

Zones côtières et environnement marin



Moderator: Dr. (Ms) M. Nowbuth, University of Mauritius

Panelists:

- 1) Dr. R. Badal, Department of Continental Shelf, Maritime Zones Administration and Exploration, Prime Minister's Office
- 2) Mr. J. Kwok, Association des Hôteliers et Restaurateurs de l'Ile Maurice (AHRIM)
- 3) Mr. F. Rogers, Reef Conservation

Rapporteur: Dr. Y. Neehaul, Mauritius Oceanography Institute

Outcomes

1. Where we are?

- ▶ Gaps/challenges in the sector

2. Where we want to go?

- ▶ Aspirations/vision for the sector

3. How to reach there?

- ▶ New policies and strategic directions
- ▶ New laws and regulations or amendment of existing legislation
- ▶ Actions (Innovative ideas, solutions to gaps identified, best practices, projects etc)

Where we are	Where we want to go	How to get there
<p>1. Management of the coastal zone involves a large number of stakeholders</p>	<ul style="list-style-type: none"> • Effective harmonisation and coordination 	<ul style="list-style-type: none"> • ICZM Committee to reflect on same • Setting up of subcommittees on different thematic areas • Amendment of the EPA to accommodate same • Enhance collaboration with NGOs , civil society and Private sector
<p>2. Incentives and taxation towards more sustainable practices are either non existent or unheard of</p>	<ul style="list-style-type: none"> • Incentives and taxation towards more sustainable practices are clearly defined 	<ul style="list-style-type: none"> • Review the Environment Protection fee and the framework of green taxation, aimed at locals and tourists • Commitment towards environment
<p>3. Recommendations of several Studies and strategy documents on the coastal zone have not been implemented fully</p>	<ul style="list-style-type: none"> • Effective implementation of the recommendations made • Need to value the studies • Enhance the baseline data 	<ul style="list-style-type: none"> • Finding of the studies to be considered during the NES • Implementation through ICZM Committee • Inform public on implementation of recommendations of the various reports

Where we are	Where we want to go	How to get there
4. St Brandon has a rich biodiversity however, it is being potentially impacted by human activities and climate change	<ul style="list-style-type: none"> The biodiversity of St Brandon is preserved and protected 	<ul style="list-style-type: none"> To include St Brandon in the MSP process Ensure monitoring and enforcement in collaboration with NGO's
5. Degradation of islets around Mauritius	<ul style="list-style-type: none"> Islets are protected and managed 	<ul style="list-style-type: none"> To consider management similar to Ile aux Aigrettes Control through visitors management
6. Growing activities within the coastal zone	<ul style="list-style-type: none"> Effective management of coastal zone 	<ul style="list-style-type: none"> Study on carrying capacity of the lagoon for nautical activities and hotel/urban development amongst others Review and update of NDS /ICZM plans
7. Impacts of infrastructure on coastal zone dynamics and health of the ecosystems	<ul style="list-style-type: none"> Effective management of coastal zone Ecosystems functions maintained 	<ul style="list-style-type: none"> Develop guidelines /protocols for activities and infrastructure within coastal zone Review and Implementation of setback

Where we are	Where we want to go	How to get there
8. The coastal zone is overdeveloped /urbanised	<ul style="list-style-type: none"> • Sustainable development of the coastal zone 	<ul style="list-style-type: none"> • Limit development within the Coastal Zone • No new permits for hotels within coastal zone
9. Coastal and marine Ecosystems are overstressed	<ul style="list-style-type: none"> • Healthy ecosystems 	<ul style="list-style-type: none"> • Policies to be developed to restrict certain activities over certain period of time in parts of the lagoon to allow regeneration of the coastal ecosystems (corals/mangroves/ Seagrasses)
10. Lack of awareness and poor appreciation of the public on functions and the value of the coastal ecosystems	<ul style="list-style-type: none"> • Public fully aware and feel concerned on the importance of the ecosystems • More stewardship towards coastal ecosystems 	<ul style="list-style-type: none"> • Effective sensitisation and communication campaign with the population at large in collaboration with NGOs • Include snorkeling, swimming and diving certifications in school curriculum • Enhance collaboration with NGOS and private sector

Where we are	Where we want to go	How to get there
11. Inadequate Public spaces	<ul style="list-style-type: none"> • More spaces dedicated to public use 	<ul style="list-style-type: none"> • Two thirds of the coastal zone be reserved for public enjoyment • Creation of coastal parks within coastal ESA's • Retreat of coastal development further inland
12. Lack of baseline data	<ul style="list-style-type: none"> • Database created and/or Up to date 	<ul style="list-style-type: none"> • Information sharing with academia and research institutions and others • Compile available data and identify gaps • Fill in data gaps through required studies
13. Reports and scientific studies not accepted by the Ministry during EIA process	<ul style="list-style-type: none"> • All reports duly considered 	<ul style="list-style-type: none"> • Improved communication between parties
14. Member of the public feel that they are not allowed to object in court on EIAs	<ul style="list-style-type: none"> • Better participation of member of the public in the EIA process. 	<ul style="list-style-type: none"> • Review the EIA process. • Improve information sharing and communication

