Actions requiring minimal additional expenditure (e.g. workshops, signage updates, internal system development).
- **Moderate Cost:** Actions requiring dedicated training, specialist input or limited capital expenditure.
- **High Cost / External Funding Required:** Actions dependent on external grants, partnerships or capital-intensive interventions.

This approach ensures that the CMP remains aligned with the Municipal Finance Management Act 56 of 2003 (MFMA) and allows for integration into annual budgeting and IDP review processes without creating unfunded mandates.

Where actions require external support, the Municipality will seek collaboration with Provincial and National departments, grant funding programmes (such as EPWP or environmental rehabilitation initiatives), or partnerships with academic and civil society organisations.

7.3 ADAPTIVE IMPLEMENTATION

Implementation of the CMP will follow an adaptive management approach. Progress will be monitored annually through defined output indicators, and a mid-term review will assess the effectiveness of implementation mechanisms. Adjustments may be made during the five-year cycle in response to emerging risks, climate-related impacts, legislative changes or institutional capacity shifts. Through this structured, prioritised and fiscally realistic implementation framework, the KLM seeks to progressively strengthen coastal governance, protect ecological integrity, reduce climate-related risks and support sustainable coastal livelihoods over the life of this CMP.

7.4 IMPLEMENTATION PLANS

The following implementation plans translate the strategic priorities and objectives of the KLM CMP into specific, measurable and time-bound actions. Each priority theme is supported by clearly defined strategies, output indicators, responsible authorities and indicative budget categories to guide practical implementation over the five-year CMP cycle. The actions have been structured to reflect the KLM's statutory mandate in terms of the ICMA, while remaining realistic in relation to institutional capacity and available resources. Collectively, these implementation plans provide a structured roadmap for strengthening governance, protecting ecological systems, managing coastal risk and promoting sustainable and equitable use of the KLM coastline.



7.4.1 Coastal Management Objective 1: Strengthen institutional governance, compliance, coordination and enforcement capacity to enable effective implementation of the KLM CMP

PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
Coastal Management Strategy 1.1: Clarify Roles and Embed Coastal Governance Within Existing Structures				
1.1.1. Formally establish and operationalise the Municipal Coastal Committee in accordance with the KLM Coastal Management By-Law, including the appointment of members, adoption of Terms of Reference and scheduling of regular meetings.	➤ Municipal Coastal Committee formally constituted. ➤ Terms of Reference adopted. ➤ At least two meetings held during the first year of implementation.	Within 6 months of CMP adoption	Implementation (Lead): Environmental Unit Support: Municipal Manager's Office Monitoring / Oversight: Municipal Council	Existing Operational Budget
1.1.2. Formally designate one of the existing Environmental Officers as the Coastal Management Focal Point responsible for coordinating CMP implementation and reporting.	➤ Written designation approved by Municipal Manager. ➤ CMP coordination and reporting responsibilities reflected in internal documentation.	Within 6 months of CMP adoption	Implementation (Lead): KLM Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
1.1.3. Develop and adopt a concise Internal Coastal Governance Protocol clarifying departmental responsibilities and decision-making pathways for coastal matters.	➤ Governance Protocol adopted and circulated to Planning, Law Enforcement, Infrastructure and Waste Departments.	Within 12 months	Implementation (Lead): Environmental Unit Support: Planning, Infrastructure, Law Enforcement Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
1.1.4. Integrate coastal management responsibilities and reporting requirements into relevant departmental operational plans.	➤ Coastal actions and reporting lines reflected in departmental plans.	Next annual planning cycle	Implementation (Lead): Relevant Departments (Planning, Law Enforcement, Waste, Infrastructure) Support: Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
1.1.5. Update and maintain a coastal stakeholder contact register for coordination and escalation purposes (DEDEAT, DFFE, DWS, SAPS, harbour authority, fisheries representatives).	➤ Updated contact register stored centrally and reviewed annually.	Annual review	Implementation (Lead): Environmental Unit Support: Office of the Municipal Manager	Existing Operational Budget



