



BUILDING A —  
***SUSTAINABLE,  
RESILIENT &  
INCLUSIVE***  
— SINGAPORE

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Photo by PMO

## Foreword

Our world has become more volatile in recent years. The COVID-19 pandemic, sharper geopolitical tensions, threats to food, water and energy security, and climate change have disrupted lives and livelihoods all over the world. They have slowed down or even reversed progress towards the Sustainable Development Goals (SDGs). Developing countries, especially Small Island Developing States and the Least Developed Countries, have been disproportionately impacted.

As Singapore navigates this turbulent and uncertain environment, we remain firmly committed to achieving sustainable and inclusive development for our citizens, and strengthening the implementation of the 2030 Agenda for Sustainable Development and the 17 SDGs. In 2021, we launched the *Singapore Green Plan 2030*, a national sustainability roadmap to build a greener future and strengthen Singapore's commitments under the 2030 Agenda and the Paris Agreement. Last year, Parliament unanimously endorsed the *White Paper on Singapore Women's Development*, which outlined concrete actions for Singapore to move towards a fairer and more inclusive society.

We accelerated our digitalisation efforts during the pandemic, rolling out multiple digital platforms as we fought the virus, including platforms to disseminate timely and accurate healthcare information, support contact-tracing efforts, and facilitate online learning for students. Fundamentally, digital transformation must empower people and promote inclusive sustainable development. We have therefore stepped up efforts to bridge the digital divide, and enhance digital skills and training for all segments of society.

Climate change is a generational challenge that confronts all societies. As a small and low-lying island nation, Singapore is particularly vulnerable to the impact of climate change. Even though Singapore's contribution to global emissions is negligible, we are doing our part to tackle climate change. We have raised our climate ambition to achieve net zero emissions by 2050. A carbon tax will be a key enabler of Singapore's decarbonisation journey.

There is no one-size-fits-all model of sustainable development. Every country must adapt solutions to their specific national circumstances. However, there is great value in cooperation. Many of humankind's challenges – climate change, digitalisation, and pandemic preparedness – are transboundary in nature and require a concerted global response to address them effectively. We must therefore strengthen multilateralism and the multilateral system to enable the international community to work together to deliver effective solutions.

Successful implementation of the 2030 Agenda worldwide will be contingent on technological advances and effective international collaboration. We should learn from one another's experiences, share best practices, and collaborate on the latest technologies. Singapore supports such efforts through the Singapore Cooperation Programme, which has trained close to 150,000 officials from more than 180 countries, territories, and intergovernmental organisations in areas aligned with the 2030 Agenda. We have launched the *Sustainability Action Package* to support the capacity-building needs of fellow developing countries on sustainability and climate issues. We also partner closely with UN entities such as the UN Development Programme to strengthen South-South cooperation and narrow development gaps across countries.

Singapore is strongly committed to the 2030 Agenda. We have benefitted much from our first Voluntary National Review (VNR) in 2018, and look forward to our second VNR to continue learning from and working with other countries, as we navigate the future as one global community.



**Lee Hsien Loong**  
Prime Minister of the  
Republic of Singapore

## Messages by Stakeholders

The recent years have been momentous for women's development in Singapore. The Singapore Council of Women's Organisations (SCWO) was one of the main organisations leading the Conversations on Singapore Women's Development throughout 2021, which was also declared the Year of Celebrating Singapore Women. Insights acquired from these conversations led to the release of the *White Paper on Singapore Women's Development* in 2022. The *White Paper's* 25 action plans laid out as a ten-year roadmap to advance women's development and are aligned with SCWO's vision and mission to achieve 'Equal Space, Equal Voice, and Equal Worth' for women.

The legislative developments to protect women against violence and harm enable women to have Equal Space. These include amendments in the Penal Code to enhance protection of victim-survivors and in the Women's Charter to enhance marriage and divorce processes, as well as new legislation on workplace fairness. There has been significant progress in female representation in leadership positions, with close to

30% of seats in Parliament and 21.5% of board seats in the top 100 listed companies in Singapore being represented by women in 2022. SCWO continues to push for more representation by women in political, corporate, and community leadership roles to ensure Equal Voice through SCWO's *BoardAgender Mentoring Programme for Aspiring Women Directors*. Giving full recognition to and valuing women's contributions to society, including caregiving, is how we can achieve Equal Worth. Focusing on mindset shift, one of the five key areas in the *White Paper*, SCWO celebrates the achievements of trailblazing women in *The Singapore Women's Hall of Fame* and inspires women to recognise their abilities and worth through initiatives such as *Project Awesome* which was launched in 2021.

The SCWO will continue to contribute to Whole-of-Nation efforts towards a fairer and more inclusive society in Singapore, in line with our progress on the 2030 Agenda.

### Singapore Council of Women's Organisations



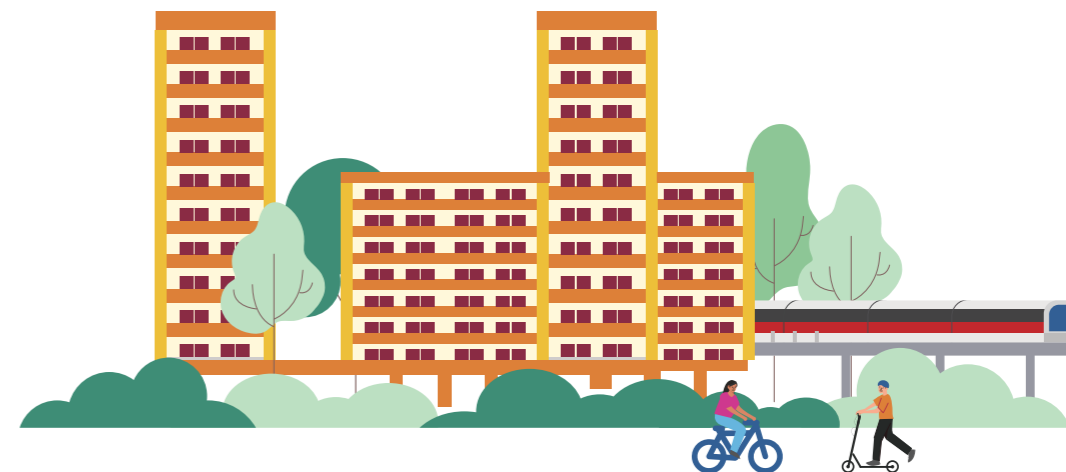
Over the years, Singapore has demonstrated commitment to addressing climate change, including through research, dialogue with youth, and collaborative action with academic and civil society. The *Singapore Green Plan Conversations* organised by the Government in partnership with Institutes of Higher Learning, have helped empower and provide opportunities for youths to take ground-up action to make a difference in the community. This has shaped Singapore's climate advocacy landscape, enabling a pipeline of climate-informed youth to step up. The creation of space for youth to be more meaningfully involved in policy making on climate action, such as through the *Youth Circles* and *Climate Action SG Alliance*, have been a welcome development. My involvement as a member and Chair of these initiatives allowed me to work alongside committed individuals across society – from business, policy, civil society, and academia – to advocate for climate action.

Starting out as a researcher and climate-concerned youth in 2010, I have witnessed a shift in Singapore's sustainability journey, from being identified as an alternative energy disadvantaged nation in the early 2010s to setting a net zero emissions target by 2050 in 2022. 2018, which Singapore designated as the Year of Climate Action, was a turning point for climate awareness and advocacy in Singapore. The 2019 public consultation on Singapore's long-term low emissions development strategy saw some 2,000 responses, and mainstream media started covering the changing environment more intentionally and comprehensively.

Progress on climate action has been the result of a Whole-of-Government endeavour to engage residents and businesses on the nation's aspirations and commitment towards global climate targets. I hope the valuable insights in this publication will generate renewed interest and productive dialogue among all stakeholders to help build a sustainable, resilient, and inclusive Singapore for many more years ahead.



Melissa Low, Research Fellow



Growing up with cerebral palsy, my world was vastly different from most. The innumerable physical, social, and educational barriers isolated me from the rest of my peers. I could not even access public transport with ease, as wheelchair ramps were not commonly available back then. Bigger challenges of building a career and life of my own, and contributing meaningfully as a member of society, seemed daunting.

Singapore has since become a more inclusive society that offers opportunities for persons with disabilities. I have had the chance to work in numerous multinational corporations, including in my current role leading the Diversity, Equity and Inclusion Client Solutions team at Michael Page. The social climate in Singapore has also progressed towards active discourse and efforts by companies, Government, and the community to support the integration of persons with disabilities in our communities, for a more inclusive Singapore.

The Purple Parade is a unifying national movement to celebrate the abilities and support the inclusion of persons with disabilities. Through this initiative, I have realised that with or without disabilities, we share more similarities than differences. By bridging these gaps so that no one community is kept in silo, we can foster a more inclusive society. The terrific turnout of more than 10,000 supporters at the Purple Parade in 2022 is testament to a growing awareness amongst Singaporeans about issues important to persons with disabilities, and Singapore's progress in ensuring the health and well-being of different communities.

Looking ahead, we can encourage the creation of more social spaces where people from all walks of life can have invaluable interactions with persons with disabilities. I am hopeful that people from diverse backgrounds can contribute to a vibrant, inclusive society, focusing not on what we can receive, but on what we can give.



**Alister Ong, Vice-Chairperson of The Purple Parade**



Singapore's efforts to develop innovative sustainable solutions for our most pressing issues has been accelerated by COVID-19, including on the health front.

Mirxes' purpose is to alleviate cancer burden and reduce healthcare costs through innovative RNA tests that detect diseases such as cancer earlier. As a Singapore-headquartered biotech company, sustainability and innovation have been integrated into all aspects of our business – from research and development to manufacturing and diagnostics, and our delivery of preventive healthcare. Mirxes supported

Singapore's pandemic response with our Fortitude Kit, Singapore's first approved COVID-19 diagnostic test kit, which was developed with the Agency for Science, Technology and Research (A\*STAR) at the height of the pandemic, in just three weeks. Using biodegradable materials and non-toxic reagents, we sought to reduce our environmental footprint while developing highly accurate and reliable test kits.

Mirxes is committed to green growth and harnessing sustainability as a competitive advantage. As Singapore focuses on recovery and resilience moving forward, Mirxes engages with partners and Government agencies towards the building of more sustainable innovative technologies, in line with Singapore's efforts toward the 2030 Agenda.

We launched Southeast Asia's first Industry 4.0 In Vitro Diagnostics (IVD) Manufacturing Facility in 2022, combining automation and digitalisation to advance our IVD productisation and manufacturing capabilities, hence making preventive healthcare solutions accessible to the masses.

Complemented by sustainable operations through waste reduction, energy conservation and sustainable supply chain practices, Mirxes will continue leveraging technology and innovation to make preventive healthcare accessible and affordable.

#### **Mirxes, Biotechnology Company**



As a leading renewable energy player in Asia, Sembcorp's solar portfolio contributes to more than a third of Singapore's 2025 solar target of 1.5 gigawatt-peak. The 60 megawatt-peak Sembcorp Tengeh Floating Solar Farm at Tengeh Reservoir, one of the world's largest inland floating solar photovoltaic systems, showcases our efforts to help overcome Singapore's challenge of land constraints in a dense urban landscape, and build national climate resilience by reducing our dependency on fossil fuels. The electricity generated from the floating solar farm, which opened in 2021, is sufficient to power Singapore's five local water treatment plants and makes Singapore one of the few countries in the world to have a 100% green waterworks system.

285 megawatt hour energy storage system, the largest in Southeast Asia. In line with Singapore's national hydrogen strategy announced in 2022, Sembcorp is working with strategic partners on hydrogen and other decarbonisation initiatives. Through our carbon management business, GoNetZero™, Sembcorp offers businesses a one-stop access to renewable energy and carbon management solutions to support their climate action plans.

Sembcorp's brown to green transformation is aligned with Singapore's vision towards a sustainable future. Sembcorp is committed to playing a central role in Singapore's transition to net zero emissions.

#### **Sembcorp Industries, Energy and Sustainable Urban Solutions Provider**

To enhance the resilience of Singapore's power grid and support solar deployment, Sembcorp operates a



## Singapore's Approach to the 2030 Agenda

### A World in Flux

Since our last VNR in 2018, the international landscape has changed dramatically. The confluence of COVID-19, global supply chain disruptions, food and energy insecurity, heightened geopolitical tensions, and armed conflicts have undermined and, in some cases, reversed progress on the SDGs. At the same time, the multilateral system is being severely tested, and the prospect of countries working together to address global challenges has weakened. These challenges have sharpened countries' vulnerabilities – particularly those of small island developing states including Singapore, which have been disproportionately impacted by these external shocks.

### Staying the Course

Amidst these challenging circumstances, Singapore has maintained our forward-looking and long-term approach to sustainable development. Without natural resources or a hinterland, ensuring sustainable development has been the cornerstone of Singapore's development since our independence in 1965. We have redoubled our efforts towards realising the 2030 Agenda and the SDGs, with a focus on the following priorities:

**First, embedding sustainability across our national policies and in our everyday lives.** We adopted a Whole-of-Nation approach to ensure that the SDGs are at the heart of our policy objectives. In February 2021, Singapore announced the *Singapore Green Plan 2030*, a national sustainable development agenda to build a greener future and strengthen Singapore's commitments under the 2030 Agenda and the Paris Agreement. Beyond reducing our carbon footprint, this initiative seeks to develop a green citizenry by encouraging them to embed sustainability in their

everyday lives. We also aim to tap sustainability opportunities across various sectors as new sources of growth.

**Second, advancing towards a fairer and more inclusive society.** In April 2022, Parliament unanimously endorsed the *White Paper on Singapore Women's Development*, setting out 25 action plans by the Government and the community in areas most salient to Singapore women, such as enabling more women to participate more fully in the workplace, better protection for women from violence and harm, and enhancing caregiver support as the majority of caregivers in Singapore are women. This *White Paper* was developed with insights drawn from a series of engagements involving nearly 6,000 Singaporeans.

**Third, leveraging digitalisation as a key enabler of the SDGs.** The onset of COVID-19 forced us to adapt quickly and harness technology to support the nationwide pandemic response. These include disseminating timely and accurate information to the public, distributing vaccines and masks, approving business processes, and contact tracing.<sup>1</sup> We adopted Home-Based Learning during the pandemic to ensure that students' learning and development were not unduly compromised during the pandemic.

**Fourth, building resilience against external shocks.** Geopolitical conflicts and the erosion of multilateralism are existential issues for small states such as Singapore, as we are heavily reliant on trade and are disproportionately affected by global supply chain disruptions. For example, we import more than 90% of our food from over 170 countries and regions around the world. As we seek to diversify our import sources, we have established a "30 by 30" goal to build up our local agri-food industry's capability and capacity to sustainably produce 30% of our nutritional needs by 2030. On energy, Singapore will continue

<sup>1</sup> Examples include: (a) a Gov.sg WhatsApp messaging service to disseminate timely, accurate, and useful information to the public in Singapore's four official languages; (b) a *COVID-19 Situation Report* dashboard to present key statistics and figures on the pandemic in Singapore; (c) *MaskGoWhere*, a website that helped Singaporeans find out the designated location, day, and time to collect their government-allocated masks; (d) *COVID GoBusiness Portal* to support the application, approval, and management process for businesses applying for essential worker permits; and (e) contact-tracing applications based on open-source technology (e.g. *TraceTogether*, *SafeEntry*) using a central server accessible only by the authorities.

to harness our "four switches", namely natural gas, solar energy, regional power grids, and emerging low-carbon alternatives, to support the transition towards cleaner energy for our power sector. We are pursuing opportunities to tap low-carbon and renewable energy sources in the region, such as through the *Lao PDR-Thailand-Malaysia-Singapore Power Integration Project*, which will allow us to import up to 100 megawatts of renewable hydropower from Lao PDR to Singapore via Thailand and Malaysia using existing interconnections.

**Fifth, addressing the existential threat of climate change.** Climate change is the most pressing global challenge confronting humanity. Singapore, as a small and low-lying island state, is particularly vulnerable to the impact of climate change, including rising temperatures, sea-level rise, and extreme weather events. While our share of global emissions is small at 0.11%, we take our climate change obligations very seriously. We raised our climate ambition to achieve net zero emissions by 2050 and to progressively raise carbon taxes from 2024 with a view to reaching S\$50-80/tCO<sub>2</sub>e (≈US\$36-57.50) by 2030. We are keen to work with like-minded countries in new technologies, green and transition finance, carbon markets, and capacity-building. For example, carbon markets can help raise significant financing for the low-carbon transition and green recovery. Singapore supports a high integrity carbon credits ecosystem, including developing robust accounting methods in areas such as blue carbon nature-based solutions, and leveraging space-based data and satellite technology for measurement and monitoring.

**Lastly, supporting international efforts to achieve the SDGs.** Singapore firmly believes that it is more important than ever to forge cooperation to confront our shared challenges. COVID-19 has shown us that multilateral cooperation is fundamentally in the interest of all nations in preparing against shocks. This is why Singapore strongly supported multilateral initiatives such as the COVID-19 Vaccine Global Access (COVAX) Facility and the Pandemic Fund. Singapore continues to support efforts to implement and achieve the SDGs at the international and regional levels. The Singapore Cooperation Programme is our flagship capacity-building platform to share our development experiences with fellow developing countries. At the regional level, through our membership of the ASEAN Working Group on Sustainable Development Goal Indicators, we worked with ASEAN Member States and the ASEAN Secretariat Statistics Division (ASEANstats) to develop ASEAN-specific indicators to better track the progress of the SDGs within ASEAN. These efforts led to the release of the inaugural ASEAN SDG Indicators Baseline Report in 2020 and the ASEAN SDG Snapshot Report in 2022.

Our second VNR is an opportunity to share our experiences, while allowing for introspection as we address future challenges and identify areas for improvement. This is a chance for us to renew our commitment and build on our progress towards the achievement of the 2030 Agenda and beyond.

## SUSTAINABLE DEVELOPMENT GOAL 1: End Poverty in All its Forms Everywhere

1 NO POVERTY



### A Fair, Inclusive, and Caring Society

Singapore remains committed to creating a fair, inclusive, and caring society where people of all backgrounds, particularly the low-income and vulnerable, have access to opportunities and can look to the future with optimism. However, achieving this has become more difficult as Singapore and other countries contend with issues such as social exclusion and increasing income inequality. These difficulties were exacerbated by the COVID-19 pandemic and inflation.

Our longstanding approach is to provide those who are vulnerable or in need with help from the community and a strong safety net so that they can achieve stability, self-reliance, and social mobility. We also introduce targeted assistance measures where needed, such as relief schemes during the COVID-19 pandemic.

#### Support for Lower-Wage Workers – Workfare and Progressive Wage Model

Singapore supports our lower-wage workers by uplifting their wages and encouraging skills upgrading and training. This is reflected in various policies such as the *Workfare Income Supplement* scheme, which tops up the *Central Provident Fund (CPF)* savings<sup>2</sup> and wages of lower-wage workers, with older workers receiving more. This is complemented by the *Workfare Skills Support* scheme, which provides training support for skills upgrading. The *Progressive Wage Model (PWM)* helps to increase the wages of workers in target sectors and occupations through skills upgrading and improved productivity. Since our last VNR in 2018, the *PWM* has been extended to cover a wider segment of lower-wage workers, including retail workers, food services workers, administrators, and drivers. In addition, a *Local Qualifying Salary* has

also been introduced, which requires companies that employ foreign workers to pay local workers at least S\$1,400 (≈US\$1,000) a month.

