

Introduction

Good morning, it is my pleasure to be here at the Opening of the First Meeting of the Global Platform for Sustainable Cities. I am delighted to know that Singapore is hosting this notable conference and hope that we can be a good example of a sustainable city.

2 Singapore was not always like this. In the 1960's and well into the mid-to-late 70's, Singapore was much like many other developing countries of that time – dirty and polluted, many parts of the country were without proper sanitation and infectious diseases were a significant part of the landscape. We were very fortunate that we were able to make progress over the decades to become the clean, green and sustainable Singapore of today. How did we do it?

3 In a nutshell, I would summarise our success factors as (1) Good leadership, (2) Long term planning and steady execution, (3) Use of technology and best practices.

The Clean-up of Singapore River

4 Let me illustrate the contribution of these factors by sharing with you the example of the clean-up of the Singapore River. Indeed, I could have chosen many other examples such as public housing, urban planning, waste management, air quality, land transport – the list goes on – but I only have time for one. I believe it will be illuminating.

5 First leadership. The vision of a clean Singapore River running through the heart of our city centre was the idea of our founding prime minister, the late Mr Lee Kuan Yew, who had the vision of building a modern metropolis that is sustainable and which all Singaporeans could be proud of. While the terms used may have been different, he had sustainability in mind before it became fashionable.

6 He pointed out that Singapore's sheer smallness forced us to work, play and live together on one small island. There would be no suburb or country side to withdraw to, and any dirty or polluted place would inevitably be in someone's face. Therefore, he placed great emphasis on building a clean and green city, both to help give Singaporeans a sense of social equity in the public spaces that we share, and to make Singapore an attractive destination for businessmen and tourists.

7 In 1977, he threw the challenge to clean up the Singapore and Kallang Rivers in 10 years to the state where fishing is possible. It was a monumental task considering that the Singapore and Kallang Rivers were urban rivers that were badly polluted. They were dumping grounds for rubbish, food waste, and even human waste, in other words, they were open sewers.

8 This leads me to the second factor of long term planning and steady execution. With Mr Lee's empowerment, officials were able to draw up radical plans and harness resources to execute them over many years. Pig farms were phased out and textile factories were relocated. Street hawkers were moved to newly built hawker centres with modern and hygienic facilities. Rubbish and flotsam were dredged and removed. The riverside was tiled and landscaping was also carried out. Within 10 years, the great clean-up was done and fish actually returned, but the water was not clean enough for the river to be tapped for water supply.

9 At that point, Mr Lee issued a further challenge that in another twenty years, with breakthroughs in anti-pollution and filtration technology, a barrage could be placed at the mouth of the Singapore River to create a giant reservoir within the city centre. This was already envisaged when the reclamation work was first done many decades earlier but not feasible then.

10 It took many years of pursuing the 3rd factor of technology development and best practices for this vision to be eventually fulfilled with the Marina Barrage. Built across the mouth of the Marina Channel, the Marina Reservoir is Singapore's 15th reservoir, and it is the most urbanised and largest one yet with a catchment area of 10,000 hectares, or one-sixth the size of Singapore. With reverse osmosis filtration, the water in the reservoir is now able to produce potable water to enhance Singapore's water supply. The Marina Barrage also doubles up as a comprehensive flood control scheme to alleviate flooding, and is a popular recreational space with many Singaporeans.

Singapore's Environmental Context and Challenges

11 We have come a long way, but going ahead, we still face many challenges. Let me outline Singapore's 3 most pressing environmental challenges to set the backdrop for our strategy of urban sustainability.

12 Firstly, with only slightly over 700 sq km of land and 5.5 million people, we have a population density higher than Hong Kong, Tokyo, London and most other developed cities. There is therefore a need for us to balance land use between many different needs such as housing, infrastructure, transport and recreational spaces. This calls for meticulous urban planning in order to keep Singapore liveable and sustainable.

13 Secondly, we have very few natural resources, making it vital that we have a strong conservation mindset to make full use of everything we have or import. The security of access to resources such as energy and water is not something we can take for granted. Hence, we have to ensure that the way we live is sustainable in the long run.

14 Thirdly, like many other low lying island states, Singapore is vulnerable to risks arising from climate change, such as rising sea levels, more volatile rain patterns and higher temperatures. We have been preparing for adaptation and, although we contribute to less than 0.2% of global carbon emissions, we are committed to reduce our carbon footprint as much as we can.

15 In June last year, we submitted our Intended Nationally Determined Contribution (INDC) to the UN Framework Convention on Climate Change, pledging to reduce our emissions intensity by 36% from 2005 levels by 2030. In December, we joined the world in concluding the Paris Agreement on Climate Change and look forward to its ratification and coming into force.

Sustainable Singapore Blueprint (SSB)

16 In response to these challenges, the Sustainable Singapore Blueprint (SSB for short) sets out our national vision and plans for the next phase of sustainable development until 2030. It encapsulates our belief that we can have a balanced approach towards attaining the twin goals of growing the economy and protecting the environment. We can have a very liveable and sustainable city while fully meeting our national needs for housing, transport and economic activity.

17 The SSB is also underpinned by the belief that care for our environment is a shared responsibility. Every Singaporean therefore has a part to play in realising a sustainable Singapore

18 We have set specific and tangible targets for each initiative to ensure that the vision will be realised by 2030, and we are largely on track to meeting them.

