DRR4AFRICA

DISASTER RISK REDUCTION:
A RESILIENCE AGENDA 4 URBAN AFRICA

Port Louis Baseline Assessment

2025

FUNDER

IMPLEMENTER

CITY

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ABBREVIATIONS

AR6 Sixth Assessment Report
CHAZ Columbia Hazard Model
CWA Central Water Authority
DRR Disaster Risk Reduction
EEZ Exclusive Economic Zone
EIA Environmental Impact Assessment
ESWMD Environment and Solid Waste Management Department
EWS Early Warning Systems
GDP Gross Domestic Product
GHG Greenhouse Gas
HDI Human Development Index
IPCC Intergovernmental Panel on Climate Change
MBEMRFS Ministry of Blue Economy, Marine Resources, Fisheries and Shipping
MCCPL Municipal City Council of Port Louis
MHHW Mean Higher High Water
MHLUP Ministry of Housing and Land Use Planning
MLGDRR Ministry of Local Government and Disaster Risk Management
MNICD Ministry of National Infrastructure and Community Development
NbS Nature-based Solutions
NCCAPF National Climate Change Adaptation Policy Framework
NDCs Nationally Determined Contributions
NDRRMC National Disaster Risk Reduction and Management Centre
PER Preliminary Environmental Report
RCP Representative Concentration Pathways
RVA Risk and Vulnerability Assessment
SEACAP Sustainable Energy Access and Climate Action Plan
SIDS Small Island Developing State
SME Small and Medium-Sized Enterprises
SOP Standard Operating Procedure
SSP Shared Socioeconomic Pathway
SWIO South-West Indian Ocean
TC Tropical Cyclone
Tmax Maximum Temperature
Tmin Minimum Temperature
UMI Upper-Middle Income
UNDP United Nations Development Programme
UNDRR United Nations Office for Disaster Risk Reduction
WMA Wastewater Management Authority

1 INTRODUCTION

This Baseline Report provides an overview of the status of climate resilience and disaster preparedness in the city of Port Louis in Mauritius. As the effects of climate change do not occur in isolation it is critical to understand how they interact with and intensify other risks and vulnerabilities. This report utilises comprehensive, evidence-based risk assessment tools to guide urban planning and policy. The first component of this Baseline Report is a climate risk vulnerability assessment (RVA) that follows the Covenant of Mayors in Sub-Saharan Africa's methodology. Data for the RVA was collected through a process of desktop research (e.g. localised climate database, Lloyd's Register Foundation World Risk Poll data) in combination with multi-stakeholder data collection workshops and data validation with key stakeholders in Port Louis. The second component of this Baseline Report supported the Municipal City Council of Port Louis in identifying priority entry points to strengthen urban planning in the context of climate change, using the UNDRR Disaster Resilience Scorecard for Cities methodology. This work was carried out in close collaboration with the UNDRR Regional Office for Africa, contributing to the joint workplan of the Regional Coordinating Committee of the Making Cities Resilient 2030 initiative in Africa, which ICLEI Africa and UNDRR co-chair.

The city's scorecard was completed through a multi-stakeholder participatory workshop held on 08-09 October 2024 in Port Louis. The event brought together 32 attendees, including 11 officials from the Municipal City Council of Port Louis (MCCPL), with just over one-third of total attendees being women. To ensure shared understanding among all stakeholders, the workshop began with an introduction to key climate change and disaster resilience concepts before completing the scorecard process.

A participatory approach was used to triangulate different sources of information (e.g. desktop research, lived experiences, households' perceptions) to collectively determine the city's results. Several Ministries and departments/institutions involved in disaster risk reduction and management were represented, including:

- The Municipal City Council of Port Louis consisting of the Chief Executive
- Local Disaster Management Coordinator
- Welfare Department
- Public Health Department
- Public Infrastructure Department
- Land Use and Planning Department

The Scorecard structures the assessment of a city around UNDRR's Ten Essentials for Making Cities Resilient (Figure 1). It can also be used to help monitor and review progress and challenges in the implementation of The Sendai Framework for Disaster Risk Reduction (2015-2030). In addition, it supports the baseline analysis for preparation of the disaster risk reduction and resilience strategies.

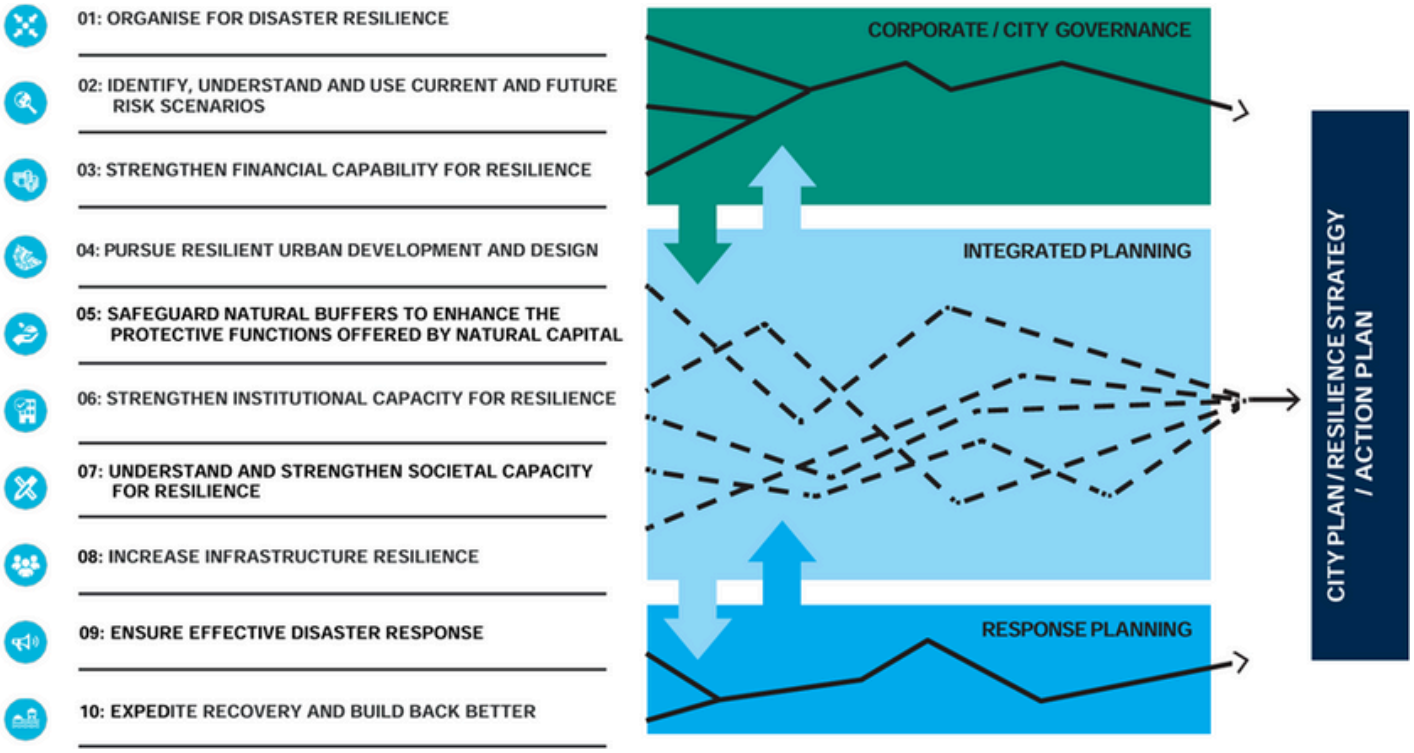

Figure 1. Using the UNDRR Disaster Resilience Scorecard for Cities and its basis on the Ten Essentials for Making Cities Resilient to inform effective DRR action planning (UNDRR, 2017).

This Baseline Report serves to translate complex climate and urban development risks into accessible, actionable information for municipal authorities and the vulnerable communities they serve. Completing the RVA and Scorecard in combination opened dialogues on resilience and disaster preparedness in Port Louis. The results identified local capacity gaps that started to be addressed via targeted climate and disaster finance training, tailored to Port Louis' unique context. The process represented the first step in establishing a community of practice that promotes multi-level collaboration and engagement across tiers of government, civil society, the private sector, and academia, for evidence and experience-based resilience planning.

2 OVERVIEW OF PORT LOUIS, MAURITIUS

2.1 COUNTRY CONTEXT

The Republic of Mauritius is a small island developing state (SIDS) located in the Indian Ocean off the eastern coast of Africa (Figure 2). It is an upper-middle income (UMI) nation and holds the second largest economy on the continent by per capita GDP (World Bank Group, 2025a) Having briefly reached high-income status in 2020 before the Covid-19 pandemic severely impacted the economy, it is now in recovery. Mauritius' economic prosperity is underpinned by growing sectors such as tourism, financial services, manufacturing, information and communication technology, seafood processing, real estate, and outsourcing (Global Finance, 2025). The county's Exclusive Economic Zone (EEZ) spans approximately 1.9 million km² and provides substantial marine resources that play a vital role in the economy. Mauritius' economy is predicted to diversify into higher value sectors such as medical tourism and agro-processing in the future (AFD, 2020).

As of 2024, Mauritius has a population of over 1.2 million people, predominantly Indo-Mauritians and Mauritian Creoles. Mauritius has a strong Human Development Index (HDI) of 0.806 (UNDP, 2023) and the population has a life expectancy of 73.4 years, above the global average, and this is reflected with the population skewing older with 17,4% of Mauritians being over 60 years of age (Statistics Mauritius, 2019).

The island has a mild tropical maritime climate, characterised by two distinct seasons: a warm, wet summer from November to April and a cooler, dry winter from June to September (Mauritius Meteorological Services, 2024a). Rainfall is unevenly distributed, with higher precipitation in the central plateau and drier conditions along coastal regions. The mean temperature is 24.7°C during summer and 21.0°C during winter. February is typically the wettest month while October is the driest (Work Bank Group, 2021).

Figure 2. Map of the Republic of Mauritius (Ezilon Maps, 2019).

Mauritius is highly vulnerable to various climate change impacts (SPI, 2023). The island nation is located in the South-West Indian Ocean (SWIO) cyclone belt, exposing it to the cyclone season which typically occurs between November and May. In addition to cyclones, Mauritius country is exposed to an array of other climate hazards including storms and tidal surges, torrential rains, floods and flash floods, landslides, droughts, and sea level rise. These hazards pose challenges to the economy, ecosystems, human health and wellbeing, and livelihoods.

To address these vulnerabilities, the Government of Mauritius has undertaken various initiatives aimed at strengthening resilience through integrated coastal zone management, urban planning, and disaster risk reduction strategies. Examples include the Climate Change Adaptation Policy Framework (2012), the National Disaster Risk Reduction and Management Strategic Framework for 2020 to 2030, and the Nationally Determined Contributions (NDCs) under the Paris Agreement.

2.2 CITY CONTEXT

Geography

Port Louis is the capital city of Mauritius and is located on the northwest coast of the island. It spans an area of 46.7 km² and is bounded by the Indian Ocean to the west and the Moka Mountain Range to the east. This strategic coastal location has positioned Port Louis as the country's economic and administrative hub, with its deep-water harbour being one of the busiest in the region.

The city lies at mean sea level and its geomorphology includes a mix of sandy beaches, coastal lowlands, hilly terrains, and urbanised areas - particularly around the waterfront. The city's natural drainage includes rivers such as the Grand River North West, which plays a key role in surface water management but is prone to flooding during heavy rainfall events (Mauritius Meteorological Services, 2022). Rapid development is drastically reducing surface permeability, resulting in greater runoff and decreased infiltration (Doorga et al. 2022). Urbanisation and land use change has reduced green spaces, contributing to a reduction in air quality, urban heat island effects and exacerbating flood risks during extreme rainfall (Allama and Jones, 2018). While the city has benefited from significant sewerage system upgrades over the past half a century, with 16 treated water service reservoirs, it still occasionally experiences liquid pollution challenges (WIOMSA and UN-Habitat, 2021).

