

## **Detailed Notes for Conversation on “SG Green Plan 2030: Towards a Sustainable Future”**

Session Details: Thursday, 30 June 2022, 4.00 pm - 5.30 pm. Hybrid engagement co-organised by the Ministry of Education (MOE) and the National Youth Council (NYC) with 54 on-site participants at NTUC Centre and 142 virtual participants via Zoom webinar.

### **Introduction**

1. The host, Ms Evelyn Kuek, welcomed participants to “Conversation on SG Green Plan 2030: Towards a Sustainable Future” and introduced the panellists: Ms Gan Siow Huang, Minister of State (MOS), Ministry of Education (MOE) and Ministry of Manpower (MOM); Ms Leow Lay May, Director, Energy Division, Ministry of Trade and Industry (MTI); Ms Cassandra Yip, President of Student Energy NUS and People’s Association Youth Movement Council Member; and Ms Ondrea Wong, Deputy Chairman of Project Committee, Student Council ITE College Central.

### **Context Setting**

2. Ms Phyllis Pham, Deputy Director, Engagement Branch, MOE, introduced the Singapore Green Plan 2030 (Green Plan) to provide context for the session. She said that the Green Plan was launched to advance the nation’s sustainable development efforts and highlighted the pillars of Sustainable Living and Green Economy.

(i) Sustainable Living: The Sustainable Living pillar aims to encourage a green citizenry that consumes and wastes less, encourage a transition towards green commutes, and strengthen green efforts in schools. Ms Pham said that the MOE’s Eco Stewardship Programme comprised 4 “C”s: to incorporate sustainability concepts into the curriculum, enhance sustainability features on campus, encourage sustainability as a culture via a whole school approach, and leverage community partnerships to offer more environment-related learning opportunities.

(ii) Green Economy: Ms Pham said that the Green Economy pillar would leverage sustainability as an engine for jobs and economic growth by transforming Singapore into a leading centre for green finance and sustainability solutions. She said that Institutes of Higher Learning (IHLs) constantly refreshed their curricula to prepare students for upcoming opportunities.

3. Ms Pham said that everyone had a part to play in the Green Plan and encouraged participants to adopt green practices to preserve the environment for themselves and future generations.

### **Panel Discussion**

4. Ms Kuek opened the panel discussion by inviting the panellists to introduce themselves and to share one green initiative that they were passionate about.
5. MOS Gan shared about the Marymount Green Plan initiative, which included monthly tree planting events to encourage a green movement at the community level.
6. Ms Leow shared MTI Energy Division's plans for Singapore's energy transition from fossil fuel and natural gas to low carbon energy sources, such as hydrogen and solar power.
7. Ms Yip shared the Student Energy NUS Chapter and the Student Heroes in Environmental Leadership Development (SHIELD) programme as part of Earth School Singapore, which aims to champion environmental literacy in primary school students.
8. Ms Wong shared the ITE College Central student council's initiative to raise awareness, reuse and recycle single-use plastics on campus.

### **“Why is the SG Green Plan important to youths, and how might they benefit from the nation's overarching goals?”**

9. MOS Gan said that climate change and effects of global warming like hotter weather, heavier downpours and rising sea levels were real-world challenges that would affect Singaporeans' future survival and liveability. She emphasised that it was crucial for Singapore and the global community to work together to address these challenges.
10. MOS Gan explained that the Green Plan presented opportunities for the local economy, such as Singapore differentiating itself from other countries by moving into sustainable tourism, enhancing itself as a carbon trading and services hub, or becoming a centre for green finance.
11. MOS Gan said that companies should start investing in the future and set sustainable business goals to meet growing consumer demands for green products and services.
12. MOS Gan said that Singapore's path towards achieving net zero emissions by 2050 would entail strategic economic restructuring and changes in how we live and work in the future.

13. MOS Gan said that new job opportunities would be created in industries aligned with Singapore's sustainability goals, such as the transport, maritime and aviation sectors. She emphasised the need to develop green skills to seize these opportunities.
14. MOS Gan said that Singaporeans should be prepared for disruptions to their lifestyle, such as their choice of transport as Internal Combustion Engine (ICE) vehicles will be phased out in favour of Electric Vehicles (EV) that have a lower carbon footprint.

