

SUSTAINABLE SOUTH WEST



A SUSTAINABLE
FUTURE STARTS
WITH YOU



CONTENTS

VISION 04

MESSAGES 06

EXECUTIVE SUMMARY 12

PAST MILESTONES AND ACHIEVEMENTS 14

BUILDING AWARENESS AND RELEVANCE 16

ACTION PLANS FOR GOALS 18

Our Active, Gracious People 20

Our Clean, Green Living Spaces 26

Our Smart Homes 32

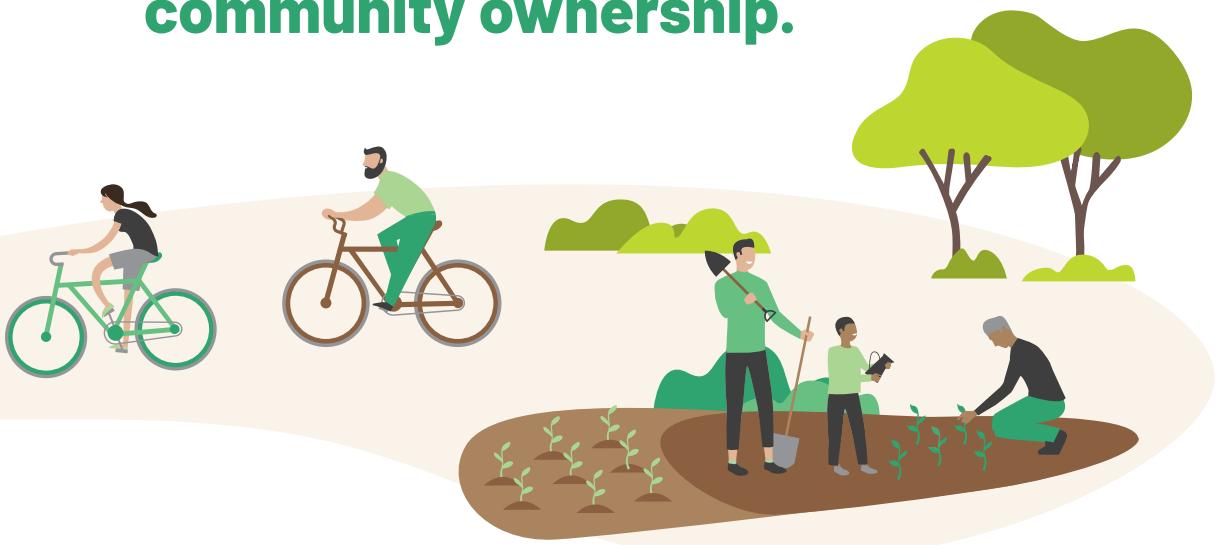
Our Green Rides 38

Our Zero Waste Journey 44

CONCLUSION 50

ACKNOWLEDGEMENTS 52

The Sustainable South West masterplan aims to nurture a community that is environmentally conscious, practises an eco-lifestyle and demonstrates community ownership.



About South West District

The South West District occupies about a third of Singapore's land mass, and comprises more than 750,000 residents. The South West Community Development Council (CDC) works closely with a network of schools, grassroots organisations, government agencies, community and corporate partners to roll out community programmes and activities that promote social cohesion and bonding in the district.

The South West District is envisioned to be a place where people care for one another – where the more abled help the less abled and community ties are warm and strong.

The masterplan is a culmination of community aspirations for a more liveable and sustainable South West District. Complementing national efforts set out in the Sustainable Singapore Blueprint 2015, it unites organisations and individuals from the People, Public and Private (3P) sectors to ensure our environmental and community initiatives stay relevant. Through this, we aspire to rally community participation in upcoming initiatives and inspire the adoption of green habits, while nurturing our environment for the generations to come.





MR LAWRENCE WONG

Minister for National Development

Second Minister for Finance

Singapore has long benefitted from a rigorous system of long-term urban planning. That is why we are now embarking on bold and exciting plans to re-make our city, and build a greener and more sustainable Singapore.

We have already made several major moves at the national level. For example, we are introducing more energy-efficient solutions across all our buildings. Today, we have greened about 40% of our buildings by gross floor area, and are on track to meet our target of greening 80% of our buildings by 2030.

Even though we have limited renewable energy options, we are doing everything we can to push the limits of solar energy deployment in our land-scarce island. By next year, we will have solar panels on the rooftops of one in every two HDB blocks across Singapore. We are also installing floating solar panels on our reservoirs and on the coastal area north of Woodlands.

We are continuing to grow as a City in a Garden. Today, we have more than 2 million trees planted along roadsides, in parks and on state land, as well as more than 4,000 hectares of green spaces, linked together by a comprehensive park connector network. In the 2019 Draft Master Plan which sets out the urban plans for the next 10 to 15 years, we have set aside more land to enhance our parks and park connectors.

These national sustainability plans are an integral part of our next phase of development. But they need to be complemented with robust community and individual actions. That is why I am heartened that the South West CDC has worked with stakeholders and residents to develop this Sustainable South West masterplan. I encourage everyone to get involved and support this sustainability journey.

Working together, I am confident we can take decisive steps to mitigate the impact of climate change, and create greener and more sustainable homes for all Singaporeans to enjoy.

A handwritten signature in black ink, appearing to read "Lawrence Wong".

Mr Lawrence Wong



MR MASAGOS ZULKIFLI

Minister for the Environment
and Water Resources

Since independence, Singapore has sought to balance economic development with environmental protection and social inclusion. Our plans have been developed to advance the well-being and security of present and future generations of Singaporeans. As a result of long-term planning and investments in innovative solutions, we enjoy a clean and green urban environment.

However, climate change poses new challenges – for instance, it will increasingly threaten our access to essential resources such as food, water and energy. Singapore will also be particularly vulnerable to rising sea levels. It is critical that we put sustainability at the centre of everything we do. We must continue to plan decades ahead, invest in research and development and innovative solutions, and strengthen our capacity to meet emerging new challenges.

The Sustainable Singapore Blueprint 2015 plays an important role in guiding our nation's efforts – with its 2030 targets and the vision for "A Liveable and Endearing Home", "A Vibrant and Sustainable City" and "An Active and Gracious Community".

We have been making progress and putting the building blocks in place to achieve these targets. Following a successful "Year of Climate Action" in 2018, the "Year Towards Zero Waste" campaign was launched this year to encourage people to reduce, reuse and recycle right. We released Singapore's inaugural Zero Waste Masterplan and introduced the Resource Sustainability Act, which charts our way from a linear "take-make-dispose" approach, to a circular economy approach that reuses resources for as long as possible. Not only will this benefit the environment, it will generate jobs and economic opportunities for our people and industries.

Together, these bold plans and targets reflect our dedication to creating a better future for our nation. However, the responsibility of building a more sustainable Singapore cannot fall on the Government alone. Everyone, from companies to community partners and members of the public, has an important part to play in creating a better future for ourselves. Going forward, the Government will identify more opportunities to co-create solutions with Singaporeans, for Singaporeans.

