THE URBAN WATER MARKET IN CHINA

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Urban Water Market in China

Policy Driver

Overall Policy Framework
"Ecological Civilisation"

- Transformation of the Economy
- New laws and regulations
- Compliance with quality standards
- New investment programmes
- Better environmental and living condition
- A decentralized system
- A hybrid mix of financing of investment

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Urban Water in China - Aspects

- Water treatment systems
- Water Networks
- Consumer water saving systems
- Desalination / water recycle to source
- Wastewater treatment
- Sludge management
- Sponge Cities – Decentralised treatments and integrated urban catchment / green infrastructure
- Climate Change Adaptation, Urban Development

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Market Opportunities – Equipment, infrastructure and services

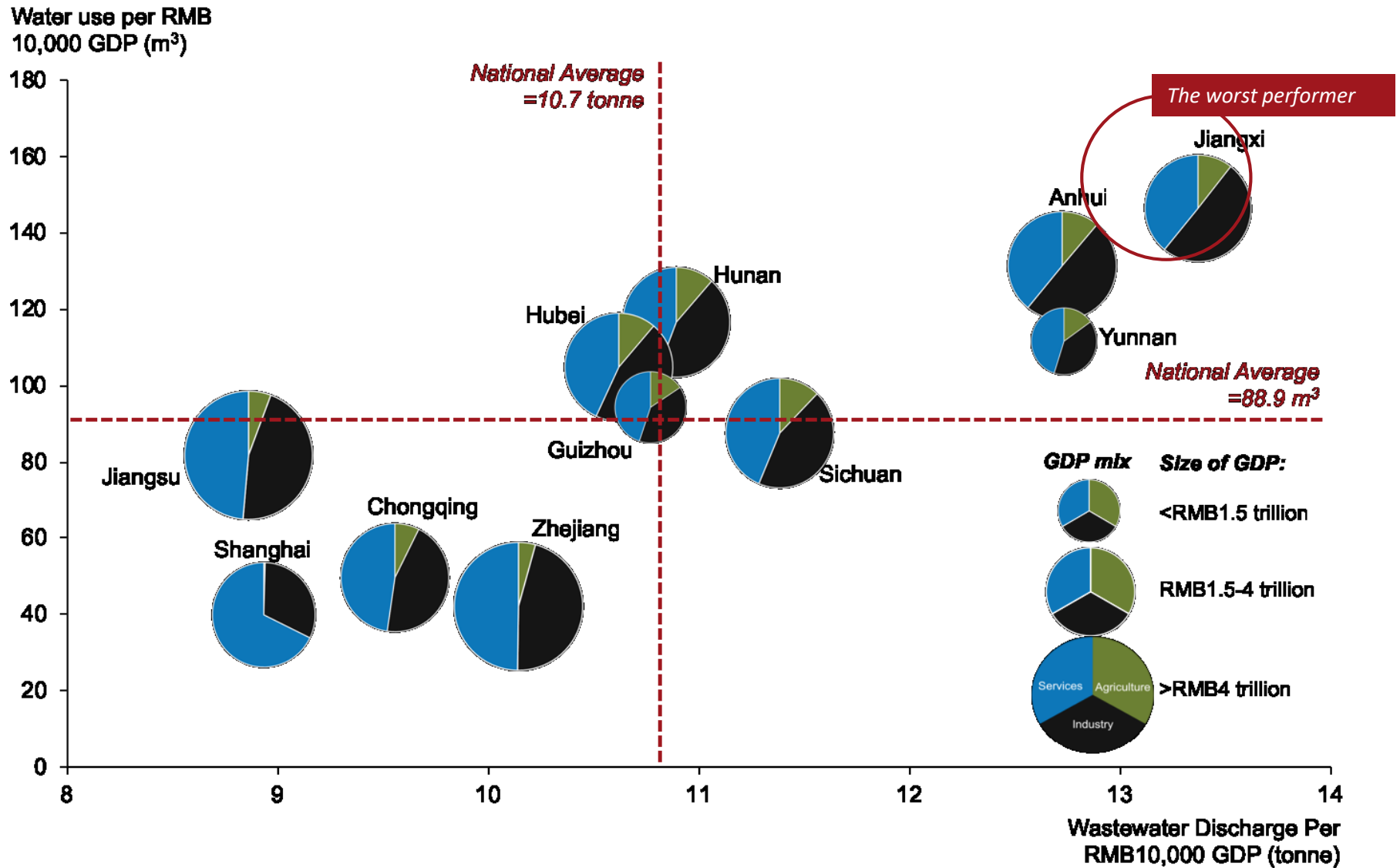
- **Water Treatment:** rising standards, investment via PPP, mature market
- **Networks:** leakage detection, water quality monitoring, modelling
- **Desalination:** municipal market static, limited growth in last 5 years.
- **Wastewater Treatment:** rising standards, massive investment via PPP, mature market – integration to green infrastructure and ecology
- **Sludge Treatment:** Growing investment, developing regulatory framework, at take-off – integration to energy systems and solid waste management
- **Sponge Cities:** 16+14, moving beyond just pilots
- The integration of Green infrastructure into urban planning and design was pioneered in Europe and is now being implemented on a massive scale in China

