

# Solid waste management for hotels in mauritius environmental sciences essay

[Business](#), [Management](#)



The chief aims of this mini undertaking were: to supply a reappraisal of cardinal constructs and issues relevant to solid waste direction for Small, Medium, and Large Hotel in Mauritius ; to analyze and measure the hotel solid waste direction ( HSWM ) plan in Mauritius and to propose recommendations and countries for farther research. The undermentioned informations aggregation methods were used in this survey: deep reappraisal of papers and literature, interviews and a propose methodological analysis to transport out the survey.

Tourism can convey both positive and negative impacts. One facet of touristry that can hold an impact on local communities is solid waste direction ( SWM ) . Improper SWM can take topollutionand impairment of the aesthetic entreaty of tourer finishes. However, may air hose bureau are assessed the hotels for safety and ecology before putting the tourer in the hotels.

A proposed study questionnaire has been designed and could be administered at a ulterior phase for future rating of solid waste in little, medium, and big hotel. The questionnaire has been designed in such a manner to be able to analyze all solid waste within a hotel, illustration, waste from kitchen, shop, office, Front Office, Laundry, Housekeeping and so on

Waste minimisation is indispensable in the hotel industry with respects to blow decrease, reuse, recovery and disposal. This is besides referred to as the Hierarchy of Waste Management. From the literature reappraisal obtained from different beginnings, little, medium and big hotel can follow the hierarchy of waste Minimization, Reduction, Reuse and Recovery.

However it is besides noticed that there is advantages and disadvantages utilizing Waste Minimization Approach.

Now, there is a batch of recycling companies in Mauritius which collect or hotel go to disposed all the stuffs to be recycled such as spectacles to Glass Gallery, Metals to Steel Scrap Ltd, Plastic Bottle to Polypet Recyclers Ltd, Paper to Agripac or Dakhri Paper.

If Solid Waste is non decently managed by the hotel, there can be a environmental debasement and pollution, resource depletion and harm to marine ecosystem. The EPA 2002 is enforced by the Ministry of Local Government. According to the EIA, no hotel building till the blessing of the EIA Report

Many hotels generate above 20 % of nutrient waste, Green Waste and can be composting. According to the Ministry of Local Government, really few hotels carry out the composting and many of the hotels whether little, medium or big do non hold expertness on composting.

It is besides apparent that little and average hotels pay less attending for the execution of waste minimisation than larger hotels, because the costs outweigh the benefits. The little and average hotels have limited infinite for them to use the minimisation wholly. But to some extent little and average hotels can use the hierrerchy. Concepts such as appropriate engineering, cleaner production, life rhythm appraisal and environmental direction systems can be utile for bettering how solid waste direction is approached.

Decisions and lessons learned from the literature are presented and links between constructs in the literature and recommendations made on how to direction waste in these hotels

### Recognitions

First and first, I would wish to show my gratitude to my supervisor, Mrs Geeta Devi Unmar for her valuable meetings usher, support for my mini undertaking on Solid Waste Management for Hotel ( Small, Medium and Large ) . I am besides thankful Mr Prakash Kowlessur, Director Solid Waste Unit, and Mr Micheal Marie, Principal Enforcement Officer, Ministry of Local Government, for his helpful coordination with his staffs to roll up the measure of waste per hebdomad. Particular thank to Mr. Shardoo, EnvironmentOfficer at Ministry of Environment and NDU for his utile information on EIA usher line for coastal hotel. Finally particular a thank to Mr. Lan Pin Wing Michel, Statistic Section, Ministry of Tourism

## **An Overview of Solid Waste In Mauritius**

The rapid industrialization and urbanisation during the past decennary have led to altering production and ingestion forms that continue to show new demands for natural resources and make new waste watercourses. It is estimated that solid waste produced in Mauritius is about 380, 000 metric tons a twelvemonth ( or 1, 200 metric tons per twenty-four hours ) and is expected to make 418, 000 metric tons in 2014. Each Mauritanian generates around 0. 7 kilogram of solid waste daily and this is expected to lift to 0. 9

kilograms by 2010. The development of an integrated solid waste direction scheme is among the precedences identified in the National

Environmental Schemes to cut down future costs from environment debasement

The addition in the economic development has changed the life manner and the ingestion form of the population. Consequently, this has led to an addition of the sum of solid waste generated.

