

The significance of ecological-engineering-geological mapping in the assessment of the geoenvironment changes in urban centres in the Russian Far East

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Predictive assessments require information on the state of the geoenvironment and its changes under the influence of technogenic factors in the territory of urbanized centers. A set of maps at 1:10,000 and 1:25,000, was compiled for an urban centres — Khabarovsk, Komsomolsk-na-Amure and Birobidzhan. The map of geological engineering conditions and geological sections reflect the composition and structure of rocks, their bedding conditions in different parts of the city, location of tectonic zones and boundaries of geological engineering regions with specific natural conditions. The map of groundwater occurrence makes it possible to determine the origin of groundwater and the depths of its occurrence, as well as its chemical composition, which is important not only for water supply, but also for assessing pollutions the water content of the ground used in constructing foundations for engineering structures. The map of development of geological processes makes it possible to detect a combination of dangerous natural-technogenic processes, to assess the degree of their danger for structures and population in a specific sector and to prepare a prediction of the activation of geological processes under the influence of natural and technogenic factors. The map of sources of technogenic impacts on the geoenvironment shows the location of engineering structures and objects which capable of causing dangerous natural-technogenic and technogenic catastrophes. These maps provide systematized information for prediction of geoenvironment change in future.