Where we are	Where we want to go	How to get there
<p>15. Climate change impacts like flooding , coastal erosion , migration of coastal population inland</p>	<ul style="list-style-type: none"> • Resilient coastal zone 	<ul style="list-style-type: none"> • Sensitisation of the population on climate change impacts including review of the education system • Provide necessary funding for the national level sensitization campaign in collaboration with the political, economic and education sector, and the civil society including the Press • Setting up of voluntary Sea Rangers who can assist the NCG in enforcement of the legislations as well sensitization of the population on ecosystems • Review and update the National Environment Plan
<p>16. Plastic wastes</p>	<p>Plastic free environment</p>	<ul style="list-style-type: none"> • Hotels to consider not using plastic bottles
<p>17. Phytoplankton as primary producers of oxygen and acting as carbon sink are being impacts by human activities and climate change</p>	<ul style="list-style-type: none"> • Acknowledge the importance of phytoplankton as carbon sink 	<ul style="list-style-type: none"> • Review and update policies and legislations

Biodiversité et ressources naturelles

Moderator: Ms. P. Bapoo-Dundoo, United Nations Development Programme (UNDP)/Global Environment Facility/ Small Grants Programme (GEF/SGP)

Panelists:

- 1) Mr. K. Ruhomaun, Ministry of Agro-Industry and Food Security
- 2) Dr. V. Tatayah, Mauritian Wildlife Foundation
- 3) Mr. A. Berthelot, La Vallée de Ferney Conservation Trust
- 4) Mr. P. Baissac, Consultant on biodiversity

Rapporteur: Ms. P. Bapoo-Dundoo (GEF/SGP)



Proposals/Bottlenecks

- ▶ 1000kms de rivière équivalente à 20ha de reserve potentiel
- ▶ Secteur privé: besoin de fiscal/financial incentives
- ▶ Enlever le blocage administrative concernant les projets
- ▶ Biodiversité et urbanisation : 2 projets faisables.....
 - ▶ 1 -colline candos: circuit de marche (SMF) peut devenir une reserve endemique
 - ▶ 2- les montagnes environnantes de Port Louis : forte degradation, il y a aussi la réserve du Pouce: créer une réserve nationale creation d'un parc national (modele du Stellenbosch a Cape Town)
- ▶ Possible conflit de langage et implémentation pour les objectifs Aichi 2020 et Vision 2030

Proposals/Bottlenecks

- ▶ Defi d'augmenter les plantes endémiques: certains zones sont difficiles d'accès la biodiversité
- ▶ Deux endroits pourraient devenir parc national: Bambou Range et le Moka Range Louis
- ▶ Le défi c'est les espèces exotique envahissantes
- ▶ 70% des espèces sont uniques dans nos îles
- ▶ La diversité génétique est un souci quand on récupère des espèces en voie de disparition
- ▶ Il faut penser restauration ecologique mais aussi et restauration des habitats
- ▶ On a perdu le "grazing component": un des facteurs qui permet la restauration. Les tortues d'aldabra ont ete introduits dans ce sens sur l'île aux Aigrettes par ex
- ▶ La loi permet au secteur privé de créer des reserve privees maintenant

Proposals/Bottlenecks

- ▶ La vallée de Ferney est un modèle de sauvegarde secteur privé-ONG-Bailleurs de fonds
- ▶ Choquant de voir dans les villes que du béton alors qu'avant on avait des arbres
- ▶ Le problème de destruction des arbres très vieux régulièrement
- ▶ Industrie canière : possibilité de reboiser les champs abandonnés - Les petits planteurs sont aussi bien concernés

Proposals/Bottlenecks

- ▶ La conservation de la biodiversité a commencé dans les années 70: beaucoup de travail pour sauver plusieurs espèces.
- ▶ Maurice est le pays qui a sauvé le plus d'oiseaux au monde!
- ▶ Déclassement du coteau vert après 50 ans! Beaucoup trop de temps!
- ▶ Les moyens pour la conservation sont inappropriés
- ▶ Il faut Rs 200000 à Rs 300000 par hectare pour le désherbage et Rs 100000 pour le "maintenance weeding"
- ▶ Il y a un souci de manque d'enforcement des lois
- ▶ Même les forêts protégées sont en dégradation
- ▶ Il faut activement restaurer les forêts... Rodrigues est le champion de la restauration
- ▶ Pas assez d'étudiants en biologie à l'Université de Maurice' et dans les cours sur l'océan

