INTEGRATED GEOCHEMICAL ASSESSMENT OF STREAM SEDIMENTS OF LITHUANIA

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Modern river sediments are complex systems of mechanical, mineral and chemical composition that are sensitive to changes in the physical and chemical conditions of the surrounding environment. In recent decades, human industrial and economic activities have become a particularly important factor influencing the major and trace element composition of river sediments. All living organisms require only very small amounts of some naturally occurring elements, and any increase in their concentrations in the environment poses a significant threat to both the environment and humans. Domestic wastewater is identified as one of the main sources of technogenic pollution. Although wastewater treatment technologies have improved rapidly in recent years and have received increasing attention, wastewater treatment companies cannot guarantee 100% treatment efficiency, which is important because trace elements released into the environment do not degrade in the natural environment. Treated wastewater is discharged back into the environment, usually into rivers, which are home to a wide variety of life forms. Previous studies indicate that certain elemental associations can be linked to technogenic pollution, but more complex studies on the chemical composition of the surrounding soil and stream sediments are necessary for reliable results.