#### Affordable Healthcare

Singapore has a multi-layered healthcare financing framework in the form of subsidies and financing schemes such as *MediSave*, *MediShield Life*, and *MediFund* to ensure that all Singaporeans can access basic healthcare. *MediSave* is a national medical savings scheme which helps individuals set aside part of their income to pay for future medical expenses. *MediShield Life* is a basic health insurance plan which helps to fund large hospital bills and selected costly outpatient treatments. *MediFund* is an endowment fund to help those with financial difficulties pay their medical bills.

During the COVID-19 pandemic, Singapore provided COVID-19 treatments at a low fee or free of charge to all Singapore residents. Those diagnosed with Acute Respiratory Infections at Public Health Preparedness Clinics were only required to pay a flat rate of S\$10 (≈US\$7) for their treatment. Eligible individuals also enjoy fully subsidised Antigen Rapid Tests and Polymerase Chain Reaction tests by the Government.

#### Social Safety Nets and COVID-19 Relief Measures

Beyond government subsidies and social transfers, we have social safety nets in place to provide targeted assistance to individuals in need.

Given the disproportionate impact of the COVID-19 pandemic on low-income households, Singapore

<sup>2</sup> The CPF is a mandatory social security savings scheme funded by contributions from employers and employees. It serves to meet the retirement, housing, and healthcare needs of residents.

introduced targeted relief measures to alleviate their hardships. For instance, low-income families obtained an additional cash payment under the *Workfare Special Payment* scheme, which provided all eligible workers with a one-time cash payment of S\$3,000 (≈US\$2,100).

Furthermore, low-income workers who were affected by the economic impact of COVID-19 could obtain assistance through several schemes. In April 2020, the Government launched the *Temporary Relief Fund* to provide one-off cash assistance for lower- to middle-income self-employed persons (SEPs), and employees who experienced job loss or income loss. Between May and December 2020, the Government made available the *COVID-19 Support Grant (CSG)* to provide interim financial support for three months for employees who had experienced involuntary job loss, no-pay leave, or income loss. Following the closure of *CSG*, the *COVID-19 Recovery Grant (CRG)* was launched in January 2021, to provide financial support for three months to lower- to middle-income SEPs, and employees who remain financially impacted by the pandemic. Applications for *CRG* remain open until 31 December 2023.

The community also provided support through donations to *The Courage Fund* and *The Invictus Fund*. *The Courage Fund* provides financial relief for lower-income households which experienced income loss due to COVID-19 (e.g., hospitalised or quarantined), while *The Invictus Fund* supported social service agencies in maintaining service delivery and serving clients effectively and safely during the pandemic.

#### ComLink – Targeted Help for Low-Income Families with Children in Public Rental Housing<sup>3</sup>

Low-income families often face complex and intersecting challenges. Addressing this effectively and sustainably requires a Whole-of-Nation effort. *CommunityLink (ComLink)* is a nationwide initiative that undertakes a family-centric approach to supporting lower-income households by reaching out to families to understand their needs and aspirations, co-developing an action plan catered to their circumstances, and bringing together community partners and volunteers to support the family as they work towards stability, self-reliance, and social mobility. Community partners, corporates, and volunteers also help to develop

customised programmes and services that meet the specific needs of families in each of the 21 *ComLink* communities across Singapore.

#### Partnerships with the Community

Aside from *ComLink*, there are various other partnerships with the community to support low-income families and individuals. The *PEERS (Partners Engaging and Empowering Rough Sleepers) Network*, comprising community partners, social service agencies, and public agencies, does regular outreach to persons who sleep rough in public places to befriend them, understand their needs, and refer them to agencies that can support them with shelter, financial assistance, and other forms of help as needed. Other cross-sectoral networks and groupings, such as the *Charity Food Workgroup* and the *Vulnerable-In-Community Network*, which similarly comprise members from the public and people sectors, also help persons who face food insecurity or are vulnerable.

*SG Cares Volunteer Centres*, operated by community-based organisations, have been established in Singapore's 24 towns to identify areas of need, deploy volunteers, and channel resources to address them and plug the gaps through community partnerships. Another initiative is the Singapore Armed Forces Reservists Association's annual project *Let's Gift For A Reason*, which enables donors to sponsor daily necessities for low-income families, elderly living in rental housing, and grant wishes from children and caregivers to persons with disabilities.



#### Engaging Stakeholders

The *Emerging Stronger Conversations* initiative, launched in 2020 as part of the *Stronger Together Movement*, facilitated conversations with the community on supporting low-income families in housing, among other topics. In 2022, the National Volunteer and Philanthropy Centre organised *CoLabs for Lower-Income Families* and identified solution spaces to create a more enabling environment to empower low-income families.

<sup>3</sup> Under Singapore's *Public Rental Scheme*, the Government provides highly subsidised rental housing to cater to low-income households who have no other housing options.

## SUSTAINABLE DEVELOPMENT GOAL 2:

End Hunger, Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture

2 ZERO HUNGER



### Ensuring Singapore's Food Security

Singapore uses various strategies such as import source diversification, local production, and internationalisation to overcome inherent food security challenges as a small city-state with limited land and natural resources. We also collaborate with global partners on food security and food safety. For small states like Singapore that are heavily reliant on food imports, it is imperative that the global food and agricultural supply chains remain open and free. During the COVID-19 pandemic in 2020, Singapore signed the Joint Ministerial Statement on Supply Chain Connectivity with like-minded countries, which called for the unimpeded flow of essential goods including food and agricultural products.

#### Did You Know?

During the COVID-19 pandemic, the NTUC Fairprice Co-operative, which runs supermarkets across Singapore, rolled out *FairPrice on Wheels* to make daily essentials more accessible, targeting residential estates with a higher concentration of low-income seniors. Basic groceries were also delivered to the doorsteps of communities who needed them.

#### Import Source Diversification

We also worked swiftly to facilitate agri-trade by match-making importers with new overseas suppliers to diversify our food import sources. We emphasised the importance of pivoting from “just-in-time” to “just-in-case” approaches to strike a better balance between resilience and efficiency. Today, more of our industry partners have business continuity processes that strengthen their resilience.

#### Local Food Production

Singapore has set a “30 by 30” goal to build the local agri-food industry’s capability and capacity to sustainably produce 30% of our nutritional needs locally by 2030. Efforts include:

- Strategically **allocating agricultural land and sea spaces** for sustainable production.

Singapore’s “30 by 30” goal is ambitious, especially as only around 1% of Singapore’s limited land area has been set aside for agricultural use. Sea spaces for aquaculture are also limited. Therefore, our agricultural land and sea spaces must be used productively, such as by planning, developing, and operating farms in a way that minimises environmental impact; improving the efficiency of resource use; managing, treating, and disposing of waste in a robust manner; achieving circularity; harnessing sustainable energy such as waste-to-energy systems and solar power; and adapting to climate change.

Singapore is also facilitating the transformation of conventional coastal farms into high-tech and sustainable fish farms. We are also planning for new aquaculture sea spaces in consultation with academics and nature groups to ensure that any environmental impact is mitigated.

- Building a **vibrant eco-system** in agri-food technology to raise productivity and grow food more sustainably.
- **Research on sustainable urban food production, future foods, and food safety science and innovation.**



The Singapore Food Story Research & Development Programme (SFS 1.0) was initiated in 2019 to cover three themes: (a) Sustainable Urban Food Production; (b) Future Foods: Advanced Biotech-based Protein Production; and (c) Food Safety Science and Innovation. It has received strong interest from industry and the research community and supported 50 projects with the potential to transform food production and enhance food security in a climate-, resource-, and economic-resilient manner. Additional funding has been allocated to SFS 2.0 to support research projects in the aquaculture, agriculture, future foods, and food safety domains. SFS 2.0 places greater emphasis on addressing challenges associated with food security and developing new food safety capabilities.

- Steering the **growth of the novel food/alternative proteins sector** by developing a regulatory framework for novel food and working with the private sector to explore innovative ways to generate low-cost, high-nutrition alternative proteins sustainably.

To support the development of the alternative proteins industry, Singapore has introduced a regulatory framework for companies seeking pre-market approval for novel food. Singapore has built a strong food safety science R&D ecosystem to support novel foods, functional ingredients, and new food processing techniques, through support by the SFS R&D fund to research partners such as the *Future Ready Food Safety Hub*, a public-private partnership launched in 2021.

- Conducting R&D and facilitating collaboration through the **Marine Aquaculture Centre**, which has specialised facilities for aquaculture research and offers access to biological materials.

#### Balancing Regulation and Innovation

As we import more than 90% of our food, our food safety system needs to be well-integrated and up-to-date with international standards. Singapore regulates food safety through two main methods. First, we accredit our overseas sources for higher-risk products such as meat and eggs. Second, we monitor local farms and food establishments through licensing, inspection, sampling, and laboratory testing regimes.

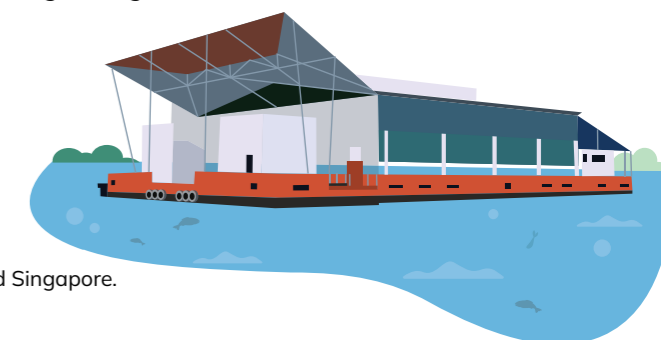
#### International Collaboration

Singapore works closely with like-minded countries to enhance cooperation in food safety, risk assessment, and standards. In addition, the National Centre for Food Science supports local, regional, and international capacity-building activities, and organises proficiency testing programmes as a World Health Organization (WHO) Collaborating Centre for Food Contamination Monitoring, World Organisation for Animal Health (WOAH) Collaborating Centre for Food Safety, and ASEAN Reference Laboratories in multiple food safety domain areas.

To drive regulatory science to support food safety assessment, Singapore is also a member of the *Global Coalition for Regulatory Science Research (GCRSR)*. It was established in 2013 to focus on research to support regulation by identifying and promoting best practices to understand and interpret data from innovative technologies such as genomics.

Singapore is also a member of the *Food Safety Australia New Zealand (FSANZ) Science and Food Safety Dialogue* inaugurated in April 2023. The dialogue is co-led by Australia and the Republic of Korea, and comprises six Asia-Pacific members to facilitate regional collaboration on risk assessment.<sup>4</sup> The dialogue focuses on identifying gaps in emerging areas of food safety concerns, challenges, and areas of collaboration in food safety among food safety agencies.

To encourage the harmonisation of safety assessments of novel foods, Singapore has held the *Roundtable for Novel Foods* annually since 2019<sup>5</sup> to provide a platform to raise awareness of new technologies for novel food production, discuss challenges in safety assessment, and explore opportunities to advance the regulatory agenda while encouraging food innovations. Under the auspices of the Singapore-UN Food and Agriculture Organization (FAO) Memorandum of Understanding, Singapore collaborates with the FAO on cultured meat, which could lead to the development of internationally recognised guidelines and/or standards in novel foods.



<sup>4</sup> Australia, China, Indonesia, Japan, New Zealand, Republic of Korea, and Singapore.

<sup>5</sup> The *Roundtable for Novel Foods* was not held in 2020.



## Future Challenges and Opportunities

### Challenges

#### IMPACT OF CLIMATE CHANGE

Rapid urbanisation and industrialisation on a global scale have exacerbated the impact of climate change and heightened the vulnerability of the farming and food production sectors, and food supply chains. Rising sea levels, changing rainfall patterns and wind speeds, and warmer climates could affect productivity and yield of farming and food production, as well as lead to the proliferation of algae blooms and various chemical and biological foodborne hazards.

#### GROWING DEMAND

The growing global population and middle class will also increase food demand and consumption, putting additional stress on local and global food supplies.

### Opportunities

#### SPACE-BASED CAPABILITIES

To address the impact of climate change, Singapore's Office for Space, Technology & Industry is investing in the R&D of space-based capabilities, including advanced remote sensing, to model the impact of weather and climate change on food production and potential supply chain disruptions.



#### Engaging Stakeholders

The Singapore Food Agency has engaged over 300 stakeholders, including farmers, associations, urban food solution providers, nature groups, and Institutes of Higher Learning in developing the *Lim Chu Kang Master Plan*, to solicit ideas and co-create a town that meets the agriculture industry's needs.

## SUSTAINABLE DEVELOPMENT GOAL 3:

Ensure Healthy Lives and  
Promote Well-Being for All

### 3 GOOD HEALTH AND WELL-BEING



## Singapore's Healthcare System

Singapore prioritises the provision of quality healthcare. Our life expectancy at birth is one of the highest in the world and can be attributed to: (a) the accessibility of quality and affordable basic medical services; (b) the active promotion of preventive health programmes; (c) high standards of living, clean water, and hygiene; and (d) a culture of healthy living.

Our healthcare system has three distinctive features. First, we offer universal healthcare coverage to all Singaporeans with a mixed financing system that has multiple layers of protection. Second, there is close regulatory supervision of all public and private healthcare providers. Third, our public hospitals function as corporate entities. Although government-owned, they have operational autonomy for greater efficiency.

#### Building Upon Strong Foundations

While Singapore has managed to maintain our healthcare spending at a sustainable level, a rapidly ageing population means that healthcare expenditure will inevitably increase. We are working to prevent or delay the onset of ill health, and slow or even reverse these trends. A national campaign, *Healthier SG*, focuses on upstream preventive health and anchoring care in the primary care sector to avoid acute stress on the healthcare system downstream.

Learn more about  
*Healthier SG* here



#### Accessible and Improved Healthcare

Singapore has low neonatal, child, and maternal mortality rates. Access to sexual and reproductive health services for women has improved. Guided by the WHO's *Health Promoting Schools* framework, preventive health programmes are available to all from the age of five.

Screening for breast and cervical cancers, some of the most common cancers among Singaporean women, at Government clinics and many private clinics, is heavily subsidised. There are also annual campaigns to raise awareness about the importance of regular health screenings. These efforts may be carried out in partnership with NGOs to amplify outreach activities.

#### Control of Communicable Diseases

Singapore has invested in preparedness, surveillance, and outbreak response capabilities for endemic and global emerging infectious diseases. We launched the National Centre for Infectious Diseases (NCID), an infectious disease management facility with integrated clinical, laboratory, and epidemiologic functions, in 2019. NCID administers national public health programmes targeting the human immunodeficiency virus, tuberculosis, and antimicrobial resistance, among other responsibilities. We also have in place a comprehensive vaccine recommendation and delivery system to ensure accessibility and affordability of vaccines.

## Control of Non-Communicable Diseases

We have an extensive suite of measures in place to combat some of the most common non-communicable diseases, such as diabetes, cardiovascular diseases, and some cancers. The national *Screen for Life* programme offers heavily subsidised health screenings to encourage Singaporeans to undergo screenings. In addition, several health campaigns have been introduced to encourage physical activity and healthier eating choices. We have also adopted a multi-pronged approach towards tobacco control, comprising strategies such as public education, provision of smoking cessation services, legislation controlling tobacco advertising and sales of cigarettes to minors, and taxation. [SDG 3.4.1](#)

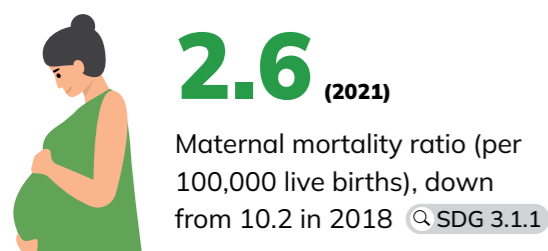
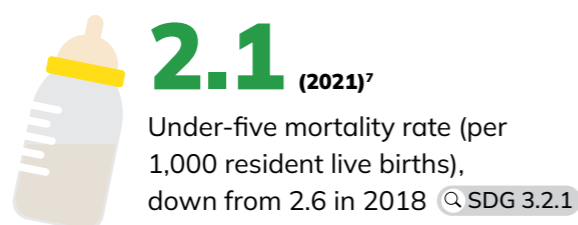
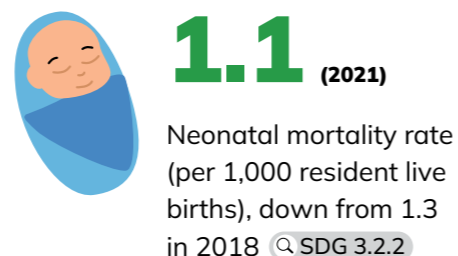
### Did You Know?

Singapore was one of the first countries to detect COVID-19, and we activated early and wide-ranging measures to fight and contain the pandemic, such as rapidly boosting testing and hospital bed capacity. Singapore also relied on its *Homefront Crisis Management System*, a Whole-of-Government mechanism which coordinates inter-agency response to crises. To develop our preparedness and response capabilities for future pandemics, Singapore set up the *Programme for Research in Epidemic Preparedness and Response (PREPARE)* to strengthen key research capabilities and develop a strong regional infectious disease collaboration network.

In 2016, the Ministry of Health launched the *War on Diabetes*, a nationwide effort to encourage healthy living and prevention, early detection and intervention, and better disease management. We also emphasised public education, stakeholder engagement, and data analytics. Age-standardised diabetes prevalence fell to under 8% from 2017 to 2020, an observable decline from 8.6% in 2010.



## Key Figures



<sup>6</sup> Data is preliminary.

<sup>7</sup> Data is preliminary.

## Future Challenges and Opportunities

### Challenges

#### AGEING

Around one in four citizens are expected to be 65 and above by 2030, up from one in five in 2022. As people get older, they are more likely to fall sick or suffer from disabilities.

#### RISING IMPACT OF CHRONIC DISEASES

Putting age aside, the prevalence of chronic diseases such as hypertension and hyperlipidaemia has risen to worryingly high levels, at 32% and 37% of our population respectively.

### Opportunities

#### CUSTOMISATION OF CARE

Technology has allowed a greater degree of personalisation across industries. We will leverage technological advancement in areas such as wearables, machine learning, and precision medicine (use of genomic data) to deliver more targeted and customised care.

#### SHIFT IN CARE MODEL

Digitalisation has enabled new approaches to healthcare and a shift in care models and approaches, with medical devices becoming more widely available and accessible, and the increasing use of digital therapeutics and healthcare solutions in non-traditional settings.

#### INCREASING OUR EFFORTS IN PREVENTIVE CARE

Through *Healthier SG*, we have shifted our focus towards preventive care to improve our population's health, and to put our healthcare system on a more sustainable financial footing. Recognising the importance of preventive care, we have been investing heavily in health promotion, early vaccination, and screening for diseases.