Climate

Port Louis is situated within the tropical maritime climatic zone. Its coastal location exposes it to tropical cyclones and storm surges, which are becoming more frequent and intense due to climate change (Figure 3). Rainfall in Port Louis is relatively low compared to other parts of the island, averaging 1,200 mm annually (Mauritius Meteorological Services, 2022). However, the city experiences occasional intense rainfall events during cyclones or summer thunderstorms, which often result in flash flooding due to poor drainage and urbanisation. Sea level rise also poses a significant long-term risk to low-lying coastal infrastructure and communities. For the period 1987-2024, data from the tide gauge located at Trou-Fanfaron in Port Louis shows a rise in the sea level of about 4.5mm per year, higher than the global average of 3.3mm per year (Mauritius Meteorological Services, 2025).

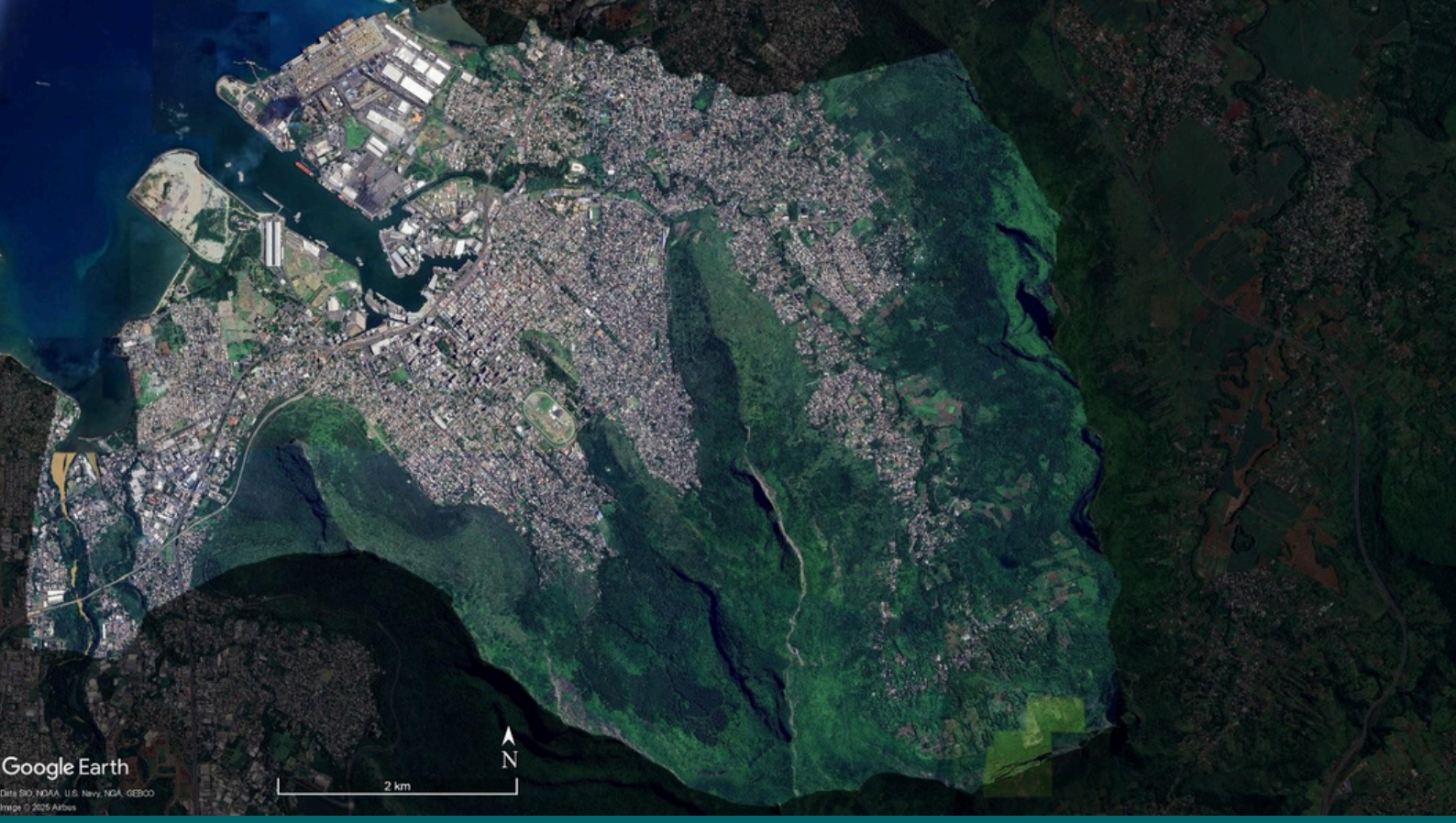

Figure 3. Map of Port Louis (Google Earth, 2025. Data: SIO, NOAA, U.S. Navy, NGA, GEBCO. Image © 2025 Airbus).

Population

In 2024, the population of Port Louis was 142,504 with an equal split between women and men (UN Data 2025). The city also has a significant transiting working population which is estimated to be between 100,000 and 200,000 people (WIOMSA and N-Habitat, 2021).

Economy and employment

Port Louis is the economic centre of Mauritius, being both a driver and beneficiary of a national effort to grow the service economy. The capital city plays a particularly significant role in blue economy industries such as maritime trade, tourism, fishing, and fish processing. The port handles 99% of Mauritius' external trade, playing a key role in shipment between other countries too. The city's primary role within the fisheries sector is processing and exporting fish. However, fishing is an important livelihood activity in the city, with a 3.33 km^2 fishing reserve established off the coast of Port Louis in 2000. There is a substantial manufacturing sector in Port Louis, with a focus on textiles, chemicals, and plastics. Conversely, industries located beyond the city limits such as manufacturing and tourism provide critical inputs which support the city's sectors (WIOMSA and UN-Habitat, 2021).

Jobs located in the capital city are often filled by people living in surrounding areas, as is evidenced by the significant transiting population relative to the city population. Unemployment rates for women (10.1%) and youth (22.1%) in Port Louis are significantly higher than the national average (6.9%).

Administration

Mauritius' Local Government Act (2011) provides the legislative framework for democratic, effective, and accountable systems of local government. The Act makes provision for the establishment, functions and powers of local authorities such as Municipal City Councils, Municipal Town Councils, Village Councils and District Councils. Port Louis is governed by the Municipal City Council of Port Louis. It is comprised of nine departments:

- Procurement and Awards
- Administration
- Finance
- Public Infrastructure
- Land Use and Planning
- Welfare; Public Health
- Parks and Gardens
- Library

Healthcare

The government of Mauritius funds public healthcare to ensure it is free of charge for both citizens and long-term residents. Dr. A. Gaffoor Jeetoo Hospital, located in Port Louis, is a key healthcare provider in the area. In addition to public healthcare, there is an overarching focus on expanding the medical tourism sector on the island.

Education

The University of Mauritius is located approximately 10 km outside of the city. As the oldest and largest university in the country, it plays a critical role in national development in its contributions to education, research, and innovation. Mauritius' University of Technology is also located in Port Louis, offering a range of undergraduate and postgraduate degrees.

Gender

The Republic of Mauritius continues to make progress in advancing women's and girls' rights and the attainment of gender equality in the country (UN Women ESARO, 2023). Despite the significant progress made towards removing formal barriers to achieving gender equality, Mauritius ranks only 111th (of 148) in the Global Gender Gap index (World Economic Forum, 2025). The gender context of the country represents a unique situation where Mauritius is ranked 1st for Health and Survival with an excellent score of 0.980[1] and also features a high Education Attainment score of 0.992 (Figure 4). For Economic Participation and Opportunity the country achieved an average-level score of 0.618 but for Political Empowerment it has a low score of 0.119.

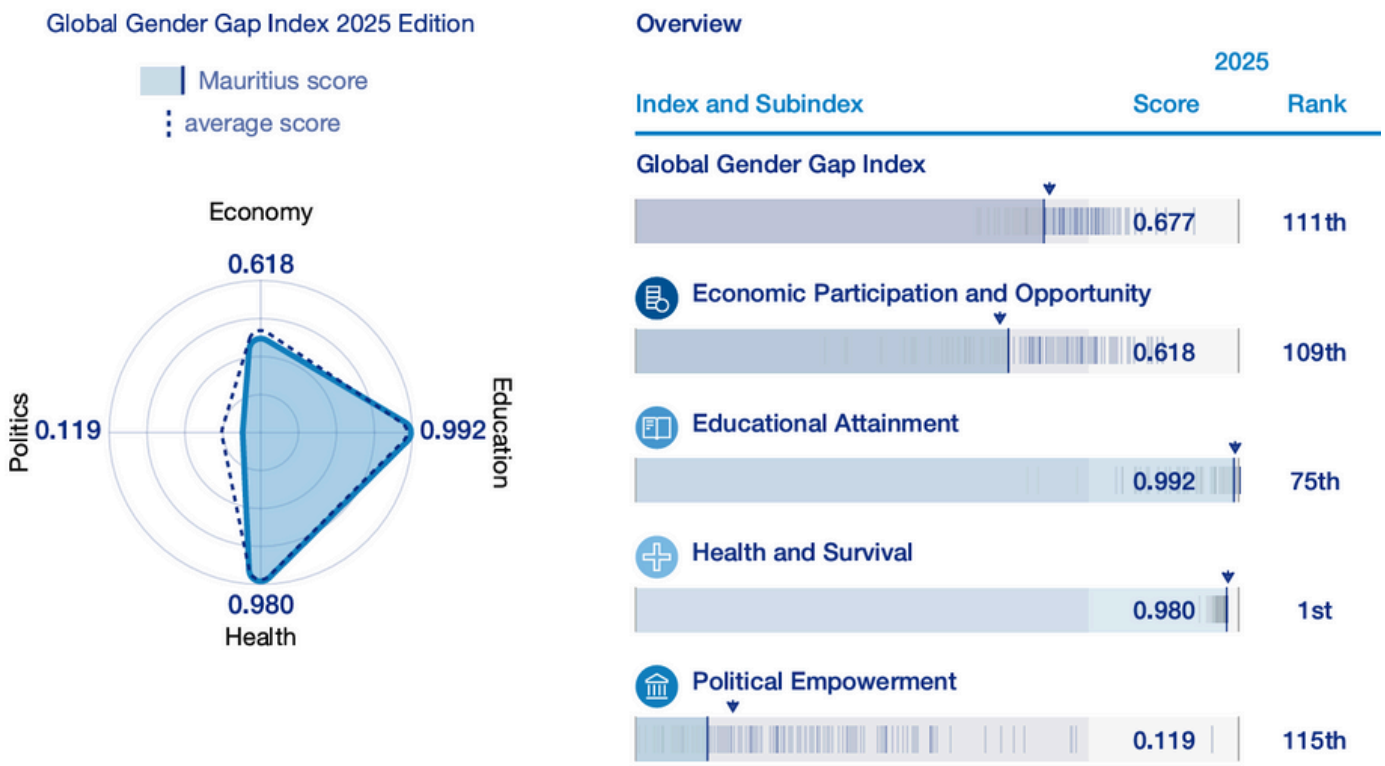

Figure 4. Gender Gap economy profile for Mauritius (World Economic Forum, 2025). Scores are on a 0 to 1 scale, where 1 represents the optimal situation or "parity".