### **Waste Composition from Hotel**

There are three chief beginnings of waste from hotels ( office/guest suites, gardens, and kitchen/restaurant ) , and each beginning contains different types of waste. For illustration, there are a batch of compostable, which can be biologically decomposed, present in kitchen-waste while more recyclables are present in waste from office/guest suites ( Chopra, 2004 )

Harmonizing to Research, Dr Wan Li Liao, 2008 A typical hotel 's waste watercourse in Belize consists of the undermentioned constituent per centums:

paper/cardboard 27 % , nutrient waste 45 % , yard waste 8 % , fictile 5 % , metal 5 % , glass 5 % ,

destruction and building waste 3 % , other 2 % .

## **Disposal Of Solid Waste In Mauritius**

Once solid wastes were disposed of in unfastened dumping evidences, but due to public ailments of the nuisance caused by the disgusting smell emitted by the putrefying waste, all the unfastened mopes have now been closed. The Ministry of Local Government and the Local Authorities are responsible for aggregation and transit offamilyand commercial wastes. Today, solid wastes are collected and disposed of at the Mare Chicose landfill through transportation Stations.

There are soon 5 transportation Stations in Mauritius viz. :

- Poudre d'Or
- Roche Bois
- Lanthanum Brasserie
- St Martin
- Lanthanum Laura

Wastes are compacted at the transportation station to cut down their volume before they are transported in larger vehicles to the exclusive landfill of the state which is at Mare Chicose.

In hotel really the waste is collected in different bins, that is, segregation at beginning. Waste bearer come to roll up the waste and so reassign to set down make full. For Most of the hotel the transportation is subcontracted to cleaning service such as Securiclean, Maxiclean ltd or even to private lorry. Sometime due to hapless direction of solid waste, hapless storage, and

abnormality of waste bearer to roll up waste, make rise to bad odor, gnawers and sometimes it is non esthetics.

Now the touristy industry is one of the three pillars of the Mauritanian Economy. Mauritius is become one of the most of import international tourer finishes in the Indian Ocean. The tourer reachings for the twelvemonth 2009 rose up to 413, 504, with a prognosis of 1. 0 million tourer reachings for the terminal of twelvemonth 2010.

Due to the enlargement of touristy industry, there were entire of 97 registered hotels in operation by the terminal of June 2009 ( C. S. O. , 2009 ) .

Hotel activities produce immense sum of wastes, which tend to increase as the figure of hotels additions. The job of waste coevals associated to environmental pollution is a challenge to hotels with respects to blow aggregation and disposal. Our infinite land fill become limited

Much accent is placed on ecotourism. Ecotourism in fact consists of three elements: natural-based, educational and sustainable direction ( ecoT mgt and buttocks ) Mauritius itself is described as an ecotourism finish in the Indian Ocean and Africa part. ( encyclo of ecoT ) . One illustration of an `` ecogreen " hotel in Mauritius is Le Coco Beach Hotel, whereby ecotourism patterns are applied ( ecot themes.. )

`` Ecogreen " hotels can assist to protect the environment, do hotel operations sustainable, cut down cost and liabilities, and better wellness and

safety. Since hotel operations such as housework, saloon and eating house, kitchen, greenscaping, administrative office and staff quarters, bring forth big measures of solid waste, a good solid waste direction system is indispensable.

Precedence must be given to the development and execution of a sustainable and incorporate solid waste direction system, promoting current patterns such as reuse, recycling, composting, waste decrease and bar, installations for waste disposal and engineerings to change over waste into energy.

## **Research Goals**

The betterment of solid waste direction is one of the challenges faced by tourer finishes in Mauritius.

This mini undertaking provides full literature reappraisal of the HSWM plan in Mauritius to circulate information about an advanced solid waste direction plan in a tourer finish. This survey will research the subjects

Decisions, recommendations and future research waies will be presented at the terminal of the survey.

The research objectives for the survey were:

- To supply a reappraisal of cardinal constructs and issues related to solid waste direction in Mauritius
- To analyze and measure the hotel solid waste direction ( HSWM ) plan in Mauritius referring to Small, Medium and Large Hotel



- To supply infinite to the landfill
- To propose recommendations and countries for farther research.

