

Ministère de l'Environnement,  
de la Gestion des déchets et  
du Changement climatique

ZONES COTIERES ET  
ENVIRONNEMENT MARIN



Les Assises de  
**l'Environnement**

CAUDAN ARTS CENTRE / 16 -17 DECEMBRE 2019

## TECHNICAL SESSION 1

### BACKGROUND

The coastal zone of Mauritius is a key resource that supports various economic activities, such as recreation, tourism, fisheries, trade and industry. It is estimated that the economic value of the coastal zone is more than 1 trillion rupees (ICZM Framework, 2010). Approximately 20% of the population reside in the coastal areas.

Section 49 of the Environment Protection Act 2002 defines the coastal zone as follows:

1. any area which is situated within 1 kilometre or such other distance as may be prescribed from the high water mark, extending either side into the sea or inland;
2. includes-
  - coral reefs, reef lagoons, beaches, wetlands, hinterlands and all islets within the territorial waters of Mauritius and Rodrigues;
  - any estuary or mouth of a river and that part of a river, stream or canal which lies within 1 kilometre from the outermost point of its bank on the sea at high tide;
  - the islands of Agalega and Saint Brandon, and other outer islets.

The total length of the coastline of the Republic of Mauritius is 496 km and its Exclusive Economic Zone is 2.3 million km<sup>2</sup>.

IMPORTANT COASTAL STATISTICAL DATA FOR MAINLAND MAURITIUS ARE AS FOLLOWS:

Resources	Number/area/length
Length of coastline	322 km
Length of coral reef	150 km
Coral reef area	300 km <sup>2</sup>
Lagoon area	243 km <sup>2</sup>
Mangroves area	181 hectares
Ramsar sites	3
Marine parks	2
Fishing reserves	6
Number of public beaches and extent	130 over a length of 48 km

The coastal zone is important not only for providing income, but also protecting the island from impacts of waves from the ocean during storm surges and other adverse climatic conditions. Intense pressure from sea and land-based activities (construction, sewage disposal, industry and agriculture) is having a negative impact on the coastal zone. The situation is exacerbated by sea level rise and storm surges and thus putting at risk the coastal inhabitants and their properties, as well as the coastal resources. Addressing environmental problems which affect the coastal zone is therefore of a very high priority.

### VISION/TARGETS

The coastal zone is sustainably managed and is resilient to climate change impacts and other disasters

“...the economic value of the coastal zone is more than 1 trillion rupees (ICZM Framework, 2010)...”

## ISSUES OF CONCERN

The major concerns affecting the coastal and marine environment are as follow:

- Sea level rise is contributing to the aggravation of coastal erosion. Over the last decade, an accelerated sea level rise of over 5.0 mm per year has been observed



- Construction of hard structures such as walls, concrete jetties, groynes, along the shoreline causing beach erosion



- Inadequately planned development in prime coastal areas
- Degradation of the coastal ecosystems (corals, seagrass, mangroves, wetlands)



- Marine litter and microplastics
- Oil spill



- Inadequate zoning of the lagoon, leading to conflict in use (e.g. aquaculture and nautical activities)
- Seine/large/gill net fishing and their impacts on marine biodiversity
- Need for capacity and resources for enforcement
- Need for more awareness on the importance and protection of the coastal zone
- Need for appropriate database to enhance integrated coastal zone management
- Inappropriate measures for beach protection in terms of aesthetics and for promoting tourism
- Sedimentation and pollution from land-based activities



## EXISTING POLICIES AND STRATEGIES

The Government adopted the National Environment Policy (NEP) in 2007 and the National Environmental Strategies (NES) in 1999, which was reviewed in 2008. These documents established a clear policy framework and set appropriate environmental objectives and strategies including coastal zone management.

