



ANNUAL REPORT 2010/11

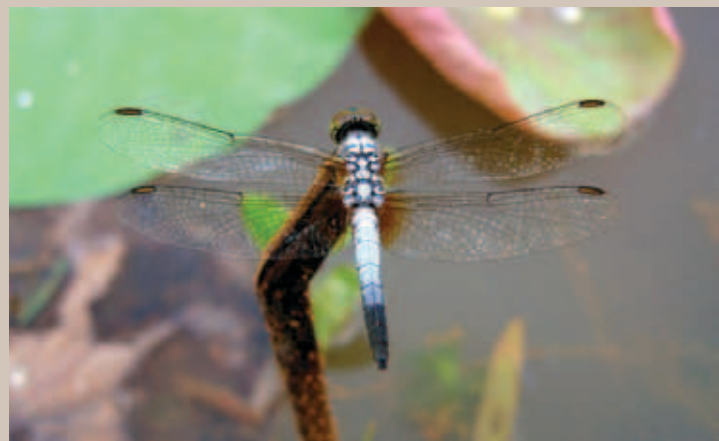


Our BiodiverCity

Singapore is a haven to an **abundance of life**. It is home to not just five million people, but also over 2,000 plant species, 370 types of birds, 52 kinds of mammals and 98 species of reptiles. At NParks, we safeguard this **rich and diverse natural heritage**, and seek ways to infuse biodiversity into the spaces where people live, work and play. As stewards of our **City in a Garden**, our goal is to build a world-class living environment for all to enjoy in harmony with nature – **Our BiodiverCity**.

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Chairman's Message

NParks' role is to balance the needs of nature and Singaporeans for mutual benefit. By caring for and managing our natural assets, we not only help protect biodiversity, but also beautify the urban landscape, promote tourism and enhance liveability.



The National Parks Board's vision is to transform Singapore into a City in a Garden, to build a metropolis in which the urban environment is interwoven with nature. Our focus on sustainable urban development is unique, especially since urbanisation is often equated with habitat and biodiversity loss. The consequences of this loss and the corresponding importance of protecting biodiversity were highlighted by the United Nations General Assembly in their decision to designate 2010 the International Year of Biodiversity.

Although Singapore is one of the world's most densely populated countries, close to 10% of our land area is dedicated to parks and nature conservation. Despite our small size, Singapore has a rich biodiversity that benefits us all. Singapore is home to over 2,000 plant species, 52 kinds of mammals and 370 types of birds – slightly more than 60% of the 568 species listed in the UK, or 75% of the 467 species found in France. Indeed, the entire country is an urban forest; its rich tapestry of greenery supplies clean air, provides shade, lowers ambient temperature, reduces soil erosion, acts as a carbon sink and beautifies our city.

Our experience of growing a city sustainably has not only served Singapore and local biodiversity well. We have been able to contribute our learnings to the international community, for example in our work with the United Nations' Convention on Biological Diversity. NParks has also engaged 30 cities worldwide to help pioneer the world's first international self-assessment tool for cities to evaluate and benchmark their biodiversity conservation efforts. Endorsed in 2010, the Singapore Index on Cities' Biodiversity was named in recognition of our country's leadership in this effort.

Obviously, NParks cannot single-handedly protect and enhance local biodiversity. Our partnerships with other government agencies and non-governmental organisations have borne fruit in terrestrial and marine conservation efforts. Over the past year, the Banded Leaf Monkey, once believed to be near extinction, has been found to be thriving in our forests. Recent research has also found 40 species of dragonflies living in our parks – a demonstration of how wildlife can thrive in urban settings.

NParks' role is to balance the needs of nature and Singaporeans for mutual benefit. By caring for and managing our natural assets, we not only help protect biodiversity, but also beautify the urban landscape, promote tourism and enhance liveability. The first phase of the much-anticipated Gardens by the Bay will be launched in 2012, and Singapore's residents and visitors alike will be delighted by the vibrant waterfront gardens and outdoor recreation spaces set within Singapore's new downtown.

All of NParks' spaces and efforts serve to connect people with nature. New nature spaces, such as Tampines Eco Green, provide many opportunities for education and recreation alike. Our iconic and beloved Sungei Buloh Wetland Reserve will also be rejuvenated to create new spaces for visitorship and outdoor learning. Creating opportunities for personal enjoyment and appreciation is also the first step in NParks' public education programme. In addition to our usual outreach activities, NParks organised over 200 activities to celebrate the International Year of Biodiversity in 2010, starting with the "BiodiverCity" photo competition and exhibition.

As we look ahead toward the transformation of Singapore into a City in a Garden, I would like to acknowledge the contributions of NParks' staff, partners, sponsors and friends. Thank you all for your commitment, hard work and your continued support of our work at NParks.



Mrs Christina Ong
Chairman
National Parks Board

Members of the Board

As of August 2011

Mrs Christina Ong – Chairman



Mrs Ong is Managing Director of Club 21 Pte Ltd, a lifestyle retailer with more than 200 stores worldwide. A leading fashion entrepreneur, Mrs Ong is a recipient of The Italian Fashion Hall of Fame Award 1995 and the Italian Award of Cavaliere De Lavo. Mrs Ong is also a noted luxury hotelier, managing a stable of niche properties under the COMO Hotels brand.

Mrs Deborah Ong – Deputy Chairman

Mrs Ong is a partner at PricewaterhouseCoopers Singapore. Mrs Ong has more than 20 years of public accounting experience, providing audit and advisory services to a wide range of clients. Mrs Ong is also the firm's Human Capital Leader and has facilitated various people initiatives, including community projects.



Mr Philip Su – Board Member



Mr Su is the Executive Director of Far East Organization. He is also a member of the National Youth Achievement Award Council, the Singapore Environment Council, the Employment and Employability Institute Pte Ltd and National University Health System. Mr Su held the appointment of Assistant Chief Executive Officer / JTC from 1 September 2001 to 31 July 2010.

Ms Lim Sau Hoong – Board Member

Ms Lim is the Chief Executive Officer and Executive Creative Director of 10AM Communications, an advertising agency she founded in 2000. She has sat on the jury for international advertising festivals including Cannes, Clio, ADC Awards and Times Asia Pacific Advertising Awards. In Singapore, she was on the inaugural jury for the President Design Award. Ms Lim has been nominated as one of Singapore's top three most influential persons in media, marketing and advertising.



Mrs Koh-Lim Wen Gin – Board Member



Mrs Koh-Lim was the Chief Planner and Deputy Chief Executive of the Urban Redevelopment Authority (URA) between 2001 and 2008. Her career with URA spanned over three decades, during which she played a key role in the strategic planning and design of Singapore's city and urban landscape, the conservation of Singapore's built heritage, and landmark developments that contributed to Singapore's growth as a global city. Mrs Koh-Lim serves as a member on several statutory board advisory panels. She is also an Independent Director of Keppel Land Limited, Keppel Land China Limited and Senior Advisor to several private firms.

Dr Malone-Lee Lai Choo – Board Member



Dr Malone-Lee is Director of the Centre for Sustainable Asian Cities, School of Design and Environment at the National University of Singapore (NUS). Prior to joining NUS, Dr Malone-Lee held senior positions in the civil service, working in the areas of strategic planning, planning policies and heritage conservation. Her current research interest is on urban planning policies and strategies for sustainable cities, focusing on the benchmarking cities, densification, city liveability and resource optimisation.

Mr Poon Hong Yuen – Board Member and Chief Executive Officer, National Parks Board

Mr Poon has held appointments across the public service, including the Economic Development Board, the Ministry of Trade and Industry, and the Infocomm Development Authority of Singapore. Most recently, he served as Director of Economic Programmes at the Ministry of Finance (MOF), where he oversaw budget policies for economic programmes. He also oversaw MOF's international relations unit, representing Singapore's interests in international finance forums. Mr Poon sits on the Board of Governors, Temasek Polytechnic.



Mr Yatiman Yusof – Board Member

Mr Yatiman has held several key appointments at the Ministry of Foreign Affairs and the Ministry of Information, Communications and the Arts. He served as Member of Parliament (MP) for Kampong Kembangan Constituency from 1984 to 1988 and as an MP for the Tampines Group Representation Constituency from 1988 to 2006. Mr Yatiman also held key positions in Berita Harian and Berita Minggu up to 1986. Mr Yatiman is presently Singapore's High Commissioner (Non-Resident) to Kenya and Rwanda.