Proposals/Bottlenecks

- ▶ La conservation devrait tomber sous le Ministère de l'Environnement - le Ministère de l'Agro-Industrie est là pour produire à manger
- ▶ La dégradation des îlots est très préoccupante - sur le coin de Mire il y a le carnage des Pailles en Queue
- ▶ Les outer islands : Agalega et St. Brandon - que faisons nous pour ces îles
- ▶ Les chauves-souris : quelle politique du pays ? On ne peut être le 1er pays signataire de la Convention sur la Biodiversité et abattre des espèces endémiques. Il y a des réflexions à mener sur la co-habitation des humains et des espèces
- ▶ Manque de coordination entre les institutions
- ▶ Le blue économie reste une notion de pêche et d'exploitation des ressources mais pas de sauvegarde
- ▶ Pourquoi les "Green taxes et Levies" ne vont pas à des projets environnementaux

Proposals/Bottlenecks

- ▶ N'oublions pas que nous sommes une espèce envahissante. Lien entre économie et environnement doit être reconfiguré
- ▶ L'urbanisation bétonnée est le souci le plus important
- ▶ On perd nos côtes....quelle stratégie pour la résilience ?
- ▶ Mettre en place un "ESA clearance mechanism" en attendant la proclamation du ESA bill
- ▶ Le EIA committee doit être plus transparent
- ▶ Mettre en place un service volontaire des jeunes pour aider à la conservation
- ▶ Lancer un concours pour que les incubateurs se penchent sur les défis environnementaux et proposent des solutions

Proposals/Bottlenecks

- ▶ Planter des fruitiers dans les forêts pour les chauve souris
- ▶ Avoir une police de l'environnement plus impliquée
- ▶ Arrêter de donner des permis pour les "domaines ou des IRS à la place des forêts
- ▶ Pas assez de bayeurs locaux pour l'environnement
- ▶ Des soak aways doivent être encouragés dans les cours
- ▶ Pas de service de voiries pour les déchets verts
- ▶ Utiliser tous les rapports déjà produits ces dernieres annees
- ▶ Le Ministere des Finance doit integrer la notion de "sustainable development" dans léconomie et la planification.

Proposals/Bottlenecks

- ▶ 'Le CSR doit comprendre les projets environnement
- ▶ L'utilisation de l'eau: on peut avoir suffisamment de pluviométrie mais on fait du gaspillage
- ▶ Ouvrir une plateforme pour les élèves et faire des camps environnement ou biodiversité
- ▶ Planter ne suffit pas ...il faut faire le suivi
- ▶ Il est temps de faire le tri sélectif des déchets
- ▶ il faut un service pour récupérer les anciens équipements ou le fournisseur devrait récupérer quand il vend un nouvel équipement: Les opérateurs doivent remplir leurs responsabilités
- ▶ Respecter les Wetlands
- ▶ Il faut mettre des environmentalistes au Ministère des Finances
- ▶ L'attitude des Mauriciens est un des plus gros défis: la mentalité
- ▶ Il faut créer une Agence nationale de la biodiversité

Lutte contre la pollution

Rapporteur

Ms D. Jaggeshar (UoM)



Theme 3: Lutte contre la pollution

Moderator: Dr Dinesh Surroop (UoM)

Panelists:

- Mr. G. Thandrayen, Ministry of Health and Wellness
- Mr Jean Luc Wilain, Ireland Blyth Limited (IBL)
- Mr. M. Apaya, Business Mauritius
- MRs Z. Chozchoo, RT KNITS LTD

Rapporteur: Ms D. Jaggeshar (UoM)

Where we are? (1)

- “Incivisme généralisée” due to irresponsible behaviour from the Citizens
- Black smoke from diesel powered vehicles
- Incompatible/ bad neighbourhood activities due to inappropriate land use planning
- Wastewater overflow or discharge
- Pollution of water courses
- Proximity of industrial development to residential settlements (e.g. La Tour Koenig)

Where we are? (2)

- Shortcomings and overlapping in legislation
- Insufficient legislation / Regulation for proper enforcement
- Regulations to be updated to meet the country needs (e.g. Industrial Waste Audit Regulations)
- Absence of appropriate disposal site for construction waste
- Absence of civic amenity centres for storage of unused/damaged items

Where we are? (3)

- Plastic pollution causing land, freshwater and marine contamination
- High dependency on fossil fuels
- Lack of communication between private, public and NGOs.
- Lack of transparency on the impact of bottom ash and fly ash from coal powerplant on the environment
- Backfilling of wetlands
- Increasing level of PM 2.5
- Excessive use of pesticides in agriculture

