Mr Tan Meng Dui, CEO of the National Environment Agency

Distinguished guests,

Ladies and gentlemen,

1. It gives me great pleasure to be here today to commemorate Semakau Landfill's 20th Anniversary.

2. Semakau Landfill is Singapore's first – and only – offshore landfill. In fact, it is the first of its kind in the world! Developed in response to growing waste volumes amidst land constraints, Semakau Landfill was a uniquely bold and innovative approach, which has enabled us to achieve land use optimisation, efficient waste management and biodiversity conservation, all at the same time. You can say it is a "three-in-one"! It is a testament to Singapore's engineering capability. It also demonstrates Singapore's adaptability and ingenuity in coming up with novel solutions to meet our developmental needs in a sustainable manner.

History of Semakau Landfill

3. Let me share how Semakau Landfill came about. The name Semakau comes from the word *bakau,* which means "mangrove trees" in Malay. The development of Pulau Semakau into a refuse landfill was first outlined in Parliament in 1989. The ash from our incinerated waste, as well as a small amount of non-incinerable waste, were previously disposed of at two landfills located at Lim Chu Kang and Lorong Halus. As no other suitable landfill sites could be found on the main island, a decision was made to create a landfill by enclosing the waters between the eastern part of Pulau Semakau and the western part of Pulau Sakeng, thereby merging the two islands to form the new landfill.

4. Semakau Landfill was constructed in two phases. The construction for Phase I began in 1995 and was completed in 1999 with a landfill capacity of 13.6 million cubic metres. Phase II, completed four years ago in July 2015, provides an additional 14.5 million cubic metres of landfill capacity, which is equivalent to nearly 5,800 Olympic-sized swimming pools, bringing the total capacity to about 11,240 Olympic-sized swimming pools.

Pioneers Behind Development and Successes of SL

5. Today's achievements would not have been possible without our capable team of pioneer engineers who drove the development of Semakau Landfill with dedication and determination. I am happy to see some of them here with us today, including Mr Koh Hee Song and Mr Ong Seng Eng. Mr Koh was the Head of then Engineering Services Department and was instrumental in the successful planning, design and construction of Phase I. Mr Ong Seng Eng, was the former Director of the Waste & Resource Management Department and had overseen the planning and development of Phase II. Both of them have played key roles in shaping the Semakau Landfill that we all see today. Thank you for your contributions, and the legacy that you have left behind.

6. Our pioneer engineers faced a multitude of challenges before the landfill operations even began. Deep-sea piling and open sea construction required the use of large floating cranes for installation of the roof structures. All construction had to be executed in a safe and efficient manner. Adding to the challenges, care had to be taken to preserve the island's thriving biodiversity, which risked being destroyed by the construction of Semakau Landfill.

7. In line with Singapore's focus on maintaining a clean and green environment, a strict process was put in place to ensure that incineration ash is landfilled properly, and any displaced seawater is treated before being discharged into the sea.

8. The far-sighted and meticulous efforts of our Semakau pioneers have paid off. Today, the marine ecosystem on and around Semakau Landfill is teeming with marine life such as sea anemone and barracuda. Varieties of birds, such as the endangered great-billed heron, have made Semakau Landfill their home. Mangrove saplings planted on the northern tip have grown into forests and act as bio-indicators. Semakau Landfill is truly a symbol of sustainability and an attraction by itself. It serves an educational role in raising public awareness on waste management, biodiversity conservation and sustainable development.

9. In fact, various projects and businesses are located on and around Semakau Landfill today. A micro-grid was installed on Semakau Landfill in 2016, which converts sunlight and wind into electricity. And part of the sea space nearby is being used as a fish farm to rear barramundi.

H.J. Sabbagh Award for Excellence in Engineering Construction

10. Just last month, NEA was awarded the 2019 Hassib J. Sabbagh Award for Engineering Construction Excellence by the World Federation of Engineering Organisations, for its outstanding engineering feat in the development of Semakau Landfill. This prestigious international award affirms NEA's efforts to leverage technology to manage our country's waste effectively and sustainably.

Looking to the Future of SL

11. Even as we celebrate our achievements, we must plan for the future. Today, we send more than 1,400 tonnes of incineration ash, and slightly more than 600 tonnes of non-incinerable waste, to our landfill each day. If we do not reduce the amount of waste we throw away, our only landfill will be full in 2035 — in just 16 years. That is not too far away. This highlights the urgent need to Save Semakau and find ways to extend its lifespan beyond 2035.

12. To this end, my Ministry has set an ambitious waste reduction target — to reduce the amount of waste sent to Semakau Landfill by 30 per cent, by 2030. A suite of initiatives was announced under Singapore's inaugural Zero Waste Masterplan to achieve this target. These include a new Resource Sustainability Act — a legislative framework which targets the management of three key waste streams, namely e-waste, food waste and packaging waste, including plastics. We are also converting residue from waste incineration into useful construction material, which we call "NEWSand". This will help close our waste loop, reduce the waste residues landfilled and further extend the lifespan of Semakau Landfill. We will need to continue to leverage on technology and adopt the same dogged determination, boldness and innovative mindset to save Semakau and in the process also fight climate change!

13. However, the Government's efforts alone will not be enough. Extending the lifespan of our only landfill requires a whole-of-nation effort involving the Government, industry, community, households and individuals. I am very heartened to see representatives from various community groups, nature groups, ground-up initiatives, as well as members from MEWR's #RecycleRight Citizens' Workgroup present here. Today is not just a celebration of Semakau Landfill's past and present, but also an opportunity for us to celebrate our nation-wide zero waste efforts as we look to the future.

Conclusion

14. Semakau Landfill is a shining example of how waste management can be done in an environmentally sustainable way. Drawing on the inspiration of Semakau Landfill, I strongly encourage everyone to continue our 3R efforts to reduce waste generation and disposal. It is only by working together that we can save our only landfill.

15. Thank you and I wish you a pleasant afternoon ahead.