

# Plastics Management in Small Islands Developing States

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**MAURITIUS**

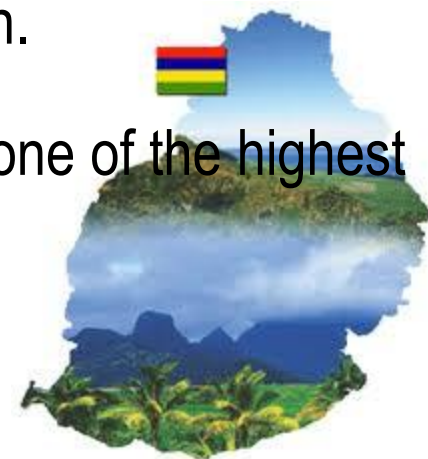


# Background on Mauritius Island



The Republic of Mauritius, is about 2,000 kilometres (1,200 mi) off the southeast coast of the [African continent](#) (between latitudes [19°58.8'](#) south and longitudes [57°18.0'](#) east).

- The area of the country is 2,040 km<sup>2</sup>.
- The estimated resident population was 1,261,208.
- Both an English-speaking and French-speaking nation.
- GDP (PPP) per capita income over \$16,820 in 2014, one of the highest in Africa.



# Solid Waste Management in Mauritius

Responsible for disposal of Municipal Solid Waste (MSW) in Mauritius

Devising policies and strategies and developing programmes for the environmentally sound management waste streams;

Management, control and supervision of transfer stations and sanitary landfill sites in Mauritius;

Around USD 300,000 is spent annually on Solid Waste Management.

# Solid Waste Management

**SOLID WASTE COLLECTION**  
(Local Authorities + Private Contractors)



**TRANSFER STATIONS (TS)**  
(La Laura, Roche Bois, La Chaumiere,  
Poudre D'Or and La Brasserie)



**MARE CHICOSE LANDFILL**

**Large-Scale  
Composting Plant  
Operational since  
October 2011**

- Designed to process around 180,000 tonnes of MSW annually



# Solid Waste Management Infrastructure

## Mare Chicose landfill

Operational as from 1997

6 million tonnes of wastes has been disposed so far ....