## **Beneficiaries**

From the result of this mini undertaking I have try to place the HSWM within the Small, Medium and Large Hotel and how the system is working within the hotel, that the hotel staff is confronting and this can function a starting point in the Hotel for bettering its conditions, substructure, work environment and attitudes towards the waste direction, and eco environment. It will be a great benefit for the Small and Medium Hotel

## **What is waste**

Wastes are those stuffs no longer required by an person, establishment or industry. Wastes are therefore regarded as byproducts or terminal merchandises of the production and ingestion procedure severally.

( Beginning: A. Vesilind, 1995 )

Solid waste is that stuff which arises from assorted human activities and which is usually discarded as useless or unwanted. Examples of solid wastes:

- waste tyres
- bit metal
- furniture and plaything
- domestic garbage ( refuse )
- discarded contraptions and vehicles
- empty tins, pigment tins and compressed gas cylinders, plastics and bottle

- building and destruction dust,

Wastes are produced by human activities and include:

1. Municipal wastes
2. Industrial wastes
3. Agricultural wastes
4. Energy coevals wastes

## **Municipal solid waste**

Municipal solid waste ( MSW ) is a waste type that includes preponderantly family waste ( domestic waste ) with sometimes the add-on of commercial wastes collected by a municipality within a given country.

There are five wide class of MSW:

1. Biodegradable waste: nutrient & A ; kitchen waste, green waste, paper ( can besides be recycled ) .
2. Reclaimable stuff: paper, glass, bottles, tins, metals, certain plastics, etc.
3. Inert waste: building and destruction waste, soil, stones, dust.
4. Composite wastes: Waste vesture, Tetra Paks, Waste plastics such as playthings.
5. Domestic risky waste & A ; toxic waste: medicine, pigments, chemicals, visible radiation bulbs, fluorescent tubings, spray tins, fertiliser and pesticide containers, batteries, shoe

## **Waste Generation And Collection**

In Mauritius waste aggregation is undertaken by the local governments which consist of 5 municipalities for urban countries and 4 territory councils for rural parts. More recent figures indicate that near to 800 metric tons of waste is collected daily and this figure is set to increase to 1000 metric tons daily in the coming old ages.

The followers is a interruption up of the beginnings of waste by tunnage.

Trade and Industry: 150 tonnes/ twenty-four hours

Domestic waste: 600 tonnes/ twenty-four hours

Hotels: 50 tonnes/ twenty-four hours

It has been estimated that, on norm, each individual generates 0. 6 kilogram of waste daily.

Whereas an mean household generates 800 kilogram per twelvemonth.

( Solid Waste Unit, Ministry of Local Government )

## **Type of Waste Percentage of Waste**

Table 2 -Tonnage of Waste -Mare Chicose Landfill for Year 2007 to 2009

From the graph it can be concluded that the coevals on waste is being unbroken addition.

Metallic tins: It is estimated that 28 million metal tins are imported yearly and this is set to increase at a rate of 5. 7 % annually.

## **HOTEL WASTE GENERATION**

Each hotel room generates an estimated 9.2 kilogram of waste per twenty-four hours ( Wisnu 1998b ) . In Indonesia, per capita waste coevals rates were 0.65-0.83 kg/day in big metropolis, 0.55-0.63 kg/day in medium metropolis and 0.47-0.5 kg/day in little towns ( Jindal et al. , 1998 ) .

Therefore, the sum of waste generate per hotel room is over 10 times the sum of waste generated per twenty-four hours. From both survey it was concluded that 80 % of waste is organic

The authorized mopes are found at:

- Poudre D'Or
- Mt St Pierre
- Riche Fond
- Solferino
- La Martiniere

An unspecified figure of unauthorized mopes exist throughout the island. Though illegal dumping takes topographic point at these sites, the governments turn a blind oculus because of the deficiency of appropriate constructions to cover with all the wastes generated on the island.

The present method of waste disposal can non go on for long as the mopes are overrunning with heterogenous waste and unfastened mopes have obvious disadvantages like the emanation of air pollutants and smells, taint of the H<sub>2</sub>O tabular array with ooze and taint of aquatic resources like rivers and the laguna.

