

green matters

Annual Report 2015/16

A scenic view of a park with a river, a path, and a bridge, with pink and yellow flowers in the foreground.

green matters

Access to greenery is integral to Singapore's efforts to improve the quality of life for her residents.

Singapore's green infrastructure has grown with more parks, green spaces and Nature Ways. Ecological resilience has been strengthened through sustained conservation efforts and the establishment of Nature Parks and reserves. Significant efforts have also been made to ensure that all residents can gain access to our parks and gardens.

The greening of Singapore is important in creating a quality living environment, but it is not a task that NParks can undertake alone. It is a constant work in progress that involves people from all walks of life, coming together with a shared vision – and conviction that green matters – to continue shaping Singapore into a City in a Garden.



Bukit Timah Nature Reserve

CONTENTS

CHAIRMAN’S MESSAGE	05
MEMBERS OF THE BOARD	06
MANAGEMENT TEAM	08
ORGANISATION STRUCTURE	10
GREENERY FLOURISHES	12
DIVERSITY COUNTS	22
PARTNERSHIP GROWS	30
GARDEN CITY FUND	40
EXPERTISE LEADS	44
FACTS & FIGURES	52
PUBLICATIONS	60
FINANCIAL REVIEW	64
FINANCIAL STATEMENTS	68

CHAIRMAN’S MESSAGE



“ We have taken to heart the role of greenery as a social equaliser, moving beyond convenience and proximity of our green spaces to ensure accessibility for all. ”

As a nation, our challenge for Beyond SG50 is to improve liveability for all Singaporeans. At the National Parks Board (NParks), our role in this mission is clear – to develop our City in a Garden in a sustainable and inclusive manner. Be it streetscapes or parks and gardens, our green spaces are a national asset that make Singapore distinct as an urban state.

Our green environment is part of our national infrastructure that improves liveability for all residents. In 2015, NParks extended the Streetscape Greenery Master Plan to another 14 roads and introduced 25 new tree species suitable to our climate and ecosystem. We redoubled our efforts and planted more than 61,000 trees during the past 12 months, more than 2.5 times that of previous years.

Our natural heritage contributes to our ecological resilience required for a sustainable future. In 2015, NParks strengthened the legacy of the Singapore Botanic Gardens, Singapore’s first UNESCO World Heritage Site, by designating a 14-hectare Nature Area within the Buffer Zone. To protect and enhance biodiversity, we also extended the buffer for the Central Catchment Nature Reserve with the opening of Zhenghua Nature Park and Chestnut Nature Park (South). These parks provide vital ecological linkages between nature reserves and forested areas, while managing visitorship pressure on the Reserve. We also opened Kranji Marshes in the third phase of the Sungei Buloh Wetland Reserve Masterplan, ensuring that Sungei Buloh continues to be a living wetland and a tranquil sanctuary for wildlife.

Most importantly, green spaces can act as social equalisers. Honouring Singapore’s chief gardener Mr Lee Kuan Yew’s vision that everyone should have access to a green environment for relaxation and recreation, NParks continued to shape our City in a Garden to ensure that every resident lives within reach of our nation’s green spaces. We have taken to heart the role of greenery

as a social equaliser, moving beyond convenience and proximity of our green spaces to ensure accessibility for all. We opened an inclusive playground at Bishan-Ang Mo Kio Park last year, enabling children with special needs to develop age-appropriate social, communication, motor and cognitive skills while playing with their peers. At HortPark, we designed a therapeutic garden to enhance the well-being of all visitors, including those with conditions such as dementia. In the years ahead, we will also expand on Singapore Botanic Gardens’ Learning Forest and Jacob Ballas Children’s Garden, providing diverse educational opportunities for visitors.

Alongside inclusive access, NParks fosters more than trees and shrubs. We champion inclusive participation and community involvement in shaping our City in a Garden. During our Jubilee year, we crossed the milestone of 1,000 Community in Bloom gardens. This nationwide gardening movement is proof that residents can enjoy and take ownership of their own green spaces. We launched another community engagement initiative, Friends of the Parks, to encourage the community to play an active role in promoting responsible use of the parks, which we share as a national asset central to the quality of our living environment.

Envisioning, building and maintaining a City in a Garden is a constant work in progress, and we hope that you will join us in this effort. Your support is vital for us in realising a green Singapore in which we, and the generations that follow, have a stake in developing a shared future for all.

MRS CHRISTINA ONG
Chairman, National Parks Board

MEMBERS OF THE BOARD

AS OF 1 OCTOBER 2016

MRS CHRISTINA ONG
Chairman



Mrs Christina Ong is founder, owner and managing director of the COMO Group, which comprises luxury fashion retail company Club 21, hospitality company COMO Hotels and Resorts, wellness brand COMO Shambhala, and philanthropic grantmaker COMO Foundation.

In 1995, Mrs Ong was awarded the Cavaliere del Lavoro and received the Italian Fashion Hall of Fame Award for her accomplishments, leadership and contributions to the fashion world.



MRS KOH-LIM WEN GIN
Board Member

Mrs Koh-Lim was Chief Planner and Deputy Chief Executive of the Urban Redevelopment Authority (URA) from 2001 to 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, and the conservation of Singapore's built heritage. She is currently Director of Keppel Land Limited, Board Member of Sentosa Development Corporation, Chairman of Sentosa Cove Resort Management Ltd and Senior Advisor to several private firms. In 2009, Mrs Koh-Lim was conferred the Meritorious Service Award by the Government of Singapore.



DR SURIANI SURATMAN
Board Member

Dr Suriani is Senior Lecturer at the Department of Malay Studies, National University of Singapore. She is trained as a social anthropologist. Her teaching and research cover areas on Malay culture and society. She has conducted research in Singapore, Malaysia and the Philippines. She is currently Deputy Chairman of the Malay Heritage Foundation Board of Directors. She is also a board member of the National Gallery Singapore and National Heritage Board. In addition, Dr Suriani is a potter and has done commissioned creative pieces for Temasek Holdings, The Sentosa Resort and Spa, National Heritage Board, Patron of the Year Award and Singapore International Foundation.



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 worked in the areas of strategic planning, urban planning policies and heritage conservation. Her current research interests lie in urban sustainability, particularly on its nexus with development, economic growth and city culture. Her more recent research projects have focused on issues of city densification, liveability and well-being, and their links to sustainability benchmarking and assessment. Together with her research team, she has been investigating planning strategies for sustainable growth, particularly for the dense cities in the developing countries of Asia. She is a part-time consultant with the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).



GUY HARVEY-SAMUEL
Board Member

Mr Harvey-Samuel is Group General Manager, Chief Executive Officer of The Hongkong and Shanghai Banking Corporation Limited (HSBC), Singapore. A member of HSBC's Asian Executive Committee, Mr Harvey-Samuel has direct responsibility for all HSBC operations based in Singapore. He is also a member of the Advisory Board of the National Youth Achievement Award Council and National Arts Council, as well as the boards of Surbana Jurong Private Limited and Jurong Town Corporation.



SEAH KIAN PENG
Board Member

Member of Parliament for the Marine Parade GRC, Mr Seah is also Chief Executive Officer of NTUC Fairprice Co-operative Limited. Mr Seah has worked in both the public and private sectors, and serves in various public and community organisations. He is on the board of International Co-operative Alliance, Singapore Centre for Social Enterprises, Centre for Fathering and Singapore Olympic Foundation. He is a Fellow of the Singapore Institute of Directors and Chartered Institute of Marketing. He also chairs the Harvard Business School Club of Singapore and the Marine Parade Leadership Foundation.



GEORGE HUANG
Board Member

Mr Huang is Managing Director of Amoy Canning Corporation (S) Ltd, a pioneer in the food processing industry. He serves on the boards and committees of various organisations including Singapore Manufacturing Federation and Consumers Association of Singapore. He is also Singapore's Honorary Consul General of the Federal Democratic Republic of Ethiopia.



ANDREAS SOHMEN-PAO
Board Member

Mr Sohmen-Pao is Chairman of BW Group Limited, BW LPG Limited, BW Offshore Limited and Singapore Maritime Foundation. He is also a non-executive director of Sport Singapore and Singapore Symphonia Company Ltd.

Mr Sohmen-Pao was previously Chief Executive Officer of BW Group. He has also served as a non-executive director of Hongkong Shanghai Banking Corporation, the Maritime and Port Authority of Singapore and The Esplanade Co Ltd amongst others. Mr Sohmen-Pao holds an honours degree (BA Hons) from Oxford University and an MBA from Harvard Business School.



MS JAMIE ANG
Board Member

Ms Ang currently heads the Fiscal Policy Directorate in the Ministry for Finance, where she oversees overall fiscal planning and the development of budget policies for ministries as well as strategic planning and economic analysis for the finance ministry. Prior to this, she served as Director for Land and Infrastructure Programmes as well as Director for Social Programmes in the ministry. She has also served in the Ministry of National Development and the Ministry of Health.



WARREN FERNANDEZ
Board Member

Mr Fernandez is Editor-in-Chief of the English/Malay/Tamil Media Group of Singapore Press Holdings (SPH), and concurrently Editor of The Straits Times, the group's flagship daily. He has been with SPH since 1990, and has served in many roles including political correspondent, news editor, deputy political editor, foreign editor and deputy editor. Mr Fernandez graduated with First Class Honours from Oxford University, where he read Philosophy, Politics and Economics, and also has a Master's Degree in Public Administration from Harvard University. He has served on a number of national committees such as the Remaking Singapore Committee, Singapore 21 Committee, Compass, and Cost Review Committee, and sat on the boards of Civil Service College and National Environment Agency. Currently, he is a board member of National Heritage Board, SPH (Overseas) Ltd, and The Straits Times Press Ltd, and is Chairman of the board for The Straits Times School Pocket Money Fund.



KENNETH ER
Board Member and
Chief Executive
Officer, National
Parks Board

Mr Er began his career in National Parks Board (NParks) and has been involved in the planning, implementation and management of parks and streetscapes in the city. In 2003, he was seconded to the Ministry of National Development, where he oversaw policies and was actively involved in the review of legislation pertaining to parks and greenery infrastructure, agri-veterinary issues, and building and construction. Mr Er was subsequently appointed General Manager at Gardens by the Bay, where he played a pivotal role in developing the Gardens from concept to form. He was also concurrently Assistant Chief Executive Officer (Corporate Development & Services) at NParks. He was appointed Chief Operating Officer of Gardens by the Bay in 2012. Mr Er is presently the Chief Executive Officer of NParks.

MANAGEMENT TEAM

AS OF 1 OCTOBER 2016

01 BANDSTAND

(LEFT TO RIGHT)

- MS LEE PIN PIN

Group Director, Communications & Community Engagement
- KENNETH ER

Chief Executive Officer
- DR KIAT W TAN

Advisor to NParks
- DR LEONG CHEE CHIEW

Deputy Chief Executive Officer, Professional Development & Services Cluster and Commissioner of Parks & Recreation
- WONG TUAN WAH

Group Director, Conservation and Senior Curator, Istana

- ## 02 PLANT HOUSE
- (LEFT TO RIGHT)
- YEO MENG TONG

Senior Director, Design Research & Development and Associate Director, Centre for Urban Greenery and Ecology (CUGE)
- TEVA RAJ

Senior Director, Municipal Landscapes
- TAN CHONG LEE

Assistant Chief Executive Officer, Corporate Development & Services Cluster
- OH CHEOW SHENG

Group Director, Streetscape
- MS TAN LAI KHENG

Senior Director, Lifestyle Business
- CHUAH HOCK SEONG

Group Director, Parks 2 and Associate Director, CUGE



The Management Team photos were taken at the Singapore Botanic Gardens.

- ## 03 HOLTUM HALL
- (LEFT TO RIGHT)
- DAMIAN TANG

Senior Director, Design
- DR LENA CHAN

Group Director, National Biodiversity Centre
- KONG YIT SAN

Assistant Chief Executive Officer, Park Management & Lifestyle Cluster
- LIM LIANG JIM

Group Director, Industry/CUGE
- BIN HEE JUM

Group Director, Finance & Procurement

- ## 04 CORNER HOUSE
- (LEFT TO RIGHT)
- CHIA SENG JIANG

Group Director, Parks 1
- FRANCIS LIM

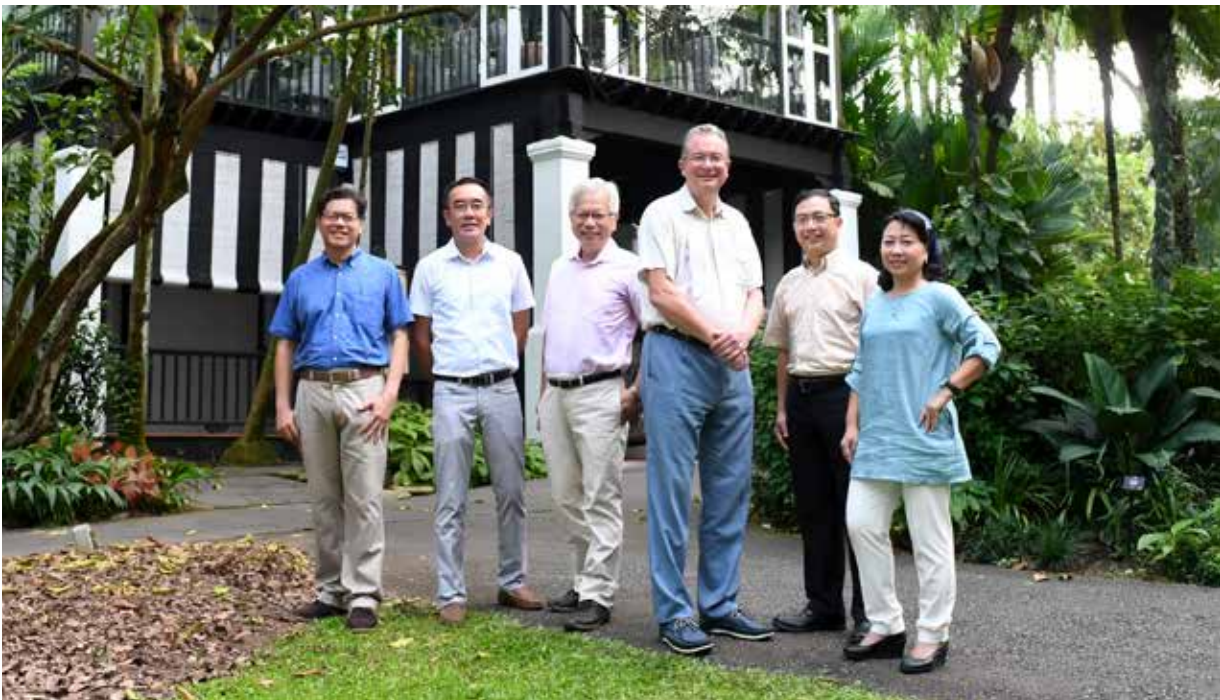
Group Director, Corporate Services
- NG CHEOW KHENG

