



MEDIA RELEASE

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CLEANENVIRO SUMMIT SINGAPORE 2018 ACCELERATES INNOVATION OF ENVIRONMENTAL SOLUTIONS FOR TOMORROW'S CITIES THROUGH GREATER COLLABORATION

The fourth edition of the CleanEnviro Summit Singapore (CESS) saw the gathering of participants across the ecosystem to drive collective action and closed with over S\$5.5 billion worth of business announcements and pipeline deals

Singapore, 13 July 2018 – Industry leaders, global stakeholders and participants gathered at the CleanEnviro Summit Singapore (CESS) 2018 to identify, develop and share practical, replicable and scalable solutions that address environmental challenges in the context of the waste-water-energy nexus in cities of tomorrow. The summit concluded yesterday (12 July) with over S\$5.5 billion worth of projects and business deals announced. These new announcements highlight the global opportunities for novel innovations in the environmental services industry to address the urgent challenges of climate change and environmental sustainability.

2 Organised by the National Environment Agency (NEA), Singapore, the fourth biennial CESS was held from 8 to 12 July 2018 in conjunction with the World Cities Summit (WCS) and Singapore International Water Week (SIWW) and attracted more than 24,000 participants from more than 110 countries/economies/regions. Returning for a second year, the integrated expo and marketplace, City Solutions Singapore, which serves to drive the growing demand for integrated sustainable urban solutions, saw more than 1,100 exhibiting companies from 28 group and country pavilions participating. For CESS exhibitors, their numbers grew by 46 per cent from the last edition. In terms of floor space, this year's environment exhibition saw a 25 per cent growth from 2016.

3 In both the conference and exhibition, the theme of **'Transforming Tomorrow's Cities with Clean Environment Solutions'** was embraced. In addition to the Waste Management and Cleaning industry streams, which were the focus in previous editions of CESS, three more streams - Pest Management, Sustainable Energy and Pollution Control - were highlighted through a mix of commercialised solutions by businesses in Asia, Europe, the United State and beyond. Up-and-coming innovation projects by start-ups and research teams were also showcased throughout. The summit also witnessed thought-leadership discussions, insights-driven conversations and knowledge exchanges facilitated through various forums and high-level plenaries.

4 "It is the bringing together of the brightest minds and varying perspectives across the ecosystem to leverage the latest trends and derive solutions that tackle complex challenges, that truly enables the co-creation of noteworthy solutions," said Mr Dalson Chung, Managing Director, CESS 2018. "Singapore plays a critical role as a hub for advanced technologies, thought leadership and collaboration. These high-level plenaries and forums at CESS 2018

help to further advance cleaner and more sustainable solutions fueled by climate change, depletion of natural resources and rapid urbanisation.”

Sharing of knowledge, insights and best practices to address environmental challenges

5 Government and academic leaders participated in high-level discussions on developing a skilled industry, optimising upcoming technologies and implementing best practices among civil and business organisations.

6 At the **Environment and Water Leaders Forum (EWLF)**, Mr Masagos Zulkifli, Minister for the Environment and Water Resources, Singapore, opened with cross-disciplinary environmental and water policies and governance issues alongside other world leaders. Given the increasingly close relationship between environment and water, the discussion of innovative solutions via cross-disciplinary collaboration reiterated how leaders across both segments must mirror that real-world link with their collaborative relationships across these disciplines.

7 The **Clean Environment Leaders Summit (CELS)** allowed delegates to connect and exchange ideas surrounding policy and regulation, business innovations and green growth models, and global trends in environmental technologies to look at best practices and possible ways to drive new innovation more systemically across the total ecosystem – both locally and globally.

8 The **Leaders-Experts Forum (LEF)** served as a plenary session that kicked off the **Clean Environment Convention (CEC)** – which took a deep dive into environmental technologies, focusing on automation, optimisation, behavioural sciences and smart grids and sensors amidst the backdrop of increasing smart solutions in the industry.