Mr Ngiam Shih Chun – Board Member

Mr Ngiam is Special Assistant to Emeritus Senior Minister Goh Chok Tong. He was formerly the Director of Community Relations and Engagement at the Ministry of Community Development, Youth and Sports (MCYS) where he oversaw the promotion of community bonding and racial and religious harmony, as well as the development of volunteerism and philanthropy. He was also concurrently the Director of the Social Sector Planning Unit. Mr Ngiam has also served in the Ministry of Home Affairs and the Ministry of Education.



Mr Seah Kian Peng – Board Member

A Member of Parliament for the Marine Parade GRC, Mr Seah is also the Chief Executive Officer (Singapore) of NTUC Fairprice Co-operative Limited. In addition, he is the Chairman of the Government Parliamentary Committee for Community Development, Youth and Sports, and also a board member of the International Co-operative Alliance, co-chair of the Social Enterprise Association of Singapore, Vice-President of the Singapore Compact for Corporate Social Responsibility, and a board member of the Centre for Fathering and Health Promotion Board. Mr Seah has worked in both the public and private sectors, and serves in various public and community organisations.



Management Team

As of August 2011



FROM LEFT

Poon Hong Yuen
Chief Executive Officer

Dr Kiat W Tan
Advisor to NParks &
Chief Executive Officer
Gardens by the Bay

Simon Longman
Director
Streetscape

Ms Kartini Omar-Hor
General Manager
Parks Division 2

Yeo Meng Tong
Director
Parks Development



FROM LEFT

Kenneth Er
Assistant Chief Executive Officer
*Corporate Development
and Services Cluster &
General Manager
Gardens by the Bay*

Ms Peggy Chong
Deputy Chief Executive Officer
*Gardens by the Bay & Policy and
Planning*

Yong Fook Chyi
Director
Resource Management

Ng Cheow Kheng
Deputy Director
Horticulture and Community Gardening

Ms Tan Lai Kheng
Deputy Director
Lifestyle Business

The Management Team photos were taken at Tampines Eco Green, an ecologically-themed park.

FROM LEFT

Dr Leong Chee Chiew

Deputy Chief Executive Officer
*Professional Development
and Services Cluster &
Commissioner of Parks and Recreation*

