

Progress of Singapore Sustainable Blueprint

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Progress of the Sustainable Singapore Blueprint



In Support of:



Outline of Presentation

1. Singapore's Context
2. Focus Areas of the Singapore Sustainable Blueprint 2015
3. Highlights in 2016
4. Indicators and Progress

Singapore's Context



Environmental Masterplans

Developed 10-year plans

1992 Singapore Green Plan

2002 Singapore Green Plan 2012



Sought to do even more for sustainable development

2009 Sustainable Singapore Blueprint

**“A Lively and Liveable
Singapore,
one that Singaporeans love
and are proud to call home.”**



A Look Back

Range of initiatives put in place since 2009 Sustainable Singapore Blueprint:

- Sustainable buildings and towns
- Sustainable transport
- Green and blue spaces
- Public cleanliness
- Energy use
- Water use
- Waste & Recycling
- Air Quality

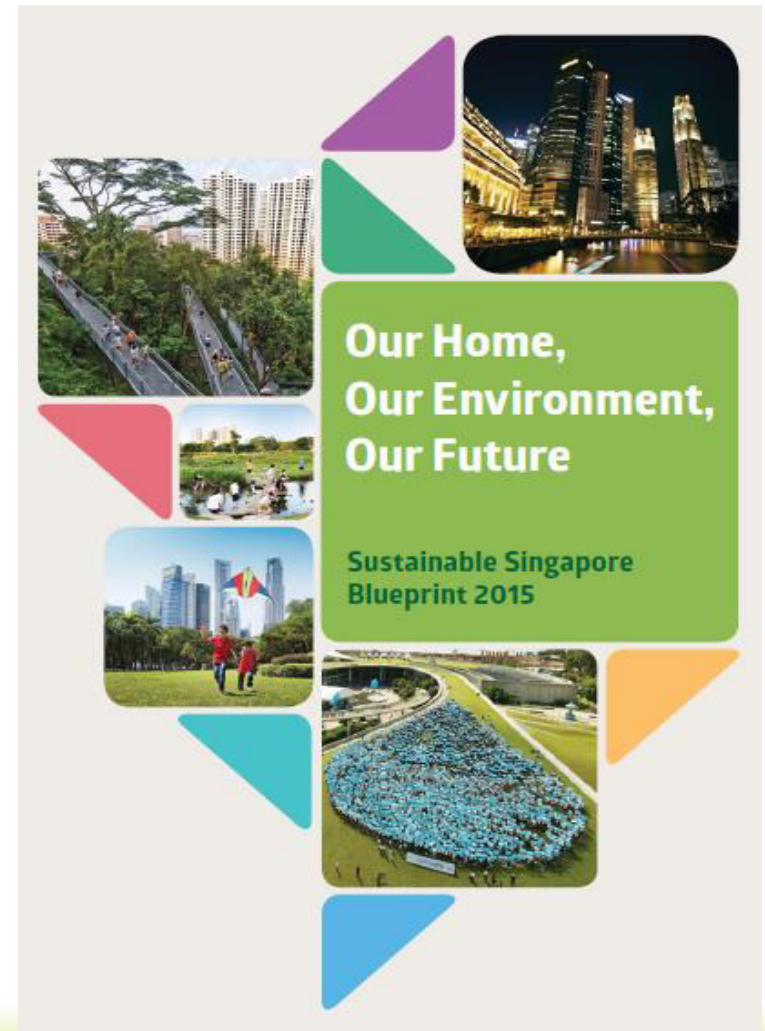


Sustainable Singapore Blueprint 2015

National vision and plans
for next phase of
sustainable development

Targets to
focus energies

Every Singaporean has a
part to play in realising a
Sustainable Singapore



Vision for a Sustainable Singapore



**A Liveable &
Endearing
Home**



**A Vibrant &
Sustainable
City**



**An Active &
Gracious
Community**



Focus Areas



**“Eco-Smart” Endearing
Towns**



A “Car-Lite” Singapore



**Towards a Zero Waste
Nation**



**A Leading Green
Economy**



**An Active & Gracious
Community**



**Sustainable
Singapore**



'Eco-Smart' Endearing Towns

Cool, "Eco-Smart" Lifestyles, starting from Home

1 Smart and Sustainable Towns

- Smart Pneumatic Waste Conveyance System
- Smart solar, lighting, irrigation, homes, carpark management system
- Urban Environmental Modelling
- Centralised Chute for Recyclables
- Regenerative Lifts

2 Greener homes

- Introduced 4-tick rating for more efficient washing machines
- More stringent Minimum Energy Performance Standards for refrigerators



Artist's Impression of Punggol Northshore





'Eco-Smart' Endearing Towns

High quality living environment

3 Green and Blue Spaces

- Completed 68km of Nature Ways
- 306km of Park Connector Network as of 2016
- Completed 36 Active, Beautiful, Clean Waters (ABC Waters) projects