9 Senior environmental policy makers were also given opportunities to discuss unique case studies at the **Clean Environment Regulators Roundtable (CERR)**. Participants discussed potential solutions to key emerging challenges that they face in their home countries, such as pollution arising from local and transboundary sources, and breakthrough technologies for the monitoring, control and enforcement of environmental pollution. Among the discussion highlights were Iskandar Malaysia's Green-focused Agenda and the Public Waste Agency of Flanders' soil remediation efforts (more information on the CERR can be found in **Annex A**).

Paving the way forward with novel innovations and cross-border collaborations

10 In the spirit of accelerating innovation in the industry, the returning **Innovation Pitch** held at the NEA Innovation Pavilion provided opportunities for promising start-ups and research teams to network with and pitch the latest environmental Research & Development (R&D) and innovations to a community that includes venture capitalists, businesses, experts in the field and regulators – to see how ideas can be further conceptualised and brought to life more quickly.

11 At the same time, delegates were able to discover new ideas and concepts and explore various prototypes and products that have yet to be commercialised, while connecting with researchers who shared perspectives to key environmental challenges. Noteworthy projects featured at the NEA Innovation Pavilion included NEA's Smart Gravitrap, a series of shape-shifting cleaning robots developed by the Singapore University of Technology and Design (SUTD) and a PV module recycling project by Singapore Polytechnic (SP).

12 On accelerating such innovations to solve unique challenges and ensure a clean and liveable environment for tomorrow's cities, Mr Chung shared that the "Innovation Pitch exemplifies how Singapore is a talent hub for CleanTech test beds and solutions because of its significant investments in research and development, strong engineering and project development capabilities, as well as good market connectivity." He emphasised that, "The technologies showcased at CESS 2018 provide just a glimpse of the plethora of breakthrough innovations that will soon transform the future of the environmental services industry."

13 Interesting collaborations also took place with newly-forged partnerships, such as a two-year Memorandum of Understanding signed between Pestech, a pest control company, and an SMU research laboratory – LiveLabs. Pestech will then be able to tap on LiveLabs' Urban Lifestyle Innovation Platform.

14 The next CleanEnviro Summit Singapore will be held from 5 to 9 July 2020 at the Sands Expo and Convention Centre, Marina Bay Sands, Singapore.

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About CESS 2018

The biennial CleanEnviro Summit Singapore (CESS) is a global networking platform for thought leaders, senior government officials and policy makers, regulators and industry captains. Held from 8 to 12 July 2018, the fourth edition of CESS is built on the theme 'Transforming Tomorrow's Cities with Clean Environment Solutions', which will deep-dive into five streams: Waste Management, Cleaning, Pest Management, Sustainable Energy and Pollution Control. In-depth discussions and the sharing of best practices will be facilitated through business forums and high level plenaries, such as the Clean Environment Leaders Summit, Leaders-Experts Forum, Clean Environment Convention, and Clean Environment Regulators Roundtable. The City Solutions Singapore Expo and Innovation Pitch will showcase the latest innovations in environmental technology and solutions.

Organised by the National Environment Agency, Singapore, CESS 2018 is held in conjunction with the Singapore International Water Week and World Cities Summit. For more information, visit www.cleanenvirosummit.sg.

FACTSHEET ON 6TH CLEAN ENVIRONMENT REGULATORS ROUNDTABLE

Background

1 Many cities face environmental challenges as their economies develop and populations grow. Growing cities may face land and air pollution, and difficulties in waste and resource management. To avoid the harmful effects of environmental degradation on the citizens and economies of cities, it is essential for governments to put in place policies and measures early to protect the environment.

2 However, environmental change on a global scale means that regulators are often confronted by a slew of emerging issues which require novel approaches. When faced with unfamiliar issues and challenges, regulators at times turn to their peers for advice. Through such consultation, they are better able to understand how solutions that have already been developed and successfully implemented in other countries help address novel challenges.

3 The Clean Environment Regulators Roundtable (CERR) is aimed at providing a unique platform for regulators to share their challenges, exchange regulatory experience and work together to develop solutions for increasingly complex environmental issues.