Mauritius' Climate Change Act 2020 has made provision for a department of Climate Change to take into consideration gender when it commissions studies on climate change (UN Women ESARO, 2023), however with weak gender-based political empowerment, more work is needed for the country's legal and social framework to be reflective of women's needs and effect a positive climate justice that also promotes equal participation (Odusanya, 2022).

Cultural values and social norms typically assign a traditional role as providers of children and elder care to Mauritian women and thus they usually carry responsibilities for a broad range of non-market or domestic activities (World Bank, 2019). As such, climate change and environmental disasters represent a threat to women's health and livelihoods.

Floods in Mauritius have affected many families, causing damage to homes and household and for some families, even food supplies were affected. As women traditionally spend more time than men on household management, the floods contribute to increased burden on women especially for clean-up purposes. Women are often responsible in the mitigation of the effects and adaption of climate change by supporting their families and societies (UN Women ESARO, 2023).These impacts are more far-reaching for women as these time-consuming additional tasks result in adverse effects on their health caused by stress and fatigue. Female-headed households are also more likely to be poor than male-headed households, further adding to the burdens that result from climate impacts (Tandrayen-Ragoobur, et al., 2021).

2.3 ADAPTATION POLICY AND COMMITMENTS

The Government of Mauritius is a party to the Sendai Framework as of 2015 and ratified the Paris Agreement in 2016. The Government submitted its first Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC) in 2016, after which it submitted an updated version in 2021 outlining enhanced targets and strategies for both mitigation and adaptation. An updated version of the 2021 NDC is expected in 2025.

The National Climate Change Adaptation Policy Framework (NCCAPF) for the Republic of Mauritius, published in 2012, aims to integrate climate change into core national development policies, plans, and strategies. The Framework's primary objective is to enhance the resilience of key economic sectors, mitigate risks to human settlements and infrastructure, and avoid casualties related to climate hazards. Other policies and plans address and integrate climate change into national and local institutional frameworks, as can be seen in Table 1.
al Services, 2025).

Plan / Strategy	Description
National	
Climate Change Adaptation Policy Framework (2012)	This Framework provides guidance for integrating climate resilience into national development, emphasising ecosystem-based adaptation, sustainable resource management, and capacity building to address the impacts of climate change on key sectors such as agriculture, water, and coastal zones.
Nationally Determined Contribution (2015, updated 2021)	Mauritius submitted an updated NDC in 2021, increasing the country's greenhouse gas (GHG) emissions reduction goal from 30% to 40% by 2030 compared to baseline. Emissions reduction targets include mitigation goals for the energy, transport, waste, industrial and produce use sectors. An accompanying NDC action plan was developed in 2022.
The National Disaster Risk Reduction and Management Act (2016)	This Act aims to prevent and reduce the risk of disasters while mitigating their adverse impacts, enhance disaster preparedness and response, and improve management of post-disaster activities, including recovery and rehabilitation.
National Disaster Risk Reduction and Management Strategic Framework for 2020 to 2030	The Framework outlines a comprehensive approach to DRR and enhancing resilience. It focuses on improving disaster preparedness, response, and recovery through stakeholder collaboration, risk-informed development, and capacity-building efforts.
Climate Change Act (2020)	This foundational Act establishes climate-oriented institutions and bodies, outlining their responsibilities while creating additional national climate policies, strategies, and plans.
National Adaptation Plan *(under development)*	The national adaptation plan is currently under development with assistance from the Green Climate Fund.
Adaptation communication (2021)	Mauritius submitted its adaptation communication as part of its updated NDC in 2021, describing priority sectors for intervention (infrastructure and disaster risk reduction, water, agriculture, tourism and coastal zone management, fisheries, biodiversity and health). The adaptation communication also prescribes ongoing and proposed adaptation actions. International support is required to implement the proposed adaptation measures.
National Environmental Policy (2007)	The Policy aims to guide decision-making and actions for enhanced environmental management, economic development, and quality of life for the Mauritian population. In 2020, consultations were held to further update the Policy, aiming to align it with contemporary environmental challenges and sustainable development goals.
Local	
Smart City Initiatives	As part of Mauritius' Smart Cities program, climate-resilient infrastructure and green urban planning are being promoted in Port Louis. These efforts aim to integrate sustainability into urban development while addressing vulnerabilities to climate impacts.

Table 1. Main national and local undertakings on adaptation in Port Louis.

2.4 KEY STAKEHOLDERS, THEIR ROLES AND RESPONSIBILITIES

Mauritius' Climate Change Act (2020) delineates the various institutional roles and responsibilities for climate change. The Act outlines that the Department of Climate Change, which falls under the Ministry of Environment, Solid Waste Management and Climate Change, is responsible for coordinating and implementing commitments to international climate change agreements. National-level objectives and targets are set by an Inter-ministerial Council on Climate Change while multi-stakeholder participation is facilitated by a Climate Change Committee in preparation for strategies and plans related to both adaptation and mitigation.

Name of institution	Role / responsibility
Public / government sector	
Ministry of Local Government and Disaster Risk Management (MLGDRR)	MLGDRR oversees policy formulation and legal frameworks related to the effective operation of local entities, with Local Authorities, the Field Services Unit, and the Mauritius Fire and Rescue Service falling under the purview of this Ministry.
Ministry of Blue Economy, Marine Resources, Fisheries and Shipping (MBEMRFS)	MBEMRFS is responsible for overseeing the sustainable use and development of ocean resources and managing the country's 1.9 million km^2 Exclusive Economic Zone (EEZ).
Ministry of Housing and Land Use Planning (MHLUP)	MHLUP is responsible for promoting planned development in a manner that optimises the use of natural resources, responds to emerging challenges faced by SIDS and meets the vision of the New Urban Agenda.
National Disaster Risk Reduction and Management Council (NDRRMC)	The NDRRMC was set up following the implementation of the National Disaster Risk Reduction and Management Act, to oversee the implementation of the National Disaster Risk Reduction and Management Policy, National Disaster Risk Reduction and Management Strategic Framework and National Disaster Risk Reduction and Management Plan.
The National Disaster Risk Reduction and Management Centre (NDRRMC)	The NDRRMC is the primary coordinating body for disaster risk reduction and management activities. It is supervised by the National Disaster Risk Reduction and Management Council and adopts a pro-active all-hazard, multi-agency approach to DR management, emphasising inclusive capacity building capacity from the individual to the institutional level.
Municipal City Council of Port Louis (MCCPL)	The MCCPL is primarily responsible for building and land use permitting, maintaining public infrastructure and providing basic city services to its residents. The Council comprises 24 councillors and one mayor.
Municipal City Council and Land Use Planning Department (MCCLUPD)	The MCCLUPD oversees urban governance, infrastructure development, and public services within city boundaries.
Environment and Solid Waste Management Department (ESWMD)	The ESWMD focuses on environmental protection, pollution control, and sustainable waste management practices.

Table 2. Relevant stakeholders, and their key roles, responsibilities in Port Louis.

Name of institution	Role / responsibility
Research / academia	
University of Mauritius (UoM)	UoM is the oldest and largest university in Mauritius and therefore plays a pivotal role in national development through teaching, research, and innovation.
University of Technology, Mauritius (UTM)	UTM is a public research university located in Port Louis. The School of Sustainable Development and Tourism is part of UTM.
Development partners	
The Port Louis Development Initiative (PLDI)	The PLDI is a public, private and civil society consortium aimed at revitalising Port Louis through sustainable urban development and stakeholder engagement. It focuses on enhancing the city's infrastructure, cultural heritage, and economic opportunities.
Agence Française de Développement (AFD)	AFD has been operating in Mauritius since 1975. After ceasing its activities in 1995, due to the level of development achieved by the island, since 2006 it has been supporting its economic and ecological transition. AFD has become one of its main partners. With the support of AFD via its AdaptAction program, a stormwater management plan was developed for the Land Drainage Authority. The plan calls for the implementation of nature-based solutions, i.e., based on the services that ecosystems can provide to reduce the country's vulnerability to floods.
United Nations Environment Programme (UNEP)	The Early Warnings for All (EW4All) initiative was launched in Mauritius in December 2023. EW4ALL brings together the United Nations system, governments, civil society, development partners and the private sector to enhance collaboration and accelerated action to address gaps and deliver people-centred, end-to-end multi-hazard early warning systems that leave no one behind.
Japan International Cooperation Agency (JICA)	JICA is providing assistance in the areas of disaster prevention, environment, and fisheries to address these issues, and is also supporting the improvement of an investment environment as a gateway to Africa.
NGOs / CSOs	
United Nations Development Programme (UNDP)	UNDP has an office in Port Louis, with its programmes in Mauritius focussing on food and energy security, marine conservation, empowering artisanal fishers working through the blue economy, gender equality, and strengthened public services.
Caritas Ile Maurice	Caritas Mauritius supports excluded, poor, or otherwise vulnerable individuals through community development, training, and income-generating projects
YUVA	YUVA's overarching focus is the well-being of children and young people, especially the most vulnerable. They work across four key areas: health, education, empowerment, and employment.
Centre d'Education et de Development pour les Enfants Mauricien (CEDEM)	CEDEM works with vulnerable children, including disabled, poverty-stricken, orphaned, homeless, and abused children through various social and educational programmes.
Fondation Pour L'Enfance - Terre de Paix	This NGO focuses on holistic child development through educational programmes, food aid, and residential care.
No to Poverty	No To Poverty is a philanthropic organisation which is dedicated to transformative societal impact through food aid, education interventions, environmental activities, and personal care for the elderly and disabled.
Women with Disabilities (WwD)	WwD is an association which advocates for the rights and empowerment of women with disabilities to enable a more inclusive and equitable environment.

Name of institution	Role / responsibility
Private sector	
Mauritius Ports Authority	Mauritius Ports Authority was set up under the Ports Act (1998) to regulate and control port sectors.
Mauritius Hotel and Restaurant Association (AHRIM)	AHRIM represents and promotes the interests of hotels and restaurants in Mauritius
Tourism Authority	The Tourism Authority is the regulatory and licensing body of the tourism industry.
Cargo Handling Corporation Limited (CHCL)	CHCL is a state-owned private company and the sole operator for container handling activities at Port Louis.
Other relevant groups	
Mauritius Meteorological Services	The official authority responsible for monitoring the weather (including extreme weather) and climate.
Seafarers' Welfare Fund	Advocates for the social and economic welfare of seafarers in Mauritius
Media	
Mauritius Broadcasting Corporation	The national state broadcaster for Mauritius.

3 BASELINE REPORT METHODOLOGY

The Port Louis baseline report was developed using a combination of two key methodologies. The assessment of climate risk and vulnerabilities (Chapter 4, 5 and 6) were developed by adapting the recommendations of the Guide How to develop a Sustainable Energy Access and Climate Action Plan (SEACAP) in sub-Saharan Africa (Palermo et al., 2018), which sets out the methodology and reporting framework for developing a SEACAP. Data collection for this part of the assessment was carried out using a mixed qualitative and quantitative approach combining: i) scientific data obtained from the online data repositories, particularly the World Bank Climate Data Portal (World Bank Group, 2021) and recently published Mauritius Climate Risk Country Profile (World Bank Group, 2025b) ; ii) a literature review incorporating the various existing national and local plans and strategies; and iii) a participatory workshop with relevant local stakeholders.

The same approach was adopted to gather the information needed to complete the Preliminary Level Scorecard, with input from the various stakeholders gathered in the participatory workshop forming primary input, supplemented with information from relevant literature. This participatory approach ensured that stakeholders from all different sectors represented at the workshop were able to provide input, contributing through their professional expertise and lived experiences within the city when relevant. Measures to encourage women participation were taken but insufficient to reach parity. All inputs were accounted equally to deliver results that aimed to capture a holistic understanding of the status of resilience in Port Louis.