Group Director, Horticulture & Community Gardening
- DR NIGEL TAYLOR

Group Director, Singapore Botanic Gardens
- SIM CHENG HAI

Group Director, Policy & Planning
- MS KARTINI OMAR

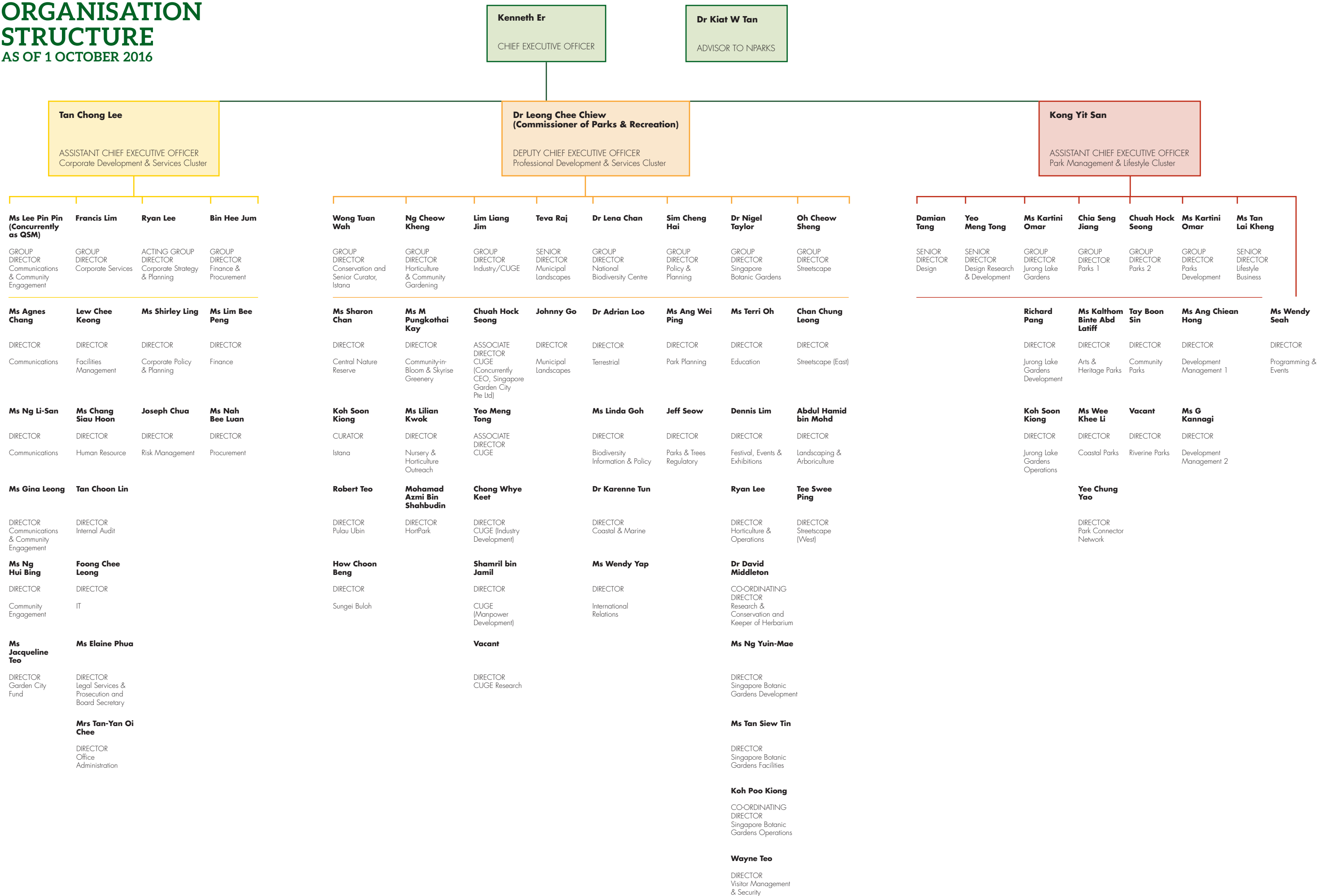
Group Director, Parks Development and Jurong Lake Gardens



Not in picture: Ryan Lee, Acting Group Director, Corporate Strategy & Planning

ORGANISATION STRUCTURE

AS OF 1 OCTOBER 2016





GREENERY FLOURISHES

ENHANCING OUR GREEN INFRASTRUCTURE

Greenery is a cornerstone of Singapore's efforts to create a quality living environment for all. During the year in review, NParks continued to strengthen the country's green infrastructure and create shared green spaces that offer avenues for relaxation, recreation and respite.

01



Achieving a UNESCO milestone

Singapore commemorated her 50th birthday with a meaningful milestone when the Singapore Botanic Gardens was conferred the status of a UNESCO World Heritage Site by the World Heritage Committee on 4 July 2015. It is the first botanic gardens in Asia and the third in the world to be inscribed.

The Gardens was established in 1859, and its legacy is being sustained through a Site Management Plan which outlines Singapore's long-term commitment towards its protection. In May 2015, NParks announced the designation of a 14 ha Nature Area situated within the Buffer Zone of the World Heritage Site, which includes 10 ha of the Learning Forest adjacent to the Gardens.

In November 2015, NParks announced a further expansion of the Learning Forest which will bring the total area of the Singapore Botanic Gardens to 82 ha (including the colonial houses at No. 5 and No. 7 Gallop Road). The Jacob Ballas Children's Garden will also be doubling its current size to 4 ha.

Creating gardens in the heartlands with the people

On 5 April 2015, NParks launched a public engagement exhibition on the new 90 ha Jurong Lake Gardens. The exhibition featured proposals for Jurong Lake Gardens West based on public feedback, such as the inclusion of family-friendly elements and features that will enable visitors to get up close to native wetland plants.

By the time the exhibition drew to a close in May 2015, some 17,700 suggestions had been gathered. These reflected an interest in preserving the tranquility of the area and retaining existing biodiversity hotspots, among others.

NParks has also developed landscape masterplans for the towns of Toa Payoh, Woodlands and Pasir Ris, under the Housing & Development Board's (HDB) Remaking Our Heartlands programme. About 400 residents and stakeholders shared their suggestions on how the towns should be enhanced, and plans include integrating more greenery into these estates.

02



Promoting well-being and social inclusion through our green spaces

Singapore's parks and gardens continue to play an important role in encouraging social inclusion by creating a quality living environment where people from all walks of life can gather for recreation and relaxation.

In August 2015, NParks launched Singapore's first inclusive playground at Bishan-Ang Mo Kio Park in collaboration with the National Council of Social Service. The playground features wheelchair-accessible equipment for children with special needs and is one of five inclusive playgrounds that NParks will build by end 2017. Three of these, including the one at Bishan-Ang Mo Kio Park, are made possible by the Care & Share Movement with donations from the Community Chest's corporate partners such as Shaw Foundation, SMRT Corporation Ltd (SMRT) and Variety, the Children's Charity.

03



01 Ministry of Foreign Affairs Second Permanent Secretary Albert Chua, NParks CEO Kenneth Er, then Minister for National Development Khaw Boon Wan, Prime Minister Lee Hsien Loong, then Minister for Culture, Community and Youth Lawrence Wong, National Heritage Board CEO Mrs Rosa Daniel, and Singapore's Ambassador and Permanent Delegate to UNESCO Andrew Toh unveiling the Singapore Botanic Gardens' UNESCO World Heritage Site plaque

02 The Singapore Botanic Gardens had a busy year of activities. It hosted some 600 educational programmes which reached out to 29,000 participants, and also staged 45 events, exhibitions and musical performances. Many of the concerts took place at the Shaw Foundation Symphony Stage (pictured).

03 An artist's impression of Jurong Lake Gardens, which will be developed around four key design principles – preserving nature and memories, co-creating show gardens, integrating science and nature, and vibrant programming – and feature design elements based on public feedback

ALL SET TO TAKE FLIGHT

When he gets onto the wheelchair swing at the inclusive playground in Bishan-Ang Mo Kio Park, Muhammad Hirwantor feels like he is flying. A wheelchair ramp and safety chain and belt ensure he can use the swing comfortably and securely.

With the introduction of inclusive facilities, a visit to the playground has become a totally different experience for Hirwantor. He used to feel bored when playing with his sisters at the playground because most of the equipment did not cater to his needs. His mother, housewife Saidah Binte Abdul Latif, would put some sand on a table for him to play with, or carry him onto the swing. "I used to envy other children who could use all the equipment at the playground," Hirwantor says. "Now I no longer feel that way."

Saidah recalls how much her son enjoyed the wheelchair swing when he tried it for the first time. "In the past, while he could go on the swing and merry-go-round, there were no safety features and I had to hold onto him when he was on the equipment. Now, I can rest assured that he can fully – and safely – enjoy himself."

"The swing and merry-go-round have wheelchair access and features such as belts and gates which keep me safe, while allowing me to feel free."

MUHAMMAD HIRWANTOR, 12 STUDENT

Muhammad Hirwantor, pictured here on the wheelchair-accessible swing with Charles Tan (left) and Benjamin Tay of the National Council of Social Service, which partnered NParks for the launch of the Bishan-Ang Mo Kio Park inclusive playground

NParks is also spearheading the development of therapeutic gardens, as part of a community-based solution to meet the wellness needs of residents. Developed in consultation with the National University Health System (NUHS), NParks launched Singapore's first therapeutic garden in a public park – the 850 sqm Therapeutic Garden @ HortPark. Designed to contribute to the well-being of all visitors, including those with conditions such as dementia, it will serve as a reference for future

therapeutic gardens that NParks is designing and developing across Singapore.

In another major green milestone, Coney Island Park was opened by Coordinating Minister for Infrastructure and Minister for Transport Khaw Boon Wan in October 2015. The 50 ha park gives Singaporeans the opportunity to experience and enjoy a rich, biodiverse environment while enhancing and protecting the wide variety of habitats found in the area.

A NATURAL PRESCRIPTION FOR MENTAL WELL-BEING

Tired, stressed and error-prone? The prescription could be a walk in the park.

The Therapeutic Garden @ HortPark was developed based on evidence-based design principles which draw on environmental psychology theories such as the Biophilia Hypothesis, Attention Restoration Theory and Stress Reduction Theory. These theories highlight the restorative effects that greenery has on people who are experiencing stress or mental fatigue.

NParks has also embarked on four studies to better understand how green spaces enhance the quality of life for Singaporeans. The first, Park Prescription, aims to substantiate the positive effects of physical activity in parks with clinical research, while the second study on Horticultural Therapy investigates the effects of parks and gardening on the mental health of the elderly. These projects are undertaken in collaboration with NUHS and National University of Singapore (NUS), with the Park Prescription study also involving Khoo Teck Puat Hospital. The third is a Dementia Prevention Programme jointly conducted with NUHS and People's Association, and the fourth is a study by the Centre for Urban Greenery and Ecology (CUGE) which looks into the impact of community gardening programmes on well-being and social cohesion.



Besides improving health and general well-being, the presence of parks in cities has also been shown to improve productivity.

SUSTAINABLE RESOURCES ON CONEY ISLAND PARK

No water? No electricity? No problem. At Coney Island Park, which was opened to the public on 10 October 2015, recycled materials and sustainable water and energy sources help to reduce the carbon footprint and make the island self-sustainable.

One of the environmental initiatives at the 50 ha park is a zero-energy self-sufficient toilet. The electricity needed to power the toilet pumps is generated from solar energy, the water used for flushing and hand washing is harvested from rainwater, and diffused sunlight is used to provide light indoors.

Lamp posts in the park are also attached with solar panels to harvest energy from the sun during the day and provide lighting at night. Timber salvaged from uprooted Casuarina trees was collected and recycled for park signage, seats, benches, exhibits and the boardwalk.



Exploration area constructed using Casuarina wood



Solar panels and plantings on the roof of the zero-energy self-sufficient toilet



04 Our extensive streetscape, or roadside greenery, forms the backbone of our City in a Garden.

05 Emeritus Senior Minister Goh Chok Tong, Minister Khaw Boon Wan and Advisor to MacPherson SMC Ms Tin Pei Ling flagging off cyclists at the launch of the Central Urban Loop, which is part of the Park Connector Network

Enhancing the roads with beautiful streetscapes

In the past year, more than 61,000 trees were planted and 25 new species introduced, and more Nature Ways were created. Totalling 68 km island-wide, these Nature Ways provide ecological linkages that facilitate the movements of birds and butterflies, help bring biodiversity into the urban infrastructure and improve the quality of the living environment.

Singapore's green legacy has been strengthened further with the number of Heritage Trees endorsed by NParks growing to 256, with 38 new entries in the year in review. Making up a large proportion of this are 22 Rain Trees in the Avenue of Heritage Trees at Connaught Drive, which forms part of the Civic District Tree Trail (www.nparks.gov.sg/CivicDistrictTreeTrail).

Linking communities through the Park Connector Network

In September 2015, NParks celebrated 25 years of the Park Connector Network (PCN) and the launch of its fifth PCN loop, the 36 km Central Urban Loop. This brought the total distance of park connectors to over 300 km.

The park connector between East Coast Park Area A and Gardens by the Bay was also opened to the public in May 2015. This enables runners, cyclists and other park users to travel along a continuous 20 km track, all the way from Changi Beach Park to the Marina Bay area.

NParks also commenced detailed design works on the first phase of the Round Island Route which will connect more than 3.5 million residents to natural, cultural, historical and recreational sites around Singapore.

TAKING THE SCENIC ROUTE

"Had a bad day at work? You can head to a park near your office or home to chill out."

**MOHAMED FADZLI HAYOF, 36
SELF-EMPLOYED**

The scenery along the Park Connector Network (PCN) makes a 5 km route seem more like 2 km, says Mohamed Fadzli Hayof, who cycles along the PCN almost every day to work and back.

His family joins him on weekends when they go running or cycling together. "We either use the Kallang Park Connector to make our way from Kallang to Stadium, or the East Coast Park extension if we are heading from the east to Marina Barrage," says Fadzli (or Faz, as he prefers to be called).

Faz finds the PCN very useful, especially for people who are not confident about cycling on the road. "I don't have to worry so much about my son's safety when he rides."

There are also more people using the PCN now compared to a few years ago, he observes. Besides cyclists, people who jog, rollerblade or use scooters will also find the PCN useful.

One of the things he is looking forward to is the Round Island Route (RIR), a 150 km park connector that will go around the island. "People will be able to cycle or jog from their home to the city area without worrying about cars and other vehicles."

