

## **AN URGENT CALL FROM SINGAPOREAN YOUTHS ON THE ENVIRONMENTAL CRISIS**

It has been two years since Prime Minister Lee Hsien Loong first acknowledged that climate change is a “life and death” issue. In those two years, however, the climate crisis and biodiversity loss have continued to exacerbate. Today, on 5 Nov 2021, designated as Youth Day at COP26, we reflect on Singapore’s progress in climate action. While we acknowledge that the government has released various initiatives and made progress on various environmental issues over the years, we know that our actions are still not yet where they need to be.

In a world ravaged by ecological loss and human-caused devastation, we must ask ourselves what more we can be doing for our home, and for this planet. If we truly want our “children and our grandchildren” to inherit a liveable future, just as PM Lee said, Singapore must and can do more.

It is undeniable that climate change and biodiversity loss are existential crises with far-reaching and world-changing consequences. But moments like this one also give us an opportunity to reflect on the values we want to hold on to, and the world we want to leave behind for our future generations. Singapore aims to honour the values of justice and equality. This means that our approach to mitigating the climate crisis must logically be rooted in these same values. We must ask ourselves: Are we truly doing enough? What is Singapore’s responsibility to our regional neighbours? What does an equal, just and inclusive climate-resilient Singapore look like?

Our sentiments in this statement are guided by these questions. Representing the voices of concerned youths, we set out key recommendations across six topics (emissions and carbon, nature and biodiversity, energy, corporate responsibility and finance, community empowerment and inclusion, economy and people) that we want to see greater action on. This is an unprecedented initiative, with environmental and climate youth organisations across varied interests coming together to collaborate for the first time.

This statement is also a call to connect with people who believe in a liveable future for Singapore. While a core set of individuals and organisations have come together to draft these recommendations, we hope that more groups and more people can join us in finding common ground to advance these goals. Even though we may differ on particular topics, the values that drive our advocacy are the same.

Since this is truly “one of the gravest challenges facing humankind,” we want to be a part of this conversation. We are highly aware that this is an issue with many trade-offs. As such, given the scale of the climate crisis, we want our decisions and choices to be more open and transparent. This is a matter that affects all of us, especially our generation and the ones to come. It is only right then, that we should be recognised as equal partners. We want to have a part in the choices Singapore ultimately makes.

COP 26 has been hailed as the world's best last chance to limit catastrophic climate change. As countries reckon with our collective future in Glasgow this month, we call on our leaders to boldly accelerate climate action, to redefine our relationships with nature, and to bring everyday Singaporeans, especially the younger generations, into the conversation.

We only have 9 years left to prevent irreversible climate change impacts. In this statement, we want to give Singapore a chance for a liveable future. We hope that whoever is reading this will seriously consider our recommendations.

And we call for individuals, organizations and leaders who care about giving us a liveable future, to stand with us too.

(The public can submit their support interest here: [tinyurl.com/isupportsgyouthcop26](https://tinyurl.com/isupportsgyouthcop26))

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## **OVERVIEW OF OUR RECOMMENDATIONS**

### **On emissions and targets.**

1. Peak emissions before 2025 and align with net zero by 2050, where our public sector takes the lead
2. Disclose Singapore's non-territorial ('Scope 3') emissions and work to reduce these emissions in line with net-zero by 2050
3. Increase participation and investments in regional mitigation measures

### **On nature and biodiversity.**

4. Protect remaining natural habitats
5. Ensure nature conservation efforts are well-established scientifically and are sustainable environmentally and financially in the long term
6. Implement structured and systematic approaches to manage divergent uses of natural spaces

### **On energy.**

7. Undertake more explicit and robust energy reporting and targets
8. Greater due diligence in new energy technological developments
9. Expanded engagements and participation of youths

### **On corporate responsibility and financed emissions.**

10. A ban on new fossil fuel and habitat destruction-related financing
11. SGX to mandate short-term and long-term targets for reaching net zero for SGX-listed companies and financed emissions for financial institutions

### **On community empowerment and inclusion.**

12. Respectful engagement with stakeholders such as the public and civil society
13. Support for a diversity of environmental projects
14. Climate and environmental education including on topics such as biodiversity conservation and indigenous studies to be robustly included as a central theme of formal education
15. To recognize and include narratives of sustainability from the indigenous communities

### **On economy and people.**

16. Progressive tax reform, including a higher carbon tax and carbon dividend
17. Protect workers in sunset industries and invest in good green jobs
18. Acknowledge global responsibility in contributing to the climate crisis

***Our full set of recommendations and statement can be accessed at:***  
***[www.tinyurl.com/sgyouthcop26](http://www.tinyurl.com/sgyouthcop26)***



## OUR RECOMMENDATIONS

### Theme 1: Emissions and Carbon

#1	Peak emissions before 2025 and align with net zero by 2050, where our public sector takes the lead
Elaboration	<ul style="list-style-type: none"> <li>• Singapore has stipulated clear targets to peak emissions by 65 MtCO<sub>2</sub>e by 2030 and to achieve 36% reduction in energy intensity by 2030 in its updated Nationally Determined Contributions (NDCs).</li> <li>• The government has further elaborated that Singapore is aspiring to halve our emissions from peak to 33MtCO<sub>2</sub>e by 2050, with a view to achieving net zero emissions as soon as viable in the second half of the century.<sup>1</sup></li> <li>• However, this has been identified by Climate Action Tracker as being critically insufficient and incongruent with the Paris Agreement target of limiting warming to 1.5 degrees.<sup>2</sup></li> <li>• Hence, we urge Singapore to take bolder action and aim to peak emissions earlier in 2025, and align with the latest climate science by the IPCC which requires global emissions to reach net-zero by 2050.<sup>3</sup></li> </ul>
#2	Disclose Singapore's 'Scope 3 emissions' and work to reduce these emissions in line with net-zero by 2050
Elaboration	<ul style="list-style-type: none"> <li>• In addition to territorial emissions, Singapore should monitor and disclose our 'Scope 3 emissions', especially given that Singapore engages in emission-intensive economic activities (shipping, aviation, sand for reclamation, export of petrochemicals), even if there are no binding international requirements to do so.</li> </ul>

<sup>1</sup> <https://www.nccs.gov.sg/media/publications/singapores-long-term-low-emissions-development-strategy>

<sup>2</sup> <https://climateactiontracker.org/countries/singapore/>

<sup>3</sup> <https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/>

	<ul style="list-style-type: none"> <li>On aviation and shipping specifically, Singapore is an aviation and maritime hub, accounting for 23%<sup>4</sup> of global maritime emissions<sup>5</sup> and 1.69% of global aviation emissions<sup>6</sup> in 2016. These are not counted under Singapore's NDCs.</li> <li>Despite certain efforts<sup>7</sup> made, we hope to see strong decarbonisation pushes in these two sectors, with the use of less carbon intensive fuels that are safe and stable for use, and with strong carbon abatement initiatives that do not rely on carbon offsets. If we do use carbon offsets, Singapore should set an allowable threshold for its use, choose only high quality carbon offsets, and publicly disclose our usage.</li> </ul>
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#3	Increase participation and investments in regional mitigation measures
Elaboration	<ul style="list-style-type: none"> <li>International and regional cooperation is key to advancing climate change because this issue is transboundary in nature. Singapore can be a key mover in the region for climate action and support.</li> <li>Land Use, Land-Use Change and Forestry (LULUCF) impact is very visible from haze impacts, and the CO<sub>2</sub> and methane emissions are huge from regional sources. Singapore should contribute and try to take leadership in regional mitigation efforts, potentially with the least marginal abatement costs.</li> <li>We hope that Singapore will continue to be ambitious on issues such as transboundary marine pollution, given the release of the ASEAN Regional Action Plan for Combating Marine Debris in the ASEAN Member States (2021-2025)<sup>8</sup>. We hope that Singapore can support efforts to encourage circular economies, the recycling of waste, and the managing of pollution and marine disasters.</li> <li>As a clean energy disadvantaged country, we also hope to see Singapore play a greater role in advancing progress on the ASEAN Power Grid.</li> </ul>

<sup>4</sup> <https://unfccc.int/sites/default/files/resource/Fourth%20Biennial%20Update%20Report.pdf>

<sup>5</sup> <https://www.iea.org/fuels-and-technologies/international-shipping>

<sup>6</sup> <https://www.atag.org/facts-figures.html>

<sup>7</sup> Sustainable Aviation Fuels (SAFs) are currently being considered for use in Singapore. SAFs are able to reduce emissions by 80% compared with jet fuel, but currently cost 4 times as much as jet fuel. Singapore is also voluntarily participating in the International Civil Aviation Organization's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). However, CORSIA is dependent on carbon offsets, which is not an ideal carbon abatement strategy. Very Low Sulphur Oils (VLSO) are currently supplied to ships calling to Singapore's port. However, there are concerns that VLSOs may be unsafe for use. There are 5 properties of VLSO that make it particularly hazardous and their spills can also cause great damage to biodiversity.