4 CLIMATE CHANGE HISTORY AND PROJECTED CLIMATE CHANGE

4.1 HISTORIC CLIMATE

Small island states in the South West Indian Ocean (SWIO) have a climate which is heavily influenced by large ocean-atmosphere phenomena, exposing them to tropical cyclones, sea level rise and other extreme weather events. These climate hazards pose significant risks to infrastructure, livelihoods, and ecosystems, necessitating a comprehensive understanding of past and present climate trends.

Identifying and unpacking historical climate patterns for Port Louis is a key component of developing adaptation strategies due to the interconnected nature of livelihood activities, general human wellbeing and the climate. Given limited city-level data for Port Louis, this section outlines the historical climate of Mauritius. Due to the relatively small geographic area of the island nation, national trends are indicative of historical climate trends in Port Louis.

Temperature

Average mean surface air temperature in Mauritius shows inter-annual variability with an overall increasing trend from 22.7°C to 24.1°C between 1901 and 2023 (Figure 5). Similarly, temperatures across Mauritius' seasonal cycle show an overall increasing trend between 1951 and 2020 (Figure 6).

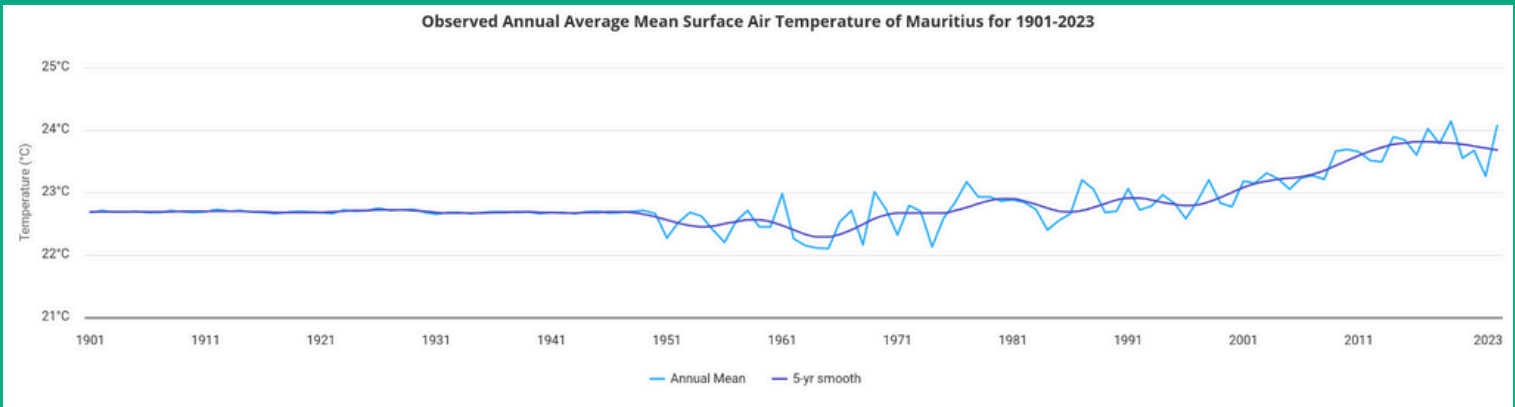

Figure 5. Annual average mean surface air temperature in Mauritius, 1901-2023 (World Bank Group, 2021).

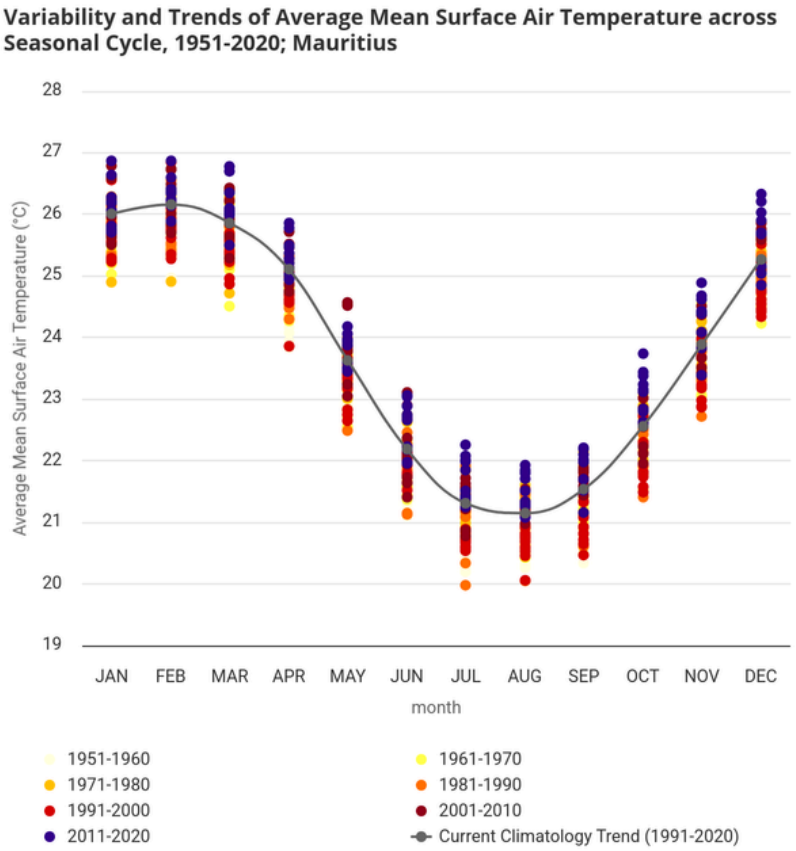

Figure 6. Variability and trends of mean surface temperature across Mauritius' seasonal cycle, 1951-2020 (World Bank Group, 2021).

PRECIPITATION

Long-term annual precipitation trends over Mauritius between 1901 and 2023 show significant inter-annual variability (Figure 7). Trends across the seasonal cycle show, on average, a decreasing trend in precipitation (Figure 8). Between the years 1971 and 2000, average annual precipitation over the island was 2010 mm, with the wettest months being February and March while the driest month was October. Mean summer rain over the same period was 1344 mm, accounting for 67% of annual rainfall. Winter precipitation was 666 mm (Mauritius Meteorological Services, 2019).

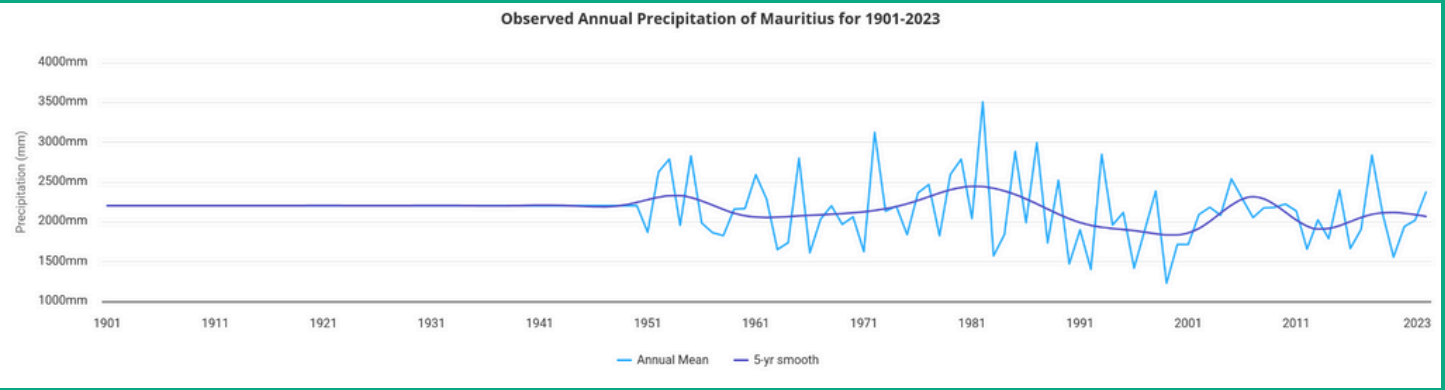

Figure 7. Annual precipitation of Mauritius, 1901-2023 (World Bank Group, 2021).

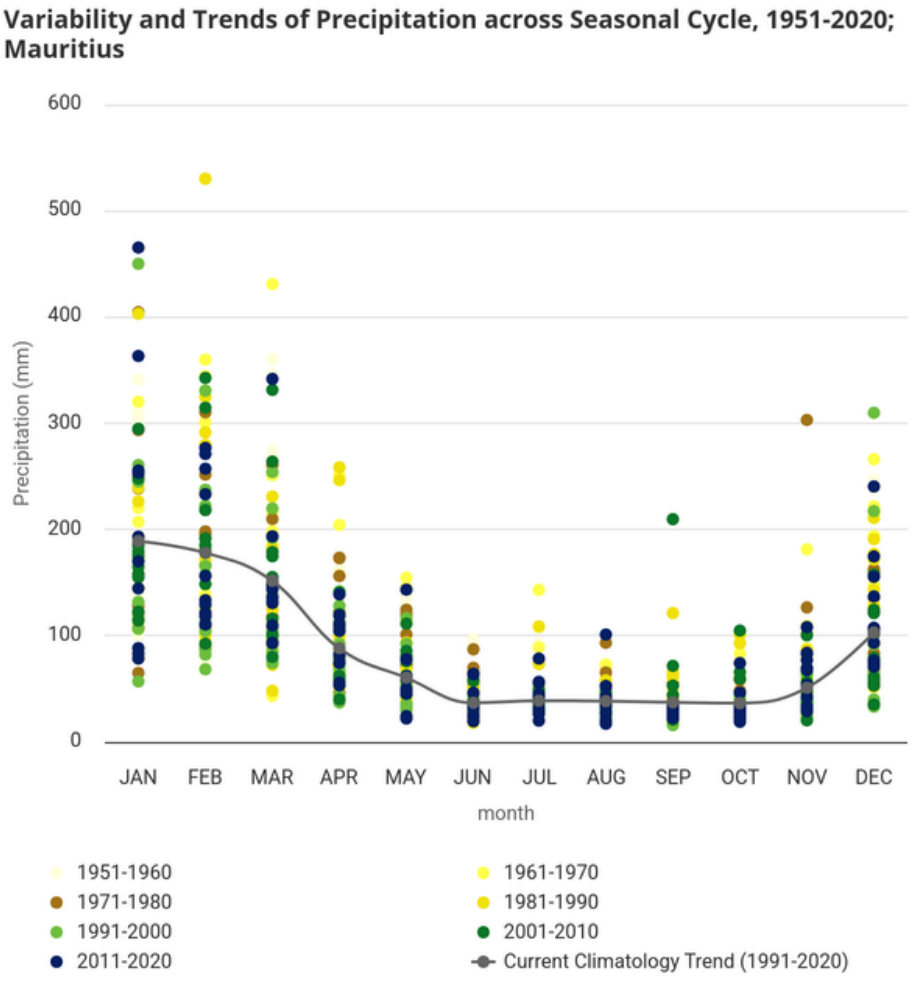

Figure 8. Variability and trends of precipitation across Mauritius' seasonal cycle, 1951-2020 (World Bank Group, 2021).

SEA LEVEL RISE

The island of Mauritius is highly exposed to sea level rise and Port Louis, being located at mean sea level, is particularly at risk. Average sea level rise in Port Louis between 1987 and 2007 was 2.1mm/year (Mauritius Meteorological Services, 2020). More recently, the rate of sea level rise, measured in Port Louis, has averaged 3.8 mm/year (Mauritius Meteorological Services, 2020).