#### ENSURING DATA SECURITY AND CYBERSECURITY

With the increasing need for data to be shared across the healthcare ecosystem, we recognise the importance of ensuring data security and cybersecurity. We can leverage privacy enhancing technologies to allow better data privacy without compromising the modelling or analyses. We will also bolster our data governance frameworks and cybersecurity capabilities to enable healthcare clusters, family doctors and partners to work more closely together in a secure environment.



### Engaging Stakeholders

The Women's Health Committee, comprising stakeholders from community outreach and advocacy organisations, healthcare partners, and Government agencies, actively looks at equipping all female Singapore residents with knowledge and skills to improve their health and well-being. Programmes include talks on cancer awareness and early detection conducted in schools, as well as workshops that equip volunteers with the knowledge on bone health and skills to administer the Osteoporosis Self-Assessment Tool for Asians for seniors.

## SUSTAINABLE DEVELOPMENT GOAL 4:

Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning Opportunities for All

### 4 QUALITY EDUCATION



## Singapore's Education System

Singapore places great importance on preparing our students to be future-ready learners who learn for life. Our education system emphasises holistic development for our students, provides different pathways that cater to their diverse interests, strengths and learning needs, and continues to perform well in international benchmarking studies such as the OECD's *Programme for International Student Assessment*.

### Quality, Affordable, and Accessible Education for All SDG 4.1

As education remains an important social leveller, we are committed to providing quality and affordable education to all Singaporeans, regardless of their background. Primary school education is compulsory for Singapore citizens under the Compulsory Education Act. Education is heavily subsidised at all levels for Singaporeans. Teachers are critical to the success of our education system. We therefore invest in having a high-quality teaching workforce by ensuring that the teaching profession is attractive and respected and provide our teachers with professional development opportunities for their continued growth.



Of each Primary 1 cohort progressing to a post-secondary education institution

Our schools also actively partner with other agencies and community stakeholders to provide targeted academic, social-emotional, and financial support for students from disadvantaged families. A key initiative is *Uplifting Pupils in Life and Inspiring Families Taskforce (UPLIFT)*, which was set up in October 2018 to strengthen support for disadvantaged students

and their families through providing after-school care and support, as well as facilitating stronger school-community partnerships.



### Did You Know?

E

**Preschool has become more affordable** with the household monthly income ceiling for additional means-tested subsidies raised to S\$12,000 (≈US\$8,500) in January 2020, doubling the proportion of children who benefit from such subsidies. Subsidy amounts were also enhanced across all eligible income tiers. Since January 2023, the Government has lowered fee caps at government-supported preschools to further enhance affordability.

C

**To raise the quality of education**, we have implemented skills frameworks and professional development roadmaps for early childhood professionals, supported by the National Institute of Early Childhood, which was established in 2019 to uplift training standards. The Government has also developed and refined national curriculum frameworks, and made resources available to preschools to guide their programme development.

The Government funds a range of early intervention services to support children with disabilities and special developmental needs. We are appointing Inclusion Coordinators in all preschools and piloting a new Inclusive Support Programme.



### Early Childhood Development SDG 4.2

To provide a good foundation for every child, we have improved the accessibility, affordability, and quality of preschool and early intervention services.



Of Singaporean children aged 5 to 6 years enrolled in preschools

### Post-Secondary Education SDG 4.3

Singapore actively enhances our post-secondary education landscape to prepare students for the future. Our Institutes of Higher Learning (IHLs)<sup>8</sup> continually engage industry partners to ensure curriculum relevance and provide industry attachments, internships, work-study programmes, and on-the-job upskilling.

### Lifelong Learning SDG 4.4

To bolster our national *SkillsFuture* movement,<sup>9</sup> we have developed a quality *Training and Adult Education* ecosystem, comprising IHLs, private training providers, and enterprises, to deliver a wide range of *Continuing Education and Training (CET)* programmes for adults to upskill and reskill. We are also strengthening the role of employers and enterprises in workforce skills development and enhancing the employability of mature workers. In 2022, the Government invested S\$0.9 billion (≈US\$0.64 billion) in *CET*.

### Maximising the Potential of Students with Disabilities SDG 4.5, 4.a

Singapore recognises the wide range of needs of students with disabilities and adopts a differentiated approach to providing children with an educational setting that meets their needs. 80% of children at school-going ages who were reported to have disabilities or Special Educational Needs were supported fully in mainstream schools. This includes almost all students with physical impairments, and students who are blind, deaf, or hard-of-hearing. The remaining smaller proportion (20%) with more severe needs were enrolled in alternative specialised settings known as Special Education (SPED) schools.

### Did You Know?

**Singapore is providing more opportunities for**

Singaporean working adults to upgrade and attain qualifications via subsidised degree programmes over the course of their lives. The percentage of fresh school leavers and adult learners who could be given places in Ministry of Education-funded degree programmes will rise from the current 50% to 60% by 2025.

The number of SPED schools will increase from 24 in 2023 to 28 by the 2030s. These schools provide a customised curriculum that equip their students with life and vocational skills. In support of this, students from SPED and mainstream schools have the opportunity



to engage in meaningful and sustained interactions through School Partnerships. These experiences are also important in developing empathy and appreciation for differently abled peers.

<sup>8</sup> Autonomous Universities, polytechnics, and the Institute of Technical Education.

<sup>9</sup> The national *SkillsFuture* movement was launched in 2015 to provide Singaporeans with opportunities to develop to their fullest potential throughout life, through skills mastery and lifelong learning. More details can be found at <http://www.skillsfuture.gov.sg>.

## Education for Sustainable Development SDG 4.7

To strengthen and deepen education on sustainable development, the *Eco Stewardship Programme (ESP)*<sup>10</sup> for all schools was introduced in 2021. Building on existing efforts, the *ESP* adopts a whole-school approach to integrate environmental sustainability into the school environment and the educational

experience through the 4Cs of **Curriculum, Campus, Culture and Community**. We are also targeting for at least 20% of schools to be carbon-neutral by 2030, and will reduce the education sector's net carbon emissions by two-thirds by 2030. Through these efforts, we hope to nurture generations of informed and responsible life-long stewards of the environment.



Learn more  
about *Education  
for Sustainable  
Development* here



<sup>10</sup> The Eco Stewardship Programme is the education pillar of the *Singapore Green Plan 2030*.

## Future Challenges and Opportunities

### Challenges

#### NEED FOR GREATER CUSTOMISATION OF LEARNING

There is no one-size-fits-all approach towards education, and we need to recognise and nurture the different strengths and abilities of our students.

#### ENSURING EDUCATION CONTINUITY IN THE FACE OF DISRUPTIONS

The future we need to prepare our students for is changing and our education system will need to evolve accordingly. We need to ensure that our students are equipped with the skills to thrive and seize new opportunities.

### Opportunities

#### FULL SUBJECT-BASED BANDING (FULL SBB)<sup>11</sup>

Full SBB allows every secondary school student to learn subjects at a level that caters to their strengths and learning needs, and gives them more opportunities to interact and develop friendships with schoolmates of different backgrounds and learner profiles.

#### BLENDED LEARNING

Learning from the experiences during the COVID-19 pandemic, we have incorporated Blended Learning<sup>12</sup> as a key feature of our students' schooling experience since 2021. All secondary and pre-university students have regular home-based learning days. Asynchronous learning allows students to learn at their own pace, and to develop self-directedness in their learning.



<sup>11</sup> Full SBB is part of Singapore's ongoing efforts to nurture the joy of learning and develop multiple pathways to cater to the different strengths and interest of our students. For more information on Full SBB, refer to <https://www.moe.gov.sg/microsites/psle-fsbb/full-subject-based-banding/main.html>.

<sup>12</sup> Blended learning refers to a mix of home-based and in-school activities that taps both online and offline approaches to learning curriculum prescribed content.

## SUSTAINABLE DEVELOPMENT GOAL 5:

Achieve Gender Equality and Empower All Women and Girls

5 GENDER EQUALITY



## Women's Development in Singapore

Singapore's approach to women's development is founded on the principles of equality and non-discrimination and reflects our vision of a society where all Singaporeans can achieve their full potential. As a nation, we value the importance of respect and partnership between men and women, and the roles of families and the community in women's development. Women in Singapore have progressed significantly. Singapore ranked 7<sup>th</sup> worldwide on the 2021 UN Gender Inequality Index (a higher rank corresponding to lower gender inequality) and was the only Asian country in the top ten.

### Ending Discrimination Against Women and Girls

Singapore is party to the United Nations Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) and is committed to implementing our CEDAW obligations to promote equality between men and women as well as protect the rights of women. We submitted our Sixth Periodic Report in 2021.

### White Paper on Singapore Women's Development

The *White Paper on Singapore Women's Development*, unanimously endorsed by Parliament, sets out 25 forward-looking and Whole-of-Nation action plans, and is informed by insights gained from a year-long,

nationwide *Conversations on Singapore Women's Development*. Singaporeans from various walks of life participated. The *White Paper* reflects the shared vision towards a fairer and more inclusive society, where men and women partner each other as equals and can pursue their aspirations freely and fully.



Learn more about the *White Paper on Singapore Women's Development* here



### Eliminating Violence Against Women and Girls [SDG 5.2.1](#)

We have taken decisive measures to combat violence and harm against women. These measures strengthen protection for victim-survivors of sexual offences in various settings, and have been adapted to meet the evolving context and nature of harms. The Penal Code was amended in 2021 to increase the penalties for sexual offences<sup>13</sup> to reflect the seriousness of such acts. The Government, in partnership with the community, has also begun implementing the 16 recommendations submitted by the multi-stakeholder Taskforce on Family Violence (FVTF) in 2021 to: (a) increase awareness of and strengthen societal attitudes against family violence; (b) enhance preventive efforts for persons at risk; (c) make it easier for victim-survivors and the community to report family violence and get immediate help; (d) strengthen protection and support for victim-survivors to reduce their risk of being harmed again; and (e) increase the accountability of perpetrators and strengthen their rehabilitation. To this end, the Government will be making legislative amendments to the Women's Charter to better protect victim-survivors and enhance the accountability and rehabilitation of perpetrators. We are also working closely with NGOs and the community to address the underlying societal mindsets that influence perpetrators' beliefs about and behaviours towards women, as well as promote values of respect and safety through our educational institutions.

The FVTF report and its recommendations can be found here



### Support Caregivers and Promote Shared Responsibility within the Household and the Family

To promote shared responsibilities between men and women in the household, the Government works with stakeholders to support parents in managing their work and family responsibilities. The Character and Citizenship Education curriculum in schools seeks to address biases and assumptions about parental and gender roles arising from stereotypes. The Government works closely with community partners such as Families for Life and Centre for Fathering to promote active fatherhood and shared parenting responsibilities. To support families with young children, the Government will continue to enhance access to quality and affordable preschool and early intervention services.<sup>14</sup>

### Did You Know?

A key area of the *White Paper* is recognition of and support for our caregivers. As part of the *White Paper* action plans, the *Home Caregiving Grant (HCG)*<sup>15</sup> was enhanced in March 2023 to provide a greater and more targeted support for lower-income families caring for loved ones with at least permanent moderate disability. Additionally, to provide families with more options to meet their household needs and provide relief to primary caregivers, in March 2023, Singapore launched a two-year pilot programme to expand the scope of the *Household Services Scheme (HSS)*<sup>16</sup> to include basic child- and elder-minding services. Singapore will also work with community partners to form community-based peer support networks to better connect caregivers to the support they need.

<sup>13</sup> In September 2021, a Bill was passed to increase the penalties for three sexual offences in the Penal Code, namely: (a) outrage of modesty; (b) sexual activity in the presence of a minor, or causing a minor to view a sexual image, where the minor is between 14 and 16 years of age; and (c) sexual activity in the presence of a minor, or causing a minor to view a sexual image, where the minor is between 16 and 18 years of age and the offender is in an exploitative relationship with the minor.

<sup>14</sup> We have more than doubled the number of full-day preschool places over the past decade to over 200,000, enough to accommodate every resident child aged three and above. About 90% of Singaporean children aged 3 to 6 years are enrolled in a preschool.

<sup>15</sup> The *HCG* provides a monthly cash grant to defray caregiving costs for eligible persons with at least permanent moderate disability living in the community. The *HCG* quantum was increased from the existing S\$200 (≈US\$140) per month to up to S\$400 (≈US\$290) per month.

<sup>16</sup> *HSS* allows eligible companies to hire more migrant workers to provide part-time household services, such as home cleaning, grocery shopping, and car-washing. With the expansion, households will be able to engage *HSS* workers from companies selected for the pilot to provide basic minding services for their children above 18 months or their elderly family members.

**Women in Leadership** SDG 5.5.1, 5.5.2

Singapore adopts a multi-pronged approach to encourage and support women to achieve their leadership potential. For example, to support greater diversity and representation of women on corporate boards, from 1 January 2022, listed companies are required to disclose their board diversity policy, including gender, skill, experience, and other relevant aspects. Companies also must disclose their plans and timelines to achieve their diversity targets.

The Council for Board Diversity was established in 2019 to promote a sustained increase in the number of women on the boards of listed companies, statutory boards, and non-profit organisations in Singapore. Through the Council's efforts, the percentage of women on the boards of Top 100 listed companies has reached 21.5%, which is almost a three-fold increase from 7.5% in 2014. The proportion of women directors on statutory boards also reached a new high of 31.4%, while those on the Top 100 Institutions of A Public Character is at 29.3%.

According to a Deloitte report, 13.1% of companies in Singapore had female CEOs in 2021, the highest proportion globally. Our proportion of female parliamentarians is close to 30%, higher than the Inter-Parliamentary Union average.

**Women's Health**

Singapore aims to provide quality medical services that are affordable for all, including women. An inter-agency Taskforce was set up in January 2021 to oversee the development of a *Child & Maternal Health and Well-being Strategy* to help every pregnant woman gain equitable access to quality maternal care services.

**Women's Employment**

As part of the *White Paper* action plans, we are taking a stronger stance against unfair employment practices by introducing workplace fairness legislation. The Tripartite Committee on Workplace Fairness recommends employers to be legally required to put in place proper grievance-handling processes to manage workplace discrimination or harassment reporting, protect confidentiality, and prohibit retaliation. To enable more employees to participate more fully in

the workplace, Tripartite Partners will introduce new guidelines on Flexible Work Arrangements by 2024.

**Legislation for the Promotion of Equality between Men and Women and the Empowerment of Women and Girls**

The principle of equality of all persons before the law is enshrined in the Singapore Constitution. Women's and girls' rights are also protected and regularly reviewed in legislation such as the Employment Act, the Women's Charter, the Children and Young Persons Act, and the Penal Code to ensure that they remain relevant.

**Did You Know?**

The Government recognises that women may choose to delay childbearing due to their personal circumstances. As

part of the *White Paper*, **all women aged 21 to 35 years will be able to choose to undergo elective egg freezing**, regardless of their marital status, with sufficient safeguards to ensure that women are able to make an informed choice. Elective egg freezing will be implemented in tandem with the introduction of the Assisted Reproduction Regulations under the Healthcare Services Act in 2023.



In 2022, Singapore's employment rate of females (aged 25-64) was 76.2%.<sup>17</sup>



Muslim law in Singapore is regularly reviewed, and the Muslim community has adopted more contextualised and adaptive practices to support the needs of Muslim women and families. The Majlis Ugama Islam Singapura (MUIS; Islamic Religious Council of Singapore)

Fatwa Committee has released *fatwas* (religious rulings) over the years to protect the financial welfare of Muslim women and their dependents. In 2019, the *fatwa* on joint tenancy was further enhanced to recognise the wife as an equal partner (in terms of house ownership) regardless of her financial contribution to the purchase of the house.

<sup>17</sup> Comprehensive Labour Force Survey, Manpower Research & Statistics Department, Ministry of Manpower.

**SUSTAINABLE DEVELOPMENT GOAL 6:**

Ensure Availability and Sustainable Management of Water and Sanitation for All

**Singapore's Water Management Strategy**

As a densely populated island city-state, Singapore is among the most water-stressed countries in the world. The need to achieve water sustainability has been imperative for Singapore, and we take an integrated and long-term approach towards water management to ensure a resilient and sustainable supply of water.

**Safe and Sustainable Drinking Water**

We have diversified our water supply through the *Four National Taps*: (a) water from local catchments; (b) imported water; (c) recycled water known as NEWater; and (d) desalinated water. We commenced operations of our fourth and fifth desalination plants – the Keppel Marina East Desalination Plant and Jurong Island Desalination Plant – in July 2020 and April 2022 respectively. These new plants feature innovative designs and are more energy-efficient than conventional desalination plants. We are also scaling up the development of biomimetic membranes, which mimic the way plants and animals extract freshwater from seawater, to lower the energy required for desalination.<sup>18</sup>

We have also been exploring technical solutions to improve our recovery rate. Our third NEWater factory in Changi is expected to be commissioned in 2025 and will enable us to recover up to 90% of treated wastewater, higher than the existing rate of about 75%.

<sup>18</sup> The scale-up and validation of such technologies could potentially reduce the energy consumption for desalination from 3.5 kilowatt-hour per cubic meter (kWh/m<sup>3</sup>) to less than 2kWh/m<sup>3</sup> by 2025.



**Keppel Marina East Desalination Plant (KMEDP)**  
KMEDP is Singapore's first large-scale dual-mode desalination plant capable of treating both seawater and freshwater. It features an innovative design to incorporate underground treatment facilities and has an open green rooftop space for recreational activities.



**Jurong Island Desalination Plant (JIDP)**  
(credit to Tuas Power)

JIDP incorporates the latest technologies such as dissolved air flotation, ultra-filtration, and reverse osmosis. It is 5% more energy-efficient than conventional desalination plants due to its co-location with an existing power plant (the Tembusu Multi Utilities Complex), allowing both to share infrastructure and power supply.

## Sanitation and Hygiene SDG 6.2.1, 6.3.1

Singapore has achieved universal access to sanitation, with all households connected to our sewers. Our *Deep Tunnel Sewerage System* enables the collection of every drop of used water for large-scale reclamation and is a key part of our long-term used water system. Singapore also has low distribution losses with systems in place to detect leaks quickly. We have adopted smart technologies such as the *Sewer Analytics and Management System*, which uses data analytics and machine learning to reduce service disruptions and optimise our sewer maintenance, to enhance the operational efficiency and maintenance of the public sewerage system. We also passed legislation to regulate the discharge of trade effluent into the public sewerage system.

## Efficient Water Use SDG 6.5.1

By 2065, Singapore's total water demand is expected to nearly double, with the non-domestic sector accounting for most of the demand. We have taken active steps to manage our increasing water demand. For instance, since 2018, amendments have been made to our *Mandatory Water Efficiency Labelling Scheme* to include a wider range of household appliances. Under the *Climate Friendly Households Programme* introduced in 2020, households are provided with vouchers to encourage switching to more water-efficient shower fittings. For the non-domestic sector, large water users are required to monitor their water efficiency and submit a mandatory Water

Efficiency Management Plan (WEMP) annually. PUB, Singapore's National Water Agency, has developed water efficiency benchmarks and best practices guidelines for the various sectors using data collected from WEMPs. We also launched the *Singapore Green Labelling Scheme* in 2019 for commercial washing appliances, with further minimum water efficiency requirements introduced in 2022. In addition, the *Water Efficiency Fund* was enhanced in 2020 to expand funding for water efficiency projects in businesses. From 2024, water recycling will be made mandatory for new projects which are large consumers of water in the water-intensive wafer fabrication, electronics, and biomedical industries.

