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SUSTAINABLE WASTE MANAGEMENT IN THE TOURISM SECTOR

Tourism is one of the world's largest industries with a global economic contribution, but the intense use of freshwater and the generation of solid and liquid waste from tourism operations cause serious environmental degradation. According to the United Nations Environment Programme (UNEP) 4.8 million tons, 14 per cent of all solid waste is produced each year solely by tourists [2].

UNEP also has estimated that every international tourist in Europe generates at least 1 kg of solid waste per day. In fact, tourists from developed countries probably produce more (up to 2 kg/person/day for the United States). The world's 692.5 million international tourists are likely to have generated no less than 4.8 million tons of solid waste, 58% of this total in Europe alone [1].

Because of the mentioned above facts, solid waste generation is nowadays considered as one of the most relevant environmental aspects from touristic activities, especially owing to the fact that many of the establishments that make up this sector, such as hotels, bars and restaurants, use large quantities of expendable single-use consumer goods as part of their operations. In addition, tourists are not always aware of how waste management in a specific region is supposed to function. As tourists are there for just a short period of time, it is unlikely that they will adapt to a specific need of the solid waste management system. This seems to be the reason why solid waste management systems in touristic regions have their own rules. Moreover, this reality is even harder when tourism is concentrated in one season only, like winter or summer, putting even more stress into waste management systems as the generated solid wastes mass and volume flow is totally season dependent [3].

Waste, produced each year by tourists, can potentially overload waste management systems, especially in destinations that are more rural in nature or have a low population. This increase is quite often seasonal as many cities have peak seasons in either winter or summer. Overloading, as well as tourists' lack of familiarity with differing waste systems, can lead to improper waste disposal, which can in turn lead to environmental problems such as groundwater or soil contamination and greenhouse gas emissions, among others [2].

Littering is also a particularly problematic issue in tourist areas, especially those on the coast, and can have extremely damaging effects on both the local landscape and the marine environment. Plastic waste in marine litter has emerged as one of the most difficult-to-resolve global waste and resource management challenges [5].

Taking into account developing countries, plastic is the highest component of tourist waste on beaches, staying on the beach and in the sea for a long time. Eunomia Research & Consulting released a wide-ranging study on marine plastic pollution in 2016, finding that over 80 per cent of plastics entering the marine environment come from land-based sources, and that the biggest density of plastic being found on beaches rather than the surface of the ocean [4].

Inefficient solid waste management operations can produce contrary effects, namely higher operational costs and blight owing to litter and contaminated water, reducing the touristic value of the otherwise attractive location. Therefore, high standard solid waste management programmes have become a must in touristic regions, which can also generate positive opportunities for the local community including higher competitiveness, new employment opportunities and even incrementing the touristic attractiveness by reducing environmental impacts [3].

To solve these problems, different strategies have to be implemented based on specific priorities to increase the sustainability of waste management systems. Several European World Heritage cities have recently teamed up to tackle waste management issues specific to such locations by taking part in the Interregional Environmental Integration of Waste Management in European Heritage project (Intherwaste). It was launched in April 2016 as a means of developing better waste management solutions through sharing information and expertise between European Heritage cities. The project aims to aid in the difficult task of dealing with high amounts of waste while preserving the heritage of the member cities, which are also popular with tourists.

The European Commission-funded UrBAN-WASTE project was initiated to deal with waste management issues in cities with high levels of tourists. It was launched in Tenerife in June, where a framework to make waste management, collection and treatment as sustainable as possible was developed. The consortium of 28 partners has been funded under the Horizon 2020 programme, and will involve pilots of "eco-innovative and gender-sensitive waste prevention and management strategies", including projects aimed at reduction and recycling. These will be implemented across Europe in cities such as Copenhagen, Florence and Lisbon and will include developing innovations including a mobile app that will reward holidaymakers for 'low-waste behaviour' [2]. The majority of these projects involve cities that are members of the Association of Cities and

Regions for Recycling and sustainable Resource management, a global network of local authorities and other organisations that work together to promote sustainable waste management.

Prior to recycling, recovery, treatment or disposal the first consideration in sustainably managing solid waste is how a facility can reduce the amount of materials used and generated by its operations. Many large hotel chains have already implemented environmental management systems. There are a number of ways to prevent facility waste at source including: sorting of glass, aluminium, paper and plastics from guestrooms; providing bulk dispensers to eliminate the use of individual bottles and other containers; returning laundered clothes to guests in reusable cloth bags thereby eliminating plastic bags; instructing housekeeping not to replace half-used rolls of toilet paper or tissue boxes and leave replacements for guests to use when required; using partially used items from guestrooms in employee restrooms or donating to charities; extending the lifespan of equipment by having it serviced regularly; using refillable containers, replacing plastic cups, utensils and plates with washable cups, dishes and utensils; using cloth roll towels or hand dryers instead of paper products; donating unused food to local food banks or other charitable organizations; offering guests the option to order half-portions of food, etc. [1].

Thus, solid waste minimisation and implementation of sustainable waste technologies in the tourism industry should become major tasks in future waste management programmes and projects. Such programmes will only be successful when there are joint efforts between the tourism industry and local and national government policies and regulations.

References

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ПЕРСПЕКТИВИ РОЗВИТКУ ТУРИСТИЧНОЇ ГАЛУЗІ В УКРАЇНІ

Люди усвідомлюють той факт, що вони є громадянами не тільки своєї країни, але і світу, що веде до розширення туристичних поїздок, збільшення пропозицій на ринку різноманітних турів, особливо цільових. Як приклад, конференція WTO в Лісабоні за результатами дослідження "Tourism 2020 Vision" проголошені п'ять перспективних туристичних напрямків XXI століття (пригодуницький, екологічний, культурно-пізнавальний, тематичний туризм та круїз).

За прогнозами WTO, в XXI столітті очікується туристичний бум: кількість подорожуючих у світі до 2020 року зросте до 1,6 млрд. чоловік за рік, що означає збільшення туристичних прибуттів у 2,4 рази порівняно з 2000 роком [2].

В Україні розвиток туризму суттєво впливає на такі сектори економіки, як транспорт, торгівля, зв'язок, будівництво, сільське господарство, виробництво товарів народного споживання, і тому саме цю галузь можна вважати однією з найбільш перспективних напрямків економіки країни.

В таблиці 1 подано показники туристичних потоків іноземців, які прибули до України, починаючи з 2007 р. до 2017 р. [1].

Таблиця 1 - Кількість прибуттів іноземних туристів

Рік	Кількість чол, млн
2017	14 230 000
2016	13 333 000
2015	12 428 000
2014	12 712 000
2013	24 671 000
2012	23 013 000
2011	21 415 000
2010	21 203 000
2009	20 798 000
2008	25 449 000
2007	23 122 000