4.2 PROJECTED CLIMATE CHANGE

Although Mauritius' GHG emissions are low compared to other countries, the impacts of climate change on the island's ecological, economic, and social systems is unavoidable, and forecast to increase in intensity in the future. The main climate change risks impacting Mauritius are sea level rise, tropical cyclones, storm surge, coastal flooding and flash floods, increased temperatures and extreme weather events, and prolonged droughts (World Bank Group, 2025b). Rising ocean temperatures will also impact marine ecosystems and coastal communities by impacting ocean oxygen levels and the health of coral reefs. These impacts will be compounded by the effects of rising sea levels, which, combined with ongoing cyclones and more extreme precipitation events, will result in higher sea level surges and an increased risk of coastal inundation.

Temperature

Under all future climate change scenarios, temperatures in Mauritius are projected to increase further (World Bank Group, 2025b; Figure 9). Under the high-emissions scenario SSP3-7.0, the mean temperature nationwide increases from 23.78°C during the historical reference period of 1995–2014 to 24.78°C for the period 2040–2059. The number of hot days (Tmax > 30°C) is projected to increase rapidly, reaching 53 days by 2080–2099. The number of tropical nights (Tmin > 26°C) per year is projected to rise to 40 nights by mid-century (2040–2059), far above 6 nights during the historical period. The rising temperatures will be accompanied by increased humidity, reaching one month of Heat Index > 35°C by 2080–2099.

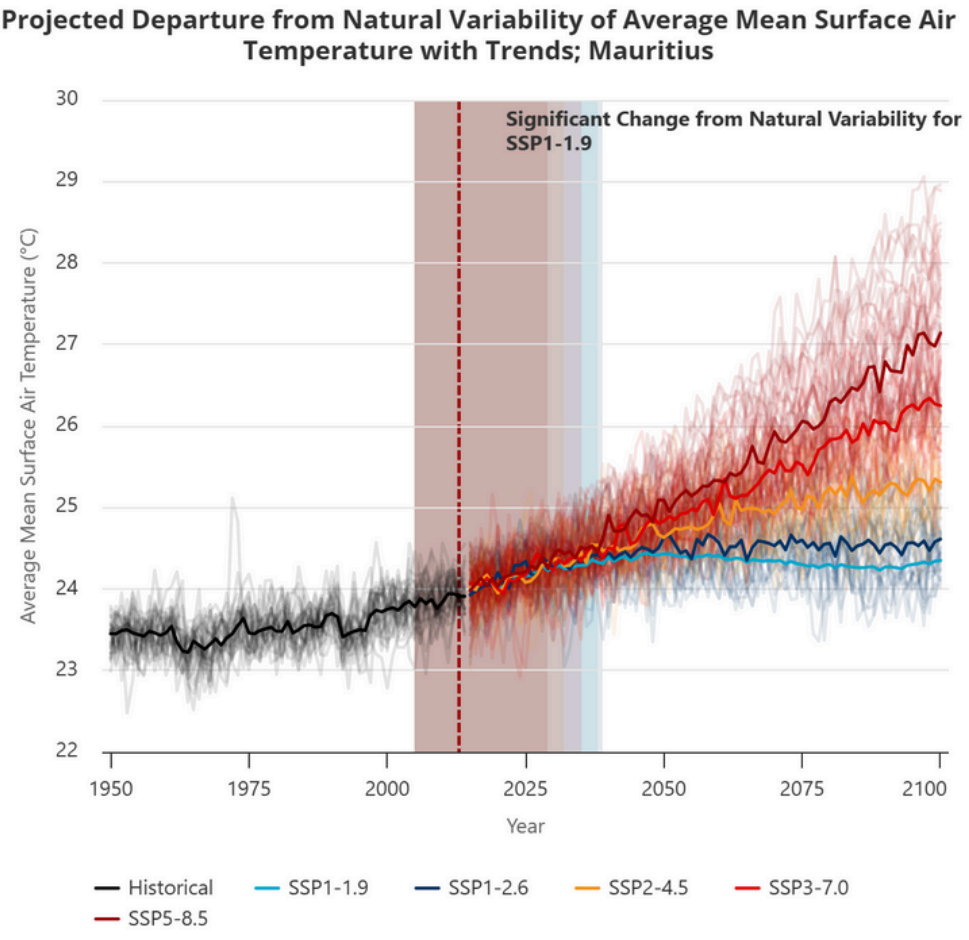

Figure 9. Projected departure from natural variability of average mean surface air temperature in Mauritius with trends (World Bank Group, 2021).

PRECIPITATION

Average annual precipitation levels are expected to show a long-term decrease due to climate change (World Bank Group 2025b; Figure 10), from 1054 mm during the historical period to 1023 mm for 2040–2059, but interannual variability remains very high. Seasonal trend differences suggest a projected delay in the start of the rainy season, along with an increase in droughts. However, intense precipitation events will likely recur more frequently, with extreme precipitation events with return periods of 50, and 100 years projected to occur more than twice as often by the end of the 21st century (2070–2099) under the SSP3-7.0 scenario, compared to historical values.

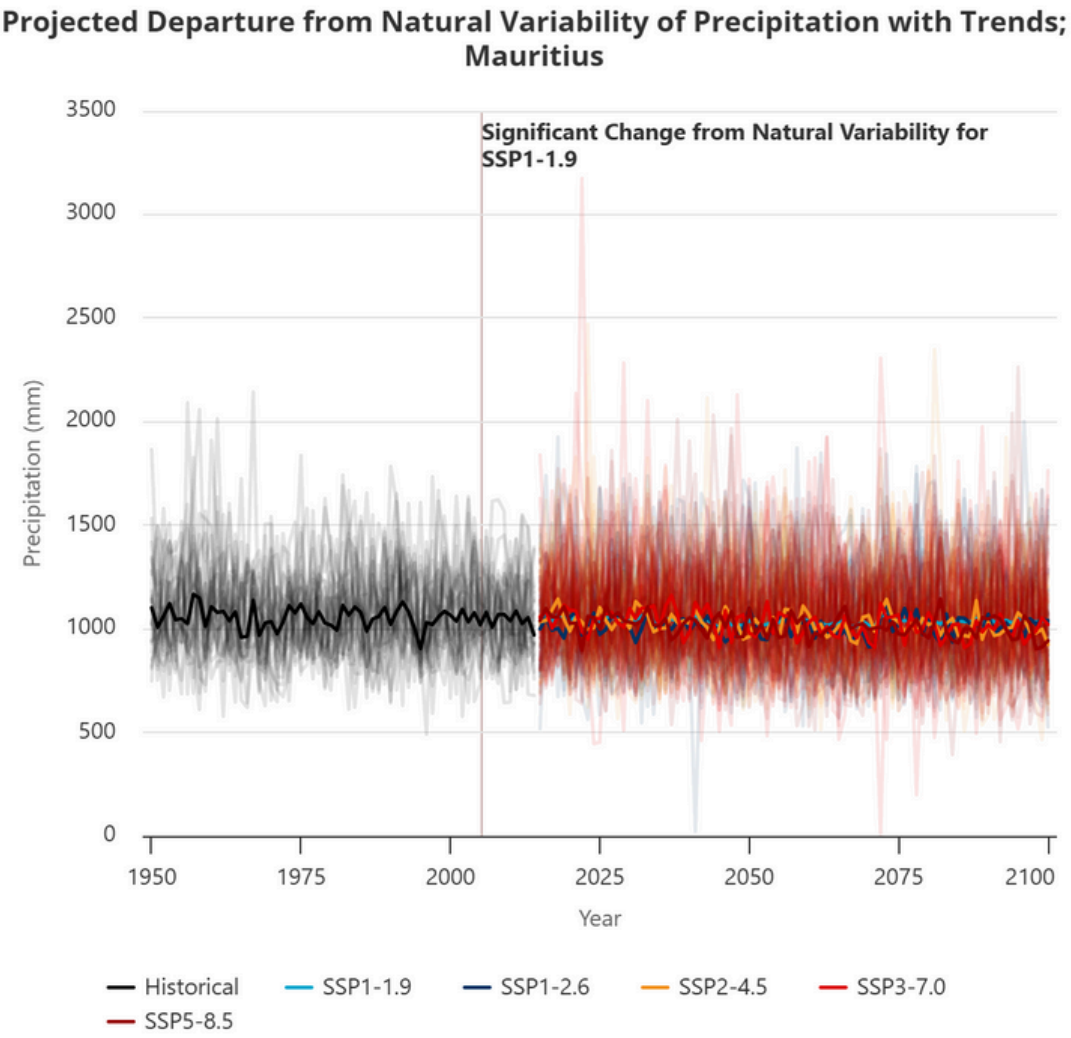

Figure 10. Projected departure from natural variability of precipitation in Mauritius with trends (World Bank Group, 2021).

SEA LEVEL RISE

Under the SSP3-7.0 scenario, sea level is expected to rise 15 centimetres from 2020 to 2050 in Port Louis, and by 2100 it is expected to reach 0.84 meters, under the SSP3-7.0 scenario relative to the historical period (World Bank Group, 2025b; Figure 11). Under the same scenario, there is a 92% chance of global sea level rise exceeding half a meter, and a 9% chance of surpassing 1 meter by 2100. This rise in sea levels will contribute to increased inundation.

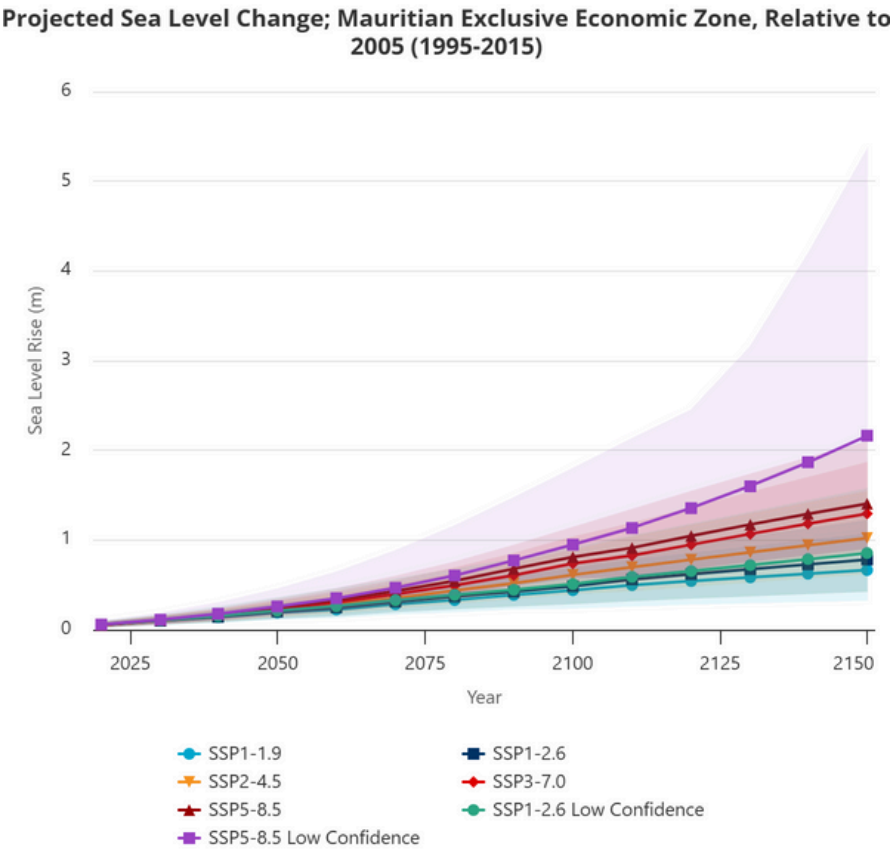

Figure 11. Projected sea level change in the Mauritian Exclusive Economic Zone, relative to 2005 (World Bank Group, 2021).