Where we want to go? (1)

- Clean air
- No littering and dumping
- No discharge of wastewater into the environment
- Environmentally responsible behaviours from all citizens of Mauritius
- A culture of self-compliance to environmental standards by industries
- Integrated approach of noise pollution control and monitoring

Where we want to go? (2)

- More transparency and communication among private & public sector and NGOs
- Process optimization to reduce waste generation
- Decrease dependence on fossil fuels
- Problem solving at source (e.g target companies that are producing PET bottles)
- Towards a low carbon economy
- Towards circular economy

How to reach there? (1)

- ✓ Development of new standards/regulations for media not covered
- ✓ Development / Review of legislative framework (IWA Regulations, Air Emissions standards, EPA 2002, etc)
- ✓ Review and strengthening of institutional framework
- ✓ Adoption of best practices and technology transfer in pollution control
- ✓ Build on the existing sensitisation campaigns to increase public awareness
- ✓ Encourage sustainable consumption and production
- ✓ Public and private partnership to enable waste recycling (e.g construction waste)

How to reach there? (2)

- ✓ Better use of Citizen Support Portal for a culture of proximity with the population and prompt addressing of complaints, requests and suggestions
- ✓ Introduce a ban in use of PET Bottles and provision of alternatives (such as water fountains to be installed and accessible to the public)
- ✓ Setting up of an online portal that focus only on environmental matters
- ✓ Setting up of a platform (with various stakeholders of different competencies) to follow up and monitor specific project
- ✓ Setting up of monitoring committee having the capacity and expertise on different environmental issues

How to reach there? (3)

- ✓ Appropriate zoning and clustering of industrial activities in dedicated zone away from residential settlements
- ✓ Discussion/ consultations with planters with regards to smart agriculture
- ✓ Setting up of civic amenity centres
- ✓ Fiscal incentives to promote recycling, composting and re-use
- ✓ Review of the taxation system imposed on fossil fuels (coal and oil)
- ✓ Environmental Fee collected to be used for funding of environmental projects.
- ✓ Promotion of renewable energy technologies

How to reach there? (4)

- ✓ Monitoring of disposal sites of coal ash to ensure that there is no groundwater or soil pollution/contamination
- ✓ Constant air monitoring for all parameters at areas where residential settlements are close to industrial areas and the report must be made public to improve transparency
- ✓ Reduce the use of paper and plastics. For example, organisation of paperless and plastic free workshops. All invitations to be sent electronically and documents to be available online.
- ✓ Implementing recommendations from existing reports
- ✓ More ambitious laws such as Environmentally Sensitive Areas (ESA) Bill
- ✓ Setting up of a noise action plan

La culture environnementale

Rapporteur

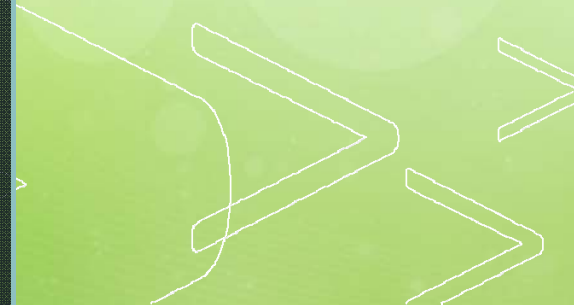
Ms Mathilde Soncin



Assises de l'environnement 2019



La culture environnementale



What is la culture environnementale?

- Wide scope: transversal subject
- Education of youth
- Education of businesses



Where do we stand?

- Measures already implemented:
 - Non formal environmental education
 - Formal environmental education MIE
 - NGOs




Where do we want to go?

- To create the next generation of forward looking and innovative leaders
- To succeed in making people believe that environmental culture is a lifestyle



How do we do it?

- Education for youth
 - Awareness amongst leaders and businesses
 - Law enforcement
 - Communication
- 



Thank you

La gestion des déchets

Moderator: Prof. T. Ramjeawon, University of Mauritius

Panelists:

- 1) Mr. B. Beerachee, Ministry of Environment, Solid Waste Management and Climate Change
- 2) Mr. R. Munien, Grand Port District Council
- 3) Ms. F. Dhuny, Mauritius Chamber of Commerce and Industry
- 4) Ms. N. Noël, Déléguée a l'Economie Circulaire, Enseignement Supérieur et à la Recherche, Ile de la Réunion

Rapporteur: Kreshny Guriah, Ministry of Environment, Solid Waste Management and Climate Change