Besides the safety aspect, Faz finds it cooler to ride on the PCN than on the roads, and having close contact with greenery can help people to de-stress, he says.

Mohamed Fadzli Hayof cycling along the East Coast Park Area A extension, which links East Coast Park to Gardens by the Bay

Scaling new heights with greenery enhancements

During the year in review, through the Skyrise Greenery Incentive Scheme, NParks supported many organisations in introducing more greenery to their premises, enhancing the overall quality of the living environment in Singapore. In 2015, the area of green roofs in Singapore increased from 65 ha to 72 ha. New additions to the scheme included Holy Innocents' Primary School and Banyan Home @ Pelangi Village, amongst others.

At the 2015 Skyrise Greenery Awards organised by NParks in November, 12 developments were recognised for their greening efforts. Eleven developments were also certified under the Landscape Excellence Assessment Framework (LEAF) in 2015, bringing the total number certified to 32. LEAF gives recognition to projects that showcase innovations in design and greenery implementation, and which demonstrate high quality landscapes and biodiversity enhancement.

As part of the initiative by the Municipal Services Office (MSO) to centralise services, NParks set up the Municipal Landscapes Division in June 2015 to undertake greenery maintenance for other public agencies. This covers trees, turf and other vegetation in about 4,000 locations, totalling about 2,500 ha. The centralisation of greenery maintenance and management has helped to streamline the process of feedback management, with NParks acting as the point of contact. Greenery is better managed

under a single agency, and greenery maintenance and productivity standards are improved with the implementation of mechanisation and other system improvements.

Greenery enhancements are also taking place at MRT stations, improving the overall quality of the living environment. During the year in review, NParks worked with SMRT and the Land Transport Authority (LTA) to complete greening works at four MRT stations – Admiralty, Mountbatten, Lakeside and Paya Lebar – with a further 12 slated for completion by March 2017. In all, 40 stations have been approved for greenery upgrading over a five-year period.

In other initiatives aimed at incorporating greenery into urban spaces, trials are being conducted on green roof mats for bus stops at Old Choa Chu Kang Road and Jalan Ubi, and Ang Mo Kio MRT station. NParks is also working with SMRT and LTA to explore ways to implement green cladding on road and MRT viaduct columns to improve the living environment.

06 SkyTerrace@Dawson, an estate by HDB, was the only development to receive both the Skyrise Greenery Award and LEAF certification in 2015.

07 Pilot implementation of greening works at Mountbatten MRT station involved introducing green creepers to covered linkways around the station for a greener and more pleasant environment.



DIVERSITY COUNTS

ENRICHING BIODIVERSITY IN OUR URBAN ENVIRONMENT

Against the urban backdrop of a city state, Singapore has continued to make strong strides in biodiversity conservation. Efforts have led to more regular sightings and encounters with wildlife, thereby increasing the quality of our living environment.





01 Mountain bikers enjoying the 1.6 km mountain biking trail at Chestnut Nature Park (South), Singapore's first Nature Park with separate mountain biking and hiking trails

02 The Ubin Living Lab is an integrated facility for field studies, education and research, and community outreach.

03 Students from ITE College East presented nest boxes which they had helped build for the Blue-throated Bee-eater (*Merops viridis*) to Senior Minister of State, Ministry of National Development Desmond Lee.

04 Garden City Fund Chairman Professor Leo Tan, SMS Desmond Lee and President Tony Tan at the launch of the Sisters' Islands Marine Park Public Gallery, which provides an overview of the Marine Park and includes a 3D diorama of its dive trails

Consolidating conservation efforts with new masterplan

NParks announced the Nature Conservation Masterplan (NCMP) in June 2015, marking another major step in the consolidation of Singapore's biodiversity conservation efforts. The plan integrates the various programmes and projects under the thrusts of conservation of key habitats, habitat enhancement, restoration and species recovery, applied research in conservation biology and planning, and community stewardship.

For the year in review, together with the Centre for Liveable Cities, NParks organised "Biophilia and the Future of Sustainable Cities" – the first symposium in Singapore on integrating nature into urban design. An ideal case study of a biophilic city, Singapore is an example of how cities can replicate and incorporate elements of natural systems into the built environment, thereby bringing about restorative effects to the mental well-being of city dwellers.

Creating Nature Parks

To protect nature reserves, NParks has created Nature Parks as buffer zones. Two projects that were completed in the past year were the Zhenghua Nature Park Extension and Chestnut Nature Park (South), both of which extended the green buffer for the Central Catchment Nature Reserve.

Work on Windsor Nature Park began in mid 2015 and the park will be opened by 2017. When completed, it will feature a small freshwater wetland, a trail network with boardwalks, lookout platforms and shelters. These parks will help reduce visitorship pressure on the Reserve by providing alternative venues for the public to enjoy nature-related activities.

Restoration works at the Bukit Timah Nature Reserve are currently in progress, and weekend access to the summit has been re-opened since April 2015.

Conserving Ubin for future generations

NParks seeks to conserve Singapore's rich and diverse habitats so that everyone can have the opportunity to experience nature and enjoy its rustic environment. In 2015, NParks launched a Shoreline Feasibility Study on Pulau Ubin and completed a habitat enhancement programme with the installation of pilot floating wetlands at Pekan Quarry and the Sensory Trail ponds.

Community partners and members of the public also planted 670 trees in an effort to restore forest and mangrove habitats while the Friends of the Ubin Network (FUN) members developed "The Ubin Way", a code of conduct guiding ecologically and socially responsible behaviour on the island. In February 2016, NParks opened the first phase of the Ubin Living Lab, a repurposed facility which enables greater outreach to students.

Raising awareness of marine biodiversity

The Marine Conservation Action Plan (MCAP), which takes reference from the NCMP, encapsulates NParks' efforts in conserving Singapore's marine biodiversity. One key focus of the MCAP is the creation of the Sisters' Islands Marine Park which spans about 40 ha, encompassing Sisters' Islands and the western reefs of St John's Island and Pulau Tekukor.

In July 2015, President Tony Tan Keng Yam opened the Sisters' Islands Marine Park Public Gallery on St John's Island. The Gallery showcases the rich marine biodiversity in Singapore's waters. In November 2015, the new Sisters' Islands Marine Park Dive Trail was opened to the public, raising awareness of Singapore's biodiversity.

“If we make it second nature for our kids to play outdoors and experience our biodiversity, it’s more likely they will grow up appreciating the beauty of our natural environment.”

**MIKE CHEE, 41
OPERATIONS MANAGER**

To Mike Chee, the child-friendly facilities at Sungei Buloh Wetland Reserve (SBWR) are not the typical amenities one would find in a park. And he loves them this way.

At SBWR’s Junior Adventure Trail, for example, young visitors experience what it is like to be a crab or mudskipper in the mangroves. They get to duck under prop roots and cross the mangrove river on a pulley boat.

“As city-dwellers who prefer convenience, we often stop our kids from playing in the grass, from jumping in the mud, from dancing in the rain. We need to change that mindset and stop depriving our kids from doing what should come naturally to them,” says Mike.

He also mentions West Coast Park as another green space with good facilities for children. Equipping green spaces with playgrounds makes them more attractive to children and provides them with greater incentive to spend time outdoors instead of staying in front of a computer screen. “We need to take them outdoors often; the graphics are better outside!”

For Mike, greenery is important because it offers tranquillity and a temporary escape from city life. And he appreciates how convenient it is to get to a green space in Singapore. “I’d say we have the best of both worlds – a city and a garden.”

SHARING A LOVE FOR THE OUTDOORS

Mike Chee, pictured here with wife Audrey and daughters Victoria, Kaitlyn and Ashley at Sungei Buloh Wetland Reserve

Conserving Singapore’s wetlands

In another conservation initiative, NParks and the Urban Redevelopment Authority officially opened Kranji Marshes, a 56.8 ha freshwater marshland, in conjunction with World Wetlands Day on 2 February 2016. Kranji Marshes provides important habitats for the conservation of biodiversity, especially marsh birds, in the Kranji area.

In October 2015, NParks also established a new mangrove arboretum at the Sungei Buloh Wetland Reserve Coastal Trail for mangrove conservation, education and public outreach. The arboretum was made possible with a donation of \$0.5 million by Kikkoman Singapore.

NParks is also working with the Tropical Marine Science Institute to reintroduce cultured giant clams into Singapore waters. Both organisations embarked on a transplantation trial of the True Giant Clam (*Tridacna gigas*) in April 2015 and juvenile Fluted Giant Clam (*Tridacna squamosa*) in August 2015. The trials will help determine the appropriate living environment and acclimation procedures for the giant clams.

On Pulau Ubin, the species recovery programme saw the planting of over 700 orchids from 15 critically endangered species. Two bat houses were also installed for bats to roost.

NParks has also put in place a long-term species recovery plan for the Raffles’ Banded Langur (*Presbytis femoralis*), which has a population of about 50 today. It is taking a multi-pronged approach that includes habitat enhancement, regular monitoring and research into the behaviour, ecology and demographics of the species.

Discovery and recovery of species

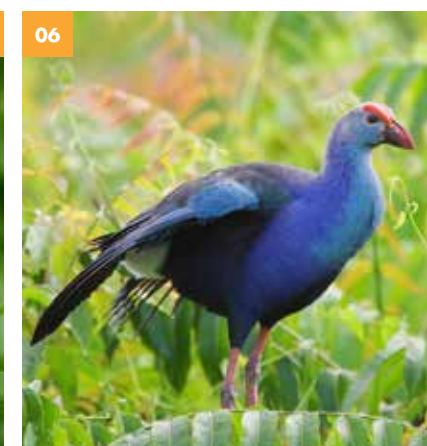
Species discovery and recovery is another important aspect of biodiversity conservation. It provides Singaporeans with access to the rich flora and fauna in the country, contributing to a richer quality of life for her residents. In June 2015, NParks announced that researchers from the Singapore Botanic Gardens had discovered *Hanguana rubinea* and *Hanguana triangulata*, two species of forest plants that are new to science and endemic to Singapore.

During the year in review, NParks also implemented the species recovery action plan for the Singapore Freshwater Crab (*Johora singaporensis*). This marked a first for a single species of invertebrate under the International Union for Conservation of Nature.

05 Butterflies such as the Blue Glassy Tiger (*Ideopsis vulgaris macrina*) can be observed at Kranji Marshes’ grass habitats.

06 Spotted at Kranji Marshes, the Purple Swampen (*Porphyrio porphyrio*) has long legs and large feet for wading in shallow water and walking over floating vegetation in the marsh.

07 The native Sheath-Covered Spathe Robiquetia (*Robiquetia spathulata*) orchid is one of the species currently being propagated and reintroduced across Pulau Ubin as part of the species recovery programme.



TRACKING THE COMMON REDSHANK WITH GEOLOCATORS

From Sungei Buloh Wetland Reserve to the Qinghai-Tibet Plateau in Northwestern China and back – that is how far some adult Common Redshanks (*Tringa totanus*) travelled during the last migratory season, according to geolocators fitted on some of the birds for an NParks survey.

The geolocators, which store location data on a memory unit attached to the bird, were used to tag and track the movement of about 100 Common Redshanks. The devices weigh about a gramme each and recorded the movement of these birds as they travelled along their migratory routes.

NParks managed to recapture five of the tagged Common Redshanks when they returned in September and October 2015. The downloaded data indicated that one of the birds, a juvenile, stayed mostly in Singapore and the immediate region, including Thailand. The adult birds travelled to Northwestern China to breed before returning to Sungei Buloh, a few stopping at Thailand, Myanmar and Southwestern China (Sichuan) along the way.



A Common Redshank with a geolocator attached to its left foot



The route taken by one of the adult Common Redshanks from Sungei Buloh to Northwestern China and back



08 The *Hanguana rubinea* (left) and *Hanguana triangulata* were discovered by researchers from the Singapore Botanic Gardens, and show how Singapore contains many thriving habitats for biodiversity.

09 At the first NParks Garden Bird Watch in April 2015, birds such as the Pink-necked Green Pigeon (*Treron vernans*) were spotted at Bishan-Ang Mo Kio Park.

10 Visitors can climb a 10.65 m tall Raptor Tower to get a panoramic view of Kranji Marshes.

Grounding conservation efforts in research

Biodiversity conservation efforts which seek to enhance the quality of the living environment in Singapore are grounded in scientific research. During the year in review, the proceedings from the Johor Strait Marine Biodiversity Survey conducted as part of the Comprehensive Marine Biodiversity Survey (CMBS) were published. The CMBS was sponsored by Asia Pacific Breweries, Care-for-Nature Trust Fund, Keppel Care Foundation, Shell Companies in Singapore and the Air Liquide Group. It involved 48 international and local scientists, staff from NParks and the National University of Singapore, as well as volunteers.

NParks has also been conducting long-term monitoring of biodiversity. An example is its bird ringing effort which has been carried out at Sungei Buloh Wetland Reserve since 1990, with nearly 11,000 birds of 140 species tagged.

Such monitoring efforts have revealed interesting migration patterns. A male Northern Pintail (*Anas acuta*) made a rare stopover in Singapore in February 2016. The pintail is a migratory duck with a breeding range that includes eastern Siberia. The last time the species was sighted here was in 1992 in Senoko South.

Encouraging community stewardship through citizen science

In April 2015, several national citizen science programmes were launched under NParks' Community in Nature Biodiversity Watch series to encourage community stewardship of biodiversity through participation in biodiversity monitoring. The first of these was Garden Bird Watch, which saw over 400 participants spreading out across 60 locations islandwide over 10 days to conduct bird surveys. Data collected from the counts will help NParks understand long-term population trends for garden birds.

Other citizen science programmes launched during the year in review included Butterfly Watch and BioBlitz. The latter saw members of the public joining naturalists in an intensive 12-hour field study to document the diversity of flora and fauna at Pasir Ris Park. In total, an estimated 265 species of plants and animals including the rare Buffy Fish Owl (*Ketupa ketupu*) and *Sivistella chekjava* – a species of cricket that can be found only in Singapore – were identified there.

Celebrating biodiversity efforts

In June 2015, the annual Festival of Biodiversity was held at VivoCity to celebrate the community's efforts in conserving Singapore's natural heritage and highlight how biodiversity contributes to a quality living environment in Singapore. Into its fourth year and in celebration of SG50, the Festival of Biodiversity raised awareness of plants and animals closely linked to Singapore's heritage.

Participating in international biodiversity initiatives

NParks has also been participating actively in regional and global biodiversity conservation initiatives. In June 2015, the National Biodiversity Centre hosted the 16th ASEAN Working Group on the Coastal and Marine Environment to profile Singapore's coastal and marine management credentials and discuss the health of the coastal and marine ecosystem. NParks and the Centre for International Law, National University of Singapore also organised a seminar on the United Nations Convention on the Law of the Sea to discuss contemporary hot-button issues related to the management and use of the high seas.

