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

LE CHANGEMENT CLIMATIQUE

BACKGROUND

Climate change is defined as *'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods'.*

It is one of the daunting challenges which humanity is facing. It poses an existential threat to all. Emissions of greenhouse gases (GHGs), which are the root cause of climate change, are increasing. As a result, climate change impacts are considerably disrupting economies, affecting livelihoods and communities all over the world.

Some observed global climate indicators are:-

- **In the last 150 years, atmospheric carbon dioxide levels have risen from 280 parts per million (ppm) to 400 ppm;**
- **In October 2019, 412 ppm of carbon dioxide was recorded (National Aeronautics and Space Administration)**
- **Glacier mass loss for 2015-2019 is the highest for any five-year period on record**
- **Changing climate patterns, melting of ice sheets and sea level rise**
- **Extreme weather events namely, cyclones, torrential rain, flash floods and bush fires, are more frequent and intense and have impacted almost 62 million people in 2018**

Climate change could force more than 100 million people into extreme poverty by 2030 (World Bank Report, 2015).

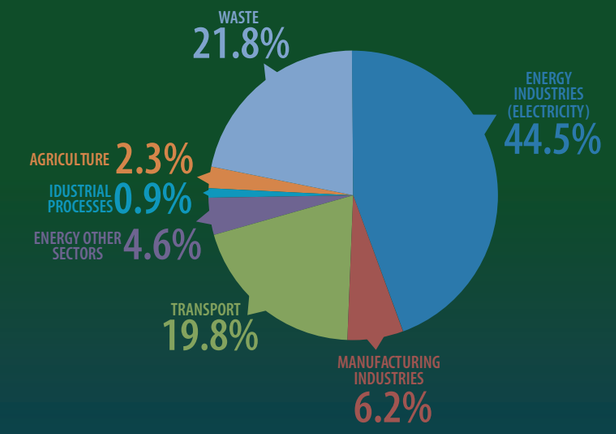
Mauritius, as a Small Island Developing States (SIDS), is one of the most exposed countries to the devastating impacts of climate change. Indeed, Mauritius is ranked as the 47th country with the highest disaster risk (World Risk Report 2019).

Some key local climate indicators are cause for concern as they are already exceeding global averages:-

- An average temperature rise of around 1.2ºC has been observed over the last decades. This figure exceeds the global average of 1.1ºC
- Decreasing trend in annual rainfall of 8% over Mauritius since the 1950s
- Accelerated sea level rise during the last decade at an average rate of 5.6 mm/year compared to the global average of 3.3 mm/year
- Intensification of cyclones. An example is cyclone Fantala in 2016 with gusts of the order of 345 km/hr
- More frequent flash floods, such as the one which occurred in March 2013, with disastrous consequences
- Outbreak of vector-borne diseases, namely, chikungunya and dengue after flooding periods

Share of GHGs Emissions in 2018 in Mauritius

In 2018, total emissions of GHGs for Mauritius (carbon dioxide, nitrous oxide and methane) stood around 5613 Gg CO_2eq with the energy sector (energy industries, transport, manufacturing industries and energy other sector) being the most emitting one, contributing to 75.1% of the total emissions, followed by the waste sector (21.8%) and the agriculture sector (2.3%). Mauritius is a low emitter of GHGs, contributing to 0.01% of the global emissions.



Source : Statistics Mauritius, 2019

Mauritius is projected to become a water stressed country by 2025 (UN SIDS in Numbers Report, 2017) and agricultural production may decline by 15%-25% by 2050 (Third National Communication, 2016). It is also predicted that a global average temperature rise of 1.5ºC is most likely to be reached by 2030 (IPCC 1.5ºC Special Report, 2018). It is projected that, with the expected increase in temperature, climate-related risks will worsen in sectors such as water, health, agriculture, fisheries and marine resources, infrastructure, coastal zone and tourism.

Climate change is also linked to the problem of ozone layer depletion. Hydrochlorofluorocarbons (HCFCs) which are responsible for both global warming and ozone layer depletion are being phased out. Additionally, hydrofluorocarbons (HFCs) were introduced in replacement of chlorofluorocarbons (CFCs) and HCFCs. HFCs are also being addressed.