## Compost Plant

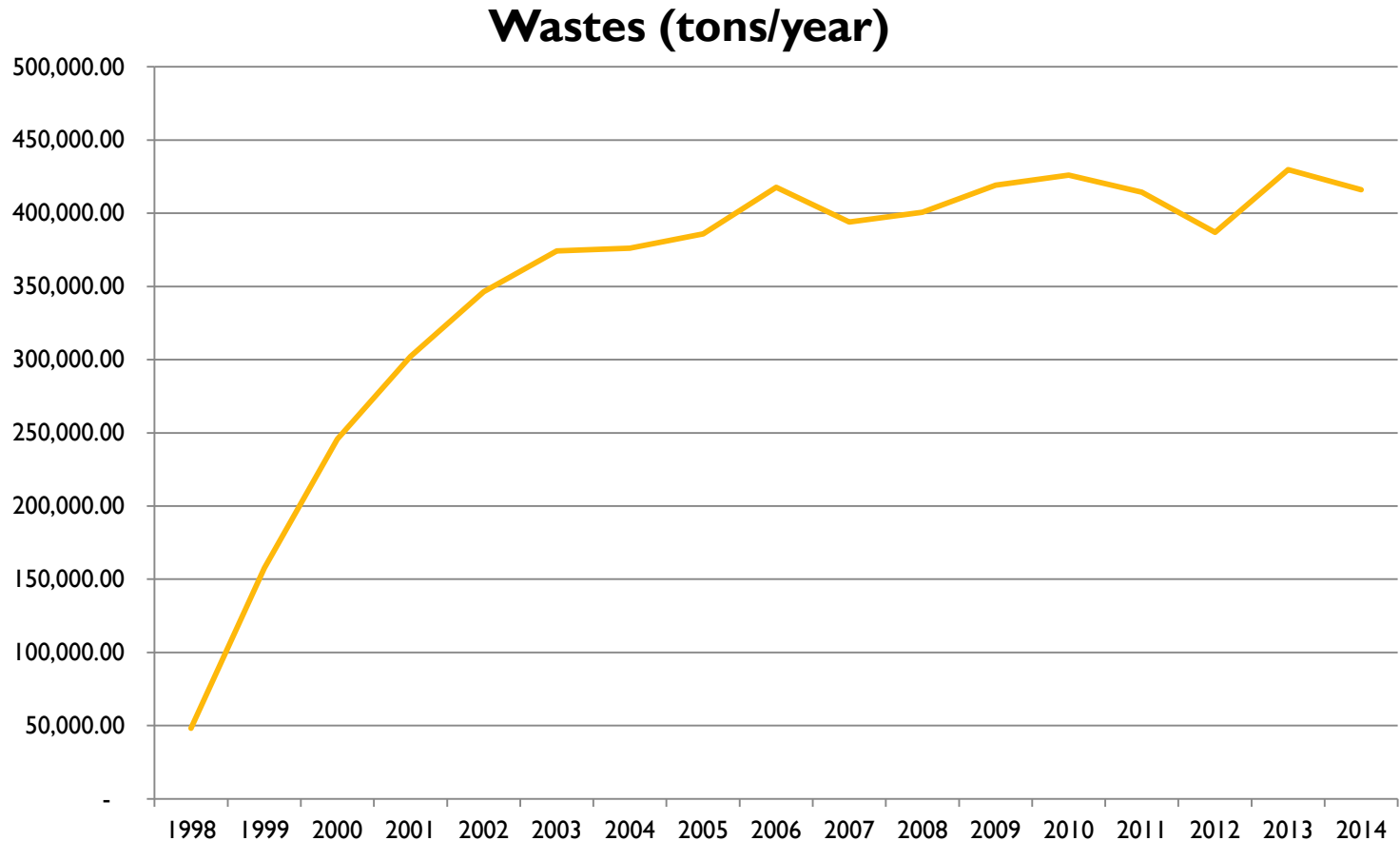
Operational as from 2011

Amount of compost produced in 2014 – 6,550 tonnes



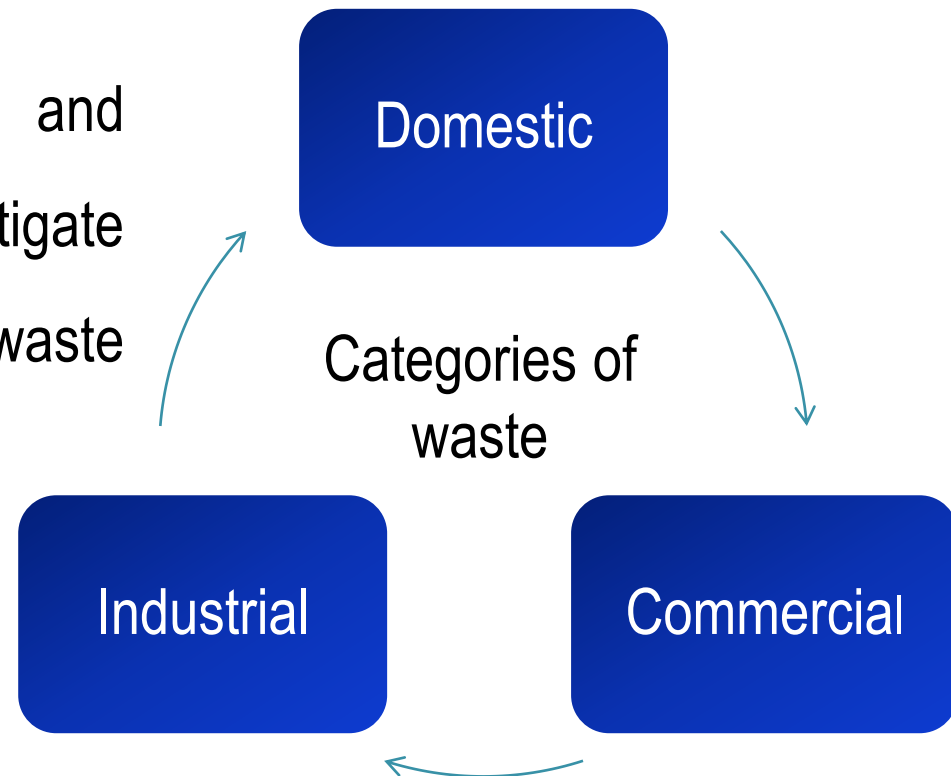
# Quantities of Solid Wastes landfilled

- About 416,000 tons of Municipal Solid Waste ( MSW) was landfilled in 2014 and the this figure is expected to curb down as composting and other recycling initiatives take shape.