## Decarbonisation

As part of the water sector's decarbonisation plan, we began replacing carbon-based energy with renewable energy in 2021 with the opening of Singapore's first large-scale inland floating solar farm at Tengeh Reservoir. We expect to abate approximately 90% of our carbon emissions by 2045 by adopting renewable energy and reducing electricity consumption. For the remaining 10%, we are exploring technologies to capture and remove carbon.



## Engaging Stakeholders

Every year, the *Make Every Drop Count* water conservation campaign and Singapore World Water Day celebrations held in conjunction with the UN World Water Day on 22 March serve to raise awareness of Singapore's water challenges in the face of climate change and educate people on the need to conserve water. In 2021, Singapore launched the *Climate is Changing* campaign, anchored on the theme of climate change and its impact on the need to: (a) enhance flood resilience; (b) strengthen coastal protection; (c) safeguard water security; and (d) reduce carbon footprint through the use of renewable energy.



## International Collaboration

Population growth and the impact of climate change will create new stresses on water availability. It is therefore imperative that we capitalise on international partnerships to address these challenges. We have shared our experiences through technical assistance and capacity-building programmes for developing countries. We also developed a *Singapore Water Exchange* as a global marketplace of innovative water companies that collaborate and co-create solutions. This helps to bring discoveries made in the lab to industrial application as quickly as possible.

We also host the biennial Singapore International Water Week (SIWW), a premier platform to share and co-create innovative water solutions. In April 2022, the 9<sup>th</sup> SIWW and the CleanEnviro Summit Singapore hosted over 11,000 delegates and visitors from 65 countries and regions. Key topics such as climate mitigation and adaptation, resource circularity, net zero, and decarbonisation were discussed.

Singapore is a strong supporter of global efforts to advance SDG 6. At the UN 2023 Water Conference, Singapore co-chaired Interactive Dialogue 5 on the Water Action Decade alongside the US, and organised a side event on Water, Technology, and Sustainable Development, both of which sought to advance discussions on the implementation of SDG 6. Singapore also joined other UN Member States in submitting voluntary contributions to the Water Action Agenda, where we pledged to implement smart water meters, conduct R&D to improve the energy efficiency of our desalination and used water treatment processes, and build expertise on coastal protection and flood management. We are also working with UN-Water on an SDG 6 Acceleration Case Study, which will outline best practices and lessons learned from Singapore's journey in building water sustainability.



## SUSTAINABLE DEVELOPMENT GOAL 7:

Ensure Access to Affordable, Reliable, Sustainable and Modern Energy for All

### 7 AFFORDABLE AND CLEAN ENERGY



## Singapore's Energy Transition

Singapore, as an island city-state with space and resource constraints, has limited alternative energy options. Despite this, we pursue a vision of a clean and efficient energy future. We have transitioned from oil to natural gas for cleaner power generation, and improved the reliability of the energy system, while keeping energy costs competitive. Under the *Singapore Green Plan 2030*, we plan to diversify our energy supply by accelerating solar deployment, facilitating the development of regional power grids, and leveraging emerging low-carbon alternatives such as hydrogen and carbon capture, utilisation and storage (CCUS), while continuing to tap on and invest in natural gas.

### Natural Gas

About 95% of Singapore's electricity is generated using natural gas, the cleanest fossil fuel. To safeguard our energy security, Singapore will continue to diversify our natural gas import sources. Singapore has also implemented policies to help companies improve the efficiency of power plants. The *Energy Efficiency for Power Generation Companies Grant Call* and the *Advanced Combined Cycle Gas Turbine* schemes encourage companies to invest in equipment and technologies that can improve generation efficiency and reduce carbon emissions. Singapore is consulting the industry on new emission standards for power generation units and intends to introduce these standards in 2023.

### Solar Power

Solar energy remains Singapore's most viable renewable energy source. As of 2Q 2022, Singapore has 700 megawatt-peak (MWp) of installed solar

capacity. [SDG 7.b.1, 7.2.1](#) We aim to reach at least 2 gigawatt-peak (GWp) by 2030, although this will only meet around 3% of total projected electricity demand.

Although Singapore's land constraints and highly urbanised environment limit our solar energy potential, we have adopted innovative ways to deploy solar photovoltaic (PV) systems, such as on water bodies, or temporary vacant land. In 2021, Singapore opened a 60 MWp floating solar farm, one of the largest inland floating solar PV systems in the world, reducing carbon emissions by about 32 kilotonnes annually.

Singapore has also deployed energy storage systems (ESS) to address solar intermittency and enhance grid resiliency. In December 2022, Singapore commissioned a 285 megawatt hour ESS facility, the largest in Southeast Asia. These investments have made Singapore one of the most solar-dense cities in the world.

### Regional Power Grids

Singapore is working with our regional partners to develop regional power grids and import up to 4GW of low-carbon electricity by 2035, which will make up around 30% of Singapore's electricity supply. To pave the way for these electricity imports, Singapore has been working with various partners on pathfinder projects that allow us to assess and refine the relevant technical and regulatory frameworks.

The *Lao PDR-Thailand-Malaysia-Singapore Power Integration Project* (LTMS PIP), which imports up to 100MW of renewable hydropower from Lao PDR to Singapore via Thailand and Malaysia, commenced on 23 June 2022. This marked a historic milestone as the



first multilateral cross-border electricity trade involving four ASEAN Member States, and the first project to import renewable energy into Singapore.

### Emerging Low-Carbon Alternatives

To reduce Singapore's carbon footprint in the longer term, Singapore is exploring emerging low-carbon technologies such as geothermal, hydrogen, and CCUS. In October 2022, the Government announced our *National Hydrogen Strategy* to develop hydrogen as a major decarbonisation pathway, as well as initiated an Expression of Interest process in December 2022 to assess the feasibility of developing an end-to-end low or zero-carbon ammonia power generation and bunkering solution in Singapore. The Government will also invest S\$184 million (≈US\$130 million) in R&D under the *Low-Carbon Energy Research Funding Initiative*.

### Energy Market Structure

The energy landscape has changed significantly in recent years and the global energy transition could result in further unanticipated security and reliability risks, as well as extreme price volatility. As sectors turn to electrification to decarbonise their operations, demand for electricity will increase. Singapore therefore evolved our energy market structure to ensure that the market continues to function well even under volatile conditions. In 2022, we announced plans to strengthen our market structure in three key areas – power generation capacity, gas supply, and retail markets.

### International Collaboration

Singapore continues to work closely with international stakeholders to advance cooperation in low-carbon solutions and regional capacity-building. In 2022, Singapore worked with the US to conduct the *Singapore-US Third Country Training Programme* on renewable energy for more than 30 ASEAN participants. Singapore has also participated actively in discussions on energy issues at multilateral fora such as ASEAN, APEC, and G20.

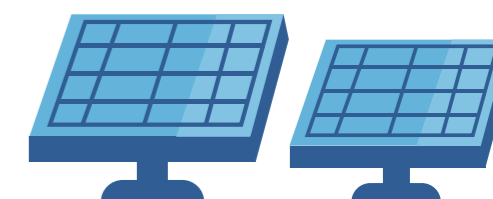
In 2022, Singapore signed MOUs with Cambodia, Indonesia, Lao PDR, and Vietnam to deepen energy cooperation in areas such as the development and financing of renewable energy projects and cross-border electricity trade. Additionally, Singapore

signed Memoranda of Cooperation (MOCs) with Japan to collaborate on long-term emissions reduction strategies and strengthen our collective energy security. Singapore also signed a *Green Economy Agreement with Australia (SAGEA)*, a first-of-its-kind agreement that will reduce barriers to cross-border trade in clean energy. In addition, we are partnering the US on a *Feasibility Study on Regional Energy Connectivity in Southeast Asia*, which will assess the socio-economic benefits, technical feasibility, and economic viability of developing a regional power grid network comprising both land-based interconnections and subsea cables.

Learn more about the SAGEA here



We continue to deepen our cooperation with key international organisations such as the International Energy Agency (IEA) and International Renewable Energy Agency (IRENA). Since 2018, the Singapore-IEA Regional Training Hub has conducted five programmes, with more than 180 participants from 33 countries attending the 2022 programme on efficient grid-interactive buildings. Singapore leads discussions on global energy issues at the annual Singapore International Energy Week (SIEW). At SIEW 2021 and 2022, we convened the Singapore-IRENA High Level Forum and the Singapore-IEA Ministerial Roundtable. These serve as important platforms for energy officials and leaders to address the interlinkages between energy security and energy transitions and the path towards a sustainable, secure, and people-centred energy future.





## SUSTAINABLE DEVELOPMENT GOAL 8:

Promote Sustained, Inclusive and Sustainable Economic Growth, Full and Productive Employment and Decent Work for All

## 8 DECENT WORK AND ECONOMIC GROWTH



### Singapore's Growth

Since Singapore's independence in 1965, the Government has prioritised improving the income and living standards of our people. Between 1965 and 2019, per capita income rose from S\$1,632 (≈US\$533 based on 1965 exchange rate) to S\$79,825 (≈US\$58,514 based on 2019 exchange rate), or an average of 7.5% per annum. Singapore has also made progress on reducing inequalities with the Gini coefficient<sup>19</sup> falling to its lowest level (since 2000) in 2021, and households in the 11<sup>th</sup> to 20<sup>th</sup> percentile seeing the largest real growth of 5.5% in income. At the same time, Singapore has had to adapt to a lower growth rate as our economy matures.

#### Impact of COVID-19

The COVID-19 pandemic caused unprecedented disruption to the global economy and supply chains. Singapore was not spared, with the economy contracting 3.9% in 2020. However, we positioned ourselves to recover quickly. Singapore's economy grew by 8.9% in 2021. We also remained attractive to global investors, securing projects that are expected to create more than 17,000 jobs. During the pandemic, the Government supported lower- and middle-income households through schemes such as the *Care and Support Package*, *Self-Employed Persons Income Relief Scheme*, *Temporary Relief Fund*, and *COVID-19 Support Grant*. By December 2021, the seasonally-adjusted resident unemployment rate was at 3.2%, close to pre-COVID-19 levels. [SDG 8.5.2](#)

As domestic businesses recover toward pre-COVID-19 levels and global travel returns, Singapore will continue

to strengthen its economic competitiveness. The *Singapore Economy 2030* vision, announced in 2022, sets out the economic transformation for the next decade. To support this vision, we have worked with stakeholders to refresh our Industry Transformation Maps (ITMs) and identify new opportunities.

#### Singapore Economy 2030 Vision

*Singapore Economy 2030* aims to position our industries, enterprises, and workers for long-term sustainable growth. The Vision encompasses four key pillars on services, manufacturing, trade, and enterprise.

Learn more about the *Singapore Economy 2030 Vision* here



Singapore's **services** sectors constitute around 70% of our economy and employ three quarters of our workforce. Among these, Information & Communications, Finance & Insurance, and Professional Services are the fastest growing sectors. We seek to harness growth opportunities in digitalisation and sustainability, and anchor Singapore as a leading, vibrant hub for businesses, lifestyle, and tourism.

Our vision is to position Singapore as a global business, innovation, and talent hub for advanced **manufacturing**.<sup>20</sup> [SDG 9.2.1](#) To achieve this, we



have instituted a three-pronged strategy to continue attracting frontier investments by enhancing our strengths such as connectivity and stability, grooming local enterprises by encouraging them to adopt Industry 4.0 technologies, and strengthening our pipeline of skilled local talent for the sector.

To strengthen Singapore's position as a **trading** hub, we will reinforce Singapore's position as a key node in global supply chains. To support this, we are also strengthening regional trade cooperation architecture through initiatives such as the *Regional Comprehensive Economic Partnership* and the *Comprehensive and Progressive Agreement for Trans-Pacific Partnership*, and forging new partnerships for the digital and green economies.

In addition, we will provide customised support for promising local **enterprises** with high growth potential under the *Singapore Global Enterprises* initiative. We will also step up efforts to help local Small and Medium Enterprises (SMEs) capture new opportunities through four key areas: capability development, internationalisation, digitalisation, and innovation.

Singapore is committed to keeping our economy open and connected to welcome global talent while building a local talent pool. This will ensure that Singapore remains competitive as a global hub for talent, and a vibrant city. Underpinning our efforts, Singapore will continue to have close tripartite coordination and collaboration between workers, companies, and the Government.

#### A Future Ready Workforce

Singapore has transformed our labour market to realise the commitment to provide good jobs and opportunities for our people. Between 1991 and 2021, the proportion of Professionals, Managers, Executives and Technicians (PMETs) among all resident jobs increased from 27% to 62%. This has been made possible by raising the quality of our workforce, together with our efforts to restructure and transform our economy. The share of employed residents with tertiary qualifications increased steadily between 1991 and 2021, from 13% to 62%.

Singapore also launched the Jobs Transformation Maps in 2021, which complement the ITMs by mapping out the impact of technology and digitalisation on

individual jobs over the medium term. It also serves as a compass for businesses and workers to prepare themselves for the future of work as the use of technology becomes more pervasive.

Singapore provides a wide range of programmes to support mid-career workers to transition into new jobs and for at-risk workers to be reskilled and redeployed. For example, the *Career Conversion Programmes* support the reskilling of mid-career workers for in-demand jobs and provide targeted support for workers whose roles are at greater risk of redundancy.

#### Green Economy

Singapore is committed to supporting businesses and industry in the effort to transition to a low-carbon economy. As part of our *Green Economy Strategy*, we aim to decarbonise industries and businesses, drive new areas of growth in the green economy, and invest in the development of new low-carbon solutions.

The heart of Singapore's Energy and Chemical (E&C) sector, Jurong Island (JI), is a world-class chemicals park home to over 100 leading global energy, petrochemical, and specialty chemicals companies. As part of the *Singapore Green Plan 2030*, the Government has committed to transform JI into a sustainable E&C park. We also aspire to achieve more than six million tonnes of carbon abatement per annum from low-carbon solutions by 2050.

The transition to a low-carbon economy presents exciting new economic opportunities. Singapore aims to develop new green growth sectors such as in the areas of carbon services and trading. To catalyse the growth of green finance in the region, we are developing financing solutions, such as by providing grant schemes to support the issuance of sustainable bonds and loans.

As we transform our industries, we will continue to equip our people to seize opportunities in the transition to a green economy and low-carbon power sectors. The Government offers relevant reskilling and upskilling programmes, which include the *Career Conversion Programme for Clean and Renewable Energy Professionals*.

<sup>19</sup> The Gini coefficient measures income inequality on a scale of 0 to 1, with 0 reflecting perfect equality and 1 reflecting maximal inequality.

<sup>20</sup> The manufacturing value added per capita in chained (2015) dollars (using the 2015 USD-SGD exchange rate) grew in the past decade from US\$10,818 to US\$15,015 in 2021.

## SUSTAINABLE DEVELOPMENT GOAL 9:

Build Resilient Infrastructure, Promote Inclusive and Sustainable Industrialisation and Foster Innovation

## 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



### Industry, Innovation, and Infrastructure

Singapore is investing in research and innovation to strengthen our economic fundamentals and develop engines of growth, as envisioned in the *Singapore Economy 2030 Vision*. We focus on three aspects: (a) building and strengthening infrastructure; (b) transforming the economy through innovation; and (c) fostering an inclusive environment for the growth of SMEs.

#### Pushing the Boundaries

During the COVID-19 pandemic, Singapore supported the aviation and maritime sectors to safeguard our status as a connectivity hub through packages such as the *Aviation Sector Assistance Package*, *One Aviation Support Package*, *One Aviation Resilience Package*, and *MaritimeSG Together Package*. Domestically, by providing annual subsidies to run public transport services and supporting the wages of public transport workers, the Government ensured that Singapore's public transport system remained reliable, affordable, and financially sustainable.

For the **aviation sector**, we took the opportunity to review the design of the Changi Airport Terminal 5 (T5) project to make it more modular, and enhance resilience and sustainability. T5 will be operational around the mid-2030s and is expected to provide an additional handling capacity of 50 million passengers annually. For the **maritime sector**, Tuas Port was officially opened on 1 September 2022. When fully operational in the 2040s, Tuas Port will be the world's largest fully automated port, capable of handling almost double its current volume.

For **land transport**, our rail network will expand by 50% over the next decade, to reach 360km by the early 2030s. This will bring us towards our aim of increasing peak-period public transport journeys completed by Walk-Cycle-Ride modes under 45 minutes from 70% today to 90% by 2040. We are working with Malaysia on the *Johor Bahru-Singapore Rapid Transit System Link*, which is slated to commence service by end-2026.



An integrated and sustainable land transport network through Walk-Cycle-Ride modes

#### Sustainable Industrialisation Supported by Innovation

Sustained investments in R&D and innovation are a key pillar of Singapore's economic development strategy. With over 4,000 technology start-ups, the Global Startup Ecosystem Index 2022 ranked Singapore as 1<sup>st</sup> in Asia and 7<sup>th</sup> globally. Business expenditure on R&D grew from S\$5.5 billion (≈US\$3.9 billion) in 2018 to S\$6.6 billion (≈US\$4.7 billion) in 2020.



During the COVID-19 pandemic, our R&D capabilities in healthcare and biomedical sciences contributed to our response. A\*STAR's Experimental Drug Development Centre collaborated with the Diagnostics Development Hub, Tan Tock Seng Hospital, and biotechnology company Mirxes to develop the Fortitude COVID-19 test kit, the first lab diagnostic kit to receive Provisional Authorisation from Singapore's Health Science Authority for clinical use. The Fortitude kit has been deployed in Singapore and more than 40 other countries.

Research and innovation have contributed to our sustainability efforts. For example, Singapore-based water analytics firm Visenti developed a smart sensor, WaterWiSe, to continuously monitor water quality and leakages in pipelines. The sensor was developed through pilot trials jointly conducted with PUB, Singapore's National Water Agency, and is now deployed across over 321 locations in Singapore.

Under the *Research, Innovation and Enterprise (RIE) 2025 Plan*, the Government remains committed to investing in research, innovation, and enterprise at about 1% of Singapore's GDP over 2021-2025, or about S\$25 billion (≈US\$18 billion). The *RIE2025 Plan* has three focus areas. **First**, tackling a spectrum of national needs to support economic growth and industry transformation such as in low-carbon hydrogen. **Second**, sustaining support for basic research through a portfolio approach for research funding. **Third**, scaling up innovation and enterprise platforms to strengthen capabilities.

#### Foster an Inclusive Environment for SMEs

Singapore continues to step up efforts to strengthen the core capabilities of our local enterprises. We have set up Centres of Innovation (COIs)<sup>21</sup> to assist SMEs with their technology and innovation ambitions. From 2016 to 2020, COIs have engaged about 3,000 SMEs. These engagements have resulted in approximately 300 innovation projects.

The Government has increased the support for local SMEs with respect to R&D and innovation activities. More SMEs will be able to tap on the research capabilities of over 80 centres undertaking innovation projects across five pilot sectors: agri-tech, construction, food manufacturing, precision engineering and retail.