I am heartened that South West CDC's latest sustainability masterplan outlines five key sustainable goals that complement the government's efforts and inspires community stewardship and sustainable practices.

By working together, we can build an endearing and sustainable Singapore, one which we are happy to live in with our loved ones, and proud to call our home.

A handwritten signature in black ink, appearing to read "Masagos Zulkifli".

Mr Masagos Zulkifli



MS LOW YEN LING

Mayor of
South West District

Our sustainability journey begins at home, in the South West District, where we live, work, play and study. In 2009, we introduced the inaugural Environment and Community (ECo) Plan South West to steer environmental and sustainability efforts in our district.

Since then, we have rolled out 90 environmental and community programmes across the South West annually, reaching out to over 700,000 residents through the support of volunteers, schools, community and corporate partners. Our district's long-standing dedication and commitment to developing sustainability in the community has led us to win several awards at local and international levels, including the Communities in Bloom International Challenge award (5 blooms) in 2012, and the Clean & Green Singapore Awards from 2009 to 2018.

Championing sustainability has become a hallmark of our South West District. We are committed to doing even more, to advance our green vision. To this end, the launch of the Sustainable South West masterplan aims to foster sustainable and engaged communities where we care for one another and together, shape a clean, green and gracious living environment.

Our Sustainable South West masterplan underpins national efforts to promote sustainability as outlined in the Sustainable Singapore Blueprint 2015. According to our masterplan, we seek to achieve these five goals for our community:

An Active, Gracious People; Clean, Green Living Spaces; Smart Homes; Green Rides; and Zero Waste.

This booklet presents vibrant views gathered from diverse stakeholders as well as feedback from the community on the future of sustainability in the South West. Through focus group discussions (FGDs), we engaged the public on their aspirations, concerns and expectations in this area. In view of their suggestions, we aim to make environmental issues more personal and relatable, and we will continue to foster greater responsibility and ownership of our actions on the environment. In addition, we will press on to facilitate continuous improvements and foster environmental consciousness in the community.

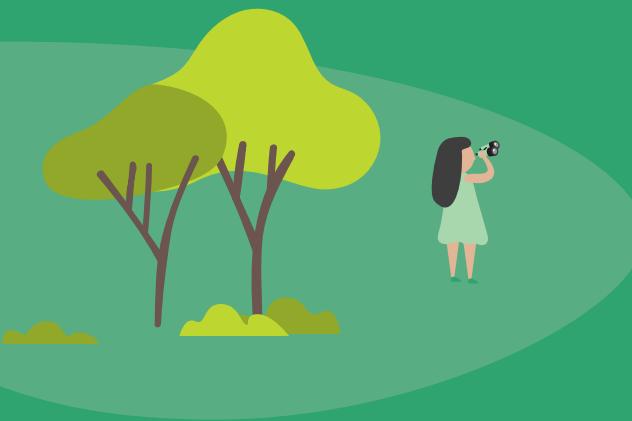
Let's work together to co-create a green, sustainable and eco-friendly South West District that we are proud to call home.

A handwritten signature in black ink, appearing to read "Yen Ling".

Ms Low Yen Ling

EXECUTIVE SUMMARY

The Environment and Community (ECo) Plan South West was published back in 2009. It outlined our sustainability efforts for the South West District. Since then, we have come a long way and made considerable progress in our efforts. With the growing emphasis on environmental issues and climate change, in addition to the rising importance of fostering community cohesion and maintaining the social fabric, it is increasingly important that we step up our efforts in responding to these threats to our quality of life.



Taking reference from the Sustainable Singapore Blueprint 2015, views from diverse stakeholders and community feedback through district-wide engagement, the Sustainable South West masterplan comprises five goals that look at specific focus areas of sustainability.

Looking ahead, South West CDC together with the National Environment Agency (NEA) will work hand-in-hand with the community, schools, government agencies and corporate partners to realise our vision of a Sustainable South West, while cultivating a clean, liveable and healthy home for all. We invite you to join us in our journey to create a green and quality home in the South West District.

OUR GOALS



**OUR ACTIVE,
GRACIOUS
PEOPLE**
ACTIVE LIVES.
CARING COMMUNITY.



**OUR ZERO
WASTE
JOURNEY**
CONSUME LESS.
RECYCLE MORE.



**OUR CLEAN,
GREEN LIVING
SPACES**
HEALTHY LIVING.
GREEN SPACES.



**OUR
GREEN
RIDES**
DRIVE LESS.
GREEN COMMUTE.



**OUR
SMART
HOMES**
LIVE SMART.
SAVE MORE.

PAST MILESTONES AND ACHIEVEMENTS



2006

Clean Up South West!

An annual recycling drive for residents to recycle their trash in exchange for groceries.

ECo Day Out @ South West

An annual flagship environmental carnival that seeks to raise awareness of climate change through fun and educational activities.

Operation Mozzie-Free @ South West

An initiative to raise community awareness about dengue prevention practices.

100,000 Native Plants @ South West

A programme that reinstates the natural heritage of Singapore by engaging residents in the planting and caring of native plants,

2007

My Litter-Free Environment @ South West

An initiative that aims to maintain public health and achieve a clean and litter-free environment through community engagement platforms.

Green Schools @ South West

A programme that fosters environmental and community ownership among students.



2015

South West ECo Fund Plus

A fund that supports ground-up environmental initiatives in the community.



2014

Recycle-a-Bulb Challenge @ South West

An initiative to encourage the community to recycle their used light bulbs while helping the less fortunate.

2011

My Preschool Shines @ South West

A programme that engages pre-schoolers through a series of environmental and public health-themed activities to inculcate good green habits from a young age.

2008

My Eatery Shines @ South West

A programme that promotes good hygiene practices and toilet cleanliness in public eateries.



1,000,000 Native Plants @ South West

A programme that encourages community bonding through gardening, and instils an appreciation for nature.



2016

Day of Service @ South West

An initiative where students conduct litter-picking and show their appreciation for community cleaners.



2017

Power Savers-for-Charity PLUS @ South West

An enhanced programme that encourages residents to pledge to adopt simple environmental actions.

2018

Love Your Living Environment Youth Challenge

An initiative that empowers youth to improve the shared living environment.

Green Spaces @ South West

Succeeding 1,000,000 Native Plants @ South West, the programme promotes an inclusive, caring and active community by injecting life, love and learning through gardening.

Recycle Our E-Waste @ South West

A programme that encourages the community to recycle electronic waste (e-waste).



Since the introduction of our ECo Plan South West in 2009, we have attained significant achievements that have resonated with and benefited our residents. Our ECo Plan sought to shape a sustainable South West District and comprised five ECo goals – three environmental goals: Cool, Green and Clean; and two community goals, Caring and Proactive.

