
Presence and distribution of microplastics in water of watershed river Baluarte, Sinaloa, México

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Abstract

The Baluarte river lead at north of national marsh, site consider like the bigger area of mangroves of mexican pacific. The watershed river Baluarte is an exoreic at the northwest of the country. That region exhibit human settlements of more than 16 thousand, as well as mining activity, aquaculture, cattle raising and agriculture. There is evidence of the contribution of material transported through the river to the adjacent coastal area. Therefore, the site is of interest for the study of microplastics. In April of 2022 (dry season), was collected samples of superficial water of 17 sites distributed in the principal river and some tributary, both in the middle and lower basin. The type of microplastics with more presence was light blue fibers (70 % aprox.); the other 25 % was fibers of different colors like hard blue, gray, translucent and red, in decrecient order. The rest 5 % of the finding microplastics was type film. The bigger concentrations of microplastics was finding in the last section of the principal river, before it lead into the Pacific ocean (733.34 items m3), as well as near mining zones (633.34 items m3). Throughout the entire sampling, remains of soda bottles, typical snack garbage, plastic waste used in agriculture, plastic drain hoses, single-use bags, among other waste were observed. Currently, work is being done on the characterization of the composition of the microplastics collected.

Keywords: Freshwatr, rivers, ocean pacific, microplastics

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