An Integrated Coastal Zone Management (ICZM) Division was set up within the Ministry of Environment in the year 2000. The Environment Protection Act was amended in 2002 to include the setting up of an ICZM Committee comprising Government bodies, parastatal organisations, local authorities, private sector and NGOs to oversee the management of the coastal zone.

The Beach Authority was set up in 2002 to look into the sustainable management of the public beaches, including provision and maintenance of amenities, demarcation of swimming zones, and maintenance of the public spaces, amongst others. There are currently 130 proclaimed public beaches in Mauritius, with a total sea frontage of around 48 km and total area of around 327 hectares.

An Oil Spill Contingency Plan was developed in 2003 to address the occurrence of oil spills, including

collection, disposal, cleaning, and rehabilitation measures.

A study on Environmentally Sensitive Areas (ESAs) was carried in 2009, which identified 14 types of ESAs and which proposed management strategies including setbacks for development.

An ICZM Framework was developed in 2010, comprising a strategy, policy, institutional and legal framework. Action and Area Plans for 6 pressure zones, namely Grand Baie, Poudre d'Or, Belle Mare, Le Morne, south and east coasts of Rodrigues were also developed to manage the areas and to guide development in a sustainable manner.

A Disaster Risk Reduction Strategic Framework and Action Plan was developed in 2012 to address issues of flooding related to climate change impacts.

## EXISTING LAWS AND REGULATIONS

The primary legislative framework for environmental protection in the Republic of Mauritius is the Environment Protection Act (EPA) 2002. The Act was subsequently amended in 2008. It declares that every person in Mauritius shall use his best endeavours to preserve and enhance the quality of life by caring responsibly for the natural environment of Mauritius.

In addition to the Environment Protection Act, there are also other pieces of legislation enacted by other organisations for the protection of the environment, including for the coastal zone. These include the Local Government Act 2011 (Ministry for Local Government); Beach Authority Act 2002 (Beach Authority); Pas Géométriques Act (Ministry of Housing and Land Use Planning); Planning and Development Act 2004 (Ministry of Housing and Land Use Planning); Removal of Sand Act 1975 (Ministry of Housing and Land Use Planning); State Lands Act (Ministry of Housing and Land Use Planning); Town and Country Planning Act (Ministry of Housing and Land Use Planning); Fisheries and Marine Resources Act 2007 (Ministry for Blue Economy); Forest and Reserves Act 1983 (Forestry Service); Public Health Act 2008 (Ministry for Health); Maritime Zone Act 2005 (Prime Minister's Office); Merchant Shipping Act 1986 (Ministry for Shipping); National Coast Guard Act 1988 (Commissioner of Police); Pleasure Crafts Act (Tourism Authority); Ports Act 1989 (Mauritius Ports Authority); Rivers and Canals Act 1863 (Ministry for Health); Tourism Act 2006 (Tourism Authority); Wastewater Management Authority Act 2000 (Wastewater Management Authority); and Native Terrestrial Biodiversity and National Parks Act 2015 (National Parks and

Conservation Service), amongst others. Moreover, in addition to the different legislation, Mauritius has also ratified several conventions (regional and international) which apply to the coastal zone, such as the Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean, ratified in the year 2000, which deals with land-based sources of marine pollution; the International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990 (OPRC 90) which came effective since March 2000 and which deals with oil spill contingency planning; the 1992 International Convention on Civil Liability for Oil Pollution Damage (CLC 92), which came into effect in 2000 and deals with damage during an oil spill; the 1992 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (1992 FUND Convention), which came into effect in 2000 and deals with compensation issues; and the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), which was signed in 1995 and which deals with pollution arising from ships amongst others.