The Roche Bois site situated close to the shore receives domestic, commercial and industrial waste from the Port Louis country. About 100 metric tons of solid waste are discharged daily at the site and so incinerated. The bordering lagoon is later polluted with all types of solid waste, it besides a receptacle for sewerage and industrial waste discharge.

## **Waste Management**

Waste management ' shall intend ' ' the aggregation, conveyance, recovery and disposal of waste, including the supervising of such operations and aftercare of disposal sites ' '

However the newer constructs of 'Waste management ' talk about 'Reduce, Reuse and Recycle of waste ' over and above waste disposal.

The Waste Hierarchy is a list of actions to pull offing waste, arranged in order of

importance. Below is a common graphical representation of the Hierarchy, with the least preferable option for pull offing waste, Recovery, located at the right terminal and the most preferable option, Reduction, located at the beginning left.

Reduction is the topmost action in the hierarchy of waste management. It is possibly the most of import component of the waste hierarchy and besides the one which presents the toughest challenges. Harmonizing to the book ' ' Waste Treatment and Disposal ' ', reduction ' ' is the scheme that waste production from commercial ingestion should be reduced. It concerns the

ingestion and buying of longer lasting merchandises, and merchandises which are likely to ensue in less waste when they are used. Examples of waste decrease are: purchasing by majority, and utilizing options.

This is the 2nd most of import attack in the hierarchy of waste direction.

Reuse is the aggregation and reuse of stuffs, for illustration cleansing and reuse of glass bottles. " Reuse is a more effectual usage of resources. Many of these merchandises can be reused alternatively of being disposed of to landfill Many waste merchandises have the possible to be reused enabling buying cost nest eggs at the installation, every bit good as diminishing waste direction cost. The attack of recycling merchandises can make alterations in attitudes towards disposable merchandises. Examples of merchandises that can be reuse are: used Surs, glass and plastic bottles, scrap paper, and plastic bags.

This is the 3rd and concluding attack in the hierarchy of waste direction.

It includes two types of waste recovery, which are recycling and composting.

Harmonizing to the book `` Waste Treatment and Disposal " , `` Recycling.

The possible to recycle stuff from waste is high, Recycling: reprocessing of a cast-off waste stuff to do it suited for subsequent re-use either for its original signifier or for other intents

Recycling is good in two ways: it reduces the inputs and reduces the sum of waste produced for disposal. Finally on recycling we can salvage conveyance vehicles, care cost, fuel cost

### **Benefits of Waste Minimization**

The benefits of the execution of waste minimisation at the hotel whether little, medium or big installation are as follows:

Less waste coevals will be produced due to the execution of waste minimisation plans in hotels and the support of tourer visitants and employees. As a consequence, the market tendencies, which attract and motivate tourers to see additions since the environmental quality is maintained. More tourer will be attracted

Giving back to the community and demoing environmentally friendly concerns besides enhances the mentality of the hotel 's public image. Being socially responsible shows how much the concern attentions about the outside elements that makes the concern successful, and non merely about net incomes

Having an environmental focal point of the hotel 's operations creates a market niche dividing that peculiar hotel from its rivals, whom are non eco-friendly. An environmental focal point is comparatively new in the hotel industry.

Increasing net incomes consequence since an abundant sum of money buying new merchandises which the installation could hold been utilizing the reclaimable merchandises alternatively and paying less for waste disposal.

### **Troubles of Waste Minimization**

Merely as there are many benefits of waste minimisation, there are so many troubles.

1. Although waste decrease, reuse and recovery have become an built-in portion of many hotel direction programs, infinite restrictions and finance frequently make this procedure problematic for some installations.
2. Limited cognition and preparation can be strenuous for directors to train their employees in transporting out these environmentally friendly patterns. Lack of control over these behaviours can be rather demanding.
- 3 At the smaller hotels, the costs outweigh the benefits go forthing the installation with no inducement to transport out this sustainable manner of operating. Environmental consciousness is turning at a slow rate.

