



FACT SHEET: GROUNDWATER REMEDIATION

Groundwater is an extremely important water resource in China as 20% of China's water supply comes from the use of groundwater. Among China's 661 cities, more than 400 of them use groundwater for their water supply. In rural areas, groundwater is used as the only drinking source.

Although groundwater is a critical water resource in China, the groundwater quality is severely threatened by over-extraction and swift urbanization and industrialization. Industrial facilities, oil/gas development, landfills, as well as farmlands and mining are examples of major causes for the groundwater pollution issues in China. A report recently issued states that nearly 60% of the monitored groundwater in China has "very poor" and "relatively poor" groundwater quality.

The Ministry of Ecology and Environmental (MEE) of China has made groundwater protection and groundwater pollution control a top priority. The *National Groundwater Pollution Prevention and Control Plan* calls for a US\$ 6.2 billion investment through 2020. Groundwater protection efforts are focused on monitoring, source control, and remediation. U.S. Superfund experience in environmental remediation creates a competitive advantage for U.S. companies. Groundwater contamination control and prevention projects in China are divided into two categories as Priority Projects and Key Projects based on their urgency and readiness. These projects create potential opportunities for US firms with groundwater protection and remediations expertise and technology.

It's estimated that China will invest roughly \$1.4 billion USD on Priority Projects. The breakdown of these investments is as follows:

- Groundwater investigation projects – \$430 million USD;
- Groundwater as drinking water sources pollution prevention and control demonstration projects – \$54.7 million USD;
- Typical site groundwater pollution prevention demonstration projects – 164 million USD;
- Groundwater remediation demonstration projects – \$61 million USD;
- Agriculture non-point source pollution prevention and control demonstration projects – \$22.5 million USD; and
- Groundwater monitoring capability infrastructure projects – \$691 million USD.

Key projects will command investment of approximately \$4.1 billion USD and they include:

- Groundwater as drinking water sources pollution prevention and control demonstration projects – \$3.15 billion USD;
- Typical site groundwater pollution prevention demonstration projects – \$800 million USD;
- Groundwater remediation demonstration projects – \$169 million USD; and
- Agriculture non-point source pollution prevention and control demonstration projects – \$21 million USD.

In contrast to China's urgent need for groundwater protection, China lags far behind in monitoring techniques and contamination remediation technologies in connection with groundwater protection. It is anticipated that the Soil Pollution Action Plan (2016) would also increase the demand for new technologies and proven expertise to tackle the groundwater problems. Even though the policy requires strong action, technologies and products provided by Chinese companies for groundwater monitoring and groundwater remediation are not up to the enormous tasks they are facing to achieve the goals set forth in the Plan. This reality of major groundwater contamination creates large potential opportunities for American companies to tap into China's groundwater protection market.