

DOSE RATE OF THE LANDFILLS OF NORTH-WEST PODILLYA (UKRAINE)

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ABSTRACT

Annually more than 300,000 thousand tons of waste are generated in Ukraine, including about 600 thousand tons of hazardous waste. These include used fluorescent lamps, motor oils, batteries, unsuitable and expired pesticides, pesticide packaging, medical waste and others. According to the State Statistics Service of Ukraine, as of the end of 2018, the total amount of waste accumulated during operation in designated areas or facilities was 12972428.5 thousand tones. Whereas during 2018 the amount of generated waste was 352,333.9 thousand tons, and utilized - 103,658.1 thousand tonnes.

In present research the radioecological investigation of landfills impact on ecosystems is presented.

Environmental monitoring primarily aims to quantify the levels of radioactive substances and ionising radiation resulting from human activities and natural sources in the different compartments of the environment through sampling or by the use of direct detection equipment.

For detailed investigation the territory of the North-West Podillya, covering almost the entire area of Khmelnytsky and Ternopil regions, was selected. Namely four municipal landfills were selected in Malashivtsi, Zboriv district (Ternopil region), near Kremenets (Ternopil region), Khmelnytsky, Dunaivtsi (Khmelnysky region).

A number of the equivalent dose rate measurements were made on the selected landfills using a certified Soeks ecotester.

Keywords: radiation background, municipal solid waste, landfill, environment, climate changer

INTRODUCTION

Nowadays the environmental protection is an urgent issue. Therefore, a lot of studies are aimed at identifying factors that have a negative impact on the environment, monitoring their dynamics and finding ways to prevent their effects or eliminate them if necessary. One of the most popular researches in this field is the monitoring of the impact of landfills on the ecosystems, as the problem of landfills is not solved, despite the already known facts of their impact on both humans and the environment [1, 2, 3].