Sim Cheng Hai

Director
Policy and Planning

Teva Raj

Director
Industry/CUGE

Ms Lee Pin Pin

Deputy Director
*Communications and
Community Engagement*

Kong Yit San

Assistant Chief Executive Officer
Parks Management and Lifestyle Cluster



FROM LEFT

Wong Tuan Wah

Director
Conservation

Dr Nigel Goh

Director
Corporate Development

Chia Seng Jiang

General Manager
Parks Division 1

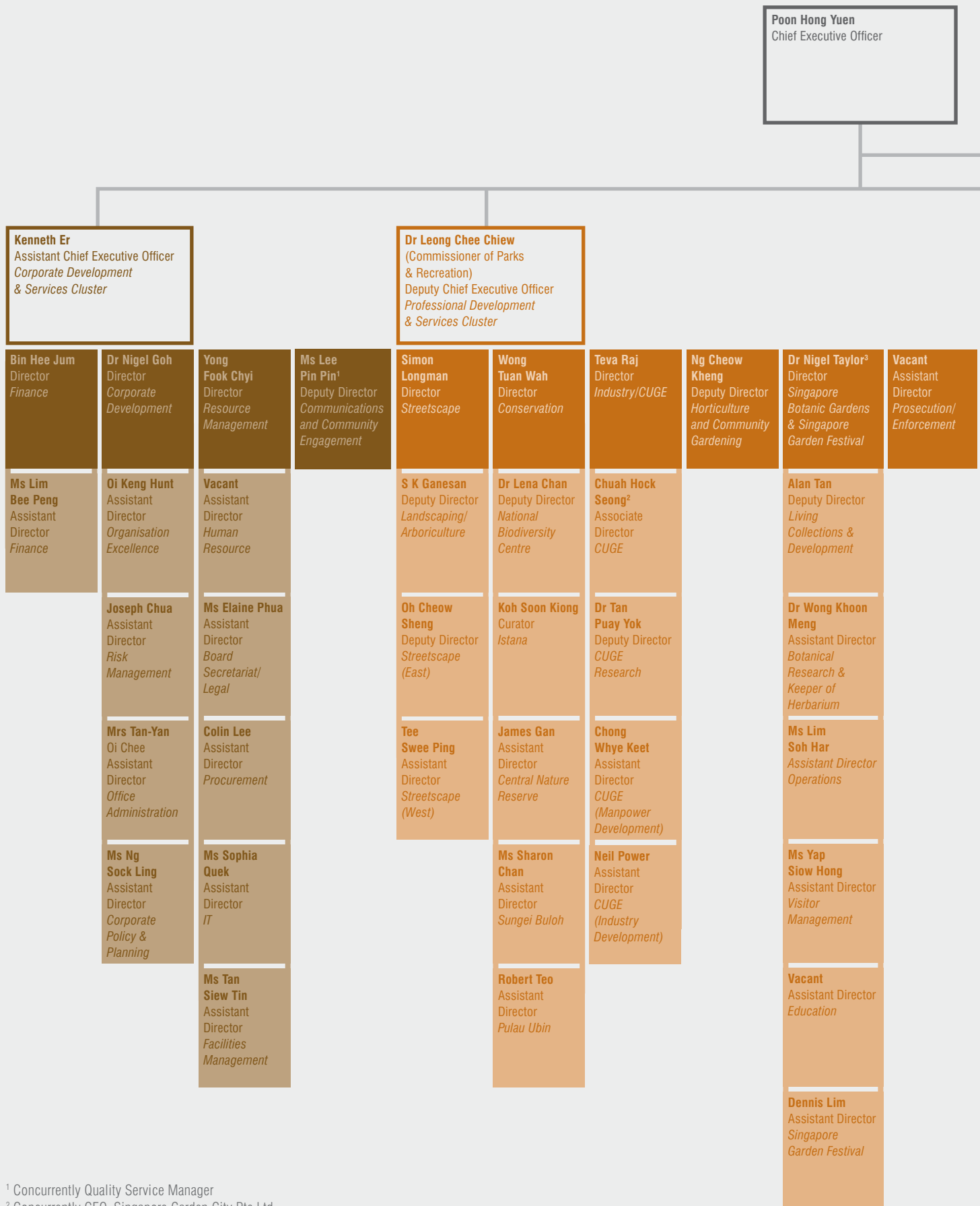
Bin Hee Jum

Director
Finance



Organisation Structure

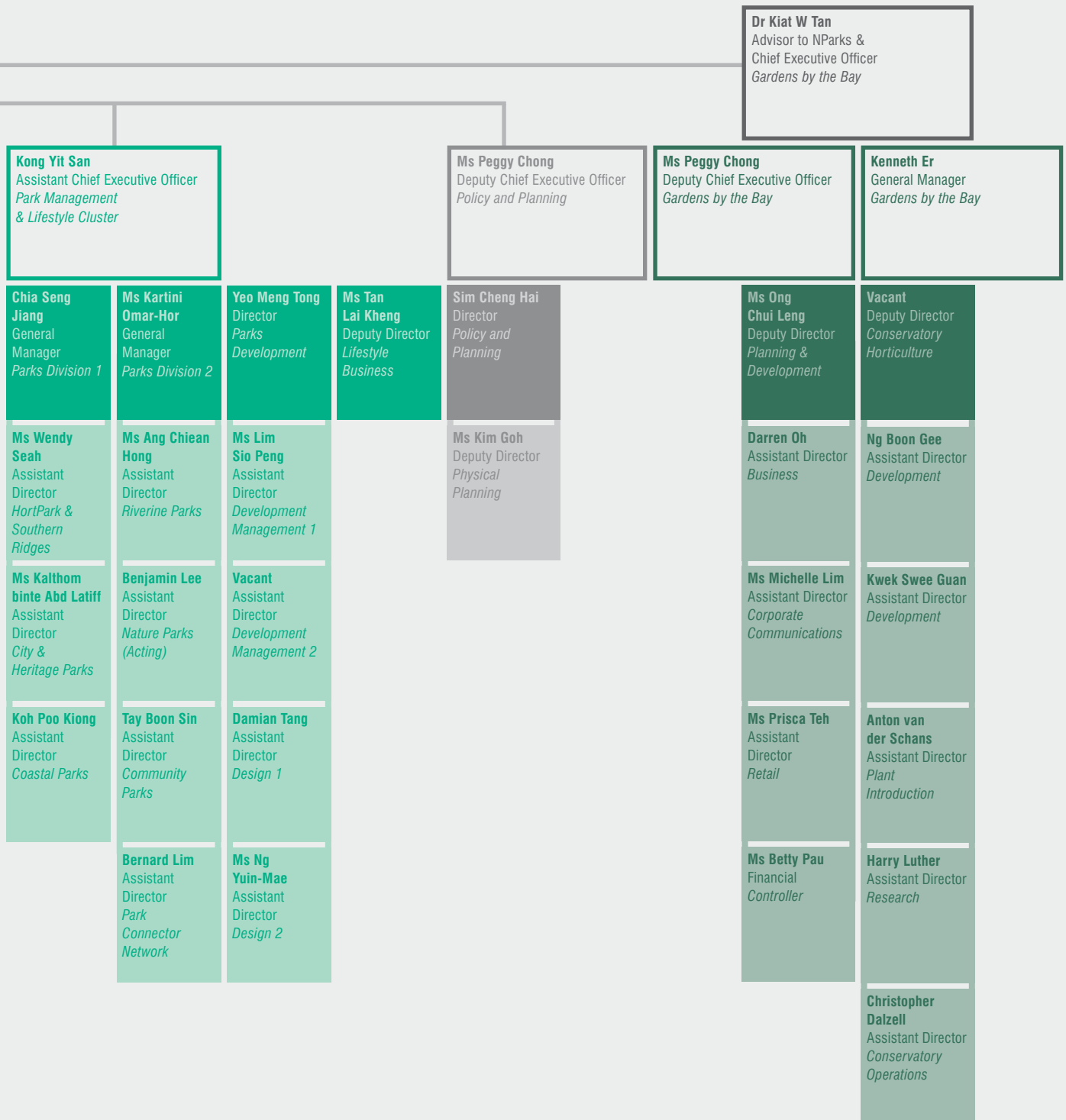
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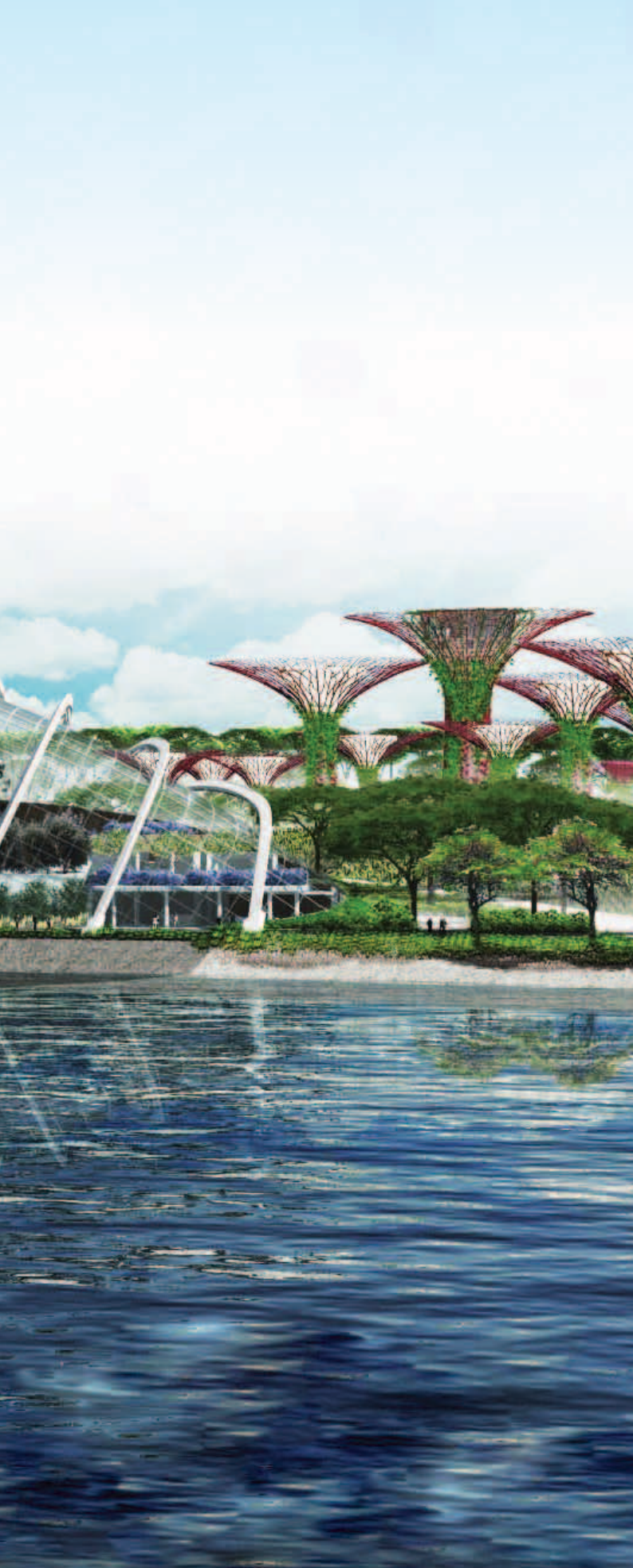
¹ Concurrently Quality Service Manager

² Concurrently CEO, Singapore Garden City Pte Ltd

³ From 19 September 2011







abundant growth

The balance between the conservation of our country's natural heritage and economic progress is a delicate one. As the guardians of our natural environment, NParks constantly innovates and implements unique solutions to conserve and enhance the biodiversity in our urban city-state. Each year, we spearhead new initiatives which bring flora and fauna closer to people, enriching the quality of life at home, work and play.

Gardens by the Bay comprises three distinctive waterfront gardens in the heart of Singapore's new downtown. When completed, the 101-hectare Gardens will create habitats for urban biodiversity such as birds and dragonflies.





- 01 The 18 Supertrees in Gardens by the Bay are covered in a 'living skin' planted with bromeliads, ferns, orchids and other climbing plants.
- 02 With its cooled conservatories and Supertrees, Gardens by the Bay will be an iconic feature of Singapore's new skyline.

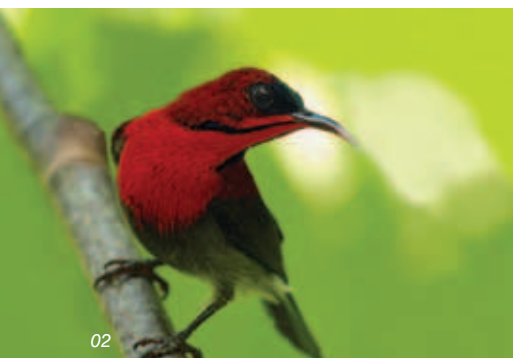
A Bayfront Garden for All

Gardens by the Bay represents a major step in enhancing Singapore's urban biodiversity conservation. When its first phase opens in June 2012, it will house an impressive variety of plant species – right in the heart of Singapore's new downtown.

The Gardens celebrated a major milestone in February 2011 with the completion of the first of its two cooled conservatories, the Flower Dome. The Flower Dome replicates the cool-dry climate of the Mediterranean and semi-arid subtropical regions. Together with the Cloud Forest which replicates the cool-moist climate of the Tropical Montane region, the two cooled conservatories will feature a rich collection of unique plants not commonly seen in this part of the world and with high conservation value.

When completed, the Gardens will also feature a sustainable lake ecosystem, with aquatic plants in the lake system that will filter and cleanse the water, and provide a habitat for wildlife. In November 2010, a groundbreaking ceremony took place for Kingfisher Lake, one of the Gardens' two major lakes. The lake, which will act as an eco-filter for the Gardens, is being enhanced with a \$1 million sponsorship from Kikkoman Singapore.

Besides these unique ecological features, visitors can also look forward to a myriad of food and beverage options located throughout the 54-hectare Bay South. Dining facilities will be located among the Gardens' key features – the cooled conservatories, the Supertree Grove, and even at the top of the tallest Supertree, with its panoramic skyline view.



01&02 The fast-fruiting native trees in the Singing Forest will attract birds like (from top) the Pink-necked Green Pigeon (*Treron vernans*) and the Crimson Sunbird (*Aethopyga siparaja*).

03 The Forest of Giants features tree species that can grow to astounding heights within 50 years, like this towering Jelutong (*Dyera costulata*) at the Singapore Botanic Gardens.

Giving a Boost to Native Forest Life

From rainforests to freshwater swamps, mangroves and coastal forests, Singapore is home to many forest types. Not only are these important to biodiversity, they also improve our well-being by regulating our climate, cleaning our air, and providing shade. In 2010, NParks launched a variety of projects in support of Singapore's forest biodiversity.

The Singing Forest at the Southern Ridges is a new collection of bird-attracting native trees, planted to intensify the area's already high diversity of native bird species. This project, launched in May 2010, is supported by STMicroelectronics through the Garden City Fund.

