Occurrence of microplastics at Wastewater Treatment Plants in the Guadalete-Barbate river basin (Cadiz, Spain).

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The increase in microplastics (MPs) research has aroused awareness about their presence and polluting potential in aquatic environments. Wastewater treatment plants (WWTPs) have been identified as one of the main paths for these pollutants to reach the environment. The present study is focussed in the WWTPs emplaced within the Guadalete-Barbate river basin. This geographical area comprises a total of 60 WWTPs treatment plants with an inhabitant equivalent (IE) above 250. Within these 60 wastewater treatment plants, there are 38 plants with conventional treatments and an estimated population of over 800,000. The high percentage of population that lives in this basin leads us to think about the quantity of microplastics that are dumped into the environment daily. Therefore, the aim of this research is to study the occurrence and identify the type of microplastics in these facilities, this information is important in order to design treatments that improve microplastics removal and avoid their entrance in the aquatic environment.