

Wastewater treatment in Food and Textile Industries located in Greece

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Textile and food industries constituted two major sectors with great contribution to the Greek economy. Due to the recent economic recession, textile sector has shrunk to a great extent, while food industry still remains among the leading sectors at national level. The aim of this study is to review key issues related to currently applied production processes and wastewater treatment methods in the food and textile industries in Greece and in particular in the wider area of Inofita – Schimatari (Prefecture of Viotia, Greece). This area is characterised by extensive industrial development that has raised serious environmental problems. Regarding the existing industrial units that operate in the wider area of interest, there were detected twenty five (25) food industries and three (3) textile industries. Among the recorded food industries, 68% produce wastewater, from which 30% treat generated wastewater within the boundaries of their units, while the majority uses biological treatment as the main treatment process. Regarding final disposal of treated or untreated wastewater, 47% of the food industries transfer wastewater to the municipal wastewater treatment plant, 30% of units dispose treated wastewater to surface water receptors, 12% employ underground disposal without prior treatment, 6% delivers wastewater to authorised companies for treatment and for the rest there is no information about the disposal methods. The majority of textile industries recorded in the study area are engaged in dyeing and finishing of textile substrates while two-thirds produce wastewater which is further treated to their private wastewater treatment plants through biological and physicochemical treatment methods. The treated effluent is disposed to surface water receptor. Features during the recording of the current situation of the food and textile industry in the study area highlighted the remarkable shrinkage of both sectors since approximately 31% and 83% reduction of operating industrial units were recorded for the food and textile industry, respectively. Although the capital and operational costs of a wastewater treatment plant constitute an additional cost to industries, their application is of high importance in order to ensure the environmental protection of surface and groundwater bodies of the area. Industries should seek for viable solutions in terms of wastewater management methods, aiming at the development of industrial partnerships against environmental pollution.