A group of people, including children and adults, are crouching on a sandy beach, looking at something in the water. In the foreground, a large, dark crab is visible on the sand. The background shows a clear blue sky and the ocean.

PARTNERSHIP GROWS

ENGAGING AND INSPIRING COMMUNITIES

The greening of Singapore cannot be achieved by NParks alone. People from all walks of life – from students and community gardeners to corporate partners and other volunteers – play an important part in creating a quality living environment for all residents.



01 Focusing on local plants and animals, the preschool educational resource materials reached out to over 80,000 preschoolers in more than 1,600 schools.

02 Students from My First Skool @ Blk 528 Hougang learning about the Tembusu tree (*Cyrtophyllum fragrans*) from the picture word cards, which are part of the preschool educational resource materials

03 Youths are trained to lead tours, enabling them to fulfil the requirements of the service learning volunteer programme, learn new skills and contribute to society.

04 NParks staff from Streetscape share about the nature of their work with students from Jurong Junior College via a hands-on demonstration.

05 Students removing mussels from aquaria as part of the Marine Eco-toxicity Biomonitoring Programme, which aims to monitor the levels of eco-toxicity in the coastal areas in Singapore using physiological, behavioural and DNA tests on Green Mussels (*Perna viridis*) that have been left out at various sites

06 A youth participating in a mangrove clean-up at Coney Island Park as part of the Project Island-A-Hand initiative

07 Students from Bukit View Secondary School planting trees in their school compound as part of Green Wave

Getting the next generation on board

Engaging the next generation on nature, biodiversity and conservation remained an important priority for NParks in the past year as Singapore continued to transform herself into a City in a Garden and enhance the quality of life for her residents.

In line with this, NParks provides educators with localised resources which focus on native plants and animals. In May 2015, it launched the first comprehensive set of preschool educational resource materials, which was developed in consultation with the Ministry of Education's (MOE) preschool branch. NParks also collaborated with MOE to incorporate greenery as a theme in Geography as well as Character and Citizenship Education textbooks. DVDs on Singapore's biodiversity and books on a wide range of nature-related topics – from dragonflies and hornbills to award-winning nature photography – were also distributed to 383 schools.

Many programmes were also conducted during the year in review to engage students in the effort to create a quality living environment for all residents. Under NParks' Every Child A Seed programme, over 45,000 Primary Three pupils from more

than 190 primary schools, including five Special Education schools, received seed-planting kits to help inculcate the young with an appreciation of greenery. Another programme, Nature Cares, reached out to five new schools and involved some 430 students. To raise awareness of Singapore's biodiversity, an interactive skit titled "Secrets of the Swamp", based on a book by Neil Humphreys, reached out to 50,000 students from 30 primary schools in the past year. More than 500 Primary Five pupils from the Gifted Education Programme in nine schools also visited parks and nature reserves as part of an annual Learning Journey.

As part of the Young Nature Surveyor Badge Programme, NParks collaborated with the Singapore Scouts Association and Gardens by the Bay to promote biodiversity and provide scouts with an opportunity to serve as biodiversity ambassadors. NParks also hosted school visits to various parks and gardens, gave presentations on Singapore's biodiversity, organised sharing sessions on wetlands conservation and horticulture, and gave talks on career opportunities in the landscape industry.

Encouraging active participation

Twenty new schools came on board the Community in Nature's (CIN) Greening Schools for Biodiversity initiative, with more than 400 teachers and students involved in the targeted planting of biodiversity-attracting plants, guided by results of student-led biodiversity audits of their school compounds. Students also brainstormed and implemented outreach efforts to increase appreciation and awareness of biodiversity among their peers. Under this initiative, the new Native Plant Conservation Programme involved four schools in caring for native plants within their school grounds.

Aimed at encouraging schools to play an active role in the conservation of biodiversity, the Nature Outreach Workshop equipped more than 100 upper primary and secondary students and teachers with skills on how to plan and run nature-related activities in their schools and beyond. The Marine Eco-toxicity Biomonitoring Programme reached out to six schools which monitored the levels of eco-toxicity in Singapore's coastal areas.

The inaugural Biodiversity Week for Schools was held in May 2015 in observance of the International Day for Biological Diversity. The biodiversity-related activities reached out to 129 preschools, 187 primary schools, 168 secondary schools and five international and tertiary schools. More than 60 schools also participated in Green Wave, either by planting trees at their campus or through tree mulching.

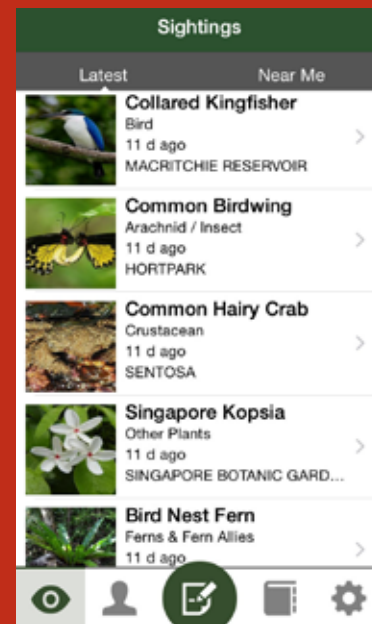
Tertiary students were also involved in programmes such as species recovery projects at Pulau Ubin, invasive species management at Venus Loop, the planting of saplings and shrubs along the Simei Park Connector, and Project Island-A-Hand at Pulau Ubin and Coney Island Park, an environmental service project organised by Outward Bound School. Under the NParks Junior Guides Pilot Programme, interested youths were also trained to lead visitors along the Singapore Botanic Gardens Heritage Trail.

MAPPING OUT SINGAPORE'S FLORA AND FAUNA WITH SGBIOATLAS

Members of the public who spot any interesting animals or plants can now share their sightings using the citizen science app SGBioAtlas.

Launched in April 2015, the app aggregates crowd-sourced information to map the distribution of flora and fauna throughout Singapore using Geographical Information System (GIS) technology. All uploaded sightings are plotted out on an atlas on the Biodiversity and Environment Database System (BIOME, biome.nparks.gov.sg), which serves as a single repository of biodiversity and environment-related data contributed by government agencies, educational institutions, non-governmental organisations and members of the public.

The app was used extensively during the first Garden Bird Watch and Butterfly Watch, which are part of the NParks CIN Biodiversity Watch. Over 650 citizen scientists fanned out across the island to conduct surveys, and used the SGBioAtlas app to submit sightings of birds and butterflies.



The SGBioAtlas app allows users to easily record and identify biodiversity sightings, which will contribute to an existing online database. It can be downloaded free from the Apple App Store and Google Play.



Youths from Outward Bound School conducting a bird survey at Coney Island Park using the SGBioAtlas app

Creating buzz at the parks

During the year in review, more than 3,300 events were organised in various parks, catering to a wide range of visitors and interests and helping to enhance the quality of life in Singapore. These included signature events such as the monthly Gardeners' Day Out at HortPark and Fort Canning Park Heritage Night Walks in August 2015, and Satay Night Live, which was held at the newly-revamped Empress Place and Esplanade Park in November 2015.

In celebration of 25 years of the Park Connector Network (PCN) and to promote a safe and responsible PCN user culture, various ground-up initiatives such as bike maintenance clinics, PCN etiquette workshops, networking rides as well as tree plantings were rolled out to further engage the community.



08 Our parks and gardens played host to many programmes in the past year, including art workshops where participants drew inspiration from their lush surroundings.

PURSUING DIFFERENT INTERESTS OUTDOORS

"I usually go for walks or have picnics at our green spaces, but I also like dining in our parks and attending concerts and performances outdoors."

**ASHLEIGH ANN CHONG, 23
COMMUNICATIONS EXECUTIVE**

There is no shortage of activities one can do outdoors, according to Ashleigh Ann Chong. Hiking at MacRitchie Reservoir Park, cycling on Pulau Ubin, skating at East Coast Park, and watching a concert or dining at one of the restaurants at Singapore Botanic Gardens are just some examples.

Fort Canning Park also plays host to a variety of productions such as Ballet Under the Stars, Shakespeare in the Park and Films at the Fort, she points out. "Chances are there's something for everyone, no matter what their preference is."

Ashleigh's favourite green spaces include HortPark and Henderson Waves by night, when the bridge is nicely lit up, very scenic and not too hot or crowded.

Greenery not only plays an important role in the ecosystem, it also lowers the surrounding temperature and makes living in Singapore more comfortable, she says. "It is also aesthetically pleasing, making the environment look less stark and urban."

She feels more young people are beginning to appreciate this. "With social media platforms like Facebook and Instagram, youths are venturing into these green spaces, appreciating the beauty of the environment and sharing their observations with their friends and families."

One of Ashleigh's favourite Instagram spots is a lone tree at Upper Seletar Reservoir Park. "It's a great place to watch and photograph the sunset," she shares.



Ashleigh Ann Chong, pictured here with friend Clarence Tan at Fort Canning Park's Gothic Gates



09 More than 350 residents joined Deputy Prime Minister and Coordinating Minister for Economic & Social Policies, Tharman Shanmugaratnam, and Minister for National Development and Second Minister for Finance, Lawrence Wong, in remembering Mr Lee Kuan Yew by planting 53 trees at Jurong Lake Park. The park will eventually be part of the new Jurong Lake Gardens.

Cycle-in Movies that emphasised safety and track etiquette were organised as part of the OCBC-NParks Ride Safe programme at the Eastern Coastal Loop and North Eastern Riverine Loop, and were well-received by the public.

Another popular activity at the parks is nature photography, and one of the highlights of 2015 was the culmination of the Singapore Garden Photographer of the Year competition. The best photos from this competition, as well as other photography competitions organised by NParks to date, were featured in the Singapore Garden Photographer of the Year coffee table book which was launched in November 2015 to commemorate the country's Golden Jubilee.

Remembering our Chief Gardener Mr Lee Kuan Yew

On 19 March 2016, Prime Minister Lee Hsien Loong, grassroots advisors and 3,000 residents attended a remembrance day event in honour of Singapore's founding Prime Minister and Chief Gardener Mr Lee Kuan Yew at Bishan-Ang Mo Kio Park. Eleven *Cratoxylum formosum* trees, commonly known as the Pink Empat, were planted. Mr Lee Kuan Yew had planted a Pink Empat in Farrer Circus in 1963, sparking off an island-wide greening movement that has continued till today.

At the Istana grounds, the day was marked by the planting of a Tembusu tree by President Tony Tan Keng Yam and Mrs Tan.

CELEBRATING SINGAPORE'S JUBILEE YEAR

Mass tree planting, a concert reminiscent of the 1950s, and the launch of a new festival celebrating community gardens – these were some of the many activities that were organised to mark Singapore's Jubilee Year.

During the Clean and Green SG50 (CG SG50) Mass Tree Planting which took place from August to December 2015, some 20,000 people planted over 5,500 trees at more than 50 parks, park connectors and Nature Ways island-wide. At the Singapore Botanic Gardens, visitors had the opportunity to re-live the 1959 Aneka Ragam Ra'ayat or "People's Variety Show" in August 2015, as part of NParks' SG50 Concert Series in the Park. During the show, Prime Minister Lee Hsien Loong unveiled the Singapore Botanic Gardens' UNESCO World Heritage Site plaque and officially named the SG50 orchid – *Papilionanthe* Singapore Golden Jubilee. NParks also organised five other free outdoor concerts at various parks as part of the SG50 celebrations.



Deputy Prime Minister and Coordinating Minister for National Security Teo Chee Hean interacting with students at the launch of the CG SG50 campaign



Jubilee Year was also commemorated with the launch of the Community Garden Festival, which saw the judging and weigh-in for the inaugural Community Garden Edibles Competition. The competition received overwhelming response, with over 900 entries.

Nurturing the spirit of volunteerism

Volunteers continued to play an integral role in helping NParks to achieve the vision of a City in a Garden and create a quality living environment for all residents. In September 2015, 20 long-service volunteers were lauded for their dedication and contributions at the annual Volunteer Appreciation Ceremony.

During the year in review, there were some 1,500 active volunteers participating in a wide range of activities such as visitor services, guided walks, gardening, outreach programmes, conservation programmes and marine biodiversity surveys. For example, volunteers took part in horticulture-centric maintenance activities at Bishan-Ang Mo Kio Park, the Intertidal Watch citizen science programme, and Forest Clean-Up 2015.

In September 2015, NParks launched the inaugural Community Garden Festival to bring the gardening community together as well as to commemorate Singapore's Jubilee Year. Besides the creation of five commemorative SG50 gardens at HortPark by over 250 community gardeners, the Festival also saw the judging and weigh-in for the inaugural Community Garden Edibles Competition which received overwhelming response with over 900 individual and group entries in 12 vegetable and fruit categories. Community gardens also continued to thrive indoors, with 67 companies participating in the Community in Bloom (CIB) Indoor Gardening initiative. As of March 2016, there were more than 1,000 community gardens island-wide in public and private housing estates, schools and organisations.

To encourage even greater community stewardship and ownership of green spaces, NParks built on the success of the Friends of Ubin Network (FUN) to launch the Friends of the Parks initiative. Members of the community comprising regular park users and stakeholders help promote active and responsible use of the parks through ground-led programmes and initiatives.

REAPING THE BENEFITS OF GREEN THERAPY

Tan Keng Leng, pictured here with fellow volunteer gardeners Tan Sok Oon (left) and Judy Neo at the Therapeutic Garden @ HortPark

“We can do more to encourage residents, especially the elderly, to garden and grow their own food.”

**TAN KENG LENG, 67
RETIREE**

Gardening is not only good exercise; it is an opportunity for residents to get to know one another and could even help them lower the cost of living by sharing the fruits (and vegetables) of their labour, says Tan Keng Leng.

Encouraging more people to visit the new Therapeutic Garden @ HortPark and try their hand at gardening, Keng Leng points out that the space

is wheelchair-accessible, with raised moveable beds that allow older people to garden without having to kneel or squat. The raised beds also have holes in the middle where bags can be attached, making it more convenient for elderly gardeners to gather plant cuttings.

“For elderly living on their own, it would be good if they could come here and interact with others instead of being cooped up at home,” he says.

Keng Leng himself became a volunteer gardener after retiring two years ago. On most Wednesdays, he can be found at HortPark propagating plants, pruning and weeding at the Greenhouse and Edibles Garden. While he does not have a preference for any specific plant species, he would like to learn more about fruit and vegetable crops as well as healing plants as these have practical health benefits.