Through our environmental programmes, we strived to support vulnerable groups in society and strengthen community bonds, while instilling good environmental habits. On the back of these initiatives, we successfully reached out to a diverse range of residents, from students and youth to the elderly. In recognition of our efforts to foster an environmentally-friendly district, we were presented with several local and international awards.

Awards and Achievements of South West District

CLEAN & GREEN SINGAPORE (CGS)

2008-2011, 2013-2016

Best Community Achievement Award

2012, 2017, 2018

Best Community Commitment Award

2012

Communities in Bloom
International Challenge (5 Blooms)

2011

ASEAN Environmentally Sustainable Cities (ESC) Award

2008

President's Award for the Environment

Annually, South West District organises



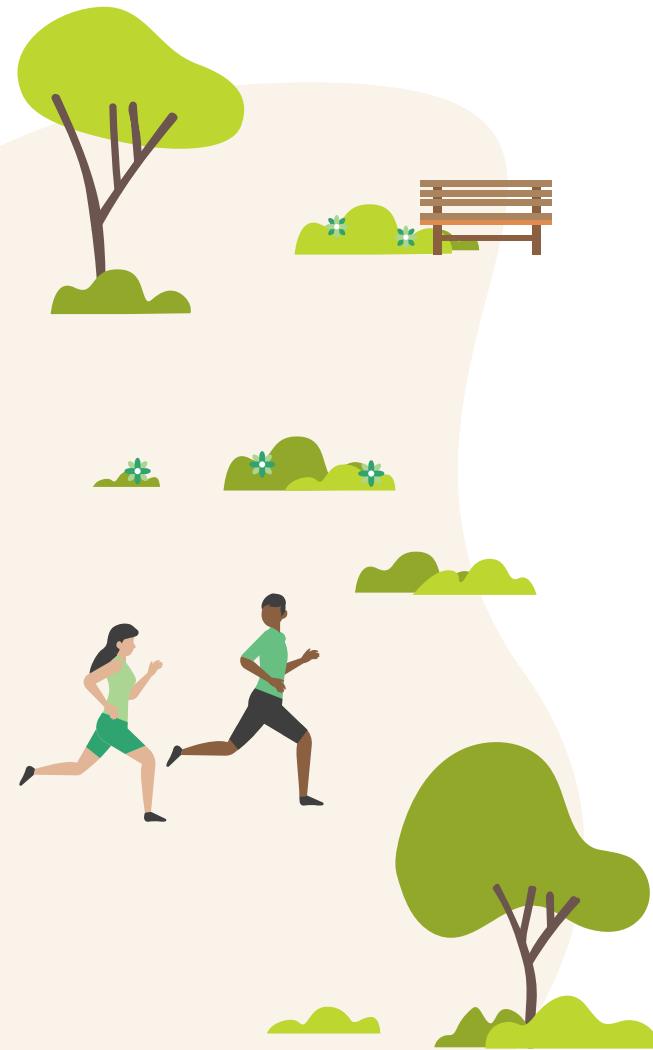
close to
1,700 activities,
90 programmes,



engages >160 partners,
>40,000 volunteers
and >700,000 residents.

BUILDING AWARENESS AND RELEVANCE

We will continue to bridge knowledge gaps and build the community's understanding of environmental issues. We seek to achieve this through these initiatives.



1. Enhancing Awareness Roadshows

Through a series of roadshows on the Sustainable South West at schools and community events, we will drive awareness on important environmental issues.

The roving roadshows will be supplemented with educational talks at schools and within the community, and include topics ranging from being good neighbours, to fostering a gracious community and using environmentally-friendly alternatives for everyday items.



Working together with grassroots organisations, schools and corporate partners, the South West CDC will roll out e-waste recycling roadshows within the South West District. Besides highlighting how e-waste is recycled and offering platforms for residents to recycle their e-waste, the roadshows promote awareness of responsible e-waste recycling by focusing on education, action and social good for the community.

2. Holding Green Conversations

We will hold Green Conversations to enhance dialogue and facilitate understanding on important environmental issues and ideas. Expert speakers will be able to engage with residents and address their queries.

3. Forming a Green Committee Network

We will set up a Green Committee Network for Green Committees in community clubs, schools and environmental non-governmental organisations (NGOs) to streamline sustainability programmes for the community.

4. Sharing Knowledge within Communities of Practice (CoPs)

Communities of Practice (CoPs) will facilitate meaningful dialogue to solve sustainability challenges. At the same time, CoPs allow green committees to build leadership capabilities and share knowledge to drive improvements in green practices.



5. Recognising Good Environmental Stewards

Through the annual Environment and Community (ECo) Awards and Public Health Awards, we acknowledge organisations and individuals who display good environmental efforts.

Organisational Level

In encouraging organisations to expand their environmental efforts, the awards recognise those who have contributed to the district's sustainability efforts and have displayed exemplary behaviour in achieving South West District's environmental and public health goals.

Individual Level

The awards acknowledge the efforts of individuals who make a difference to our environment and serve as role models of gracious and caring behaviour.

2030 TARGETS

- Form a network of 150 Eco / Sustainability Clubs.
- Organise 100 Sustainable South West Roadshows.
- Engage community in at least one Eco / Sustainability conversation on a biennial basis.
- Increase overall community awareness of environmental issues.

SUSTAINABLE SOUTH WEST 2030

With climate change increasingly impacting health and society, the Sustainable South West masterplan emphasises five goals to mitigate climate change and shape a cleaner, greener and healthier environment for all.

ACTION PLANS FOR GOALS



OUR ACTIVE, GRACIOUS PEOPLE

Residents can look forward to more platforms for volunteerism and greater support to kickstart community ground-up projects.

- ▶ Championing Green Volunteerism
- ▶ Providing Seed Funding
- ▶ Encouraging Community Participation



OUR CLEAN, GREEN LIVING SPACES

Residents can look forward to more pockets of green spaces that promote community cohesion, as well as cleaner public spaces and a healthier environment.

- ▶ Growing Green Spaces
- ▶ Enriching Lives with Garden Therapy
- ▶ Creating a Clean and Healthy Environment



OUR ZERO WASTE JOURNEY

Residents can take part in sharing systems to reduce waste and collective community zero waste challenges.

- ▶ Promoting a Sharing Economy
- ▶ Sharing Community Best Practices
- ▶ Rolling Out Zero Waste Challenges



OUR GREEN RIDES

Residents can adopt car-lite lifestyles and enjoy community hotspots and a more gracious commuting culture.

- ▶ Encouraging Car-Lite Communities
- ▶ Promoting a Green and Gracious Commute



OUR SMART HOMES

Residents can look forward to embracing smart technology in their homes and more platforms to innovate for a better living environment.

- ▶ Promoting Green Living
- ▶ Innovating for a Liveable Future



Many in Singapore have expressed the wish for a more gracious society – one with a kampong spirit characterised by a sense of community and neighbourliness. In line with this, encouraging higher rates of volunteerism can nurture a more gracious society.

