

**SPEECH BY GUEST OF HONOUR, MR DESMOND LEE, SENIOR MINISTER OF STATE FOR HOME AFFAIRS AND NATIONAL DEVELOPMENT, AT THE ASIA PACIFIC CENTRE FOR ENVIRONMENTAL LAW (APCEL)'S 20<sup>TH</sup> ANNIVERSARY CELEBRATIONS, HELD ON 10 NOV 2016, AT 9.10 AM, NUS ALUMNI HOUSE AUDITORIUM, NUS**

Honourable Justices,

Distinguished Professors,

Ladies and gentlemen,

1. A very good morning to all of you. My warmest congratulations to the faculty, staff and students of the Asia Pacific Centre for Environmental Law on the occasion of your 20<sup>th</sup> anniversary!

2. APCEL has helped Singapore build up capacity in the field of environmental law. You have also established a wide network of contacts and information resources in international, regional and national environmental policy. This has helped us to strengthen and deepen our understanding of environmental issues and our competence in dealing with them when they arise.

3. Environmental issues have become more prominent in the policy discourse of many countries, including Singapore, as well as at international organisations. In fact, a couple of weeks ago I was at Quito for Habitat III, it was refreshing to have, as one of the side events, a dialogue by UNEP on housing and sustainable development where many of us focus on biophilia and being a biophilic city. The room was packed with people, and it was nice to have it in the biodiversity capital of the world – in Ecuador. It was a refreshing discussion amid a lot of talk about development, good to talk about how greenery and the protection of greenery within the cities can make a difference to the quality of life for people.

4. Being at the forefront today, better late than never, given the serious challenges posed by climate change. So, for example, in recent times we have seen the setting of 17 important Sustainable Development Goals at the UN, and the coming into force of the Paris Agreement on Climate Change just last week, on 4 Nov. These are important collective efforts taken at the global level to try to address critical global issues of our times.

5. Let me bring the focus back to Singapore. We are a small city-state, very urbanised. In fact, by the end of the 1880, we had lost some 90% of our primary rainforest cover, even before the turn of the century. And we have one of the highest population densities in the world.

6. So, when we say Singapore is green, or aspires to be green, just what do we mean by that? People from overseas looking in, tend to wonder. There are two major dimensions to this. The first is our push to build 'green' and to live 'green', and the second is our aspiration to be a City in a Garden. Let me briefly sketch these two aspects of green Singapore out, so our friends from abroad have some local context as you hold your seminars and discussions these few days at APCEL.

### **Building and Living Green**

7. As I have mentioned, the Paris Agreement recently came into force. It is a comprehensive and historic agreement to curb the world's greenhouse gas emissions. And Singapore will play our part. We target to reduce our emissions intensity by 36 percent off 2005 levels by 2030 and to peak by then. This is a commitment to grow our economy more sustainably as we should, at more than one-third less emissions for every dollar of GDP that we have agreed to generate. This is an ambitious target, but we have plans to meet our commitments and we will keep our word.

8. As an urban centre, our buildings contribute around a quarter of Singapore's emissions. In other countries it may vary, depending on your industry mix. But for us, buildings are an important target that we have to work on in order to fulfil our Paris commitments. We need to build and run our buildings – both new ones as well as retrofitting old ones, with fewer resources, to reduce their emissions. This is what we mean by "building green". Building green is critical for a highly urbanised city-state. We have set an ambitious target, to green 80% of all buildings here by 2030 and we will keep pushing.

9. We also aspire to have new low-rise and mid-rise buildings become net energy producers. High-rise buildings are a bit more difficult but at least very low energy or energy neutral. NUS recently did ground breaking for a new zero-energy building project at the School for Design and Environment, and that will be our first such prototype in an academic institution – that bodes well for translational research and application in industry. The fact that many companies were invested, and donated to this project, speaks volumes about the mind-set of our building sector industry in wanting to participate actively in building green. These will play a big part in meeting our climate commitments.

10. In tandem, we are also pushing for greater use of renewable energy in our estates and neighbourhoods so that ordinary people with an eco-conscience can play their part and to “live green”. We do this by introducing green features, such as solar panels, rainwater harvesting systems and green roofs, in our public housing estates.

11. There are of course limits and constraints. Many people think that we have a lot of rooftop space, the reality is not so, because tall buildings shield the roofs of shorter buildings, and there are competing demands for roof space, so solar deployment is necessarily constrained. We also clearly do not have land to support solar farms within Singapore. But we try to innovate, we try to think out of the box, so we decided recently that we can introduce solar PVs in our water catchment areas. Our pilot project was just launched recently, at Tengah Reservoir in the north-west of Singapore, and it is the world’s largest floating solar PVs, in probably the only city-state in the world. That is living green and building green – an often neglected aspect in the push for environmental consciousness.