The minor high-water level serves as an indicator of potential flooding impacts and is defined as 40 cm above the average high tide (mean higher high water; MHHW). On average across the coastlines of Port Louis, there were 0 days total exceeding the minor high-water level between 1980 and 1990, as well as and between 2005 and 2015, but in 2050 under the SSP3-7.0 scenario, Port Louis is expected to have up to 14 minor high-water days per year. Extreme sea level surge events are projected to become significantly more frequent across much of the tropics. In the island of Mauritius, a sea level event with a 100-year return period, currently reaching between 1.73 and 1.94 m, is expected to occur as often as once every 75–80 years by 2050 under the RCP4.5 scenario.

4.3 CLIMATE HAZARDS

CURRENT CLIMATE HAZARDS

During the DRR4Africa participatory workshop held in August 2024, participants identified flash floods, sea level rise, storm surges and high waves, drought, and strong winds from cyclones as recurring climate hazards in Port Louis. These hazards pose significant risks to economic sectors and activities as well as vulnerable population groups within the region. Understanding the nature and impacts of the climate hazards in Port Louis critical for assessing current and future vulnerabilities and prioritising adaptation planning accordingly.

Table 3. Historic climate hazards affecting Port Louis.

Year	Occurence	Name	Description of national impact	Affected sectors	Source
1975	Intense cyclone	Cyclone Gervaise	- Wind gusts up to 280 km/h - 826 113 people affected - 9 fatalities - 13 000 houses affected - Heavy damage to crops, power lines, and roads. US$200 million in damages	- Agriculture - Transport Energy	Office of U.S. Foreign Disaster Assistance (1993)
1979	Intense cyclone	Cyclone Claudette	- Wind gusts up to 220 km/h - 100 000 affected - 5 fatalities - 257 injuries - Many houses destroyed, leaving 5000 people homeless US$175 million in damage on the island.		Office of U.S. Foreign Disaster Assistance (1993)
1989	Intense cyclone	Cyclone Firinga	- Wind gusts up to 150 km/h - 4000 affected - 1 fatality - 501 injured - 844 houses destroyed, leaving 4000 people homeless - Crops damaged; Communications and power disrupted US$50 million in damages	- Agriculture - Communication Energy	Office of U.S. Foreign Disaster Assistance (1993)
1994	Intense cyclone	Cyclone Hollanda	- Wind gusts up to 225 km/h - 2 fatalities - 450 houses destroyed or severely damaged, leaving 1500 people homeless - Caused the Mauritius gross domestic product to decline by 10% US$135 million in damages	- Agriculture: 50% of the island's sugar crop destroyed; fruit and vegetable crops and tea plantations severely damaged. - Communication: 50% of telephones non-functional Coastal infrastructure	ReliefWeb (2010)
2002	Very intense tropical cyclone	Cyclone Dina	- 50 km north of the island - Wind gusts up to 228 km/h - 4 fatalities US$50 million in damages	Agriculture (sugar crops)	ReliefWeb (2002)
2013	Flash flood		- 15 cm of torrential rain in Port Louis in 2 hours - At least 11 fatalities - Hundreds left homeless Impacted the Caudan waterfront in the city centre but did not reach the port area.	Waterfront activities	FloodList (2013)
2024	Heavy rains and flash floods	Cyclone Belal	- Torrential rain and flash flooding led to damaged infrastructure, rendered roads impassable and washed cars away. - 1,000 people were evacuated - 40,000 households experienced power outages 100,000 people were affected	- Transport Energy	ReliefWeb (2024)

FUTURE CLIMATE HAZARDS

The IPCC Sixth Assessment Report (AR6; Seneviratne et al., 2023) projects that climate extreme events will increase in frequency and intensity in the near to distant future. The hazards that currently impact Port Louis are expected to present more significant risks as their impacts worsen with climate change. In particular, heavy rainfall and cyclone-strength tropical storms are anticipated to continue increasing in frequency, as has already been observed over the last two decades (Mauritius Meteorological Services, 2024c). More severe flooding events are expected in a contracted rainy season, with resultant runoff and an overall decrease in annual precipitation levels contributing to reduced water security. This will be compounded by heat stress during more severe heatwaves, with more hot days and tropical nights, as well as rising humidity. Rising sea levels will contribute to increased inundation and worsened impacts during floods, tidal storms, and cyclone events.

As Mauritius lies within the core cyclone zone, it is significantly affected during the cyclone season which spans from October to May (World Bank Group, 2025b). These cyclonic events have significant impacts, often leading to severe coastal damage, the destruction of infrastructure, loss of biodiversity, landslides, and the displacement of communities.

The predictability of future tropical cyclones is accompanied by significant uncertainties due to several factors. These include discrepancies between climate models, the inherent complexity of processes integrated into Tropical Cyclone Models, and regional variations in cyclone formation, behaviour, and dispersal. Furthermore, Tropical Cyclone Models are predominantly calibrated for current climate conditions, which could introduce additional biases when applied to future scenarios. In summary, the complex and often conflicting interactions among ocean temperatures, wind patterns, and atmospheric conditions that drive cyclone formation, movement, and landfall are still not fully understood, making it difficult to predict which trends will ultimately dominate.
(from World Bank Group, 2025b)

The Columbia HAZard Model (CHAZ; Lee et al., 2018) model does not project any significant changes in the frequency of tropical cyclones in the future for this region. The IPCC AR6 report (Seneviratne et al., 2023) states as the global temperature rises, the average and maximum rainfall rates associated with tropical cyclones (TCs), extratropical cyclones, atmospheric rivers, and severe convective storms in some regions are projected to increase. Peak rainfall rates from TCs are expected to rise with local warming and it is likely that as global warming intensifies, the proportion of intense TCs, average peak TC wind speeds, and the peak wind speeds of the most intense TCs will continue to rise. However, the total global frequency of TC formation is expected to either decrease or remain unchanged with increasing global warming.

5 CLIMATE HAZARD IMPACTS

5.1 SECTORAL IMPACTS

To evaluate the relationship between climate hazards and economic activities, workshop participants were grouped by sectors to facilitate targeted discussions. These groups analysed the specific climate manifestations affecting their sectors (Table 4), identified vulnerabilities and impacts, and proposed potential adaptation measures. This approach provided valuable insights into sector-specific challenges and adaptive needs in the face of a changing climate.

Sector	Hazards					Total
	Flash floods	Sea level rise	Storm surges and high waves	Drought	Strong winds from cyclones	
SMEs	3	1	1	2		7
Communication	2	1	1	1	3	8
Port	3		3	1	3	10
Tourism	2		2	2	1	7
Buildings	1	2	3	1	3	10
Transport	3	2	3	1	3	12
Energy	1	3	1	1	3	9
Water	3	2	1	3	1	10
Waste	3	1	2	2	3	11
Agriculture & forestry	1	1	1	3	2	8
Environment & biodiversity			1		2	3
Health	3	2	1	3	3	12
Civil production & emergency	2	2	1	2	2	9

Table 4. Magnitude of the impact of climate hazards on sectors in Port Louis, rated high (3), moderate (2) or low (1).

The stakeholders identified the Transport and Health sectors as being the most impacted by the hazards that affect Port Louis. All other sectors were assigned moderate impacts, aside from Environment and Biodiversity, which was expected given the predominantly urbanised context of the city.

For the Transport sector, flooding and blockage of roads was highlighted as a key impact, which severely impedes evacuation efforts in the city during flood events and thus increases risk to people and property. As the city is Mauritius' economic hub, it hosts the port and accompanying facilities, offices and government buildings, and thus is densely populated during business hours. When evacuation orders are given, roads can become gridlocked, flooded or blocked by trees blown over by strong winds or other debris impeding evacuations, and preventing critical access by emergency services. This is also linked to the identification of the Port as its own sector, with maritime transport being impeded during storm surges. This prevents large and small vessels from moving in and out of the port, leading to severe socio-economic impacts as import and export functions must cease and local fishing vessels are also unable to operate safely. The port infrastructure is also vulnerable to damage during these events, and if rendered inoperable, significant economic losses may result until the infrastructure is repaired.

The impacts on the Health sector manifest predominantly through physical injury and loss of life during floods and storms. The mental impacts of these events were also highlighted, with the dread of impending storm seasons, the highly stressful experience of the floods and storms, as well as post-event concerns over the socio-economic impacts. Drought impacts on health were also highlights, with dehydration being a key impact along with the exacerbation of cardiorespiratory conditions.

Impacts to the Waste sector include inundation of sewage and drainage systems during flood events, leading to contamination of floodwaters and resulting in the spread of waste. This poses health risks for those exposed to the floodwaters and requires costly post-disaster clean-up efforts. Waste material and debris also contribute to blockage of flood drains and gutters, worsening flood impacts in the urban area.

5.2 POPULATION IMPACTS

To evaluate the differential impacts of climate hazards on vulnerable population groups, workshop participants were asked to first identify particularly vulnerable population groups. Thereafter, participants scored the level of impact of various climate hazards on the identified population groups. This approach provided valuable insights into intersectional challenges and adaptive needs of Port Louis' population in the face of a changing climate.

Table 5. Magnitude of the impact of climate hazards on population groups in Port Louis, rated high (3), moderate (2) or low (1).

Sector	Hazards					Total
	Flash floods	Sea level rise	Storm surges and high waves	Drought	Strong winds from cyclones	
Women & girls	2	1	1	1	3	8
Children	3	1	1	2	3	10
Youth	3	1	1	1	3	9
Elderly	3	1	1	2	3	10
Fishers	2	3	3	1	3	12
People with disabilities	1	1	1	2	3	8
People with chronic illness	1	1	1	2	3	8
Low-income households	1	1	1	1	3	7
Homeless	1	1	1		3	6
Maritime workers	1	3	3		3	10

The participants identified Fishermen as a population group that faces unique exposure to the impacts of the climate hazards. Their physical exposure to risk while out in the ocean as well as the vulnerability of their livelihoods were the determinants of their high vulnerability. Rough seas and storm surges can overturn fishing vessels, leading to loss of life or injury and halted work during these events for safety results in economic losses and places livelihoods at risk of being lost. There are also long-term impacts as violent storms damage the local marine environment leading to reduced availability of marine resources for Fishermen. The costs associated with lost work hours and damaged vessels can cripple small-scale fishing businesses and these businesses are reliant on unimpeded functioning of the port and its infrastructure. Similar impacts were identified for Maritime workers who were also noted as having unique vulnerability. The physical exposure to rough ocean conditions and socio-economic impacts of the functioning of the port were listed as contributors to their vulnerability.

For Children and the Elderly, vulnerability to the impacts of floods and strong winds were highlighted. It is often difficult for these individuals to escape the dangers of these events, being reliant on shared transport or rescue services, and their ability to recover from injuries and exposure is also reduced. They often lack the physical strength to resist being caught-up in floodwaters or swim to safety. During strong winds, falling trees and infrastructure as well as airborne debris can more severely injure them due to their more fragile physical stature. The long-term psychological effects of these events are also often more significant for these groups.

The remaining population groups had an average result of moderate impacts across all the hazards, though it should be noted that strong winds were assigned severe impacts across all groups. This results from the unpredictable nature of these impacts and thus a difficulty in avoiding their exposure for all people. Falling and airborne debris can lead to loss of life or serious injury, as well as damage to property for those living in the city. Damaged infrastructure can result in reduced socio-economic function in the city and thus jeopardise livelihoods across all population groups.