<sup>8</sup> [https://asean.org/wp-content/uploads/2021/09/FINAL\\_210524-ASEAN-RAP-Summary.pdf](https://asean.org/wp-content/uploads/2021/09/FINAL_210524-ASEAN-RAP-Summary.pdf)

## Theme 2: Nature and Biodiversity

#1	Protecting remaining natural habitats
Elaboration	<ul style="list-style-type: none"> <li>Over the years, Singapore's natural habitats, both terrestrial<sup>9</sup> and marine habitats<sup>10</sup>, have either been lost or affected by development.</li> <li>Despite this, we still have remaining natural spaces of significant conservation value, either because they have been spared by development, or because the habitat has regenerated over the years.</li> <li>These habitats are refugia for our remaining native biodiversity, and they provide significant ecosystem services to the environment and humanity.</li> <li>They also can serve as nature-based climate solutions, by sequestering carbon and protecting our coasts. Mature habitats are much better at providing these solutions, and destroying them would be counterproductive to our climate mitigation and adaptation efforts.</li> <li>The resilience of our ecosystem against extreme events and ecological collapse<sup>11</sup> is enhanced by protecting these relatively mature habitats, hence the retention of such existing habitats should be prioritised.</li> <li>These habitats, when retained, can serve as biodiversity banks and can support future restoration efforts. Hence, retaining and enhancing these mature, well-established habitats are more beneficial than restoring them - a process which takes a lot more time.</li> <li>However, many of these habitats are yet to receive sufficient formal protection:</li> </ul>

<sup>9</sup> Turner, I. M., & Corlett, R. T. (1996). The conservation value of small, isolated fragments of lowland tropical rain forest. *Trends in ecology & evolution*, 11(8), 330-333.

Corlett, R. T. (1997). The vegetation in the nature reserves of Singapore. *Gardens' Bulletin Singapore*, 49(2), 147-159.

<sup>10</sup> 1. Hilton, M. J., & Manning, S. S. (1995). Conversion of Coastal Habitats\* in Singapore: Indications of Unsustainable Development. *Environmental Conservation*, 22(4), 307-322.

Lai, S., Loke, L. H., Hilton, M. J., Bouma, T. J., & Todd, P. A. (2015). The effects of urbanisation on coastal habitats and the potential for ecological engineering: a Singapore case study. *Ocean & Coastal Management*, 103, 78-85.

<sup>11</sup> Yachi, S., & Loreau, M. (1999). Biodiversity and ecosystem productivity in a fluctuating environment: the insurance hypothesis. *Proceedings of the National Academy of Sciences*, 96(4), 1463-1468.

	<ul style="list-style-type: none"> <li>○ Currently, few marine spaces are formally protected: Sisters' Islands Marine Park, Sungei Buloh Nature Park Network (including the upcoming Lim Chu Kang Nature Park, Mandai Mangrove and Mudflat, and Kranji Marshes)<sup>12</sup>.</li> <li>○ Terrestrially, there is an extensive network of Nature Reserves and Nature Parks. But 2,700 ha<sup>13</sup> of forested land is potentially slated for development.</li> <li>● Such protection includes setting aside spaces for conservation purposes, as well as enhanced legislation and other efforts to protect the natural and cultural heritage within these sites. We hope Singapore can: <ul style="list-style-type: none"> <li>○ Protect remaining forested areas. <ul style="list-style-type: none"> <li>■ This includes habitats that have regrown over time, allowing the re-establishment of native biodiversity, such as Clementi Forest<sup>14</sup>.</li> </ul> </li> <li>○ Protect or conserve 30% of our blue spaces by 2030, in line with global targets<sup>15</sup>. <ul style="list-style-type: none"> <li>■ Conservation of blue spaces can be prioritised as highlighted by the Singapore Blue Plan 2018<sup>16</sup>.</li> </ul> </li> <li>○ Amend existing legislation and administrative practices to protect marine habitats to address ambiguity in the following areas: <ul style="list-style-type: none"> <li>■ Overfishing (E.g. Species and quantities permitted for commercial and recreational harvesting)</li> <li>■ Pollution from coastal and marine activities (e.g. Regulate indiscriminate disposal or abandonment of fish gears).</li> <li>■ Enhancing the protection and regeneration of our wildlife (including intertidal, aquatic, coastal and marine species). <ul style="list-style-type: none"> <li>● E.g. To ensure that all illegal wildlife trade entering Singapore and in transit is not overlooked by the lack of specification.</li> </ul> </li> </ul> </li> </ul> </li> </ul>
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<sup>12</sup> <https://www.nparks.gov.sg/gardens-parks-and-nature/parks-and-nature-reserves/sisters-islands-marine-park>, <https://www.nparks.gov.sg/news/2020/8/new-sungei-buloh-nature-park-network-to-expand-singapore's-natural-capital-along-our-northern-coasts-as-part-of-efforts-to-make-singapore-a-city-in-nature>

<sup>13</sup> Our Wild Spaces Report: [https://drive.google.com/file/d/1T6NiCXE\\_JqjurGJFIKmpkBJaY3eXHURo/view](https://drive.google.com/file/d/1T6NiCXE_JqjurGJFIKmpkBJaY3eXHURo/view)

<sup>14</sup> Yee, A. T. K., Chong, K. Y., Neo, L., & Tan, H. T. (2016). Updating the classification system for the secondary forests of Singapore. Raffles Bulletin of Zoology.

<sup>15</sup> <https://ukcop26.org/nature/>, <https://www.cbd.int/convention/>

<sup>16</sup> <https://singaporeblueplan2018.blogspot.com>

	<ul style="list-style-type: none"> <li>• E.g. To explicitly include aquatic and marine wild animals (including invertebrates) in the definition of 'wild animals' in Wild Animal and Birds Act.</li> </ul>
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#2	To ensure nature conservation efforts are well-established scientifically and are sustainable environmentally and financially in the long term
Elaboration	<ul style="list-style-type: none"> <li>• Singapore has made notable efforts in using science to inform or back up policy decisions in managing and conserving our blue and green spaces. However, we feel that these efforts can be further strengthened by:</li> <li>• Having greater transparency and accountability in environmental governance. <ul style="list-style-type: none"> <li>○ Increasing access to data regarding conservation efforts. <ul style="list-style-type: none"> <li>■ For example, more data relating to the sapling survivability, rationale for the choice of location and species of saplings can be provided for the OneMillionTrees initiative.</li> <li>■ The Environmental Impact Assessment (EIA) process should also be more public to enhance accountability, such as making it accessible online to facilitate public participation and feedback.</li> <li>■ Give researchers enhanced access to sensitive nature areas.</li> </ul> </li> <li>○ Establishing a formal, streamlined process to share data. <ul style="list-style-type: none"> <li>■ This can be done through the creation of a public database as a one-stop portal to provide public access to components of biodiversity and environmental data.</li> <li>■ Non-sensitive data, such as water quality and EIAs, can be shared for public access to promote more efficient use of resources to monitor such baseline measurements.</li> <li>■ Other data can then be shared more selectively to researchers and other stakeholders via restricted access or other means. This can include relevant information such as past studies from government agencies or related projects that should be made available to scientists and stakeholders.</li> </ul> </li> </ul> </li> <li>• Further supporting habitat restoration and enhancement efforts in the long term.</li> </ul>

	<ul style="list-style-type: none"> <li>○ Continued intervention, such as regular and long-term assessments, is necessary<sup>17</sup> after the completion of such projects to validate the success of said projects.</li> <li>○ This information can also help to identify potential impacts and develop strategies that can strengthen the nation's environmental management.</li> <li>○ Such long-term support measures can come in the form of: <ul style="list-style-type: none"> <li>■ More diversified and committed funding model with research institutions, industries and private sectors to ensure sustained habitats and projects monitoring.</li> <li>■ More committed, long-term partnerships with research institutions.</li> <li>■ More opportunities to engage community stakeholders for shared responsibility in restoration and enhancement projects.</li> </ul> </li> <li>● Strengthening research efforts to better monitor and manage the impacts of development, such as: <ul style="list-style-type: none"> <li>○ Strengthening the Ecological Profiling Exercise to include more taxa, such as butterflies and herpetofauna.</li> <li>○ Making the EIA process more robust, by: <ul style="list-style-type: none"> <li>■ Ensuring that the scope and content of the EIA meet or exceed applicable international standards.</li> <li>■ Including coastal and marine spatial planning as part of the Integrated Urban Coastal Management framework.</li> </ul> </li> </ul> </li> </ul>
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#3	To implement structured and systematic approaches to manage divergent uses of natural spaces
Elaboration	<ul style="list-style-type: none"> <li>● Our natural habitats are vulnerable to impacts arising from developments and activities that take place in surrounding areas. The green and blue spaces have also offered communities, agencies and industries various opportunities for research, recreation and commercial purposes.</li> <li>● Promote multi-stakeholder cooperation in the management of green and blue spaces, through more regular engagement efforts by setting up working groups and committees.</li> </ul>