6th Clean Environment Regulators Roundtable

4 CERR has seen strong participation from regulators around the globe since its inception in 2012. Being a closed-door forum, it encourages regulators to share frankly on both unsolved problems and solutions in a confidential setting.

5 The 6th edition of CERR, organised by the National Environment Agency (NEA), saw the participation of more than 50 regulators and policy makers from 14 countries and economies including Algeria, Australia, Belgium, Brunei, Cambodia, China, Hong Kong SAR, Laos, Malaysia, Myanmar, USA, Singapore, Sri Lanka and Vietnam.

6 The discussions held at the 6th CERR focused on the theme of “**CLEAN Environment for Growing Cities,**” and centered around the following topics:

- **C**hallenging cities to adopt pro-environment behavior
- **L**everaging technology in environmental protection
- **E**mbracing innovative solutions
- **A**dvancing a cleaner environment through effective environmental regulatory control
- **N**etworking with other regulators to exchange environmental experiences.

7 Over the two-day event, held from 10 to 11 July 2018, participants discussed potential solutions to key emerging challenges that they face in their home countries, such as pollution arising from local and transboundary sources, and breakthrough technologies for the monitoring, control and enforcement of environmental pollution.

8 For example, Iskandar Malaysia shared key perspectives of their Green-focused Agenda and how the metropolis is harnessing technology to promote the development of their economy

without damaging or depleting natural resources, while minimising the environmental impact of human activities. Some initiatives the authority has embarked on include the implementation of 281 programmes under the Adopted Low Carbon Society Blueprint for Iskandar Malaysia 2025¹, as well as its Green Economy Guidelines for nine promoted sectors. The Guidelines are aimed at encouraging businesses to adopt green technology and practices in their operations. Iskandar Malaysia also shared information on their active promotion of the Green Accord Initiative Award (GAIA), which was designed to recognise businesses and organisations that have adopted green practices in their building design and operations.

9 Another excellent case study shared was from Belgium’s Public Waste Agency of Flanders, where the Flemish regulators shared details of the region’s goal to remediate historical soil pollution within a period of 40 years. The case study has special relevance to growing economies, as city populations grow and land space becomes more scarce.

10 For Singapore, NEA shared case studies on Singapore’s move to join the global shift towards promoting the use of cleaner fuels and renewable energy through the implementation of carbon pricing, as well as the adoption of innovative waste management and resource recovery technologies in Singapore’s upcoming Integrated Waste Management Facility (IWMF).

11 The regulators gained valuable insights from the 17 case studies shared by their peers and the rigorous discussions that ensued.



Mr Pieter Vervinckt, Deputy Director and part of the European-International Policy Unit at the Public Waste Agency of Flanders (OVAM), sharing his region’s experience in dealing with soil remediation.

¹ The Blueprint was launched at COP18 Doha, Qatar in November 2012.



Regulators from around the world engaging in a lively discussion on pollution control and waste management solutions.

CleanEnviro Summit Singapore 2018

12 This year's CERR was held as part of the 4th edition of CleanEnviro Summit Singapore (CESS) at the Sands Expo & Convention Centre. CESS is a key international clean environment event organised biennially by NEA, alongside the Singapore international Water Week and the World Cities Summit events. CESS, together with CERR, reinforces collective commitment towards the environmental agenda through high-level dialogues across nations, and also provides a distinctive platform to showcase the latest innovations in environmental technology, and create opportunities for business partnerships. The next CERR will be held in 2020, together with the 5th edition of CleanEnviro Summit Singapore.

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About National Environment Agency

Formed on 1 July 2002, the National Environment Agency (NEA) is the leading public organisation responsible for improving and sustaining a clean and green environment in Singapore. The NEA develops and spearheads environmental initiatives and programmes through its partnership with the People, Public and Private sectors. It is committed to motivating every individual to take up environmental ownership and to care for the environment as a way of life.

By protecting Singapore's environment from pollution, maintaining a high level of public health and providing timely meteorological information, the NEA endeavours to ensure sustainable development and a quality living environment for present and future generations.