



# China: Water Treatment Industry

## Overview of Emerging Tier II Markets

# INTRODUCTION

The objective of this report is to provide an overview of the Chinese market for wastewater treatment<sup>1</sup>, with focus on eight key emerging markets beyond already established cities such as Shanghai, Beijing, and Guangzhou.

## EXECUTIVE SUMMARY

**Market overview.** China continues to face severe water pollution and water scarcity problems. It generated 53.7 billion tons of wastewater in 2006; municipal wastewater and industrial wastewater account for 55% and 45% respectively. It is expected that total wastewater will continue growing due to rapid urbanization and industrialization, to reach 64 billion tons in 2010. The current wastewater treatment infrastructure is inadequate, and there will be continued construction of new facilities and upgrading of existing ones, resulting in a large demand for related technology and equipment. However, competition for projects is also fierce, both from foreign suppliers that can provide good technology, as well as from domestic suppliers that can offer competitive prices.

**China has stepped up its efforts to improve the regulatory framework for wastewater management**

**Regulatory environment.** China has stepped up its efforts to improve the regulatory framework for modern wastewater management. A range of regulatory and economic instruments are used (e.g. user charges for water services); however, local enforcement remains weak in many regions. The 11th Five Year Plan emphasizes the concepts of constructing a water-saving society and treating water pollution. China has also stipulated relevant policies to encourage private and foreign investment wastewater treatment facilities.

**Key emerging markets and best prospects.** Best prospects closely follow government directions and the areas of planned investment in wastewater treatment facilities. In general, most needed equipment are those with advanced technology that domestic companies are not able to provide. In the eight emerging markets analyzed in this report – Dalian, Harbin, Hangzhou, Ningbo, Nanjing, Shenzhen, Xiamen, and Chongqing - a key trend for these eight cities is a strong focus on developing biological treatment process with nitrogen and phosphorus removal technologies. This represents good opportuni-

<sup>1</sup> The process of removing contaminants from wastewater, which involves physical, biological, and chemical treatment

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ties for foreign exporters. All the cities are also moving towards greater use of separation, membrane and disinfection technology and equipment, and the needs for sludge treatment equipment and water reclamation technologies are expected to increase. Although different technologies have been applied in different WWTPs<sup>2</sup>, good prospects are for sequencing batch reactor (SBR) activated sludge process and biological aeration filter (BAF) process. Physical-chemical and biological processes are widely used to treat industrial wastewater in all cities, including sedimentation, filtration, anaerobic and aerobic activated sludge, etc., which also represent opportunities for foreign suppliers.

**Market access.** Foreign companies face several barriers to direct exports. Local governments generally prefer foreign direct investment (FDI) in wastewater projects (over pure imports of equipment) as it brings technology transfer and capital investment. There is also strong competition from European and Japanese companies, which have been more aggressive in market entry, and in terms of financing support (often from their governments). However, there are still market opportunities for direct exports, either by using local distributors, participating in bidding for equipment procurement, or establishing a presence (i.e. Representative Office).



<sup>2</sup> Wastewater Treatment Plant