These fruiting trees will provide a variety of food sources to native birds – including green pigeons and hornbills – as well as shelter and nesting areas. They will also regenerate the existing forest around Mount Faber, Telok Blangah and Kent Ridge Parks.

The Southern Ridges also houses a living gallery of giant tree species which are threatened in the region. Launched in April 2010, the Sembcorp Forest of Giants is an arboretum of 600 giant trees which can grow to heights of up to 80 metres in the wild – around the height of a 30-storey HDB block.

This project is supported by a \$1 million donation by Sembcorp Industries to the Garden City Fund, which will also fund ongoing research and outreach programmes to promote

awareness and enjoyment of the forests. The trees can be viewed along two loops in Telok Blangah Hill Park.

Our forests are also home to a number of endangered species. In a joint study with the National University of Singapore and the Wildlife Reserves Singapore Conservation Fund, NParks discovered breakthrough evidence that the numbers of the critically endangered Banded Leaf Monkey have been increasing.

Although it was on the verge of extinction in the 1980s, this species was found to be breeding successfully in Singapore's forests. A 2010 survey of the Central Catchment Nature Reserve revealed 50 – 60 Banded Leaf Monkeys sighted in the eastern part of the Reserve. This was more than expected, given that only 10 were estimated to be living in the forest 20 years ago. NParks and its partners are exploring ways to encourage a further increase through habitat improvement.

The Banded Leaf Monkey is one of only three species of non-human primates that are native to Singapore. The other two are the Long-tailed Macaque and the Sunda Slow Loris.





01



02

01 Along the Northern Explorer Loop, cyclists can explore rustic areas such as this stretch along the Mandai Park Connector.

02 A haven for biodiversity, Tampines Eco Green promotes a deeper appreciation for nature among those living in the nearby housing areas.

03 You can spot butterflies like this Lemon Emigrant (*Catopsilia pomona pomona*) along the Northern Explorer Loop, especially at the Butterfly Corner near the Admiralty West Park Connector.

Creating and Enhancing Green Spaces

Outside our nature areas, biodiversity is also found in various urban ecosystems throughout our parks, gardens and even in built-up areas. This harmonious sense of green space grows with every new park and park connector created for the enjoyment of all.

Tampines Eco Green was created as a tranquil sanctuary for biodiversity in the heart of Tampines North. A rich variety of native flora and fauna thrives in this ecologically-themed park. It spans 36.5 hectares, and features various natural habitats such as marshes, secondary rainforest and freshwater ponds.

The park amenities are also uniquely eco-friendly. Its furniture and signage are made from recycled materials and environmentally friendly products, and it features the first odour-free and waterless eco-toilet in Singapore's public parks. The Tampines Park Connector links Tampines Eco Green to Sun Plaza Park and the Tampines Bike Trail.

Jalan Kemuning Park is another recently launched eco-friendly park. Located in Sembawang, this park is the first to make use of a fully solar-powered lighting system, with enough backup energy stored to last up to five days. The park design reduces the need for open drains along footpaths by closely following the site's natural topography. It also retains the site's existing bird habitats by minimising tree removal during the development process.

With the completion of the 25-kilometre Northern Explorer Loop in November 2010, 150 kilometres of park connectors have been completed island-wide.

This is the third completed park connector loop, following the Eastern Coastal Loop and the Western Adventure Loop. Four other major loops have been earmarked, which will bring the total Park Connector Network (PCN) mileage to an estimated 300 kilometres by 2015.

The Northern Explorer Loop offers a range of experiences to those living in the north of Singapore. They can enjoy the view of the Straits of Johor from Woodlands Waterfront, discover over 100 species of flora and fauna at Admiralty Park, and bike along a rustic stretch at Ulu Sembawang which leads to the fringe of the nature reserves.

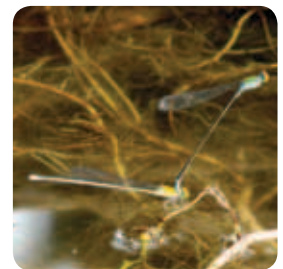


Biodiversity Snapshots



Jade Tree Snail
Amphidromus

atricallosus temasek
A master of camouflage, this snail is incredibly difficult to spot in its tree canopy home. It is known to be found in the older forests of Singapore, such as the Central Catchment Nature Reserve.



Orange-faced Sprite
Pseudagrion rubriceps

This damselfly is very rare in Singapore. It had previously only been sighted in nature reserves, but now has a small population in Toa Payoh Town Park.



Greater Racket-tailed Drongo
Dicrurus paradiseus

This forest bird has a distinctive long tail: the shafts of the two outermost feathers are extended and end in the rackets which give this species its name. It can imitate sounds and calls from other birds, and can be seen in many gardens and nature areas.



Flora and Fauna within the Cityscape

A two-year study by NParks, completed in 2010, found that many species of dragonflies are able to thrive in Singapore's urban settings. Forty species were found at key locations such as Bishan Park, Kent Ridge Park, and Toa Payoh Town Park, including the rare *Pseudagrion rubriceps* found at Toa Payoh Town Park.

The dragonflies' presence outside of nature reserves and rural areas indicates that the parks' waterbodies are healthy freshwater ecosystems. The results of the study have also helped NParks to better maintain and design dragonfly habitats in its various park developments.

NParks has an ongoing collaboration with PUB to transform utilitarian drains, canals and reservoirs into streams, rivers and lakes. The Active, Beautiful and Clean Waters or ABC Waters Programme has integrated waterbodies and waterways with parks including Bishan Park and Sengkang Riverside Park, as well as the Alexandra and Whampoa park connectors. These efforts have helped to enrich the native biodiversity, allowing water plants, dragonflies, and even birds to thrive.

In residential areas, Streetscape gardens have been introduced to improve the neighbourhoods' greenery. To date they have been launched in Boon Lay, Tampines and Thomson. These small pockets of linear gardens beautify the area, provide shade and are also refreshing spots to relax and socialise. Streetscape gardens are also envisaged as collaborations with the community, to develop strong and cohesive community bonds and to build a gardening culture among community groups. These gardens are cared for by residents and community leaders to cultivate a sense of ownership and pride.

Even the bustling Orchard Road is included in biodiversity conservation initiatives. Under NParks' orchid reintroduction programme, the spectacular Tiger Orchid – which is already extinct in the wild in Singapore – was chosen as the first native orchid to be reintroduced to Orchard Road in May 2010. The programme aims to propagate and reintroduce native orchid species into natural, semi-natural, and urban environments. It addresses the extinction of most of Singapore's 226 native orchids, mainly due to habitat loss.

As of 2010, the orchid reintroduction programme has seen 2,100 native orchids planted in Bukit Batok Nature Park, East Coast Park, West Coast Park, Pasir Ris Park, Labrador Park, Kim Seng Park and Napier Road. The reintroduced orchids have already begun flowering at various locations including Labrador Park and Pasir Ris Park.

NParks also supports the Nature Society (Singapore) in its efforts to develop a four-kilometre Butterfly Trail along a stretch of Orchard Road, beginning at the Singapore Botanic Gardens and ending at Fort Canning Park. Other partners in this project, launched in June 2010, include Singapore Environment Council, Singapore Tourism Board and the Orchard Road Business Association.

One-third of the world's dragonfly species exist in Singapore's urban parks and gardens.



02



03

01 The picturesque Yellow-barred Flutterer (*Rhyothemis phyllis*) is one of the 40 dragonfly species found to be thriving in Singapore's parks.

02 The Thomson Streetscape Garden was planned and planted by over 50 residents and students living nearby, who are also actively involved in its ongoing maintenance.

03 In conjunction with the planting of a Tiger Orchid outside the TANGS store along Orchard Road, a display of native orchids was exhibited inside TANGS. Clarins' Chairman Christian Courtin-Clarins (right) was present for the launch, seen here with Dr Yam Tim Wing, NParks' Senior Researcher (Orchid Breeding).



