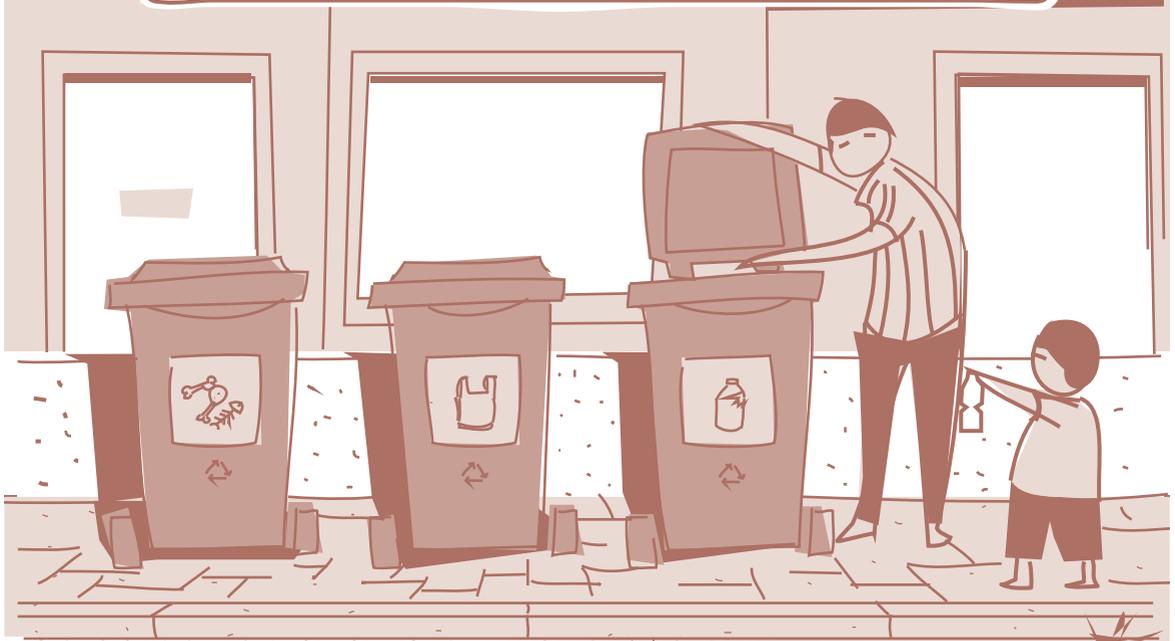


Tourism Sector: Solid waste management



Introduction

Tourism contributed an annual growth rate 7.5% (2010 -2011) to it's GDP, which was MVR 50,830 per capita in 2011. The industry had a record in tourist arrivals to the country with over 930 thousand visitors in a year.

With increased tourism arrivals and tourism related activities, current waste management practices need better adaptive measures to both, manage waste more efficiently and to reduce the risks and impacts of climate change.

Currently, in the Tourism Resorts, waste comprises of discarded food waste and

Residual waste including construction and demolition debris (organics such as wood and paper and inorganics such as concrete), glass, discards such as textiles, leather, rubber, and waste such as batteries. The food and other organic waste is separated from inorganic waste. The organic waste (food, garden, paper) are incinerated. Combustion under suitable process systems can reduce waste volume up to 90%, but incinerators of such capacity is a limitation at the resorts. Inorganics such as glass waste is crushed to reduce its volume. Many resorts use this crushed glass as a construction material.

A Upgrading & maintenance of incinerators

Installing efficient incinerators for improved combustion, and maintenance of these equipment's through regular servicing.



Cost

US\$ 50,000 (2015)



Cost-benefit

Can manage both solid and liquid waste. Also industrial, construction and toxic waste. All waste broken down into fine residue form.



Additional benefits

Incinerator residue can be used in landfills. Heat from incinerators can be used to generate hot water and electricity.



Success story

A world bank funded 2.6 million dollar investment to build a regional waste management centre in Raa Atoll Vandhoo, which functions with the help of incinerators as the main method of processing 52 tons of waste daily for 45 inhabited islands.

B Recycling waste

Reuse of waste materials such as plastic, metals and glass by using crushers and shredders to break them up to make recycled products or for exporting to neighbouring countries such as India.



Cost

US\$ 35,000 (2011)



Additional benefits

Can generate revenue by selling recyclables such as plastic and metals to scrap-dealers.

C High technology Composting

Breakdown of organic waste with the help of composters into usable soil component, which is rich in humus and nutrients such as nitrates.



Cost

US\$40,000 (2011)



Cost-benefit

Segregation of wastes and separation of recyclables from non-recyclables. Non-recyclables broken down into compost, which can be used in gardens and food productions.



Additional benefits

Can generate revenue by selling compost to other agricultural or horticultural island communities nearby.

Reference

Fourth Regional 3R Forum in Asia. (2013). Country Analysis Paper-Maldives. Retrieved from: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=20&cad=rja&uact=8&ved=0CFcQFjAJAOApqFQoTCLjx0aPMkMkCFYihlAodcFAHog&url=http%3A%2F%2Fwww.uncrd.or.jp%2Fcontent%2Fdocuments%2FCountry%2520Analysis%2520Paper_Maldives.pdf&usq=AFQjCNH5cteM7fzrutnMXGnM0JK_5peUOA

Ministry of Environment and Energy. (2014). Agreement signed to establish incineration plant in Raa atoll Vandhoo island . Retrived from: <http://www.environment.gov.mv/v1/news/agreement-signed-to-establish-incineration-plant-in-raa-atoll-vandhoo-island/>

Minivan News Archive. (2013). Maldives' waste management hampered by local politics, lack of funding. Retrieved from: <http://minivannewsarchive.com/politics/maldives-waste-management-hampered-by-local-politics-lack-of-funding-51680>

Peterson, C. (2013). Assessment of solid waste management practices and its vulnerability to climate risks in Maldives tourism sector, Tourism Adaptation Project, Male', Maldives.



THE TOURISM ADAPTATION PROJECT The Maldives Tourism Adaptation Project (TAP) (2011 – 2015) was run by the Ministry of Tourism, in collaboration with the United Nations Development Program (UNDP) and funded by the Global Environmental Facility (GEF). The project supported the tourism sector in the Maldives to set up the required policy environment, regulatory guidance, technical skills and knowledge to ensure that climate change-related risks were systematically factored into day-to-day tourism operations.



This booklet is a collection of 6 booklets, which identifies potential areas for investment to strengthen climate resilience and adaptation in the tourism sector.

Tourism Adaptation Project (TAP)

Ministry of Tourism

5th Floor, H. Velaanaage, Ameer Ahmed Magu, Male', Maldives

+960 3022200 ministry@tourism.gov.mv tap@tourism.gov.mv



Empowered lives.
Resilient nations.

