GIS-BASED FLOOD MONITORING OF LAKE BAIKAL BASIN

Tatyana A. Borisova
Baikal Institute of Nature Management, Siberian Branch of the Russian Academy of Sciences, 6, Sakhyanova St., Ulan-Ude, 670031, Russia, Ph. D., Senior Researcher, phone: (3012)43-36-76, e-mail: tabor@binm.ru

Andrew N. Beshentsev
Baikal Institute of Nature Management, Siberian Branch of the Russian Academy of Sciences, 6, Sakhyanova St., Ulan-Ude, 670031, Russia, D. Sc., Professor of the Russian Academy of Sciences, Head of the Laboratory, phone: (3012)43-36-76, e-mail: abesh@mail.ru

Alexander A. Lubsanov
Baikal Institute of Nature Management, Siberian Branch of the Russian Academy of Sciences, 6, Sakhyanova St., Ulan-Ude, 670031, Russia, Leading Engineer, phone: (3012)43-36-76, e-mail: alub@binm.ru

Darima G. Budaeva
Baikal Institute of Nature Management, Siberian Branch of the Russian Academy of Sciences, 6, Sakhyanova St., Ulan-Ude, 670031, Russia, Ph. D., Leading Engineer, phone: (3012)43-36-76, e-mail: budaevadarima@yandex.ru

Zorigma Z. Pakhakhinova
Baikal Institute of Nature Management, Siberian Branch of the Russian Academy of Sciences, 6, Sakhyanova St., Ulan-Ude, 670031, Russia, Ph. D., Leading Engineer, phone: (3012)43-36-76, e-mail: m_zorigma@mail.ru

The article highlights information about catastrophic floods on the rivers of the Baikal Basin in the last century. The functional structure of GIS flood monitoring, consisting of measuring, information, technological and analytical subsystems, is presented. A technology system of creating a digital terrain model based on vector isolines of the relief and satellite images, representing the physical-geographical features of the development of danger, is proposed. The characteristic of the main indicators of the hazard area from floods is given - the frequency of floods, their size and area of distribution. Physical and geographical features of the spread of flooding on the main rivers of the study area were determined. The geoinformation mapping of flood parameters in the boundaries of the basins of the main rivers was carried out. A flowchart of work with GIS is presented, including the method of automated mapping and the method of interactive work with GIS by means of geoinformational queries, a characteristic of the response hazard development models is given.

Key words: floods, monitoring, GIS, digital terrain model, geoinformation mapping, queries.

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