Outcomes

1. Where we are?

- ▶ Assessment/gaps/challenges in the sector
- ✓ Mauritius generate around 543,000 tonnes of solid wastes annually
- ✓ Increase of 3.1% in solid waste generation annually
- ✓ The bulk of our solid wastes is landfilled at the Mare Chicose landfill - over reliance of landfilling
- ✓ Around 3 ha of land is required for landfilling every year at current generation rate
- ✓ Mare Chicose is nearing saturation, reaching its end of life in May 2020
- ✓ Cost of whole solid waste management is around Rs 1.5 billion annually
- ✓ Scarcity of land

Outcomes

1. Where we are?

- ▶ Assessment/gaps/challenges in the sector
- ✓ Lack of political will to bring about improvement - New Solid Waste Management Strategy still being finalised since years
- ✓ No source segregation in place
- ✓ Low rate of recycling
- ✓ No system in place for collection and management of waste streams such as e-wastes, construction and demolition debris, coal ash, healthcare wastes, etc
- ✓ Lack of planning
- ✓ Unsustainable production and consumption patterns - over use of single use products
- ✓ Lack of information on solid waste management projects, initiatives.

Outcomes

2. Where we want to go?

- ▶ Aspirations/vision for the sector
- ✓ High time to have an Integrated National Solid Waste Management Strategy with clear vision, objectives and targets
- ✓ The strategy needs to be visible and known to everyone
- ✓ Reduce reliance on landfilling and move from linear economy focusing on waste management to circular economy which lays emphasis on resource management.
- ✓ Not in favour of incineration
- ✓ Encourage prevention and minimisation of solid waste generation by adopting responsible consumption and production practices.
- ✓ Use of economic instruments for the purpose for which they were intended

Outcomes

3. How to reach there?

- ✓ Finalise the National Solid Waste Management Strategy at the earliest
- ✓ Implement segregation at source at national level for MSW – promulgation of regulations, provision of separate bins for wet and dry wastes, etc
- ✓ Setting up of Material Recovery Facilities (sorting centres, composting plants)
- ✓ Setting up of civic amenity centres (déchetteries) at local authority level for the collection of bulky wastes, including e-wastes, construction and demolition debris

Outcomes

3. How to reach there?

- ✓ Application of Extended Producer Responsibility approach to manage waste streams such as e-wastes, etc.
- ✓ Implement deposit-refund schemes for other waste streams such as aluminium cans, other types of plastics
- ✓ Need for feasibility studies before considering waste-to-energy projects in the long term
- ✓ Need for proper systems for collection and management of waste streams such as coal ash, health care wastes
- ✓ Recyclers and planters to be given incentives in terms of equipment for recycling, equipment to reduce reliance on use of herbicides

Urbanisme et politique environnementale



Moderator: Mr. G. Siew, Architect

Panelists:

- 1) Ms. Sareeta Suntah, Ministry of Housing and Land Use Planning
- 2) Mr. Tony Lee Luen Len, Ecosis Ltd
- 3) Mr. Rajeshwar Phul, Ministry of Local Government, Disaster and Risk Management

Rapporteur: Mr. Zaheer Allam

Where we are?

Gaps at institutional level:

- ▶ No inclusive participation in decision-making.
- ▶ Authorities work in silos.
- ▶ The absence of a Ministry of Economic Planning since 2003, had impinged on macro-economic development orientations
- ▶ Communication gaps and lack of dissemination of information to general public on good building practices and permitting systems
- ▶ Lack of personnel to enforce planning regulations
- ▶ Failure of the current economic model (GDP)

EIA Mechanism:

- ▶ Granting of 10 EIA Licenses in/around ESAs in 2018
- ▶ EIA is more business driven and piece-meal only
- ▶ Too much discretionary powers of the Minister in EIA process
- ▶ Political financing and corruption in the environment sector

Ecological Footprint:

- ▶ Disconnect with nature
- ▶ Limited space on coastal zones and too many hotels
- ▶ 'Betonnage' / desert island
- ▶ No parks, walking and biking tracks in towns and villages
- ▶ No trees/green spaces in towns, villages, schools
- ▶ High Maintenance costs associated with green spaces
- ▶ Construction on river reserves, which cause flooding
- ▶ Ecological footprint of ICT sector - data centers, Cloud Infrastructure



Where we want to go?

Protection of ESAs:

- ▶ Redefine development paradigm
- ▶ Stop developments on ESAs and construction of hotels
- ▶ 2/3 of the coastline to be reserved as public space and developed as coastal public parks

Economic model:

- ▶ Adoption of a new economic model based on environmental protection and inclusiveness
- ▶ To explore a new economic area by promoting and legalizing cannabis plantation
- ▶ Promotion of Work-Live-Play
- ▶ Government to lead by example
- ▶ Rethink Maurice Ile Durable

Planning tools:

- ▶ Strengthening of planning control mechanisms
- ▶ Need for good planning practices to build resilient cities in the face of climate change and its impacts

Sustainable practices:

- ▶ Sustainable transport system
- ▶ Energy conservation and efficiency in buildings
- ▶ Protect flat and fertile agricultural lands
- ▶ Inculcate nature conservation and environmental education in children and youth such as planting of endemic plants and composting
- ▶ Promote the rehabilitation of old building instead of demolition and reconstruction

How to reach there?

