The aim of this thesis is to assess the crystalline rock environment with a focus on the Bohemian-Moravian Highlands in terms of groundwater reserves to supply the local population. The greatest importance has therefore chapter, which discusses the present use of groundwater resources and prospects for the coming years. For the correct answer to the question of perspektivity of groundwater resources geomorphological, hydrological and climatic conditions of the discussed area are described and also geological and hydrogeological conditions. The thesis also contains a chapter about the exploration and searching for groundwater. Evaluation of the appropriateness of the use of water resources from crystalline rocks of the Bohemian-Moravian Highlands, it is important for the economic functioning of the area, which is reflected in the economy of the entire country.