### **Tourism: Solid waste coevals and impacts**

Hotel activities tend to bring forth big sum of solid wastes ; waste paper, letter paper and ink cartridges from the administrative offices and staff quarters ; old furniture equipments from invitee suites ; nutrient garbages, broken glasswork and other solid waste from the kitchen, saloon and eating houses ; newspapers and magazines from the forepart desk, waste flora from greenscaping and out of usage equipments from the care section.

The touristy industry can hold positive impacts for a state. For illustration: addition of national net income, sweetening of the state 's planetary image, conveying in investors and improved substructure. On the other manus, negative effects are besides felt ; environmental debasement and pollution, resource depletion and harm to marine ecosystem.



## **Importance of a good Solid Waste Management**

Waste is unsightly, malodorous and inaeathetic, fouling land, air and H<sub>2</sub>O, choke offing drainage systems, presenting serious public wellness hazards, and curtailing possible land usage ( Pernia, 1992 ) . Improper SWM can ensue in pollution and wellness hazards and waste, if non disposed of decently can go a nuisance and a wellness hazard. Decomposing waste seaport disease vectors, attracts varmint and assist the proliferation of gnawers and rats ( national province of

Allegro Papgayo hotel in Costa Rica was closed because of bad and unsustainable waste direction patterns which lead to ocean pollution in the milieus and bad smelling ( `` Costa Rica 's Occidental Grand Papagayo to shut? " , 2008 ) . A good SWM is indispensable and shouldstresson environmental protection and wellness

## **Approach to a Sustainable and Integrated Solid Waste Management**

At present, more and more hotels are implementing sustainable patterns to cut down touristry impacts on the environment by utilizing H<sub>2</sub>O, energy and other stuffs expeditiously. These are termed as `` ecogreen " hotels. This reduces cost for waste disposal and increased net incomes. In Mauritius some hotels like Oberoi Hotel and Le Plantation utilizing recycles points and one eating house from Le Plantation Hotel is made of all recycles stuffs like all home bases, spectacles, chairs, tabular arraies and so on Another illustration is that At Amelia Island Plantation, Amelia Island, FL, more than 5. 5 dozens of waste is collected for recycling each hebdomad.

### **Energy recovery**

Treating waste thermally WTE with heat recovery can assist to provide a clean and trusty energy under the signifier of heat and power. This can lend to salvaging energy ( Pavlas, et al. , 2009 ) . One illustration is Payatas, whereby electricity is produced from methane gas ( Serrona, Yu, 2009 ) . Energy recovery is a really sustainable solution to Plastic Solid Waste since plastics have a high calorific content and corporal energy. Cement kilns and fluidized beds are utilised to retrieve energy from PSW ( S. M. Al-Salem et al. , 2009 ) .

### **Composting**

Composting is a natural procedure that turns organic stuff into a dark rich substance. This substance, called compost, is a fantastic conditioner for dirt. It is the decomposition of the organic fraction of waste to bring forth a stable merchandise such as dirt conditioners and turning stuff for works.

Composting can salvage money for transportation of waste to landfill

Composting is found to be the best manner to cover with organic types of waste generated ( Narayana, 2009 ) . In fact, for solid waste which have a high wet content and low calorific value, for illustration: nutrient wastes and greenscaping wastes, aerophilic composting is the best method for pull offing this waste. ( Narayana, 2009 ) .

### **WASTE REDUCTION**

Refillable agreeableness dispensers can replace soap, lotion, shampoo and conditioner bottles in hotel invitee suites. In Food and Beverage they can buy big Sn butter and replenishing in little porcelain pot instead than to purchase

really little butter with smaller plastic container They can utilize Beverage Dispenser instead than can. They cut down waste, cut operating costs and salvage clip. Housekeeping directors save staff clip when they buy extremely concentrated cleansing supplies.

Engineering directors cut waste and increase productiveness when they switch from candent visible radiations to fluorescent or LED bulbs.

Fluorescent bulbs last five times every bit long as incandescents and LED 's operate 25 times longer.

Modular mattresses allow hotels to replace merely the mattress tops, non the remainder of the units. They extend the seven-year mean life of hotel mattresses by five to ten old ages.

Hotel eating houses cut down waste by utilizing washable table fabrics and dinnerware, reclaimable java filters and by supplying condiments in majority dispensers. Hotels can extinguish bottled H<sub>2</sub>O waste by utilizing filtered H<sub>2</sub>O.