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
			Monitoring / Oversight: Municipal Coastal Committee	
1.1.6. Undertake a coastal management capacity assessment to evaluate whether existing environmental and enforcement capacity is sufficient to support CMP implementation and prepare a motivation for additional capacity where justified.	➤ Capacity assessment report completed. ➤ Recommendation submitted through IDP and HR planning processes.	Within 2 years of CMP adoption	Implementation (Lead): Environmental Unit Support: Corporate Services / HR Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget (internal assessment)
Coastal Management Strategy 1.2: Strengthen Enforcement Through Cross-Designation Rather Than New Posts				
1.2.1. Identify and designate a minimum of two existing Law Enforcement Officers as Peace Officers authorised to enforce the Coastal Management By-law.	➤ At least two officers formally designated.	Within 2 years	Implementation (Lead): KLM Law Enforcement Unit Support: Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Moderate Cost (training/designation fees)
1.2.2. Facilitate one structured training session (internal or Provincial-supported) on ICMA and Coastal Management By-law provisions for designated Peace Officers and selected Planning officials.	➤ Attendance register and training materials on file.	Within 18 months	Implementation (Lead): Environmental Unit (Coordination) Support: DEDEAT (Provincial EMI training where available) Monitoring / Oversight: Municipal Coastal Committee	Moderate Cost / External Support
1.2.3. Develop a one-page enforcement quick-reference guide summarising common coastal offences and corresponding by-law provisions.	➤ Quick-reference guide distributed to designated officers.	Within 12 months	Implementation (Lead): Environmental Unit Support: Law Enforcement Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
Coastal Management Strategy 1.3: Implement Structured Monitoring to Inform Adaptive Decision-Making				
1.3.1. Develop a standardised Coastal Compliance Inspection Checklist for use during routine patrols and coordinated inspections.	➤ Checklist template developed and used during inspections.	Within 12 months	Implementation (Lead): Environmental Unit Support: Law Enforcement Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
1.3.2. Undertake at least two coordinated coastal compliance operations per year at identified high-risk areas.	➤ Inspection reports documenting date, officers present, issues identified and actions taken.	Bi-annual	Implementation (Lead): Law Enforcement Unit (Lead) Technical Support: Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
1.3.3. Establish and maintain a Coastal Incident Register capturing erosion events, pollution incidents, illegal vehicle use and enforcement actions.	➤ Incident Register maintained electronically and updated as incidents occur.	Ongoing	Implementation (Lead): Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
1.3.4. Conduct an annual review of inspection and incident data to identify trends, emerging hotspots and enforcement gaps.	➤ Annual trend summary included in CMP implementation report, with documented adjustments to inspection priorities where necessary.	Annually	Implementation (Lead): Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
Coastal Management Strategy 1.4: Strengthen Intergovernmental Escalation and Responsive Coordination				
1.4.1. Develop a written escalation pathway outlining when and how matters are referred to DEDEAT, DFFE, DWS or SAPS.	➤ Escalation pathway document approved and adopted internally.	Within 12 months	Implementation (Lead): Environmental Unit Support: Municipal Manager Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
1.4.2. Ensure KLM representation at Provincial Coastal Committee meetings and formally table emerging coastal risk trends where required.	➤ Attendance recorded and issues minuted at PCC meetings.	As scheduled	Implementation (Lead): Environmental Unit Monitoring / Oversight: Municipal Coastal Committee External Monitoring / Oversight: DEDEAT (PCC Secretariat)	Existing Operational Budget
1.4.3. Convene one annual coordination meeting with Port St Francis management and fisheries stakeholders to review compliance trends and adjust cooperative actions.	➤ Meeting minutes recording issues raised and agreed follow-up actions.	Annual	Implementation (Lead): Environmental Unit Support: Law Enforcement External Participants: DFFE Fisheries, Harbour Authority	Low Cost



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
Coastal Management Strategy 1.5: Embed Measurable Governance Indicators and Periodic Review				
1.5.1. Develop a set of measurable governance performance indicators for Theme 1 (e.g. inspections conducted, incidents recorded, MCC meetings held, training sessions completed) and align these with the Municipal Performance Management System (PMS).	➤ Indicator framework approved and formally incorporated into CMP reporting and, where appropriate, IDP/PMS processes.	Within 12 months	Implementation (Lead): Environmental Unit Support: IDP / PMS Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
1.5.2. Prepare an Annual CMP Implementation Report assessing progress against indicators, summarising monitoring findings, identifying implementation gaps and recommending adjustments. The report shall be tabled at the Municipal Coastal Committee (MCC) for technical review and submitted to the Municipal Manager for executive oversight. A summary of the Annual CMP Implementation Report may be shared with the Provincial Coastal Committee and other stakeholders and NGO's to support cooperative governance.	➤ Annual CMP Implementation Report prepared. ➤ Review minuted at MCC. ➤ Submission to Municipal Manager recorded.	Annually	Implementation (Lead): Environmental Unit Monitoring / Oversight: Municipal Coastal Committee (technical review) and Municipal Manager (executive oversight)	Existing Operational Budget
1.5.3. Integrate key findings from the Annual CMP Implementation Report into the IDP review process and, where relevant, into departmental operational planning cycles.	➤ Evidence of CMP findings referenced in IDP review documentation or departmental planning processes.	Annually (aligned to IDP cycle)	Implementation (Lead): Environmental Unit Support: IDP Unit; Relevant Departments Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
1.5.4. Conduct a mid-term governance effectiveness review in Year 3 to determine whether governance systems, enforcement mechanisms and institutional arrangements require adjustment.	➤ Mid-term governance review report completed and recommendations documented. ➤ Tabled at MCC and submitted to Municipal Manager.	Year 3	Implementation (Lead): Environmental Unit Monitoring / Oversight: Municipal Coastal Committee (technical review) and Municipal Manager (executive oversight)	Low Cost (internal review)



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
1.5.5. Adjust implementation priorities, inspection focus areas and coordination mechanisms where monitoring indicates recurring non-compliance or emerging risks.	➤ Documented evidence of adjustments reflected in subsequent Annual CMP Implementation Reports.	Annually	Implementation (Lead): Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget



7.4.2 Coastal Management Objective 2: Protect, restore and sustainably manage estuarine systems within the KLM through phased EMP development, strengthened implementation, operational risk management, spatial integration and adaptive governance in accordance with the National Estuarine Management Protocol (2021).

PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
Coastal Management Strategy 2.1: Finalise, Develop and Formalise Estuarine Management Plans (EMPs)				
2.1.1. Undertake a gap analysis of the Gamtoos Draft EMP against NEMP minimum requirements to inform scope of update.	➤ Gap analysis report completed.	Within 6 months	Implementation (Lead): Environmental Unit Support: DEDEAT Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
2.1.2. Submit a formal request to DEDEAT for technical and/or financial support for EMP development and updating of priority Estuarine Management Plans, including the Gamtoos, Kabeljous and Kromme, in accordance with the National Estuarine Management Protocol.	➤ Written submission and response recorded.	Within 12 months	Implementation (Lead): Environmental Unit Monitoring / Oversight: Municipal Manager (sign-off authority)	Existing Operational Budget
2.1.3. Formally prioritise the Gamtoos EMP for review and updating of the 2008 Draft EMP in alignment with the NEMP (2021).	➤ Updated EMP completed, gazetted and implemented.	Within 18 months	Implementation (Lead): Environmental Unit Support: DEDEAT Monitoring / Oversight: Municipal Coastal Committee	High Cost (External Funding Required)
2.1.4. Undertake a feasibility and scoping assessment for the development of NEMP-compliant EMPs for the Kromme and Kabeljous estuaries, including review of existing management instruments, available data, governance arrangements and funding requirements.	➤ Scoping assessment completed. ➤ EMP development pathway and prioritisation approved by KLM.	Within 24 months	Implementation (Lead): Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
2.1.5. Develop a phased programme for the preparation of EMPs for the Kromme and Kabeljous estuaries, informed by the outcomes of the scoping assessment and availability of provincial or national support funding.	➤ EMP development programme adopted. ➤ Funding applications submitted where required.	Within 3 years	Implementation (Lead): Environmental Unit Support: DEDEAT Monitoring / Oversight: Municipal Coastal Committee	High Cost (External Funding Required)



