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Identification of fallow land for the intended use to basin organization of natural resource management

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Abstract

© SGEM2017 All Right Reserved. Satellite images analysis conducted using modern ERS methods allows to allocate lands which can be referred to the deposits based on a group of diagnostic indicators and using a number of techniques. Change of vegetation cover type associated with change of fallow lands use features is manifested in their spectral response, including the vegetation index values (NDVI). In the course of experimental studies the peculiarities of seasonal dynamics of vegetation index for the initial few years after the transfer of the cultivated area in the state of deposit were calculated and analyzed. The key feature of the index dynamics for deposits older than three years is a relatively stable course after reaching the maximum values and the fluctuation around values above 0.6. The article deals with the change of farmland area and issues of its intended use control. When addressing economic neglect of agricultural lands it is first of all necessary to identify the environmental reasons related to soil degradation and contamination, and, as a result, taking of large areas of arable land out of use. To transfer unproductive land to less intensive forms of land or other land categories the criteria for their selection shall be developed. Agroecological evaluation results should become one of the main criteria for selection of lands unsuitable for agricultural use, if their transfer is necessary. A structural model of natural resource management and ecoregion sustainable development based on the concept of basin natural resource management and analysis of the negative impact on the natural environment elements has been offered. It has served as a basis for development of measures related to implementation of the rehabilitational land use in the study area. Possible measures for degraded soils conservation and recovery have been offered.

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Keywords

Agricultural lands, Agroecological evaluation, Fallow land, Natural resource management, Satellite images

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