There are many more godforsaken bar schemes that hotels could deploy, such as: eliminating unrequested newspapers ; necessitating papers to be printed on both sides of the page and with a smaller fount and borders ; inquiring hotel providers to cut down extra packaging ; and holding staff usage lasting mugs and cups, instead than disposables. The old furniture and the bed with the bed sheet can be donated to the infirmary establishments for reused and at the same clip their CSR additions.

## **Recycling**

Merchandises with minimum packaging can be ordered.

Make grass cycling with the grass from the lawn.

Stop supplying disposable mugs for illustration, purchase company mugs.

Buy lasting towels, serviettes, etc.

Promote the invitees to return the reclaimable merchandises.

Introduce the waste bar programme to the invitees. ( ecogreenhotel, 2009 ) .

## **Environmental Management Systems**

Environmental direction systems ( EMSs ) provide a model that can assist organisations incorporate tools such as cleaner production. EMSs involve the accomplishment of environmental ends through the direction of environmental facets in a consistent manner. Environmental ends, policies, mensurable aims are set by the administration and achieved through the control of operations. Waste minimisation can be an Environmental Policy and nonsubjective set is less than 2 % of Solid Waste Generation or Zero Waste

## **EIA Guide Line For Proposed Coastal Hotel Projects, July 2004**

In 2008, some 44 EIA licenses were granted of which 12 ( 27 % ) were issued to set down allotment and 8 ( 18 % ) were provided to coastal hotels and related plants

There is an addition of hotel in our coastal part and an EIA is required under subdivision 15 of the EPA 2002 for the coastal hotels. Under subdivision 3.7 of the EIA guideline, July 2004, for each impact the subdivision should provide steps to avoid or cut down it, for illustration, is as follows:

Beginning, Type, Generation, , Collection and disposal of solid wastes

One EIA study for Proposal for the Construction of new Hotel at Tamarin Medine Ltd had been verified and found that that the undermentioned statement has been made

Waste generated from the kitchen and accommodation services if not decently managed may do direct impact on the environment. Indirect impacts may be caused by proliferation of rats, insects and emanation of bad odor ( EIA Report, 2009 -Ministry of Environment and N. D. U. )

### **Impact Mitigation Measures**

Hotels will be committed to suitably pull off its solid wastes. Equally much as possible, solid waste wastes will be sorted for its different constituents.

Biodegradable waste will be composted. Other waste will be kept in certain bins located in the dormitory house prior being carted off by accredited companies. Measures for waste direction to be implemented are as follows:

Kind out wastes at beginning ( glass, paper, biodegradable substances, metals, tins Compost garden green waste and kitchen waste Provide particular bin for disposal of batteries, cartridges, bulbs etc.

Waste is unsightly and malodorous, fouling land, air and H<sub>2</sub>O, choking off drainage systems, presenting serious public health hazards, and curtailing possible land usage.

The combustion of refuse releases smoke and toxic substances. Leachate from the waste can pollute soil, surface H<sub>2</sub>O and groundwater. Mosquitoes that can transport dengue fever as last twelve months this disease recurred. Mosquitoes breed in fresh H<sub>2</sub>O from accumulated rainfall in tins and bottles. Disease vectors such as mosquitoes, flies, cockroaches and gnawers thrive on solid waste

Workers frequently do not utilize safety equipment such as facemasks, ear stoppers, baseball mitts and

proper footwear, and there is a demand for instruction about health and safety issues

## **Economic**

Waste recycling can cut down waste disposal costs for local governments by widening the life of landfills, cutting down the demand to put in conveyance vehicles and equipment, cutting down vehicle operation and care costs, and cutting down fuel consumption for transporting waste. Businesses are provided with inexpensive natural products. In Mauritius some hotels are used to recycle products such as the home bases made of spectacles, chairs, kitchen waste used for composting and used for gardening. Thus the usage of recycled products reduces the demand to import natural products, intending that less money is spent on foreign currency.

## **Research Methods**

Information was gathered utilizing a assortment of methods to derive a better apprehension of the state of affairs, issues, positions and precedences. The primary informations will be obtained by using the undermentioned methods viz. Interviews, Site Visit for Observations, Email of Survey Questionnaires to the selected Hotel

The secondary informations will be obtained by reexamining the literature obtaining from the goggle bookman, University of Mauritius Library Search, Publications, , Magazine Articles and Resent News. Some information will besides be obtained from the www. lepress. mu -Newspaper L'Express.

