

7. Geosynthetic debris on the beaches of Kaliningrad Oblast – result of systematic assessment of 2018

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The continuous inspection of the entire coastal strip of the Kaliningrad Oblast (135 km) by groups of tree observers revealed contamination of beaches by debris of geosynthetic materials which probably were initiated during partial damage of coastal protection constructions.

In 2018, within the framework of the RFBR Project 18-55-76002, the entire coastal strip of the Kaliningrad Oblast was surveyed using the continuous visual scanning. This technique involves a continuous passage by tree observers along the entire shoreline (135 km) covering total width of the beach (30 m in average) from the water edge to the fore dune.

The initial analysis showed visible contamination of beaches of the northern shore of the Sambian Peninsula and the Curonian Spit by debris of

geosynthetic material and other large litter. The integral amount of debris of geotextile objects was more than 190 m², the integral length of the geotextile braids from gabions was about 100 m. Similar pollutants on the western shore of the Sambian Peninsula and the Vistula Spit were practically not found.

This fact well correlates with the location of the main engineering structures that have geosynthetic material in their content. The bulk of the debris of geosynthetic materials such as «Dornit»-type geotextiles, geocells and geogrids, were found within a radius of 2–5 km from the expected sources, but mostly to the east of them.

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