Barriers

- Only in niche and specialised areas can EU companies stand out. Major areas are blocked.
- SOE / Private sector companies are now fully established in the core markets. Little scope for EU business to directly engage in the main urban water business or to bid successfully against local players.
- Though it is rising, the low water price for water supplied and low rates for wastewater treatment provision remains a barrier to entry.
- The political means available to local companies to negotiate around low tariffs to get to extra payments is complex and sensitive and much more difficult to engage in for EU SMEs

Different Regions, Great Differences

2015 Yangtze River Economic Belt (YREB) Provinces
Per RMB10,000 GDP Wate Use and Wastewater Discharge



A Route to Accessing a Global Market

- The leading Chinese water sector companies are now in the top 3 globally by size and revenue
- Beijing Enterprises Water Group – approaching size of SUEZ and Veolia – looking at overseas investment and operations.
- China State Construction Engineering – major Chinese construction contractor – Water and environmental services divisions & overseas investment companies.
- BRI – Chinese companies becoming major infrastructure providers globally – incl. the water sector – strategic support and funding from the government

Strategies to overcome the barriers

- Understand the market and the procurement processes.
- Match to the needs and expectations of the clients.
- Map the revenue streams of the clients and the supply chain.
- Best chances of successful entry are in niche, emerging **or high-risk areas**.
- Keep the product simple. Express yourself in simple terms.
- Comply with local standards and market prices.
- Define a premium product that still offers good value.
- Have strategies to protect your IPR.
- Acquire knowledge of the financing options.
- Understand the reforms to the procurement regulations and the actions now available.
- Invest in building relationships with technical, business and financial partners and exercise due diligence.

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Urban Water Management

Market Opportunities – Case Study

CAMBI

- CAMBI is a medium sized company from Norway that developed a Thermal Hydrolysis treatment for municipal sludge prior to digestion
- The dewatered Sludge is heated by steam at high pressure at 150-170 oC in batches in pressure vessels for 20 to 30 minutes, it is then cooled and passed on to normal digestion vessels for biological anaerobic digestion.
- The heat treatment breaks down the cellular structure of the sludge, releasing the digestible material and also completely sterilising of pathogens
- This results in much easier and faster digestion with much higher biogas yields and less residual sludge. The digested sludge is easier to dewater and safe to use on agricultural fields. It is easier to recover Phosphorous and Nitrogen from the water extracted from the sludge processed in this way.
- CAMBI have a joint venture company with Beijing Drainage Group (BDG), an SOE who provide most of the drainage and wastewater treatment and recycling for Beijing City, and more recently some other cities.
- 4 very large plants have now been built in Beijing and more have been contracted for Shanghai and Chongqing. These are amongst the largest sludge treatment plants in the world.