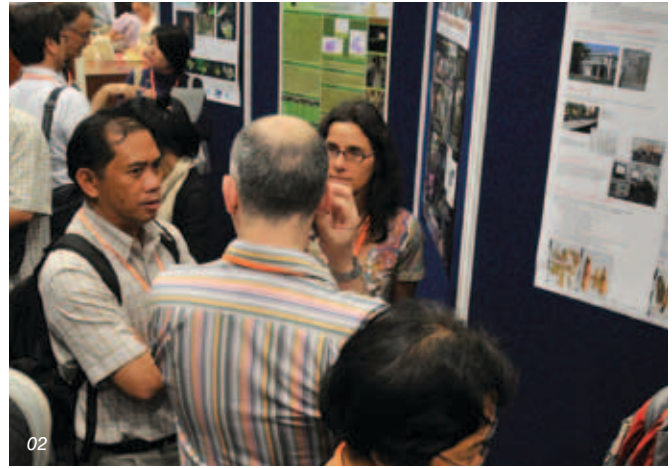


symbiotic partnerships

Biodiversity conservation is an ongoing challenge for everyone, and it is through meaningful partnerships that NParks can accomplish more than we could by ourselves. Globally and locally, we work with like-minded partners in governments, non-governmental organisations and academia to protect and enhance our biodiversity.

During 2010, which was declared the International Year of Biodiversity by the United Nations, NParks led a year-long series of initiatives and activities to celebrate our rich biodiversity, and remind the public that the conservation of our natural heritage is a shared responsibility for all.

Through guided walks in parks and gardens, NParks creates encounters for children and adults to discover, first-hand, the amazing biodiversity found in our natural environment.



Conservation on the Global Scale

NParks is deeply committed to working with the global community in championing biodiversity conservation worldwide. In October 2010, the Singapore Index on Cities' Biodiversity (Singapore Index or CBI) was formally endorsed at the 10th Conference of Parties (COP10) to the Convention on Biological Diversity in Nagoya.

NParks coordinated the development of the Singapore Index in cooperation with the Secretariat of the Convention on Biological Diversity, the Global Partnership on Cities and Biodiversity, and international experts. The Singapore Index was tested by over 30 cities globally, and is the first self-assessment tool for cities to evaluate and prioritise biodiversity conservation efforts over time.

Prior to COP10, NParks hosted two workshops on the Singapore Index. The first, in April 2010, was organised in collaboration with the ASEAN Centre for Biodiversity. It introduced the Singapore Index to government representatives from 18 ASEAN cities and trained city officials on its usage, highlighting the importance of incorporating biodiversity and ecosystem services into city planning and management. In July 2010, the Second Expert Workshop on the Development of the CBI was held to review the preliminary results from cities which had test-bedded the Singapore Index, and to prepare for COP10.

In another collaborative effort, NParks worked with Partnerships in the Environment Management of the Seas of East Asia (PEMSEA) to conduct the first Integrated Coastal Management (ICM) workshop in August 2010. Through this workshop and its case studies, participants from 10 government agencies

gained an understanding of ICM development and implementation in a highly urbanised setting with numerous competing land-use pressures.

NParks has been active in organising and hosting events that facilitate the exchange of knowledge and ideas from all over the world. During the World Cities Summit 2010, NParks organised the first international seminar on biodiversity and ecology for sustainable cities on 30 June 2010. The seminar attracted over 200 attendees from seven cities and countries who play a role in shaping the cities of the future, and provided a platform for them to share their experiences.

The Singapore Botanic Gardens hosted the 8th International Flora Malesiana Symposium in August 2010, which achieved the highest ever attendance in the Symposium's history. A total of 362 professional botanists and postgraduate students in Malesian botany from 28 countries gathered at the triennial Symposium. This event is the foremost platform for exchanges of the latest taxonomic information, ideas, and research on plant diversity and distribution in the Malesian floristic region.

As a city-state with few natural resources, Singapore has a unique perspective on the complex challenges faced by cities worldwide, in achieving sustainable development and safeguarding biodiversity.

- 01 Singapore's approach to Integrated Coastal Management supports the conservation of this island's amazing marine biodiversity, such as this pair of *Hypselodoris bullocki* nudibranchs (a species of sea slug).
- 02 Hosted by the Singapore Botanic Gardens, the 8th International Flora Malesiana Symposium saw the exchange of ideas between botanists from 28 different countries.
- 03 At the 10th Conference of Parties (COP10) to the Convention on Biological Diversity in Nagoya in October 2010, then-Minister for National Development Mr Mah Bow Tan presented the Singapore Index on Cities' Biodiversity for official endorsement. The Singapore Index is the first self-assessment tool to promote better management of resources and conservation of biodiversity in cities.





01

Nature reserves cover more than 3,000 hectares or about 4.5% of Singapore's land area.



02

01 BG (NS) Tan Chuan-Jin, Minister of State for National Development and Manpower (far left) reviews development plans for the Eco-Link at the groundbreaking ceremony on 30 July 2011. With him are (from left) NParks' CEO Poon Hong Yuen, Chairman Mrs Christina Ong, and Assistant Director Ms Sharon Chan.

02 The nature reserves are home to a myriad of biodiversity, including critically endangered species. The pangolin is one such species that will benefit from the upcoming Eco-Link – many have lost their lives on the roads due to their clumsy gait.

Bukit Timah and Central Catchment Nature Reserves

Given our land constraints, Singapore has to work hard to protect indigenous ecosystems. Our nature reserves, in particular, have been the focus of conservation efforts.

First announced in 2009, the Eco-Link project commenced in July 2011 with a groundbreaking ceremony, marking an important milestone in the conservation of Singapore's natural heritage. The 50-metre wide hourglass-shaped overhead bridge will span across the Bukit Timah Expressway (BKE). It will be located near Rifle Range Road, and will re-establish the link between the Bukit Timah and Central Catchment nature reserves for the first time since the two areas were separated by the BKE in 1986.

A joint project by NParks and the Land Transport Authority, the success of the Eco-Link project rests on close partnerships with nature groups, NGOs, tertiary institutions, volunteers and

government agencies. From the beginning of this project, these groups partnered with NParks to conduct feasibility studies and eco-monitoring surveys necessary for the project's planning and development.

Through long-term monitoring of the Eco-Link's effectiveness in enhancing biodiversity conservation, this project will enable better understanding of the local biodiversity, and even help in the discovery and rediscovery of new species. NParks will also work with community and school groups to conduct guided nature walks and educational activities on biodiversity conservation around the Eco-Link.

A Volunteer Leader Programme was introduced at the Bukit Timah and Central Catchment nature reserves in 2010, to engage and cultivate leaders committed to safeguarding the natural heritage of the forests. Each volunteer leader works closely with NParks staff to organise, coordinate

and execute activities with other volunteers. These include forest patrols, outreach efforts, and invasive species management.

With an increase in interest from the public towards the presence of Long-tailed Macaques in nature areas, staff from the Bukit Timah and Central Catchment nature reserves worked with the community to develop new ways of reaching out to the public on this issue. They collaborated with students from Raffles Girls' School to design educational signs, installed at Bukit Timah Nature Reserve, on how to coexist harmoniously with the Long-tailed Macaques.

Concurrently, NParks developed a monthly guided tour on Long-tailed Macaques with the Jane Goodall Institute (Singapore) and a primatologist. Tour participants learn how to read monkey behaviour and minimise conflict between people and macaques, and to appreciate the similarities between monkeys and human beings.

Biodiversity Snapshots



Common Palm Civet
Paradoxurus hermaphroditus
This cat-sized mammal is responsible for the world's most expensive coffee, kopi luwak. The Palm Civet eats coffee cherries, then defecates the beans which are collected and processed for consumption. It can be seen on Pulau Ubin and in some urban areas.



Oriental Magpie Robin
Copsychus saularis
This endangered bird is known for its ability to produce melodious songs. It can be found in parks, gardens and mangroves. Protection from poaching and provision of a suitable habitat has helped to sustain its population.



01



02

- 01 Migratory birds such as these whimbrels are commonly seen at Sungei Buloh Wetland Reserve, which is a site along the East Asian-Australasian Flyway.
- 02 Visitors to the Reserve can learn experientially about its biodiversity through the use of interactive media, such as the ColorZip wireless trail.
- 03 When the new 38-hectare Sungei Buloh Wetland Park is completed in 2013, it will feature new facilities for students and family groups. These include observation pods that will allow visitors to get up close with the mangrove environment.

Sungei Buloh Wetland Reserve

As Singapore's first ASEAN Heritage Site, Sungei Buloh Wetland Reserve (SBWR) is a landmark in the history of nature conservation. It was one of two first new Nature Reserves to be gazetted since Singapore's independence in 1965, together with Labrador Nature Reserve.

This well-loved nature area is set to be revamped by 2013. The SBWR Master Plan Exhibition, launched in June 2010, unveiled plans to strengthen conservation of the wetland's rich biodiversity, while enhancing its outdoor nature-based recreation and educational activities.

The Master Plan, developed by NParks in collaboration with various government and non-government agencies, academia, and volunteers, will transform SBWR into a regional centre for wetland education and recreation. The Reserve will be extended with the development of a 38-hectare park, the Sungei Buloh Wetland Park, which is funded by the Singapore Tote Board. This addition to the Reserve will diversify the visitor experience, and also take on the Reserve's additional visitorship.