The *Technology for Enterprise Capability Upgrading* programme, has provided for the secondment of more than 1,000 A\*STAR research scientists and engineers to support over 1,000 local SMEs in product development. Enterprise Singapore, the Government agency championing enterprise development, has enhanced its *Innovation Advisors Programme* to partner industry veterans with SMEs to commercialise their research and translate their innovations into new products and services.

The Government has also set up Innovation Partner for Impact Singapore, which serves as a neutral intermediary to accelerate the innovation process of enterprises through access to its global innovation ecosystem and advisory services.



<sup>21</sup> There are currently 11 COIs which are set up in partnership with selected polytechnics and research institutes. They cover aquaculture, energy, electronics, supply chain management, environment and water, food, complementary health products, precision engineering, built environment, beauty and personal care, and urban agriculture industries.

## Future Challenges and Opportunities

### Challenges

#### TRANSITION TO A LOW-CARBON FUTURE

Transitioning to a low-carbon future poses new challenges. Companies will need to deepen sustainability capabilities to remain competitive. Industries would need to invest in emerging technologies to decarbonise and reduce emissions significantly.

#### RISING COST PRESSURES

COVID-19, the Russia-Ukraine conflict, and the increasing cost of electricity and supplies have significantly increased business costs. This makes it challenging for businesses to invest resources to innovate and transition towards low-carbon, more sustainable business operations.

### Opportunities

#### SUSTAINABILITY

Our *Green Economy Strategy* focuses on three thrusts: (a) greening our businesses and industry and shifting to renewable energy; (b) capturing green growth opportunities; and (c) equipping workers for the green economy.

#### DIGITALISATION

Digitalisation is a global trend that will continue to change the way we live, work and play. Singapore is actively supporting companies' digitalisation journeys to improve their productivity and help them change their business models.

Tuas Port, an automated and intelligent port, will be a critical engine that drives the Singapore economy, and reinforces our status as an international maritime centre. The Maritime and Port Authority of Singapore (MPA) is working with port operators to drive the adoption of digital technologies at Tuas Port. Digital innovations such as MPA's digitalPORT@SG™ will enhance efficiency of port operations and reduce the turnaround time of ships, while the *Next Generation Vessel Traffic Management System* will provide accurate, real-time situational awareness of shipping traffic.

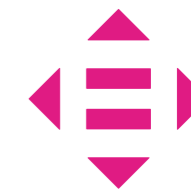
Sustainability is also a key design feature of Tuas Port. Besides electrified equipment and automated guided vehicles which reduce carbon emissions by about 50% compared to current diesel prime movers, green buildings, smart grid solutions and battery energy storage systems will be developed to optimise energy usage.



## SUSTAINABLE DEVELOPMENT GOAL 10:

Reducing Inequality within and Among Countries

10 REDUCED INEQUALITIES



## Leaving No One Behind

Singapore is committed to providing an enabling environment for all citizens to reap the fruits of our economic progress. We have pursued policies to mitigate income inequality, ensure social mobility, and enhance social integration regardless of our citizens' ethnicity, sex, origin, religion, and economic status.

### Reducing Inequalities and Ensuring Social Mobility

Improving the lives of Singaporeans, particularly the low-income and vulnerable, is a continuous endeavour. The Government ensures access to affordable basic services, creates opportunities for growth, and provides institutional support for individuals to look after themselves and their families, with help from the community. We do not rely narrowly on redistribution to reduce inequality, but also seek to maximise opportunities for all Singaporeans to secure their own success.

#### Education

One way of doing so has been to invest heavily upstream in the early childhood sector to provide affordable, accessible, and quality preschool education. We are also strengthening after-school support by enrolling disadvantaged students in school-based Student Care Centres to provide them with a conducive after-school environment. Beyond formal education, Singapore has also established *SkillsFuture*, a national integrated system of education and training to provide all Singaporeans

with enhanced opportunities to acquire greater skills proficiency, knowledge, and expertise throughout their lives.

#### Income Inequality

The *Progressive Wage Model* (PWM) helps to increase wages of workers in sectors and occupations that may require more help through upgrading skills and improving productivity.<sup>22</sup> This has contributed to progress in reducing income inequality. From 2016 to 2021, the average monthly household income per household member among resident employed households in the 1<sup>st</sup> to 40<sup>th</sup> percentiles grew by 2.3% per annum in real terms. [SDG 10.1.1](#) The corresponding Gini coefficients have also progressively decreased over the years.<sup>23</sup> We will continue to ensure that Singaporeans have opportunities to develop to their fullest potential throughout their lives, regardless of their starting point.

#### Robust Social Security System

Singapore's social security system comprises the four pillars of (a) home ownership, (b) healthcare assurance, (c) retirement adequacy through the Central Provident Fund (CPF) system, and (d) tax-financed transfers through the *Workfare Income Supplement* and *Silver Support* schemes. We have increased our social spending in recent years to ensure that more Singaporeans can benefit from them.

<sup>22</sup> Currently applies to the workers in cleaning, security, landscaping, lift and escalator, retail, and food services sectors, as well as administrators and drivers across all sectors. From July 2023, Progressive Wages will be extended to workers in the waste management sector.

<sup>23</sup> The Gini coefficient before government transfers and taxes in 2021 was 0.444 and 0.458 in 2016. The Gini coefficient after government transfers and taxes was 0.385 in 2021 and 0.401 in 2016.

One example is healthcare, where lower-to-middle-income Singaporeans are eligible for higher subsidies for subsidised treatment and medication, including at participating general practitioner and dental clinics.

On a broader level, Singapore believes in a Whole-of-Nation effort to reinforce a supportive social culture that encourages personal and family responsibility. Social policies are designed to empower the vulnerable and are complemented by a spirit of community volunteerism and giving. For example, *ComCare* provides financial assistance to low-income individuals and families to meet their basic needs, while working hand-in-hand with the families to improve their situation and regain self-reliance. This is also why the *CPF* is funded by contributions from employers and employees and is the key vehicle to deliver our various social security policies. Such policies are key to more sustainable longer-term social mobility.

### Empowering and Promoting Social, Economic, and Political Inclusion

As a multi-ethnic and multi-religious society, ensuring that people from all ethnic groups and religions enjoy equal opportunity has been a fundamental principle in Singapore's governance. To ensure that minority ethnic groups in Singapore will always have a voice and are represented in Parliament, at least one Member of Parliament in each of the larger electoral constituencies (Group Representation Constituencies) must be from an ethnic minority.

We continue to work towards building a more inclusive society. This includes Singapore's *Enabling Masterplan 2030*, a national roadmap developed by and with persons with disabilities and caregivers, which

charts out how Singapore seeks to enable persons with disabilities to participate fully as integral and contributing members of society. Singapore's *White Paper on Singapore Women's Development* also outlines action plans to address issues ranging from workplace discrimination and equal opportunities for women to pursue leadership and celebrate women empowerment. The *WorkPro* scheme helps employers implement flexible work arrangements and age-friendly workplaces.

Learn more about the *Enabling Masterplan 2030* here



As a nation founded by immigrants, Singapore has always been an open society. We value strong social cohesion and harmony between the different community groups in Singapore and we work together as a community to continuously strengthen these bonds and ensure that new Singaporeans feel welcomed.

### Towards a More Caring and Inclusive Society

Singapore is at a crossroads as our society matures and ages. While many of our social policies and initiatives have worked well, there are unavoidable trade-offs in policy-making. We will continue to consult a wide variety of stakeholders as we seek new ways to improve the lives of Singaporeans and ensure that we progress together as a society and nation.



### Engaging Stakeholders

As part of the *Singapore Together* movement, the Ministry of Manpower has worked with *ForwardSG* and *ThinkPlace* to convene an *Alliance for Action on Lower-Wage Workers*, with the aim of encouraging a Whole-of-Nation effort to uplift the wages and well-being of lower-wage workers.

### Did You Know?

Singapore has rolled out several initiatives aimed at enhancing support for children from disadvantaged backgrounds.

#### **UPLIFT Community Network (UCN)**

The Ministry of Education has progressively expanded the *UCN* nationwide, starting with 12 Social Service Office towns in 2022. Support for these students and their families is coordinated at the town level, where they are referred to relevant agencies and community-based resources. Once fully implemented, *UCN* aims to benefit about 1,800 students nationwide each year.

#### **UPLIFT Enhanced School Resourcing (UESR)**

Since 2019, *UESR* has been piloted in 23 schools by allocating additional resources such as teacher posts and consultancy for schools, so that schools can put in place structures, processes and customised programmes to support vulnerable and at-risk students. The pilot supported more than 2,000 students each year and has seen encouraging interim outcomes, including improvements in students' attendance and behaviour, as well as a greater sense of belonging amongst the secondary school students. From 2022, *UESR* has been expanded to an additional 24 primary and secondary schools, with plans to extend this to about 100 schools by 2025. When fully rolled out, *UESR* is expected to support around 13,000 students from about 100 schools.

#### **KidSTART**

*KidSTART* has supported more than 6,200 children aged 6 and below to date. The programme has shown positive outcomes. Parents in *KidSTART* families who received home visits showed improvements in their confidence and ability to interact well with their children and reduced parenting stress. Their children also improved in their socio-emotional and daily living skills, such as their ability to cooperate with others, as well as manage their emotions and self-control. *KidSTART* will be expanded nationwide and expects to support about 80% of children from eligible lower-income families, beginning with those born in 2023.



## SUSTAINABLE DEVELOPMENT GOAL 11:

Make Cities and Human Settlements Inclusive, Safe, Resilient and Sustainable

### 11 SUSTAINABLE CITIES AND COMMUNITIES



## Integrated Land Use Planning

As a city-state with limited land and high urban density, it is critical for Singapore to adopt prudent and strategic use of land and other spaces to ensure a liveable and sustainable city for our residents. Sound and dynamic urban governance, balanced by social, economic, and environmental considerations, and combined with long-term development planning, remain core to our strategy. In 2021, Singapore embarked on a review on our land use plans and developed broad strategies to guide the development of Singapore over the next 50 years and beyond, as part of the *Long-Term Plan Review*. Singapore has also adopted a systematic framework to determine and mitigate the potential impact of new development, including by strengthening our *Environmental Impact Assessment* framework, and introducing a new *Heritage Impact Assessment* framework in 2022.

### Housing a Nation

Singapore will keep public housing affordable and accessible while protecting the interests of current and future generations. As the master planner and developer of Singapore's public housing estates, the Housing & Development Board (HDB) is also continually incorporating fresh planning concepts, bold ideas and innovative designs to develop a quality living environment. This includes planning new housing estates with smart technologies and sustainable designs, as well as expanding housing options for seniors. To ensure that all Singaporeans have a home, the HDB has various support schemes including giving priority for first-timer applicants, and assistance to those in need.

### Did You Know?



The Punggol Regional Library opened its doors in 2023 to provide a range of accessible features that cater to persons with disabilities. The library is equipped with assistive technology devices, wheelchair-accessible book borrowing stations, and an Accessible Collection with books for persons with disabilities and their caregivers. The accessible features are a result of feedback received from over 500 persons with disabilities and their caregivers since 2018 to explore how libraries can better serve their needs.



### Building Safety

The Building and Construction Authority (BCA) champions a strong culture of safety in the built environment sector by regularly reviewing building standards. BCA's regulatory regime includes a rigorous system of checks and controls throughout the entire building lifecycle. Regular inspections are conducted on buildings by professionals to provide a structured approach to detect and rectify building deterioration in a timely manner.

### Land Transport Master Plan 2040

Singapore employs a transit-oriented approach to development and planning to ensure that transport capacity can support land use plans. We continue to promote active mobility, and are expanding our cycling network to around 1,300km by 2030. To support Singapore's future growth and meet commuter expectations, we are also harnessing emerging technologies to create a forward-looking, sustainable, and more efficient land transport system. This includes embracing Mobility-as-a-Service, Autonomous Vehicles, and autonomous on-demand services.

### Inclusive Transport

Singapore aims for a transport system that is inclusive and accessible by all. All train stations, bus interchanges and 98% of bus shelters in Singapore are barrier-free, and all public buses are wheelchair-accessible.

### Green Transport

Adopting cleaner-energy vehicles such as electric vehicles (EVs) and encouraging people to walk, cycle, or take public transport are key initiatives to support a greener land transport system. We aim to roll out 60,000 EV charging points and electrify half of our bus fleet by 2030.

### Green Buildings

Greening our buildings is a key strategy to mitigate our carbon emissions and make our city more resilient and sustainable. In 2021, Singapore launched the latest edition of the *Singapore Green Building Masterplan*. Singapore has greened over half of its buildings by Gross Floor Area and will accelerate Singapore's transition towards a more sustainable, low-carbon built environment.

### Green Spaces

As we face the growing impact of climate change, we are prioritising building a liveable, sustainable, and climate-resilient Singapore for residents. To do so, Singapore is transforming into a *City in Nature* as outlined in the *Singapore Green Plan 2030*. As part of this plan, we aim to plant one million more trees across Singapore between 2020 and 2030. We are also on track to achieve our goal for all households to be within a 10-minute walk of a park by 2030. [SDG 11.7.1](#)

### International Collaboration

Singapore continues to actively advance the SDG 11 agenda through platforms such as the biennial World Cities Summit and the Centre for Liveable Cities' (CLC) *International Capability Development Programmes*, such as the *Singapore-UN Habitat International Leaders in Urban Governance Programme*. CLC has developed a *Liveability Framework* that distills an urban systems approach to liveable and sustainable cities. Participating cities benefit greatly from the application of the *Liveability Framework* principles to urban planning and development.





## Future Challenges and Opportunities

### Challenges

#### LIMITED LAND

As an island constrained by limited land and natural resources, Singapore has to balance competing land requirements to meet our different economic, social, and environmental needs. We will need to continually optimise our land use, whether through redevelopment or building underground. Another strategy is to reclaim and redevelop large tracts of land, for example, the consolidation of our port at Tuas to make way for the Greater Southern Waterfront.

#### CHANGING DEMOGRAPHICS

With increasing lifespans, we aim to develop “longevity-ready neighbourhoods” across the city. Since 1990, HDB developments have incorporated barrier-free accessibility requirements like ramps and barrier-free routes that link up blocks and amenities in the area. In 2021, we announced the *Health District @ Queenstown* project, a community initiative to pilot a suite of solutions (programmes, infrastructure, digital solutions, etc.) that will enhance the health and well-being of residents across life stages.

### Opportunities

In urban governance, Singapore has always strived to balance the need to cater to the diverse needs of current residents, while being responsible to future generations. The *Long-Term Plan Review* that we embarked on in 2021 mapped out ways for the city to adapt to anticipated and unanticipated trends in areas like the future of work, mobility, and housing. We continue to innovate through R&D initiatives such as *Research, Innovation and Enterprise 2025*, which will further strengthen our capabilities in building Singapore into a liveable, resilient, sustainable, and economically vibrant city.



#### Engaging Stakeholders

The *Long-Term Plan Review*, which reviews Singapore’s physical development plans over the next 50 years and beyond, concluded in August 2022. We engaged more than 15,000 people in reimagining Singapore’s future together, through various platforms, including facilitated discussions, workshops, polls, and written feedback. This allowed us to better balance our diverse land use needs and prepare for future uncertainties.

## SUSTAINABLE DEVELOPMENT GOAL 12:

Ensure Sustainable Consumption and Production Patterns

## 12 RESPONSIBLE CONSUMPTION AND PRODUCTION



### A Sustainable and Resource-Efficient Nation

Ensuring sustainable consumption and production is vital to Singapore’s continued development. Launched in 2019, our inaugural *Zero Waste Masterplan* maps out our key strategies to build a sustainable, resource-efficient, and climate-resilient nation. Additionally, our Resource Sustainability Act gives legislative effect to regulatory measures targeting three priority waste streams – e-waste, packaging waste including plastics, and food waste. These policy and legislative tools have catalysed and coordinated waste reduction and management efforts nationwide.

#### Waste Reduction and Management

Singapore generated about 6.94 million tonnes of solid waste in 2021 with a recycling rate of 55%. [SDG 12.5.1](#) The post-pandemic pick-up in economic and social activity in 2021 has led to a 10% increase in waste disposal, but with 26% more waste being recycled. We incinerate close to 100% of our non-recycled waste. As a small country with limited land, we have to stretch our only landfill for incineration ash. We have therefore put in place policies to reduce our waste and move towards a circular economy. We have achieved 100% recycling rates of our construction waste.

**E-waste.** To ensure proper collection and handling, we implemented the *Extended Producer Responsibility (EPR)* scheme for e-waste in 2021. The *EPR* scheme requires producers to bear physical and financial responsibility for the collection and treatment of their products when they reach end-of-life. Since its implementation, more than 700 e-waste collection points have been deployed nationwide at shopping malls, community centres, government, and commercial buildings, and more than 9,000 tonnes of consumer e-waste have been collected.

**Packaging waste.** In 2021, we instituted a *Mandatory Packaging Reporting (MPR)* Scheme requiring producers of packaged products and retailers to submit packaging data and their 3R (Reduce, Reuse, Recycle) plans to the National Environment Agency (NEA). The *MPR* lays the necessary foundation for an *EPR* scheme to be introduced for managing packaging waste, which will be implemented in the future. To support companies in their journey towards adopting sustainable packaging waste management practices, the Singapore Manufacturing Federation partnered NEA to introduce the industry-led *Packaging Partnership Programme (PPP)* in 2021. The *PPP* is a capability development programme that supports companies to fulfil their regulatory obligations starting with *MPR* requirements. It also enables the exchange of best practices in sustainable packaging waste management. To nudge consumers towards more sustainable consumer behaviour, Singapore will implement a disposable carrier bag charge in mid-2023 and plans to introduce a beverage container return scheme in the coming years.

**Food waste.** Our food waste management system is guided by a food waste management hierarchy, with reduction of food waste as its priority, followed by redistribution of unsold/excess food, recycling/treating food waste and finally recovering energy. Where food waste is still generated,<sup>24</sup> [SDG 12.3.1](#) we look to recycling and treatment to recover valuable resources. Under the Resource Sustainability Act, large commercial and industrial food waste generators will be required to segregate their food waste for treatment from 2024 onwards. Reporting requirements will also be implemented to facilitate the tracking of food waste generated and segregated.

<sup>24</sup> About 665,000 tonnes of food waste were generated in 2020, much lower than 786,000 tonnes in 2015.

Singapore is keenly aware of the threats that marine litter poses to our environment. It is thus important to put in place integrated waste management systems to ensure all waste is collected and properly treated. In doing so, we effectively reduce land-based sources of marine litter, the biggest source of marine litter globally.



Sustainable consumption and production, resource efficiency, and moving towards a circular economy are important ways to tackle marine litter. In June 2022, Singapore launched our *National Action Strategy on Marine Litter*, which outlines the actions and measures taken to combat marine litter across six priority areas tailored to our local context. This includes reducing land and sea-based waste, taking a circular economy approach, investing in research and development, and engaging stakeholders and international partners to raise awareness and co-create sustainable solutions. This seeks to invigorate further efforts from all sectors of society to play their part, thus enabling a Whole-of-Nation approach to tackle marine litter.