10 Community gardeners from South West District at Talk Bird Sing Song, one of the five SG50 CIB Gardens which were created at HortPark as part of the Community Garden Festival

11 At the SGfuture citizen engagement series, participants came together to share their views, aspirations and ideas for the future through discussions and dialogue sessions.

Looking forward

NParks also had the opportunity to engage youths, working adults and families to discuss the future of our City in a Garden through the SGfuture citizen engagement sessions. The conversation series on “A Cleaner, Greener and Smarter Home” sought to envisage the future living environment in Singapore through the collective input of the public, as SG50 drew to a close. More than 300 people participated in three engagement sessions and went on guided tours of Bishan-Ang Mo Kio Park, Singapore Botanic Gardens, Pasir Panjang Nursery and HortPark. Participants gave feedback that they enjoyed the sessions, which also gave them the chance to collaborate with different government agencies to chart their future by sharing their views on how Singaporeans can play a bigger role in creating a more liveable and sustainable Singapore.



The Plant-A-Tree programme is a platform for organisations and individuals to actively participate in the greening of our City in a Garden, by donating the cost of a young tree and planting it themselves.

Charity Registration Number/Unique Entity Number:
T02CC1634C
Charity Registration Date: 19 November 2002
IPC Number: IPC000104
Auditor: Deloitte & Touche

The Garden City Fund (GCF) is a registered charity and an Institute of Public Character (IPC), with its registered address at National Parks Board, Singapore Botanic Gardens, 1 Cluny Road, Singapore 259569.

The GCF seeks to enhance the enjoyment of our City in a Garden by working with corporations and individuals to support the development of amenities and special features in Singapore's green spaces; community activities and programmes that promote awareness, research and education in nature and conservation; and citizen involvement to encourage greater ownership of our City in a Garden.

The Board of NParks serves as the trustee of the GCF and has appointed the GCF Management Committee to plan, develop, promote and manage the GCF in accordance with its Trust Deed.

The Management Committee comprises eight members. All are non-executive members except for GCF Secretary Dr Leong Chee Chiew, who is also the Deputy Chief Executive Officer, Professional Development & Services Cluster at NParks and the Commissioner of Parks & Recreation.

Between 1 April 2015 and 31 March 2016, the total amount of cash donations received through GCF was about \$8.8 million.

The members of the seventh GCF Management Committee appointed from 1 November 2014 to 31 October 2016 are:

Chairman	Professor Leo Tan Wee Hin
Treasurer	Vincent Lien Jown Jing
Secretary	Dr Leong Chee Chiew
Members	Tan Khin Nguan
	Mrs Fu E-Len
	Goh Kong Aik
	Mrs Kirtida Mekani
	Dr Malone-Lee Lai Choo

As part of the GCF Accountability and Governance Framework, any member of the Board, Committee or Sub-committee has to give prior written disclosure of any actual or potential conflict of interest for any transaction or project in connection with GCF, and will not be able to participate or cast a vote in the transaction/project.



Fundraising for green causes

Various private fundraising initiatives were organised by corporations and individuals to support efforts to create a quality living environment in Singapore. A charity gala event was held on 17 September 2015 with support from **City Developments Limited**. It raised over \$330,000 to support education and outreach programmes at the Singapore Botanic Gardens.

Long-time NParks volunteer and supporter **Han Jok Kwang** also raised funds and donated over \$270,000 to GCF to mark his 30th wedding anniversary. The donations were used to support habitat enhancement and outreach activities on Coney Island Park and other park programmes.

Other fundraising partnerships included **Club 21's** charity redemption programme in support of the Jacob Ballas Children's Garden; **The Body Shop's** support for tree planting through the sale of selected beauty products; and **Tokio Marine Life Insurance Singapore's** fundraising campaign to support the planting of mangrove saplings at Sungei Buloh Wetland Reserve.

Tree planting

Over 500 corporations and 50,000 individuals have participated in the Plant-A-Tree programme, pledging and planting more than 25,000 trees since its inception in 2007.

Part of the Plant-A-Tree programme, Clean and Green SG50 Mass Tree Planting 2015 took place from 1 August to 31 October 2015 as part of NParks' ongoing efforts to create a quality living environment for all residents. It received strong support from corporate partners including **April Group, IKEA, Pratt & Whitney, Singapore Pools, Singtel, Tokio Marine Life Insurance Singapore** and **United Parcel Service** as well as individuals. Under the programme, some 5,500 trees were planted across the island, with over 100 species of trees planted at more than 50 locations along parks, park connectors and Nature Ways.

Temasek also donated \$100,000 to plant 100 trees at Fort Canning Park to enhance its greenery and reintroduce selected primary forest species to the park.

Rejuvenating the Singapore Botanic Gardens' icons

At the Singapore Botanic Gardens, various icons are being rejuvenated to protect their heritage value for future generations. Burkill Hall's original identity as an Anglo-Malayan plantation-style house is being restored through a repainting sponsored by **AkzoNobel**. The sponsorship also covers the repainting of the Gardens' iconic Bandstand.

NParks is also embarking on a series of enhancements to rejuvenate various features of the 20-year-old National Orchid Garden. A \$10 million donation by **Sembcorp Industries** – the largest single donation to GCF by a corporate partner to date – will partially fund enhancements to the 600 sqm Cool House which simulates high elevation sites in the tropics. To be named The Sembcorp Cool House, it will have a new climate control system which allows researchers to grow and flower rare orchids that occur naturally only at higher elevations.

Also within the National Orchid Garden, the 380 sqm Yuen Peng McNeice Bromeliad Collection enclosure will be enhanced, partly through a contribution by the **family of the late Lady Yuen Peng McNeice**. The collection showcases bromeliads from about 520 taxa, including representatives from 23 genera and 320 species. An anonymous donor also donated a sum via GCF to support enhancements to the 350 sqm Tan Hoon Siang Mist House. Named after Tan Hoon Siang, Singapore's very own gold medal winner at the Chelsea Flower Show in the early 1950s, the Mist House features a selection of unique, uncommon and award-winning tropical lowland orchid hybrids and species set in a lush mist forest.

Supporting the wetlands and nature reserves

Kikkoman Singapore donated \$500,000 for the new mangrove arboretum at the Sungei Buloh Wetland Reserve Coastal Trail for mangrove conservation, education and public outreach. Besides the arboretum, their sponsorship covers an education programme designed around the interesting features of the mangrove arboretum, which aims to engage young children between the ages of 4 and 6 to play and learn in a natural environment.

Long-time GCF partner **HSBC** pledged a donation of \$300,000 and the support of staff volunteers for a comprehensive two-year biodiversity survey at the Bukit Timah Nature Reserve. The study is aimed at improving understanding of the conservation status and distribution of plants and animals in the 163 ha Reserve.

Nurturing talent

Lee Foundation contributed \$420,000 towards training the next generation of botanists and biodiversity scientists in Southeast Asia. This will fund three scholarships for a new Master of Science programme in Plant and Fungal Taxonomy, Diversity, and Conservation at the Royal Botanic Gardens, Kew, as well as a Tropical Identification course for a number of local and regional students.

Promoting safe cycling

OCBC Bank has committed to contribute \$90,000 over the next three years for a safe cycling programme conducted at different parks across the island. The OCBC-NParks Ride Safe programme aims to educate cyclists on the importance of safe cycling around pedestrians and other park users, while improving the quality of life through participation in these activities.

Commemorating Singapore’s Jubilee Year

Sembcorp Industries presented a three-day carnival and series of concerts at the Singapore Botanic Gardens to commemorate Jubilee Weekend. The activities celebrated the Gardens’ rich cultural and botanical heritage and its contribution to enhancing the quality of life in Singapore, as well as its inscription as Singapore’s first UNESCO World Heritage Site.

The Singapore Garden Photographer of the Year coffee table book was also produced to commemorate Singapore’s 50th anniversary. The book brought together prize-winning entries from three photography competitions organised by NParks to date. These included the Singapore Garden Photographer of the Year competition (2015), the City in a Garden competition (2012) and the BiodiverCity competition (2010). Gold sponsors for the book included **Jardine Cycle and Carriage, Kwang Im Tong Hood Cho Temple, Lee Foundation** and **Woh Hup (Private) Limited**, and the Bronze sponsor was **Kingsmen**.

Remembering Mr Lee Kuan Yew

In a fundraiser organised in memory of GCF’s founding patron Mr Lee Kuan Yew, over \$500,000 worth of donations were received in support of urban ecology and innovation projects that help improve the quality of the living environment. Major donations came from **Allgreen Properties Limited, Credit Suisse, HSBC, Satsuma Shipping Pte Ltd, WongPartnership LLP** and **Sumitomo Mitsui Banking Corporation**.

Future plans and commitment

As a conduit for green initiatives, the charity will continue to engage members of the public and support conservation efforts, research, outreach and educational initiatives under NParks. The aim is to cultivate a love for the environment, promote a sense of ownership, and encourage the community to play a stronger role in preserving Singapore’s legacy as a City in a Garden.

Visit www.gardencityfund.org for more information.

Garden City Fund Donors’ Acknowledgement (FY 2015)

We acknowledge and thank the following donors who have generously supported our City in a Garden efforts, including those who wish to remain anonymous.

\$1 million and above

Sembcorp Industries Limited

\$500,000 and above

The Hongkong and Shanghai Banking Corporation Limited
Kikkoman (Singapore) Pte Ltd

\$100,000 and above

APEL Enterprises (Singapore) Pte Ltd
Central Granite Industries Pte Ltd
City Developments Limited
Lady Y P McNeice Charitable Foundation
Lee Foundation
Leong Sou Fong Rosslyn
Leong Wai Leng
Singapore Telecommunications Limited
Tan Jiew Hoe
Temasek Holdings Pte Limited
UBS Trustees (Bahamas) Ltd

\$10,000 and above

ADDP Architects LLP
Allgreen Properties Limited
American Association of Singapore
Ardentec Singapore Pte Ltd
Art Of Living Foundation Ltd
Ascendas-Singbridge Gives Foundation
AXA Insurance Singapore Pte Ltd
Bharat & Kirtida Mekani
Clarins Pte Ltd
Coen Design International Pte Ltd
Credit Suisse AG (Singapore Branch)
ExxonMobil Asia Pacific Pte Ltd
Facility Link Pte Ltd
Fuji Xerox Singapore Pte Ltd
Ho Ching
IKEA Southeast Asia
Infineum Singapore Pte Ltd
Invista Singapore Fibres Pte Ltd
JCU Singapore
Jessie Wu
KOSÉ Singapore Pte Ltd
Kwan Im Thong Hood Cho Temple
Learning Vision @ Work Pte Ltd
Lee Theng Kiat
Liam Wee Sin
Mapletree Commercial Trust
Marina Bay Sands Pte Ltd
Marsh (Singapore) Pte Ltd
Mitsubishi Electric Asia Pte Ltd
Moove Media Pte Ltd
Nestlé Singapore Pte Ltd
Nikon Singapore Pte Ltd
NTUC Fairprice Co-operative Ltd
NXP Semiconductors Singapore Pte Ltd
Oversea-Chinese Banking Corporation Limited
Panasonic Asia Pacific Pte Ltd
Panasonic Singapore
Pico Art International Pte Ltd
Pratt & Whitney
PricewaterhouseCoopers LLP
Reed Elsevier (Singapore) 2008 Pte Ltd
Ricoh (Singapore) Pte Ltd
Ricoh Asia Pacific Pte Ltd
Satsuma Shipping Pte Ltd
Shimano (Singapore) Pte Ltd
Singapore Pools Limited
Singapore Press Holdings Foundation Limited
Singapore Totalisator Board
Soh Kim Pheoh
Specialist Eyecare Centre
Starhill Global Property Management Pte Ltd
STMicroelectronics Pte Ltd
Sumitomo Mitsui Banking Corporation
Sumitomo Rubber Asia (Tyre) Pte Ltd
Sunray Woodcraft Construction Pte Ltd
Tan Yang Sock Deborah
The Body Shop (Singapore) Pte Ltd
Tokio Marine Life Insurance Singapore Ltd
TTJ Design and Engineering Pte Ltd
UPS Foundation
Vinum Pte Ltd
Woh Hup (Private) Limited
WongPartnership LLP
Yap Yuk Kiew

Below \$10,000

ABN Amro Bank NV
Active Fire Protection Systems Pte Ltd
Akzo Nobel Paints (Asia Pacific) Pte Ltd
Ang Kong Hua
Anjali Mohan Ramchand
Apollo Tyres Holdings (Singapore) Pte Ltd
APP Engineering Pte Ltd
Arab Bank PLC
Architects 61 Pte Ltd
Artelier Furnishing Pte Ltd
Australia and New Zealand Banking Group Limited
B K Civil & Construction Pte Ltd
Backjoy Singapore Pte Ltd
Bai Shi Yin Guang Li Liang Ke Ji Yan Jiu Yuan
Bank of America, N.A.
Bank of China Limited
Bank of India
Banking Computer Services Pte Ltd
Basilio Damaso
BNP Paribas Singapore Branch
Building and Construction Authority
Central Singapore Community Development Council
Chan Hian Wun Belinda
Chan Kwai Wah Paul
Chan Wai Ching
Chan Wan Ting Catherine
Chandran Vivian Pearl Johnston
CHC Construction Pte Ltd
Cheah King Mun Clifford
Chin Yen Mei
Chong Chiet Ping
Chong Hui Min
Chong Kee Hiong
Chong Mo Ai Grace
Chow Ying Hoong
Christian Rothenbuehler
Chua Eu Jin
Chua Yuaw Hong Edwin
Ciliendo Eduardo Johann Pasquale
Citibank, N.A.
Club 21 Pte Ltd
Command-Air Pte Ltd
Creative Eateries Pte Ltd
Credit Agricole (Suisse) SA Singapore Branch
Credit Agricole Corporate & Investment Bank
Dai-Dan Co., Ltd
DBS Bank Ltd
D’ckrystal
DDS Contracts & Interior Solutions Pte Ltd
Det Norske Veritas Pte Ltd
Dharma Rajah S/O Nadarajah
Dilhan Pillay Sandrasegara
Disco Hi-Tec (Singapore) Pte Ltd
DLE M&E Pte Ltd
DN Hybrid Pte Ltd
Events Partner Pte Ltd
Fiona Pentney
Fish and Toast LLP
Foo May Yee
Forest Adventure Pte Ltd
Goh Bee Kheng Grace
Hang Seng Bank Ltd
HL Bank
Ho Sai Keat Vincent
Ho Sing
Hong Hin Kay Albert
Hsieh Fu Hua
Huang Xiang Yuan Jason
ICBC Standard Bank PLC, Singapore Branch
IDEE Enterprise Pte Ltd
Indian Bank
Indian Overseas Bank
Industrial and Commercial Bank of China Limited
ING Bank N.V. Singapore Branch
Ino Arts & Communications Pte Ltd
IPA Singapore Pte Ltd
Jain Sanjay
Jardine Cycle & Carriage Limited
Jose Isidro N. Camacho
JPMorgan Chase Bank, N.A.
Juliana Huang Benelli
Kee Teck Koon
Keppel Care Foundation
Kok Tong Construction Pte Ltd
Langdon & Seah Singapore Pte Ltd
Leaena Tambyah Nee Chelliah
Leow Kim Sen