Students and family groups can look forward to new facilities that include observation hides, coastal boardwalks and educational play facilities, along with new programmes and activities. Educational trails will also promote family bonding out in the field while bringing people closer to the natural mangrove environment.

Conservation efforts will continue to be strengthened in the main reserve area. To enhance Sungei Buloh's biodiversity, a new Mangrove Arboretum will be set up. The first in the region, this will be a national collection of all 67 species of mangrove plants and trees found in Singapore. Improvement works will also be implemented to further protect Sungei Buloh's biodiversity and habitats, such as the building of a breakwater to mitigate the impact of waves on mangrove trees and mudflats.

The Sungei Buloh Master Plan received an Honour Award from the 2010 American Society of Landscape Architects (ASLA) Professional Awards. It was lauded as "an exciting vision that has a believable solution".

SBWR continues to engage visitors through innovative activities, especially when celebrating global 'green dates'. The Reserve

celebrated World Environment Day in June 2010, with a guided walk, talk and exhibition on local spiders for 180 students and teachers. In February 2011, the ColorZip wireless trail was launched on World Wetlands Day. Using their mobile devices, visitors – especially the young – can enjoy learning about biodiversity along the Mangrove Boardwalk through interactive media.

The Reserve's avian visitors are also well-taken care of. On 11 and 18 December 2010, SBWR conducted a Bird Census with the support of 100 visitors. Through helping with the census, children and adults learnt about the importance of protecting SBWR as a site for migratory birds along the East Asian-Australasian Flyway.

In December 2010, the Reserve hosted a two-day event for 320 students from Singapore and Japan under the Sister Wetland Affiliation Programme. This

programme allows students from the region to collaborate in studying wetland conservation and the protection of migratory shorebirds. Students from three local schools – Kuo Chuan Presbyterian Secondary School, Pei Cai Secondary School and River Valley High School – partnered with students from Mishima High School in Japan to exchange information on their respective wetlands and to conduct projects together.



To view one of the common fauna of Sungei Buloh Wetland Reserve, scan this Colorcode with your smartphone. Download the ColorZip app at www.czip.sg





Spectacular Blooms, Indoors and Out

NParks' efforts in biodiversity conservation would not be complete without the full and active support of the people. Through engaging with the private, public and people sectors – corporations, academia, conservation groups and passionate individuals – we gain invaluable support in safeguarding and promoting awareness of Singapore's biodiversity.

The Singapore Garden Festival (SGF) is a biennial show where garden and floral designers from all over the world converge in Singapore to showcase their masterpieces. The 2010 event, held at Suntec Singapore from 15 to 22 July, awed over 300,000 visitors with creations by award-winning designers, comprising 250,000 tropical and temperate plants and 65,000 cut flowers.

Visitors were inspired by the Balcony Garden Display, which demonstrated how lush greenery can be cultivated in Singapore's high-rise balconies. Southeast Asia's rich and diverse heritage was also on display at the Singapore Orchid Show, which attracted entries from 12 countries.

Two Singaporean designers, John Tan and Damian Tang, took top honours for the Best of Show Landscape Garden and Best of Show Fantasy Garden categories respectively. International participants took honours as well: Jim Fogarty of Australia, a three-time SGF gold medallist, won the SGF Horticulture Excellence Award, while Brigitte Heinrichs from Germany won the Best of Show for the Floral Windows to the World Competition.

At SGF 2010, community gardeners had their share of the spotlight at the inaugural Gardeners' Cup, where 27 gardening groups under NParks' Community In Bloom Programme (CIB) collaborated to create eight



show gardens. NParks also presented the biennial CIB awards at SGF. Twenty-seven CIB groups were presented the Platinum Award, in recognition of their excellence in gardening efforts. A record number of 279 gardening groups took part in the competition, including new entrants from hotels and manufacturing companies.

Since 2005, over 400 CIB community gardening groups have been set up in Singapore. As a collective effort by residents to cultivate gardens in neighbourhoods' green areas, as well as in schools and organisations, it has encouraged social integration, learning and community bonding. At the first international seminar on Creating Liveable Cities through Community Gardening in June 2010, the keynote speaker Nigel Colborn, former vice-chairman and current member of Britain's Royal Horticultural Society's Council, commended NParks' CIB programme as a shining example to other countries.

Many avid gardeners have contributed to the growth of Singapore's community gardening scene. NParks presented six CIB Ambassador awards in 2010, to recognise those who have fostered the love of gardening in their communities.

In 2010, the Singapore Garden Festival featured displays by award-winning garden and floral designers from 17 countries. The Festival hosted over 300,000 visitors during its eight-day run.

01 Through the Community In Bloom programme, neighbours and co-workers can set up and cultivate community gardens, like this one at Tampines Starlight.

02 At the Singapore Garden Festival, the winners of the Floral Designer Society of Singapore Cup had the opportunity to share their works with Dr Mohamad Maliki Osman, Senior Parliamentary Secretary for National Development.

03 The Singapore Garden Festival featured a five-metre giant centrepiece based on the eco-fable of The Man Who Planted Trees. The centrepiece represents the mythical shepherd who set out to reforest the ruined eco-system of a desolate and abandoned valley in the Alps, cultivating an entire forest over a period of decades.



Biodiversity Snapshots



'Cheng Tng' Tree

Scaphium macropodum

When the ripe seeds of this tree are soaked in water overnight, they exude a brown spongy jelly. This jelly is used in the dessert *Cheng Tng*. The tree can be seen along the Treetop Walk at the Central Catchment Nature Reserve.



Colugo

Cynocephalus variegatus

This mammal lives mainly in rainforests of Southeast Asia, including the Bukit Timah and Central Catchment nature reserves. It has membranes that connect its legs and tail, allowing it to glide from one tree to another.



Brown Wood Owl

Strix leptogrammica

Discovered only in 2010 on Pulau Ubin, this owl is the largest owl in Singapore. It can be found in dense forests, and feeds on small animals like rats, lizards and even birds.



01



02

- 01 With the support of volunteers, partners and corporate sponsors, the Comprehensive Marine Biodiversity Survey will bring to light the myriad of species found in Singapore's mudflats and intertidal/subtidal areas, and even on the seabed.
- 02 The 'BiodiverCity' photo exhibition brought the city's flora and fauna into Orchard Road, where locals and visitors alike enjoyed the nature photography on display.

- 03 Tree planting is a tradition that dates back to 1963, when the inaugural Tree Planting Campaign was launched. This tradition is celebrated annually during the Clean and Green Singapore campaign, where state leaders including Prime Minister Lee Hsien Loong plant trees in parks and constituency areas.

Building and Growing the Green Community

The many members of NParks' Green Community are regularly involved in projects and initiatives that contribute to the greening of Singapore, and the conservation of its biodiversity. At the same time, regular outreach activities are held, which introduce more people to the amazing flora and fauna of this city.

For a month beginning 22 May 2010, shoppers in Orchard Road were enchanted by an unusual display of photographs highlighting Singapore as an urban haven for biodiversity. The 'BiodiverCity' nature photo competition and exhibition was organised by NParks and the Photographic Society of Singapore with the support of Banyan Tree Holdings, PICO Art, the Garden City Fund, HP, Mandarin Gallery and the Singapore Tourism Board. More than 40,000 visitors viewed the images of the city's rich flora and fauna, which were selected from 2,200 competition entries.

In September 2010, the Singapore Botanic Gardens launched the Wealth of the Rainforest exhibition, which excited visitors with amazing facts about the rainforest's ability to feed, clothe and even heal people. The interactive exhibition showcased the richness of the flora and fauna in tropical rainforests, the Earth's biggest trove of biodiversity.

Another exhibition by NParks and the Raffles Museum of Biodiversity Research celebrated a decade of Singapore's achievements in biodiversity conservation. It showcased local flora and fauna discoveries that were new to Singapore or even new to science. This exhibition, held in HortPark in April 2010, was also displayed in various shopping centres and libraries.

With the use of social media, NParks has actively engaged with the next generation of green-minded Singaporeans. The "Love Green: Just Bin It" online video competition attracted 78 entries over two months, in support of the message not to litter in parks and nature reserves. In a twist of irony, the prize money for the competition – including a top prize of \$10,000 in cash – was funded by littering fines collected by NParks.

Through the Garden City Fund, a registered charity and institute of public character established by NParks, corporations and individuals have contributed to conserving and growing the City in a Garden.