Institutional strengthening

- ▶ Align the New NDS with SDGs
- ▶ Need for holistic strategies to be defined and spearheaded by the Ministry of Economic Planning
- ▶ To introduce a comprehensive legal framework for Strategic Environmental Assessment
- ▶ Public consultation and participation in the drafting of proposals for National Development Strategy
- ▶ More capacity for planning issues
- ▶ Need for a zoning system, guidelines as well as a specific model for residential/industrial buildings for each zone on the BLUP e-licensing system to guide applicants.
- ▶ Government to provide incentives / guidelines for rehabilitation of old buildings
- ▶ The need to appoint the right service providers to ensure compliance with planning guidelines

How to reach there?

Protection of ESAs

- ▶ Protect ESAs and use them as educational tools and for promotion of research.
 - ▶ A “Moratoire” regarding EIA Licenses issued for development in/around ESAs
 - ▶ Promulgation of ESA Bill
 - ▶ Securing of an ESA Clearance prior to submission of EIA application
 - ▶ Need for drastic actions such as pulling down of illegal construction on river reserves, wetlands, along coastlines (jetties, walls) and other ESAs
 - ▶ Preserve the South of the Island as the “Poumon Vert”
- ▶ Promote inland development including in abandoned sugarcane fields through the creation of agri-solar farm and eco-lodges amongst others.
 - ▶ Creation of coastal public park from Gris Gris to La Cambuse to be managed by the NPCCS/Forestry Service
 - ▶ National Campaign and crowd funding by AKNL for the coastal public park from Gris-Gris to La Cambuse. The ecological park to encourage inclusive development
 - ▶ Need to review green coverage to at least 10%
 - ▶ Need national embellishment programmes

How to reach there?

Sustainable Practices

- ▶ Introduction of a congestion charge to discourage use of cars and promote public transport, especially in Port Louis
- ▶ Changing habits and lifestyles
- ▶ Widening of the PV scheme to enable more residential and commercial users sell green energy on the grid.
- ▶ Reshape the economy to achieve 35% green energy by 2025
- ▶ Information to be user-friendly and to be accessible on user-friendly platforms
- ▶ Encourage construction on slopes/mountains by reviewing existing policies. However, most forests are located on mountain slopes and hence construction on slopes will entail loss of biodiversity

Le changement climatique



Moderator: Mr. S. Ramchurn , United Nations Development Programme (UNDP), Country Office Mauritius

Panelists:

- 1) Mr. J. Seewoobaduth, Ministry of Environment, Solid Waste Management and Climate Change
- 2) Mr. V. Kauppaymuthoo, Delphinium Ltd
- 3) Dr. S. Deenapanray, Ecological Living In Action Ltd
- 4) Ms. M. Raghoobar, SIDS Youth AIMS Hub (SYAH)