<sup>17</sup> <https://www.nparks.gov.sg/about-us/city-in-nature>

	<ul style="list-style-type: none"> <li>○ This should include more cross-agency collaborations, since the use of natural spaces is managed by various government bodies.</li> <li>○ A good example is The Technical Committee on the Coastal and Marine Environment (TCCME), which was set up to address multi-sectoral use of Singapore's coastal and sea-space resources to balance development, navigation, public health and conservation goals.<sup>18</sup></li> <li>● Inclusion of more diverse voices in stakeholder discussions <ul style="list-style-type: none"> <li>○ For example, we should recognise and respect the traditions of Singapore's indigenous peoples by giving them a seat at the table. This can be achieved by establishing a working committee, ideally consisting of key island stakeholders such as indigenous communities and ex-islanders, to regularly discuss strategies for the islands' development that incorporates the conservation of the islands' natural and cultural heritage.</li> <li>○ This can also be done for TCCME where more relevant stakeholders, like more universities and updated relevant agencies, could be included.</li> <li>○ More opportunities for public sharing of key findings of conservation projects as a key output for research projects with the agencies, through committees like TCCME or otherwise.</li> <li>○ Expanding on existing efforts to engage public stakeholders in stewardship of our natural spaces, through stakeholder meetings and initiatives like Friends of the Parks, Youth Stewards for Nature, BioBlitz and other Community in Nature initiatives.</li> </ul> </li> </ul>
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### **Theme 3: Energy**

<b>#1</b>	<b>Undertake more explicit and robust energy reporting and targets</b>
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<sup>18</sup> <https://www.cbd.int/doc/world/sq/sq-nbsap-v4-en.pdf>

Elaboration	<ul style="list-style-type: none"> <li>● The majority of carbon emissions in Singapore originate from energy use. Being a small island state with a naturally low capacity for renewable energy, Singapore will need to be innovative with low carbon technologies and economic relations to set more robust and targeted solutions. Such rigour will need to be facilitated by increased clarity on how Singapore's current energy and emission targets can be actualised.</li> <li>● Some key areas where reporting and targets can be improved include: <ul style="list-style-type: none"> <li>○ Expanded regional cooperation on renewable energy. <ul style="list-style-type: none"> <li>■ Because of Singapore's domestic limitations on renewable energy generation, it will have to look beyond its borders to achieve a high share of renewables in its energy mix. In contrast, ASEAN has substantial renewable energy potential which remains largely untapped, in part because of its lower levels of development. The ASEAN Power Grid, a proposed clean energy grid, is one such solution to develop clean energy in Southeast Asia. But it has received only lukewarm interest<sup>19</sup> from Singapore. In addition to several recently-announced bilateral deals to import electricity, Singapore should take a more proactive step in developing the ASEAN Power Grid.</li> </ul> </li> <li>○ Consistency with international standards regarding energy reporting. <ul style="list-style-type: none"> <li>■ Currently, Singapore's method of displaying energy data under "Singapore Energy Statistics"<sup>20</sup> is inconsistent with the International Recommendations for Energy Statistics (IRES). For example, energy demand statistics that are widely shown and discussed on the internet only focus on electricity and natural gas, where primary energy final demands of oil and petroleum products are omitted. While it is important to display clear and accessible infographics for the wider public without the granularity of the IRES, it is important for standard reporting methods of energy statistics to be also included in publicly released infographics and documents for more clarity and accountability.</li> </ul> </li> <li>○ Increased precision in energy sector statistics and target setting. <ul style="list-style-type: none"> <li>■ Currently, the supply and consumption of energy is classified into broad categories like "Households," "Buildings," "Transport" and "Industry". Some of these categories, such as households, are a relatively small proportion of Singapore's energy needs and are already</li> </ul> </li> </ul> </li> </ul>
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<sup>19</sup> <https://www.eastasiaforum.org/2020/08/24/singapores-energy-security-dilemma/>

<sup>20</sup> <https://www.ema.gov.sg/singapore-energy-statistics/Ch03/index3>



	<p>highly electrified, which means they should be low-hanging fruit to decarbonise. Ambitious and clear short-term targets should be set for such sectors. Other categories, such as industry, are still dependent on fossil-fuel based forms of energy, and whose emissions will be harder to abate. For these categories, long-term targets which eventually lead to decarbonisation should be set and outlined. A further breakdown should be provided in expanded reports and data sets on specific sectors in each category (i.e. Pharmaceuticals, Data Centers, Different types of manufacturing). A more precise statistical segmentation will bring further clarity on the different abatement potential and targets of individual industries, thereby improving the accountability of different energy consumers. This will also inform youths on the areas where possible solutions and innovations can be applied.</p> <ul style="list-style-type: none"> <li>○ Local scenarios and projections to map Singapore's energy futures. <ul style="list-style-type: none"> <li>■ Currently, emission targets have been proposed in the Nationally Determined Contribution and the Long Term Low Emission Development Strategy, along with qualitative descriptions of possible solutions. With the lack of additional projections and scenarios provided with clear abatement potential estimations for the different abatement pathways, it is difficult to get a sense of the magnitude of different solutions, what may be key to achieving our energy and emission, and with what degree of confidence. Having such estimates and projections be available will create a more meaningful platform for discussion and discourse over our energy future.</li> </ul> </li> <li>○ Expected electricity fuel mix in 2030 and expected generation capacity. <ul style="list-style-type: none"> <li>■ Singapore's electricity fuel mix has been made up of 95% natural gas for a period of time. While we are making strides to diversify our sources, it's uncertain whether our renewable energy ambitions aim to replace existing natural gas sources given the lack of official figures released for the expected electricity fuel mix or expected generation capacity by 2030. These figures would help civil society understand the direction our electricity generation is headed, and support work to reduce emissions from electricity generation.</li> </ul> </li> </ul>
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#2	Greater due diligence in new Energy Technological Developments
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Elaboration	<ul style="list-style-type: none"> <li>● As we move to a more advanced and sophisticated energy system, we are fed with a continuous barrage of solutions and innovations. And while we often take for granted that the innovative energy solutions will be more sustainable than the incumbent technologies, it is not always true depending on the much more complex life cycle of new technologies. Such topics are also generally less discussed in innovations in energy systems and we would want to see Singapore put together a strategy report, outlining ways to address these potential concerns. This will ensure better informed policies around new energy developments.</li> <li>● Some new technological developments that will need a greater degree of due diligence on environmental sustainability will include: <ul style="list-style-type: none"> <li>○ Natural Gas. <ul style="list-style-type: none"> <li>■ The vast majority of Singapore's projected electricity production comes from Natural Gas. While natural gas is positioned as the least carbon intensive fossil fuel in terms of combustion, there are other related GHG emission concerns. In terms of fugitive emissions, methane from oil and gas extraction and transport still accounts for 10% of the world's methane emissions. Also, additional energy is required for liquifying and transporting natural gas. As such, a conscious strategy of cooperating with upstream suppliers to ensure environmental due diligence should be shown.</li> </ul> </li> <li>○ Solar Energy. <ul style="list-style-type: none"> <li>■ The deployment of solar energy comes with issues regarding both critical resource depletion and the production of solar waste when the solar panels approach the end of life in due course. Sound strategies to ensure sustainable use of solar panels should be synthesised and communicated.</li> </ul> </li> <li>○ Electric Vehicles (EV). <ul style="list-style-type: none"> <li>■ EVs are lauded as one of the key clean development strategies in the most recent SG Green Plan. But while EVs are marketed to be less emission-intensive than their fossil fuel counterparts, it still ultimately incurs very significant emissions from electricity consumption and from the production of the vehicle. Limitations of EVs as a low carbon solution should therefore be clearly accounted for and benchmarked against lowest carbon transport options like public transport, bicycles, and shared mobility devices. Our priority should be to continue to encourage more Singaporeans to embrace a switch to such lowest emission transport options, and to bolster infrastructures for public transport and bicycles.</li> </ul> </li> </ul> </li> </ul>
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	<ul style="list-style-type: none"> <li>○ Hydrogen. <ul style="list-style-type: none"> <li>■ Hydrogen is one of the energy vectors that has recently garnered a huge amount of attention. Similarly, Singapore began to heavily investigate the potential use of hydrogen as an energy solution. However, just 1% of the hydrogen generated are from renewable sources, while the vast majority is still produced by steam methane reforming. Should Singapore pursue hydrogen as a clean solution, due diligence should be done to ensure that it delivers sound life cycle emission reductions, and is sourced from clean supplies.</li> </ul> </li> <li>○ Carbon Capture Utilization and Storage (CCUS). <ul style="list-style-type: none"> <li>■ Singapore has also started to seriously consider CCUS as one of the low-carbon strategies. Should the technology mature and Singapore begin to deploy them in the future, pitfalls especially regarding the integrity of carbon storage should be addressed with robust due diligence processes.</li> </ul> </li> </ul>
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#3	Expanded engagements and participation of youths
Elaboration	<ul style="list-style-type: none"> <li>● A big part of our energy transition relies on energy literacy. But there are a few key reasons for why general knowledge around energy systems and energy transition has a higher barrier to understanding.</li> <li>● Firstly, energy transition is not something that happens in direct sight. Power systems are operating behind mostly restricted premises. Additionally, energy resources like electricity and heat are not visible. Therefore, exposure to and education on energy transition must always be done with deliberate effort. Secondly, these topics tend to be both multi-faceted and technical, which means that it is difficult to gain an appreciation for energy issues and its prospective solutions. Thirdly, energy-related issues are highly complex and dynamic, meaning that the constant bombardment of new ideas and solutions are harder to distinguish from myths, if there is no constant, meaningful engagement.</li> <li>● The Singapore government has already indicated that it is important to go beyond the “whole-of-government” approach to a “whole-of-nation” effort to tackle climate change. We hope that youths can be seen as equally important stakeholders in these engagements.</li> <li>● With a difficult learning environment in mind, there should be more engagements with youth communities in an expansive and strategic manner. Some possible lines of action include:</li> </ul>