## ACTIONS TAKEN/ ONGOING

- A 30-metre setback policy was developed in 2003 and included in the Planning Policy Guidance (PPG) of 2005 to prevent construction within the dynamic beach zone
- Many coastal activities are controlled through the Environmental Impact Assessment (EIA) licencing mechanism as well as the Building and Land Use Permit requirements, which also take into consideration the provisions of the Planning Policy Guidance, Outline Planning Schemes on plot coverage and development density of coastal development
- A policy paper on replacement of casuarina (filao) trees within the dynamic beach zone, including the list of plants which should be planted, was developed in 2016 to restore the coastal biodiversity and increase resilience to climate change impacts
- A coral conservation plan was developed in 2015 to protect coral reefs including reef restoration measures
- Coastal conservation plans for 14 sites around Mauritius was developed in 2015, in the context of a technical assistance from Japan, to address issues of coastal erosion and increase the resilience of the coastal zone to impacts of climate change

In addition, there are many other sectoral policies that have been developed under other Ministries / organisations pertaining to management of the coastal zone.

## PROJECTS IMPLEMENTED/ BEING IMPLEMENTED

- A study of environmental risks in Grand Baie was undertaken in 2003 to address issues of flooding in low-lying areas and measures to protect wetlands
- A Strategic Environmental Impact Assessment (SEA) for Identification of Potential Sites for Marinas, Ski Lanes and Bathing Areas for Mauritius was completed in 2005 to address user conflicts through zoning of activities in the lagoon and providing guidelines/criteria for setting up of these activities
- A Disaster Risk Reduction Report was completed in 2013 to address impacts of natural disasters such as flooding
- A project on Identification, Characterisation and Exploitation of Potential Offshore Sand Banks/ deposits in Mauritius was done in 2018 to explore the possibility of extracting offshore sand for beach replenishment
- A programme on coastal protection, landscaping and infrastructural work is being carried out to address coastal erosion and shoreline change at 13 priority eroded sites
- A yearly budget of around Rs 100 million is provided by the National Environment Fund (NEF) to address issues of coastal erosion
- A project on replacement of casuarina (filao) trees within the dynamic beach zone (2019-2021) on three public beaches, namely Flic en Flac, Belle Mare and Le Morne is ongoing to restore the coastal biodiversity and increase resilience of the coastal zone to climate change impacts
- A study on coastal erosion at Flic en Flac and Blue Bay is ongoing to address coastal erosion and shoreline change

## PROPOSED ISSUES FOR DISCUSSION (NON-EXHAUSTIVE)

In order to address the environmental challenges with regard to the management of the coastal zone and the marine environment, participants can propose practical solutions, innovative ideas and best practices, amongst others, in relation to the problems identified to constructively advance towards a shared vision.

### Where we are

- The coastal zone is subject to impacts of climate change
- Uncontrolled development within the coastal zone
- Management of the coastal zone is fragmented among stakeholders
- Degradation of coastal ecosystems is worsening
- Pollution due to plastics, dumping, littering
- Destructive fishing practices
- Need for enhanced enforcement