We recognise that promoting environmental ownership is important to shaping a greener tomorrow and developing an active and gracious community. The Sustainable South West masterplan seeks to encourage residents to take ownership of public spaces. In doing so, we seek to foster a kampong spirit where the community cares for the environment and for one another, and where every individual is committed and empowered to ensure a clean and hygienic environment for all.

- ▶ Promote a caring and sharing community by developing meaningful platforms where the community can contribute and bond.
- ▶ Cultivate a pool of long-term volunteers who care for the environment and community.
- ▶ Promote environmental ownership by instilling good values and habits through education and awareness.



OUR ACTIVE, GRACIOUS PEOPLE



ACTION PLANS

1. Championing Green Volunteerism

Organise integrated community platforms to match interested volunteers with suitable opportunities, so as to address gaps in the community where more volunteers are needed.

► Community roadshows for Social Service Agencies (SSAs) to share volunteering opportunities with the public, link up volunteers to available opportunities and develop a pool of regular volunteers.

► Ideation and hackathon sessions to allow young people to pitch ground-up projects to foster volunteerism and youth activism.

► The CARE (Caring commuters Assist Readily with Empathy) Ride @ South West programme promotes intergenerational bonding between the elderly and volunteers while taking public transport to inspire a green and gracious commuting culture.



► Youth collaborating on meaningful projects in the South West District to reduce waste.

2. Providing Seed Funding

In line with our efforts to promote bonding and foster community cohesion and involvement, funding will be provided to support community projects.

- An integrated community fund, known as the South West Happy Fund, will be introduced to support community projects. These include initiatives that foster community bonding, offer social services or green projects.
- The Green Spaces Activity Grant offers a one-time funding of \$500 to community gardens to organise bonding activities.
- Encourage take-up of funding resources to support ground-up recycling projects centred on waste reduction.



▲ Garden volunteers conducting an enzyme-making workshop to teach residents how to use egg shells as natural soil fertilisers.

3. Encouraging Community Participation

There will be more green platforms and opportunities that build community bonds while encouraging residents to care for their environment.

- Organise environmental carnivals such as ECo Day Out @ South West and the South West Clean & Green Singapore Carnival. These platforms celebrate environmental efforts in the district while promoting environmental awareness and ownership, and bonding communities and families.



▲ Clean & Green Singapore (CGS) is an annual campaign that inspires the community to care for and protect the environment by adopting a clean, green and sustainable lifestyle.



▲ Held annually, ECo Day Out @ South West is the CDC's flagship event that bonds the community through green activities and the sharing of environmental messages.



CRAFTING A SUSTAINABLE COMMUNITY

Agnes Tan is an avid crafter and volunteer who uses every imaginable material to create useful products. She shares her passion for upcycling with other residents through classes she conducts at Keat Hong Community Club (CC), where participants learn how to use recycled materials to make various products ranging from photo frames to stationery holders.

In 2015, she joined fellow members of the Keat Hong CC Women's Executive Committee to create 200 gift boxes from used toilet rolls that were presented as tokens of appreciation to other volunteers.

Apart from this, the former school librarian actively volunteers at a children's community service, teaching underprivileged kids how to reuse materials such as stamps, buttons and old keys to make gifts. "When I saw the kids' joy, it gave me so much satisfaction, and that kept me going back year after year," she shared. A sense of appreciation along with her own passion for crafting drives Ms Tan to devote her time to promote upcycling practices in the South West District.

"It feels good that I can do my part to save the environment. We must have patience and be willing to take the time to recycle and reuse the things we retain. Sustainability is for the long term."



▲ Ms Agnes Tan volunteers at a children's community service teaching underprivileged children to repurpose materials to create useful products.

WHAT YOU CAN DO

Tips for Individuals:

- Consider becoming a green volunteer with community organisations or environmental groups.
- Be actively involved in open dialogue sessions on environmental topics.

Tips for Organisations:

- Promote economic sustainability in the green sector through establishing partnerships for eco-work fairs.
- Enhance corporate social responsibility through sustainability reporting and/or organising educational sustainability tours for the community.
- Collaborate with community organisations to run green campaigns.



Rapid urbanisation and the urban heat island effect have contributed towards temperatures in Singapore rising at a rate more than double that of the global average. To mitigate this, we cultivate green spaces in our district. These pockets of greenery dot the community and neighbourhood, helping to cool our environment, enhance our health and nurture an appreciation for nature among the young. At the same time, we seek to safeguard clean, hygienic and dengue-free spaces, while encouraging residents to adopt a clean and green lifestyle.

- ▶ Create a cleaner, greener physical landscape that enhances the health of the community.
- ▶ Improve attitudes and mindsets to encourage residents to take responsibility for their living environment, while instilling a love for nature.



OUR CLEAN, GREEN LIVING SPACES



ACTION PLANS

1. Growing Green Spaces

Come 2030, there will be more pockets of green spaces to foster community ties and environmental ownership, while providing opportunities for residents to live, learn and love the beauty of nature. We will also champion inclusive green spaces and edible gardens, which offer opportunities for the elderly, people with disabilities and children to enjoy nature together.

- ▶ Provide a one-time seed funding to organisations to kick-start community gardens.
- ▶ Provide more support to cultivate community gardens and edible gardens to promote food resilience.
- ▶ Work with National Parks Board (NParks) to roll out allotment gardens¹ in the district.
- ▶ Develop more biodiversity trails within community spaces to allow residents to enjoy its rich flora and fauna.
- ▶ Instil a love for nature among students by incorporating biodiversity elements or eco-tours into the school curricula.
- ▶ More opportunities for families to appreciate nature and bond over nature-related activities.



¹ Facilitated by the National Parks Board, allotment gardens offer plots of land to individuals looking to grow their own plants. The allotment plots are leased at an annual fee.

2. Enriching Lives with Garden Therapy

Garden-related activities offer several benefits for the community, ranging from keeping the elderly active, to stimulating the creativity of children and encouraging inter-generational bonding.

- Work with NParks to set up Therapeutic Horticulture Nodes at community gardens aimed at encouraging positive social connection, enhancing mental wellness and promoting fine motor skills through therapeutic gardening activities.



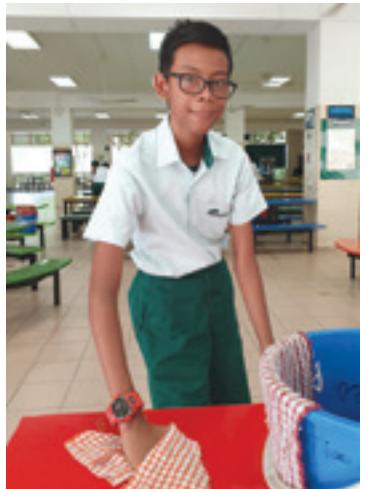
▲ Community gardeners engaged in therapeutic gardening activities.

3. Creating a Clean and Healthy Environment

In maintaining clean public spaces, it is vital to inculcate environmental responsibility among the community so that they pick up after themselves and ensure that public spaces and homes are dengue-free.

