

# The big tree debate

## The changing face of Singapore

The past 50 years has seen the greening of Singapore. But even as people become more eco-aware, population needs put pressure on the environment. Grace Chua looks at the challenges.

**1973** **1989** **2002** **2009**

**YOU** look out the window of your HDB flat at a view that makes you happy. It is a wide expanse of trees and grass, an open space where children play football or where yellow orioles sing. But one day, hearings go up, construction cranes move in. And your view is gone.

Some may shrug and see it as the price of progress. Others will be sad at the loss of yet another precious slice of nature in this tiny island of so many people.

And, amid the rise of civic activism, a small but vocal minority might wonder: Could I have done something about it?

Such a scenario is a microcosm of the conflict between urbanisation and nature, that pits the needs of a growing country, such as infrastructure and housing, against less quantifiable needs such as the value of species-rich forests.

However, recently those less quantifiable things have been found to have their own currency, now that the perils of climate change have reared their head, with more pollution and fewer trees able to filter carbon from the atmosphere.

Going green now also means tangible benefits such as realising that trees help filter pollution particles and make for clearer air, or that, planted wisely, their shade can reduce the need for expensive air-conditioning.

And to some extent, planners see the need to be eco-aware, too, with the latest Land Use Plan released in January setting a target of 0.8 park ha per 1,000 residents by 2030.

Still, there's no escaping that tension, seen just this week as the need to be eco-aware, too, with the latest Land Use Plan released in January setting a target of 0.8 park ha per 1,000 residents by 2030.

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ahead in trying to reconcile the two, especially as Singapore's population grows.

**How going green took root**

ON JUNE 16, 1963, then-Singapore Prime Minister Lee Kuan Yew planted a slender mangrove sapling at a traffic roundabout called Holland Circus.

Trees such as the mangrove - known for its pretty pink blossoms - certainly are pretty to have around.

But decades before it became fashionable to be environmentally conscious, Mr Lee put shovel to soil to kick off a tree-planting campaign to help bring rain. It was the middle of a drought at the time, and leaves help send water vapour into the atmosphere.

Pragmatic Mr Lee also wanted to send visitors and investors the message that Singapore was a disciplined nation able to tend to its people and its environment.

As well, an island-wide greening programme was a social equaliser, in contrast to British rule, when only wealthy enclaves like Tanglin had cultivated gardens.

Since 1963, Mr Lee - often dubbed Singapore's "Chief Gardener" - has unfailingly planted a tree every year, typically in November, at the start of the rainy season.

Professor Leo Tan, who in 1973 was a young biology lecturer at the University of Singapore, said: "Originally, people took (trees) for granted. The assumption was that we had enough green. But Lee Kuan Yew had this vision."

Singapore was a fledgling country, and it was not immediately clear why government money should be spent on greening.

But Mr Lee in his memoir, *Reflections on My Years in Singapore*, recalled that one who went on to be NParks CEO and who is now Garden City, then the City in a Garden.

Take the national Community in Bloom community-garden programme, launched in 2005. At first, people felt the Government should take care of greenery in their estates.

"Now, people see the point of it - it brings the community closer together," said NParks' Mr Poon.

Senior research fellow Belinda Yuen, an urban planner at the Singapore University of Technology and Design's Lee Kuan Yew Centre for Innovative Cities, pointed out that besides "active" uses of green space such as for exercise and picnics, there is an indirect psychological benefit.

People like having a view of a garden or nature area, she said - they know it is available to escape to if needed.

**Battles and trade-offs**

IS THERE a difference in benefit or value depending on whether you're looking at a cultivated park or a natural area?

Little work on that has been done in Singapore yet, Dr Yuen said. "We need to conduct a study to better understand what exact value people ascribe to open space."

But vociferous public debate over areas like a Pasir Ris patch of empty land, slated for an international school, and Bukit Brown cemetery, earmarked for housing, demonstrates "the people don't just want manicured parks. They want wild areas also", said Mr Tony O'Dempsey, a council member of The Nature Society (Singapore) (NSS).

"Promising a manicured park within some distance of each household - as per the White Paper discussion (see other report) - is missing the point of what I think people really want."

The NSS is concerned that small forest patches at Bukit Timah, Lorong, Mandai and Selat

are getting too separated by roads from larger reserves to sustain rich plant and animal life.

It has identified green sites rich in biodiversity that should get higher priority in protection efforts, and is currently preparing a report on the overall green impact of the Government's Land Use Plan.

And Mr N. Sivasothi, an NUS biology lecturer and coordinator of the Raffles Museum Biodiversity Conservation Society, said: "On the one hand, urbanites don't interact with nature every day and don't see the value of the clean air or fresh water it provides."

"On the other hand, I see young people actually doing something about it."

**The next 50 years**

AS NPARKS' Mr Poon puts it: "The top three challenges for us are space, space and space."

However, it is precisely because the population is growing that more nature also needs to be retained - to address the impact of climate change, serve as an emotional anchor, and meet recreational needs.

But what happens when NParks' mandate clashes with another agency's - say, when planning to come up with a solution - to retain or replace or enhance greenery?

"In the past, we've been quite reactive - the Land Transport Authority says we want to do road-widening, so say you can't get rid of this tree. Now, you're doing road-widening, can (NParks) do something to beautify the area?"

Still, retaining natural or managed areas, and adding new ones, remains a process of give and take.

Later this month, an official tree-planting event will take place at Holland Village Park, not far from where Mr Lee planted his first mangrove tree.