**“What opportunities are there in the green sector today?”**

15. Ms Leow said that the renewable energy sector (e.g., solar energy deployment, solar energy research and development (R&D), hydropower and geothermal projects) was very active, which provided opportunities for technical and electricity trading jobs within Singapore and regionally. She said that new jobs would also emerge due to emerging fields such as green finance, R&D for new technologies and carbon services.
16. Ms Yip, who is presently interning with Accenture Singapore in Sustainability Consulting, said that corporations ranging from large MNCs to SMEs were embracing sustainability. As such, these businesses were looking to hire candidates with a sustainability lens on top of their existing skills.

**“What is a green job, and how do you turn our jobs into a green job?”**

17. MOS Gan explained that green jobs referred to the greening of existing jobs. She said that while there were new jobs arising from emerging sectors, green jobs were also current roles that necessitated a shift towards a sustainability mindset and an awareness of future green trends to achieve environmental, social and governance (ESG) goals.

**“What do you think students can do to better prepare themselves for green jobs?”**

18. Ms Wong opined that the best way students could prepare themselves was by having a sustainability mindset in job seeking.
19. MOS Gan agreed that having a sustainability mindset was beneficial and encouraged students to be willing to learn on their own, outside of school and through on-the-job learning. She referred to the [Skills Demand for Future Economy](#) report and said that over 450 job roles across 17 sectors required green skills and that IHLs, polytechnics and ITEs had been keeping up to date with industrial demands and regularly refreshing their curricula.

20. Ms Leow added that with the greening of existing jobs, students could also pick up “adjacent skills,” such as learning what constitutes a green project and how investors could be attracted to support these projects. She said that the green economy was growing quickly, and what students learnt in schools would have to be supplemented with on-the-job training. She encouraged youths who were already working to explore courses to develop relevant skills via the Singapore Green Finance Centre.

21. Ms Yip also highlighted that companies were looking for candidates with soft skills such as being able to understand existing systems and change management and encouraged students to develop passion and curiosity about global green trends.

**"How do you address common apathetic sentiment, basically, individuals' and SMEs' efforts are a drop in the ocean if big corporations and governments don't take radical action?"**

22. Ms Yip advised that one should not be too quick to dismiss individual action as it could build momentum for systemic change. She shared her experience as a co-founder of the Student Energy Chapter in NUS, which provides undergraduates with opportunities to learn about the energy sector and said that students had resultantly been inspired to pursue sustainability-related roles as career prospects.

**“What happens when the Green Plan goals are not met by 2030?”**

23. MOS Gan said that it would be better to approach the Green Plan by asking if Singaporeans believed in why efforts were needed to reach each pillar’s goals. She mentioned that the Green Plan comprised bold and ambitious goals that could not be achieved by Government actions alone and necessitated the mobilisation of the community, corporations and individuals.

24. MOS Gan said that 2030 was not far away, and Singapore aimed to achieve net zero by 2050. She said other countries were also committed to shifting international and trading norms on carbon emissions and encouraged participants to work together to achieve goals beyond the Green Plan 2030.

**“Are you aware of algae biofuel? If you are aware, do you see a future in it?”**

25. Ms Leow responded that algae biofuel was one of the many different types of fuels and energy carriers (such as plant biofuel, hydrogen and ammonia) that global research institutes were looking into. She cautioned that while there was a future in alternative energy sources, there were also many uncertainties in assessing biofuels, and MTI

had to compare each type of fuel against other options in terms of cost efficiency and which would work best for Singapore's context.

**“What are some actions and efforts our ministries and Government agencies are taking to market the Singapore Green Plan as a whole of nation movement to youth, and better engage and involve youth in Government sustainability efforts?”**

26. MOS Gan highlighted that the Green Plan was widely distributed in mainstream and social media, and the low awareness of the Green Plan among youths could be due to a lack of interest. She said that more could be done to engage the wider youth population to care for the environment.

27. MOS Gan said that the Eco Stewardship Programme was implemented in primary schools, secondary schools as well as junior colleges/MI to encourage a sustainability mindset from a young age through the 4 “C”s of curriculum, campus, culture and community.

**“In order to become eco stewards, how can we better spread awareness to our students to reduce, reuse and recycle? How can they spread this to their fellow schoolmates?”**

28. Ms Wong explained that social media was one way to spread awareness to reach a broader audience, and ITE College Central utilised a social media campaign to raise awareness about single-use plastics. She said that the usage of social media could be complemented by deeper engagements, such as by organising face-to-face workshops to discuss the topic further.

29. MOS Gan suggested that competition and the subsequent rewards that came with it were another way to excite students about sustainability. For example, she cited a competition where students from Cedar Girls' Secondary School developed a concept of using banana skins as fabric. She said such competitions encouraged creative ideas and sparked students' deeper interest in environmental sustainability.

