



## **Establishment of Groundwater Arsenic Potential Distribution and Discrimination in Taiwan**

Kuo Sheng Tsai (1), Yu Ying Chen (1), Chih Chung Liu (2), and Chien Wen Lin (2)

(1) Soil and Groundwater Pollution Remediation Fund Management Board, Environmental Protection Administration, Taiwan R.O.C. , (2) Division of Environmental Technology, Sinotech Environmental Technology, Ltd., Taiwan R.O.C.(lincw@setl.com.tw)

According to the last 10 years groundwater monitoring data in Taiwan, Arsenic concentration increase rapidly in some areas, similar to Bengal and India, the main source of Arsenic-polluted groundwater is geological sediments, through reducing reactions. There are many researches indicate that high concentration of Arsenic in groundwater poses the risk to water safety, for example, the farm lands irrigation water contains Arsenic cause the concentration of Arsenic increase in soil and crops. Based on the management of water usage instead of remediation in the situation of insufficient water. Taiwan EPA has been developed the procedures of Arsenic contamination potential area establishment and source discriminated process. Taiwan EPA use the procedures to determine the management of using groundwater, and the proposing usage of Arsenic groundwater accordance with different objects. Agencies could cooperate with the water quality standard or water needs, studying appropriate water purification methods and the groundwater depth, water consumption, thus achieve the goal of water safety and environmental protection, as a reference of policy to control total Arsenic concentration in groundwater.

Keywords: Arsenic; Distribution; Discrimination; Pollution potential area of Arsenic; Origin evaluation of groundwater Arsenic