And perhaps symbolising how much the need to value the environment has taken root, even amid necessary development, in order to build the pocket-sized green lung - completed in 2011 - it was a carpark that made way.

**Greenery is now integrated into new building structures, such as the Sky Park at City Square Mall. More people are seeing the tangible benefits of going green as trees help filter pollution particles and, planted wisely, their shade can reduce the need for expensive air-conditioning. ST PHOTO: KEVIN LIM**

### A BRIEF HISTORY OF GREENING IN SINGAPORE

- 1963** Mr Lee Kuan Yew plants a tree at Holland Circus as start of island-wide campaign
- 1967** Garden City programme of roadside landscaping launched
- 1971** The first Tree Planting Day held (November) replaced by Clean and Green Week in 1990
- 1973** Labrador Beach de-gazetted to be nature park
- 1974** Parks and Recreation Department formed
- 1986** Bukit Timah Expressway constructed, cutting through Bukit Timah and Central Catchment Nature Reserve
- 1989** Sengkang Rukoh given nature park status after Malaysian Nature Society (Singapore) calls on Government to conserve it
- 1990** Nature Society of Singapore (NSS) publishes its master plan for nature conservation
- 1990-91** National Parks Board (NParks) established to oversee nature reserves, Singapore Botanic Gardens and Fort Canning Park
- 1992** Government publishes its First Green Plan: Lower Peirce Reservoir
- 1996** Parks and Recreation Department merges with NParks
- 1999** Sengkang development put on hold after environmental impact assessment by NSS
- 2001** Labrador Park re-gazetted as nature reserve
- 2002** Sungei Buloh gazetted as nature reserve
- 2009** Eco-link between Bukit Timah and Central Catchment reserves over the DKE is announced; Blue Plan by academics and non-government groups is submitted to Government, proposes specific marine areas that have high conservation value
- 2010** National University of Singapore and corporate sponsors begin five-year Comprehensive Marine Biodiversity Survey
- 2012** Gardens by the Bay officially opened
- 2013** Government publishes its Population White Paper and Land Use Plan laying out plans till 2030
- Nature groups raise concerns about environmental impact, particularly of Cross-Island Line
- Land Transport Authority agrees to postpone its Environmental Impact Assessment report till nature groups have studied the effect of different rail-line alignments

## Land Use Plan: The good, bad and ugly

DAYS after the White Paper came out, with its projection of a 6.9 million population by 2030, came a policy plan in January showing, among other things, how to accommodate that number.

This is the Ministry of National Development's Land Use Plan.

How the plan squeezes in more people and infrastructure affects the environment in ways that encompass the good, the bad and the ugly, say conservation-minded nature groups.

The good: By 2030, the Government wants 85 per cent of residents to be able to live within 400m of a park, and has a planning target of 0.8ha of parkland per 1,000 people.

Eco groups also like that the plan outlined new nature areas with different habitats: Jalan Gemala in Lim Chu Kang for marshes, woodland and a river; a reef and intertidal area at Beting Ironok off Pulau Tekong; and coastal mangroves at nearby Pulau Ubin.

The bad: some of the land reclamation. Environment groups say the plan appears to swallow up biodiversity-rich shores, including mangrove areas in Mandai and Pasir Ris, areas with marine life like Chek Jawa and Pulau Selat, and even perhaps islands like Pulau Hantu.

They are also concerned about how the Cross-Island MRT line goes through the Central Catchment Nature Reserve, a gazetted reserve. In Parliament, Nominated Member of Parliament Faizah Jamal asked if any environmental impact assessment had been done in the first place.

Mr N. Sivasothi, of the Toddycats volunteer group at the Raffles Museum of Biodiversity Research, asked why "existing sites under the highest protection can be casually subverted to a transport plan".

The Land Transport Authority is now engaging civic groups on the issue.

This week, it met nature groups and academics, and agreed to hold off conducting its environmental impact assessment until nature groups finish a six-month study on how different rail-line alignments will affect the reserve.

Mr Tony O'Dempsey, council member of the Nature Society (Singapore), also highlighted that there would be high-density developments right up to the edge of nature reserves.

These produce light, sound and smell pollution and changes in lighting and wind flow, he said. "The bite-back is you end up with monkey and other wild animal interactions, and the Agri-Food and Veterinary Authority solution to this problem is culling the animals that become a nuisance."

The ugly: lack of prior consultation, internally and with civic groups and the public, over the overall environmental impact of the Land Use Plan.

Mr Sivasothi said: "The question should be: Has the Government asked these questions on a broad scale? We should model the situation to circumvent predicted impact, not simply respond to stress points."

Mr O'Dempsey added that the average citizen is not necessarily familiar with longstanding urban plans, "hence the conflict that occurs when the planned use is 'activated' by the agencies".

Rather, plans should be communicated in a more accessible way, he said.

And what of the Government's green-spot guardian, the National Parks Board (NParks)?

The Cross-Island Line was no surprise to NParks, said its former chief executive Kiat W. Tan, now NParks adviser and chief executive of Gardens by the Bay.

"It was always the other shoe waiting to drop," he said. However, he has "great optimism" that an environmentally sensitive alternative can be found, even if expedience is sacrificed.

And NParks chief executive Poon Hong Yuen said Singapore is capable of coming up with creative solutions to the space crunch, such as drainage reserves doubling as park connectors.

When agencies' mandates conflict, a serious attempt is made to find a solution, or at least develop in a way to retain, replace or enhance the greenery that was there before.

"The objective, the most important thing, really is to create a better Singapore for Singaporeans," he said.

GRACE CHUA