# Waste Characterization

- Carried out in 2012/13 at two transfer stations in urban and rural areas respectively
- Duration : 1 week in winter and summer seasons each to investigate any seasonal variations in waste generation.





# Waste Characterization – On Site



Unloading wastes from truck



Measuring wastes height



Mechanical Quartering of wastes



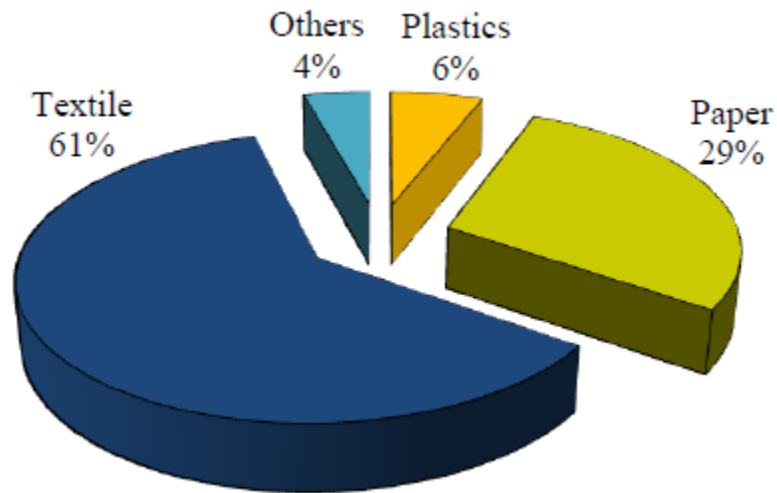
Removing quartered waste for weighing