A 'Car-Lite' Singapore

Public transport as choice mode

1 Bus, Rail enhancements

- 80 new bus services and 1,000 new buses rolled out by 2017
- Opening of Tuas West Extension and Downtown Line 3



A variety of public transport options

2 Car-free Zones

- 18 roads regularly closed to cars, in the form of Car-Free Zones
- Car-Free Sunday SG extended to form a 5.5km route around the Civic District and parts of the Central Business District

A car-free Civic District





A 'Car-Lite' Singapore

Diverse, sustainable mobility options for a compact city

1 National Cycling Plan

- Cycling paths completed in Tampines, Sembawang, Pasir Ris, Yishun, Changi-Simei, Punggol and Jurong Lake
- Length of paths increased to 376km in 2016



Cycling on the Park Connector Network

2 Electric vehicles, autonomous vehicles

- EV car-sharing programme to be rolled out progressively from Dec 2017
- AV trials to enhance first-and-last-mile commute



Electric Vehicles



Towards a Zero Waste Nation

Reduce consumption, reuse and recycle all materials

1 Waste Reduction Initiatives

- Dual chutes for waste and recyclables and PWCS will be implemented for
 - HDB developments in new towns and estates such as Punggol, Tengah, Tampines North and Bidadari
 - New private non-landed residential developments from 1 Apr 2018
- Singapore Packaging Agreement extended till 2020



Pneumatic Waste Conveyance System, Yuhua





Towards a Zero Waste Nation

Reduce consumption, reuse and recycle all materials

2 Food Waste Reduction and Recycling

- Food waste treatment pilots ongoing at Blk 628 Ang Mo Kio Ave 4 Market and Food Centre and Tiong Bahru Market, 740 tonnes of food waste treated to date
- Food waste digesters will be installed at Blk 58 New Upper Changi Rd Hawker Centre and Blk 16 Bedok South Rd Hawker Centre

Food waste recycling blk 628 Ang Mo Kio





Towards a Zero Waste Nation

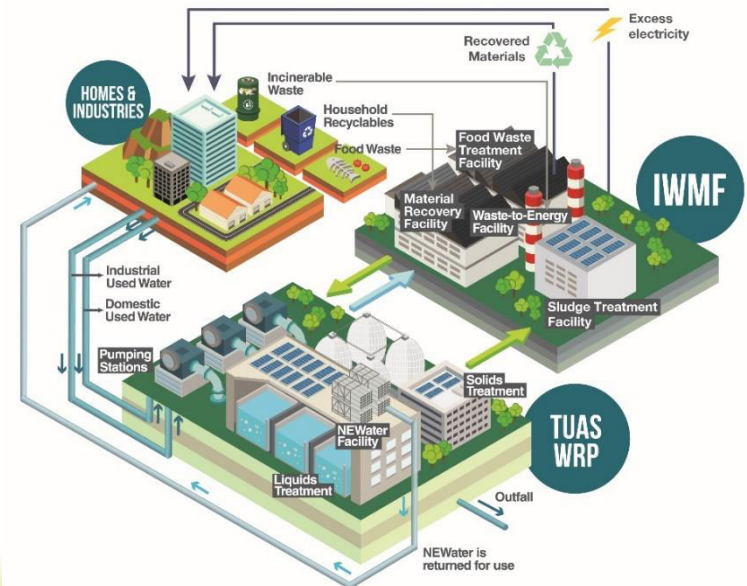
Enhance waste infrastructure

1 Waste Management

- Feasibility study for Multi-Storey Recycling Facility completed
- Preliminary Engineering Designs for the Integrated Waste Management Facility (IWMF) completed, consultancy tender for IWMF development called



Multi-Storey Recycling Facility





A Leading Green Economy

Develop a green industry

1 3rd Green Building Master Plan

- More than \$14.2 million committed under the Green Buildings Innovation Cluster (GBIC) fund
- More than 50% committed to \$50 million Green Mark Incentive scheme for Existing Buildings and Premises (GMIS-EBP)

2 Solar Efforts

- HDB has committed a solar capacity of 190 MWp out of the 220 MWp target for 3,350 HDB blocks
- Floating solar testbed at Tengah Reservoir commissioned

Floating solar panels at Tengah Reservoir



Solar, wind and tidal energy at Semakau





A Leading Green Economy

Reducing Pollution for Cleaner Air

1 Greener Industries and Vehicles

- Carbon tax on industry to be implemented from 2019
- Emission standards for motorcycles tightened to Euro IV standards
- Euro VI emission standards to be adopted from 1 Sep 2017 and 1 Jan 2018 for petrol and diesel vehicles respectively
- Vehicular Emissions Scheme (VES) to replace Carbon Emissions-based Vehicle Scheme from 1 Jan 2018 to promote uptake of cleaner vehicles

2 Making Air Travel More Sustainable

- Partnership between CAAS-SIA on a green flight package
- Completion of three-month trial on the use of sustainable biofuels