We have continued to enforce stringent regulatory frameworks to ensure the environmentally sound management of **hazardous substances and toxic industrial waste**, [SDG 12.4.2](#) in accordance with international multilateral environmental agreements that we are Party to.<sup>25</sup>

#### Promoting Resource Efficiency

We have implemented the *Mandatory Energy Labelling Scheme*, *Minimum Energy Performance Standards*, and *Mandatory Water Efficiency Labelling Scheme* to promote the efficient use of water and energy. These schemes empower consumers to make more informed decisions about household appliance usage, and

raises the average efficiency levels of products. We will continue to implement and extend these schemes to achieve greater resource sustainability in our consumption patterns.

The *Mandatory Water Efficiency Management Plan* and *Water Efficient Building* certification have also been introduced to encourage commercial and industrial partners to adopt water efficient practices. The *Water Efficiency Fund (WEF)* was established to provide financial support for businesses to implement water efficiency projects. In 2020, the *WEF* was enhanced to cover expanded funding areas, higher funding amounts and shorter disbursement periods.

In 2020, NEA and PUB, Singapore's National Water Agency, jointly launched the *Climate Friendly Households Programme* to encourage households to reduce their energy and water consumption by making the costs of energy-efficient appliances and water-saving fittings more affordable. Smart water meters are also being progressively implemented at 300,000 residential, commercial, and industrial premises to help households and businesses conserve water. This will provide users with access to near real-time water consumption data, empowering consumers to become smarter and more efficient users of water.



<sup>25</sup> Singapore is a Party to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal; the Stockholm Convention on Persistent Organic Pollutants; the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; the Vienna Convention for the Protection of the Ozone Layer; the Montreal Protocol on Substances that Deplete the Ozone Layer; and most recently, the Minamata Convention on Mercury. 0.063 tonnes of hazardous waste were being collected and treated in 2020, as compared to 0.081 tonnes in 2015.

#### Moving Forward

Our targets under the *Singapore Green Plan 2030* include:

- By 2026, Singapore's first integrated waste and used water treatment facility, Tuas Nexus, to be 100% energy self-sufficient;
- By 2026, reduce the amount of waste to landfill per capita per day by 20%; and
- By 2030, reduce energy consumption in existing HDB towns by 15%.

While Singapore has made significant progress towards these goals, more needs to be done. We must: (a) continue to work with the community to encourage adoption of sustainable consumption practices, with emphasis on waste reduction; (b) improve our recycling rate, particularly for the three priority waste streams; and (c) partner corporate and industry partners to co-create innovative solutions and novel approaches to close the resource loop efficiently and effectively.

I founded *Repair Kopitiam*, an initiative that organises monthly community repair meetings to repair items, from broken electrical appliances to damaged furniture, to combat the throw-away culture. Through the efforts of our volunteers, our society is now more aware of their consumption by ensuring that things are durable and repairable. I look forward to stronger networks and support to scale the impact of the initiative, towards a more sustainable Singapore.



Farah Sanwari, Founder of Repair Kopitiam



#### Artist's Impression of Tuas Nexus

Our first integrated used water and solid waste treatment facility, **Tuas Nexus**, is expected to be operational in phases from 2025 onwards. Tuas Nexus brings together the Tuas Water Reclamation Plant and the Integrated Waste Management Facility as an innovative and sustainable solution to meet our long-term solid waste management and used water treatment needs. When completed, it will be energy self-sufficient and harness the synergies of the water-energy-waste nexus.

# SUSTAINABLE DEVELOPMENT GOAL 13:

Take Urgent Action to Combat Climate Change and its Impacts

## 13 CLIMATE ACTION



### Singapore's Climate Ambition

Despite being a small island state with limited access to renewable energy, Singapore is committed to supporting global climate action. In response to the 2021 Glasgow Climate Pact, we raised our climate ambition in October 2022 by committing to achieve net zero emissions by 2050. In November 2022, we committed to reducing our emissions to around 60 MtCO<sub>2</sub>e in 2030, after peaking our emissions earlier. [SDG 13.2.2](#) We further joined various climate coalitions at the 27<sup>th</sup> Conference of the Parties to the United Nations Framework Convention on Climate Change (COP-27).<sup>26</sup> We are working to phase down the consumption of hydrofluorocarbons to meet our obligations under the Kigali Amendment to the Montreal Protocol.

We were the first country in Southeast Asia to introduce a carbon price in 2019. To help reach our higher climate ambition, our carbon tax will be increased to S\$50-80/tCO<sub>2</sub>e (≈US\$36-57.50) by 2030. This will incentivise businesses to invest in decarbonisation solutions to

transition to a low-carbon future. We also introduced schemes to support and encourage businesses and households to pursue energy efficiency, such as the *Resource Efficiency Grant for Emissions* and the *Climate Friendly Households Programme*.

#### Singapore Green Plan 2030

In February 2021, the *Singapore Green Plan 2030* was launched to rally Whole-of-Nation efforts to tackle climate change. Some key efforts and targets include:

- Quadrupling our solar deployment by 2025, and importing 30% of our energy mix from renewable sources by 2035;
- No new diesel car registrations from 2025, and no new internal combustion engine car registrations from 2030;
- Planting one million more trees in the next decade, and greening 80% of Singapore's buildings (by Gross Floor Area) by 2030; and
- Reducing the waste sent to our landfill per capita per day by 30% by 2030, and working towards achieving a 20% reduction by 2026.

The *Singapore Green Plan 2030* will continue to evolve as we develop and refine our strategies.

#### Did You Know?

Singapore's Minister for Sustainability and the Environment Grace Fu co-facilitated the Ministerial consultations on Article 6 of the Paris Agreement (cooperative implementation through carbon trading) alongside Norway's Minister of Climate and the Environment Espen Barth Eide at COP-26, which led to its successful completion after six years of negotiations.



Learn more about the **Singapore Green Plan 2030** here



<sup>26</sup> These include Egypt's initiative on *Action on Water Adaptation and Resilience*; the United Nations Secretary General's initiative on *Early Warnings for All*; the *Forest and Climate Leaders' Partnership*; the *Green Shipping Challenge*; the *Net Zero World Initiative*; the *Net Zero Government Initiative*; the *Collective 2030 Zero Emissions Vehicle Goal*; the *Article 6 Implementation Partnership*; the *Joint Declaration from Energy Importers and Exporters on Reducing Greenhouse Gas Emissions from Fossil Fuels*; and the *Powering Past Coal Coalition Declaration*.



#### Aviation and Maritime Sustainability

We support efforts led by the International Civil Aviation Organization and the International Maritime Organization to address international transport emissions. We are developing a **Sustainable Air Hub Blueprint** for release in 2023, which will chart Singapore's decarbonisation efforts across the three key aviation domains of airport, airline, and air traffic management. On the maritime front, we published our **Maritime Singapore Decarbonisation Blueprint** in 2022, which included a US\$216 million investment to help our port and domestic harbour craft decarbonise, and to support bunkering of low and zero-carbon marine fuels such as biofuels, ammonia, and hydrogen.

#### Resilience Strategy

The Centre for Climate Research Singapore (CCRS) runs high-resolution regional climate models to produce long-term projections of rainfall, temperature, wind, relative humidity and sea level for Singapore and Southeast Asia. CCRS is also home to the World Meteorological Organisation's Regional Office for Asia and South-West Pacific, which helps to improve regional coordination, build capacity, and strengthen meteorological services.

We are developing a Coastal-Inland Flood Model to help us assess flood risks more holistically. Site-specific studies are carried out across our coastline on implementing hybrid solutions that combine natural elements such as mangroves and sea grasses with hard engineering solutions geared towards multi-functionality. To manage inland flood risks due to climate change, we are also planning for our drainage system to cater for higher rainfall intensity, and enhancing capabilities in rainfall nowcast and flood response.

#### Sustainable Finance

We are working to galvanise and channel funding to support Asia's transition to a low-carbon economy. Singapore is ASEAN's largest market for green and sustainability-linked bonds and loans. We support corporates, both globally and in Asia, on sustainable finance through the *Sustainable Bond Grant Scheme* and the *Green and Sustainability-linked Loan Grant Scheme*.



### 5 Pillars of Singapore Green Plan 2030



The five pillars of the Singapore Green Plan 2030



The Government will take the lead by issuing up to S\$35 billion (≈US\$25 billion) of green bonds by 2030 to fund public sector green infrastructure projects. In June 2021, we announced the deployment of S\$1.8 billion (≈US\$1.3 billion) under the Green Investments Programme to invest in public market investment strategies that have a strong green focus. The national *Singapore Green Bond Framework* published in June 2022 lays the foundation for sovereign green bond issuances. An inaugural S\$2.4 billion (≈US\$1.72 billion) sovereign green bond was issued in August 2022. Other efforts to build a comprehensive ecosystem for green and transition finance include:

- Building capabilities in environmental risk management in the financial sector, such as using climate stress tests;
- Providing grants to defray the costs of issuing green and sustainability-linked loans and bonds;
- Supporting industry efforts to develop a liquid and transparent voluntary carbon credit market; and
- Deploying technology to address data challenges, such as through Project Greenprint which will feature an Environmental, Social and Governance (ESG) registry to record and maintain the provenance of green certifications, and an ESG disclosure platform to enable listed companies to disclose their corporate sustainability data in a structured and efficient manner.

### International Collaboration

The constraints we face underscore the importance of international collaboration to achieve our climate goals. We are actively working with partners to research, develop and deploy low-carbon climate technologies, including carbon capture, utilisation and storage (CCUS), blue and green hydrogen, domestic solar energy and regional renewable energy.

In addition to working with international partners from public, private, and people sectors to facilitate the development of a high-integrity carbon market to advance global climate action and ambition, we are setting up a vibrant carbon trading and services ecosystem in Singapore to support this aspiration. We are partnering researchers to develop robust methods for accounting carbon sequestration in nascent areas like blue carbon nature-based solutions and leveraging satellite technology for measurement and monitoring. Along with the World Bank Group and International Emissions Trading Association, we co-founded and launched the Climate Action Data (CAD) Trust in December 2022 to facilitate transparency in the carbon markets.<sup>27</sup> We hope that these collaborative efforts can help build regional capabilities, unlock the potential of the Asia Pacific region, and develop mutually beneficial partnerships and solutions to address the global climate challenge.



### Engaging Stakeholders

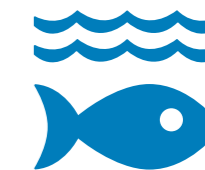
To support Singapore organisations in reducing their carbon impact and improve sustainability, *Sustainability in Singapore* was launched by the Building and Construction Authority and Singapore Green Building Council in 2021. The initiative aims to develop a training programme that builds capabilities in designing and delivering behavioural change campaigns.

<sup>27</sup> The CAD Trust provides a decentralised metadata platform that links, aggregates, and harmonises all major carbon registry data to avoid double counting, increase trust in carbon credit data, and build confidence in carbon markets.

## SUSTAINABLE DEVELOPMENT GOAL 14:

Conserve and Sustainably Use the Oceans, Seas and Marine Resources for Sustainable Development

14 LIFE BELOW WATER



## Singapore's Marine Conservation Story

Biodiversity is a part of our natural heritage, and we strive to conserve and protect it. Singapore's coastal and marine areas play host to maritime and industrial activities such as port operations, ship building and petrochemical refinement, as well as recreation. At the same time, Singapore's coastal and marine environment supports a diverse range of habitats and biodiversity. Although our reef areas are just over 12km<sup>2</sup>, they harbour over 250 hard coral species, 12 seagrass species, and 100 fish species. Other coastal and marine habitats in Singapore include rocky shores, mangroves, mudflats, seagrass beds and coral reefs. Aspiring to become a City in Nature, Singapore aims to restore and enhance 80 hectares of forest, marine, and coastal habitats by 2030.

### Integrated Urban Coastal Management SDG 14.2.1

To ensure the sustainability of our marine natural heritage, we have taken steps to ensure that our marine conservation strategies are in line with broader sustainable development efforts. In 2009, we adapted the Partnership in Environment Management for the Seas of East Asia's *Integrated Coastal Management* principles to our national urban context. To reconcile competing demands for marine space, we take a pragmatic and science-based approach to marine conservation through our unique *Integrated Urban Coastal Management (IUCM)* approach. Our *IUCM* strategy has four guiding principles:



Proactive planning and management to safeguard our coastal and marine environment by optimising the use of coastal resources, including coastal spaces in a sustainable manner;



A Whole-of-Government approach to ensure consultative planning and coordination of policies between all stakeholders in coastal and marine land-use and planning;



Active partnerships through community engagement & public awareness programmes; and



Science-based management through research, monitoring, restoration, and enhancement programmes to conserve sensitive coastal habitats and their biodiversity and natural resources amidst coastal development.

### Safeguarding Areas for Conservation, Research, and Education

The Sisters' Islands Marine Park (SIMP) SDG 14.5.1 was established in 2015 as Singapore's first marine park. Spanning 40 hectares, it contains a wide range of marine habitats, including coral reefs, sandy shores and seagrass meadows, and showcases our sub-tidal coral reef and shallow sea-floor areas, in addition to the unique biodiversity within the inter-tidal areas and coastal forests. This allows the SIMP to provide visitors with recreational options while creating space for cutting-edge research, restoration, and enhancement techniques.

Singapore strongly supports enhancing the conservation and sustainable use of oceans and their resources by implementing the UN Convention on the Law of the Sea (UNCLOS), which provides the international legal framework for the conservation and sustainable use of the oceans and their resources. In recognition of this, Ambassador for the Oceans and Law of the Seas Rena Lee, who chaired the Intergovernmental Conference on Marine Biodiversity of Areas Beyond Natural Jurisdiction (BBNJ), led negotiations towards the successful conclusion of an international legally binding instrument in March 2023. The BBNJ Agreement would also promote the achievement of other targets within SDG 14.

### Habitat enhancement using artificial reef structures

The Government led efforts to install eight artificial reef structures at the Sisters' Islands Marine Park in 2018, which increased the existing 17,000m<sup>2</sup> of subtidal reef area by 500m<sup>2</sup>.

A total of 1,993 coral colonies were transplanted to these structures and are surviving well, with 85% survivorship. More than 95 coral colonies have also been naturally recruited. This project helps to enhance biodiversity of the reef, understand natural coral recruitment and ecological succession, establish an *in-situ* coral gene bank, and provide for environmental education through outreach programs.

In 2019, the *Friends of Marine Park (FMP)* community started organising outreach activities (e.g., community beach and dive clean-ups, guided walks) and citizen science research at the 3.9-hectare Bendera Bay, which comprises a variety of coastal and marine habitats. It aims to expand activities in the coming years to foster a sense of stewardship for the shared space and raise awareness about Singapore's marine heritage and conservation.



### Advancing Management Through Science and Research

The successful management of Singapore's marine resources requires up-to-date research to inform decision-making. To this end, we launched the *Marine Climate Change Science* programme in 2021, which will catalyse the development of evidence-based interventions and solutions to safeguard our coastal and marine ecosystems against the impact of climate change. This is part of our efforts to build climate resilience under the *Singapore Green Plan 2030*.

Space technologies and their applications have also contributed to the management of Singapore's coastal waters. Through the use of multispectral and hyperspectral satellite data, we are able to monitor water quality and detect harmful algal blooms.

### Illegal, Unreported and Unregulated Fishing (IUUF)

Although Singapore has a small fisheries sector, we recognise the negative impact of IUUF on sustainable fisheries resources in our oceans, and remain committed to strengthening the following measures:

- Amend our Fisheries Act to accord powers for the effective implementation of the FAO's Port State Measures Agreement.
- Cooperate with Regional Fisheries Management Organisations to ensure that fish traded in Singapore are not from IUU sources.

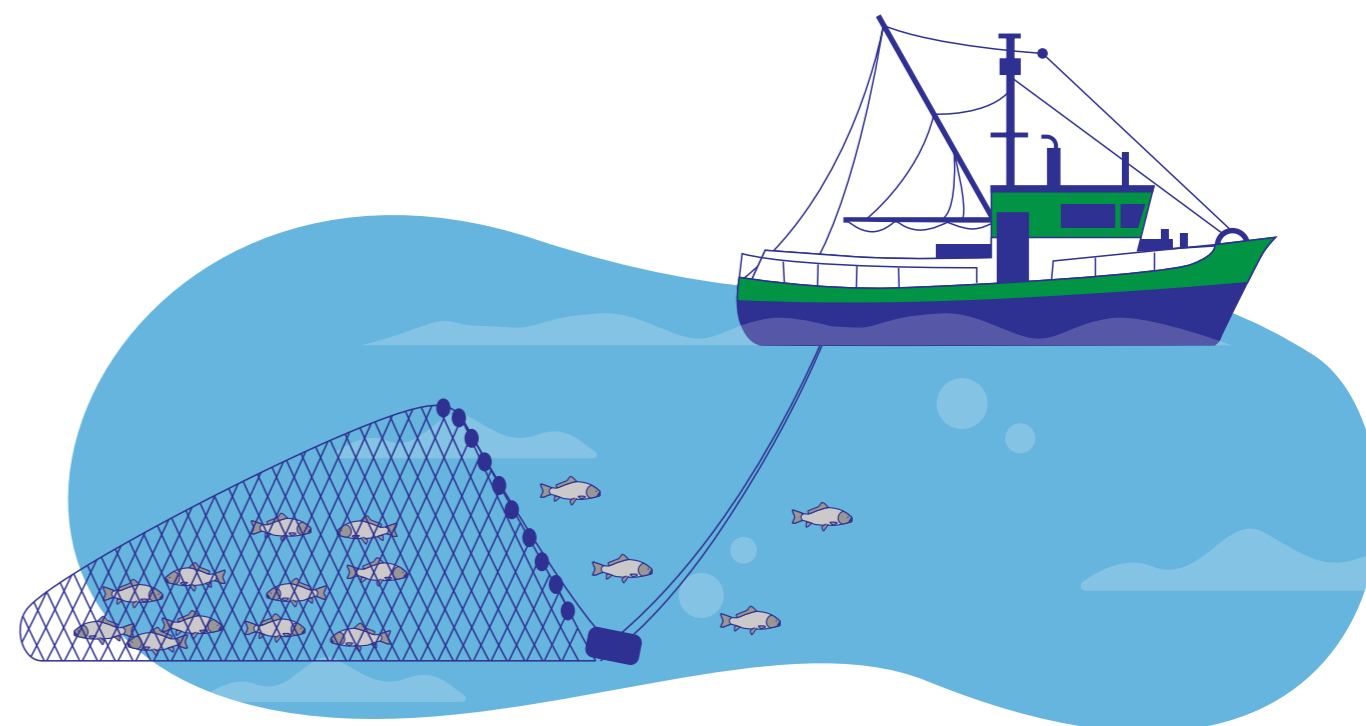
We will work with ASEAN Member States on initiatives towards sustainable fisheries management and combating IUUF, especially in capacity-building. As a participating country of the Regional Plan of Action to Promote Responsible Fishing Practices including Combatting Illegal, Unreported and Unregulated Fishing, we will work with other participating countries and are involved in concerted efforts to combat IUUF in the region. In addition, we support Indian Ocean Rim Association initiatives to combat IUUF.



