

Groundwater pollution mechanism in Kasanohara plateau

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Mechanisms of groundwater pollution by nitrate nitrogen and hydrogeological features were studied at a volcanic plateau Kasanohara, Kagoshima, Japan, where the deterioration of water environment caused by agricultural activities has been actualized. Especially, the hydrological properties of aquifers, vadose zone and the geographical distribution of geological properties are analyzed by using the results of geological boring survey, hydrological observations and the construction of geological database based on information collected. As a result, the following hydrogeological features of the plateau were found: i) Hydraulic and physical properties of stratum were quantified; ii) The distribution of impermeable layers of unconfined groundwater in the plateau was quantified; iii) There is a stratification structure of groundwater quality. The pollution seems to spread horizontally through a pumice layer.