

Microplastic background pollution in the Curonian Spit beach

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An article written by an international team of scientists was published recently in *Marine Pollution Bulletin* magazine. The team included representatives of the Russian Academy of Sciences Shirshov Institute of Oceanology Atlantic Department, the Immanuel Kant Baltic Federal University, and the Institute of Baltic Sea Research (Warnemunde, Germany). The article was aimed at studying Curonian Spit beaches pollution with macro and microplastic. The pollution from both the Russian and Lithuanian parts was studied.

Alexander Kileso, junior researcher at Shirshov Institute of Oceanology states, "We found out that there are some large quantities of macro wastes in the water, but it is located in several isolated spots while being spread around the beach area. The microplastic is being dragged in the area by sea storms. And the process of storms dragging wastes to and from the beach repeats itself constantly. But only if there are no people to step in and clean the wastes."

But the fact that people live nearby the beach also proves to have a significant impact on the environment. For example, this is the main reason of [pollution](#) around Klaipeda (Lithuania). Klaipeda is a large port city, so active industrial activity there causes major pollution.

The situation with microplastic is a bit different. According to the analysis of data gathered on the territory under study—an area between Zelenogradsk and Klaipeda, there is an amount of microplastic evenly distributed all over the area, so it is background pollution we observe

here.

Alexander Kileo added, "We studied sand in several parts of the Curonian Spit and in the central and back parts of the [beach](#) and we have seen the same result everywhere—50-120 particles of [microplastic](#) (sizing up to 2 millimeters) per one kilogram of sand."

More information: I. Chubarenko et al, From macro to micro, from patchy to uniform: Analyzing plastic contamination along and across a sandy tide-less coast, *Marine Pollution Bulletin* (2020). [DOI: 10.1016/j.marpolbul.2020.111198](#)

Provided by Immanuel Kant Baltic Federal University

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