**“How can we also increase awareness and engagement in early education in primary schools and secondary schools?”**

30. Ms Yip also added that the Earth School Singapore worked with primary schools to teach children about sustainable development goals and brought them on field trips to experience wildlife and issues such as plastic pollution. She said that creating a connection to nature from a young age and providing platforms for students to

understand sustainability issues first-hand would inspire children to do more and hopefully “grow some environmentalists”.

**“When we switch to EVs, will the pros outweigh the cons?”**

31. Ms Leow highlighted that transitioning to EVs had resulted in savings in carbon emissions, and EVs were more efficient than ICE vehicles. She acknowledged that when weighing the costs and benefits of EVs, one had to look at the entire lifecycle of the car, such as how EV car batteries are disposed of. She said examining the lifecycle cost of deploying EVs was an area of further development and encouraged youths to enter the sector to help address the issue.

32. Ms Leow said that the move towards EVs had to be complemented by using renewable energy. She said that as Singapore moved towards net zero, carbon efficiency would improve over time as more low-carbon energy sources were deployed into the power sector.

**“Are there any more plans to increase the supply of renewable energy in Singapore on top of the Singapore Green Plan?”**

33. Ms Leow said that renewable energy refers to energy sources that can be infinitely produced in the environment, such as solar power, hydropower and geothermal energy. She said that current efforts to place solar panels on rooftops and reservoirs resulted in solar power accounting for about 8% of Singapore’s energy mix.

34. Ms Leow explained that in assessing other renewable energy sources, wind energy had low potential, and the Energy Market Authority (EMA) was studying whether geothermal energy might be a possible option. She said that presently, one consideration was to import electricity through the regional power grid, which would allow countries to trade electricity and result in decarbonisation within the region.

35. Ms Leow said that in the longer term, Singapore would explore importing renewable, low-carbon energy such as hydrogen and ammonia. She said that presently, the cost of renewable energy was high, but with more international collaborations and investments within this field, the costs would lower in the long term.

36. MOS Gan said that Singapore had faced similar challenges with water and was previously reliant on importing water. She said that NEWater emerged through R&D to produce drinkable water via salination, and new technologies today resulted in significant breakthroughs in Singapore’s water story. She said that Singapore’s

success in producing renewable water was admired by many countries, and she was hopeful the same success could be achieved with energy.

**“Singapore subscribes to the carbon credit system, which mainly uses forestry, which is a long-term solution to capture carbon. Instead of forestry, will we ever adopt other carbon capture methods for the short-term solution to capture carbon?”**

37. Ms Leow explained that carbon capture referred to capturing carbon dioxide from the air, and trees were one example of a means to capture carbon. She said there were new technologies that used certain membranes, chemicals or catalysts to capture carbon dioxide fumes, and certain sectors on Jurong Island were looking at direct air carbon capture using machines.

38. Ms Leow said that the present challenge was cost and how to identify a cost-efficient way to capture carbon dioxide fumes from the air. She said that further R&D was required to lower the costs of capturing carbon dioxide and storing or processing the captured carbon.

**“What will you say to participants to encourage them and drive more individual action?”**

39. Ms Wong encouraged participants not to be afraid to take the first step in leading others towards more sustainable practices and to be confident in what they do.

40. Ms Yip said that environmentalism was unique to everyone and encouraged participants to grow through their own journeys to become more well-rounded environmentalists.

41. Ms Leow encouraged participants to believe that individually, they could still make a difference. She said that as consumers, politicians and companies would heed their aspirations and opinions. She said that employees had the choice of which job sector to enter, while employers could make environmentally conscious choices at the workplace.

### **Closing Remarks**

42. MOS Gan reiterated that the Green Plan’s goals were achievable through the actions taken by all stakeholders. She acknowledged that challenges facing the environment would continue to evolve and called for Singaporeans to work together to address these issues collectively.

43. MOS Gan encouraged participants to seek purposeful jobs and bring a sustainability mindset to their job and company so that they would be able to create a positive impact on the environment throughout their careers.
44. Ms Kuek closed the session by directing participants to platforms, such as the Youth Action Challenge, Young ChangeMakers, and Youth Corps Leaders Programme- National Environmental Agency Youth for Environmental Sustainability edition, that allow youths to take action in areas that they are passionate about.

Notes recorded by the National Youth Council Youth Engagement Team