### Did You Know?

To better regulate wildlife trade and stop illegal trade, the National Parks Board (NParks), Microsoft, and Conservation International developed

Fin Finder, Asia's first mobile application that employs artificial intelligence to visually identify shark and ray species. The joint innovation aims to provide onsite support to NParks' wildlife trade inspectors by allowing them to accurately identify shark and ray species that may have been illegally traded, and to quickly flag suspicious fin shipments for further DNA testing.



## SUSTAINABLE DEVELOPMENT GOAL 15:

Protect, Restore and Promote Sustainable Use of Terrestrial Ecosystems, Sustainably Manage Forests, Combat Desertification, and Halt and Reverse Land Degradation and Halt Biodiversity Loss

15 LIFE ON LAND



## A City in Nature

As a result of early and sustained greening efforts over almost 60 years since our independence, Singapore has more than 7,800 hectares of green spaces island-wide. This includes nature reserves, gardens, and parks linked by a network of park connectors, i.e. green corridors linking major parks and nature areas. According to the Green View Index,<sup>28</sup> Singapore is ahead of most cities in urban tree coverage despite being a small, densely populated city-state of around 730km<sup>2</sup>.

Singapore has since evolved into a biophilic City in a Garden, integrating greenery extensively into our built environment. In recent years, biophilic design approaches have been adopted to create restorative landscapes, ecological principles have been employed to restore habitats, and the community has been actively engaged to sustain these greening efforts.

In the next phase of our greening journey, we aspire to become a City in Nature. With increasing urbanisation and climate change, we have adopted a science-based approach to greening and nature conservation such as integrating nature-based solutions into our urban infrastructure to achieve climate, ecological and social resilience. The City in Nature vision is a key pillar of the *Singapore Green Plan 2030*.<sup>29</sup>

### Conserving and Extending Our Natural Capital

Our four nature reserves safeguard important habitats for native biodiversity. As core components of our natural capital, they are also providers of clean air and water. To date, we have converted more than 530 hectares of forested areas surrounding the nature reserves into nature parks, and we intend to add

more by 2030, to serve as complementary habitats and buffer our nature reserves against the impacts of urbanisation and human activities.

### Intensifying Nature in Our Gardens and Parks

We are actively restoring and enhancing our habitats within key nature areas. By 2030, we aim to restore and enhance 80 hectares of forest, [SDG 15.1.1](#) marine and coastal habitats, and restore ecological habitats in at least 50% of our gardens and parks. Species recovery efforts are also undertaken to safeguard the survival of endemic species or species of significance. Species recovery plans are currently being implemented for over 120 plant and animal species, and we aim to do this for 100 plant and 60 animal species by 2030.

### Strengthening Connectivity Between Our Green Spaces

To sustain a healthy natural ecosystem, we will continue expanding our network of ecological corridors to connect the core ecological habitats. This is done by implementing measures to support ecological connectivity, including retaining key existing forest patches, incorporating Nature Parks, and developing the *Park Connector Network (PCN; a network of linear parks)* as well as *Nature Ways*, which are roadside verges planted with native trees and plants to mimic the multi-tiered structure of forests. Singapore currently has approximately 185km of *Nature Ways*, with a target to reach 300km by 2030. The aspiration is to make every road a *Nature Way*, and to expand the PCN from over 375km currently to 500km by 2030.

<sup>28</sup> The Green View Index is an indicator of visibility of greenery at street level using Google Street View images, as a measure of the degree of greenery/vegetation that pedestrians utilising the roads would be exposed to.

<sup>29</sup> See SDG 13 chapter.



### Enhancing Stewardship of Our Greeneries and Biodiversity

To foster greater stewardship of Singapore's natural heritage, NParks is partnering the community to plant one million more trees island-wide between 2020 and 2030. To date, over 540,000 trees have been planted under the *OneMillionTrees* movement, involving more than 75,000 members of the community. These efforts will contribute to restoring and buffering our core forests, providing more habitats for our native biodiversity, and creating more nature corridors that further enhance ecological connectivity between our green spaces.

### Addressing Trade in Endangered Species [SDG 15.7.1, 15.c.1](#)

The illegal trade in endangered species threatens their survival in the wild and is a key contributor to global biodiversity loss. Singapore is a Party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and we do not condone illegal wildlife trade activities. We are committed to implementing and enforcing CITES to regulate the trade in, and protect endangered species of animals and plants. Singapore adopts a Whole-of-Government multi-pronged approach to take strong and effective enforcement measures. NParks, Singapore's CITES Management Authority, works closely with domestic law enforcement agencies as well as civil society and individuals on such efforts.

Singapore's efforts to tackle the illegal wildlife trade is underpinned by a robust legislative framework and strong rule of law. In July 2022, Singapore amended the Endangered Species (Import and Export) Act, Singapore's primary legislation regulating the trade in endangered species, to strengthen Singapore's enforcement powers and penalties against illegal wildlife trade, and provide greater clarity for stakeholders on the scope of Singapore's wildlife trade regulations. This was done in consultation with stakeholders from the nature community, traders, shipping companies, academic experts, and NGOs.

Singapore also leverages science and technology and works closely with our international partners to tackle illegal trade in wild fauna and flora. For example, to enhance our capabilities in identifying and analysing wildlife specimens, Singapore established the Centre for Wildlife Forensics (CWF) in 2021. The CWF is

recognised as a CITES Reference Laboratory, which enables Singapore to support the implementation and enforcement of CITES by other CITES parties. The CWF also meets ISO quality assurance standards for wildlife forensic testing.



### Did You Know?

Strong international cooperation is a cornerstone of the global fight against illegal wildlife trade and Singapore works closely with other countries to intercept illegal wildlife trade shipments. In 2019, Singapore worked with China to successfully seize 37.5 tonnes of pangolin scales and 8.9 tonnes of ivory between April and July 2019. The seized pangolin scales and ivory were being transhipped illegally through Singapore, from Africa to Vietnam, and were estimated to be worth about S\$152.5 million (≈US\$109 million) and S\$17.7 million (≈US\$12.6 million) respectively. All the seized pangolin scales and ivory have been destroyed to prevent them from re-entering the market.

The close cooperation between Singapore and China led to the arrest of suspected criminals in China and the successful disruption of a criminal network on illegal trade in wildlife within Asia. These collaborative efforts to combat illegal trade in wildlife have been recognised by the United Nations Office on Drugs and Crime Asia Environmental Enforcement Award 2019.



### Engaging Stakeholders

NParks launched the *City in Nature Conversations* in 2020 to leverage various platforms including webinars and workshops to engage the public on a variety of topics, such as Our Green Spaces for the Future, Science Behind a City in Nature, and A City in Nature for Coastal Resilience.



## SUSTAINABLE DEVELOPMENT GOAL 16:

Promote Peaceful and Inclusive Societies for Sustainable Development, Provide Access to Justice for All and Build Effective, Accountable and Inclusive Institutions at All Levels

## 16 PEACE, JUSTICE AND STRONG INSTITUTIONS



### Law and Order in Singapore

Singapore's judicial system prides itself on its transparency, accountability, promotion of the rule of law, and equal access to justice. Singapore was ranked first in the 2022 Gallup Global Law and Order Report, and third for "Order and Security" in the 2022 World Justice Project (WJP) Rule of Law (ROL) Index. Singapore remains one of the safest places in the world and is committed to protecting society's most vulnerable.

#### Corruption Under Control

Singapore adopts a zero-tolerance approach to corruption. Our national anti-corruption framework includes strong anti-corruption laws, effective and impartial enforcement by an independent anti-corruption agency, the Corrupt Practices Investigation Bureau (CPIB), and strong political will to eradicate corruption. The number of corruption reports received in 2021 remained low at 249 cases, with the private sector still accounting for the majority (89%) of cases registered for investigation.

Nevertheless, we are not complacent. CPIB has taken significant steps to co-create corruption prevention solutions with strategic partners. One such initiative is the *Anti-Corruption Partnership Network*, established in September 2018, to promote ownership of corruption prevention in the private sector. To instil values of integrity and incorruptibility in youth, the CPIB collaborates with Institutes of Higher Learning and youth organisations to co-create anti-corruption resources. For example, the CPIB collaborated with Nanyang Polytechnic to develop *Corruzione*, a web game to raise awareness on corruption issues.

#### Effective, Accountable, and Transparent Institutions

We have maintained our strong reputation as a trusted and efficient legal system, and are ranked in the top ten globally in the 2022 WJP ROL Index for the Criminal Justice and Civil Justice factors. We have transformed our court system with our Courts (Civil and Criminal Justice) Reform Act 2021 and the Rules of Court 2021 to: (a) enhance the ability of the Singapore courts to conduct proceedings in a flexible manner;<sup>30</sup> and (b) place a duty on parties to attempt amicable resolution before the commencement of court proceedings and while court proceedings are pending. These changes, among other things, support Singapore's efforts to keep the litigation costs reasonable, increase convenience, and ensure that our laws are accessible and easily understood by the public.

#### Partnering Communities

The Government takes a holistic approach to improving access to justice by working with an extensive network of advocacy and community partners to provide both civil and criminal legal aid to those who cannot afford legal representation. The Government provides civil legal aid through the Legal Aid Bureau, and co-funds the *Criminal Legal Aid Scheme* administered by registered charity Pro Bono SG to provide criminal legal aid in non-capital cases. We established the Public Defender's Office on 1 December 2022 to expand the scope of criminal legal aid to cover a wider range of incomes and offences. This is expected to increase the number of Singapore residents receiving criminal legal aid by more than 50% and improve access to justice for vulnerable individuals.

<sup>30</sup> For example, through a combination of remote hearings, documents-only hearings, asynchronous hearings by exchange of written correspondence, and in-person hearings.

Educating the public about law and governance is an ongoing priority. Since 2015, the Ministry of Law, in close cooperation with the Ministry of Education, has conducted an annual *School Outreach Programme* to various pre-University institutions, covering topics such as the rule of law and human rights.

#### Stemming the Flow of Illicit Funds

As Singapore is a major global financial centre, we are exposed to money laundering risks arising from crimes committed overseas. We have robust controls in place to detect and deter the flow of illicit funds. Singapore has taken further steps to enhance our Anti-Money Laundering (AML)/Counter Financing of Terrorism (CFT) regime.

- Singapore established the AML/CFT Industry Partnership (ACIP) in 2017. It brings together financial, regulatory, and legal stakeholders to jointly identify and mitigate ML/TF risks to Singapore. ACIP published best practices on key risk areas and facilitated the sharing of information between authorities and ACIP members. These collaborative efforts have led to the interception of about US\$53 million from suspicious accounts.
- In 2019, the Singapore Police Force established the Anti Scam Centre (ASC) to consolidate its anti-scam efforts and enhance efforts to counter the scam situation in Singapore. The ASC leverages technology for faster intelligence gathering and works closely with banks to rapidly freeze bank accounts suspected of receiving or transferring crime proceeds.
- Since 2020, we have leveraged automation and data analytics to combat ML/TF more effectively.<sup>31</sup> For example, we introduced the *Production Order – Electronic Transmission Project*, a public-private partnership that facilitates the transmission of banking information from banks to law enforcement agencies within one business day.

The Singapore authorities work closely with foreign counterparts to stem illicit financial flows linked to transnational crime and terrorism. We support mutual legal assistance requests from foreign counterparts in accordance with our domestic framework and laws, as well as our international obligations, particularly

<sup>31</sup> <https://www.mas.gov.sg/regulation/notices/psn02-aml-cft-notice---digital-payment-token-service>

those under the United Nations Convention Against Corruption and the United Nations Convention Against Transnational Organised Crime. We participate actively in international organisations and networks such as INTERPOL, the Egmont Group, the Financial Action Task Force (FATF), and the Asia Pacific Group on Money Laundering.

Singapore assumed the two-year FATF Presidency on 1 July 2022. The Singapore Presidency will focus on: (a) strengthening asset recovery; (b) countering illicit finance of Cyber-Enabled Crime; (c) increasing effectiveness of global AML measures; and (d) reinforcing FATF partnerships with FATF-Style Regional Bodies.

Learn more about our FATF priorities here



#### Maintaining a Secure Cyberspace

Maintaining a secure cyberspace requires international cooperation. Singapore currently chairs the United Nations Open-Ended Working Group on Security of and in the Use of Information and Communication Technologies (2021-2025). Regionally, we contributed to the establishment of the ASEAN-Singapore Cybersecurity Centre of Excellence in 2019 for capacity-building in areas such as confidence-building measures, policy, strategy, legislation, and operations, and to shape norms for the responsible use of cyberspace at the UN.

#### Enhanced Protection for the Vulnerable

We are constantly reviewing our legislation as part of our ongoing efforts to combat violence and harm to the most vulnerable in society. In addition to amendments to the Penal Code, we amended the Protection from Harassment Act (POHA) in 2019. The POHA provides a range of criminal and civil remedies against harassment to, among other things, enhance protection for victims with increased penalties for offences committed against vulnerable victims and victims in intimate partner relationships. In June 2021, a dedicated and specialist court was set up to make it easier, more affordable, and more efficient for victims to obtain relief under the POHA.

## SUSTAINABLE DEVELOPMENT GOAL 17:

Strengthen the Means of Implementation and Revitalize the Global Partnership for Sustainable Development

### Singapore Cooperation Programme

The successful implementation of the 2030 Agenda can only be achieved through global partnerships, including North-South, South-South, and triangular cooperation.

Singapore benefitted significantly from international support in the early years of our independence. To give back to the international community, the *Singapore Cooperation Programme (SCP)* was established as Singapore's flagship platform for technical assistance to fellow developing countries. Since 1992, the SCP has hosted close to 150,000 officials from more than 180 countries, territories, and intergovernmental organisations. All SCP programmes are aligned with the 2030 Agenda and the 17 SDGs, and reflect our belief that human capital is a country's most valuable asset.

#### Did You Know?

The SCP celebrated its 30<sup>th</sup> Anniversary in 2022. The SCP30 logo features an ascending path around the milestone of 30 years, with the 17 SDG colours reflecting the SCP's support for the 2030 Agenda for Sustainable Development.



#### Evolving to Support the 2030 Agenda

We constantly review and adapt the SCP to address evolving development needs and priorities. To help countries emerge stronger from COVID-19, we introduced new courses on global health and pandemic preparedness, as well as digital transformation.

Climate change is a clear and pressing priority for many countries. Singapore launched the *Climate Action Package (CAP)* in 2018 to support fellow developing countries in meeting their Paris Agreement obligations. Over 1,300 government officials have

## 17 PARTNERSHIPS FOR THE GOALS



participated in close to 60 CAP courses. We recently launched the three-year *Sustainability Action Package (SAP)*, comprising capacity-building programmes on a wide range of climate and sustainability themes, to succeed the CAP from April 2023.

The SCP offers customised capacity-building programmes tailored to the unique challenges of each constituency:

- **ASEAN.** Our training centres in Cambodia, Laos, Myanmar, and Vietnam have been conducting courses under the *Initiative for ASEAN Integration (IAI)* to narrow the development gap within ASEAN. These centres also serve as integrated platforms to deliver additional capacity-building beyond the IAI such as the new *Singapore-Laos Enhanced Cooperation Package* geared towards Laos' priorities and supporting its ASEAN Chairmanship in 2024.
- **Africa.** Singapore launched the *Singapore-Africa Partnership Package* in June 2022 to share our development experience and best practices in areas relevant to Africa's needs through capacity-building programmes, and offer postgraduate scholarships for senior African officials.
- **Small States.** The Forum of Small States (FOSS) was established by Singapore in 1992 for small states to discuss issues of common interest at the UN. The "FOSS for Good" technical assistance package was launched in 2022 comprising programmes covering COVID-19 recovery and digital transformation. The *Singapore Partnership for the Small Island Developing States' (SIDS) Accelerated Modalities of Action (SAMOA) Pathway*, launched in 2019, supports SIDS' implementation of the SAMOA Pathway by offering them priority placements in SCP courses, customised regional and bilateral courses, and aviation and maritime fellowships. Over 11,000 participants from SIDS have benefitted from these packages.



#### Third Country Training Programmes (TCTP)

The SCP strengthens our partnerships to provide technical assistance to the Global South through our TCTP frameworks. We have worked with over 50 partners, including UN agencies,<sup>32</sup> to cover a wide range of topics on sustainable development. Our partnerships with countries such as Argentina, Chile, Japan, Mexico, Morocco, Thailand, Türkiye, and the US have facilitated North-South and South-South Cooperation. Singapore also hosts the International Monetary Fund (IMF)-Singapore Regional Training Institute, to provide capacity-building on macroeconomic and debt sustainability issues for Asia-Pacific countries to enhance fiscal and monetary stability.

#### Multi-Stakeholder Partnerships

The implementation of the SDGs is a Whole-of-Nation effort and requires support from all sectors of society. To this end, Singapore has strengthened our multi-stakeholder partnership to implement the SDGs through existing and new partnerships.

#### International and Regional Efforts

Singapore has continued to support multilateral initiatives for pandemic prevention, preparedness, and response. We contributed US\$500,000 to the WHO Strategic Preparedness and Response Plan for COVID-19 in 2020, US\$5 million to the COVAX Advance Market Commitment in 2021, and US\$10 million to the Pandemic Fund in 2022. Singapore also represents the FOSS on the WHO's Access to COVID-19 Tools (ACT)-Accelerator Facilitation Council to provide guidance and advocacy to resolve the challenges of the ACT-Accelerator.

To assist countries in dealing with the economic fallout of the pandemic, Singapore contributed a total of US\$20.57 million to the IMF's *Catastrophe Containment and Relief Trust*, IMF's *COVID-19 Crisis Capacity Development Initiative* and the IMF's *Trust for Special Poverty Reduction and Growth Operations for the Heavily Indebted Poor Countries* in April 2021.

<sup>32</sup> UN agencies include the UN Development Programme (UNDP), UN Children's Fund (UNICEF), UN Office for Disaster Risk Reduction (UNDRR), and the International Monetary Fund (IMF). We also work with the World Trade Organisation (WTO) and the World Intellectual Property Organisation (WIPO). Singapore hosts the IMF-Singapore Regional Training Institute (IMF-STI), the IMF's regional training centre for Asia-Pacific; the Global Centre for Technology, Innovation and Sustainable Development, a joint initiative between Singapore and the UNDP; and the WIPO-Singapore Office, which serves the ASEAN region in intellectual property issues.

<sup>33</sup> Organised in partnership with the UNDP and Citi Foundation's *Youth Co:Lab* initiative, the four-month YAC enables participants to accelerate the implementation of the SDGs through leadership, social innovation and entrepreneurship. Youth participants will turn their ideas into reality through a series of curated workshops and guidance from experienced industry professionals.

#### Civil Society, NGOs, and Industry Efforts

Our civil society organisations have also been actively promoting projects which contribute to the SDGs. The Singapore International Foundation collaborates with local and overseas public and private stakeholders to share skills and expertise through its capacity-building programmes and projects such as the *Water for Life* programme, which provided 155,000 villagers in Cambodia, Indonesia, and Myanmar with access to clean potable water. Temasek Foundation, a Singapore-based non-profit philanthropic organisation, also supported communities and hospitals in Asia through the provision of medical and essential items to cope with COVID-19.