	<ul style="list-style-type: none"> <li>○ Developing energy literacy and interest amongst youths. <ul style="list-style-type: none"> <li>■ In a bid to engage more youths in the energy sphere, there are several programs already launched like the Energy Ambassador Programme, Youth@SIEW, and the Powering Lives Trial (PLT)<sup>21</sup>. These initiatives serve as a promising start to providing interested youths with important industry engagements. However, these are still very niche programmes and engagement with the wider youth community is still lacking.</li> </ul> </li> <li>○ Increasing access for youths to more domains in the energy sector. <ul style="list-style-type: none"> <li>■ Current energy transition is complex with many moving parts. Therefore, youths will require engagements not just with governments and utilities, but with players that are directly involved in the industry, investments, geopolitics, security, and frontier developments in the energy sector as well. The government can play a key role in building more networks for wider engagements.</li> </ul> </li> <li>○ Co-creation of energy plans. <ul style="list-style-type: none"> <li>■ In the EU, youths are actively involved in energy transition related consultations. For example, the OpenPolicy Europe initiative supported by European Youth Energy Network (EYEN) and European Youth Portal encourages the formation of networks between interested youths and key actors in the energy sector, while also sharing knowledge. The government can reach out to energy-focused youth groups in Singapore or create initiatives to get youths involved in our energy transition conversations and long-term plans.</li> </ul> </li> </ul>
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#### **Theme 4: Corporate responsibility and financed emissions**

<b>#1</b>	<b>A ban on new fossil fuel and habitat destruction-related financing</b>
Elaboration	<ul style="list-style-type: none"> <li>● To ensure financial and corporate responsibility on climate change, it must be noted that Article 2.1c of the Paris Agreement states the goal of "making financial flows consistent with a pathway towards low</li> </ul>

<sup>21</sup> [https://www.ema.gov.sg/Industry\\_Human\\_Capital\\_Development.aspx](https://www.ema.gov.sg/Industry_Human_Capital_Development.aspx)

	<p>greenhouse gas emissions and climate-resilient development".<sup>22</sup> To achieve this, finance must be brought in line with the 1.5 degree target set by the Paris Agreement.</p> <ul style="list-style-type: none"> <li>• However, finance remains far from achieving this goal. An IMF study revealed in October 2021 that the production and burning of coal, oil and gas were subsidised to the tune of \$5.9 trillion in 2020, or \$11 million every minute.<sup>23</sup> Similarly, another report also published in October 2021 found that, since the Paris Agreement, banks and asset managers have channeled \$119 billion in finance to 20 major agribusinesses linked to deforestation.<sup>24</sup></li> <li>• This makes clear that finance is still taking us further from, not closer to, the 1.5 degree target of the Paris Agreement. The approach taken by the financial industry on climate change, focusing on the risks posed by climate to the financial system (and not vice versa), and presenting green finance as an opportunity for further growth, is inadequate.</li> <li>• In Singapore, the major local banks (DBS, OCBC and UOB) have made some positive steps in their financing policies. In 2019, the three banks announced that they would stop new financing to coal projects, while DBS has also committed to net zero by 2050. However, this has not been extended to other forms of fossil fuels which, as the International Energy Agency outlines,<sup>25</sup> would need to cease in order to keep to a 1.5 degree target. A 2020 report by Rainforest Action Network also linked DBS to investments and financing in forest-risk commodity supply chains such as palm, soy, timber and beef, amounting to revenues of US\$15 billion.<sup>26</sup></li> <li>• What is needed are clear directives prohibiting the channeling of finance to highly-polluting and environmentally destructive activities. The appropriate measure to take would be a moratorium on financing towards new coal, oil or gas projects, as the International Energy Agency (IEA) outlines,<sup>27</sup> as well as a moratorium on financing towards projects linked with deforestation.</li> <li>• Institutional investors, such as sovereign wealth funds and universities with significant endowment funds, must also play their part by setting a clear timeline to divest their portfolios from assets that don't meet basic</li> </ul>
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<sup>22</sup> [https://unfccc.int/sites/default/files/english\\_paris\\_agreement.pdf](https://unfccc.int/sites/default/files/english_paris_agreement.pdf)

<sup>23</sup> <https://www.theguardian.com/environment/2021/oct/06/fossil-fuel-industry-subsidies-of-11m-dollars-a-minute-imf-finds>

<sup>24</sup> <https://www.ft.com/content/ff1eccc8-645a-497b-a02d-6eb38efe6219>

<sup>25</sup> <https://www.theguardian.com/environment/2021/may/18/no-new-investment-in-fossil-fuels-demands-top-energy-economist>

<sup>26</sup> [https://www.ran.org/wp-content/uploads/2020/03/RAN\\_Keep\\_Forests\\_Standing\\_vWEB.pdf](https://www.ran.org/wp-content/uploads/2020/03/RAN_Keep_Forests_Standing_vWEB.pdf)

<sup>27</sup> <https://www.theguardian.com/environment/2021/may/18/no-new-investment-in-fossil-fuels-demands-top-energy-economist>

	social and environmental thresholds, particularly those linked with fossil fuels and deforestation. This would rescind the social license granted by association to these destructive activities, while also shielding portfolios from the significant risk of assets stranded from the risk of climate change.
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#2	<b>SGX to mandate short-term and long-term targets for reaching net zero for SGX-listed companies and financed emissions for financial institutions</b>
Elaboration	<ul style="list-style-type: none"> <li>• We acknowledge the steps that Singapore has taken to green its financial system. This includes, amongst other measures, guidelines on Environmental Risk Management (ERM) and mandating climate disclosures by firms listed on the Singapore Stock Exchange. However, much more is needed in terms of both approach and ambition.</li> <li>• The current set of measures, focused on disclosures, must be complemented by a clear push towards net zero targets, which remain lacking among corporates and financial actors. This requires both a long-term target for businesses to reach net zero, and nearer-term plans to reduce emissions on an annual basis.</li> <li>• For financial institutions, their environmental footprint in their operations is relatively minor compared to the activities they finance. As a result, their Scope 1 and 2 emissions will not adequately account for their full environmental footprint. New metrics covering financed emissions, such as those by Partnership for Carbon Accounting Financials (PCAF), should be mandated. From these metrics, financial institutions must also be pushed to commit to net zero targets.</li> </ul>

### **Theme 5: Community empowerment and inclusivity**

#1	<b>Respectful engagement with stakeholders such as the public and civil society</b>
Elaboration	<ul style="list-style-type: none"> <li>• As stakeholders of the future, all citizens, including youths, should be meaningfully engaged to address the climate crisis together as a nation. The various stakeholder engagements conducted by the ministries as well as their statutory boards vary in their effectiveness. We want open and transparent consultations, with clear communication on the method of engagement, the process and the expected outcomes. An example of this is</li> </ul>