Leow Sheong Voon
LGT Bank (Singapore) Ltd
Liak Teng Lit
Lim Eng Hwee
Lim Fung Jen
Lim Huay Ee
Lim Kee Pin
Lim Kei Hao Patrick
Lim Ming Yan
Lintec Singapore Pte Ltd
Loh Kin Wah
Lye Lin Heng
Malayan Banking Berhad
Mozat Pte Ltd
My Art Space
National Australia Bank Limited
Neil Garry McGregor
Ng Geok Lin Grace
Ng Lang
Noble Denton Singapore Pte Ltd
Nomura Singapore Limited
Nordea Bank S.A. Singapore Branch
Ode to Art Contemporary Pte Ltd
Oh Boon Hui Stella
Ong Chin Sim Simon
Ooi Yu Chuean Arthur
OrthoSports@Novena
P.T. Bank Negara Indonesia (Persero) Tbk
Pacificlight Energy Pte Ltd
PepsiCo International Pte Ltd
Philippe Marie Prevost
Poh Beng Min Phyllis
Powen Electrical Engineering Pte Ltd
PSL Holdings Ltd
Qatar National Bank S.A.Q., Singapore Branch
QE Elemech Engineering Pte Ltd
RHB Bank Berhad
Royal Caribbean Cruises (Asia) Pte Ltd
Russell Andrew John
Sakura Pte Ltd
Seah Lim Huat Peter
Shef Connexion Pte Ltd
Shimizu Corporation
Singapore Green Building Council
Singapore Press Holdings Limited
Soh Hwee Hoon
Standard Chartered Bank
Stargood Construction Pte Ltd
State Bank of India, Singapore
Suntech Ventures Pte Ltd
Suppiah Dhanabalan
SUTL Corporation Pte Ltd
SymAsia Singapore Fund – Goh Bee Gah Foundation
Symrise Asia Pacific Pte Ltd
Tag Team Inc Pte Ltd
Tan Choon Huat
Tan Kuan Loong Jeremy
Tan Su Shan Carrie
Tan Tiang Lee Walter
Tang See Chim
Tay Eng Hoe
Tay Mi Lian Marian
Teh Kok Peng
Teo Ah Kee
Teo Sio Hoon Claudine
Tham Sai Choy
The Bank of East Asia Limited
The Bank of Tokyo-Mitsubishi UFJ Ltd Singapore Branch
The Community Foundation of Singapore
The Norinchukin Bank
TMG Projects Pte Ltd
Toh Kim Bock C-E Contractor Pte Ltd
Toh Suan Har
Tong Bee Construction Pte Ltd
UCO Bank
Uniseal Creative Solutions Pte Ltd
United Overseas Bank Limited
United Test And Assembly Center Ltd
UTAC Manufacturing Services Singapore Pte Ltd
Utracon Structural Systems Pte Ltd
Wailow Singapore Pte Ltd
Wawawa Pte Ltd
Weyy Tec Investments Pte Ltd
Wing Tai Foundation
Wong Chien Chien
Wong Yuen Kuai Lucien
Xtra Designs Pte Ltd
Zhang Hui Construction Pte Ltd

A man wearing a white safety helmet, yellow safety glasses, and black gloves is climbing a tree. He is wearing a red t-shirt with a white graphic that says "ASIA PACIFIC TREE CLIMBING". He is smiling and looking towards the camera. The background is a blurred green forest with a blue sky. The text "EXPERTISE LEADS" is overlaid on the right side of the image.

EXPERTISE LEADS

**ENHANCING COMPETENCIES IN THE LANDSCAPE AND
HORTICULTURE INDUSTRY**

Capability development, whether at the individual or sectoral level, continues to be important in creating a quality living environment in Singapore and realising the vision of a City in a Garden. NParks' industry development and training programmes are aimed at supporting innovation, strengthening capabilities and cultivating the expertise needed to support this effort.

01



Uplifting the industry

The Landscape Productivity Roadmap, which was launched in 2011, will continue to chart the course for productivity reform in the landscape industry till 2020 and support the sector in its efforts to create a quality living environment for all residents. To date, more than 50 companies have been supported under the Landscape Productivity Grant, which was introduced in 2013 to support contractors' efforts to mechanise their operational processes.

NParks also continued to work closely with the industry to address the challenge of attracting and retaining talent. The second intake of a joint scholarship programme by NParks, Institute of Technical Education (ITE) and Landscape Industry Association of Singapore (LIAS) led to the successful placement of six ITE students, while NParks' Landscape Apprenticeship Programme resulted in eight apprentices placed in seven companies. In September 2015, NParks and e2i co-organised a Human Resource (HR) Masterclass for landscape contractors to help them develop good HR practices, better manage their manpower and better attract and retain local talent.

01 ITE student Yu Zhang tending to plants at the nursery of Greenology Pte Ltd as part of the joint scholarship programme by NParks, ITE and LIAS

02 As part of the Asia Pacific Tree Climbing Championship, children learnt to climb trees under the watchful eye of professionals during the Young Arborist workshop.

03 Holland-Bukit Panjang Town Council hosted the pilot programme of the Resident Gardeners project, which recruited 10 resident gardeners now in the employment of one of the town council's landscape contractors.

Providing the impetus for training

To further raise the profile of the industry, the Tripartite Cluster for Landscape Industry announced the Progressive Wage Model (PWM) for the landscape maintenance sector in April 2015. The PWM will enable local maintenance workers to achieve sustainable real wage increases through skills upgrading and productivity improvements. It encourages landscape workers to upgrade themselves under the Landscape Workforce Skills Qualifications (WSQ) Framework developed by NParks and the Singapore Workforce Development Agency (WDA). During the year in review, there were 1,700 sign-ups from 230 companies for WSQ training courses. This was a three-fold increase from previous years.

02



03



In response to industry demand for workplace-based training and assessment arising from the PWM, the Centre for Urban Greenery and Ecology (CUGE) introduced several initiatives including a mobile training van, in-house training options as well as weekend and evening classes.

As part of the overall effort to build capabilities and enhance the living environment for Singaporeans, CUGE introduced new programmes covering a wide range of topics from tree transplanting and tree support systems, to plant epidemiology and urban ecology strategies. A programme on Climbing Trees Using Single Rope Technique (SRT) gave participants a better understanding of the technical and safety aspects of SRT. CUGE also teamed up with the Singapore Arboriculture Society to organise the Asia Pacific Tree Climbing Championship which attracted a record 60 competitors from seven Asia Pacific countries – Australia, Hong Kong, Japan, Malaysia, New Zealand, Singapore and Taiwan.

Supporting continuous learning

To engage mature residents, CUGE worked with the Holland-Bukit Panjang Town Council to train resident gardeners in a pilot project where town council landscape contractors employ these residents to maintain the neighbourhood green spaces. CUGE is looking to roll out the programme to other town councils in the North West District.

As one of WDA's Continuing Education and Training partners, CUGE also participated in WDA's Learning Fest at the Lifelong Learning Institute in November 2015 and its SkillsFuture Credit Roadshow in March 2016.

04



05



Engaging industry practitioners

NParks continued to engage industry practitioners through various ways to enhance the living environment in Singapore. These included organising seminars and demonstrations to share research findings, discuss key urban challenges, and co-create research and development solutions to address national challenges. CUGE also published guide books to help practitioners design and maintain parks and gardens efficiently, and embarked on research studies to better understand how green spaces benefit residents.

Sharing knowledge, strategies and experiences

In November 2015, the International Skyrise Greenery Conference (ISGC) was held in conjunction with the sixth Skyrise Greenery Awards to highlight greening strategies and solutions that help enhance the quality of the living environment, and discuss emerging trends and priorities of the urban greenery, design and landscape communities in Asia.

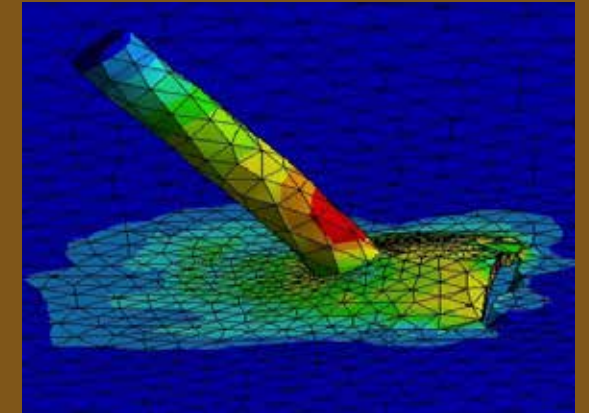
Taking place alongside ISGC was GreenUrbanScape Asia 2015, the region's leading exhibition for urban design, landscape and greenery, and the inaugural GreenUrbanScape Asia Congress. These conferences attracted close to 500 delegates from 18 countries.

NUMERICAL MODELS MEET NATURE IN NPARKS' TREE CARE STRATEGY

NParks is collaborating with Nanyang Technological University to better understand the impact of wind forces on trees using a numerical technique known as the Finite Element Model.

In this approach, a mathematical model of a tree is constructed using software and subdivided into simpler, disjoint components called finite elements. The response of these elements to different forces (such as gusts of wind) can be assembled to construct the response of the larger structure (the tree).

The ability to model the dynamic behaviour of trees helps NParks to better understand how trees react to strong wind gusts and refine our tree risk management programme. For example, research has revealed that the discordant vibration of branches and leaves during strong wind can help to dissipate a significant amount of wind energy from being transmitted to the trunk of the tree. This data helps guide NParks on our tree care management strategy.



This image shows a three-dimensional view of an uprooting tree. When the tree is uprooted, stresses are generated throughout the lower trunk, root system and surrounding soil. Should NParks' tree inspection officers need to trim the roots of leaning trees, this helps them assess which roots should be retained.

04 Minister Lawrence Wong being briefed on new innovations showcased at GreenUrbanScape Asia 2015

05 A volunteer guide explaining to Indonesian delegates on the lightning protection system for some of our heritage trees

International outreach

During the year in review, NParks hosted many foreign visitors keen to find out more about Singapore's greening programmes and how NParks was involved in creating a quality living environment for all residents. The visitors included officials from countries such as China (including Hong Kong), India, Indonesia, Japan, Laos, Malaysia, Mongolia, Tatarstan, the Philippines, and Vietnam. CUGE was also invited by the Muscat Municipality and New Delhi Municipal Council to organise a four-day

international programme on Singapore Greenery Planning and Management in Oman and Singapore respectively.

NParks, under the leadership of the Ministry of National Development, also signed a Memorandum of Understanding with the Tianjin Eco-city Administrative Committee to advise on the design and development of the Sino-Singapore Friendship Garden.



06 Community Parks Senior Manager Ms Amanda Galistan (left) with Parks Victoria staff exchange coordinator, Ms Angela Gardiner, on a visit to Brimbank Park Playscape during Amanda's exchange programme with Parks Victoria. Brimbank Park Playscape is an inclusive playground that provides a range of experiences for young children with different abilities.

07 Ms Hairani binte Osman, Visitor Services Officer, Singapore Botanic Gardens, and recipient of the PS21 Star Service Award, is known for her warm and friendly manner when sharing her knowledge with park visitors.

08 During Kindness Day 2015, NParks staff had the opportunity to accompany beneficiaries of Voluntary Welfare Organisations during activities at our parks and gardens.

09 Over the years, the PCN has evolved beyond its initial function to connect parks. It now provides visitors with opportunities to experience nature, and is a platform for communities with shared interests to gather.



Nurturing NParks' human resources

Talent development continues to be a key focus as Singapore works towards creating a quality living environment and a City in a Garden for her residents. During the year in review, NParks offered four undergraduate scholarships, three overseas Merit Award sponsorships and five postgraduate scholarships to deserving staff and external candidates. NParks also continued to expand its collaboration with reputable overseas botanical institutions and gardens to provide professional exchange opportunities for its staff, with the latest addition to the network being the Royal Botanic Gardens Melbourne. In late 2015, one officer attended a professional exchange programme with Parks Victoria in Melbourne. To date, 10 NParks staff have been placed on overseas exchange programmes.

The regular Hort Colloquiums continued to provide rich opportunities for NParks' officers to share their knowledge and experiences with one another. One example is the fifth roadshow on the Plant Matrix, a tool to help staff easily select suitable plants for a given site condition.

Staff well-being remained a priority of NParks. In 2015, NParks received the Singapore Health Award (Platinum) in recognition of its holistic workplace health initiatives. NParks' staff and projects were also recognised at the Public Service Awards. Ms Hairani binte Osman, Visitor Services Officer, Singapore Botanic Gardens, received the PS21 Star Service Award while the Park Connector Network (PCN) received the ExCEL Innovation Spotlight Award.



Family bonding at NParks

The 2015 calendar was filled with social, recreational and corporate activities that brought members of the NParks family closer together as they worked towards the shared goal of improving the living environment for all residents.

The year in review began with the annual Staff Conference on 1 April 2015, where Chief Executive Officer Kenneth Er paid tribute to Mr Lee Kuan Yew and shared NParks' priorities for the year.

The annual Kindness Day, which was held in November 2015, brought smiles and laughter to the children of the Salvation Army's Child Care Centres who visited various parks and gardens, and NParks' staff who volunteered their time to accompany the

children. In the year in review, NParks also began providing one day of unrecorded leave per year for officers to volunteer, in their personal capacity, at any local charity with an Institution of Public Character (IPC) status.

In February 2015, the NParks Family was set up as a networking platform for past and present NParks staff. NParks Family members, who comprise former staff who had worked in the organisation for five years or more, attended the SG50 Concert Series in the Park, NParks Staff Mass Tree Planting, and NParks Year-End Get Together. NParks staff were also given the opportunity to visit the Night Safari with their family and friends, as part of NParks Family Day 2015.