The Care-for-Nature Trust Fund sponsored \$250,000 to the Garden City Fund to finance equipment required for the three-year Comprehensive Marine Biodiversity Survey. This survey began in November 2010,

and aims to perform a comprehensive stocktake of Singapore's marine biodiversity to aid in the conservation and management of the coastal and marine environments.

NParks, experts from various tertiary institutions and non-government organisations, and over 200 volunteers are involved in this project. It is also supported by Shell Companies in Singapore, which donated \$500,000 to the National University of Singapore for conservation activities, of which \$300,000 goes towards bringing in scientific experts for this survey.

In addition, the Garden City Fund's Plant-A-Tree programme has seen more than 9,000 trees pledged and planted by 181 organisations and 432 individuals since it was launched in 2007.



03

In 2010, over 250,000 visitors visited the Jacob Ballas Children's Garden – Asia's first children's garden.

The Next Generation of Environmental Stewards

You can never be too young to begin caring for our natural environment. NParks has a range of activities for children and youths, which are designed to encourage them to contribute to the conservation of our natural environment and its biodiversity. 2010 saw a number of new and enhanced programmes to engage children of all ages, and excite them about the wonders of Singapore's biodiversity and habitats.

At the Singapore Botanic Gardens, the Jacob Ballas Children's Garden saw over a quarter of a million visitors in 2010. Three hundred and thirty programmes were conducted that year, introducing more than 20,000 children to nature's wonders through entertaining and engaging activities.



In July 2010, the 'Sara Goes to the Supermarket Garden' activity book was launched. It is the fifth in the 'Sara the Botanicosaurus' series, which is designed to cultivate children's interest in plants, nature and the environment.

The Nature Keeper programme, launched in May 2010, brings primary school students through workshops on topics including the impact of the release of animals in nature reserves and the native plants and animals unique to Singapore. It is supported by Mitsubishi Corporation through the Garden City Fund.

Children with special needs can also participate in these nature activities. The Special Project to Understand Nature (SUN) Club celebrated its fifth anniversary at Sungei Buloh Wetland Reserve in September 2010. Sponsored by SPH Foundation, the SUN Club is the first and only nature appreciation programme customised for special needs children. It has touched the lives of over 3,000 children, and will provide even more hands-on activities for its young participants in future.

In celebration of the International Year of Biodiversity, over 35,000 people took part in NParks' outreach and public awareness events, most of them children and youths. At Pasir Ris Park alone, thousands of students from primary, secondary and even tertiary institutions learnt about environmental responsibility through cleaning up the mangrove forest.

2010 also saw the development of the Kids for Nature programme, in conjunction with the Ministry of Education's Programme for Active Learning (PAL), an experiential learning programme for primary school students. Kids for Nature shapes children's character and attitudes through outdoor learning, and provides basic knowledge on environmental issues. To date, over 5,000 children from 14 schools have benefitted from the Kids For Nature programme.



01 At the Jacob Ballas Children's Garden, budding green thumbs can explore nature and gardening through activities designed just for the young.

02 The Nature Keeper programme gives primary school-aged children a deeper appreciation for nature, through workshops where they learn about issues concerning Singapore's flora and fauna.

03 Every year, tens of thousands of children are fascinated by nature's wonders, through programmes and activities held in parks and nature reserves.





flourishing innovations

As Singapore's urban spaces develop, the local landscape industry keeps pace by continuously improving itself in the pursuit of greening up Singapore. NParks partners the landscape industry holistically, to ensure a vibrant and conducive environment for the development of skills and initiatives that support our urban biodiversity goals. These range from skysrise greenery – a term first developed in Singapore – to innovations supporting the growth of trees in areas affected by development. These partnerships contribute to the quality of our living environment by integrating greenery into infrastructure, and creating urban habitats for biodiversity.

With its terraced levels of rooftop gardens, Khoo Teck Puat Hospital successfully integrates themed garden spaces for healing with its various patient care facilities. This holistic approach to skysrise greenery provides a therapeutic environment for the hospital's patients and their guests. The development was awarded First Prize in the SIA-NParks Skysrise Greenery Awards 2010.



01 The Ovalis Plantercell System, developed jointly by Ngee Ann Polytechnic and CUGE, allows for creative indoor and outdoor placement of its egg-shaped modules.

02 Minister for National Development Khaw Boon Wan tours one of the many rooftop gardens at Khoo Teck Puat Hospital. Some of the themed gardens are dedicated to spice and produce, while others cater to specific needs of the hospital's patients.

03 The first-ever International Skyrise Greenery Conference featured award-winning experts including Patrick Blanc, who invented the concept of vertical greenery.

Rising to Greener Heights

Skyrise greenery is greenery that is integrated into built-forms: green roofs, green walls and sky terraces. It helps to soften the harshness of the high density built structures in cities as well as to contribute towards a better urban environment. Today, skyrise greenery is recognised as an important component in the greening of cities.

In November 2010, more than 470 delegates from 28 countries converged for the inaugural International Skyrise Greenery Conference in Singapore. Organised by CUGE and the International Green Roof Association, the Conference provided a valuable platform for knowledge sharing and professional networking as well as showcasing prominent green roof and vertical greening projects in Singapore. The three-day conference saw over 30 internationally-renowned industry leaders from 10 countries sharing the latest insights and trends on integrating greenery with buildings.

2010 also saw the third iteration of the SIA-NParks Skyrise Greenery Awards. Jointly organised by Singapore Institute of Architects (SIA) and NParks, the Awards aim to promote and recognise the greening of high-rise developments. As further evidence of the growing recognition of this Award, 27 submissions were received – almost double that of the previous year.

The Green Roof Incentive Scheme (GRIS) is an NParks programme that encourages the installation of green roofs on existing buildings. This programme received an enhancement in March 2011, with the Skyrise Greenery Incentive Scheme (SGIS). This scheme subsidises up to half the costs for installing retrofitted green walls in existing buildings. The SGIS addresses a heightened interest in vertical greenery and the increased availability and variety of products for green walls.

Two new skyrise greenery systems have also been developed by NParks jointly with its partners: HDB's Building Research Institute and Ngee Ann Polytechnic. Both these systems allow the easy creation of interesting and attractive landscaped interior and exterior walls.

To help building owners implement green walls smoothly, NParks also provides technical advice on vertical greenery technology as well as resources to aid developers and individuals in building green roofs. A series of CUGE Standards was published by CUGE on various aspects of rooftop greenery, including design loads, growing substrate and drainage, and safety considerations.



02



03

01 Green Thumbs is a milestone event for Singapore's landscape industry. Besides showcasing the skill sets of the landscape workforce, it is a day for celebrating the industry's growth and transformation.

02 NParks aims to not just raise the skill levels of the industry, but also to instill pride and professionalism into every worker.

03 & 04 The development of container trees allows mature trees to be embedded in tree planting verges, then relocated relatively easily with minimal impact to the tree's health.



Singapore's ever-changing and evolving landscape industry is central to the development and maintenance of its green spaces, which in turn support the city's wealth of urban biodiversity.

A Vibrant Landscape Industry

Green Thumbs is an annual landscape industry event organised by NParks, in collaboration with the Singapore Landscape Industry Council (SLIC), the Landscape Industry Association of Singapore (LIAS), Employment and Employability Institute (e2i), and WDA. Since 2006, the event has celebrated the development journey of the Singapore landscape industry and the skills of its workers, and enhances the industry's profile and image.

Held on 11 September, Green Thumbs 2010 showcased a range of competencies in the landscape industry. Over 150 landscape practitioners from 25 companies demonstrated skills such as tree climbing, chainsaw operations, excavator operations, turf maintenance, and landscape design implementation. Also featured for the first time was the multi-skilled Landscape Productivity Pentathlon Championship, where teams went through a competition which showcased a set of five skills.

At the same event, it was announced by Deputy Prime Minister Teo Chee Hean that the landscape industry will receive support from the National Productivity Fund to undertake a new Landscape Industry Productivity Roadmap. It aims to benefit all 23,000 workers in the industry, and improve productivity in the landscape industry. At the same time, it will raise workers' skill levels and restructure work operations to boost efficiency.

In May 2010, NParks and the Building and Construction Authority (BCA) introduced a new category of Green Mark awards – the BCA-NParks Green Mark for New Parks. This award aims to inspire and promote sustainable park design, and identify best practices in park design, construction, management and maintenance planning. It was

specifically developed for civic landscape areas, examining social and economic sustainability with a strong emphasis on environmental sustainability. At the 2010 awards, NParks' Dairy Farm Nature Park was among the first parks to be presented with the Green Mark for New Parks Certification.