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
	➤ Priority estuary EMPs initiated during the CMP implementation period where resources permit.			
2.1.6. Maintain implementation tracking of the Seekoei EMP and identify priority actions within municipal mandate.	➤ Annual Seekoei implementation summary included in CMP report.	Annually	Implementation (Lead): Environmental Unit Support: Relevant Departments Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
Coastal Management Strategy 2.2: Strengthen Operational Management of Estuarine Pressures				
2.2.1. Develop an Estuary Mouth Management Coordination Protocol for priority temporarily closed estuaries (Gamtoos, Seekoei, Kabeljous), clarifying: KLM disaster response role. ➤ DEDEAT environmental oversight role. ➤ DWS water resource and hydrological mandate. ➤ Escalation and communication pathways.	➤ Protocol adopted internally and shared with DEDEAT and DWS.	Within 12 months	Implementation (Lead): KLM Environmental Unit Support: DEDEAT; DWS; KLM Disaster Management; Infrastructure Services Monitoring / Oversight: Municipal Coastal Committee	High Cost (External Funding Required)
2.2.2. Integrate estuary-related pollution incidents into the Coastal Incident Register and ensure appropriate escalation to Infrastructure Services, DEDEAT, DWS or Law Enforcement where relevant.	➤ Incidents recorded and tracked annually; escalation correspondence documented where applicable.	Ongoing	Implementation (Lead): Environmental Unit Support: Infrastructure Services; Law Enforcement Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
2.2.3. Undertake two documented annual visual condition assessments for each estuary within the KLM, with one assessment in summer and one assessment in winter, using a standardised checklist to record mouth condition, bank erosion, visible pollution, invasive species	➤ Completed annual seasonal assessment checklists for each estuary, summarised in the annual CMP implementation report.	Annually	Implementation (Lead): Environmental Unit Support: Law Enforcement; Infrastructure Services (where relevant)	Existing Operational Budget



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
presence, informal access proliferation and infrastructure encroachment.			Monitoring / Oversight: Municipal Coastal Committee	
2.2.4. Coordinate with Law Enforcement to address recreational compliance issues in high-use estuaries.	➤ At least one coordinated operation per priority estuary annually.	Annual	Implementation (Lead): Law Enforcement Unit Support: Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
2.2.5. Identify estuary rehabilitation opportunities suitable for external funding (e.g. alien clearing, dune stabilisation) and prepare concept notes for submission where funding windows arise.	➤ Funding-ready project list compiled and at least one concept note prepared per estuary during CMP cycle.	Within 2 years	Implementation (Lead): Environmental Unit Support: Corporate Services (grant support) Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
Coastal Management Strategy 2.3: Integrate Estuary Management into Spatial Planning and Development Control				
2.3.1. Ensure Estuarine Functional Zones (EFZs) are reflected in SDF, LSDFs and development screening processes.	➤ EFZ spatial layers incorporated into planning system.	Within next SDF review	Implementation (Lead): Planning Department Support: Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Planning Budget
2.3.2. Develop internal screening note for development applications within or adjacent to estuarine areas.	➤ Screening guideline adopted internally.	Within 12 months	Implementation (Lead): Environmental Unit Support: Planning Department Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
2.3.3. Ensure that EMP zonation plans are integrated into municipal GIS and spatial planning tools once formally adopted.	➤ Zonation layers incorporated into GIS system.	As EMPs adopted	Implementation (Lead): Planning Department Support: Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
Coastal Management Strategy 2.4: Establish Monitoring, Reporting and Adaptive Governance Mechanisms				



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
2.4.1. Develop an EMP Implementation Tracking Framework applicable to all estuaries within KLM, identifying priority actions, responsible departments and status categories (Not Started / In Progress / Complete).	➤ Tracking framework template adopted and actively used for annual reporting.	Within 12 months	Implementation (Lead): Environmental Unit Support: Relevant Departments (Planning, Infrastructure, Law Enforcement) Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget. Possibly external funding initially.
2.4.2. Include estuary condition and EMP implementation status in the annual CMP implementation report.	➤ Annual CMP report includes dedicated estuary management section.	Annually	Implementation (Lead): Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
2.4.3. Review annual monitoring findings to identify emerging estuary risks and hotspots and adjust municipal response priorities (including enforcement focus, rehabilitation targeting and EMP prioritisation) accordingly.	➤ Adjustments and revised priorities documented in subsequent annual CMP report.	Annually	Implementation (Lead): Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
2.4.4. Conduct a mid-term (Year 3) review of estuary governance effectiveness, including EMP development progress, implementation tracking and operational risk management performance.	➤ Mid-term review section included in CMP review report and tabled to Municipal Manager.	Year 3	Implementation (Lead): Environmental Unit Support: Relevant Departments Monitoring / Oversight: Municipal Coastal Committee (technical review) and Municipal Manager (executive oversight)	Low Cost