BEACH EROSION

LOW WATER LEVEL IN RESERVOIR

CORAL BLEACHING

DAMAGE TO INFRASTRUCTURE

VISION/TARGETS

To make Mauritius a climate-resilient country and achieve a low carbon emission economy by:

- Reducing emissions of GHGs by up to 30% by year 2030 relative to the business as usual scenario
- Increasing the proportion of renewable energy by at least 35% in our energy mix by 2025
- Improving education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning by the year 2030 in line with Sustainable Development Goal 13 on climate action
- Phasing out of HCFCs by 2025

ISSUES OF CONCERN

- Mainstream climate change in all sectors, including in private sector-driven activities
- Need of a legislative framework to address climate change issues
- Mobilise climate finance for implementation of adaptation and mitigation measures identified in the Mauritius Nationally Determined Contribution
- Vulnerability to impacts of climate change
- Need to build capacity on vulnerability assessment, GHG inventory, downscaling of climate models, assessment of carbon footprint
- Enhance awareness, education and training on climate change at all levels
- Need for gender balance in the decision-making process of climate change governance

EXISTING POLICIES AND STRATEGIES

Mauritius ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, the Kyoto Protocol in 2001 and the Paris Agreement in 2016. The aim of Paris Agreement is to strengthen the global response to the threat of climate change by keeping a global temperature rise well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C

The Mauritius Nationally Determined Contribution (NDC) covers both mitigation and adaptation for 14 sectors. Under mitigation, the 6 key sectors are: energy, transport, industry, waste, agriculture, and land use and forestry. Under adaptation, the 8 key sectors are: water, agriculture, disaster risk reduction, fisheries, infrastructure, coastal zone, biodiversity and health. The NDC is required to be reviewed every five years and Mauritius is currently updating its NDC for submission to UNFCCC in 2020

A National Climate Change Adaptation Policy Framework was formulated in 2012 to foster the development of policies, strategies, plans and processes to avoid, minimise and adapt to the negative impacts of climate change on the key sectors

A Disaster Risk Reduction Strategy and Action Plan, 2013 including risk maps in relation to inland flooding, landslide and coastal inundation for the Republic of Mauritius has been formulated

The Sendai Framework for Disaster Risk Reduction 2015-2030 was adopted by Mauritius. It aims to achieve the substantial reduction of disaster risk and losses in lives, livelihoods and health as well as in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries over the next 15 years

A Long Term Energy Strategy was formulated (2009 – 2025)

A Renewable Energy Roadmap 2030 (2019) has been formulated for the electricity sector, which is geared towards enabling the optimum production of energy from renewable resources and ensuring a transition towards greener and cleaner energy

Mauritius has ratified the Vienna Convention and Montreal Protocol (1992) on substances that deplete the ozone layer and Kigali Amendment (2019) to phase down HFC

EXISTING LAWS AND REGULATIONS

- Main climate change–related legislation are the Mauritius Renewable Energy Agency Act 2015, National Disaster Risk Reduction and Management Act 2016, the Land Drainage Authority Act 2017, the Local Government (Amendment) Act 2018 and the Mauritius Meteorological Services Act 2019
- Other legislations are Environment Protection Act (2002); Dangerous Chemical Control Act (2004); Building Control Act (2012); Energy Efficiency Act (2011)
- Consumer Protection Regulations to ban equipment containing ozone depleting substances (2013)
- Energy Efficiency (Energy Consumer and Energy Audit) Regulations (2017)
- Energy Efficiency (Labelling of Regulated Machinery) Regulations (2017)
- Energy Efficiency (Registration of Energy Auditors) Regulations (2016)

In order to move a step further in terms of climate change governance, a Climate Change Bill is being finalised. The Bill aims at strengthening our resilience and paving the way towards a low carbon economy, thus, ensuring that our current and future generations have a safe and resilient infrastructure and environment to live.

