EVALUATION OF AQUIFER VULNERABILITY WITH APPLYING GIS METHODS IN BIHAR PLAIN

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Abstract

The utilization of freshwater resources and among them that of groundwater without deteriorating their good status is one of the accepted objectives of sustainable development. The Water Framework Directive of the European Union confirms this approach as well.

Since the drinking water supply originates from subsurface in the highest degree in Hungary, the protection of aquifers has great importance.

For investigation of aquifer vulnerability a groundwater flow model was built in area of Bihar Plain. The model was constructed using the Processing MODFLOW Pro environment.

The maps which developed by using of pollution sources and head protection areas can be used for control the land use and design the groundwater quality monitoring network, together with managing of pollution sources.

Key words: ***aquifer vulnerability, GIS methods.***