




THE SAMARA REGION SOIL CONTAMINATION WITH INDUSTRIAL TOXICANTS

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АННОТАЦИЯ:


Currently, the problem of environmental pollution by toxicants of industrial origin has great ecological, social and economic importance. The research aim is to analyze the soils contamination in the Samara region with industrial toxicants. The objectives of the research included: to reveal the soil pollution dynamics with nitrates and sulfates over the years, to assess their content in the areas of soil contamination and in the background areas. The studies were carried out in 2014–2018 in the Samara city (near the territory of JSC "Arkonik SMZ") and in the background areas (FSBI "National Park Samarskaya Luka" and Povolzhskaya AGLOS-Branch of FSC Agroecology RAS). In 2014–2018 the content of nitrate ions in the soils of the background plots and in the areas adjacent to JSC "Arkonik SMZ" varied from 7 to 66 mg/kg (1–9.4 F), sulfate ions from 13 to 303 mg/kg (0.4–8.7 F). During the studied observation period, there is a tendency to a decrease in the content of nitrates in the soils, the MPCs were not exceeded, which makes it possible to classify these soils as a pollution acceptable category. Exceeding the MPC of sulfates in research certain years (2014 in soils 5 km from JSC Arkonik SMZ and soils of FSBI National Park Samarskaya Luka, 2017 in soils 5 km from JSC Arkonik SMZ, 2018 in soils of the Volga region AGLOS-Branch of the Federal Research Center of Agroecology RAS) had a local character.


БИБЛИОМЕТРИЧЕСКИЕ ПОКАЗАТЕЛИ:


 Входит в РИНЦ®: да

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 Цитирований в РИНЦ®: 0

 Цитирований из ядра РИНЦ®: 0

 Цитирований в Scopus®: 0

The Samara region soil contamination with industrial toxicants

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Abstract. Currently, the problem of environmental pollution by toxicants of industrial origin has great ecological, social and economic importance. The research aim is to analyze the soils contamination in the Samara region with industrial toxicants. The objectives of the research included: to reveal the soil pollution dynamics with nitrates and sulfates over the years, to assess their content in the areas of soil contamination and in the background areas. The studies were carried out in 2014-2018 in the Samara city (near the territory of JSC "Arkonik SMZ") and in the background areas (FSBI "National Park Samarskaya Luka" and Povolzhskaya AGLOS-Branch of FSC Agroecology RAS). In 2014-2018 the content of nitrate ions in the soils of the background plots and in the areas adjacent to JSC "Arkonik SMZ" varied from 7 to 66 mg/kg (1-9.4 F), sulfate ions from 13 to 303 mg/kg (0.4-8.7 F). During the studied observation period, there is a tendency to a decrease in the content of nitrates in the soils, the MPCs were not exceeded, which makes it possible to classify these soils as a pollution acceptable category. Exceeding the MPC of sulfates in research certain years (2014 in soils 5 km from JSC Arkonik SMZ and soils of FSBI National Park Samarskaya Luka, 2017 in soils 5 km from JSC Arkonik SMZ, 2018 in soils of the Volga region AGLOS-Branch of the Federal Research Center of Agroecology RAS) had a local character.

1. Introduction

Currently, the problem of environmental pollution by toxicants of industrial origin has great ecological, social and economic importance. Industrial enterprises, polluting the environment, can harm the health of the population, destroy the soil cover. Soil resources are one of the most important national resources of Russia and determine its food, environmental and economic security. The soil cover, performing

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