Identification of large rivers of siberia (Ob, Yenisei, Lena) by using GIS technology based on remote sensing of Earth from Cosmos

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Abstract

Decryption of high-resolution space pictures in the territory of an Asian part of Russia is executed. This research is conducted for the purpose of a territory exception within which there is no washout of soils. Methodical questions of application of remote sensing for assessment of inundated sections of the large rivers of Siberia are considered. One of criteria of creation of an electronic vectorial card of river basins is separation of inundated sections. Visual decryption of satellite images for the purposes of detection of inundated sections of the large rivers, can be used in hardly accessible, severe conditions of Siberia, in particular behind a polar circle. As a result of the research conducted on materials of space shooting inundated sections pp are revealed. Ob, Yenisei, Lena. The largest number of inundated sections is created by the river Ob, at the same time the decoded territories are found from a river source in case of confluence of Biya and Katun, to an estuarial section. Rather the most smaller number of floodplains is identified on the Yenisei River. The mid position on the decoded inundated sections is held by the river Lena. Results of a research are planned to be used further when forming the specialized geoinformation database on small river basins of the Arctic basins of an Asian part of Russia. As the model river basin for calculation of potential washout of soils it is planned to use the Lena River catchment.

Keywords

Databases, GIS-analysis, Inundated sections, Remote sensing, Rivers of Siberia, Visual decryption, Washout of the soil

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