The Influence of waste generation in Tourist Areas in the Framework of Area Metabolism: A case study from Cyprus

Irene Voukkali¹, Pantelitsa Loizia¹, Niki Tofalli², Georgia Chatziparakeva², Samaras Petros³, Jose Navarro Pedreno⁴, Antonis A. Zorpas¹

¹Envitech - Environmental Technology Ltd, Institute of Environmental Technology and Sustainable Development, Department of Research - Development, Paralimni, Cyprus, www.envitech.org, pantelitsa-loizia@hotmail.com, voukkei@yahoo.gr

² Cyprus Open University, Faculty of Pure and Applied Sciences, Environmental Conservation and Management, Laboratory of Chemical Engineering and Engineering Sustainability P.O.Box 12794, 2252, Latsia, Nicosia, Cyprus; +357-22411936, antonis.zorpas@ouc.ac.cy, antoniszorpas@yahoo.com

³ TEI Thessaloniki's,

⁴Department of Agrochemistry and Environment, University Miguel Hernandez of Elche, Av. De la Universidad s/n, 03206, Elche, Alicante, Spain, jonavar@umh.es

Abstract

The impacts of tourism are manifold. On the one hand, tourism is one of the most important industries worldwide and a driver for socio- economic development in many regions. Around 10% of the world's GDP are directly and indirectly generated by and one out of eleven jobs is related to tourism. On the other hand, at the same time, the total number of 1.1 billion tourists every year also brings a range of negative externalities, including emissions from transport and touristic activities, high levels of unsustainable resource consumption (renewable and non-renewable, incl. water resources) and waste production.

Solid waste generation is considered being one of the most relevant environmental aspects related to tourism activities. In comparison with other areas, tourist areas have to face additional challenges related to waste prevention and management due to their geographical and climatic conditions, the seasonality of tourism flows and the specificity of tourism industry and of tourists as waste producers. One major objective of the project is to support policy makers in answering these challenges and in developing strategies that aim at reducing the amount of municipal waste production and at further support the re- use, recycle, collection and disposal of waste in tourist areas. The main aim of the research is to provide background data to assess waste related impacts of tourism using compositional analysis approach in order to provide the information necessary for linking touristic processes to resource consumption and waste generation, prevention, recycling, treatment and disposal activities in order to analyses how tourism is responsible for positive and negative impacts considering the three pillars of sustainability (environment, society and economy) and to develop metabolism indicators

Keywords: area metabolism, compositional analysis, hospitality industry, coastal area