- More platforms for the community to participate in litter-picking exercises under the My Litter-Free Environment @ South West programme.
- Training of Junior Environmental Ambassadors (JEAs) under the Green Schools @ South West programme to empower student leaders to share good environmental practices and values with their peers.
- House-to-house visits under Operation Mozzie-Free @ South West to share about dengue prevention habits to keep homes dengue-free.

CLEANING UP FOR GOOD



▲ Shakir, a Secondary 1 student at Hillgrove Secondary School, helping to clean the school canteen.

The following month, Shakir and his schoolmates spent an hour sweeping up dirt, clearing debris and wiping surfaces around the school. At the end of the year, students will also pick litter in public spaces outside the compound in addition to cleaning the school.

Thanks to the Day of Service, Shakir has become more environmentally conscious. "I pick up litter in public areas and volunteer to stay back to clean my classroom at least once a week," he says. The Environment Advocate at Hillgrove looks forward to becoming a Junior Environmental Ambassador (JEA) under the Green Schools @ South West programme.

"After going through the environmental modules and volunteer opportunities, I hope to inspire my classmates to do their part for the environment."

ENJOYING THE FRUITS OF HIS LABOUR

Asari Rafie is a familiar sight at the Sky Garden at Jurong Central Zone D. The 70-year-old avid gardener is one of the 3,000 South West volunteers who have reaped much from the 10-year 1,000,000 Native Plants @ South West initiative launched in 2008. Aimed at reinstating the district's green heritage and creating inclusive and caring green spaces, it has seeded more than 150 community gardens with over 1,000,000 native plants across the district.

"Before, this was a bare field. Now, with the garden, it's a place where people can bond, share their harvests and make new friends."

Asari set up a hydroponics system and designed the automatic irrigation and feeding systems for the garden's plants and fishes using recycled materials. "People are surprised that such gardens can flourish in HDB heartlands," he says.

Succeeding the 1,000,000 Native Plants @ South West initiative is Green Spaces @ South West, which was launched in 2018 to emphasise greater community ownership and participation. Inspired by the programme's elements of Life, Learn and Love, these spaces will offer more community-centric activities, host events that build community experience and engage the vulnerable, as our community gardens are transformed into multi-purpose and inclusive green spaces for all to enjoy.

2030 TARGETS

- Support 250 green spaces / community gardens.
- Set up 30 Therapeutic Horticulture Nodes.
- Organise 50 clean-up activities under the Day of Service and My Litter-Free Environment annually.
- Organise 120 Operation Mozzie-Free activities annually.



▲ Mr Asari tending to his plants with his wife and granddaughter.



WHAT YOU CAN DO

Tips for Individuals:

- Grow your own garden at home and in the community.
- Keep public eating spaces clean by cleaning up after yourself and maintaining public cleanliness and hygiene.
- Practise good dengue prevention habits at home.

Tips for Organisations:

- Organise environmental learning journeys for schools and community organisations.
- Pursue opportunities to collaborate with the government to test bed innovative technologies in the district.



By harnessing smart technology and eco-friendly features, we can make homes in land-scarce Singapore more sustainable, liveable and safe. In the future, we can look forward to smart homes that can improve the quality of our lives, while championing green lifestyles.

Smart-enabled Housing & Development Board (HDB) homes of the future will include several in-built features to enhance convenience, energy efficiency and safety. For example, a panic button can be placed by the bedside of elderly residents, and motion sensors will enable remote supervision of seniors.

These homes will also come with smart energy meters, and homeowners will be able to control the lights and air-conditioning remotely. At the same time, the upcoming housing estate in Tengah Town will have eco-friendly features to foster resource conservation.

- ▶ Encourage the community to embrace upcoming sustainable smart features that will be introduced in the HDB estates.
- ▶ Promote environmentally-responsible mindsets among residents concerning the usage of smart technology.



OUR SMART HOMES



1 Promoting Green Living

2 Innovating for a Liveable Future

ACTION PLANS

1. Promoting Green Living

Adopting energy-saving practices can help to reduce our carbon footprint and save money. Residents can look forward to using more convenient and environmentally-friendly smart home devices in the coming years.

- ▶ Roll out initiatives that encourage adoption of energy-efficient appliances and smart technology in homes.
- ▶ Roll out awareness campaigns to educate the community about appropriate usage of smart technology enablers.



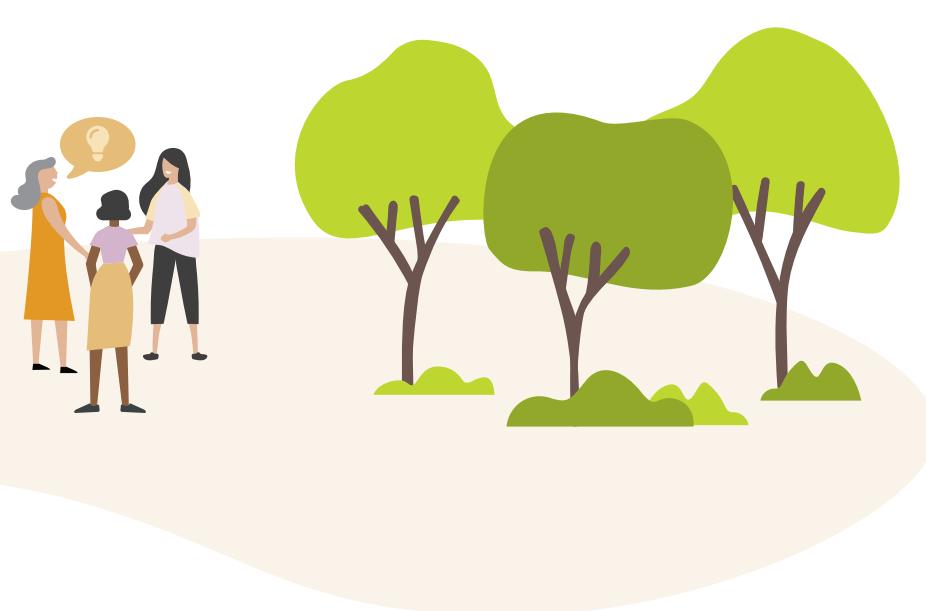
Harnessing Eco-Smart Technology @ Tengah Town

The upcoming Tengah Town will be the first HDB town to be planned with smart technologies town-wide from the onset. Featuring an urban water harvesting system, which collects rainwater for irrigation and the washing of common areas, it facilitates water and energy savings. Beyond this, additional power points and data points will be provided in residents' homes to enable the adoption of smart home devices to foster resource conservation.

2. Innovating for a Liveable Future

We can foster a more sustainable tomorrow by encouraging collaboration among corporate institutions to drive green innovation. By promoting greater collaboration with social enterprises, we seek to roll out innovative ideas for enhanced living design to benefit the community.