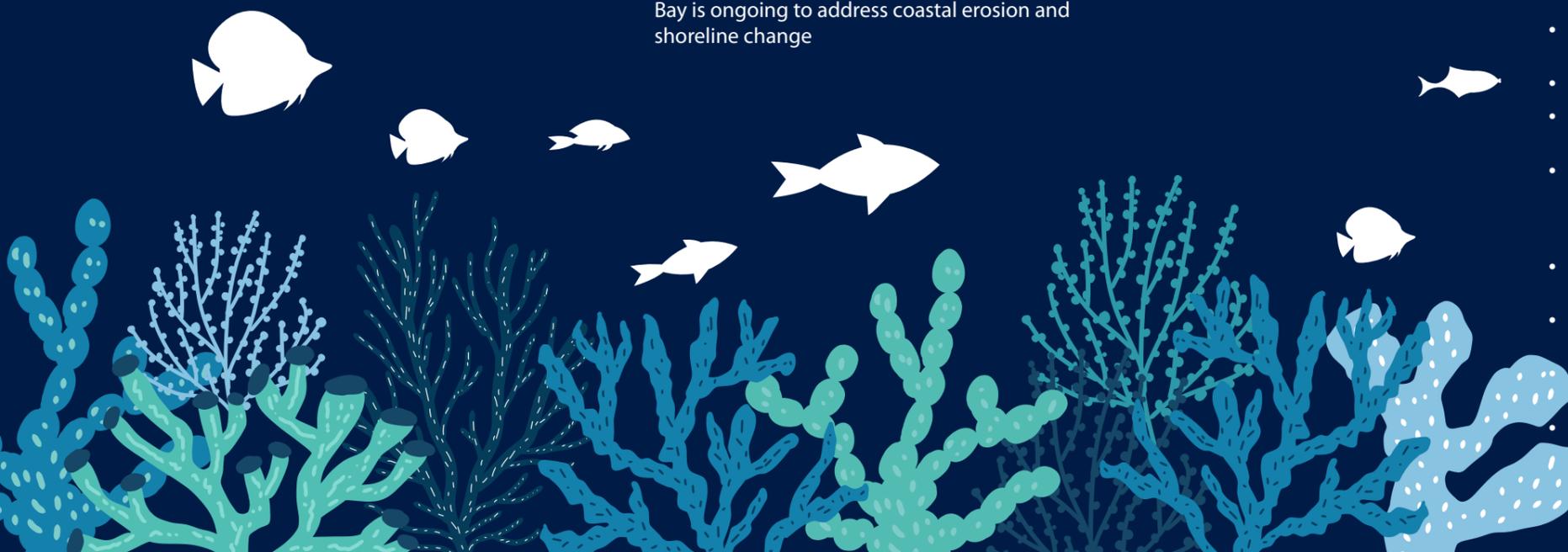
### Where we need to go?

- Development in the coastal zone is carried out in a sustainable manner
- The coastal zone is resilient to the impacts of climate change
- The setback for coastal construction is increased, compared to the current statutory 30 metres, to protect from erosion and impacts of climate change;
- Effective planning of development in the coastal zone
- Enhanced collaboration and commitment from all ministries and stakeholders acting in the coastal zone
- Restored access along the shoreline
- Minimised sediment load in the lagoon
- Restored biodiversity in the coastal zone and thriving ecosystems
- Beaches and lagoon are clean of plastics
- Innovative coastal protection measures and restored beach profiles
- Lagoon corals and the reef system reinstated to increase their efficiency as a barrier to dissipate the energy of high waves
- Comprehensive zoning of the lagoon for different uses
- Ban on large nets and other destructive fishing practices in the lagoon
- Reinforced capacity for enforcement and monitoring against malpractices
- Awareness raised on importance of the coastal zone and its resources

### How to reach there?

- Review and strengthening of planning instruments as well as institutional framework
- Pursue with the ridge-to-reef concept, which is an integrated approach linking the natural and social systems from the mountain 'ridges', through coastal watersheds and habitats, and across coastal lagoons to the fringing 'reef'
- Reinforce human resources and capacity building for organisations mandated to act in the coastal zone;
- Strengthen enforcement
- Aggressive sensitisation campaigns
- Review legislative framework
- Technology transfer and use of innovative and best practices
- Pursue the mobilisation of local and international funding and technical support for implementation of projects
- Enhance research on the degradation of the coastal zone
- Consolidate the existing databases and knowledge
- Ensure policy decisions are based on scientific evidence
- Establish an Integrated Coastal Zone Management Department to ensure management of all activities are undertaken in a holistic, effective and efficient manner

*Note: The issue of marine biodiversity is being looked into under this theme, whereas terrestrial biodiversity is considered under the theme for 'Biodiversité et Ressources Naturelles'*





Les Assises de  
**l'Environnement**

CAUDAN ARTS CENTRE / 16 - 17 DECEMBRE 2019

# ZONES COTIÈRES ET ENVIRONNEMENT MARIN

Ministère de l'Environnement,  
de la Gestion des déchets et  
du Changement climatique