Weighing of bins with wastes



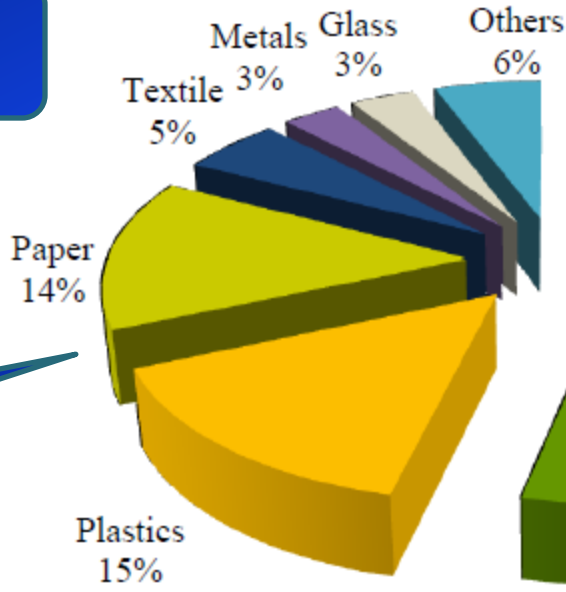
# Waste Characterization - Results



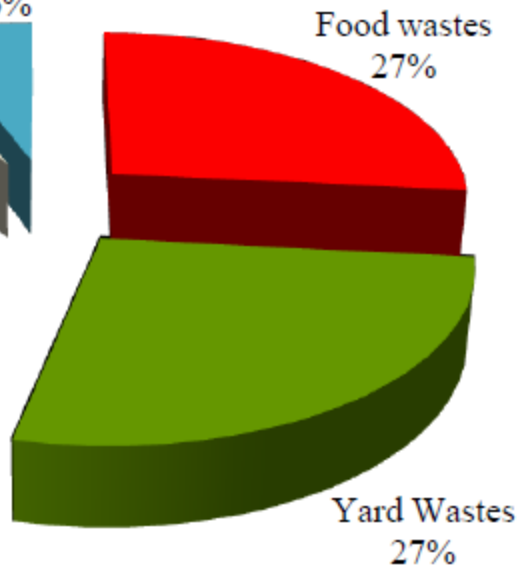
Industrial Waste



Commercial Waste

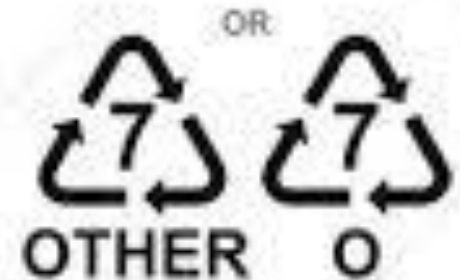


Domestic Waste









# Waste Characterization - Plastics

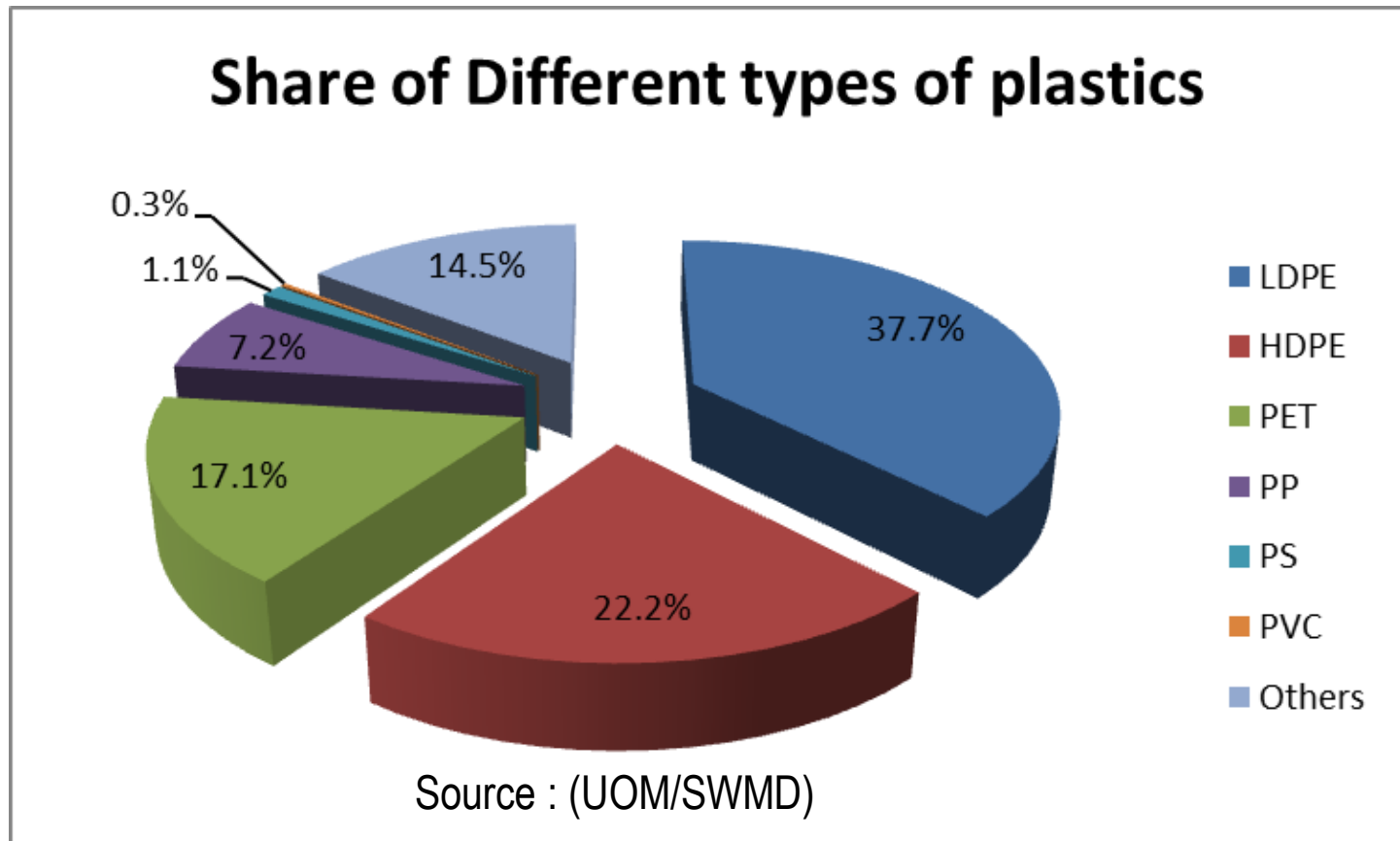
- The 17% plastics from domestic wastes was further characterized into the following categories:



# Types of plastics and their uses

Symbol	Acronym	Full name and uses
	PET	Polyethylene terephthalate - Fizzy drink bottles and frozen ready meal packages.
	HDPE	High-density polyethylene - Milk and washing-up liquid bottles
	PVC	Polyvinyl chloride - Food trays, cling film, bottles for squash, mineral water and shampoo.
	LDPE	Low density polyethylene - Carrier bags and bin liners.
	PP	Polypropylene - Margarine tubs, microwaveable meal trays.
	PS	Polystyrene - Yoghurt pots, foam meat or fish trays, hamburger boxes and egg cartons, vending cups, plastic cutlery, protective packaging for electronic goods and toys.
	Other	Any other plastics that do not fall into any of the above categories. For example melamine, often used in plastic plates and cups.

# Waste Characterization – Plastics (Results)



## Analysis:

- LDPE, HDPE & PET are generated in largest amount.
- The high % of LDPE can be attributed to packaging waste found in most items consumed nowadays.



# Plastics and their impacts



Eyesore – Remains in the environment and takes more than 400 years to degrade



Health Hazards – breeding grounds for mosquitoes and attract rodents and pests



Air Pollution – emit toxic gases when burned

# Legal Framework / Policy & other measures

## Legal Framework

- PET Bottle Permit Regulations 2001
- Registration of recyclers and exporters Regulations 2013
- Banning of Plastic Bags - Draft



## Policy

- Clean-Up campaign prior to cyclonic & summer seasons
- Conversion of Transfer Station into Material Recovery Facility

## Other Measures

- Refund Scheme for Recycling and Exportation of PET Bottles

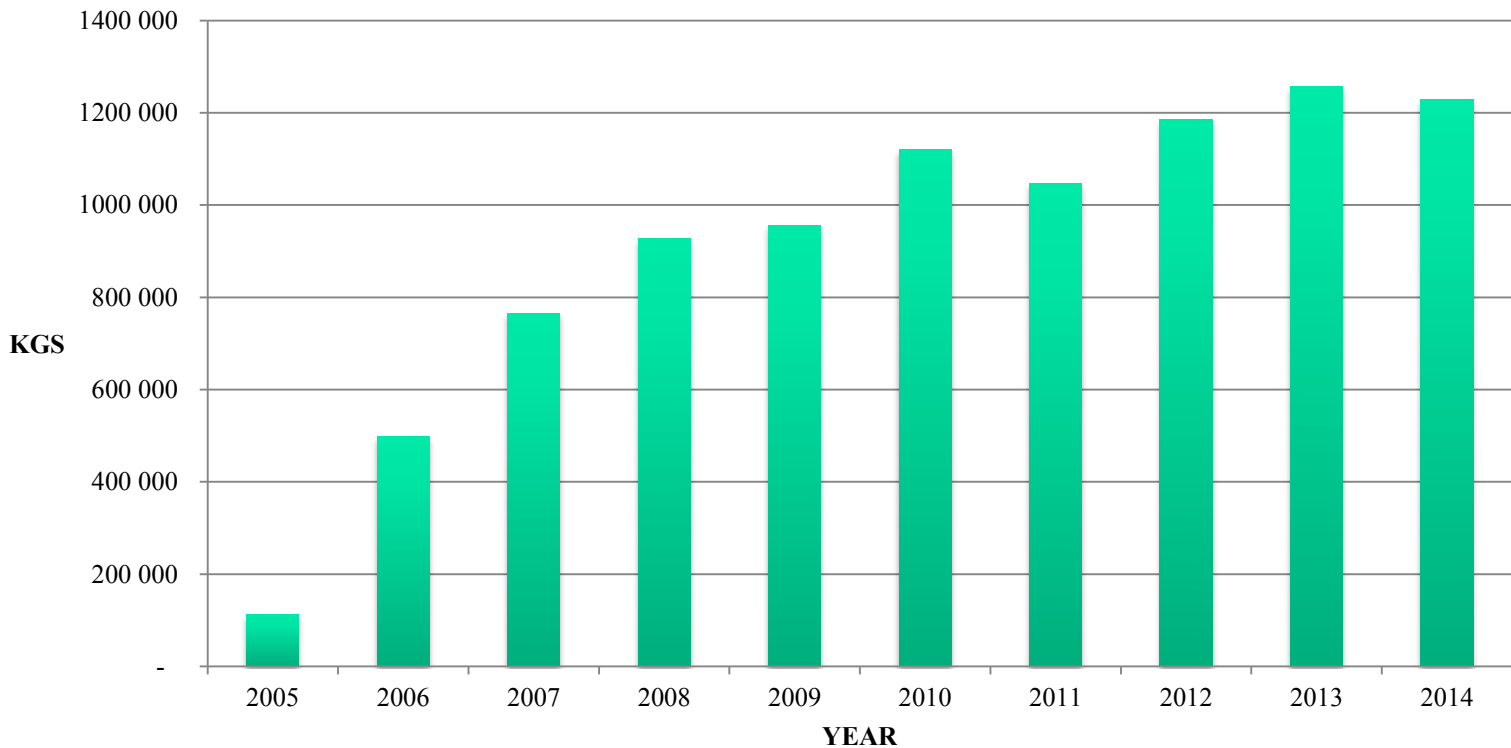
### 1. PET Bottle Permit Regulations 2001