- Living laboratories enable companies to work with the government to conceptualise, develop and test-bed innovative urban solutions for the community.
- Partnerships with Institutes of Higher Learning (IHLs) to cultivate innovative ideas that can help vulnerable groups in society attain household energy and electricity savings through leveraging new home technologies and developing prototypes. These ideas could be passed on to companies that are willing to test-bed them and roll out market solutions.
- Open dialogue sessions and hackathons to be organised for residents to provide feedback and share ground-up initiatives to improve the green features in their community.



EMBRACING THE SMART HOME LIFESTYLE

Ko Lingwei was in the midst of renovating his new home when he decided to make it a smart home. Hoping for greater convenience and automation, the father of two scoured the internet for possibilities.

His search led him to fit out his home with smart light bulbs which can be operated with just a verbal command via apps on smart devices or smart home interfaces. “It’s very useful as my family can control the lights from anywhere,” he says. “When friends visit, I share these features and encourage them to adopt a smart lifestyle too.”

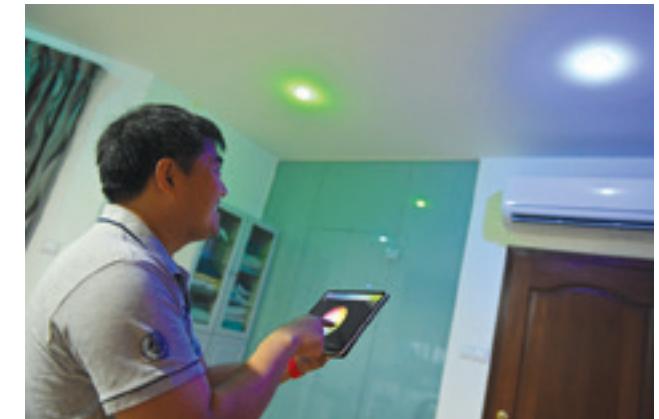
More than convenience, smart devices help conserve energy usage and improve resource efficiency. Lingwei programmes his smart light bulbs to use electricity only when needed. “We schedule some lights to turn on and off automatically, and have others that are motion activated,” says the 37-year-old lawyer. “But I make sure my children understand the need to turn off the lights and air-conditioners when they aren’t using them.”

While smart devices may cost a little more, by budgeting for and installing them as part of his renovations, Lingwei had a hassle-free experience in creating his smart home.

“Smart home owners need to be open to new technology and change,” he muses. “It’s also important for us to use smart devices responsibly to conserve our resources.”

2030 TARGETS

- Support at least one innovative Smart Eco Home project annually.
- Increase awareness of environmentally-responsible and smart living habits, by having 50 outreach activities.
- Organise Eco Challenges related to smart home technology to encourage responsible consumption habits.



▲ Mr Ko conserves energy at home and enjoys the convenience of automation through the use of apps.

WHAT YOU CAN DO

Tips for Individuals:

- Choose home appliances which use less energy, for example, energy-saving light-emitting diode (LED) light bulbs which utilise 85% less energy compared to incandescent light bulbs.
- Switch off your water heater and home appliances at the main power switch when not in use.
- Choose to use a fan instead of an air conditioner.

Tips for Organisations:

- Adopt and implement energy management practices. Participate in the Energy Efficiency National Partnership (EENP) programme which helps companies learn and share energy best practices.
- Choose Water Efficiency Management Plans – a voluntary initiative to help companies improve their water efficiency. Tap PUB’s Water Efficiency Fund (WEF), which supports companies in implementing water efficiency projects.
- Work with community partners to organise talks to educate the public about using water and energy-efficient technology and adopting green innovations in this sector.



In land-scarce Singapore, there is a limit to the number of cars that we can comfortably accommodate. In 2014, more than 50 million tonnes of greenhouse gases were generated, with carbon dioxide comprising 95% of total emissions here. Given this, reducing our reliance on cars and embracing sustainable modes of transport will be an important part of our green journey.

To this end, it is heartening that our public transport mode share stands at 66% and more Singaporeans walk or cycle. Moreover, there has been an increase in transport options for commuters, with smartphones facilitating convenient mobility solutions.

Looking ahead, 80% of households are expected to be within a 10-minute walk from a train station by 2030. Additionally, the upcoming launch of autonomous vehicles will enable environmentally-friendly forms of shared transport.

- ▶ Make the car-lite lifestyle second nature to residents.
- ▶ Promote the use of national infrastructure as an alternative to driving.
- ▶ Encourage the take up of green vehicles.
- ▶ Provide greater convenience to amenities through car-lite community hotspots.



OUR GREEN RIDES



ACTION PLANS

1. Encouraging Car-Lite Communities

In nurturing a car-lite lifestyle in our district, we will partner with relevant organisations to transform common spaces into car-free zones and hotspots for residents to enjoy.

- ▶ Hold community events at accessible locations, near MRT stations and bus interchanges, to encourage the public to embrace public transport, cycling or walking and reduce their dependence on cars.
- ▶ Promote the use of greener vehicles that emit less pollutants compared to combustion engine vehicles.
- ▶ Promote awareness of car-sharing schemes that provide alternative green modes of transport.
- ▶ Organise community dialogue sessions to better understand residents' needs, problems and concerns on transport matters.
- ▶ Provide greater support for families in their daily commute.

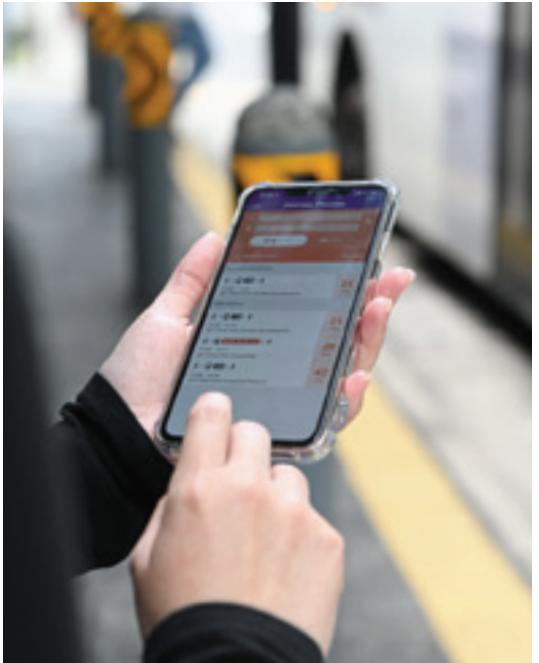


▲ Electric car-sharing schemes offer users a greener alternative mode of transport.

2. Promoting a Green and Gracious Commute

In the future, more green commuting options will be developed to promote an active and gracious way of life. Beyond developing our green infrastructure, it is just as important to ensure that our transport infrastructure has a “heart” for people and is caring and inclusive.

- ▶ Organise Green Trails in the community that encourage residents to walk, cycle or ride through park connectors and nature areas in the South West District.
- ▶ Encourage the use of digital platforms such as LTA's MyTransport.SG app and SG BusLeh to plan smoother, more efficient walk-cycle-ride journeys through live traffic updates.



▲ Using digital platforms to plan smoother journeys.