	<p>NCCS' 94-page document<sup>28</sup> responding to specific public comments. NCCS accepted feedback to make (unaltered) submissions available online. While we endorse and applaud such efforts, we would like to recommend several areas of improvement:</p> <ul style="list-style-type: none"> <li>○ To give a longer lead time of between 3 to 6 months for the public to respond to the call for public feedback. At hand, the lead time is about a month.</li> <li>○ To broadcast such feedback on other channels including social media, as well as making the content more accessible for the public.</li> <li>● Moving beyond public consultations, we would like to see more civic participation activities that are collaborative and empowering in nature. We recommend the approaches stated in the IAP2 Spectrum of Public Participation<sup>29</sup> developed by the The International Association for Public Participation (IAP2). As described in the IAP2 Spectrum of Public Participation, most public participation exercises in Singapore fall under the first three methods, 'Inform', 'Consult' and 'Involve'. It is high time that we give more space for the involvement of civil society in decision-making processes, a move that would require the government to see civil society as equal partners in the development of Singapore. This could take the form of citizen advisory committees to help co-deliberate policies, or citizen town halls that could decide on the policies to implement. We could also be more inclusive in hearing the views of a diverse range of Singaporeans, and veer away from valuing only certain voices, as often seen in closed-door consultations.</li> </ul>
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#2	Support for a diversity of environmental projects
Elaboration	<ul style="list-style-type: none"> <li>● The Singapore Green Plan is advertised as “a whole-of-nation movement to get every Singaporean on board; getting everyone motivated to help transform Singapore into a glowing global city of sustainability”. Yet, sustainability is understood in a limited and narrow sense, and certain sustainability projects and groups are highlighted, supported, and recognized, whilst others less so. There remain significant barriers in place for all types of sustainability projects to flourish, and more must be done to make space for a diversity of environmentally-focused projects to take form in their varied purposes and manifestations.</li> </ul>

<sup>28</sup> [https://www.nccs.gov.sg/docs/default-source/default-document-library/annex-for-singapore's-leds-public-consultation-response-\(final\).pdf](https://www.nccs.gov.sg/docs/default-source/default-document-library/annex-for-singapore's-leds-public-consultation-response-(final).pdf)

<sup>29</sup> [https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum\\_8.5x11\\_Print.pdf](https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x11_Print.pdf)

	<ul style="list-style-type: none"> <li>• A barrier is the lack of resource support. While support for environmental projects exists at different levels, many projects (e.g. social media awareness campaigns, faith-based environmentalism, sharing of indigenous stories etc.) may not be considered as environmental or sustainability-oriented and may fail to qualify. Furthermore, support from such grants or schemes are often contingent upon projects achieving tangible milestones and deliverables, when the impact of many sustainability projects cannot be directly quantified.</li> <li>• To allow for the emergence of a diverse range of environmental projects, voices and identities, it is imperative that the government: <ul style="list-style-type: none"> <li>○ Rethink what kinds of projects qualify for existing support/funding channels, and key performance indicators (KPIs) as benchmarks and requirements for support. The success of community and civic institutions formed around environmental efforts are not determined only by their quantitative outputs but also their qualitative benefits such as building social cohesion or community, and imparting values-based education. Additionally, within project benchmarks, we urge a recognition of positive impacts of projects to the localised or smaller identity groups, communities and neighbourhoods, rather than solely focusing on projects with impacts at a national-scale.</li> <li>○ Identify, safeguard and institutionalize the existence of alternative spaces for citizens to be empowered to test alternative ways of enacting sustainability in URA's land use plans.</li> <li>○ Reopen the Speakers' Corner again to allow events that adhere to social distancing regulations, like how other commercial events are allowed to happen. The Speakers' Corner serves as an important alternative space for voices to emerge, including voices for sustainability and the environment (Save the World's Saddest Dolphins 2011, Cross Island Line in 2014, SG Climate Rally in 2019).</li> </ul> </li> </ul>
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<b>#3</b>	<b>Climate and environmental education including on topics such as biodiversity conservation and indigenous studies to be robustly included as a central theme of formal education</b>
Elaboration	<ul style="list-style-type: none"> <li>• We "are still educating the young as if there were no planetary emergency"<sup>30</sup>. In an age where climate change is a major shaping force of the world, climate and environmental education (including topics such as</li> </ul>

<sup>30</sup> Orr, D. W., 2004. *Earth in mind: On education, environment, and the human prospect*. 2nd ed. s.l.:Island Press.



	<p>local biodiversity and conservation, human-wildlife conflict, indigenous studies etc.) must no longer be "an addendum to the core curriculum." It should be a central theme of learning for our students who are growing up in our current planetary emergency<sup>31</sup>. Our youths and future generations must be equipped and empowered with the knowledge of the world they are growing up into, in order to be relevant, adaptable, and resilient to the climate and environmental challenges Singapore will be facing. Furthermore, climate action for Singapore encompasses a whole-of-nation approach, which means that the success of this approach will hinge on a robust educational effort; our youths cannot care for a crisis they do not understand or know about.</p> <ul style="list-style-type: none"> <li>• Climate and environmental education in Singapore currently exists in disparate and uncoordinated pockets across different subjects, where delivery is at times ineffective because there is no explicit pedagogy for climate change education<sup>32</sup>. This has resulted in relatively few teachers and students being able to articulate the importance of climate change, and much of Singapore's students having incomplete<sup>33</sup> and incorrect<sup>34</sup> knowledge of climate change.</li> <li>• Effective climate and environmental education can be developed by addressing and considering the following three facets: <ul style="list-style-type: none"> <li>○ Active learning that is hands-on, experiential and inquiry-based. Climate and environmental education should not be a separate subject, but integrated into every subject across both the humanities and sciences, examining climate issues comprehensively through different lenses and via experiential learning methods. Positive examples include Commonwealth Secondary School, which has successfully integrated nature into their school compound and harnessed its power as an educational tool in every academic department.<sup>35</sup> MOE's Eco Stewardship Programme is a welcome step, but it must go further and beyond just discussing resource sustainability. It must address the climate and biodiversity crises and indigenous studies etc. and integrate such themes into all relevant</li> </ul> </li> </ul>
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<sup>31</sup> Young PAP, 2020. *Singapore: A Green Hub*. Singapore: Young PAP.

<sup>32</sup> Chang, C.-H. & Pascua, L., 2017. The curriculum of climate change education: A case for Singapore. *The Journal of Environmental Education*, 48(3), pp. 172-181.

<sup>33</sup> Chang, C.-H. & Pascua, L., 2016. Singapore students' misconceptions of climate change. *International Research in Geographical and Environmental Education*, 25(1), pp. 84-96.

<sup>34</sup> Chang, C.-H., 2013. Advancing a framework for climate change education in Singapore through teacher professional development. *HSSE Online*, April, pp. 28-35.

<sup>35</sup> <https://www.commonwealthsec.moe.edu.sg/imaginative-trailblazers/environmental-education>

	<p>subjects at every educational level, and commit to increasing time spent discussing such issues, as has been done for cyber wellness issues in Character and Citizenship Education<sup>36</sup>.</p> <ul style="list-style-type: none"> <li>○ Climate and environmental education must be intersectional, made personally relevant, and regionally and locally contextualized. A lack of intersectionality and criticality in examining climate change without a systemic, regional, and justice lens or without reckoning with prevailing narratives does a disservice by failing to address the social, developmental, and humanitarian implications of the climate crisis, which ultimately undermines its severity and urgency.</li> <li>○ Pedagogy and content training for teachers must be developed and provided. One positive example was NUS' Energy Studies Institute sharing<sup>37</sup> with 50 Pre-University Geography teachers in 2019 during the Pre-U H1-H2 Geography Syllabus Mid-Term Review briefing. However, training must go beyond ad-hoc, one-off sessions to select groups of educators, and should be institutionalized for all educators at all levels.</li> </ul>
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#4	To recognize and include narratives of sustainability from the indigenous communities
Elaboration	<ul style="list-style-type: none"> <li>● Though two-thirds<sup>38</sup> of the world's indigenous peoples live in Asia, many from these communities have experienced exclusion and marginalisation, and have not had their cultural identities recognised. In Southeast Asia, 150 million indigenous peoples face increasing challenges<sup>39</sup> due to rapid development, climate change, displacement and lack of recognition of their traditions and practices.</li> <li>● While we acknowledge the importance of science behind the growing sustainability movement, more efforts should also be taken in researching the knowledge and values of sustainability<sup>40</sup> within indigenous communities – for the opportunity to learn more about traditional agriculture, food security, and issues related to natural-resource management will be incredibly useful. These efforts are also imperative in recognising the</li> </ul>

<sup>36</sup> <https://www.straitstimes.com/politics/parliament-schools-to-devote-more-time-to-cyber-wellness-education>

<sup>37</sup> [Presentation to Pre-U Geography Teachers - Energy Studies ...https://esi.nus.edu.sg/publicationss/2019/05/27/pre...](https://esi.nus.edu.sg/publicationss/2019/05/27/pre-...)

