

Initiatives and Targets under the Singapore Green Plan 2030

S/n	Initiatives	Targets
City in Nature		
a	<p>City in Nature</p> <p>i. More green spaces and park connectors</p> <ul style="list-style-type: none"> Add 1000ha of green spaces, of which 200ha will be new nature parks. Our new nature parks will provide more recreational options (e.g. hiking and birdwatching), and protect nature reserves from urbanisation. Add 160km of park connectors <p>ii. More naturalised parks and urban infrastructure to provide shade, cool the environment, improve air quality, and beautify our city</p> <ul style="list-style-type: none"> Incorporate natural designs and planting in 140ha of parks and gardens, and restore and enhance 30ha of forest, marine, and coastal habitats Add 80ha of skyrise greenery Have 300km of Nature Ways along our roads 	<p>2030 targets:</p> <ul style="list-style-type: none"> Double our annual tree planting rate between 2020 and 2030, to plant 1 million more trees across Singapore Increase nature parks' land area by over 50% from 2020 baseline Every household will be within a 10-minute walk from a park <p>2035 target:</p> <ul style="list-style-type: none"> Add 1000ha of green spaces
Sustainable Living		
a	<p>A Green Citizenry that Consumes and Wastes Less</p> <p>i. Encourage water conservation and water efficient practices for households and industries</p> <ul style="list-style-type: none"> Shower Fittings Replacement under the Climate-Friendly Household Programme Mandatory water efficiency labelling scheme <p>ii. "Reduce, Reuse and Recycle" as a norm for citizens and businesses, with a national strategy to address e-waste, packaging waste and food waste</p>	<p>2026 target: Reduce the amount of waste to landfill per capita per day by 20%</p> <p>2030 targets:</p> <ul style="list-style-type: none"> Reduce household water consumption to 130 litres per capita per day Reduce the amount of waste to landfill per capita per day by 30%
b	<p>Green Commutes</p> <p>i. Expand our rail network with new stations or lines opening almost every year over the next decade</p> <p>ii. Purchase only cleaner-energy public buses going forward</p> <p>iii. Encourage walking and cycling, by</p>	<p>2030 targets:</p> <ul style="list-style-type: none"> Achieve 75% mass public transport (i.e. rail and bus) modal share Expand rail network from around 230km today to 360km by early 2030

	<p>expanding the cycling network and repurposing roads for active mobility uses where possible</p> <p>iv. Develop new town concepts (e.g. Tengah to have the first car-free HDB town centre)</p>	<ul style="list-style-type: none"> • Triple cycling paths to 1,320km from 460km in 2020
c	<p>Strengthen Green Efforts in Schools</p> <p>i. Enhance the integration of environmental sustainability in schools, and strengthen the building of informed, responsible and sustainability-conscious mindset and habits in students through the Eco Stewardship Programme</p> <p>ii. Reduce net carbon emissions for the schools sector</p> <p>iii. Start with some of our schools achieving carbon neutrality by 2030, with the rest to follow thereafter</p>	<p>2030 Targets:</p> <ul style="list-style-type: none"> • Achieve a two-thirds reduction of net carbon emissions from the schools sector • At least 20% of schools to be carbon neutral
<p>Energy Reset</p>		
a	<p>Green Energy</p> <p>i. Promote sustainable fuels for international trade and travel</p> <p>ii. Increase solar deployment in Singapore together with the deployment of energy storage to address solar intermittency, enhance grid resilience, and support the transition towards a greener energy mix</p> <p>iii. Increase efficiency with each new generation of gas-fired power plant to reduce carbon emissions (e.g. adopting new, advanced combined-cycle gas turbines)</p> <p>iv. Green Singapore's electricity supply by tapping on the low-carbon potential of clean electricity imports</p>	<ul style="list-style-type: none"> • Play active and important roles in fulfilling two international goals <ul style="list-style-type: none"> ○ The International Civil Aviation Organisation's aspirational goals of 2% annual fuel efficiency improvement from now to 2050 and carbon neutral growth from 2020 ○ The International Maritime Organisations' target to reduce greenhouse gas (GHG) emissions from international shipping by at least 50% by 2050 compared to 2008 levels, and to phase out such GHG emissions in this century <p>2030 targets:</p> <ul style="list-style-type: none"> • Increase solar energy deployment by five-fold to at least 2 GWp, which can meet around 3% of our 2030 projected electricity demand and generate enough electricity to power more than 350,000 households a year (1.5 GWp by 2025, which can meet around 2% of our 2025

		<p>projected electricity demand and generate enough electricity to power more than 260,000 households a year)</p> <ul style="list-style-type: none"> • 200 MW of energy storage systems deployment beyond 2025, which can power more than 16,000 households a day • Best-in-class generation technology that meets heat-rate/emissions standards and reduces carbon emissions • Diversified electricity supply with clean electricity imports
b	<p>Greener Infrastructure and Buildings</p> <p>i. Raise the sustainability standards of our buildings through the Singapore Green Building Masterplan, to pave the way for a low-carbon built environment</p> <ul style="list-style-type: none"> • Raise minimum energy performance requirements • Review the Green Mark scheme • Push for the adoption of Super-Low Energy Buildings (SLEB) • Support the development of energy-efficient and cost-effective green technologies <p>ii. Improve energy efficiency of water treatment through research and development</p> <ul style="list-style-type: none"> • Investment in desalination and used water treatment technologies such as electrochemical desalination and step-feed membrane bioreactor <p>iii. Reduce carbon footprint of water production through adoption of renewables (e.g. solar energy)</p> <p>iv. Improve energy and resource efficiency of used water treatment plants</p>	<p>2030 target:</p> <ul style="list-style-type: none"> • Green 80% of Singapore's buildings (by Gross Floor Area) by 2030 <p>2021 target: PUB to generate sufficient solar energy from their floating solar panels to power 100% of Singapore's waterworks.</p> <p>2025 targets:</p> <ul style="list-style-type: none"> • Reduce energy consumption of desalination process from current 3.5kWh/m³ to 2kWh/m³ • Singapore's first integrated waste and used water treatment facility to be 100% energy self-sufficient (Tuas Nexus) <p>Long-term target: Reduce desalination energy further to 1kWh/m³</p>
c	<p>Sustainable Towns and Districts</p> <p>i. Under the 10-year HDB Green Towns Programme, we will:</p> <ul style="list-style-type: none"> • Introduce smart LED lighting that can use 60% less energy than normal LED lighting • Double total solar capacity on HDB rooftops from 220 megawatt-peak (MWp) today to 540 MWp by 2030 by increasing number of HDB rooftops with solar panels from 50% to 70% by 2030 • Pilot the Urban Water Harvesting 	<p>2030 target: Reduce energy consumption in existing HDB towns by 15%</p>