Innovative Solutions for Growing Trees

Singapore's increased urban density makes it difficult to provide large, unobstructed spaces for growing trees. To address this problem, CUGE has researched the use of structural soil and structural cells. These systems can be placed under paved areas to support tree growth while accommodating traffic loads, without compromising on the normal functions of the paved surfaces. To date, structural soil and structural cells have been piloted in a variety of areas including Springleaf Linear Park, MacRitchie Reservoir Park, and a carpark in Punggol Park.

Residents of Cashew Constituency can now enjoy the instant greenery provided by 27 container trees planted along Cashew Road. These Bintangor bunut (*Calophyllum soulattri*) trees are planted in specialised containers, jointly developed by NParks and the Nanyang Technological University through a joint research and development project.

Implemented in 2010 for the first time in Singapore, these containers allow trees to be planted along roads slated for future development. The containers can be embedded in the regular tree planting verges along new roads, and subsequently relocated with relative ease when these roads are widened or diverted. This minimises the negative impact that tends to occur when large trees are moved, and allows the trees to thrive in their new location. Container trees also do not need additional maintenance over and above the current requirements for roadside trees.





cultivating connections

NParks' greatest strength is its people – their skills and expertise, their willingness to innovate and their passion in the pursuit of excellence. We celebrate their dedication to serve, and their passion to reach out to the community, and strive to build a great workplace at NParks. Our people are also uniquely placed to host and entertain distinguished visitors and international celebrities, who have enjoyed their warm welcome in our parks and gardens.

NParks staff share a love for nature, and a common goal to make Singapore a City in a Garden.



01

The majority of NParks' staff committed at least 80 hours to training and development in 2010.



03



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- 01 The staff of NParks contribute to the Singapore Kindness Movement in various ways, such as leading guided walks in disabled-friendly parks for the Handicaps Welfare Association (HWA), NParks' adopted charity.
- 02 Staff throughout NParks have many opportunities to enrich their knowledge and capabilities through relevant courses and programmes.
- 03 In recognition of NParks' efforts to promote workplace health, the organisation was awarded the Singapore HEALTH Award (Platinum) as well as the Fitness Sub-Category Award. NParks' Director of Corporate Development Dr Nigel Goh received the award from Minister for National Development (then-Minister for Health) Khaw Boon Wan at a ceremony on 26 November 2010.

A Culture of Learning and Caring

2010 saw NParks achieving a number of awards for excellence. We received the Special Commendation Award at the 2010 Asia Human Capital Summit in recognition of our efforts in building a learning organisation. This award, conferred by the Ministry of Manpower, INSEAD and CNBC, distinguishes our human resource practices as among the best in Singapore. It recognises practices that encourage innovation, people development and sharing of expertise among Asia-based organisations.

As the only public organisation to receive the award, NParks is grateful to staff who have taken the initiative to develop themselves professionally, imparting their skills and experience to fellow colleagues and the industry. This culture of learning and sharing contributes to making NParks a great workplace.

As part of ongoing talent attraction efforts, NParks gives out scholarships to local and

overseas universities in the areas of botany, horticulture, landscape architecture and environment management. In 2010, four undergraduate scholarships, four overseas merit awards and three WDA-NParks Masters of Landscape Architecture scholarships were given out. In addition, two postgraduate scholarships were also awarded to in-service staff.

Besides developing its own staff, NParks also strongly believes in giving back to the community. In 2010, NParks staff continued to organise and host regular outings to parks for members of its adopted charity, the Handicaps Welfare Association (HWA). These included Earth Day 2010, where HWA members were treated to a guided nature walk through Pasir Ris Park. The park's disabled-friendly mangrove boardwalk allowed the wheelchair-bound members to move about with ease. Apart from sharing their love for nature with HWA members, NParks staff also volunteer their time to maintain the gardens in HWA's premises.

Biodiversity Snapshots



Tiger Orchid
Grammatophyllum speciosum

Singapore is home to the Tiger Orchid – the largest orchid plant in the world. It is extremely rare in the wild and has been planted in many parks and gardens under NParks' orchid conservation and reintroduction programme.



Saga Tree
Adenanthera pavonina

The characteristic scarlet seeds of the Saga Tree are known for their uniform weight: four seeds make up 1 gram. This tree is hardy, fast-growing, and low-maintenance. It has a large spreading crown, suitable for providing shade in large gardens.



Peacock Pansy
Junonia almana javana

This butterfly's wings have large ocelli (i.e. eye-like patterns), which help to deceive potential predators. It is commonly seen in open grassy areas.



Parks: Venues of Choice and Distinction

In our quest to bring biodiversity into urban spaces, NParks has created iconic event spaces within our parks and gardens. Large-scale sporting and entertainment events are regularly held in our green spaces, which also play host to international VIPs and celebrities throughout the year.

In August 2010, several of our parks hosted and witnessed historic moments at the inaugural Youth Olympic Games (YOG). The Youth Olympic Flame, lit in Greece, was carried through MacRitchie Reservoir Park, Bedok Reservoir Park, and Xtreme SkatePark @ East Coast on its 13-day relay. In addition, three NParks staff had the privilege of bearing the flame through the Singapore Botanic Gardens.

The first-ever YOG victory ceremony, for the girls' triathlon event, was held at East Coast Park. The same coastal park also hosted the Games' sailing events, while Bay East at the Gardens by the Bay was the venue for rowing, canoeing and kayaking. During the Olympians' downtime, HortPark provided recreational activities in the form of workshops and guided tours. These were extremely popular among the athletes and officials, who enjoyed learning about Singapore's greenery, gardening and conservation efforts.

Throughout the year, the Singapore Botanic Gardens hosted a number of visiting dignitaries. Orchids were named after nine VIP visitors in 2010, including His Excellencies Benigno S Aquino III, President of the Republic of the Philippines, Ali Bongo Ondimba, the President of the Gabonese Republic, Sir Anand

Satyanand, the Governor-General of New Zealand and Sukhbaatar Batbold, the Prime Minister of Mongolia.

The Gardens was also honoured to provide a retreat venue for Prime Minister Lee Hsien Loong and Indonesian President Susilo Bambang Yudhoyono. A lush and magical landscape, vibrantly accessorised with red and white orchids, was specially created for the occasion on 17 May 2010. The scenic surroundings provided both countries' leaders and ministers a pleasant environment in which to conduct their meetings.

Besides world leaders, the Gardens also played host to popular celebrities during the YTL Concert of Celebration in May 2010. World-renowned Italian tenor Andrea Bocelli headlined the concert, accompanied by Australian pop singer Delta Goodrem, Slovenian soprano Sabina Cvilak, acclaimed flutist Andrea Griminelli, as well as The Philharmonic Orchestra and The Philharmonic Chamber Choir. Their performances, set amidst spectacularly-lit trees, enthralled 12,000 members of the public. To mark the occasion, two of the Gardens' orchid hybrids were named Vanda Andrea Bocelli and Vanda YTL in honour of Mr Bocelli and the YTL group respectively.

A unique opportunity took place for the Gardens to be introduced to the American prime-time audience, when lifestyle guru Martha Stewart featured Singapore's parks and nature areas on her world-famous television show. During her visit, the American lifestyle celebrity was introduced to some of Singapore's most spectacular orchids and hybrids.

01 The Singapore Botanic Gardens featured prominently on Martha Stewart's eponymous lifestyle television programme, in an episode which showcased Singapore's wealth of greenery. The Gardens' principal botanist Dr Chin See Chung (now retired) guided Ms Stewart (left) and her co-host Memrie Lewis on a televised tour of the Gardens.

02 The torch-bearers for the inaugural Youth Olympic Games included Singapore Botanic Gardens' Deputy Director of Living Collections & Development, Alan Tan (in orange shirt). The flame's progress through the Gardens was cheered by hundreds of NParks staff.

03 In May 2010, the Singapore Botanic Gardens hosted the star-studded YTL Concert of Celebration, featuring international musical luminaries including Andrea Bocelli (right) and Delta Goodrem.

04 Along with the iconic Fort Canning Park, various other parks have distinguished themselves as popular venues for concerts and performances. Korean pop boyband U-KISS performed in the Kings of Freedom Concert at Bedok Reservoir Park in November 2010, delighting a crowd of young fans.

05 His Excellency Benigno S Aquino III (right), President of the Republic of the Philippines, toured the National Orchid Garden on 11 March 2011. An orchid, the *Ascocenda Benigno S Aquino III*, was named in conjunction with his visit. NParks' CEO Poon Hong Yuen (left) presented President Aquino with a symbolic "birth certificate" to commemorate the orchid naming.