Rapporteur: Mr. S. Ramchurn , UNDP Mauritius

Approach

1. **Where we are?**

- Gaps/challenges in the sector

2. **Where we want to go?**

- Aspirations/vision for the sector

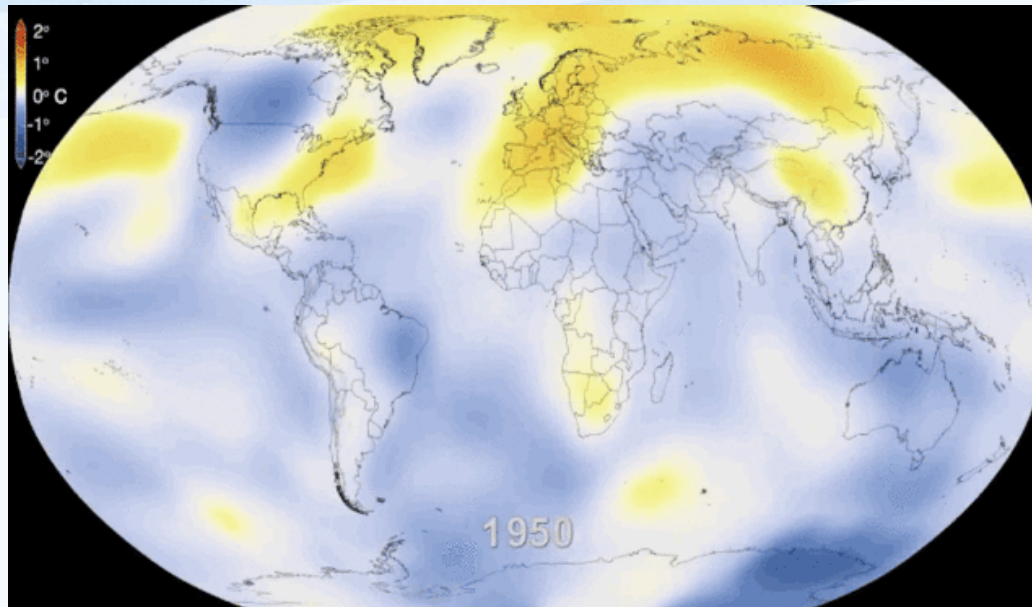
3. **How to reach there?**

- New policies and strategic directions
- New laws and regulations or amendment of existing legislation
- Actions (Innovative ideas, solutions to gaps identified, best practices, projects etc)

Where are we?

- Context set by Ministry of Environment, Solid Waste Management and Climate Change in terms of scientific observations, international commitments, policies, laws, projects
- NDC document outlining mitigation and adaptation actions
- Maximum temperature rise target of 1.5 °C
- Rising sea level – 5.6 mm/year
- Change in rainfall patterns and more extreme weather events
- Flashfloods
- Impact on agriculture, corals

Where We Are - Global Context

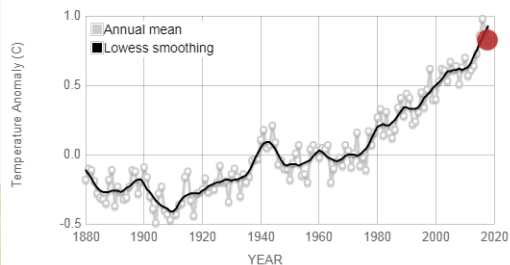


- **TEMPERATURE (1.1 °C rise)**
- **SEA LEVEL RISE (3.3 mm/year)**
- **CARBON DIOXIDE (411.93 ppm) (October 2019 NASA)**
- **Accelerated GHG Emissions (last 150 yrs.)**
- **Main GHGs: CO₂; CH₄; N₂O; HFCs; PFCs; and SF₆**

Global Temperature

GLOBAL LAND-OCEAN TEMPERATURE INDEX

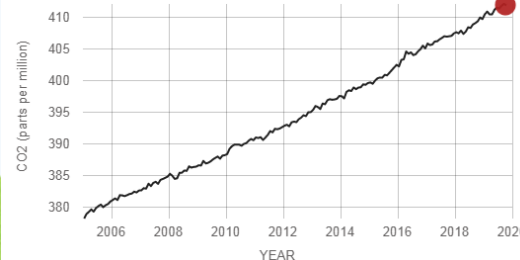
Data source: NASA's Goddard Institute for Space Studies (GISS). Credit: NASA/GISS



Carbon Dioxide

DIRECT MEASUREMENTS: 2005-PRESENT

Data source: Monthly measurements (average seasonal cycle removed). Credit: NOAA

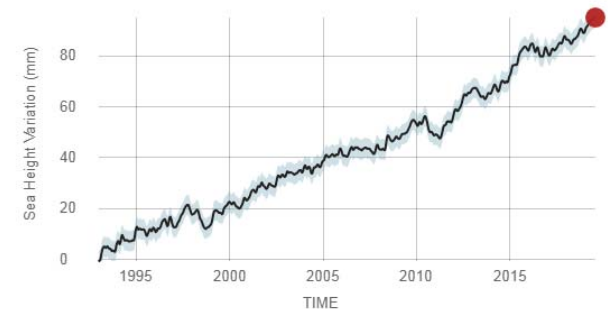


SATELLITE DATA: 1993-PRESENT

Data source: Satellite sea level observations. Credit: NASA Goddard Space Flight Center

RATE OF CHANGE

↑ 3.3 millimeters per year

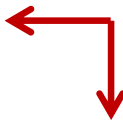


Where We Are – Key Observation in Mauritius

World Risk Report: Mauritius is the **47th country with the highest disaster risk** (WRR 2019) as compared to WRR 2018 where Mauritius was the **16th country with the highest disaster risk** and the **10th most exposed to natural hazards**

Climate Change Indicators	Observed Impacts	Projected Impacts
Temperature	1.2°C	2°C by 2070
Water Resources	8%	13% by 2050
Sea Level Rise	5.6mm/year	1m by 2100
Beach Erosion	Loss of 20 meters of beaches over the last 8 years	Loss in 50% of beaches by 2050

- Coastal inundation, Inland flooding and Landslides
- More frequent flash floods and stronger cyclones
- Coral bleaching
- Fish mortality
- Chikungunya/Dengue outbreak
- Pests and crop diseases
- Damage to infrastructure: Landslide



Where do we want to go?

