

Appropriate approaches for dealing with GW pollution on contaminated land

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Current situation

South Korea has limited use of GW compared to surface water, in which 11 % of total water use is from GW and the remaining 89% is from the surface water. However, some rural area depends heavily on GW resource alone as drinking water.

We have very limited GW remediation experience, mostly linked with soil remediation. To manage GW contamination, we are focusing on groundwater contamination sources rather than GW bodies (i.e., aquifer).

Key issues and problems still to be solved

Firstly, in a national scale, we need to choose which water bodies (aquifers) shall be conserved with sustainable use of GW. Then we could concentrate to manage groundwater quality within that target area. So, I think, in South Korea, that our primary management target shall be rural area without suitable water resource as drinking water.

Secondly, we need to manage simultaneously quality and quantity of GW in target area. In South Korea, our government is trying to make the ministry of Environment manage simultaneously the quantity of water resource as well as its quality

Thirdly, we need to do more integrated approaches for dealing with GW contamination. It indicates that risk-based approach, considering all media (such as soil, surface water, groundwater, air, and/or waste), need to be taken into

account on groundwater contaminated sites.

Finally, liability problem shall be solved to manage GW contamination, especially, for examples, mixed plumes to reach drinking water wells. Furthermore, we need to set up a fund to manage and remedy GW contamination, considering its complexity.