ACTIONS TAKEN/ ONGOING

- Creation of a Climate Change Division (2010), Energy Efficiency Management Office (2011), Climate Change Information Centre (2013), National Disaster Reduction and Management Centre (2013), Mauritius Renewable Energy Agency (2015)
- Setting-up of a National Emergency Operations Command (NEOC) for managing disasters at national level, a Rodrigues Emergency Operations Command and 12 Local Emergency Operations Command (LEOC) at level of Local Authorities
- Installation of the Doppler Radar System in 2018. The objective is to contribute to better general weather forecasting, enhance people's life and also address the specific challenges posed by extreme weather events
- Several sensitisation materials have been developed, such as, toolkits, video clips, card games, depiction panels and digital interactive models
- Formulation of a Climate Change Charter for Local Authorities
- Renewable Energy Strategic Plan 2018-2023
- Master Plan for Energy Efficiency/Demand Side Management and Action Plan for the period 2016 to 2030
- Multilateral Environmental Agreements (MEAs) Coordinating Committee under the EPA 2002 to report progress on climate change related MEAs, which are atmosphere, biodiversity and marine related

PROJECTS IMPLEMENTED/BEING IMPLEMENTED

- Implementation of the 'Adapt'Action' Programme under the NDC under which, a Resilience Strategy for Mauritius is under finalisation
- Formulation of Nationally Appropriate Mitigation Actions for a Low Carbon Island Development Strategy
- Preparation of the first Biennial Update Report, covering GHG inventory for period 2014-2016
- Signature of a European Union Joint Monitoring Framework Agreement on Climate Change
- Implementation of a project on Climate Change Vulnerability and Adaptation Study for the Port of Port Louis is underway
- Preparation of a National Adaptation Plan to enhance climate resilience for coastal zones, infrastructure, flood affected areas, agriculture, fisheries and vulnerable marginal lands in Mauritius
- Development of a Mauritius 2050 Pathways Calculator in 2015
- Preparation of the Third National Communication in 2016
- Implementation of a HCFC Phase-out Management Plan (2011-2025) is underway

FUNDING

Mauritius has invested up to 2.15% of its GDP annually, that is, roughly Rs 10.3 billion (which include grant funding) in environment and climate change related sectors (Tracking Public Sector Environment Expenditure, 2018). This represents 77% on adaptation and 23% on mitigation measures, respectively. The economic costs of climate change for SIDS are projected at 15% of Gross Domestic Product (GDP) or more (UN SIDS in Numbers Report, 2017).

PROPOSED ISSUES FOR DISCUSSION (NON – EXHAUSTIVE)

Where we are

- Climate-change related legislation, namely, Disaster Risk Reduction Management Act 2016, Land Drainage Authority Act 2017, Local Government Act 2018, Mauritius Meteorological Services Act 2019 have been promulgated
- Institutions such as, the Climate Change Division, Energy Efficiency Management Office, Mauritius Renewable Energy Agency, Mauritius Meteorological Services, National Disaster Risk Reduction Management Centre have been set up
- Policies and strategies on adaptation and mitigation have been developed
- GHGs emissions reduction pledges have been taken at international level
- Commitments have been taken under MEAs (UNFCCC, Paris Agreement and Kigali Amendment)
- Sustaining awareness raising and mass sensitization towards a climate change conscious population
- Further complying with our obligations under UNFCCC and Paris Agreement
- Facilitating the setting-up of an association in the refrigeration and air conditioning sectors.

Where we need to go?

- Mainstreaming climate change in key sectors
- Building capacity in terms of climate modelling and vulnerability assessment
- Setting up of a dedicated Department of Climate Change
- Developing a Nationally Appropriate Mitigation Strategy and Action Plan
- Developing a National Adaptation Plan;
- Improving weather forecasting
- Having a dedicated unit on climate change in all Local Authorities and concerned Ministries
- Strengthening preparedness and response at community level

How to reach there?

- To promulgate a Climate Change Act;
- To mobilise funding and technical support to achieve the set targets as per our Vision
- To build capacity of relevant stakeholders to formulate project proposals to access climate finance
- To set up additional weather stations for better weather forecasting
- To construct additional fully-equipped refuge centres
- To access support for technology transfer and development
- To have an improved education, training and public awareness strategy and action plan
- To have an upgraded Climate Change Information Centre and sustained sensitisation campaigns on climate change issues
- To further enhance public private partnerships through networking by sharing experiences/addressing challenges

Les Assises de l'Environnement

CAUDAN ARTS CENTRE / 16 -17 DECEMBRE 2019

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