<sup>38</sup> <https://www.un.org/esa/socdev/unpfii/documents/2014/press/asia.pdf>

<sup>39</sup> <https://www.responsiblebusiness.com/news/asia-pacific-news/indigenous-peoples-of-southeast-asia-reaffirm-their-rights/>

<sup>40</sup> <https://www.sentinelassam.com/editorial/indigenous-knowledge-for-sustainable-development-560611>

	<p>displaced communities of Singapore's early inhabitants, and documenting the lost traditions that they are no longer able to practice.</p> <ul style="list-style-type: none"> <li>• We can empower and recognize indigenous voices by: <ul style="list-style-type: none"> <li>○ Acknowledging the richness of culture, tradition and recorded/oral histories of the indigenous communities, with the inclusion of their extended narratives in formal education (e.g. social studies, geography, history, etc.) from the primary level.</li> <li>○ Including members of indigenous communities in consultations on environmental issues such as land reclamation and urban-planning that may have an impact on the practice of their cultural traditions.</li> <li>○ Supporting the preservation of indigenous cultures and their communities through nation-wide educational programmes on indigenous histories &amp; cultures, the funding of projects with similar aims, and the provision of necessary infrastructures and spaces to prolong the practice of their traditions.</li> <li>○ Fostering spaces that allow for the cross-over of knowledge between indigenous communities and other sectors of society (e.g. blue and green spaces, academic circles, conservation groups, educational organisations, etc).</li> <li>○ Supporting youth voices<sup>41</sup> that are advocating for indigenous communities by offering state-recognized platforms and partnering with relevant governing bodies to amplify their narratives and culture.</li> </ul> </li> </ul>
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### Theme 6: Economy and People

#1	Progressive tax reform, including a higher carbon tax and carbon dividend
Elaboration	<ul style="list-style-type: none"> <li>• One of the primary tools of climate policy that has been used by governments is carbon taxes. In Singapore, the price has been set at \$5 per ton, with Finance Minister Lawrence Wong stating that a higher price even beyond the originally slated \$10-15 level will be announced at the 2022 budget. A higher price, brought closer to the social cost of carbon, is much welcome. However, two considerations must be given due attention:</li> </ul>

<sup>41</sup> <https://www.instagram.com/oranglautsg/>

	<ul style="list-style-type: none"> <li>○ Firstly, this new price needs to be set at a sufficiently ambitious level. Authoritative studies provide a good benchmark for the range of prices required to keep to 1.5 degrees. The World Bank-supported High Commission on Carbon Prices proposes that US\$50-100 is needed by 2030<sup>42</sup>, LSE's Grantham Institute suggests a price of US\$145<sup>43</sup>, while the OECD provides a central estimate of US\$147<sup>44</sup>.</li> <li>○ Secondly, the distributional impacts of a higher price must be given utmost priority. This matters, not just from the perspective of equity and justice but also, for the perspective of its efficacy. A significant raise in the carbon price will generally lead to an increase in the cost of living, as it raises the costs of daily activities that depend on the release of carbon emissions. This leads to the possibility that the costs of climate change and decarbonisation will be front-loaded onto ordinary households and consumers. This will have regressive impacts on social inequality, and will risk significant political pushback. In order to ensure the long-term viability of an ambitious carbon tax, one appropriate policy instrument would be a form of carbon dividend, which redistributes the revenues from a carbon tax directly back to citizens, ideally at a higher proportion towards lower-income households.</li> <li>● Research on carbon tax policies around the world has also indicated that both the carbon price level and the use of carbon tax revenues have been diminished by lobbying from industry groups to protect heavily polluting sectors.<sup>45</sup> In light of this, we call on the Singapore government to hold extensive consultation sessions with the public, including green groups, on the revised carbon tax policy before the raised carbon price is announced at the 2022 Budget. Such public engagement from the government will be necessary for ensuring the effectiveness and the political viability of the carbon tax policy.</li> <li>● At the same time, climate policies do not only encompass carbon prices. The remaining toolkit of tax policies are also of direct relevance to climate change. How taxes are generated and how they are spent will determine who bears the cost and who benefits from decarbonisation.</li> </ul>
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<sup>42</sup> Stern & Stiglitz (2017) Report of the High Commission on Carbon Prices.

<sup>43</sup> Dietz et al (2018) The economics of 1.5c climate change, London School of Economics and Imperial University Grantham's Institute.

<sup>44</sup> Organisation for Economic Co-operation and Development. *Effective carbon rates 2018: Pricing carbon emissions through taxes and emissions trading*. OECD Publishing, 2018.

<sup>45</sup> Svendsen, G. T., Daugbjerg, C., Hjøllund, L., & Pedersen, A. B. (2001). Consumers, industrialists and the political economy of green taxation: CO2 taxation in OECD. *Energy policy*, 29(6), 489-497.

	<ul style="list-style-type: none"> <li>• The overarching tax regime, both in Singapore and globally, must also be reformed in order to tackle climate change in a just and equitable manner<sup>46</sup>.</li> <li>• Globally, the role of corporate offshoring has created numerous impacts that harm the conditions for governments to enact policies aimed at decarbonisation. Firstly, it takes away from government revenues, which enable the scale of investments needed for a green transition. Secondly, the wealth accumulated through corporate offshoring then enhances their ability to influence elections and regulations, both of which weaken the prospects for ambitious climate policy. Agreements are underway over a global minimum corporate tax regime<sup>47</sup>, and Singapore must help to support and enhance the ambition of such global efforts, in spite of its current and long-held policies which favour an approach of low corporate taxes. Domestically, Singapore can play a further part through measures such as wealth taxes, which dampen current levels of social inequality.</li> <li>• Reducing social inequality will help currently marginalised groups who will be disproportionately exposed to the impacts of climate change, while also reducing the disproportionate environmental footprints of wealthier social groups.</li> </ul>
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#2	Protect workers in Sunset industries and Invest in Good Green jobs
Elaboration	<ul style="list-style-type: none"> <li>• Given the undeniable reality that the petrochemical industry is a sunset industry, it is important for workers to protect themselves against unfair severance packages, and forced and/or sudden redundancies<sup>48</sup>. These can be combated with robust bargaining power capabilities. Unions and workers must have more agency to challenge such issues. Certain petrochemical companies have reportedly engaged in employment malpractice, including having managers<sup>49</sup> score workers' performance poorly in order to inconspicuously cut jobs. Reports such as this, if true, would be very concerning. It is not unreasonable to assume that suspect practices like these will probably affect workers of the lowest ranks. Additionally, if carbon taxes are to increase, businesses may attempt to pass on the costs to their workforce in the form of lower wages, benefits</li> </ul>

<sup>46</sup> Green, Jessica F. "Beyond Carbon Pricing: Tax Reform is Climate Policy." *Global Policy* (2021).

<sup>47</sup> <https://www.washingtonpost.com/us-policy/2021/10/30/biden-g20-global-minimum-tax/>

<sup>48</sup> <https://www.businesstimes.com.sg/energy-commodities/five-things-to-know-about-exxonmobils-singapore-layoffs>

<sup>49</sup> <https://www.businessinsider.com/exxon-managers-dub-some-employees-poor-performers-cut-staff-2020-7?r=US&IR=T>

	<p>or bonuses. These measures will disproportionately affect the workers who earn the least and whose jobs are precarious in nature (for example, contracted, technical workers). As such, it is important for workers to be able to sufficiently resist such unfair measures.</p> <ul style="list-style-type: none"> <li>• An important and valuable way for people to combat job redundancies would be to implement a minimum, living wage. As workers start to face more precarity with the changes in industry, these people must be safeguarded while they transition. Having a minimum wage will allow them to continue supporting themselves and their families without any concerns. Given a recent study<sup>50</sup> on the basic standard of living in Singapore, it is especially important that we seriously consider a minimum wage given the high costs. Beyond this, as climate change affects food security<sup>51</sup> more and more, food prices will increase, making the cost of living even higher. The world is changing and the people of Singapore must be more greatly protected.</li> <li>• More investment is needed in greener, more regenerative jobs. An increase in incentives and infrastructures is especially important in order to protect workers from the fossil fuel industry who are looking to transition. As our economy shifts, we must do more to protect the workers who will be most affected in order to alleviate their concerns and any material repercussions. The pandemic has exposed fault lines in multiple industries, with teachers' mental health<sup>52</sup> greatly affected and our healthcare system hurtling towards full capacity<sup>53</sup>. These point to a lack of support and infrastructure in these sectors. Given that these jobs in particular are green jobs, we must be putting a lot more resources into them.</li> <li>• Relatedly and more specifically, our public healthcare system must be seriously reformed in anticipation of more climate-related health problems. Health problems caused by climate change<sup>54</sup>, such as heat stress and mosquito-borne diseases will worsen and increase as the climate crisis exacerbates. This, coupled with Singapore's aging population, should reflect a serious need to expand our healthcare system in anticipation.</li> </ul>
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<sup>50</sup> <https://www.todayonline.com/singapore/parents-2-children-need-earn-about-s5800-6400-monthly-basic-standard-living-study>

