

Gismethods in evaluation of arable soils' spatial-time erosion dynamics on the territory of the Russian plain

Yermolaev O., Avvakumova A.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© SGEM2014. The aim of the research was to devise a method for analyzing the spatial-time dynamics of soil erosion intensity under conditions of high agricultural production. Soil maps on a scale 1:10000 made during the period from 1970 to 2007 according to the State programme were taken as a base for the research. Spatial-time analysis of soil erosion was conducted using the creation of vector thematic erosion maps. The vectorized relief map was used to create elementary river basins for second and third order tributaries within the key areas, chosen according to a number of conditions. The following analysis of the spatial distribution of soil erosion in the region was made according to the created river basins.

Keywords

GIS, River basins, Soil erosion, Soil map