7.4.3 Coastal Management Objective 3: Coastal Spatial Planning and Climate Change Adaptation

PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
Coastal Management Strategy 3.1: Finalise, Adopt and Implement Coastal Management Lines as the Primary Coastal Risk Management Tool for the Kouga Local Municipality				
3.1.1. Complete the acquisition, development, refinement and validation of priority local-scale spatial datasets required to support the delineation of scientifically defensible Coastal Management Lines (CMLs), including topography, coastal process, shoreline change, estuarine and coastal hazard information, and climate change in accordance with the National Guideline for Coastal Management Lines.	➤ Spatial Data Gap Assessment completed. ➤ Priority datasets required for CML delineation acquired and incorporated into the CML project database. ➤ Technical confirmation received from the appointed specialist team that sufficient information is available to proceed with CML delineation.	Within 12 months of CMP adoption	Implementation (Lead): KLM Environmental Unit Support: Appointed CML Specialists; DEDEAT; DFFE; SANBI; SAEON; CSIR Monitoring/Oversight: Municipal Coastal Committee (MCC)	High Cost (External Funding Required)
3.1.2. Complete specialist analysis and coastal risk modelling required to support the delineation of scientifically defensible Coastal Management Lines, including consideration of erosion risk, coastal flooding, sea-level rise, dune dynamics, estuarine processes and associated coastal hazards.	➤ Coastal hazard and risk assessment completed. ➤ Specialist technical inputs completed and documented. ➤ Draft Coastal Management Lines produced.	Within 18 months	Implementation (Lead): Appointed CML Specialists Support: KLM Environmental Unit; DEDEAT Monitoring/Oversight: MCC	High Cost
3.1.3. Finalise draft Coastal Management Lines and associated management zones in accordance with the National Guideline for Coastal Management Lines and applicable legislative requirements.	➤ Draft CMLs and associated management zones completed. ➤ Technical delineation report completed.	Within 18 months	Implementation (Lead): Appointed CML Specialists Support: KLM Environmental Unit; DEDEAT Monitoring/Oversight: MCC	Included in Action 3.1.2
3.1.4. Undertake a structured stakeholder engagement and public participation process on the draft Coastal Management Lines.	➤ Public participation process undertaken in accordance with applicable legislative requirements. ➤ Stakeholder comments and responses documented. ➤ Final CML package prepared for submission.	Following completion of draft CMLs	Implementation (Lead): Environmental Unit Support: Communications Unit; DEDEAT Monitoring/Oversight: MCC	Moderate Cost



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
3.1.5. Submit final Coastal Management Lines to the relevant Provincial Authority for approval and gazetting.	➤ CML submission completed. ➤ Approval process initiated.	Within 24 months	Implementation (Lead): Environmental Unit Support: DEDEAT Monitoring/Oversight: MCC	Existing Operational Budget
3.1.6. Develop and adopt internal procedures for the consideration of approved Coastal Management Lines during development applications, land use planning and municipal infrastructure planning.	➤ Internal CML implementation procedure approved. ➤ Planning, Building Control and Infrastructure officials briefed on CML application requirements.	Within 12 months of CML approval	Implementation (Lead): Planning Department Support: Environmental Unit; Building Control Monitoring/Oversight: MCC	Low Cost
Coastal Management Strategy 3.2: Integrate Coastal Risk and Climate Change Considerations into Municipal Planning and Decision-Making				
3.2.1. Incorporate approved Coastal Management Lines, coastal hazard information and climate adaptation considerations into the SDF, LSDFs, Land Use Scheme and municipal GIS systems.	➤ Approved CMLs and associated coastal risk layers incorporated into the municipal GIS. ➤ CMLs considered during reviews of relevant planning instruments.	Following approval of CMLs	Implementation (Lead): Planning Department Support: GIS Unit; Environmental Unit Monitoring/Oversight: MCC	Existing Operational Budget
3.2.2. Ensure that coastal erosion, flooding, sea-level rise, dune migration and wildfire risks are considered during municipal planning, infrastructure development and land use decision-making processes.	➤ Coastal risk considerations incorporated into municipal planning and infrastructure decision-making processes.	Ongoing	Implementation (Lead): Planning Department Support: Environmental Unit; Infrastructure Services; Disaster Management Unit Monitoring/Oversight: MCC	Existing Operational Budget
3.2.3. Review development applications within the coastal zone against approved Coastal Management Lines, biodiversity priorities and coastal risk information.	➤ Development applications within the coastal zone assessed against available coastal risk information and approved CMLs, where applicable.	Ongoing	Implementation (Lead): Planning Department Support: Environmental Unit Monitoring/Oversight: Municipal Planning Tribunal (where applicable) and MCC	Existing Operational Budget
Coastal Management Strategy 3.3: Protect Natural Coastal Defences and Support Climate Resilience				
3.3.1. Identify priority coastal areas affected by erosion, dune destabilisation, sand inundation or loss of ecological function and incorporate	➤ Priority intervention areas identified and mapped.	Within 3 years	Implementation (Lead): Environmental Unit	Low Cost



