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## Reflections with a Maritime Sustainability Secretariat

Simon Kuik is currently Vice-President & Head of Research & Development (R&D), and Secretary of the Sustainability Council at Sembcorp Marine Ltd. Sembcorp Marine provides innovative engineering solutions to the global offshore, marine and energy industries. Headquartered in Singapore, the Group has close to 60 years of track record in the design and construction of rigs, floaters, offshore wind products and specialised vessels, and in the repair, upgrading and conversion of different types of vessels. Sembcorp Marine's solutions focus on the following areas: Renewables, Process, Gas, Ocean Living and Advanced Drilling Rigs.



*Simon Kuik (right) with Ms Goh Swee Chen, President of Global Compact Network Singapore at Singapore Apex Corporate Sustainability Awards Gala Dinner 2018.*

### **1) In your current role as Vice-President, Head of R&D and Sustainability Secretariat, what is your job scope and what does your work mean to you?**

As Head of R&D, I oversee the research and development of new technologies, products and solutions at Sembcorp Marine. I also serve as the Secretary of the company's Sustainability Council to champion Sustainability and manage the Group's sustainability strategy, policies and programmes. In R&D, we explore new technology frontiers to create positive impact for the organisation. Part of R&D is also about having the thirst for knowledge and pushing boundaries.

My role in Sustainability allows me to manage more than physical work execution; it goes deeper and beyond where I have the opportunity to influence the sustainability ethos and culture within the organisation. Together with our sustainability champions, we drive sustainability and our company performance from a more holistic perspective, taking into consideration our environmental footprint and social impact. We are cognizant that sustainability is not the responsibility of one company or a single individual only. We seek to collaborate with our clients, business partners and advocates to improve the ecological health of our planet. This, to me, is the most meaningful and satisfying part of my job.

Through these roles, I find immense pride in achieving positive outcomes for our stakeholders and this, naturally translates into joy.

### **2) Sustainability is a big word. What does it mean to you? How do you bring sustainability to life at Sembcorp Marine?**

For me, Corporate Sustainability refers to the creation of Economic value (E) over time, through an integrated approach of managing the Environment, Social, Governance (ESG) and business. At Sembcorp Marine, we embed these four aspects (EESG) into our Sustainability approach, which cascades down to our operations, strategy and stakeholder outreach.

As the industry embraces sustainability and envisions a future where maritime stakeholders collectively drive and adopt the implementation of sustainable business practices, Sembcorp Marine endeavours to do our part in this process. We recognise that we have a responsibility

and the opportunity to contribute to a more sustainable world by integrating Sustainability into our business, anchored to our corporate mission, vision and core values.

For example, to reduce our carbon footprint in production activities, we have installed a Digital Energy Management System (DEMS) and solar panels at our flagship Tuas Boulevard Yard. The DEMS leverages Internet of Things, Artificial Intelligence (AI), sensors and advanced metering infrastructure to manage the generation, and to monitor the usage and storage of solar power. The panels generate more than 5,000 MWh of clean solar energy per annum, equivalent to powering 1,100 four-room flats annually. We have plans to increase solar electrical generation to 12,000 MWh per year by 2025.

We have also expanded into new business markets by providing innovative solutions to meet international standards, regulatory requirements, global environmental concerns and customers' sustainability needs. For example, Sembcorp Marine has developed a comprehensive suite of Gas Value Chain solutions to support the global transition to cleaner energy. In addition, the Group's wholly-owned subsidiary, LMG Marin, has designed a zero-emission ROPAX charged by clean hydro-power for a customer. In April 2021, we signed a Memorandum of Understanding with Shell and Penguin International to develop hydrogen fuel cells to power vessels with zero emission, potentially paving the way for decarbonised shipping.



*Simon (right) signing a Memorandum of Understanding with Shell and Penguin International to develop hydrogen fuel cells to power vessels with zero emission, potentially paving the way for decarbonised shipping.*

### **3) What are some key sustainability initiatives that have been adopted by your Company within Maritime Singapore?**

Locally and regionally, to promote a green culture and sustainability mindset among the young, we organise the Sembcorp Marine Green Wave Environmental Care Competition annually which has seen more than 16,000 students from primary to tertiary institutes participating in the event since 2003.

Furthermore, Sembcorp Marine has pledged \$10 million to support the establishment of a global maritime decarbonisation centre in partnership with the Maritime and Port Authority of Singapore and five other organisations.