The results show how the disaster impacts on Port Louis, resulting from various hazards –flash floods, sea level rise, storm surges and high waves, drought, and strong winds from cyclones – have widespread consequences. With the transport and health sectors being most significantly affected by these hazards, there are broad socio-economic impacts within the city. As the city is the business and administrative capital of the country and also hosts the port and its associated infrastructure, presents a unique hotspot of vulnerability for various population groups. People with livelihoods associated with the port, particularly fishermen and other maritime workers, have the greatest level of exposure to these risks. This exposure risk extends to children and the elderly, who are particularly vulnerable as they cannot independently evacuate high risk areas and have limited physical resilience.

6 SCORECARD RESULTS

6.1 CITY GOVERNANCE

Essential 1: Organise for Resilience

The city has a Local Disaster Management Coordinator as part of the Disaster Risk Reduction and Management Unit established at the local level in 2018. In Port Louis, more development is needed to put in place an organisational structure to act on reducing disaster risks. The city benefits from the presence of the Ministry of Local Government and Disaster Risk Management as well as the National Disaster Risk Reduction and Management Centre, with the National Disaster Scheme (2015) outlining the roles and responsibilities of various actors before, during, and after disaster events. While there are policy guidelines in place, it is recommended that the National Disaster Scheme, the Flood Response and Rescue Plan, and the Planning Policy Guidance all be updated to enhance effective DRR. Furthermore, it is strongly recommended that Port Louis develops a City Master Plan in line with the Sendai Framework. These guiding policies and plans would be best informed by data-driven disaster scenarios to ensure better preparedness in a rapidly changing climate. Importantly, the central government could make provisions for disaster funding which aligns with these updated insights. Alongside sensitisation campaigns, the government already funds cleaning, desilting, and rehabilitation activities for rivers, canals, and drains, although more regular surveying of drainage infrastructure is recommended. The city would also benefit from more regular exchanges between stakeholders, to integrate resilience across city functions.

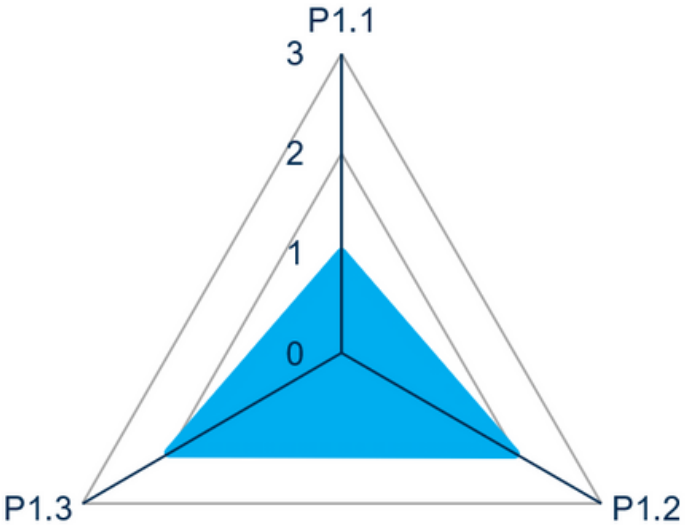

Figure 12. Essential 1 scorecard results.

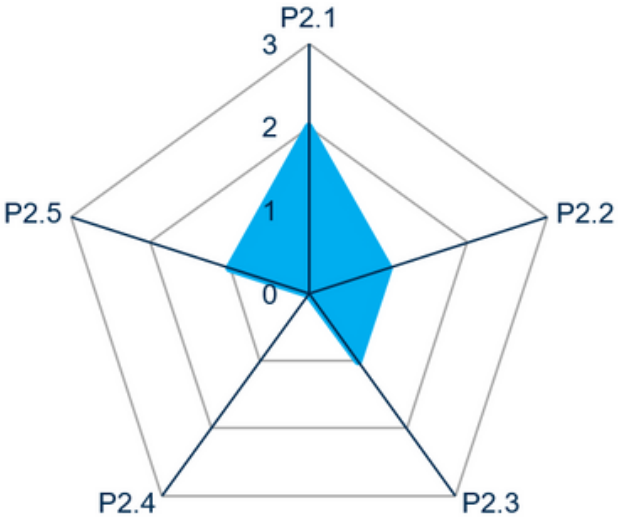

Figure 13. Essential 2 scorecard results.

Essential 2: Identify, Understand and Use Current and Future Risk Scenarios

Port Louis has data related to climate risks available, which are modelled on past disaster events, including a database indicating flood-prone areas and landslide zones. The city would benefit from developing updated data which is based on future scenarios and accounts for all hazards, as well as associated resources and capacities. Additionally, Port Louis could strengthen understanding of cascading impacts, and furthermore, understanding of infrastructure risk is limited. The allocation of resources is necessary to support data collection processes, and it is recommended that this data is housed on a platform which is accessible to stakeholders to add contributions. Simulation drills should be prepared for all hazards and executed on a regular basis, with additional capacity building on DRR being highly recommended.

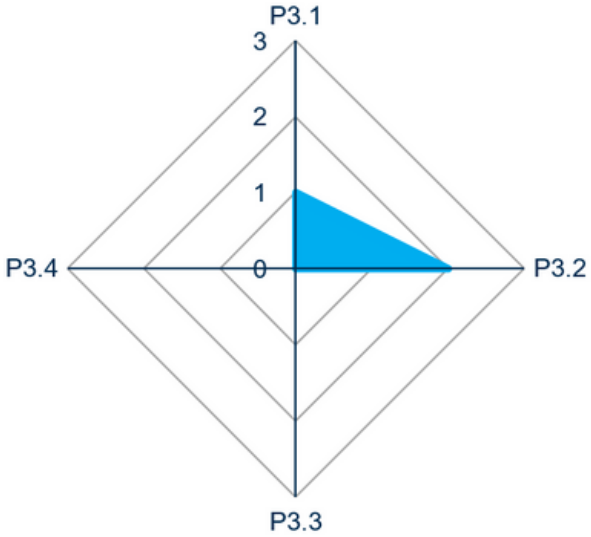

Figure 14. Essential 3 scorecard results.

Essential 3: Strengthen Financial Capacity for Resilience

The assessment found that while there are some funding sources present, Port Louis would benefit from greater awareness of DRR across various sectors and ministries to expand possible funding sources while also encouraging the pursuit of such funds. The city's financial plan does budget for DRR-related activities. Incentives should be included in the Port Louis budget to encourage the involvement of various sectors and groups in resilience building efforts.

6.2 INTEGRATED PLANNING

Essential 4: Pursue Resilient Urban Development

Port Louis has several urban development policies in place to guide practitioners and support resilience, although several of these should be updated. Relevant policies and plans include the National Development Strategy, the Outline Planning Scheme, Planning Policy Guidance, Land Drainage Map, and Landslide Hazard Map. It is particularly critical that the city's Development Management Map be updated, incorporating future hazards and risks, to inform and strengthen city-scale zoning, codes, and standards for resilience.

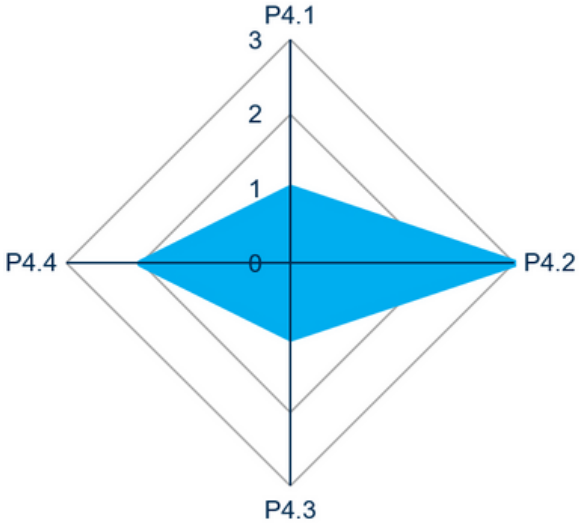

Figure 15. Essential 4 scorecard results.

Essential 5: Safeguard Natural Buffers to Enhance the Protective Functions Offered by Natural Ecosystems

This assessment showed there is some awareness in Port Louis related to ecosystem services and functions, however improvements could be made to integrate natural assets into planning and practices related to building, land use protocols, and permits. Furthermore, it is recommended that Environmental Impact Assessments (EIAs) and Preliminary Environmental Reports (PERs) be more stringent to safeguard natural hazard buffers. Thorough policy frameworks as well as incentives are required to support the development of green and blue infrastructure projects as well as other nature-based solutions (NbS).

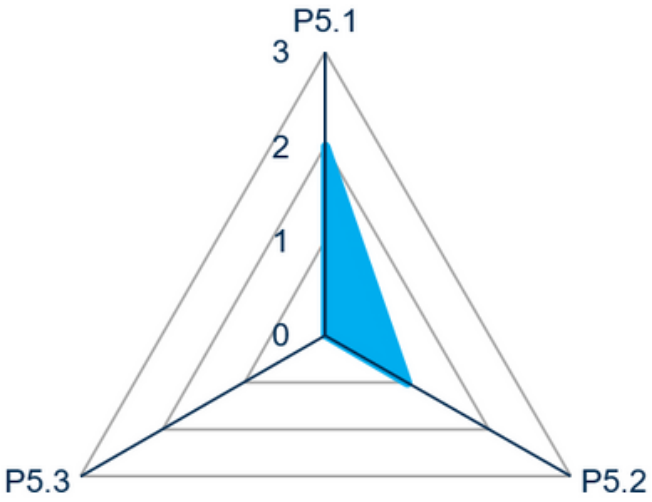

Figure 16. Essential 5 scorecard results.

Figure 17. Essential 6 scorecard results.

Essential 6: Strengthen Institutional Capacity for Resilience

The assessment found that Port Louis currently has limited development of skills or experience for different disaster scenarios, underscoring the urgency of capacity building, protocols, and funding structures which take this into account. The city oversees sensitisation campaigns and MBC, NDRRMC, and MMS are responsible for disseminating hazard-related information. A public relations programme which coordinates all stakeholders, including the media and particularly vulnerable population groups, is highly recommended for improving education and awareness regarding climate hazards. This can be supported by transparent data sharing processes amongst stakeholders to improve DRR. Furthermore, there is a need to provide DRR training materials in Mauritius' native language, Creole, as well as Oriental languages, in addition to English. Training processes should expand on the several workshops and webinars which have already taken place, with a recommendation to leverage insights from other cities facing DRR challenges through networking events.

Essential 7: Understand and Strengthen Societal Capacity for Resilience

Community organisations are involved in sensitisation programmes, simulation exercises, and waste campaigns in Port Louis, where Community Disaster Response Programmes are conducted once a year. Additional funding is required for more regular training which targets high risk areas as well as people with disabilities. Citizen engagement could be strengthened through more diverse and locally relevant DRR communication, as current communication is through the Mauritius Broadcasting Commission and WhatsApp[1]. It is strongly recommended that local authorities, small and medium-sized enterprises (SMEs), Business Mauritius, and other concerned stakeholders develop a business contingency plan as less than 20% of businesses currently have one in place.