### **City in a Garden**

12. The more tangible aspect of being green would be our aspirations to be a City in a Garden. At a time when many cities around the world – especially in the developing world, were concrete jungles with glass and steel, concrete and asphalt, our Founding Prime Minister made a big push from the 1960s despite many other pressing demands on our resources to weave greenery intensively into our cityscape, and not notionally, and by doing so had seared it into our urban-planning DNA.

13. So we have an intricate and established matrix of greenery throughout Singapore today, not just intricate and established but mature – nature reserves, parks, park connectors, nature-ways and other green spaces – significant green-cover over almost half of Singapore, and of course now skyrise greenery as well.

14. But beyond urban green which gives a sense of calm and reflection to otherwise tense urbanites, we are also a biophilic city – or biophilial as one of our former NParks colleagues had recently coined, a biophilic city or biophilial city with a wealth of biodiversity, is a surprising fact that few would expect in a small city like ours. Some are endemic to Singapore – found here and nowhere else, and we are incredibly proud of these species that we have discovered, while many are critically endangered, making them all the more precious.

15. Protecting our natural heritage for future generations is therefore especially vital for Singapore. NParks’ Nature Conservation Masterplan, however, goes beyond the traditional

identification and protection of nature reserves, nature areas and of course our latest marine park which we are all very proud of. For us, nature is never far away from the city, so in other countries with lots of land, you will gazette large reserves away from your cities in the outskirts, and have them protected. That is the luxury that large countries have – to protect large tracts of beautiful biodiversity. But this is not, unfortunately, what we can do in Singapore, so conservation has to embrace community participation and stewardship. When we talk about a biophilic society, it means the community actively playing their part alongside the Government and other interested NGOs to protect what little we have. This is a vital aspect that permeates a large part of our nature conservation masterplan.

16. You will see our species recovery and habitat enhancement work involving nature groups, volunteers and academic institutions. It is not just lip service, these working groups are serious work, whether it is for the Sunda pangolin, whether it is for the Raffles banded langur, or the banded leaf monkey, or for the freshwater crabs – the *Johora singaporensis*, there are dedicated work groups that pay a lot of attention and take this professionally.

17. Schools and members of the community are also roped in to help us with conservation work through citizen science, and with the benefit of technology, we hope this would reach into the app list, into every pocket, in every phone, or as many Singaporeans as possible. So with technology we are able to at a high level do agent-based modelling, we are now able to prove using science and technology where the source of mangrove propagules are and where the sink is, and therefore justifying our plans for conservation. But at the ground level, we have applications that allow ordinary citizens with some interest piqued in the environment to be able to report sightings, species types and actual numbers, and that will help NParks with crowdsourcing, with a better sense of the spread and the locality and the context of biodiversity.

18. We have also recently launched a Friends of the Park programme. We came up with this programme as NParks colleagues and I were walking through some damaged parts of our primary rainforest, we were very disturbed, and our instinct was let's call a tender and get some contractors to come in and fixed these areas, but we resisted it, and thought let's get the community – especially those responsible for the damage, to come back, and work with us in a non-judgemental way to heal the rainforest and to work with us, to bring the community to support it. And so the Friends of the Park programme, where we bring various stakeholders such as nature groups, heritage enthusiasts, sportsmen, cyclists, artists, brisk walkers and other park users to come together to celebrate, activate and ultimately protect and champion our reserves, nature areas and parks.

19. And NParks is going upstream: working with pre-schools as well as our primary and secondary schools to promote environmental awareness and education at an early age. We did a pilot this year, the results were good.

20. As our city grows, develops and transforms, the challenge to be “green” in all senses of the word grows and becomes harder. For instance, we can “green” more of our buildings and deploy technology to reduce water and energy usage and wastage, but the age old question is – how do we shift people’s mindsets to better conserve resources on a daily basis. It is not rocket science, we can get caught up in talking about technology – but well that is the challenge since the dawn of time.

21. In Parliament yesterday, there was a call once again for supermarket chains to charge for plastic bags, it was a spirited discussion led by an MP who is working for ACRES, who asked, do we need to regulate, or can we use education and people will be persuaded to do the right thing.

22. While building industry, housing and infrastructure to transform our city, there will sometimes be pressure on our precious natural heritage, because for us, the city envelopes nature, whereas in other places the environment envelopes urban centres. Some environmental partners with whom we work closely have suggested to us ideas on how to better improve and adapt and enhance the way we assess and manage these intersections and interfaces, given our unique city context. And we are in conversation with them on these ideas to see if they enhance our role as stewards and custodians of our heritage.

23. In a small city-state, the constraints are real. Sometimes trade-offs cannot be avoided. But we strike a balance and get all stakeholders involved in one room to grow sustainability and maintain a liveable environment, and because this City in a Garden is all that we have.

24. I wish all of you a fruitful discussion this morning. Thank you.