- This regulation was introduced to ensure sound disposal of PET bottles through recycling, based on the concept of Extended Producer Responsibility (EPR).
- Main provisions of the regulations
  - No person shall bottle or cause to be bottled any beverage in a PET bottle unless he is in possession of a permit
  - Annual returns on quantity of PET produces; and
  - Annual returns on post consumer PET bottle collected for recycling/ exportation
- At present Post Consumer PET bottles collected, processed and exported is around **40%**

**Objective of the Ministry is to increase Post Consumer PET recycling to 80%**

# Impact of PET Legislation

- POLYPET, Mauritius – Since its coming into operation in 2005- 9,190MT (i.e 300M) of PET bottles have been collected.
- Annual Collection Rate – 40M Pet Bottles
- Processes involved: Collecting, Sorting, Segregating, compacting prior to exportation to mother company in South Africa for recycling back to PET Bottles.



**PET Bottles Collection in Mauritius**



## 2. Banning of Plastic bags

- Government has announced in the budget speech 2015-2016 the banning of plastic bags to come into effect as from 01 January 2016.



- The regulations still at draft stage for time being.



## 3. Registration of recyclers /exporters regulations 2013

- The aim of this regulation is to formalize the sector of waste recycling and exportation. The categories of waste concerned includes:



# Registration of recyclers /exporters regulations 2013

## Main provisions of the regulations

- No person shall dismantle, recycle and export wastes, unless he is registered under these regulations
- The registered recycler/exporter shall report to the Ministry on an annual basis on the actual amount of wastes that has been dismantled, recycled or exported.
- The registration is valid for a period not exceeding 5 years from date of registration.

There are about 20 registered companies involved in recycling/exportation of wastes.

Out of which 6 are involved in plastic exportation and 1 company in plastic recycling.

## Conversion of transfer stations into MRFs

- To promote the recycling sector in Mauritius
- Reduction on reliance on landfill or on other ultimate disposal facilities Savings on waste transportation and disposal of waste
- New economic activities and hence green jobs are created





## Other Measures

### Refund Scheme for Recycling & Exportation of PET Bottles

- In 2014, the Government introduced a refund scheme with a view to encouraging recycling companies to increase collection rate of plastic PET bottles for export. The quantum for refund was as follows:
  - 42 Cents/kg in excess of 1000 tonnes
  - 56 Cents/kg in excess of 1500 tonnes



In view to encourage Small and Medium Enterprises (SMEs) to engage in such recycling activities, the scheme was re-engineered this year.

- In 2015, Government will now pay a flat rate of 14 Cents per kg of used PET bottles whenever the enterprise has exported or locally recycled at least 1ton.

# Recycled products from plastics



Bench with flat arm rest



Bench with rounded arm rest

Sun lounges



## Conclusion

*Despite the fact of being a SIDS, Mauritius has tried to be innovative in its approach towards plastic management through the use of legal and institutional frameworks.*

Plastics Recycling



**Thank you  
for your attention.....**