Benefits of Going Car-Lite:

- ▶ Taking public transport allows seniors to travel independently.
- ▶ Taking public transport is more cost efficient compared to driving.
- ▶ Driverless technology removes the potential for human error behind the wheel and reduces traffic casualty rates.



Adapted from Centre for Liveable Cities: Car-Lite Urban Mobility
www.clc.gov.sg

Driving a Sustainable Future with Autonomous Vehicles

Able to move with little or no human intervention, autonomous vehicles (AVs) are able to sense their environment, thereby enhancing safety. Come 2022, driverless, dynamically-routed buses will ply Punggol, Tengah and the Jurong Innovation District as part of a pilot programme of AVs. Shared autonomous transport will also nurture a sharing culture among commuters.



LOVING THE CAR-LITE LIFESTYLE

When Felix Wong went car-lite after 15 years of driving, it meant a change in travelling habits for his family of four. Today, they go everywhere by public transport, grabbing taxis only after grocery shopping or if they are pressed for time. The family also does their marketing at the nearby supermarket. Their daily commute is supported by a host of apps, from taxi and bus arrival apps to journey planners which help find the most efficient routes. With a bit of planning, Felix has even been able to send his children to school on some occasions.

“To be honest, because of Singapore’s excellent transport system and good connectivity to most of our destinations, the transition was quite seamless.”

Besides lowering their carbon footprint, the move also allowed Felix to spend extra quality time with his kids on their commute, while the money saved from owning a car has gone towards activities which have improved their quality of life.

Today, Felix is very happy to lead the car-lite lifestyle. “After deciding to marry my wife, going car-lite is the next best decision in my life.” he says. “I am free from the commitments of owning a car and am glad that I can play a small part in contributing to a more sustainable environment.”

2030 TARGETS

- ▶ Support car-lite, car-free and green trails and events by organising 40 trails and/or events.
- ▶ Support 2,500 physical activities in the community (e.g. Fun Walker Club activities), to promote walking and cycling.
- ▶ Increase awareness of a car-lite lifestyle and alternatives to driving.



▲ Mr Felix Wong on his green commute to work.

WHAT YOU CAN DO

Tips for Individuals:

- ▶ Choose to take public transport, walk, cycle, carpool or take advantage of car-sharing schemes.
- ▶ Employ technology and digital platforms to check public transport arrival times for seamless travel.
- ▶ Utilise electric vehicles for a more environmentally-friendly alternative that is more energy efficient than combustion engine vehicles and offers cost savings.

Tips for Organisations:

- ▶ Organisations can arrange for buses to transport residents to community events or tours.
- ▶ Taxi companies and private hire car companies can commit to have 90% of their fleet run on cleaner energy by 2025.
- ▶ Companies can adopt flexible work arrangements such as allowing staff to work from home or work nearer to home to reduce travelling time.



OUR ZERO WASTE JOURNEY

CONSUME LESS.
RECYCLE MORE.



With urbanisation and economic growth, Singapore is facing increasing amounts of waste and new challenges. In 2018, we generated about 7.7 million tonnes of waste. The amount of waste disposed of in Singapore has also increased seven-fold from 40 years ago.

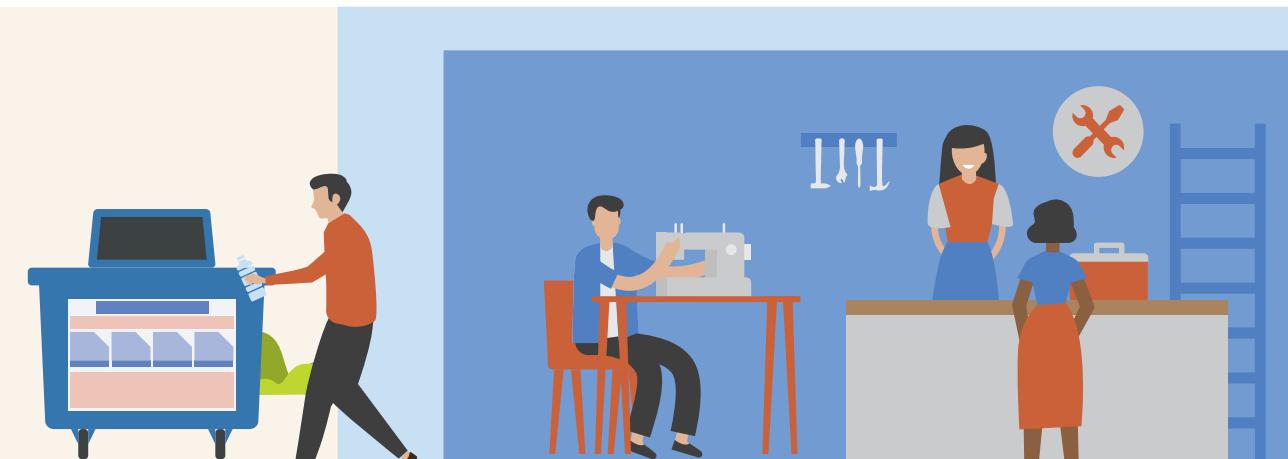
Hence, it is crucial for us to reduce waste as a community. Rather than using and throwing, we can extend the life of our precious resources by reusing and recycling them. In doing so, we can build a sustainable society, one where no resources are wasted.

Through wise planning, embracing technology and the collective efforts of the community, we can realise our vision to embrace a zero waste lifestyle and, on a larger scale, move towards a zero waste nation.

- ▶ Make the concept of a zero waste lifestyle relevant and accessible to the community, so as to inspire positive mindset change.
- ▶ Increase residents' awareness of the importance of the 3Rs (Reduce, Reuse and Recycle), while setting up suitable platforms, alternatives and incentives to support national efforts to reduce waste.



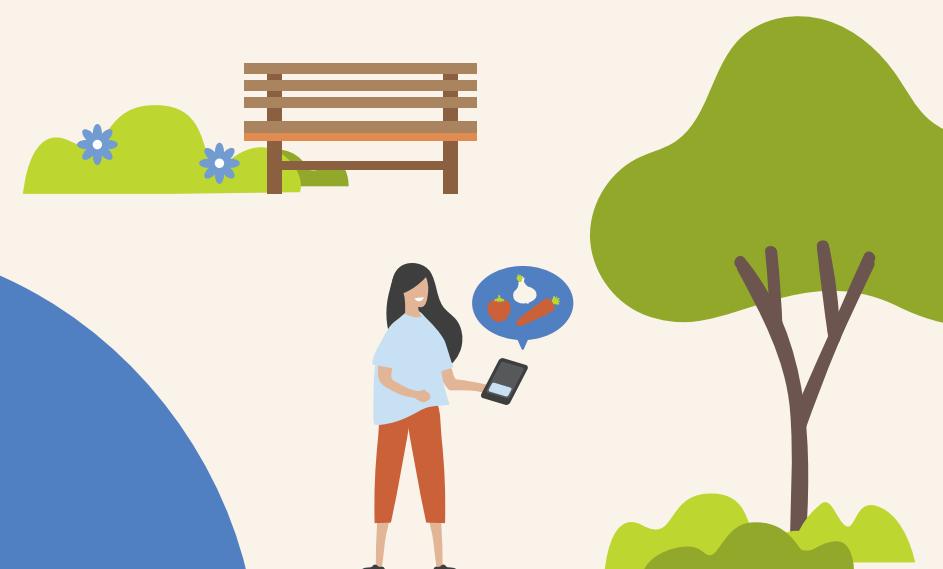
OUR ZERO WASTE JOURNEY



1 Promoting a Sharing Economy



3 Rolling Out Zero Waste Challenges



ACTION PLANS

1. Promoting a Sharing Economy

We recognise the value of nurturing a sharing economy where residents share resources with each other. Moving forward, we will be piloting the following initiatives to foster a circular economy that reuses resources.