- Low carbon, climate-resilient society
- More renewable energy
- Paradigm shift needed
- Involvement of youth and stakeholders at all levels
- Tree planting on a much larger scale
- Nature-based solutions implemented at scale
- Ridge to reef approach

How do we get there?

- Paradigm shift – thinking and actions at both institutional and individual levels
- Think outside the box, need for innovation
- Holistic collaboration among public and private stakeholders
- Involvement of all stakeholders – youth, women. NGOs
- Building of political will – the proposed actions need a lot of political courage
- Constitutional right to environment protection/climate change
- M&E framework needed with KPIs and regular monitoring with the participation of all stakeholders
- Innovative financing to be explored
- Nature Based solutions, coral restoration, mangroves
- Improved land use planning – coastal setback to be increased and enforced
- Increase Government budget on climate change adaptation and mitigation

Thank you for your kind attention

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Contrôle des déchets plastiques



Moderator: Mr. N. Nazurally, University of Mauritius

Panelists:

- 1) Mr. D. Dookee, Ministry of Environment, Solid Waste Management and Climate Change
- 2) Mr. M. Vaghjee, Fondation Resources et Nature (FORENA)
- 3) Mr. L. Langlois, Surfrider Co Ltd
- 4) Dr. Y. Neehaul, Mauritius Oceanography Institute

Rapporteur: Mr. M. Vaghjee

Outcomes

1. Where we are?

Gaps/challenges in the sector

- ▶ 543,196 tonnes of solid waste generated in 2018, out of which 14 % plastic waste
- ▶ 76,000 tonnes of plastic wastes generated annually, out of which only 2000-3000 tonnes are recycled
- ▶ Only 40 M out of 100 M PET bottles are recycled annually
- ▶ There is presently little distinction between durable and single-use plastics
- ▶ Lower level of microplastics in lagoon compared to high seas, as per study carried out by MOI
- ▶ Lack of transparency on utilisation of fund arising from taxation imposed for plastic products (such as PET and plastic containers) - same goes to Consolidated Fund
- ▶ No standard method to quantify microplastics
- ▶ Plastic being a light material, same is often windblown
- ▶ Low Cost of plastics encourages its abusive use. Alternatives are more costly
- ▶ Microplastics is present in effluents rejected into ocean, including from textile industry and hotels

Outcomes

1. Where we are?

Gaps/challenges in the sector

- ▶ Rs 15 subsidy for local recycling of PET bottles is not attaining expected results of encouraging local recyclers (e.g. it takes lot of time to install recycling plant by locals)
- ▶ Studies on plastics are carried out but difficulty to collect data due to lack of confidence among stakeholders
- ▶ PET - there are more collecting facilities in Mauritius than recycling facilities
- ▶ Problem of sensitisation and education since public does not know how to sort waste

GEF-SGP projects by NGOs:

- ▶ Recycle bins installed by Mission Verte
- ▶ Segregation of wastes at Roche Bois
- ▶ Pandanus Weavers Coordination Centre and Plant propagation at Vieux Grand Port
- ▶ Decreasing Persistent Organic Pollutants (POPs) through management of empty pesticide containers by Croplife Mauritius

Outcomes

2. Where we want to go?

Aspirations/vision for the sector

- ▶ Shift from linear to circular economy for waste management
- ▶ Need collaboration of all stakeholders
- ▶ Low cost toys from china need to be regulated
- ▶ Study on microplastics / nanoplastics and bioaccumulation is required.
- ▶ Traceability of plastic waste exported for recycling
- ▶ Need better segregation of wastes - people to separate glass, cans, plastics, green wastes, and to clean dirty bottles to facilitate recycling
- ▶ Better provide for a Deposit Refund system and give back to the companies who produce PET bottles.
- ▶ Need closed bins to contain windblown plastics

Outcomes

3. How to reach there?

New policies and strategic directions

New laws and regulations or amendment of existing legislation

Actions (Innovative ideas, solutions to gaps identified, best practices, projects etc)

- ▶ Should put more tax on other types of plastics
- ▶ Need more transparency for use of this tax
- ▶ Consigne at supermarket already exist - could have govt collaboration to recuperate plastic bottles
- ▶ Reuse and reduction of packaging to create circular economy
- ▶ Tax from govt for use of virgin plastic in packaging
- ▶ Detergent containers - refill and reuse
- ▶ Should introduce law to allow people have the choice to opt for carafe water instead of bottled water in restaurants.
- ▶ Alternatives - to encourage people to use recyclables in packaging
- ▶ Tax not only on single use products but also reusable products
- ▶ Sharing of experience in the region
- ▶ Need for Deposit Refund system