Sun Plaza Park

FACTS & FIGURES
FY 2015

National Day Awards

DISTINGUISHED SERVICE
ORDER MEDAL

Dr Kiat Tan
Advisor to NParks

PUBLIC ADMINISTRATION
MEDAL (SILVER) (BAR)

Dr Leong Chee Chiew
Deputy Chief Executive Officer
Professional Development & Services
Cluster and Commissioner of Parks
& Recreation

PUBLIC ADMINISTRATION
MEDAL (SILVER)

Francis Lim
Group Director
Corporate Services

Ng Cheow Kheng
Group Director
Horticulture & Community
Gardening

Dr Nigel Taylor
Group Director
Singapore Botanic Gardens

PUBLIC ADMINISTRATION
MEDAL (BRONZE)

Ms G Kannagi
Director (Development
Management 2)
Parks Development

Robert Teo
Director (Pulau Ubin)
Conservation

COMMENDATION MEDAL

Ms Choi Yook Sau
Deputy Director (Pulau Ubin)
Conservation

How Choon Beng
Director (Sungei Buloh)
Conservation

Tan Seng Aik
Assistant Curator (Istana)
Conservation

EFFICIENCY MEDAL

Lim Kian Huat
Manager (Streetscape)
Streetscape

Ng Kim Seng
Manager (Municipal Landscapes)
Municipal Landscapes

Oh Yong Choon
Manager (Parks)
Parks 2

Rahmat bin Adban
Officer (Parks)
Parks 1



Yellow Flame trees
(*Peltophorum pterocarpum*)
along Sixth Avenue



East Coast Park

Long Service Medals

Ms Bhavani d/o Subramaniam
Senior Executive (Accounts)
Finance & Procurement

Goh Sin Kok
Executive (Corporate Strategy
& Planning)
Corporate Strategy & Planning

Ms Norzehan binte Ahmad
Deputy Director (Parks)
Parks 1

Oh Cheow Sheng
Group Director
Streetscape

Oi Keng Hunt
Senior Trainer (CUGE)
Industry & CUGE

Omar bin M P Shamsudeen
Manager
(Development Management)
Parks Development

S K Ganesan
Postgraduate Scholar
Corporate Services

Tay Boon Sin
Director (Community Parks)
Parks 2

Vairavelu Ramasamy
Manager (Streetscape)
Streetscape

Awards and Accolades

Excellent Service Award
2015

Attractions
(2 Star, 5 Gold, 5 Silver)

Excellence in Public Service
Awards 2015

PS21 Star Service Award

PS21 ExCEL Awards 2015

Innovation Spotlight
(Park Connector Network)

MND Family Minister's
Award (Team) 2015

**Singapore Garden Festival
2014** (joint award with Gardens
by the Bay)

The Ubin Project (joint award
with MND)

**Singapore Sustainable
Blueprint 2015** (joint award
with MND)

FACTS & FIGURES FY 2015

Regional Parks maintained by NParks

	Area (ha)		Area (ha)
Admiralty Park	25.67	Lower Seletar Reservoir Park	4.30
Ang Mo Kio Town Garden East	4.89	MacRitchie Reservoir Park	12.00
Ang Mo Kio Town Garden West	20.63	Marina Promenade	15.10
Bedok Reservoir Park	42.39	Mount Faber Park	56.44
Bedok Town Park	12.43	My Waterway @ Punggol	12.30
Bishan-Ang Mo Kio Park	62.00	(formerly Punggol Waterway Park)	
Bukit Batok Nature Park	35.74	One-north Park	5.59
Bukit Batok Town Park – Little Guilin	42.16	Pasir Ris Park	73.02
Bukit Timah Nature Reserve	162.64	Pasir Ris Town Park	12.76
Central Catchment Recreation Area	455.00	Pearl’s Hill City Park	8.50
Changi Beach Park (including	28.52	Pulau Ubin Recreation Area	649.94
Changi Point Promenade)		Punggol Park	16.66
Choa Chu Kang Park	11.81	Rifle Range Nature Park	65.28
Clementi Woods Park	11.50	Sembawang Park	15.57
Coney Island Park	46.64	Sengkang Riverside Park	20.70
Dairy Farm Nature Park	75.32	Singapore Botanic Gardens	60.93
East Coast Park	242.42	Sisters’ Islands Marine Park	47.68
Esplanade Park	2.40	Springleaf Nature Park	10.78
Fort Canning Park	19.74	Sun Plaza Park	9.60
Hindhede Nature Park	9.00	Sungei Buloh Wetland Reserve	193.31
Hong Lim Park	1.26	Tampines Eco Green	36.61
HortPark	24.57	Telok Blangah Hill Park	34.19
Istana Park	1.30	Tiong Bahru Park	3.33
Jurong Central Park	7.98	Toa Payoh Town Park	4.91
Jurong Lake Gardens West and	84.69	Upper Peirce Reservoir Park	4.00
Jurong Lake Gardens Central		Upper Seletar Reservoir Park	15.00
Kallang Riverside Park	6.23	War Memorial Park	1.64
Kent Ridge Park	47.89	West Coast Park	50.00
Kranji Marshes	56.29	Windsor Nature Park	60.00
Kranji Reservoir Park	3.78	Woodlands Town Garden	10.94
Labrador Park and Nature Reserve	25.88	Woodlands Waterfront Park	11.22
Lower Peirce Reservoir Park	10.00	Yishun Park	13.22
		Zhenghua Nature Park	13.50
Total		3,129.78*	

* subject to rounding adjustments



Total Number of Parks

Regional Parks	62
Neighbourhood Parks	275
Park Connectors**	70
Total	407

Total Area Maintained

	Area (ha)
Parks, playgrounds, open spaces, fitness corners and park connectors***	2,633
Nature reserves	3,347
Istana and Parliament	42
House grounds	
Roadside greenery	2,576
Vacant state land	139
State land taken over from Jun 2015****	2,514
Government premises	8
Total	11,259

** Total mileage of the park connectors maintained is 303 km as of 31 March 2016.

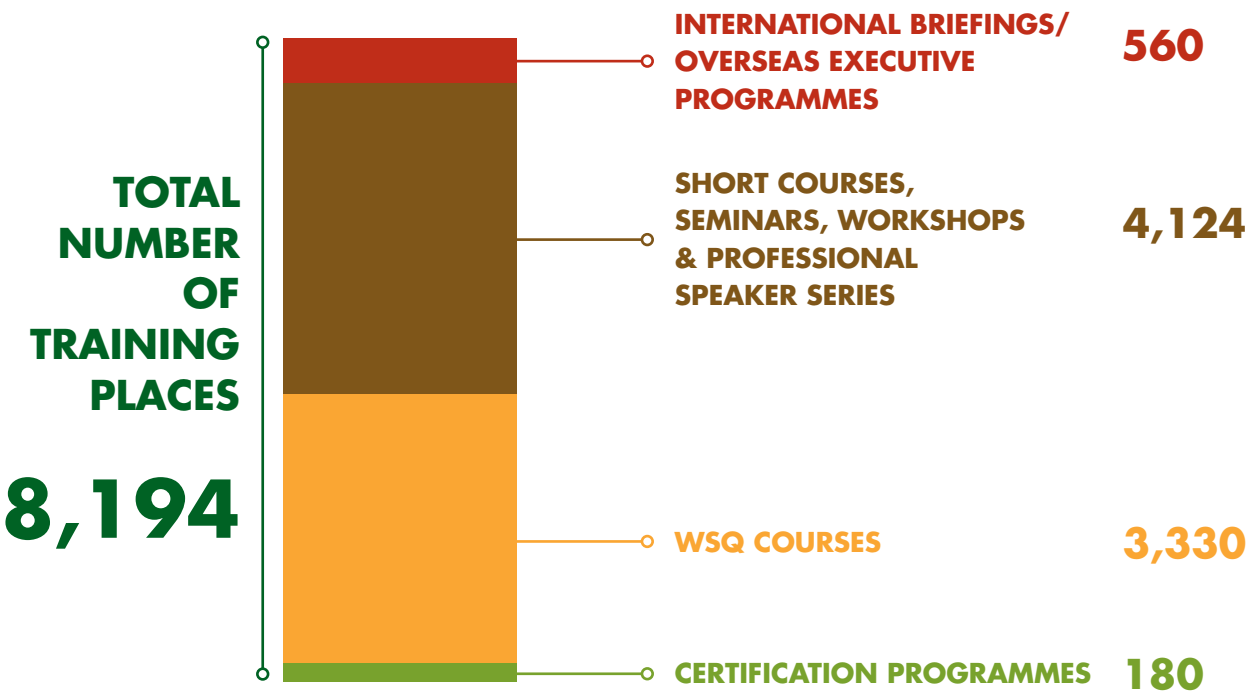
*** Excludes Bukit Timah Nature Reserve, Central Catchment Nature Reserve, Sungei Buloh Wetland Reserve and Labrador Nature Reserve which have been computed under “Nature reserves”

**** Greenery on vacant land taken over from agencies

FACTS & FIGURES FY 2015

CUGE Training Programmes

The Centre for Urban Greenery and Ecology (CUGE) was established by NParks as a regional centre of excellence to advance an urban and green living environment, and a one-stop training and knowledge hub in urban greenery and ecology.



Workforce Skills Qualification (WSQ) Courses

- WSQ Certificate in Landscape Operations
- WSQ Certificate in Basic Nature Interpretation
- WSQ Higher Certificate in Landscape Operations (Arboriculture)
- WSQ Advanced Certificate in Landscape Supervision (Parks, Reserves and Gardens)
- WSQ Advanced Certificate in Landscape Supervision (Turf, Sports Ground and Greens)
- WSQ Advanced Certificate in Landscape Supervision (Nursery)
- WSQ Diploma in Landscape Management (Parks, Reserves and Gardens)
- WSQ Diploma in Landscape Management (Nursery)

Professional Certification Programmes

- Certified ISA Arborist Programme
- Certified Arborist Municipal Specialist Programme
- Certified Park Manager Programme
- Certified Playground Safety Inspector Programme
- Certified Practising Horticulturist Programme
- ISA Tree Risk Assessment Qualification

Seminars / Professional Speaker Series / Workshops

- Basic Enforcement Seminar for NParks Staff
- Basic Palm Identification and Horticulture Workshop
- Basic Tree Identification Course – Fabaceae
- Biochar – An Effective Soil Amendment for Urban Soil and Tree Growth
- CUGE Professional Speaker Series
- CUGE Research Seminar
- Community Gardening Training Series
- Documenting Evidence: Practical Guidance for Arborists
- Edible Landscaping – Creating Landscapes with Edible Plant Species
- Ecology of Singapore Termites
- Ecodesign as Designing for Biointegration – The Next Generation of Green Design
- Habitat Enhancement Workshop
- Introduction to Common Road Reserve Trees
- Impact Mitigation and Ecological Science
- Landscape Safety Orientation Course
- Malaysia Macrofungi Diversity
- NParks Legislation & Enforcement Management Course
- Occupational First Aid
- Plant Epidemiology – Who Killed My Plant?
- Plant Diversity and Nomenclature – Part I, II, III, IV, V
- Planting Design – Principles & Introduction
- Playground Maintenance Technician Course
- Presentation Essentials for Green Space Managers
- Safe Design for Skyrise Greenery
- Science & Symptoms of Quality Turf
- Seminar on Greenery Regulations & Policies for Developments in Singapore
- Skyrise Greenery Module 1 – Rooftop Tree Planting & General Maintenance of Rooftop Greenery
- Skyrise Greenery Module 2 – Design for Safety on Rooftop Greenery
- Sustainable / Organic Gardening in Permaculture
- Tropical Forest Restoration

- Tree Climbing using Single Rope Technique
- Tree Decay – The Fundamentals
- Tree Inspection Level 1 & Level 2
- Tree Transplanting Level 1
- Tree Support Systems
- Trees & Construction – The Arboriculture Impact
- Trees & Greenery of Developments Within the City in a Garden
- Tree Failure Profile for Common Wayside Trees in Singapore
- Understanding Winds in Urban and Rooftop Settings
- Understanding the Singapore Weather
- Urban Stream Restoration
- Urban Ecology Strategies for Co-existence with Bees
- Walk with Trees

International Briefings and Overseas Executive Programmes

- CUGE Overseas Executive Programme on Greenery Planning & Management
- Briefings for Overseas Delegates



CORPORATE GOVERNANCE FY 2015

Board Members

NParks is overseen by a Board comprising 11 members. The current Chairman is Mrs Christina Ong.

All the Board members are non-executive members, except the Chief Executive Officer, Mr Kenneth Er. The Board derives its strength from the extensive and complementary backgrounds, qualifications and experience of its members.

The Board's key responsibilities are to:

- Endorse broad directions, policies and strategies relating to NParks' achievement of its vision, mission and objectives, and performance of its functions;
- Oversee NParks' operating and financial performance taking into account NParks' budget, expenditure, assets, transactions and projects;
- Provide guidance on matters relating to NParks' parks and infrastructure development programmes; and
- Approve NParks' tenders (as members of the relevant Tender Boards).

The Board has established the following committees to assist it in carrying out its duties:

- Human Resource and Compensation Committee;
- Audit Committee;
- Operations Risk Committee; and
- Garden City Fund Management Committee.

The Human Resource and Compensation Committee's role is to review key human resource policies and provide strategic oversight of related risks. The Audit Committee ensures a high standard of corporate governance through independent reviews of internal controls, financial reporting processes and financial

risks. In addition, the Audit Committee reviews the audited financial statements, as well as the audit plans and observations of external and internal auditors. The Operations Risk Committee provides strategic oversight on NParks' operations risk management framework, including review of NParks' operations risks. The Garden City Fund Management Committee plans, develops, promotes and manages the Garden City Fund in accordance with its Trust Deed.

Board's Conduct of its Affairs

The Board meets four times a year and as and when necessary to address any significant matters that may arise. To enable the Board to fulfil its responsibilities, the Management Team strives to provide the Board members with adequate information during Board meetings and on an ongoing basis. The Board also has direct and independent access to the Management Team for further information and explanation, if necessary.

Accountability and Audit

The Board's accounts are audited by the Auditor-General or such other auditor may be appointed annually by the Minister in consultation with the Auditor-General. The auditor engaged for the financial year which ended on 31 March 2016 was Deloitte & Touche. The auditor's findings in the course of the annual financial audit were submitted to the Board and also reported to the Ministry of National Development. The audited financial statements and the auditor's report were also presented to Parliament.

