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Title: Regolith Mapping of a catchment area to recommend the agricultural drains removal to combat the droughts of the SEICHE river : Analyse of the critical zone in hardrock aquifer.

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Abstract (maximum 2000 characters including spaces):

The SEICHE river is a river which, as its name suggests, is subject to severe and regular droughts. Added to this, is the installation of agricultural drains during the 1960s, 1970s and 1980s to optimize farming. With the advent of climate change which is reflected in the SEICHE catchment area by more regular droughts, we have imagine a method that can be recommended for the removal of certain agricultural drains and thus provide a gain of underground water for supports it from its low water level. After reflection, the cartography of the regolith, often underestimated on geological maps at 1/50,000 of the BRGM, but also the creation of a groundwater model, both combined with the geomorphology of the site, show that the drains installed under certain plots, are inefficient and useless for the improvement of agriculture. On the other hand, their deletions would allow an additional supply of groundwater to the SEICHE but beyond to the rivers located above the hardrock aquifers. Thus flat, non-clay soils where the unsaturated zone is deep enough do not need to be drained. This study makes it possible to better adapt the agricultural development according to this critical zone which is the regolithe and the preservation of both water resource and biodiversity.

References