



17 August 2018

## Media Release

### **Young Singapore Engineer Named Sole Winner of Global Sustainable Development Competition**

**Dr Victor Sim applauded for leading his team to give underserved  
community in Myanmar access to clean water and to advance United  
Nations Sustainability Development Goals**

SINGAPORE, 17 August 2018 – The Institution of Engineers, Singapore (IES) announced that Dr Victor Sim, IES Council Member 2018/2020 and an IES Chartered Engineer, has won the World Federation of Engineering Organizations (WFEO) 2018 Young Engineers Competition for his project on “Clean Water Access for Don Bosco School Hlaing Thar Yar, Myanmar”. The win marks a milestone for IES, a member of WFEO, in supporting engineers to create a sustainable world through engineering for the benefit of humanity.

Held in conjunction with WFEO’s 50th anniversary, the competition recognises young engineers below 35 years of age for leading projects that advance the United Nations (UN) Sustainable Development Goals (SDGs). Dr Sim emerged as the winner from amongst more than 140 international submissions after a rigorous round of judging, for his outstanding contributions to the UN SDGs of Clean Water and Sanitation, Good Health and Well-Being for People, Quality Education and Partnership for the Goals.

Currently the Principal Engineer of Sustainable Urban Solutions at Surbana Jurong, Dr Sim steered his team when he was with NEWRIComm, the philanthropic arm of Nanyang Environment & Water Research Institute (NEWRI) to design an innovative reverse osmosis water treatment system. Their aim was to provide clean and safe water to an under-privileged community in Hlaing Thar Yar, a large industrial city in Yangon, Myanmar.

Dr Sim has taken his breakthrough work in membrane technology that has earned him prestigious international water and sustainability awards, to real-life application in this project. By taking a holistic approach, he has made a seemingly high-cost technology affordable and accessible to a needy community in Myanmar.

The inter-disciplinary team of process, civil, mechanical, electrical and instrumentation engineers innovatively integrated a smart Internet of Things (IoT) concept using sensors and solar power into the system, to optimise maintenance, enable continuous monitoring and reduce operating expenses. The team also developed a business model to make the system affordable through the subsidised sale of water to the school's surrounding community.

“UN SDGs are never meant to have a single size-fit-all solution. Representing multi-disciplinary problems covering basic yet intricately intertwined aspects of society, environment and economy, they are meant to be tackled on a united front to end all forms of poverty. My best take-away from this award is that the success of the project hinges heavily on my team members and their varied skillsets, the support from our Lien Environmental Fellowship partner and Lien Foundation, the buy-in from the community, vendors, suppliers and the wisdom of our advisory panel in accepting this project. It's an award I attribute to everyone involved,” said Dr Sim.

“IES extends our warmest congratulations to Dr Victor Sim and his team from NEWRIComm for winning this prestigious award. We hope that his achievement will inspire our younger generation to create better lives for impoverished communities around the world through innovation and engineering,” said Er. Edwin Khew, Immediate Past President and acting President of IES.

Dr Sim represents the Young Engineers Division at IES. He also became an IES Chartered Engineer in the Environmental and Water Engineering sector in January 2018 – an accreditation providing pivotal professional recognition to advance Dr Sim's work.

When fully deployed in the Don Bosco School, the system is estimated to improve the health of more than 200 young students and about 1,500 residents in the immediate village. NEWRIComm hopes to extend the system to other townships with similar problems. Dr Sim and his team conducted preliminary studies in December 2017, obtained approval for the use of project funds in February 2018 and completed the

reverse osmosis design in March 2018. They are currently testing and commissioning the project.

As a NEWRI community project, the project emphasises on education and knowledge-sharing with community partners for lasting and scalable solutions; and precludes passing of problems on to communities downstream and long-term environmental damage.

As the winner, Dr Sim will see his project featured in WFEO's 50th Anniversary booklet, alongside projects by other remarkable young engineers. He will also represent IES at the Global Engineering Congress (GEC2018) in London, October 22–26, as the only project chosen by WFEO for oral presentation at the event. GEC2018 marks WFEO's 50th anniversary and the Institution of Civil Engineers' (U.K.) 200th anniversary.

“The inaugural WFEO Young Engineers Competition showcases the leadership of young engineers in advancing the UN Sustainable Development Goals. I am delighted that Dr Victor Sim Siang Tze of NEWRIComm, Singapore is the winner of this competition and will be presenting his project of providing clean water to the children at the Don Bosco School in Hlaing Thar Yar village, Myanmar. This project embodies the values of engineering to improve the lives of people everywhere for a better sustainable world,” said Dr. Marlene Kanga, WFEO President.

Dr Sim's project is a philanthropic project supported through the Lien Environmental Fellowship (LEF) programme that is funded by Lien Foundation and administered by NEWRI.

“Beyond generating intellectual property or training talents for the economy, a university has a larger role in advancing society's greater good and contributing to global development. Engineers like Dr Victor Sim can be powerful agents of social change by combining their professional skills with multi-disciplinary knowledge and a well-grounded approach that serves the best interests of the community. Engineering change in society is much tougher than the hard science of engineering,” said Mr. Lee Poh Wah, Lien Foundation's CEO who expressed his support for the LEF at NEWRI.

A trained sustainability report specialist, Dr Sim has also been recognised for his contributions to the field of water and environmental sustainability through the Nanyang Outstanding Young Alumni Award, the Singapore-Netherlands Sustainability

Award, Green Talent (top 25 global young scientists in sustainable development), the International Desalination Association Young Leader Award and other awards.

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**Notes to media:**

1. Annex

Images of project on “Clean Water Access for Don Bosco School Hlaing Thar Yar, Myanmar” and headshot of Dr.Victor Sim

2. Chinese Glossary

English Terms	Chinese Terms
The Institution of Engineers, Singapore (IES)	新加坡工程师学会
IES Council	新加坡工程师学会理事会
Dr Victor Sim Siang Tze	沈善之 博士
Er. Edwin Khew, Immediate Past President and Acting President of IES	邱德福, 新加坡工程师学会前任会长及代理会长

**About The Institution of Engineers, Singapore (IES)**

The Institution of Engineers, Singapore was formally established on July 1966 as the national society of engineers in Singapore. IES is the premier engineering Institution in Singapore and is often called upon by the Government to provide feedback on professional engineering matters.

IES is well represented among the faculty members of the major engineering institutions of higher learning in Singapore. Through close collaboration with the local universities and polytechnics, IES organizes courses, seminars and talks for engineers and IES members to advance the continuous development of engineers.

The Institution maintains close links with professional organizations of engineers regionally and throughout the world. These include organisations in Australia, China, Japan, United Kingdom and the United States. The Institution also represents Singapore in the World Federation of Engineering Organisations (WFEO), ASEAN Federation of Engineering Organisations (AFEO) and the Federation of Engineering Institutions of Asia and the Pacific (FEIAP) in promoting goodwill and fellowship among all engineers in the region and internationally.

Through its Engineering Accreditation Board (EAB), IES obtained full signatory status in the Washington Accord (WA) in June 2006. The entry grants IES the authority to represent Singapore, the first country within the ASEAN region which has obtained full signatory status in the WA, to vet education systems under the WA mutual recognition framework.

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Annex

Images of project on “Clean Water Access for Don Bosco School Hlaing Thar Yar, Myanmar” (Photo credit: NEWRI Community Development)



Headshot of Dr. Victor Sim (Photo credit: [The Institution of Engineers, Singapore](#))



Hi-res images can be found via this link <https://goo.gl/rMTyU1>