	<p>System (UWHS) to recycle rainwater for non-potable uses and help mitigate flood risk by releasing stormwater at a slower rate</p> <ul style="list-style-type: none"> • Pilot test the effectiveness of “Cool Paint” in reducing ambient temperatures • Convert top decks of suitable multi-storey carparks into urban farms, community gardens and extensive greenery to increase green cover and enhance liveability <p>ii. Make new HDB towns greener and more sustainable (e.g. Tengah town will have a centralised cooling system)</p> <p>iii. Develop Jurong Lake District as a model sustainable mixed-use district, with district cooling, solar power deployment, and super low-energy buildings</p>	
d	<p>Cleaner-energy Vehicles</p> <ul style="list-style-type: none"> i. Require all new registrations to be of cleaner-energy models by 2030 ii. Build up the EV charging infrastructure to support the growth of EVs iii. Revise the vehicle tax structure to make it easier to buy and own EVs. 	<p>2030 targets:</p> <ul style="list-style-type: none"> • All new car registrations will be of cleaner-energy models • More than double our national EV charging point targets from 28,000 to 60,000 charging points
Green Economy		
a	<p>New Investments to be Among the Best-in-Class</p> <ul style="list-style-type: none"> i. Ensure that new carbon-intensive investments brought into Singapore are among the best-in-class in terms of carbon and/or energy efficiency, for carbon-intensive sectors. ii. Review carbon tax by 2023 	<p>Seek new investments to be among the best-in-class in energy/ carbon efficiency</p>
b	<p>Sustainability as a New Engine for Jobs and Growth</p> <ul style="list-style-type: none"> i. Green our industries' production processes and energy usage, such as transforming Jurong Island into a sustainable energy and chemicals park, and improving industries' energy efficiency ii. Develop Singapore into a sustainable tourism destination. iii. Develop Singapore as a carbon services hub, with the requisite capabilities and networks across the value chain iv. Develop Singapore as a leading centre for green finance in Asia and globally, to 	<p>2030 targets:</p> <ul style="list-style-type: none"> • Jurong Island to be a sustainable energy and chemicals park • Singapore as a sustainable tourism destination • Singapore as a leading centre for green finance and services to facilitate Asia's transition to a low-carbon and sustainable future • Singapore as a carbon services hub in Asia • Singapore as a leading regional centre for developing

	<p>support a sustainable Singapore and facilitate Asia's transition to a sustainable future</p> <p>v. Strengthen Singapore as a vibrant location for global and local companies to develop new sustainability solutions for Asia, with R&D as an enabler, in areas such as sustainable packaging, decarbonisation, waste upcycling, urban farming, and water treatment</p> <p>vi. Develop and trial new technologies for carbon capture, utilisation and storage</p> <p>vii. Study the potential of low-carbon hydrogen and other emerging technology pathways for decarbonisation².</p> <p>viii. Support local enterprises to adopt sustainability practices/ solutions/ standards, enhance their resource (including energy) efficiency, and capture new business opportunities in sustainability</p>	<p>new sustainability solutions</p> <ul style="list-style-type: none"> Groom a strong pool of local enterprises to capture sustainability opportunities
Resilient Future		
a	<p>Adapt to Sea-level Rise and Enhance Flood Resilience</p> <p>i. R&D to better understand sea level rise projections and technology/modelling to manage inland and coastal flood risks holistically</p> <p>ii. Site-specific studies to assess and provide details of coastal adaptation measures to be implemented</p> <p>iii. Sustainable and reliable funding pool for coastal and flood protection</p>	<p>2030 target: Complete formulation of engineering design and implementation plans for coastal adaptation measures at City-East Coast, Northwestern Coast (Lim Chu Kang and Sungei Kadut) and Jurong Island</p>
b	<p>Keep Singapore Cool</p> <p>i. Deploy sensors to understand urban heat island effect on Singapore and implement UHI mitigation measures</p>	<p>2030 target: To be determined from studies</p>
c	<p>Grow Local</p> <p>i. Avail space and infrastructure for agriculture and aquaculture; enhance funding support to incentivise agri-food industry to adopt highly productive, climate-resilient, and resource-efficient farming technologies; and develop a local pipeline of skilled workers for agri-food sector</p> <p>ii. Conduct R&D under the Singapore Food Story R&D Programme to promote</p>	<p>2030 target: Meet 30% of Singapore's nutritional needs through locally produced food</p>

² Please refer to "Green Energy" for low carbon solutions and applications in industry and power generation.

	<p>research innovation and plug existing technological gaps in three themes:</p> <ul style="list-style-type: none">• Theme 1: Sustainable Urban Food Production• Theme 2: Future Foods: Advanced Biotech-based Protein Production• Theme 3: Food Safety Science and Innovation	
--	--	--