<sup>51</sup> <https://www.channelnewsasia.com/singapore/climate-change-singapore-food-production-fish-eggs-1340266>

<sup>52</sup> <https://www.straitstimes.com/singapore/parenting-education/more-than-80-of-teachers-say-the-pandemic-has-hurt-their-mental-health#:~:text=SINGAPORE%20%2D%20More%20than%2080%20per.pandemic%20in%20a%20nationwide%20survey.&text=More%20than%2062%20per%20cent.irritability%2C%20inso mnia%20and%20recurring%20headaches.>

<sup>53</sup> <https://www.bloomberg.com/news/articles/2021-10-26/singapore-has-60-more-icu-beds-left-as-severe-covid-cases-rise>

<sup>54</sup> <https://www.straitstimes.com/singapore/environment/spore-at-risk-of-heatwaves-and-more-dengue-outbreaks-as-climate-change-worsens>

#3	Acknowledge global responsibility in contributing to the climate crisis
Elaboration	<ul style="list-style-type: none"> <li>As part of the global supply chain, Singapore is not an insignificant contributor to climate change-domestically and internationally. Singapore is the world's second busiest port. The quantity of aviation and marine fuel that we supply the world generates almost three times as much greenhouse gases as our domestic emissions<sup>55</sup>. As these emissions occur over international waters, they are not calculated as emissions from any single country and therefore, are not included in IPCC's calculation of Singapore's domestic emissions. Beyond this, corporations based in Singapore have been accused of causing transboundary haze<sup>56</sup>, investing in coal plants across Southeast Asia<sup>57</sup>, and even making land investments in Africa that devastate local livelihood<sup>58</sup>. Singapore is also the leading single-use plastic waste polluter on a per capita basis worldwide.<sup>59</sup></li> <li>Singapore's actions in developing countries render significant costs to large numbers of working-class people who live there. According to the Global Climate Risk index<sup>60</sup>, Myanmar, the Philippines, Vietnam, and Thailand are among the 10 countries in the world most affected by climate change in the past 20 years. Southeast Asia is one of the regions most heavily affected by the planet's rising temperature, and the impacts are being felt in the form of rising sea levels, increasingly extreme weather patterns, and intensifying heavy rainfall. As a result, every year since 2008, an average of 26.4 million persons around the world have been forcibly displaced by floods, windstorms, earthquakes, or droughts<sup>61</sup>. A sea level rise of 2 metres could displace 187 million people<sup>62</sup>. People who are displaced by such adverse environmental changes are also known as climate refugees.</li> </ul>

<sup>55</sup> <https://www.nccs.gov.sg/docs/default-source/default-document-library/singapore's-fourth-national-communication-and-third-biennial-update-repo.pdf>

<sup>56</sup> <https://www.straitstimes.com/singapore/environment/three-companies-with-offices-in-singapore-fingered-for-involvement-in-haze>

<sup>57</sup> <https://www.straitstimes.com/asia/se-asia/dbs-urged-not-to-fund-vietnam-coal-plant>

<sup>58</sup> <https://worm.org.uy/articles-from-the-worm-bulletin/section1/gabon-olams-industrial-oil-palm-plantations-deprive-community-of-sanga-of-access-to-safe-water/>

<sup>59</sup> <https://www.statista.com/statistics/1236953/single-use-plastic-waste-generation-per-capita-worldwide/>

<sup>60</sup> [https://germanwatch.org/sites/germanwatch.org/files/20-2-01e%20Global%20Climate%20Risk%20Index%202020\\_14.pdf](https://germanwatch.org/sites/germanwatch.org/files/20-2-01e%20Global%20Climate%20Risk%20Index%202020_14.pdf)

<sup>61</sup> [https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/621893/EPRS\\_BRI\(2018\)621893\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/621893/EPRS_BRI(2018)621893_EN.pdf)

<sup>62</sup> <https://www.newsweek.com/sea-rising-700000-land-187-million-people-displaced-1431411#:~:text=%22Such%20a%20rise%20in%20global.have%20profound%20consequences%20for%20humanity.%22>

	<ul style="list-style-type: none"> <li>Given the effects of our contributions to the climate crisis in Southeast Asia, Singapore should - along with other developed countries - do everything within our capacity to mitigate the climate crisis in the region. For example, Singapore should: <ul style="list-style-type: none"> <li>Limit our reliance on sand from our neighbours<sup>63</sup> and regularly reveal the sources of the sand we import<sup>64</sup> from.</li> <li>Have open, national conversations about accepting climate refugees from countries we have directly or indirectly wrought the most damage to. Along these lines, Singapore should consider signing the United Nations 1951 Convention Relating to the Status of Refugees or its 1967 Protocol of the same name.</li> </ul> </li> <li>Finally, Singapore should pay close attention to political developments with major ramifications for crucial environmental habitats in the region. We recognize that Singapore's impact and influence in the region has far-reaching environmental consequences. For example, the political crisis in Myanmar seriously threatens the country's climate and biodiversity as the progress made by the civilian government in improving its environmental regulatory framework is at risk of being undermined or even reversed under the military junta<sup>65</sup>. The Anti-Terrorism Law in the Philippines also puts Filipino environmental defenders at risk<sup>66</sup>. Political developments do not just concern relations at the inter-state level, but also in the economic activity that flows across borders. For example, in Indonesia, the passing of the Omnibus Bill<sup>67</sup> also affects the deforestation activities of Singapore companies based there.</li> </ul>
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<sup>63</sup> <https://www.nytimes.com/2010/03/28/weekinreview/28grist.html>

<sup>64</sup> <https://www.todayonline.com/singapore/explainer-why-sand-so-highly-valued-and-consequences-overmining>

<sup>65</sup> <https://ceobs.org/what-myanmars-coup-could-mean-for-its-environment-and-natural-resources/>

<sup>66</sup> [Counterterrorism Measures Take Aim at Environmental Activistshttps://www.hrw.org › news › 2019/11/28 › targeted-co...](https://www.hrw.org/news/2019/11/28/targeted-counterterrorism-measures-aim-at-environmental-activists)

<sup>67</sup> <https://www.straitstimes.com/asia/se-asia/indonesia-president-jokowi-signs-contentious-omnibus-bill-into-law>



**Post-mortem analysis (as at 4 Nov 2021):**

Aside from these six topics, a myriad of other Singaporeans and groups have provided valuable feedback about other interconnected topics that were not included in our original statement. These topics are no less important and reflect the diversity of perspectives and considerations that Singapore has yet to, and must take into account for us to emerge stronger for all out of our multiple interconnected crises. These include (but are not limited to):

- Welfare protections for, decision-making, and participatory inclusion of lower income, migrant workers, and other vulnerable communities, both in and out of crisis periods
- Directly addressing how Singapore's petrochemical industry relate to our national climate efforts
- Ending institutional associations with environmentally destructive industries and activities
- Increasing accessibility of plant-based food options
- Supporting alternative forms of food production in Singapore's quest for food security and local production, including agroecology, permaculture, and regenerative agriculture
- Signing on to the Glasgow leaders' declaration on forests and land use to halt and reverse forest loss and land degradation by 2030
- Regulators to provide greater assistance and guidance for corporates in setting, planning for, and achieving sustainability and climate goals

*Do note that prior to the statement's release, we incorporated feedback that provides clarity and does not change the essence and ask of our original statement. Thank you for taking the time to read our statement.*

**This statement is supported by: 101 individuals and 78 organizations and entities (as at 5 Nov)**

<b>Individuals: 101</b> *indicates being a member of a supporting organisation	<b>Designations if any</b>
A/Prof Jason Lee	Yong Loo Lin School of Medicine, NUS
Aarika Lee	
Abner Lim	Student
Amelia Seah	Young Sustainability Professional
Alfian Saat	
Amelia Yeo	Grassroots Leader
Ang Xiao Teng	Freelance theatre practitioner
Anthea Ong*	Founder, SG Mental Health Matters Founder, Hush TeaBar Founder & Chair, A Good Space Co-operative Limited Founder & Chair, WorkWell Leaders Ltd Former President, WINGS Former Nominated Member of Parliament
Aproop Ponnada	
Asnida Daud	Performer, Island Descendant & Malay Culture advocate
Benjamin Sim	Environmental advocate
Beverley Choo	Climate action advocate
Brice Li	