## **Document and Literature Review**

Literature referring solid waste direction in hotel industry was reviewed. Documents were collected from assorted beginnings such as universities, industry associations, foreign bureaus, authorities establishments, AHRIM, Books, Magazine Articles, Publications, Present News, research bookman utilizing goggle and statistic office, Ministry of Environment and National Development Unit, Ministry Of Local Government, Solid Waste Unit

Interviews will be conducted with the Small, Medium and Large Hotels, To larn about the Hotel Solid Waste Management ( HSWM ) plan, I willinterviewstaff chiefly the Maintenance Manager, Quality Assurance Manager, Healthand Safety Officer, the Head of Restaurant, Chef Cook, Food and Beverage Manager, Executive Housekeeper from those selected hotel

Consecutive conversations with the staffs will be helpful for deriving a better apprehension of the issues that emerged. An initial set of inquiries will be prepared as per our Survey Questionnaire Appendix I in progress and extra inquiries were asked as the interviews will be conducted. This site visit interview will be appropriate for our mini undertaking

A pilot study questionnaire will be designed by me and one questionnaire will be sent to for illustration Oberoi Hotel or any hotel. A brief session will be done with the Management, the Quality Assurance Manager of the hotel. The questionnaire will be redesigned for easy application in hotel sector.

Hotels will be selected harmonizing to their room scope as shown in table above. The hotel representative will be contacted for the research on solid waste direction at these hotel.

A consent and understanding will be obtained for our handiness to those hotels.

The study questionnaire will be posted by mail for their exact apprehension of the questionnaire and can look for information about solid waste generated by the hotel.

An assignment will be fixed and during our study, we will carry on a site visit rating about the different waste coevals, the estimated measures of waste generated and waste minimisation by the different section and its hotel waste direction within the hotel.



An audit programme will be prepared for scrutinizing about the solid waste coevals in those selected hotels for how solid waste is treated, disposed, who removed the waste, the consequence of these solid waste in the environment

During our study with one hotel, we can be referred to other hotels and if new hotel it will added to our list of hotels to be surveyed. Because some hotels can reply the questionnaire really tardily or some will non reply at all.

Obtaining entree to these hotels will be a really ambitious task. Normally it is non easy from acquiring entree in hotels.

## **Observation**

Field work referring to solid waste direction in hotel will be conducted harmonizing a Gantt Chart.. These field visits helped us to familiarise with solid waste direction patterns and challenges in the hotel industries. During our site visit a solid waste audit will be carried out utilizing the same questionnaire as per study. Observations and issues will be discussed informally with staff and consequences will be noted.

The Waste Management Practices, Solid Waste Minimization, Reuse, and Recycling will be observed for the different size hotel

## **Datas Analysis**

All information and information obtained will be statistically analyzed utilizing the SPSS package

Both qualitative and quantitative informations will be used to depict and measure the hotel solid waste direction plan. Qualitative information analysis involved reexamining papers and sorting informations into similar class and subjects. Quantitative information will be tabulated and so interpreted

Making research involves undertaking a figure of challenges because world frequently differs from what is planned. In this subdivision, challenges and obstructions will meet during the research procedure will be identified.

Many hotel can assist us to derive entree to other hotels which will ease our entree to the hotels. The job of deriving entree can be a serious job particularly for hotel. Even with the support of the hotels mentioned above, deriving entree to the hotels visit were will be really hard.

## **Discussion**

The reaching of tourer from twelvemonth 2006 to twelvemonth 2003 shows an addition in the reaching of tourer and a little lessening in twelvemonth 2009 due to fiscal crisis. The prognosis of the reaching this twelvemonth, 2010 has the inclination to increase to 915, 000. Prognosis of tourer reachings are based on the followers: - yesteryear tendencies infinite being a major restraint on such a little island. It is clear that Mauritius will confront acute jobs of solid waste disposal in the following few old ages.