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
these into municipal planning and management programmes.			Support: GIS Unit; Infrastructure Services Monitoring/Oversight: MCC	
3.3.2. Support the protection, rehabilitation and appropriate management of dune systems, coastal vegetation and ecological corridors through municipal projects and external partnership programmes where resources are available.	➤ Participation in at least one coastal rehabilitation, restoration or invasive species management initiative during the CMP period, where funding and partnerships are available.	Ongoing	Implementation (Lead): Environmental Unit Support: EPWP; Working for Water; Landowners; DEDEAT Monitoring/Oversight: MCC	Moderate Cost (Subject to External Funding Availability)
3.3.3. Promote nature-based solutions and discourage inappropriate hard-engineering responses that may negatively affect coastal processes and shoreline stability.	➤ Nature-based coastal management measures promoted through municipal planning and environmental review processes. ➤ Develop guidelines on suitable erosion control measures similar to what The Wilderness LM has done.	Ongoing	Implementation (Lead): Environmental Unit Support: Planning Department; Infrastructure Services Monitoring/Oversight: MCC	Existing Operational Budget
Coastal Management Strategy 3.4: Strengthen Coastal Spatial Information Management and Adaptive Management				
3.4.1. Maintain and update municipal coastal spatial information, including Coastal Management Lines, biodiversity information, coastal risk layers and other relevant datasets.	➤ Municipal coastal spatial database maintained and updated periodically as new information becomes available.	Ongoing	Implementation (Lead): GIS Unit Support: Environmental Unit; DEDEAT; DFFE; SANBI Monitoring/Oversight: MCC	Existing Operational Budget
3.4.2. Strengthen collaboration and data-sharing with research institutions and government departments to support evidence-based coastal management and future updates of the Coastal Management Programme.	➤ Engagement with relevant research institutions and government departments undertaken as required. ➤ Available coastal datasets incorporated into municipal decision-making processes where appropriate.	Ongoing	Implementation (Lead): Environmental Unit Support: SAEON; NMU; Rhodes University; DEDEAT; DFFE Monitoring/Oversight: MCC	Existing Operational Budget
3.4.3. Include coastal risk, climate change adaptation and Coastal Management Line implementation progress within the Annual CMP Implementation Report.	➤ Coastal spatial planning, climate adaptation and CML implementation progress reported	Annually	Implementation (Lead): Environmental Unit Monitoring/Oversight: MCC and Municipal Manager	Existing Operational Budget



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
	through Annual Implementation Reports. CMP			



7.4.4 Coastal Management Objective 4: Prevent and reduce land-based and marine pollution impacts on the coastal and estuarine environment through improved infrastructure coordination, monitoring, enforcement and public accountability.

PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
Coastal Management Strategy 4.1: Strengthen Coordination Between Environmental and Infrastructure Services				
4.1.1. Develop a Coastal Pollution Response Note clarifying roles of Environmental Unit, Infrastructure Services and Law Enforcement in relation to sewer spills, stormwater discharge and pump station failures.	➤ Response note adopted and circulated internally.	Within 12 months	Implementation (Lead): Environmental Unit Support: Infrastructure Services; Law Enforcement Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
4.1.2. Integrate coastal pump station maintenance reporting into MCC discussions at least once per year.	➤ Annual infrastructure status briefing minuted at MCC.	Annually	Implementation (Lead): Infrastructure Services Support: Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
Coastal Management Strategy 4.2: Improve Monitoring and Transparency of Coastal Water Quality				
4.2.1. Consolidate coastal and estuarine water quality monitoring results into a quarterly public summary, and issue ad hoc notices where significant exceedances or pollution incidents occur.	➤ Quarterly water quality summaries published; incident notices issued where required.	Quarterly	Implementation (Lead): Environmental Unit Support: Infrastructure Services; Communications Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
4.2.2. Identify and prioritise high-risk stormwater outfalls discharging into estuaries and beaches, classify associated risks and trigger inspection, corrective maintenance or intergovernmental escalation as appropriate.	➤ Outfall risk register compiled; corrective or escalation actions recorded in Incident Register. ➤ Status reported in annual CMP report.	Within 12 months (identification) Ongoing (management)	Implementation (Lead): Environmental Unit Support: Infrastructure Services; Law Enforcement; DWS/DEDEAT where applicable Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
Coastal Management Strategy 4.3: Strengthen Waste Management at Coastal Access Points				
4.3.1. Conduct a coastal access waste infrastructure audit to identify bin adequacy, design suitability (wind-proofing), servicing frequency gaps and illegal dumping hotspots, and develop a prioritised corrective action plan for implementation through operational or IDP processes.	➤ Audit report completed. ➤ Prioritised corrective action plan developed. ➤ Actions tracked in Annual CMP Report.	Within 18 months	Implementation (Lead): Environmental Unit Support: Waste Management Unit; Law Enforcement; Infrastructure Services Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget (audit) Operational budget for corrective measures
4.3.2. Increase waste servicing frequency at identified high-use beaches during peak holiday periods.	➤ Documented seasonal servicing schedule.	Annually (peak season)	Implementation (Lead): Waste Management Unit Support: Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Operational (seasonal allocation)
4.3.3. Facilitate and support targeted coastal clean-up initiatives informed by waste hotspot identification and seasonal tourism pressures, with a minimum of one coordinated initiative per coastal node annually.	➤ Clean-up initiatives recorded. ➤ Hotspot locations referenced in annual CMP report.	Annually (minimum), additional events as required	Implementation (Lead): Environmental Unit Support: Waste Management; NGOs; Ratepayers Associations Monitoring / Oversight: Municipal Coastal Committee	Low Cost
Coastal Management Strategy 4.4: Address On-Site Sanitation Risks in Coastal and Estuarine Areas				
4.4.1. Undertake a desktop-based risk screening of properties within estuarine functional zones and high-risk coastal areas to identify potential on-site sanitation risks using available municipal records and GIS data.	➤ Risk screening map and priority list compiled. ➤ High-risk clusters identified for further engagement.	Within 2 years	Implementation (Lead): Environmental Unit Support: Infrastructure Service; GIS Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
4.4.2. Engage Infrastructure Services to review honey-sucker service response times and identify high-risk backlog areas.	➤ Response time review documented.	Within 2 years	Implementation (Lead): Infrastructure Services Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
4.4.3. Develop and adopt a policy position discouraging new septic tank installations within estuarine functional zones and high-risk coastal areas and requiring conservancy tanks or alternative approved systems where sewer infrastructure is unavailable.	➤ Policy position endorsed internally and integrated into development screening processes.	Within 2 years	Implementation (Lead): Environmental Unit Support: Planning Department; Building Control; Infrastructure Services Monitoring / Oversight: Municipal Coastal Committee and Municipal Manager	Existing Operational Budget
Coastal Management Strategy 4.5: Strengthen Marine and Fisheries Waste Oversight				
4.5.1. Table marine litter concerns (ghost gear, chokka waste) annually at intergovernmental coordination meetings.	➤ Issue minuted and referral recorded.	Annually	Implementation (Lead): Environmental Unit Support: DFFE Fisheries; Harbour Authority Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
4.5.2. Consolidate marine litter observations recorded through annual estuary assessments, coastal compliance inspections, waste audits and clean-up initiatives into a marine litter trends section within the Annual CMP Implementation Report.	➤ Marine litter trends section included in Annual CMP Implementation Report, with hotspot locations identified where applicable.	Annually	Implementation (Lead): Environmental Unit Support: Law Enforcement; Waste Management Unit; Harbour Authority (where applicable) Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget



7.4.5 Coastal Management Objective 5: Ensure safe, equitable and environmentally responsible access to coastal public property while managing coastal recreational use and protecting sensitive coastal environments.

PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
Coastal Management Strategy 5.1: Improve Coastal Access Management				
5.1.1. Undertake an audit of formal and informal coastal access points to identify priority areas requiring formalisation, upgrading, rehabilitation or closure.	➤ Coastal access point inventory completed. ➤ Priority intervention areas identified.	Within 2 years	Implementation (Lead): Environmental Unit Support: Infrastructure Services; GIS Unit Monitoring/Oversight: MCC	Existing Operational Budget
5.1.2. Develop and implement a prioritised programme for the formalisation, rationalisation or rehabilitation of coastal access points where environmental degradation or safety concerns have been identified.	➤ Priority access management actions identified and incorporated into departmental planning processes.	Within 3 years	Implementation (Lead): Environmental Unit Support: Infrastructure Services Monitoring/Oversight: MCC	Moderate Cost
5.1.3. Rehabilitate or close environmentally damaging informal access routes where feasible.	➤ Priority rehabilitation or closure interventions implemented where resources are available.	Ongoing	Implementation (Lead): Environmental Unit Support: Infrastructure Services; DEDEAT Monitoring/Oversight: MCC	Moderate Cost
Coastal Management Strategy 5.2: Improve Coastal Amenities and Public Access Infrastructure				
5.2.1. Identify priority public amenities and access infrastructure requiring maintenance, upgrading or improved accessibility.	➤ Priority amenity and infrastructure needs identified.	Within 2 years	Implementation (Lead): Community Services Support: Infrastructure Services; Environmental Unit Monitoring/Oversight: MCC	Existing Operational Budget
5.2.2. Incorporate priority coastal access and amenity improvements into relevant municipal planning and budgeting processes.	➤ Priority projects considered through municipal planning and budgeting processes.	Ongoing	Implementation (Lead): Community Services Support: Infrastructure Services Monitoring/Oversight: MCC	Existing Operational Budget



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
Coastal Management Strategy 5.3: Improve Coastal Use Management and Reduce User Conflicts				
5.3.1. Develop and adopt a Beach User Management Guideline to inform the management of recreational activities, user conflicts and, where appropriate, the future delineation of user zones at priority beaches.	➤ Beach User Management Guideline adopted.	Within 3 years	Implementation (Lead): Environmental Unit Support: Community Services; NSRI; Lifesaving Clubs; User Groups Monitoring/Oversight: MCC	Low–Moderate Cost
5.3.2. Identify beaches, estuaries and launch sites where user conflicts, safety concerns or competing recreational activities warrant management intervention.	➤ Priority conflict areas identified and documented.	Within 2 years	Implementation (Lead): Environmental Unit Support: Community Services; User Groups Monitoring/Oversight: MCC	Existing Operational Budget
5.3.3. Implement beach user management measures, including signage, awareness initiatives and user separation measures where appropriate.	➤ User management measures implemented at identified priority sites where required.	Ongoing	Implementation (Lead): Community Services Support: Environmental Unit Monitoring/Oversight: MCC	Moderate Cost
Coastal Management Strategy 5.4: Improve access, aesthetics and beach stability as part of the St Francis Bay Coastal Protection Scheme				
5.4.1. Cover the rock revetments with accumulating sand and establish a vegetated foredune above the HWM to bind sand and improve aesthetics.	➤ Vegetated dune along the accreting beaches.	12 months after the beaches have been determined to be dynamic equilibrium.	Implementation (Lead): Environmental Unit Support: Infrastructure Services Monitoring/Oversight: MCC and SFPO	High Cost Seek funding from SFPO
5.4.2. Provide a formalised walkway along the sand spit above the beach and vegetated dune, and boardwalk access points over the dune.	➤ Walkway and access points provided.	12 months after the beaches have been determined to be dynamic equilibrium.	Implementation (Lead): Environmental Unit Support: Infrastructure Services Monitoring/Oversight: MCC and SFPO	High Cost Seek funding from SFPO



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
Coastal Management Strategy 5.5: Strengthen Management of Public Launch Sites and Vessel Activities				
5.5.1. Maintain coordination with relevant authorities and user groups regarding public launch site management and vessel-related activities.	➤ Launch site management issues discussed through annual coordination processes where required.	Ongoing	Implementation (Lead): Environmental Unit Support: DFFE; NSRI; User Groups Monitoring/Oversight: MCC	Existing Operational Budget
5.5.2. Identify and escalate infrastructure, safety or environmental concerns associated with public launch sites through appropriate municipal or intergovernmental processes.	➤ Priority issues recorded and referred to relevant authorities where necessary.	Ongoing	Implementation (Lead): Environmental Unit Support: Infrastructure Services; Community Services Monitoring/Oversight: MCC	Existing Operational Budget



7.4.6 Coastal Management Objective 6: Strengthen evidence-based coastal governance through improved data management, monitoring coordination, spatial information integration and strategic research partnerships.

PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
Coastal Management Strategy 6.1: Consolidate Coastal Monitoring and Information Systems				
6.1.1. Develop and maintain a consolidated Coastal Information Register capturing key datasets relevant to coastal management (e.g. estuary assessment findings, water quality summaries, stormwater outfall risk register, sanitation risk screening, coastal incident records, EMP implementation status).	➤ Coastal Information Register compiled and updated annually and referenced in Annual CMP Implementation Report.	Within 18 months; updated annually	Implementation (Lead): Environmental Unit Support: GIS Unit; Infrastructure Services; Planning Department Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
6.1.2. Ensure that priority coastal risk information (erosion hotspots, storm damage locations, waste hotspots, sanitation risk clusters, outfall risk areas) are georeferenced and incorporated into the municipal GIS system to support planning and decision-making processes.	➤ Coastal risk spatial layers incorporated into GIS and accessible for planning and screening purposes.	Within 2 years	Implementation (Lead): Environmental Unit Support: GIS Unit; Planning Department Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
Coastal Management Strategy 6.2: Strengthen Monitoring Coordination Rather Than Create New Programmes				
6.2.1. Identify and document priority coastal and estuarine knowledge gaps that may warrant future specialist investigation or partnership-based research (e.g. shoreline change trends, groundwater–estuary linkages, climate vulnerability mapping, CML refinement), without committing immediate municipal funding.	➤ Research and knowledge gap register included in Annual CMP Implementation Report and reviewed during the mid-term CMP evaluation.	Within 3 years; reviewed during mid-term review	Implementation (Lead): Environmental Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
Coastal Management Strategy 6.3: Support Climate and Coastal Risk Knowledge Integration				
6.3.1. Maintain a record of coastal erosion incidents, storm damage events and infrastructure vulnerability observations within the Coastal Incident Register.	➤ Erosion and storm damage trends summarised in Annual CMP Implementation Report.	Ongoing	Implementation (Lead): Environmental Unit Support: Infrastructure Services Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
6.3.2. Engage with Provincial or academic institutions to explore partnerships for coastal risk or estuary-related research where opportunities arise.	➤ Engagements documented. ➤ Partnership opportunities recorded where applicable.	Ongoing	Implementation (Lead): Environmental Unit Support: DEDEAT; Universities (where applicable) Monitoring / Oversight: Municipal Coastal Committee	Low Cost
Coastal Management Strategy 6.4: Improve Accessibility and Transparency of Coastal Information				
6.4.1. Publish key non-sensitive coastal information (e.g. CMP summary, quarterly water quality summaries, marine litter trends, EMP status updates) through municipal communication platforms.	➤ Coastal information section maintained on municipal website and updated periodically.	Ongoing	Implementation (Lead): Environmental Unit Support: Communications Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget
6.4.2. Ensure that coastal datasets are archived systematically to support future CMP reviews and audits.	➤ Digital archive maintained and referenced during mid-term and 5-year CMP review process.	Ongoing	Implementation (Lead): Environmental Unit Support: ICT Unit Monitoring / Oversight: Municipal Coastal Committee	Existing Operational Budget



7.4.7 Coastal Management Objective 7: Promote responsible coastal use, voluntary compliance and shared stewardship through strengthened education, awareness and community participation initiatives.

PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
Coastal Management Strategy 5.1: Improve Public Awareness of Coastal Regulations and Responsibilities				
7.1.1. Develop concise, user-friendly information material summarising key coastal by-law provisions (e.g. vehicle restrictions, waste disposal, dune protection, estuary use rules).	➤ Awareness material developed, published on municipal communication platforms and distributed at identified priority coastal access points.	Within 12 months	Implementation (Lead): Environmental Unit Support: Communications Unit; Law Enforcement Monitoring/Oversight: Municipal Coastal Committee	Existing Operational Budget
7.1.2. Install or update signage at priority coastal access points reflecting key use restrictions, environmental sensitivities and public safety considerations.	➤ Priority signage gaps identified. ➤ Signage replacement and installation actions implemented and recorded in Annual CMP Reports.	Within 2 years (phased)	Implementation (Lead): Environmental Unit Support: Infrastructure Services; Law Enforcement Monitoring/Oversight: Municipal Coastal Committee	Moderate Cost
7.1.3. Include seasonal awareness messaging through municipal communication platforms focusing on responsible coastal use, waste management, estuary protection and public safety during peak holiday periods.	➤ Seasonal awareness messaging issued prior to peak holiday periods and reported in Annual CMP Reports.	Annually	Implementation (Lead): Environmental Unit Support: Communications Unit Monitoring/Oversight: Municipal Coastal Committee	Existing Operational Budget
Coastal Management Strategy 5.2: Strengthen Community and Stakeholder Stewardship Partnerships				
7.2.1. Establish and maintain a coastal stakeholder engagement platform (e.g. annual coastal forum or workshop) to review CMP implementation progress and emerging coastal management issues.	➤ Annual stakeholder engagement event convened and minuted. ➤ Key issues and agreed actions documented and reflected in Annual CMP Reports where applicable.	Annually	Implementation (Lead): Environmental Unit Support: Office of the Municipal Manager Monitoring/Oversight: Municipal Coastal Committee	Low Cost
7.2.2. Support community-led coastal clean-up, stewardship and monitoring initiatives	➤ Community stewardship initiatives recorded in Annual CMP Reports.	Annually	Implementation (Lead): Environmental Unit	Low Cost



