



Alaca Creek (Çorum) Litter - A Preliminary Study to Explore the Extent of Pollution

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This study, which aims to increase public awareness about freshwater pollution by use of local instances, was carried out in April 2018 at Alaca Creek on the basis of 3 sampling points. Litter – the majority of which is from domestic sources – were collected by hand using the large plastic bags to bring them together while classifying the waste under some particular classes: Plastic, metal, paper (paper/wood/fabric) and glass. During the litter collection period, only water body and littoral zone were cleaned out. Sampling points on the creek were chosen to represent litter outputs of pre-urban, mid urban and post-urban areas. Percentages of materials were determined for each litter material as; plastic %79.1, metal %3.65, glass %7.29, and paper %9.96. Litter densities of three sampling points were standardized according to 1000 m²; plastic 1231 item/1000 m² – 182 kg/1000 m², metal 61 item/1000 m² – 18 kg/1000 m², glass 107 item/1000 m² – 24 kg/1000 m², and paper 148 item/1000 m² – 11 kg/1000 m².

As results of this preliminary/short-term assessment study, it can be easily said that plastic litter is the predominant type of waste among all others, and the second sampling point – urban area – is the most polluted site by all types of litters mentioned. To increase awareness about environmental pollution, especially water pollution, local governments such as Alaca Municipality will be informed at an institutional level in order to protect and maintain the health of Alaca Creek.

Keywords: Alaca Creek, pollution, litter, public health, water quality, anthropogenic effects

Introduction

As the volume of the human population on Earth increases and demand for more natural resources reaches to an excessive state, as a natural resource, freshwaters are being more and more exploited for numerous anthropogenic uses. During this utilization stage, waste materials of many kinds are being introduced to freshwaters which cause loss of clean water urgent for life on Earth. Sources of pollutants can be categorized as municipal, commercial, industrial, agricultural,