At the terminal of December 2009, there were 102 registered hotels in operation, with a entire room capacity of 11, 456 and 23, 235 bed topographic points. The mean room tenancy rate for all hotels for 2009 was 61 % while bed tenancy rate averaged 54 % .

Due to the widespread and rapid tourism growing, the negative environmental impacts of the tourism industry are rather apparent. Tourism greatly depends on environmental and cultural resources, which offers resource-based activities that invariably interact with the natural systems.

One of the chief environmental impacts of the tourism industry is increased load to solid waste management. It is found from the literature reappraisal that if solid waste are not decently managed, there may be negative consequence on the environment and the community.

In Mauritius many hotels do not measure the quantity of waste being produced. However if these hotels kept the waste information it will be a great benefit for them to command the cost.

### **Screening and Storage and Waste Disposal**

In hotels really the waste is collected in different bins. Some hotels chiefly the big one will utilize separate bins for segregating waste at beginning.

Different bins, Food bin, Glass Bin, Plastic Bin are placed at kitchen and restaurant country. The big hotel will empty these bins as when required and on every day before traveling place. Then the bins are clean and kept in a specific topographic point for drying. Large Hotel has fund to finance the waste programme and handiness of topographic point for storage.

Most of the Small and Medium Hotels deficiency of infinite and the storage is non in appropriate conditions.

For Most of the hotel the transportation is subcontracted to cleaning service such as Securiclean, Maxiclean ltd or even to private lorry. Sometime due to hapless direction of solid waste, hapless storage, and abnormality of waste bearer to roll up waste, make rise to bad odor, gnawers and sometimes it is non esthetics. There are batch of little and Medium Hotel dispose in an inappropriate conditions.

In 2008, the entire sum of solid waste landfilled at Mare Chicose increased to 400, 813 metric tons from 394, 118 metric tons in 2007, up by 1. 7 %

Domestic waste constituted 93 % of the entire solid waste landfilled in 2008. The tendency of the sum of solid wastes landfilled is as shown below

## **Waste Reduction Programs**

Waste decrease plan is forestalling waste at its beginning, at a peculiar hotel installation.

Waste coevals by hotels and most of the hotels does non follow the Waste Reduction Programme. The Number of Small and Medium Hotels is more than the big hotels and each of these hotels when add all the waste together does a negative consequence on solid waste in Mauritius. Tourist who stay at these hotels do so anticipating to be pampered and unworried. Therefore, waste decrease plans need to be concentrated in such a manner to extinguish the impairment of the service Therefore, waste minimisation is indispensable in the hotel industry with respects to blow decrease, reuse, recovery and disposal

## **Seasonal Effect on Waste Generation**

It is apparent that the measures of solid waste coevals by hotels besides depend on the season.

The season with high hotel tenancy rate called "high season" is from November to May. We expect that the coevals of waste will be increased in high season while the low season is from June to October as per Oberoi Hotel, Le Plantation, and Mourouk Ebony Hotel.

Very few Hotels has an Environmental Policy. It is notices that merely the big hotels are certified ISO 14001 such as Sun Resorts and Labourdonais Hotel. The two hotels mentioned has its Environmental and Purchasing Policy for Waste Minimization, Reduction, Reused and Recovery. These hotels are Eco friendly. They buy largely Eco merchandises that will non harm the environment

## **Decision**

Clearly, it takes clip and attempt to develop an effectual waste direction plan. However, it pays off with a better underside line, a greener image and an healthier environment for any types of hotel. The HSWM plan provides a theoretical account for learning about the conditions referring to solid waste direction in Mauritius. The complexness of issues associated with solid waste direction makes solid waste planning and direction a challenging undertaking. The end of this research is to aim the cordial reception industry to implement waste direction policies and patterns via waste decrease,

reuse, recycling and composting to minimise the sum of waste coming into the waste watercourse.

It is besides apparent that little and average hotels pay less attention for the execution of waste minimisation than larger hotels, because the costs outweigh the benefits. Since they are not bringing forth a copiousness of solid waste, these smaller hotels believe it is not economically executable to pattern these techniques at their installation. However everyone must do it a duty on their portion the articulation the race for environmental quality.

## **Recommendations**

For any hotels whether little, medium or big hotel, the undermentioned actions need to be taken in order for the HSWM to be successfully implemented.