Tightening of Emission Standards



Trial on sustainable biofuels for flights





An Active & Gracious Community

Greater Community Stewardship

1 Encouraging Greater Stewardship of the Environment

- About 1,750 active green volunteers served in Nparks' activities and programmes
- HDB's new volunteer network, Friends of our Heartlands (FOH) launched to provide more volunteering opportunities
- Community Volunteer programme expanded to cover more offences and also empower individuals
- More than 600 'Bright Spots' across Singapore have been created as at 2016

Dengue Prevention Volunteers



An Active & Gracious Community

Greater Community Stewardship

1 Vibrant Public Spaces

- PubliCity launched to involve the community in enlivening public spaces through good design and programming
- PubliCity rebranded as our Favourite Place (OFP) with seed funding and special grants supported for projects to support more ground-up initiatives
- Supports Car-Free Zones projects for a car-lite Singapore

Car-free zone at Ann Siang Hill



2 Sustainable Singapore Movement

- Inaugural Partners for the Environment forum
- Attended by more than 300 delegates from public agencies, business, NGOs and schools
- Discussed ideas for collaboration between 3P (people, private, public) sectors

SSM Mascots



SSB 2015 - Indicators and Progress

S/n	Indicator	2015	2016	Targets for 2030
Green and Blue Spaces				
1	Amount of skyrise greenery	72 ha	80 ha	200 ha
2	Amount of park space and waterbodies open to recreational activity			
	a) Parks	4,172 ha	4,332 ha	Park Provision Ratio of 0.8 ha / 1,000 population
	a) Waterbodies	974 ha	974 ha	1,039 ha
3	Length of park connectors and waterways open to recreational activity			
	a) Park connectors	302 km	306 km	400 km
	a) Waterways	98 km	99 km	100 km
4	Length of Nature Ways	68 km	68 km	180 km
5	Proportion of households within 10-min walk of a park	83%	Not available yet	90%

SSB 2015 - Indicators and Progress

S/n	Indicator	2015	2016	Targets for 2030
Mobility				
6	Length of cycling paths	355 km	376 km	700 km
7	Modal share of journeys during peak hours made via public transport	66%	67%	75%
8	Length of rail network	200 km	200 km	360 km
9	Proportion of households within 10-min walk of a train station	60%	60%	80%

SSB 2015 - Indicators and Progress

S/n	Indicator	2015	2016	Targets for 2030
Resource Sustainability				
10	Proportion of buildings that has achieved BCA Green Mark standards	31%	33.4%	80%
11	Energy intensity improvement (from 2005 levels)	25.5%	Data will be available in 2018	35%
12	Household water consumption per capita	151 L	148 L	140 L
13	National recycling rate	61%	61%	70%
	a) Domestic recycling rate	19%	21%	30%
	a) Non-domestic recycling rate	77%	76%	81%

SSB 2015 - Indicators and Progress

S/n	Indicator	2015	2016	Targets for 2020
Air Quality				
14	PM2.5			
	a) Annual mean	24 µg/m ³	15 µg/m ³	12 µg/m ³ (Long term: 10 µg/m ³)
	a) 24-hour mean (99 th percentile)	145 µg/m ³	40 µg/m ³	37.5 µg/m ³ (Long term: 25 µg/m ³)
	PM10			
	a) Annual mean	37 µg/m ³	26 µg/m ³	20 µg/m ³
	a) 24-hour mean (99 th percentile)	186 µg/m ³	61 µg/m ³	50 µg/m ³ (Long term: 20 µg/m ³)
	Sulphur Dioxide (SO ₂), 24-hour mean (Max)	75 µg/m ³	61 µg/m ³	50 µg/m ³ (Long term: 20 µg/m ³)
	Ozone, 8-hour mean (Max)	152 µg/m ³	115 µg/m ³	100 µg/m ³
	Nitrogen Dioxide (NO ₂)			
	a) Annual mean	22 µg/m ³	26 µg/m ³	40 µg/m ³
	a) 1-hour mean (Max)	99 µg/m ³	123 µg/m ³	200 µg/m ³
	Carbon Monoxide (CO)			
	a) 8-hour mean (Max)	3.3 mg/m ³	2.2 µg/m ³	10 mg/m ³
	a) 1-hour mean (Max)	3.5 mg/m ³	2.7 µg/m ³	30 mg/m ³

SSB 2015 - Indicators and Progress

S/n	Indicator	2015	2016	Targets for 2030
Drainage				
15	Flood-prone areas	32 ha	30.5 ha	23 ha
Community Stewardship				
16	Number of active green volunteers	1,500	1,750	5,000
17	Number of Community in Bloom Gardens	995	1,080	2,000
18	Number of litter-free Bright Spots	528	600	2,000

Our Journey Ahead

**SSB 2015 is not an end in itself, but
a blueprint for the future**

- ***Garner support for programmes on environmental sustainability***
- ***Galvanise the community for a ground-up movement***



Thank You