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
through coordination, information sharing and stakeholder collaboration.			Support: NGOs; Ratepayers Associations; Community Organisations Monitoring/Oversight: Municipal Coastal Committee	
7.2.3. Encourage the establishment or strengthening of Estuary Advisory Forums where EMP development or implementation processes are underway.	➤ Evidence of Estuary Advisory Forum engagement included in Annual CMP Reports.	Ongoing	Implementation (Lead): Environmental Unit Support: DEDEAT (where applicable) Monitoring/Oversight: Municipal Coastal Committee	Existing Operational Budget
Coastal Management Strategy 5.3: Promote Youth and School-Based Coastal Education				
7.3.1. Collaborate with local schools, NGOs and community organisations to support at least one annual coastal awareness or stewardship initiative.	➤ School-based or youth-focused coastal awareness initiative undertaken annually.	Annually	Implementation (Lead): Environmental Unit Support: NGOs; Schools; Community Organisations Monitoring/Oversight: Municipal Coastal Committee	Low Cost
7.3.2. Develop simple educational material explaining estuary functioning, coastal ecosystems and coastal risks in locally relevant languages.	➤ Educational material developed and made available electronically and, where feasible, shared with schools and community groups.	Within 2 years	Implementation (Lead): Environmental Unit Support: Communications Unit Monitoring/Oversight: Municipal Coastal Committee	Existing Operational Budget
Coastal Management Strategy 5.4: Strengthen Internal Awareness and Cross-Department Capacity				
7.4.1. Facilitate at least one internal interdepartmental coastal awareness session during the CMP cycle to improve understanding of ICMA obligations, coastal risks and departmental responsibilities.	➤ Internal awareness session conducted and attendance recorded.	Within 3 years	Implementation (Lead): Environmental Unit Support: IDP/PMS Unit Monitoring/Oversight: Municipal Manager	Existing Operational Budget
7.4.2. Circulate an annual CMP implementation summary internally to relevant departments to reinforce shared responsibility for coastal	➤ Annual internal CMP summary circulated and distribution record maintained.	Annually	Implementation (Lead): Environmental Unit	Existing Operational Budget



PROPOSED IMPLEMENTATION ACTION	OUTPUT INDICATOR	TIMEFRAME	RESPONSIBLE AUTHORITIES	INDICATIVE BUDGET
management and request departmental feedback.			Monitoring/Oversight: Municipal Coastal Committee	



7.5 IMPLEMENTATION AND REVIEW

Implementation of this KLM CMP is driven by the municipality's commitment to the principles and objectives of Integrated Coastal Management (ICM) as contained in the ICMA, the National Coastal Management Programme (2025), the Eastern Cape Coastal Management Programme (2025) and other relevant national, provincial and municipal policies and strategies.

The priority themes, management objectives and implementation actions contained in this CMP have been informed by the findings of the Situation Assessment, the review of the first-generation KLM CMP, stakeholder engagement undertaken during the development of the programme, and the identified coastal management needs of the municipality. Together, these provide a practical and implementable framework for improving coastal governance, protecting coastal ecosystems, managing coastal risks and promoting sustainable use of coastal resources within the KLM.

Implementation of the CMP will be coordinated primarily through the Municipal Coastal Committee (MCC), with responsibility shared across municipal departments and supported by provincial and national government departments, research institutions, civil society organisations, coastal user groups and other stakeholders where appropriate. Given municipal capacity and resource constraints, emphasis has been placed on integrating CMP actions into existing municipal planning, budgeting and operational processes wherever possible.

Monitoring and evaluation of implementation progress is essential to ensure that the CMP remains relevant, effective and responsive to emerging coastal management challenges. The output indicators identified within the implementation framework provide a basis for tracking progress and assessing the effectiveness of management interventions. These indicators may be refined over time as additional information becomes available, and implementation experience is gained.

The implementation of approved Estuarine Management Plans (EMPs), the CML project and other associated coastal management initiatives will contribute significantly towards achieving the objectives of this CMP and should be considered integral components of the municipality's broader coastal management programme.

It is proposed that a concise CMP Implementation Report be prepared annually and submitted to the MCC for review. The report should summarise progress against implementation actions, identify challenges and emerging issues, record key achievements, and make recommendations for adaptive management where necessary. The annual reporting process will support ongoing implementation, facilitate interdepartmental coordination and provide a mechanism for tracking progress against the objectives of the CMP.

In accordance with the requirements of the ICMA, this CMP must be reviewed and updated at least every five years following its adoption by the KLM and approval by the Member of the Executive Council (MEC) responsible for environmental affairs in the Eastern Cape Province. Progress review and adaptive management should occur on an ongoing basis through the MCC, and amendments to specific actions may be undertaken where necessary to respond to changing circumstances, new information, emerging risks or revised legislative requirements.



8 CONCLUSION

The Kouga coastline is characterised by a diverse range of coastal ecosystems, estuaries, beaches, dunes, coastal settlements and economic activities that collectively contribute to the municipality's environmental, social and economic wellbeing. Managing these interconnected systems requires coordinated governance, informed decision-making and practical implementation actions that balance environmental protection with sustainable development and equitable access to coastal resources.

This second-generation KLM CMP provides a strategic and practical framework for guiding coastal management within the municipality over the next five years. The programme seeks to strengthen institutional governance, improve estuary management, advance climate adaptation and coastal spatial planning, reduce pollution, manage public access and coastal use, strengthen information systems, and promote environmental stewardship and community participation.

The successful implementation of the CMP will depend on continued collaboration between municipal departments, government institutions, local communities, coastal user groups, non-governmental organisations, researchers and the private sector. While financial and institutional constraints remain a challenge, the implementation framework has been designed to focus on practical, achievable actions that can be progressively implemented through existing municipal processes and strategic partnerships.

Particular emphasis is placed on the completion and implementation of CMLs, improved integration of coastal risk into municipal planning and decision-making processes, and the continued development and implementation of Estuarine Management Plans. Together with strengthened governance, monitoring and stakeholder participation, these initiatives will contribute significantly towards enhancing coastal resilience, protecting ecological infrastructure and promoting the sustainable use of coastal resources.

Through the implementation of this CMP, the KLM will be better positioned to fulfil its responsibilities in terms of the ICMA, contribute towards the achievement of provincial and national coastal management objectives, and support the long-term sustainability and resilience of its coastal environment for the benefit of present and future generations.



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APPENDIX A: KOUGA LOCAL MUNICIPALITY COASTAL MANAGEMENT SPATIAL DATA FRAMEWORK
