

Food Waste in Tourism Sector: The case study of Protaras Area in Cyprus

Pantelitsa Loizia and Antonis A. Zorpas

Open University of Cyprus, Faculty of Pure and Applied Sciences, Environmental Conservation and Management, Laboratory of Chemical Engineering and Engineering Sustainability

Abstract

Tourism is one of the biggest and fastest growing sectors globally. Tourism may bring many economic advantages to a country as it boosts employment and wealth, while at the same time is causing pressure on infrastructure, the environment, to local communities, to other economic sectors and wider society. Food waste is a monumental problem. Annually, over 1 billion tons of food produced from human consumption is lost or wasted. Furthermore, food waste is responsible for an astonishing 8% of global carbon emissions. The main objective of this study is the qualitative and quantitative waste composition analysis of the tourist area of Protaras (Paralimni Municipality) giving emphasis in food waste production, in order to determine the correlation between the food waste production and the visitors, to determine their habits and to evaluate the existing Waste Management Plan. The waste composition analysis was carried out according to the Standard Test Method for Determination of the Composition Of Unprocessed Municipal Solid Waste, D5231-92,2003 and took place from June to October for a period of 7 days per month (Sunday to Saturday, last week for each month) and sampling was done on a daily base, 3 times/day. The result from the analysis shows that the largest volume of waste was produced in July and August. Regarding daily waste production, the largest volume was produced during the weekend, while smaller amounts were usually on Monday and Tuesday. This is due to the increased attendance of local visitors on Saturday and especially on Sunday. Regarding the qualitative composition analysis, the waste was divided in 18 main categories while for food waste were 7 main categories with 31 sub categories. In ascending order, the main waste streams were paper cardboard 7%, metal packaging 8%, glass packaging 13%, food waste 24% and plastic packaging 33%. Regarding food waste the largest amount were fruits (such as banana, watermelon and apples), sweet corns, bread and pasta products. The waste composition analysis highlighted the significant problem of the absence of an effective waste management plan and, in particular, of the inefficiency plan for the separate collection of recyclable materials. Finally, changing visitors habits, raising awareness and developing environmental consciousness is an essential step toward food and solid waste management.

Keywords: tourist sector, solid waste, food waste