### **4) What are some challenges that the sustainability movement in maritime faces? Do you see more career opportunities opening up in maritime sustainability?**

The maritime community is facing an energy transition dilemma, premised on climate change, economics, new regulations and evolving transport needs. COVID-19 has provided an impetus for maritime to re-examine traditional business strategies and practices, highlighting the need to embrace change, innovation and sustainability. The challenge is to find a balance between present short-term objectives and future long-term goals.

On a related note pertaining to sustainability, maritime is also facing a talent crunch. New graduates are not keen to join the industry as it is perceived to be unglamorous and polluting. However, the industry is transforming with the International Maritime Organization's (IMO) goal

to halve global shipping emissions by 2050. New technologies in renewable energy such as hydrogen fuel cells and offshore carbon capture solutions are in the development stage and look promising. The offshore wind energy industry is also set to grow exponentially over the next three decades. Furthermore, the industry is embracing Industry 4.0 technologies such as AI, digital design, cloud computing and advanced manufacturing to improve safety, efficiency and sustainability. New opportunities abound not only for businesses in maritime but also for talent who wish to contribute to a greener and more sustainable Earth.

**5) The generation today care about the earth that we live in, and want to work for companies that are socially responsible. How is Sembcorp Marine responding to this trend?**

Firstly, as an organisation, we integrate sustainability into our business operations and the solutions we deliver. For instance, we are implementing a comprehensive set of climate-related actions to reduce our production carbon footprint. We have developed and continue to develop cleaner, greener and renewable solutions across our entire business value chain in the offshore, marine and energy sectors. We endeavour to do our part to make renewables more cost-effective and accessible to the global community. We aim to avoid 15,000 tonnes of carbon emission by 2025 through our implementation and delivery of sustainable solutions and green initiatives.

Today, we need to be able to reach out and engage the green generation more effectively. In 2020, we published our first concise and highly readable standalone sustainability report to share our vision, sustainability approach, sustainability accomplishments and sustainability pathway for the future.

We have also continuously sparked creative ideas in the young generation in the quest for environmental sustainability through our Green Wave Environmental Care Competition. The annual Green Wave competition is part of our long-term commitment to inculcate a culture of sustainability among young people. As our future leaders, they play an instrumental role in ensuring that the generations to come can continue to live in a healthy and pleasant environment.

To nurture the next generation of sustainability leaders, we provided mentorship to a group of five undergraduates in a project to enhance Sustainability Development Goal (SDG) business integration during the 2020 Young SDG Leaders competition. We also mentored a group of three students from the Massachusetts Institute of Technology (MIT) in their sustainability-related research project to develop their proposed carbon pass-through model into a real business application and apply it.

In the past two years, we have also sponsored the National Engineers Day, organised by the Institute of Engineers Singapore, to share our innovative and sustainable solutions with the students and business leaders.

**6) Must one study in a maritime related field to work in the business?**

Obtaining maritime related qualifications are necessary for specific job scopes in marine and offshore engineering. For example, keeping floating ships and platforms stable and structurally safe. However, we also require a mix of other talents from diverse backgrounds in order to provide a broad range of product solutions. As an example, executing an offshore wind farm project will require more electrical than structural engineering skills; designing gas and process systems will require more mechanical or chemical processes knowledge. We need people with fresh ideas who are passionate about the marine environment to deliver our sustainable product solutions, many of which are new innovations.

**7) Could you share any interesting facts or trivia about sustainability in maritime?**

The IMO introduced the Energy Efficiency Design Index in 2013 which sets a minimum energy-efficiency limit for every ship. The climate change mitigating Index requires engineers and marine architects to design innovative solutions and/or use sustainable alternatives to achieve energy efficiency goals.

Also, the Ballast Water Management Convention entered into force in 2017. Under this ocean sustainability Convention, all ships are required to meet compliance treatment standards and destroy invasive species in ballast water before discharge into the environment.

**8) How would you describe your life outside of work? What are some things or activities you engage in, and enjoy engaging in, beyond work to achieve work-life balance?**

My weekends are usually spent with my family and friends. I believe in having wholesome quality time, including time with our fur-child Benji, our adopted Singapore Special dog. I also enjoy bird-watching in our vibrant nature reserves and cycling in the wide network of park connectors and nature ways.

**9) What values would our youth need that are embedded in your line of work? What advice do you have for the youth of today?**

I think they need to have an open mind, be willing to explore, actively participate and be collaborative. Most of all, they should find joy in their work.

*This article was written by Advisory Singapore (<https://advisory.sg/>) in cooperation with Maritime Singapore Connect Office (<https://www.maritimesgconnect.com/>) and republished with their permission. The original story is here.*