Brice Tan	Founder, Brand Strategist and Designer of int
Cassandra Yip*	Founder of Earth School Singapore
Celine Lim Sufen	Editor-writer, movement practitioner
Charmaine Seah	Co-founder, Elementary Co.
Chen Chingwei*	Co-creator of Food Citizen and Project Black Gold
Cheng Chin Hsien	NTU project officer
Coco Oan Jia Xuan	Environmental advocate
Cuifen Pui*	Co-creator of Food Citizen and Project Black Gold
Daniel Lim	Aspiring Regenerative Farmer
Daniella-Louise Bourne	Sustainability Consultant
Debby Ng*	Founder of Hantu Blog Organisation, HantuBlog.Sg
Diana Rahim	Editor of Beyond the Hijab
Dorcas Tang	Climate Artist & Activist
Dr Geh Min	Former Nominated Member of Parliament
Dr Ho Hua Chew	
Dr Miles Kenney-Lazar	
Dr Neo Mei Lin	Marine conservationist, Co-founder of Celebrating Singapore Shores
Dr Sng Bee Bee	

Dr Vilma D'Rozario	
Dr Yap Wei Liang Nicholas	Sea anemone biologist
Edward Eng	
Elizabeth Tan*	Member of NUS Students Against Violation of the Earth (SAVE)
Elliott James Ong	Environmental advocate
Ethel Pang	Environmental advocate
Fathanah Binti Muhammad Saleh	Green Chemist
Grant Pereira	Green Volunteers Network
Gretchen C Coffman	Wetland Restoration Ecologist
Huiying	
Hoi Wen	
Inez Alsagoff	Environmental advocate
Irsyad Ramthan	Green Innovator
Izavel Lee	sneaker wearing Earthling
Jacinda Yee	Founder of The Breakfast Club
James Chua	
Janice Teo	Environmental advocate
Jay Wong	

Jeanette Alexis Quek	A slipper wearing concerned citizen
Jimmy Tan	
Joel Chang	Sustainability advocate
Joseph K H Koh	
Kate Yeo	Environmental advocate, Founder of @byobottlesg
Kymberly Goh	Aspiring environmental communicator and advocate
Kathy Xu*	Founder of The Dorsal Effect
Lau Ying Shan	Creator of SG Parents for Climate Action
Lester Tan	
Liyana Dhamirah	
M. Ibnur Rashad*	Founder of GUILD Founder of Floating Gardens Initiative
Madeleine Fung	
Madhu	
Mandy Koh	
McIntyre Denise Ann	Underwater Photographer
Melina Thebe*	Co-President, NUS Students Against Violation of the Earth (SAVE)
Min Yamone	
Miriam Yeung*	Co-creator of Food Citizen

Nafla Binte Mohamed Yousuf	Environmental advocate
Naomi Clark-Shen	Shark and Ray Researcher
Neo Win Yee*	Member of NUS Students Against Violation of the Earth (SAVE)
Neo Xiaoyun	Environmental advocate
Ng Hui Hsien	Artist/Researcher
Nor Lastrina Hamid*	
Nyi Nyi Swe Min	Macro Photographer
Pamela Low	Founder of Tingkats
Parizad Nasheer	
Phoebe Rae Tan*	Climate advocate, Founder of Our Burning Rock
Phoebe Zhou	Biodiversity enthusiast
Quek Xiao Tong	Environmental studies graduate
R Chithra	
Rachel Wong	Founder of Cong
Rachael Goh	Biodiversity enthusiast
Sai Surya	Founder of interseed.co
Sam Thian*	Founder of Seastainable.Co
Sarah Lin	Slipper wearing environmental advocate

Sheryl Lim	Masters student in Climate Change, Management, and Finance
Stephanie Chan	Poet and performer
Tan Han Zhong	Environmental educator
Tan Shi Zhou*	Coordinator of Inter-University Environmental Coalition (IUEC), President of Earthlink NTU
Tan Teong Kai	Student
Teng Chu Yu*	Coordinator of Inter-University Environmental Coalition (IUEC) & Students Taking Action for NUS to Divest (STAND), and Member of Lepak in SG
Teo En Yu Rica*	Member of NUS Students Against Violation of the Earth (SAVE)
Teo Xiao Ting	Counsellor, Somatic Practitioner
Ting Wai Kit*	Co-President, NUS Students Against Violation of the Earth (SAVE)
Unsu Lee	Impact investor
Vickerman Harvey Chettiar	Director of Events & SIGs, Mensa Singapore
Vivian Lee	Somatic therapist
Wong Shi Le	Environment enthusiast
Yasser Amin*	Environmental advocate
Yeo Jing Ying	Environmental advocate
Zac Lim Zhi Hao	

**Organisations and entities: 78**

(See end of document for logos, ^ indicates organizations without logos)

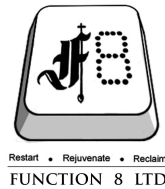
1. **#lovemycoast^**
2. **A Good Space**
3. **Accommodate**
4. **Blazon (Pte. Ltd.)**
5. **Bye Bye Plastic Bags Singapore**
6. **Climate Conversations**
7. **Coastal Natives**
8. **Community Action Network**
9. **Community for Advocacy and Political Education (CAPE)**
10. **Cong**
11. **Creation Care Singapore^**
12. **Divert for 2nd Life**
13. **Earth School Singapore**
14. **Earthlink NTU**
15. **Eco Youth Collective**
16. **Eco-SIM**
17. **Floating Gardens Initiative**
18. **Foodscape Collective**
19. **Forest School**
20. **Food Citizen**
21. **Fossil Free Yale-NUS**
22. **Friends of Marine Park**
23. **Function 8**
24. **Georges Restaurant Group**
25. **Green Drinks (Singapore)**
26. **Ground Up Initiative**
27. **Ground-Up Innovation Labs for Development (GUILD)**
28. **Habitat Collective**
29. **HantuBlog.Sg**
30. **Herpetological Society of Singapore**
31. **Hush TeaBar**
32. **Katong Queers**
33. **MaidforMore**

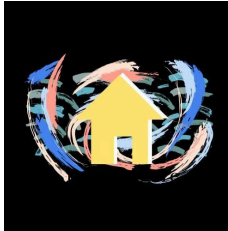


34. Marine Stewards
35. Minority Voices
36. NTU Asian School of the Environment Club
37. NTU GreenSparks
38. NUS Students Against Violation of the Earth (SAVE)
39. Naked Hermit Crabs
40. Nature Society (Singapore)
41. Ocean Purpose Project
42. Our Burning Rock
43. People's Movement to Stop Haze (PM Haze)
44. Project bECOMe
45. Project Black Gold
46. Project X
47. Rachel Pang Comics
48. Rainbow Girls Singapore
49. Rumah Foundation
50. Post-Museum^
51. Save the Children
52. SafeNUS
53. SG Green Groups Town Hall
54. SG Mental Health Matters
55. SIT Action for Environment Conservation (AEC)
56. Seastainable.Co
57. Singapore Boating Industry Association
58. Singapore Youth for Climate Action^
59. Singapore Youth Voices for Biodiversity
60. Small Change
61. Soil Regeneration Project, Singapore^
62. Speak For Climate
63. Stridy
64. Singapore Really Really Free Market
65. Students Taking Action for NUS to Divest (STAND)
66. Students for a Fossil Free Future (S4F)
67. Tingkats

- 68. The Dorsal Effect**
- 69. The Singapore Blue Plan 2018**
- 70. The Untamed Paths**
- 71. Third Spacing**
- 72. Transformative Justice Collective**
- 73. Wan's Ubin Journal**
- 74. Yale-NUS i'dECO**
- 75. Yale-NUS Scuba Environments Association**
- 76. Young Nautilus**
- 77. Your Head Lah!**
- 78. Zen Freediving**

**Logos of supporting organisations and entities:**





MINORITY  
VOICES



فانس اوبين جورنل  
WAN'S UBIN  
JOURNAL



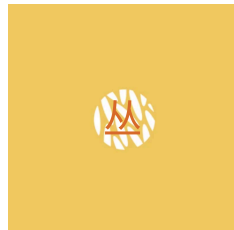
R U M A H  
• FOUNDATION •



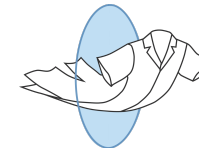
THE UNTAMED PATHS



PMHAZE



FOOD  
CITIZEN





**your  
head lah!**



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