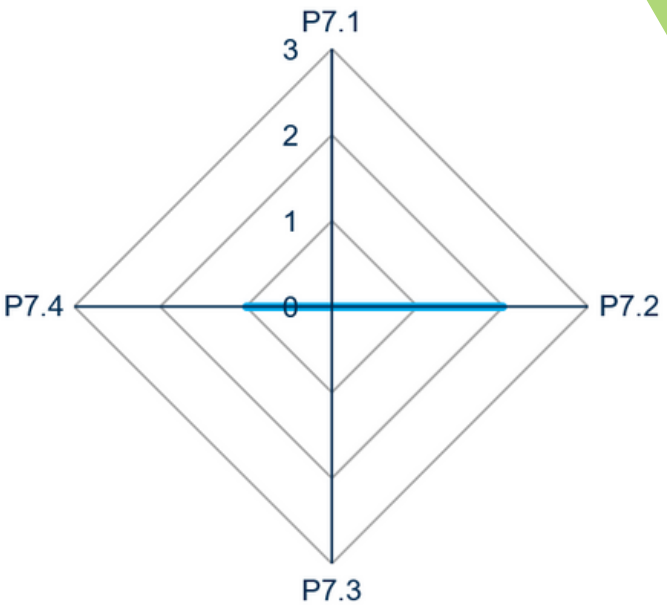

Figure 18. Essential 7 scorecard result.

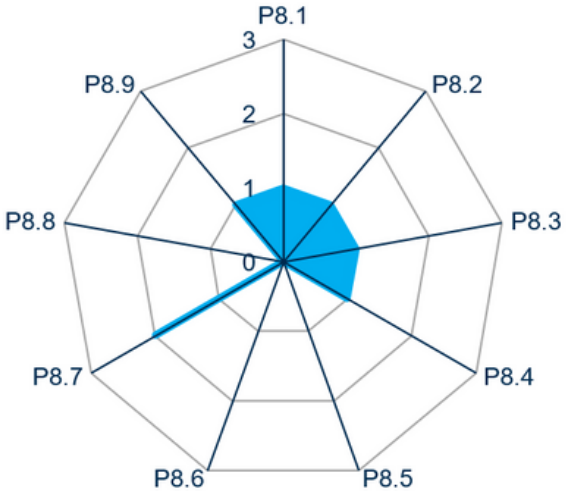

Figure 19. Essential 8 scorecard results.

Essential 8: Increase Infrastructure Resilience

The assessment found vulnerability of critical infrastructure systems in Port Louis, stemming from budgetary constraints which prevent the city from establishing a dedicated monitoring team. Storm drainage networks do not have sufficient hydraulic capacity during heavy rainfall, leading to urban flooding. The Local Government Act indicates that Municipal City Councils, the Municipal Town Councils and the District Councils are responsible for the "construction, maintenance and cleaning of drains of all roads other than motorways and main roads, for the collection and conveyance of waste to waste disposal or management facilities, for the undertaking of afforestation and terracing works along public roads, for the construction, control, care, management, maintenance, improvement and cleaning of the beds and banks of lakes, rivers, rivulets and streams, and for the control of pollution". Any expansion of storm drain age networks in the city will require funding and capacity building, as well as any protective infrastructure such as flood barriers and basins, which are essential to reduce flood risk. Due to its topography and infrastructural capacities, climate hazard events classified as 'most probable' are likely to disrupt potable water and sanitation, energy, transport, and communication services. The transport and communication sectors are particularly vulnerable to disruptions, and many teaching facilities are also at risk of damage. Flood events contaminate potable water, causing serious health and safety risks. It was noted that Central Water Authority (CWA) and Wastewater Management Authority (WMA) have the capacity to perform maintenance for water and sanitation services within 24 hours of disrupted services. Furthermore, the city has healthcare capabilities to treat over 90% of major injuries within 24 hours in "most severe" scenarios. There are gaps in first responder assets which are modelled and proven adequate to deal with "most severe" scenarios, signalling a need for additional investment.

6.3 RESPONSE PLANNING

Essential 9: Ensure Effective Disaster Response

Disaster response in Port Louis was found to be relatively strong in some key areas. The media's early warning systems (EWS) are able to reach over 90% of the population however, the city still needs to develop a standard operating procedure (SOP) to complement this. The National Disaster Scheme (2015) and the Response and Rescue Plan for the City Centre of Port Louis was devised by the NDRRMC and contingency plans for high-risk areas have also been developed. A common disaster management and preparedness plan could strengthen responses to local emergencies. There are sufficient staffing capacities in place to support first responder duties under surge event scenarios, but it was noted that additional equipment and relief supplies are needed in the event that volunteers are involved. While there is a need to construct additional evacuation centres, those that are established are properly equipped with basic food items and the Ministry of Social Security allocates allowances to evacuees.

Critically, the emergency operations centre is designated to the national level therefore there is an urgent need to establish local authorities which can act alongside relevant agencies according to localised and well-structured SOPs. Simulations and drills are carried out in high-risk areas yet more funding and capacity building is required by local authorities to more regularly test all scenarios.

Figure 20. Essential 9 scorecard results.

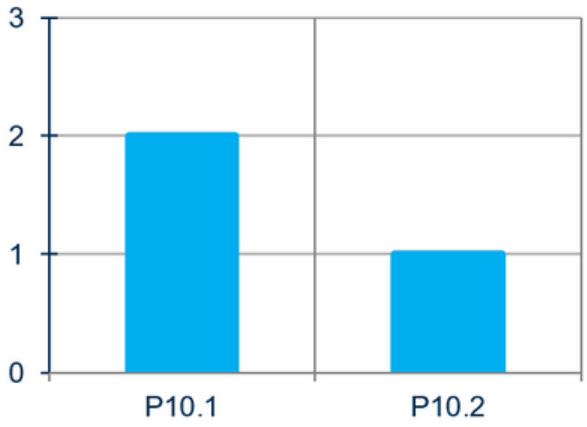

Figure 21. Essential 10 scorecard results.

Essential 10: Expedite Recovery and Build Back Better

Recovery processes are well established in Port Louis but additional funding and appropriate logistics support, as well as the recruitment of specialised personnel, is recommended to enhance these efforts. Additionally, counselling and community support arrangements require further long-term investment. Some post-event lessons are captured by the Local Disaster Management Coordinator and disseminated among local communities. These could be captured in a more systemic manner by drafting a SOP which includes post-event debriefing sessions. It is recommended that Port Louis develops an independent data management agency to capture impacts and insights which can inform improved recovery and building back better.

6.4 FINAL CITY SCORE

The city of Port Louis shows an overall score indicative of the current foundational status of DRR within the city. There is strong understanding of hazards and their impacts, as well as a baseline of infrastructure resilience that has ensured that the city has remained relatively resilient through past disasters. However, as climate change impacts such as cyclones are projected to worsen, key steps must be taken to account for more severe hazards and ensure the city is able to respond accordingly. This is highlighted by lower scores in the City Governance and Response Planning sections of the Scorecard. Mainstreaming of DRR and adopting a cross-sectoral approach to DRR in the city will be key to establishing effective organisational structures for future resilience. Importantly, safeguarding natural hazard buffers and leveraging community capacity for disaster response can aid in improving the city's overall resilience.

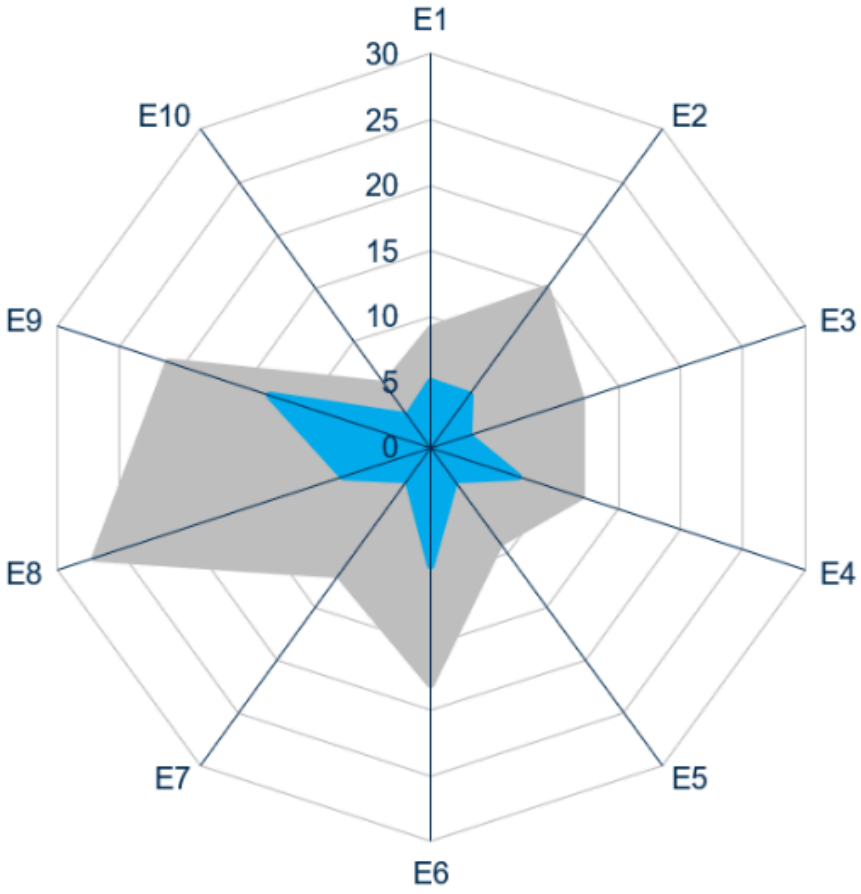

Figure 22. Port Louis overall scorecard results.

7 CONCLUSION

The city of Port Louis faces significant climate risks due to its geographical location, with key recurring hazards such as flash floods, sea level rise, storm surges and high waves, drought, and strong winds from cyclones already having severe socio-economic impacts. These hazards are likely to continue intensifying under future climate change scenarios, and thus result in greater impacts to the city's people and sectors. While the future impacts of tropical cyclones are difficult to project, floods and droughts are set to become more severe. Sea level rise is expected to continue, contributing to inundation and worsening flood impacts.

Vulnerable population groups like fishermen and maritime workers, as well as children and the elderly are currently most vulnerable to hazard impacts and will thus be most greatly affected in the future. Key sectors such as Transport and Health are also currently impacted by hazards and will face greater burdens in the future. Critically, the functioning of the port and its associated infrastructure are vulnerable to all hazard impacts and there will be significant socio-economic ramifications if resilience is not prioritised. As the socio-economic hub of the country, these impacts can spread beyond the city level and affect Mauritius as a whole.

While there has been significant progress in modelling and planning for DRR, challenges remain regarding data accessibility, urban planning, infrastructure resilience, and funding mechanisms to operationalise action at the city level. With some mandate over flood drain management allocated at the local level through the Local Government Act (responsible for the construction, maintenance and cleaning of drains of all roads other than motorways and main roads) there is opportunity to address flood resilience. The broader mandate for DRR efforts, and thus most of the funding for these activities, is mostly held by the national entity NDRRMC, and so city level action requires close collaboration with external actors. It is critical that DRR is mainstreamed through city processes to unlock local-level DRR funding within government budgets and create an enabling environment for external investment into resilience-building actions. Engagement with national entities and ministries to advocate for this will be integral to strengthening local-level DRR efforts in Port Louis. City-level stakeholders need to continue being empowered through capacity building and cross-sectoral collaboration to enable more swift action before, during and after disasters. Enhanced community engagement and investment in more resilient green and blue infrastructure are essential to developing long-term resilience in Port Louis.

Awareness and understanding of hazards and their interactions with risks and vulnerabilities is increasingly informing the development of Port Louis and Mauritius as a SIDS. Continued capacity building and effective DRR mainstreaming into policy will lead to improve resilience and safeguard the wellbeing and livelihoods of the most vulnerable people in the city as hazard impacts worsen in the future. This will be supported by the established community of practice that will continue to promote multi-level collaboration and engagement across tiers of government, civil society, the private sector, and academia. These steps will also protect vital socio-economic functions that support the city and all of Mauritius and provide evidence-based insights to support other African cities in reducing risk and advancing towards more climate resilient futures.

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