

S'pore firms make waves worldwide in water treatment

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SINGAPORE – With the world placing a greater focus on environmental protection, Singapore's homegrown water and wastewater treatment firms are making big waves outside of the Republic, helping to solve water problems for countries all over the world.

According to International Enterprise (IE) Singapore, the Government agency driving Singapore's external economy, the Republic has a vibrant cluster of more than 100 local water companies that have built up expertise across the water and wastewater treatment sectors. Their track record exhibits a global footprint, with numerous projects in Asia, the Middle East and even further afield to Latin America and Africa.

From wastewater treatment to decentralised water management and the cleaning of industrial wastewater, Singapore companies have been tackling water problems globally.

In the municipal water space, home-

grown company WaterTech has built, owns and operates several wastewater treatment plants in China, said Mr Kow Juan Tiang, group director of environment & infrastructure solutions at IE Singapore.

Meanwhile, the Silua Tek village in India, located near Jabalpur in the state of Madhya Pradesh, enjoys clean water supply, wastewater treatment and total sanitation thanks to companies such as Ecosoft that deal with decentralised water management.

Singapore companies also have strong capabilities in industrial wastewater management, and are able to assist industrial players in meeting increasingly stringent discharge standards, added Mr Kow.

For example, Century Water has expertise in providing solutions for pharmaceutical firms and Flagship EcoSystems has built a textile wastewater treatment plant in Bangladesh.

GLOBAL REACH

In an interview with TODAY, Mr Theron Madhavan, CEO of Flag-



Flagship EcoSystems' Dhaka EPZ central effluent treatment plant is the largest of its kind in Bangladesh. PHOTO: FLAGSHIP ECOSYSTEMS

ship EcoSystems, said the company was set up nearly 11 years ago during a "period of strong political and social interest" in seeing companies adopt an environmentally responsible approach to business.

Two years after it was incorporated, the company expanded into Indonesia and subsequently Bangladesh, where it built and now operates the largest central effluent treatment plant in the country.

Revenue for the entity in Bangladesh, which has been operational since 2012, has increased by almost 270 per cent, said Flagship Ecosystems.

Further opportunities abound in India, China, South Korea and Malaysia, said Mr Madhavan.

"Both India and China have in recent years seen greater pressure from the state in clamping down on discharge of untreated effluent into waterways," he said. "There has also been increasing pressure from buyers and end users demanding that suppliers operate in an environmentally responsible way. This has led to a growth in demand for solutions to help companies achieve their environmental objectives, presenting opportunities for us."

Another global company, main-board-listed Hyflux, specialises in water treatment and has operations and projects in the Asia Pacific, Middle East, Africa and the Americas. The company, founded by Ms Olivia Lum, currently the group's executive chairman and group CEO, began out of a small office at Tampines Industrial Park. It now employs about 2,500 staff. The group is now 25 years old and has a market capitalisation of S\$380.9 million.

Last month, Hyflux won a US\$50.4 million (S\$72.5 million) contract through its wholly owned subsidiary to design, manufacture and supply a seawater reverse osmosis and sulphate removal facilities package in Khurais, Saudi Arabia.

The group said in its latest results statement that the projects in the Middle East, North Africa and Singapore will be the main revenue contributors in the next few years.

Local institutions are also producing water treatment providers.

NanoSun, a local start-up born at a lab in Nanyang Technological University (NTU), last year clinched a S\$4.3 million joint venture with a Chinese state-owned enterprise to treat industrial wastewater in the eastern

city of Qingdao in Shandong province.

The company had previously only conducted laboratory research and had not considered the extent of the value of the technology until a meeting with Chinese officials in 2014.

The China Commerce Group for International Economic Cooperation saw the vast potential of NanoSun's self-cleaning, 3D-printed membrane water filter technology in China, where rapid industrialisation is driving demand for extensive wastewater treatment.

In just three years since it was founded in 2013, the previously five-man show now has 25 staff members globally.

"China remains the main focus for NanoSun, and we have been receiving much interest in our water treatment systems. Most recently, a sugar producer from India approached us to develop a more efficient and powerful water treatment system," said Dr Darren Sun, co-founder of NanoSun and associate professor at NTU's School of Civil and Environmental Engineering.

SINGAPORE'S REPUTATION AS A GLOBAL WATER HUB

Many local water treatment companies said Singapore's reputation as a green city and global water hub is a reason why they are able to get ahead of competition globally.

The environment and water industry is identified as a key growth industry for Singapore. In 2006, the Government committed S\$330 million to fund innovation and capability development in the industry, according to the Economic Development Board. In 2011, it allocated an extra S\$140 million, bringing the total amount committed to S\$470 million.

"In the water industry, Singapore's geographical size often takes a back seat. The country's reputation as a green city and a global water hub means that by being a Singapore company operating in the water space, Flagship is viewed by its business partners as experts and leaders in the industry," said Mr Madhavan.

Co-founder of NanoSun, Mr Wong Ann Chai added: "Over the years, Singapore has come to be recognised as a global hydrohub, and Singapore-developed solutions are much sought after. NanoSun is one such example and our 3D-printed TiO2 membranes are well received, particularly in emerging markets such as China and India. Leveraging on Singapore's strengths in connectivity, logistics and a skilled workforce, we will be able to effectively manage global operations from Singapore."

NanoSun's Dr Sun credits the achievement of the company to the Government's foresight to invest in water technologies.

"The advanced water technology that we have in Singapore was developed by hundreds of scientists working over the past two decades and is not by chance. It comes only because there was foresight by the Singapore Government, which invested heavily in water technology."