19 We adopted a ground-up approach for the visioning of SSB 2015. More than 6,000 Singaporeans were involved in the visioning exercise that converged around three themes: A Liveable and Endearing Home; a Vibrant and Sustainable City; and an Active and Gracious Community.

20 To better streamline and channel the efforts of all the agencies in Singapore, 5 focus areas were identified under the themes. Under A Liveable Home, we aim to create “Eco-smart” Endearing Towns, and a “Car-lite” Singapore. Under a Vibrant and Sustainable City, we are aiming to become a “Zero Waste” Nation and a Leading Green Economy. And all of these can only be built if we have a foundation of an Active and Gracious Community to make these visions a reality. I will briefly explain each of these 5 themes in the subsequent slides.

"Eco-Smart" Endearing Towns

21 The first focus area is “Eco-Smart” Endearing Towns. This is about

allowing Singaporeans to enjoy a better quality and more sustainable lifestyle by embedding smart technology and eco-friendly features into both our future towns and homes. Our next generation of public housing will be designed and built with sustainability in mind, maximising the natural elements like wind and shade, and minimising the energy and water loads of the buildings.

22 We are also building a high quality external living environment. We aim to provide lush greenery around all homes so that we can live up to being a “City in a Garden”. More green and blue spaces, parks and waterways, and community facilities are being provided, and they will be made nearer to homes. There is also on-going work to ensure a clean and healthy environment by reducing typical urban inconveniences such as litter and noise, and making sure we have clean and fresh air in all parts of the city.

"A Car-lite Singapore"

23 The second focus area is “**A Car-Lite Singapore**”. This means a city where public transport is the preferred choice because it is both efficient and convenient. While Singapore has been well known for having expensive cars and a long standing congestion pricing system, we have concluded that the future city has to be even less dependent on cars. As such, we are beefing up our public transport infrastructure by expanding rail networks and increasing the number of operating buses and trains. Our rail network will be soon be as dense as London’s, and we are growing the bus fleet and giving more priority to them over cars. To cope with our hot and humid weather, we are also making it more convenient to take public transport by creating better connections such as sheltered walkways and underground links to public transport nodes.

24 We are also providing other sustainable mobility options that will capitalise on our compact urban landscape. This involves creating a culture of walking and cycling. We are providing better cycling infrastructure for travel between and within towns, as well as a code-of-conduct for cyclists. The advent of personal mobility devices also offers other options for last-mile connectivity to public transport commuters. Culturally, we hope to put an end to the Singaporean love affair with the car, and if anyone must have one, then they should only use it occasionally.

Zero Waste Nation

25 The third focus area we are working towards is a **Zero Waste Nation**. As is typical for affluent urban economy, we generate a lot of municipal and industrial waste. At the broader level, we will use innovative engineering and technology to improve our infrastructure so that we can recover as much as possible from our waste streams, whether it is recyclables, metals or energy. One key future development is the building of an Integrated Waste Management Facility which will be able to treat and recycle more of our waste. This Integrated

Waste Management Facility will be unique in that it is co-located with a water reclamation plant to realise waste-water-energy synergies.

26 At the micro-level, we also need the community and companies to do their part in order to optimise these infrastructures and minimise unnecessary waste. We are working towards this by encouraging more environmentally responsible behaviour and promoting the 3Rs nationwide. One particular problem is food waste. Over the past 10 years, food waste has increased by nearly 50%, but less than 15% of it gets recycled. We have no overall system solution yet, so we are doing pilots at different scales to find the right way to deal with this. Our aim in the end is that there should be zero landfill. For that to happen, we will have to find ways to recycle even the ash that our incinerators produce and put it to some good productive re-use. This will require for the ash to be treated and rendered safe for use.

A Leading Green Economy

27 The fourth focus area is building a **Leading Green Economy**. This means that our companies should adopt more efficient and sustainable processes to optimise land and resource use as well as reduce environmental externalities, while also improving their bottom line. There are strategies being developed to reduce the resource and environmental impact of many economic sectors – industry, buildings, construction, land transport, shipping. There are also initiatives to encourage Singapore companies to adopt best-in-class sustainability practices, and these plans will also create more high quality green jobs in the process.

28 As we grow the green economy and create green jobs, we also aim to be among the leading cities in green innovation and deployment. One area we need to catch up in is renewable energy. We plan to raise the adoption of solar power in our energy system to 350 Megawatt Peak by 2020. Under this programme, solar panels will be progressively procured and installed on most if not all public housing blocks. We are doing the same for other public buildings and also experimenting with floating solar panels at our reservoirs.

Active and Gracious Community

29 Finally, for any of this to work, Singapore has to be an **Active and Gracious Community**. Our government can have all the engineers to build the infrastructure for urban sustainability, but it takes a motivated people to make it happen. To encourage a sense of shared responsibility, we are working to create more opportunities for non-government organisations to grow, encourage greater community stewardship for the environment, and inculcate a sustainable lifestyle from the schools and up. For a young country, we are seeing very promising signs, though we must keep working at it.

Conclusion

30 Our journey towards sustainable development is a challenging one. It will take years to implement the needed changes to both our physical and social environment that supports sustainability. As I said at the beginning, to succeed we need good leadership, long term planning and good technology. No secret formula – just a lot of hard work.

31 Thank you for letting me share about the Singapore sustainability journey today. I hope there is something in it that can be a help to you. Finally, let me wish you all a fruitful and enriching conference ahead and, for our overseas visitors, a pleasant stay in Singapore. Thank you.

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