The management of contaminated sites in Korea has mainly been carried out on the basis of soil contamination and some groundwater contamination. However, given the pollutant spread between adjacent environmental media and the receptors affected by pollutants, the management of contaminated sites should be conducted in a linked management instead of individual medium management. Therefore, it is necessary to adopt a system that can integrate and manage the media such as soil, groundwater, surface water, and atmosphere of contaminated sites escaping from the existing contaminated soil and groundwater management in accordance with the individual medium law. Although many stakeholders are aware of the need for this, there is little detailed research on the specific situation regarding relevant policies under the existing media laws and future direction. In this study, we reviewed the management status of contaminated sites in accordance with the laws of each environmental medium in Korea and suggested ways to improve the system to solve the problems.

- We analyzed the current status of contamination control procedures such as investigation and remediation of contamination through the analysis of laws and cases by relevant environmental media that can be affected by contaminated soil. Although soil and groundwater are closely intertwined the most, contamination management is carried out under individual laws. Also, there is a lack
of links between the statutes, resulting in blind spots in the management of the investigation, cleanup, etc. When detailed survey of soil and groundwater is conducted, the possibility of contamination spreading to surrounding environmental media is also subject to investigation. However, there is little legal basis regarding the follow-up procedures after contamination is confirmed in surrounding environmental media. There is a problem that there are differences between the cause of contamination and the contaminant to be managed in accordance with each environmental medium law, even if the contaminant is to be removed or managed. Even if the remediation is carried out, problems such as recontamination due to differences in cleanup levels by environmental media laws may occur. In Washington, USA, and Alberta, Canada, there are not only laws for each environmental medium, but also an integrated law for managing contamination of each environmental medium in contaminated sites, making this problem less likely to occur. There is a system to manage contaminated sites from a human and ecological-risk perspective. Although there is a risk assessment system for soil contamination in Korea, it is not activated due to the systematic limitations on the application of risk assessment, risk assessment techniques and risk management procedures.

- Taking the aforementioned current status into account, four alternatives were proposed to resolve the problems and improve policies for contaminated site management instead of individual environmental medium management. The first measure is to strengthen the linkage between soil and groundwater management. It complements the legal basis of each law related to contamination detection, investigation and remediation of the 「Soil Environment Conservation Act」 and the 「Groundwater Act」. In the same way with the first case, the second plan strengthens the linkage between soil and groundwater management and enable integrated management of soil and groundwater, by transferring the content related to detection, investigation, and remediation of groundwater contamination in 「Groundwater Act」 to 「Soil Environment Conservation Act」. The third plan integrates contents related to the detection, investigation, remediation and management in individual laws on environmental media of contaminated sites such as soil, ground water, surface water, and air quality, and incorporates the contents into the new chapter on the management of contaminated sites in the 「Soil Environment Conservation Act」.
Act. The fourth plan is to establish a new 「Contaminated Site Management Act」. It is a plan to establish a law on contaminated site management by separating and integrating contents related to contamination detection, investigation, remediation and remediation responsibilities among relevant laws of individual environmental medium such as 「Soil Environment Conservation Act」 and 「Groundwater Act」. This is a transition toward a contaminated site management system focusing on the risk of the receptor. Considering the characteristics, advantages, and disadvantages of each alternative, the first alternative, which can solve problems on the management of contaminated soil and groundwater relatively easily and quickly, is likely to be realized in the short term. In the long run, it would be desirable to switch to a system proposed in the fourth alternative, which allows the integrated management of contaminated sites, rather than the management of individual environmental medium.
International Sources


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