We continue to work closely with the Global Compact Network Singapore (GCNS), the local chapter of the United Nations Global Compact, in supporting sustainable business practices in Singapore. GCNS has upskilled over 600 participants from more than 400 companies through *LowCarbon SG*, launched in 2021, to enable local businesses to reduce their carbon emissions.

#### Engaging Youth

Youth engagement is crucial to drive sustained implementation of the SDGs. Since 2019, the National Youth Council (NYC) has supported efforts in engaging youths through the National Youth Fund and Singapore-ASEAN Youth Fund, and innovation programmes such as the Singapore Sustainability Conference and the annual *Youth Action Challenge (YAC)*.<sup>33</sup> These develop future leaders with SDGs in mind.



#### Did You Know?

Prominent SDG-related initiatives that NYC, together with UNDP and Citi Foundation, have supported over the past few years include: (a) Skilio, an AI-powered platform for educational institutions to track soft skills growth in their students, and to build skills that employers value, (b) Calm Collective Asia, a mission-driven organisation that aims to break the mental health stigma in Asia, (c) Stick 'Em, which aims to make technological literacy accessible; and (d) Homepal, which aims to empower the lives of vulnerable individuals through technology.

## The Road Ahead

Singapore is one of the world's greenest cities today. Our journey towards sustainable development is an iterative one that constantly adapts to evolving needs and challenges. However, the world today is beset by a confluence of fragilities – deepening geopolitical fractures, economic crises, the bifurcation of technology and supply chains, as well as growing threats to our global commons. As a small nation buffeted by global headwinds, these challenges will have a huge impact on Singapore.

The VNR provides a platform for Singapore to introspect and glean lessons on how best to equip ourselves with the strategy and tools to confront these challenges head-on, both domestically and as part of a global ecosystem of like-minded partners. The problems of today will have far-reaching implications for the generations of tomorrow. We must continue to forge our path towards sustainable development with careful planning and stewardship of our limited resources.

### Future Challenges and Outlook

Looking ahead, we face major uncertainties and risks in our external environment, and the impact

will be disproportionately borne by small states like Singapore. Further escalations in ongoing geopolitical conflicts could bring new waves of disruptions and turmoil, particularly in global food and energy markets. This would push the world into deeper economic and humanitarian crises. It would also further undermine the multilateral rules-based international system which is already under siege, and this will have serious implications for small and open economies like Singapore. The devastating effects of climate change will become more frequent and intense, disproportionately impacting small, low-lying island states, including Singapore. Even as we have fully transitioned to living with COVID-19 as an endemic disease, we cannot rule out the possibility of new and more deadly pandemics.

Recognising these challenges, we will continue to build on strong foundations to overcome these challenges. **We will chart long-term strategies to ensure a green, liveable, and climate-resilient home.** We have raised our climate ambition to achieve net zero emissions by 2050, with the carbon tax as a key enabler. As we transform Singapore into a *City in*

*Nature*, we will bolster our food resilience and water security, and shore up our coastal defences to ensure that Singapore becomes a climate-resilient nation. At the same time, we will double down on our efforts to stay open and connected to the world.

**We will renew our social compact and strengthen our social safety nets.** To ensure that every child has a strong foundation to reach their fullest potential, we will reach out to lower-income parents and close the gaps in the early stages of our children's lives. To overcome the challenges of an ageing population, we will build a *Nation for All Ages* by leveraging technology to enable our seniors to remain active and gainfully employed. We will address the disproportionate share of caregiving responsibilities that women tend to shoulder, as well as gender stereotypes about familial roles and career choices. We will do more to alleviate the impediments that persons with disabilities face in life, and adopt new ways of empowering them.

**We will empower our people with the skills and adaptability to face the future with confidence.** We will adopt a new approach to skills which will include

a fresh commitment to making continuous learning, reskilling, and upskilling a way of life. We will continue to uplift lower-wage workers and narrow the wage gap. We will step up efforts to bridge the digital divide, enhance digital skills and training, and promote inclusive digital transformation.

Singapore has always taken a long-term, forward-looking approach to sustainable development and will continue to upgrade existing capabilities while building new ones. We do not shy away from making hard but necessary decisions. These decisions will require clarity in communication and support from stakeholders across all segments of society. Furthermore, global challenges must be addressed in parallel due to their cross-cutting nature, and we must work with all countries to strengthen the robustness of the global architecture for the future, instead of focusing on stop-gap solutions. We remain committed to upholding the principle of multilateralism, as it is in the interest of all nations, large and small, to work in tandem to strengthen cooperation. In doing so, we seek to learn best practices and build on our progress towards the achievement of the 2030 Agenda and beyond.



## Methodology

Singapore has always adopted a Whole-of-Government and Whole-of-Nation approach towards sustainable development. In preparing for this VNR, we took stock of our policies and assessed their contributions to Singapore's sustainable development in line with the 2030 Agenda. We assessed that our approach of integrating sustainability directly in our policy process has yielded positive results thus far. The report writing process also played a pedagogical role. It encouraged a diffusion of best practices through interaction with key stakeholders, experts, youth organisations, and other countries, to understand sustainable development from multiple points of view.

### Writing the Report – an Inter-Agency Effort

This report has been in the works for more than a year in advance of its publication during which the views and considerations of all relevant Government agencies and stakeholders were taken into account. Our Inter-Ministry Committee on Sustainable Development Goals (IMC-SDGs), co-chaired by the Ministry of Foreign Affairs and the Ministry of Sustainability and the Environment, convened inter-agency meetings to seek agencies' support for and ownership of the VNR process. We urged agencies to critically examine the efficacy of our policies, highlight achievements, and most importantly, identify areas where there is room for improvement. Acknowledging that the implementation of SDGs is a cross-sectoral effort, we also assigned groups of different agencies to work with each other on each of the 17 SDG chapters. Through the process, we were better able to glean the inter-linkages between SDGs and assess how we can work on the different goals together to achieve effective implementation.

### Learning from Others

The IMC-SDGs drew from international and regional experience, especially from countries that have undertaken their VNRs, to improve our approach towards SDG implementation and showcase our progress in the report. We participated in the Global Preparatory Workshops for the 2023 VNRs organised by the UN Department of Economic and Social Affairs. These provided us with an opportunity to build a network of contacts with VNR focal points and UN agencies to share experiences and collaborate on our VNR.



### Engaging Stakeholders Outside Government

We recognise that sustainable development issues cannot be addressed in silos or in a vacuum. Our report reflects the diversity of views and ideas from key stakeholders beyond Government agencies. We made a concerted effort to publicise Singapore's VNR undertaking at various fora and engagements to reach the relevant stakeholders and solicit their views and concerns. Our stakeholders responded readily with their views and ideas on the report, with some even sharing their research on the 2030 Agenda in areas specific to their interests. These engagements highlighted areas where the Government's work aligned with stakeholders' interests and sparked off ideas on how we could potentially support and collaborate with these stakeholders. We are grateful for the enthusiastic responses that enriched our reflections and this report on Singapore's progress on sustainable development.

## Annex: Progress Tracker

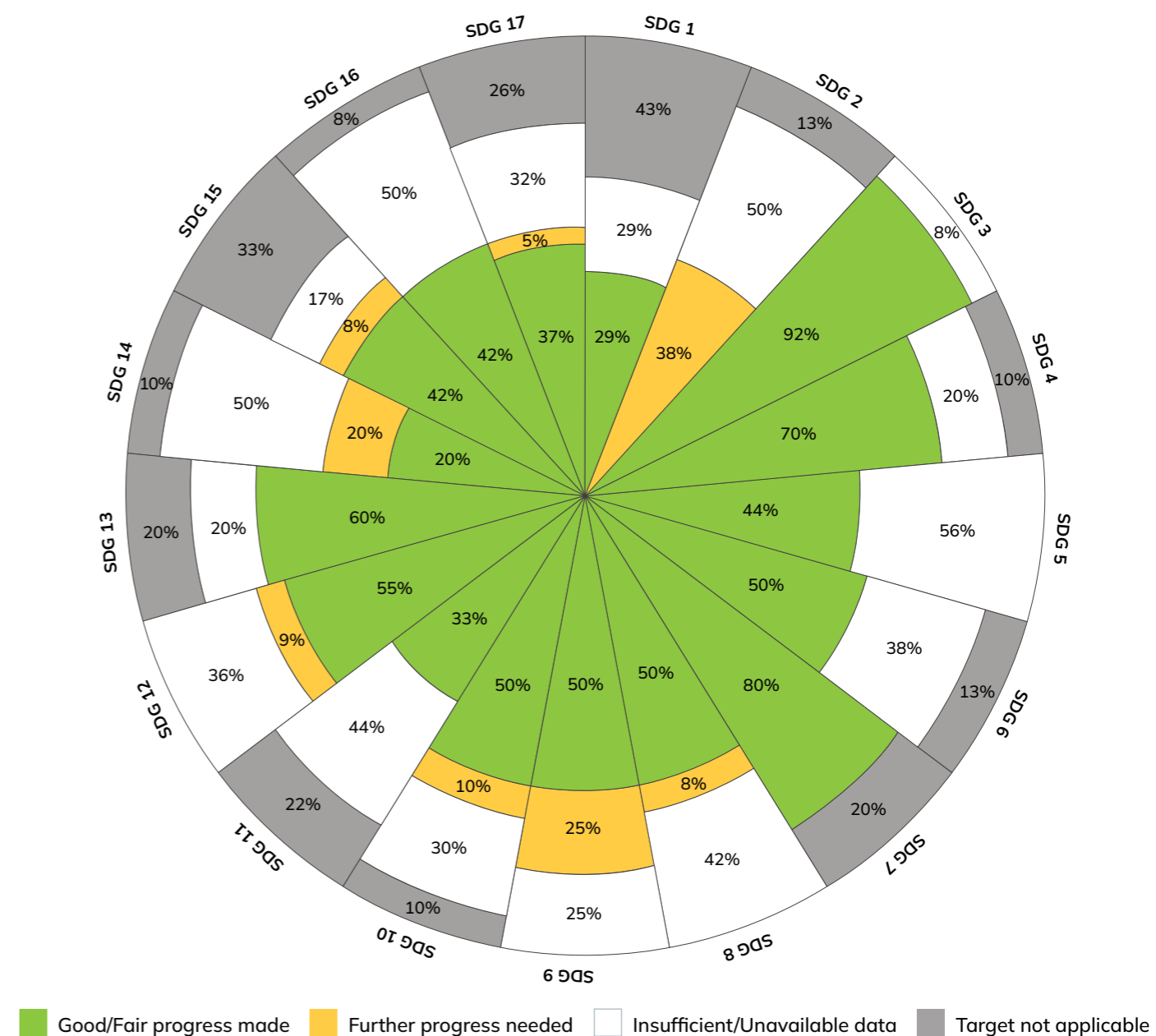
Singapore supports the 2030 Agenda and has been monitoring the progress in our sustainable development based on the global indicator framework, comprising 17 SDGs with 169 targets and 248 indicators. To facilitate monitoring and data-based reporting since our 2018 VNR, the Singapore Department of Statistics had developed an *SDG Webpage* on its website in September 2019, which serves as a one-stop online portal to provide access to Singapore's statistics on the relevant SDG indicators collated from various government agencies and international data sources.

This annex presents a snapshot of Singapore's progress on all 169 targets based on the trend growth of all indicators. Each of the targets is colour-coded to represent the progress in meeting the target by 2030.

**View our SDG Webpage here**



Progress In Achieving Targets By 2030



**GOAL 1 NO POVERTY**

- 1.1 International poverty
- 1.2 National poverty
- 1.3 Social protection
- 1.4 Access to basic services
- 1.5 Resilience to disasters
- 1.a Resources for poverty programmes
- 1.b Poverty eradication policies

**GOAL 2 ZERO HUNGER**

- 2.1 Undernourishment and food security
- 2.2 Malnutrition
- 2.3 Small-scale food producers
- 2.4 Sustainable agriculture
- 2.5 Genetic resources for agriculture
- 2.a Investment in agriculture
- 2.b Agricultural export subsidies
- 2.c Food price anomalies

**GOAL 3 GOOD HEALTH AND WELL-BEING**

- 3.1 Maternal mortality
- 3.2 Child mortality
- 3.3 Communicable diseases
- 3.4 NCD & mental health
- 3.5 Substance abuse
- 3.6 Road traffic accidents
- 3.7 Sexual & reproductive health
- 3.8 Universal health coverage
- 3.9 Health impact of pollution
- 3.a Tobacco control
- 3.b R&D for health
- 3.c Health financing & workforce
- 3.d Management of health risks

**GOAL 4 QUALITY EDUCATION**

- 4.1 Effective learning outcomes
- 4.2 Early childhood development
- 4.3 TVET & tertiary education
- 4.4 Skills for employment
- 4.5 Equal access to education
- 4.6 Adult literacy & numeracy
- 4.7 Sustainable development education
- 4.a Education facilities
- 4.b Scholarships
- 4.c Qualified teachers

**GOAL 5 GENDER EQUALITY**

- 5.1 Discrimination against women & girls
- 5.2 Violence against women & girls
- 5.3 Early marriage
- 5.4 Unpaid care and domestic work
- 5.5 Women in leadership
- 5.6 Reproductive health access & rights
- 5.a Equal economic rights
- 5.b Technology for women empowerment
- 5.c Gender equality policies

**GOAL 6 CLEAN WATER AND SANITATION**

- 6.1 Safe drinking water
- 6.2 Access to sanitation & hygiene
- 6.3 Water quality
- 6.4 Water-use efficiency
- 6.5 Trans-boundary water cooperation
- 6.6 Water-related ecosystems
- 6.a International cooperation on water & sanitation
- 6.b Participatory water & sanitation management

**GOAL 7 AFFORDABLE AND CLEAN ENERGY**

- 7.1 Access to energy services
- 7.2 Share of renewable energy
- 7.3 Energy efficiency
- 7.a International cooperation on energy
- 7.b Investing in energy infrastructure

**GOAL 8 DECENT WORK AND ECONOMIC GROWTH**

- 8.1 Per capita economic growth
- 8.2 Economic productivity & innovation
- 8.3 Formalisation of SMEs
- 8.4 Material resource efficiency
- 8.5 Full employment & decent work
- 8.6 Youth NEET
- 8.7 Child & forced labour
- 8.8 Labour rights & safe working environments
- 8.9 Sustainable tourism
- 8.10 Access to financial services
- 8.a Aid for Trade
- 8.b Strategy for youth employment

**GOAL 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**

- 9.1\* Infrastructure development
- 9.2 Sustainable/inclusive industrialisation
- 9.3 Small-scale industries access to finance
- 9.4 Sustainable & clean industries
- 9.5 Research and development
- 9.a Resilient infrastructure
- 9.b Domestic technology development
- 9.c Access to ICT & the Internet

\* The progress for Target 9.1 was impacted by the performance of Indicator 9.1.2 on "Passenger and freight volumes, by mode of transport" which was greatly affected by the travel restriction during the COVID-19 pandemic, resulting in a sharp decline in passenger volumes.

**GOAL 10 REDUCED INEQUALITIES**

- 10.1 Income growth (bottom 40%)
- 10.2 Inclusion (social, economic & political)
- 10.3 Eliminate discrimination
- 10.4 Fiscal & social protection policies
- 10.5 Regulation of financial markets
- 10.6 Inclusive global governance
- 10.7 Safe migration & mobility
- 10.a Special & differential treatment (WTO)
- 10.b Resource flows for development
- 10.c Remittance costs

**GOAL 11 SUSTAINABLE CITIES AND COMMUNITIES**

- 11.1 Housing & basic services
- 11.2 Public transport systems
- 11.3 Sustainable urbanisation
- 11.4 Cultural & natural heritage
- 11.5 Human & economic losses to disasters
- 11.6 Urban air quality & waste management
- 11.7 Urban green & public spaces
- 11.a Urban planning
- 11.b Disaster risk management policies

# Target 11.c was excluded as no suitable replacement indicator was proposed during the 2020 comprehensive review. The global statistical community is encouraged to work to develop an indicator that could be proposed for the 2025 comprehensive review.

**GOAL 12 RESPONSIBLE CONSUMPTION AND PRODUCTION**

- 12.1 Programmes on SCP
- 12.2 Sustainable use of natural resources
- 12.3 Food waste & losses
- 12.4 Managing chemicals & wastes
- 12.5 Reduction in waste generation
- 12.6 Corporate sustainable practices
- 12.7 Public procurement practices
- 12.8 Sustainable development awareness
- 12.a Support for R&D capacity for SD
- 12.b Sustainable tourism monitoring
- 12.c Fossil-fuel subsidies

**GOAL 13 CLIMATE ACTION**

- 13.1 Resilience & adaptive capacity
- 13.2 Climate change policies
- 13.3 Climate change awareness
- 13.a UNFCCC commitments
- 13.b Climate change planning & management



**GOAL 14 LIFE BELOW WATER**

- 14.1 Marine pollution
- 14.2 Marine & coastal ecosystems
- 14.3 Ocean acidification
- 14.4 Sustainable fishing
- 14.5 Conservation of coastal areas
- 14.6 Fisheries subsidies
- 14.7 Marine resources for SIDS & LDCs
- 14.a Research capacity & marine technology
- 14.b Small-scale artisanal fishing
- 14.c Implementing UNCLOS

**GOAL 15 LIFE ON LAND**

- 15.1 Terrestrial & freshwater ecosystems
- 15.2 Sustainable forests management
- 15.3 Desertification and land degradation
- 15.4 Conservation of mountain ecosystems
- 15.5 Loss of biodiversity
- 15.6 Utilisation of genetic resource
- 15.7 Protected species trafficking
- 15.8 Invasive alien species
- 15.9 Biodiversity in national & local planning
- 15.a Resources for biodiversity & ecosystems
- 15.b Resources for forest management
- 15.c Protected species trafficking (global)

**GOAL 16 PEACE, JUSTICE AND STRONG INSTITUTIONS**

- 16.1 Reduction of violence & related deaths
- 16.2 Human trafficking
- 16.3 Justice for all
- 16.4 Illicit financial and arms flow
- 16.5 Corruption and bribery
- 16.6 Effective institutions
- 16.7 Inclusive decision-making
- 16.8 Inclusive global governance
- 16.9 Legal identity
- 16.10 Public access to information
- 16.a Capacity to prevent violence
- 16.b Non-discriminatory laws

**GOAL 17 PARTNERSHIP FOR THE GOALS**

- 17.1 Tax & other revenue collection
- 17.2 ODA commitment by developed countries
- 17.3 Additional financial resources
- 17.4 Debt sustainability
- 17.5 Investment promotion for LDCs
- 17.6 Science and tech international cooperation
- 17.7 Transfer of technologies
- 17.8 Capacity building for ICT
- 17.9 Capacity building for SDGs
- 17.10 Multilateral trading system (WTO)
- 17.11 Exports of developing countries
- 17.12 Duty-free market access for LDCs
- 17.13 Global macroeconomic stability
- 17.14 Policy coherence for SD
- 17.15 Respect country's policy space
- 17.16 Global partnership for SD
- 17.17 Partnerships (public, private, CSO)
- 17.18 National statistics availability
- 17.19 Statistical capacity

**Notes**

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MINISTRY OF  
FOREIGN AFFAIRS  
SINGAPORE