- >Create Community Libraries that allow residents to share resources and items ranging from books and clothes to basic household tools and common gardening equipment.
- Organise repair and upcycling workshops that provide hands-on opportunities for residents to learn how to fix household and electronic items and upcycle waste materials into useful items.
- Tap digital platforms to tackle food waste by informing online communities (e.g. Telegram groups) whenever there is surplus food.
- Encourage composting in community gardens that use food waste as natural fertilisers.



Fixing Our Items with Repair Kopitiam

Repair Kopitiam provides repair services in the community and teaches residents how to mend broken electrical appliances, household items and clothes. This will help give items a new lease of life. Through this initiative, our repair coaches will assess the condition of the items, identify suitable ways to repair them and teach residents how to do so.

2. Sharing Community Best Practices

We will share zero waste community best practices with our partners to practise simple steps to reduce waste and minimise the carbon footprint of our buildings and events.

- ▶ Encourage communities and organisations to follow a best practice guide for organising environmentally-friendly events, for example, going paperless, ceasing distribution of plastic mineral water bottles and using water dispensers instead.

- ▶ Use reusable cutlery, avoid over catering of refreshments and ensure ample litter bins and recycling bins at events to cut out waste.

- ▶ Incorporate the Energy Label at community clubs and use energy-efficient light-emitting diode (LED) light bulbs at community events.

3. Rolling Out Zero Waste Challenges

In our efforts to instil green habits among residents, a district-wide Zero Waste Challenge will be rolled out in schools and the community to recognise and encourage waste minimisation habits.

- ▶ Encourage the community to take on the zero waste challenge by bringing their own lunchboxes or reusable bags, and keeping track of their zero waste progress.

- ▶ Collaborate with Institutes of Higher Learning (IHLs) to prototype technologies and test bed innovative ways of recycling waste in the community.

Benefits of a Zero Waste Lifestyle:

- ▶ Economic: Reducing, reusing and recycling creates 10 times more jobs than disposing waste.
- ▶ Environment: 20 times less energy is used to make an aluminium can from recycled materials than raw materials.
- ▶ Community: A circular economy to recycle waste benefits the community by enabling the distribution of surplus food to shelters and food banks, among others.
- ▶ Attitude: Moving towards zero waste will foster an improvement in the mindsets and attitudes of the community and achieve greater environmental ownership.



Adapted from
Toronto Environmental Alliance
www.torontoenvironment.org/zewaste_benefits

TACKLING E-WASTE



Recognising the global problem of electronic waste (e-waste), HP Inc. stepped up to encourage e-waste recycling in Singapore through the HP Make I.T. Green Campaign @ South West. The initiative promotes the recycling and upcycling of e-waste among schools and community organisations, with the funds raised from refurbished laptops channelled to support the needy children under The Straits Times School Pocket Money Fund.

Rallying their employees as part of ongoing efforts to encourage giving back to society, HP, in partnership with South West CDC, engaged six community centres, 24 schools and over 63,000 students throughout the year to educate them on the 3Rs (Reduce, Reuse and Recycle) and sustainably disposing of their e-waste. At the community centres, staff spoke with residents through launch events and detailed the need for a circular economy where materials are reused continuously in a closed loop. They also share how HP walks the talk through innovation, with products like the HP Spectre laptop and HP printers that contain recycled plastic and packaging.

"The residents were very receptive. Some even went home and brought us e-waste for recycling and upcycling on the same day!" says Ronnie Lee, Singapore Managing Director of HP Inc.

With over 200,000kg of e-waste collected, the campaign well exceeded the original target of 50,000kg and raised \$50,000 for The Straits Times Pocket Money Fund. "Sustainability is a long-term effort," explains Ronnie.

"I'm inspired by the support from South West CDC and am glad people from all walks of life rose to the challenge and make a positive difference for our world."

Clean Up South West!

Launched in 2006, Clean Up South West! is an annual district-wide recycling drive in the South West District involving Grassroots Organisations (GROs), corporate partners and schools. Aimed at encouraging residents of the South West District to recycle their waste in exchange for groceries, the flagship programme has collected more than 800 tonnes of recyclables since its inception. Residents have the opportunity to redeem their groceries during ECo Day Out @ South West, an annual environmental-themed carnival.



2030 TARGETS

- ▶ Set up 10 Eco Community Libraries (including handymen and makers workshops).
- ▶ Support 30 environmentally-friendly events with reference to Best Practice Guide from the Ministry of the Environment and Water Resources (MEWR).
- ▶ Organise 60 Recycle Our E-Waste roadshows.



WHAT YOU CAN DO

Tips for Individuals:

- ▶ Reduce use of single-use disposable items and utilise reusable items whenever possible.
- ▶ Reuse, repurpose or repair items before throwing them away.
- ▶ Reduce food waste, order only what you can eat.

Tips for Organisations:

- ▶ Join the Producer Responsibility Scheme (PRS) for the end-of-life treatment of e-waste.
- ▶ Participate in mandatory waste and packaging reporting for large commercial premises to track waste data and possible improvements in waste management processes.
- ▶ Participate in the Singapore Green Labelling Scheme (SGLS), which represents a commitment to being environmentally friendly in the design and manufacturing process.

CONCLUSION

Our Sustainable South West masterplan underpins the national efforts outlined in the Sustainable Singapore Blueprint 2015. At the same time, it seeks to fortify the community against the backdrop of a changing climate and rising sea levels. Alongside this, we will continue to promote sustainable lifestyles, reinforce the 3Rs (Reduce, Reuse and Recycle) and foster an active and gracious community. To this end, we will encourage the community to take personal ownership of the environment, while developing more innovative solutions and platforms to promote volunteerism.

We are heartened that many individuals and organisations have come forward to join us in our journey towards fostering a more sustainable home, environment and city. We invite you to take the next step together with us, as we join hands to create a better living environment for Singapore and the generations to come.



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South West CDC has printed limited copies of the masterplan in its quest to be environmentally friendly. Electronic versions of the publication can be viewed on our website, www.southwestcdc.org.sg

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