Internal Control Framework

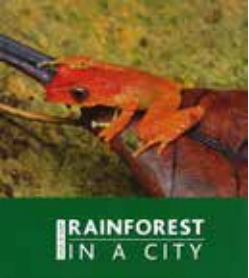
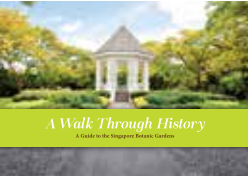
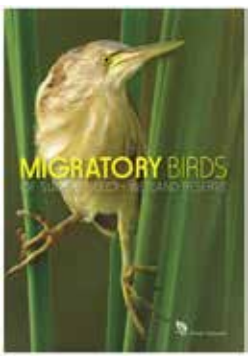
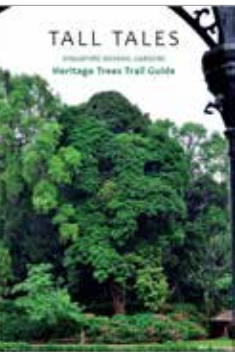
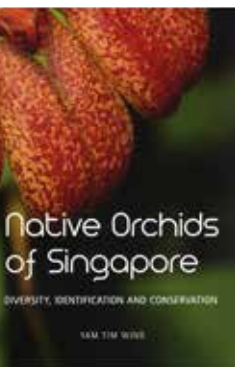
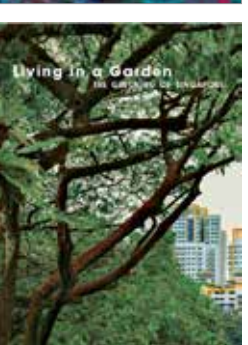
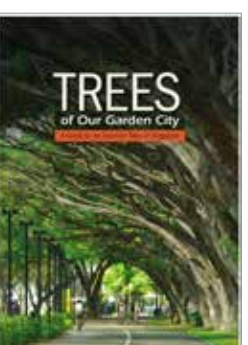
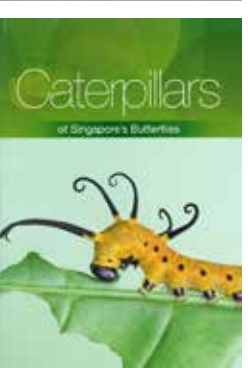
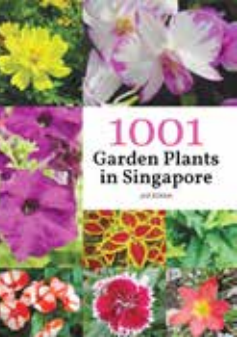
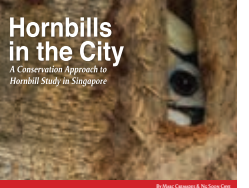
NParks' internal control system ensures that assets are safeguarded, proper accounting records are maintained, and financial information is reliable. The overall control framework includes:

- An organisation structure with clearly defined authority and delegation limits and reporting mechanisms to higher levels of management and to the Board;
- An annual budgeting and quarterly financial reporting system for all operating units that enables progress against annual plans and objectives to be monitored;
- Compliance with the provisions of the National Parks Board Act, Chapter 198A, Singapore Financial Reporting Standards, Government Instruction Manuals, Finance and PSD Circulars and Minutes for policies and procedures related to operations, human resource management and financial controls and regulations; and
- A risk management framework which ensures close monitoring with proper mitigating measures for all identified high risk areas.



Tampines Eco Green

PUBLICATIONS

- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 
- 11 
- 12 
- 13 
- 14 
- 15 
- 16 
- 17 
- 18 
- 19 
- 20 
- 21 
- 22 

Books

1. Singapore Garden Photographer of the Year

Singapore Garden Photographer of the Year won the Grand Award in the 2016 APEX Awards for Publication Excellence under the category of One-of-a-Kind Publication – Green.

2. Rainforest in a City

By Chua Ee Kiam

Rainforest in a City won the Bronze medal in the 2015 Independent Publisher Book Awards under the category of Environment/Ecology/Nature, and the Silver award in the 2015 Nautilus Book Awards under the category of Ecology/Environment.

3. Footprints on an Island – Rediscovering Pulau Ubin

By Chua Ee Kiam, Choo Mui Eng and Wong Tuan Wah

4. Gingers of Cambodia, Laos & Vietnam

By Jana Leong-Škorničková and Mark Newman

5. A Walk Through History – A Guide to the Singapore Botanic Gardens

By Nigel Taylor and Ada Davis

6. Migratory Birds of Sungei Buloh Wetland Reserve

By James Gan, Mendis Tan and David Li

7. My Green Space: Indoor Gardening Made Simple

By Lily Chen, Ng Shan Jun, Ang Wee Foong, et al.

8. A Guide to the Common Epiphytes and Mistletoes of Singapore

By Jean W.H. Yong, James Wang Wei, Joanne Y.T. Khew, Sheue Chiou Rong and Wong Wei San

9. Tall Tales: Singapore Botanic Gardens Heritage Trees Trail Guide

By Shee Zhi Qiang, Ang Xing Qi, Lahiru Wijedasa and Nigel Taylor (Singapore Botanic Gardens)

10. Native Orchids of Singapore – Diversity, Identification and Conservation

By Dr Yam Tim Wing

11. Dragonflies of Our Parks and Gardens

By Robin Ngiam

12. The Hunt for the Green Boomerang

By Neil Humphreys and illustrated by Cheng Puay Koon

13. Secrets of the Swamp

By Neil Humphreys and illustrated by Cheng Puay Koon

Secrets of the Swamp won the Best Book award for 6-8 year olds in the 2014 Harper's Bazaar Junior Toy Awards.

14. Living in a Garden – The Greening of Singapore

By Timothy Auger

15. Trees of Our Garden City

Edited by Tee Swee Ping

16. Caterpillars of Singapore's Butterflies

By Horace Tan and Khew Sin Khoon

17. 1001 Garden Plants in Singapore

By Lily Chen, Ang Wee Foong, Arthur Ng, Jessica Teo and Dr Jennie Tang

18. Hornbills in the City – A Conservation Approach to Hornbill Study in Singapore

By Marc Cremades and Ng Soon Chye

19. Our Fragile Rainforest

By Dr Leong Tzi Ming and James Gan

Journals

20. The Gardens' Bulletin Singapore, June 2015 & December 2015

Periodicals

21. Gardenwise, August 2015 & February 2016

22. CITYGREEN, issue 11 – Ecologically Healthy Cities

The CUGA publication CITYGREEN won the APEX Awards for Publication Excellence in 2015, 2014, 2013 and 2012.

These publications are available for sale at the Gardens Shops at the Singapore Botanic Gardens and the online shop www.botanicgardensshop.sg. Visit www.sbg.org.sg for more information.

PUBLICATIONS

AUTHORED OR CO-AUTHORED BY NPARKS STAFF

Papers

Ardi, W.H. & Thomas, D.C. [2015]. Studies on *Begonia* (Begoniaceae) of the Moluccas II: A New Species from Seram, Indonesia. *Gardens’ Bulletin, Singapore* 67(2): 297–303.

Bai, L., Leong-Škorničková, J. & Xia, N.H. [2015]. Taxonomic studies on *Zingiber* (Zingiberaceae) in China I: *Zingiber kerrii* and the synonymy of *Z. menghaiense* and *Z. stipitatum*. *Gardens’ Bulletin, Singapore* 67(1): 129–142.

Bai, L., Leong-Škorničková, J. & Xia, N.H. [2015]. Taxonomic studies on *Zingiber* (Zingiberaceae) in China II: *Zingiber tenuifolium*, a new species from Yunnan, China. *Phytotaxa* 227(1): 92–98.

Bauman, A.G., Guest, J.R., Dunshea, G., Low, J., Todd, P.A. & Steinberg, P.D. [2015]. Coral settlement on a highly disturbed equatorial reef system. *PLoS ONE* 10(5): e127874. doi: 10.1371/journal.pone.0127874.

Benedict, J.C., Smith, S.Y., Collinson, M.E., Leong-Škorničková, J., Specht, C.D., Fife, J.L., Marone, F., Xiao, X. & Parkinson, D. [2015]. Evolutionary significance of seed structure in Alpinioideae (Zingiberaceae). *Botanical Journal of the Linnean Society* 178: 441–466.

Benedict, J.C., Smith, S.Y., Collinson, M.E., Leong-Škorničková, J., Specht, C.D., Fife, J.L., Marone, F., Xiao, X. & Parkinson, D. [2015]. Utility of seed morphology and anatomy and its utility in recognizing subfamilies and tribes of Zingiberaceae. *American Journal of Botany* 102: 1814–1841.

Boo, G.H., Cai, Y. & Boo, S.M. [2016]. Molecular identification of gelidioid algae (Gelidiales, Rhodophyta) from Singapore with a description of *Gelidium sentosaense* sp. nov.. *Phycologia* 55 (3), 247–256.

Boo, G.H., Cai, Y., Kim J.Y. & Boo, S.M. [2015]. Phylogeny and morphology of *Parviphycus myriocladus* (Bergesen) comb. nov. (Gelidiales, Rhodophyta) from Asian waters. *Botanica Marina* 58(6): 475–483.

Bransgrove, K. & Middleton, D.J. [2015]. A revision of *Epithema* (Gesneriaceae). *Gardens’ Bulletin, Singapore* 67(1): 159–229.

The Brazil Flora Group [Zappi, D.C. et al. (>400 authors including Taylor, N.P.)] [2015]. Growing knowledge: an overview of Seed Plant diversity in Brazil. *Rodriguésia* 66(4): 1–29. doi: 10.1590/2175-7860201566411.

Browne, N.K., Tay, J.K.L., Low, J., Larson, O. & Todd, P.A. [2015]. Fluctuations in coral health of four common inshore reef corals in response to seasonal and anthropogenic changes in water quality. *Marine Environmental Research* 105: 39–52.

Burcham, D. C., Wong, J.-Y., Ali, M.I.M., Abarrientos, N. V., Fong, Y.-K., & Schwarze, F.W.M.R. [2015]. Characterization of host-fungus interactions among wood decay fungi associated with *Khaya senegalensis* (Desr.) A. Juss (Meliaceae) in Singapore. *Forest Pathology* 45(6): 492–504. doi: 10.1111/efp.12199.

Chen, J., Tan, H.T.W. & Wong, K.M. [2015]. A revision of *Timonius* (Rubiaceae) in Kinabalu Park, Borneo, with notes on typification and species distinction. *Plant Ecology and Evolution* 148(3): 420–430.

Er, K. & Chan, L. [2016]. Singapore’s Nature Conservation Masterplan: Networks for Biodiversity. *Urban Solutions* 8: 38–42.

Ghosh, S., Scharenbroch, B.C., Burcham, D. C., Ow L.F., Shenbagavalli S. & Mahimairaja S. [2016]. Influence of soil properties on street tree attributes in Singapore. *Urban Ecosystems*, doi: 10.1007/s11252-016-0530-8.

Goettsch, B., Hilton-Taylor, C., Cruz-Piñón, G., Duffy, J.P., Frances, A., Hernández, H.M., Inger, R., Pollock, C., Schipper, J., Superina, M., Taylor, N.P. [& 70+ other authors] [2015]. High proportion of cactus species threatened with extinction. *Nature Plants* 1: 1–7, Article number: 15142. doi:10.1038/nplants.2015.142.

Guest, J.R., Low, J., Tun, K., Wilson, B., Ng, C., Raingeard, D., Ulstrup, K.E., Tanzil, J.T.I., Todd, P.A., Toh, T.C., McDougald, D., Chou, L.M. & Steinberg, P.D. [2016]. Coral community response to bleaching on a highly disturbed reef. *Scientific Reports* 6: 20717. doi: 10.1038/srep20717.

Harnas, F.R., Rahardjo, H., Leong, E.C., Tan, P.Y. & Ow, L.F. [2015]. Stability of containerized urban street trees. *Landscape and Ecological Engineering* 12: 13. doi: 10.1007/s11355-015-0272-4.

Ho, B.C., Luong, T.T., Tan, B.C. & Dinh, N.H. [2015]. Additional new and noteworthy moss (Bryophyta) records from Vietnam and Laos. *Bryophyte Diversity and Evolution* 37: 1–11.

Joffre, A.A., Muhammad Ariffin, A.K., Low, Y.W. & Wong, K.M. [2015]. Novitates Bruneienses, 1. A background to the botanical survey of Brunei Darussalam, and a new species of *Jarandersonia* (Malvaceae). *Gardens’ Bulletin, Singapore* 67(1): 51–60.

Khew, G.S. & Lim, D. [2015]. Singapore events of 2015 and their orchid hybrids. *Malayan Orchid Review* 49: 5–7.

Koh, K.S. [2015]. Batfishes off Pulau Hantu. *Singapore Biodiversity Records* 2015: 205–206.

Koh, K.S. [2015]. Eastern cowtail stingray in eastern Johor Strait. *Singapore Biodiversity Records* 2015: 208.

Koh, K.S. [2015]. New record of Celebes flathead in Singapore. *Singapore Biodiversity Records* 2015: 207.

Koh, K.S. [2015]. New record of flower cardinalfish in Singapore. *Singapore Biodiversity Records* 2015: 54.

Koh, K.S. & Tun, K. [2015]. New record of bluefin trevally in Singapore. *Singapore Biodiversity Records* 2015: 59.

Kurzweil, H. & Lwin, S. [2015]. An interesting albino form of *Bulbophyllum ornatissimum* from northern Myanmar. *Malayan Orchid Review* 49: 57–59.

Kurzweil, H. & Lwin, S. [2015]. New orchid records for Myanmar, including the first record of the genus *Stereosandra*. *Gardens’ Bulletin, Singapore* 67(1): 107–122.

Kurzweil, H., Suksathan, P. & Tripetch, P. [2015]. *Satyrium nepalense* (Orchidaceae) newly recorded in Thailand. *Thai Journal of Botany* 7: 59–64.

Kurzweil, H. & Tripetch, P. [2015]. A new species of *Peristylus* (Orchidaceae) from southern Thailand. *Thai Forest Bulletin (Botany)* 43: 24–29.

Leong-Škorničková, J. [2015]. [BOOK REVIEW] Flowering Plants of the Western Ghats. *Gardens’ Bulletin, Singapore* 67(1): 251–252.

Leong-Škorničková, J. & Boyce, P.C. [2015]. *Hanguana* in Singapore demystified: an overview with descriptions of three new species and a new record. *Gardens’ Bulletin, Singapore* 67(1): 1–28.

Leong-Škorničková, J., Ly, N.S. & Nguyễn, Q.B. [2015]. *Curcuma arida* and *C. sahuynhensis*, two new species from subgen. *Ecomata* (Zingiberaceae) from Vietnam. *Phytotaxa* 192(3): 181–189.

Leong-Škorničková, J., Nguyễn, Q.B., Trần H.Đ., Šida, O., Rybková, R. & Trương, B.V. [2015]. Nine new *Zingiber* species (Zingiberaceae) from Vietnam. *Phytotaxa* 219(3): 201–220.

Leong-Škorničková, J., Šida, O., Závěská, E. & Marhold, K. [2015]. History of infrageneric classification, typification of supraspecific names and outstanding transfers. *Taxon* 64(2): 362–373.

Li, P.S., Thomas, D.C. & Saunders, R.M.K. [2015]. Phylogenetic reconstruction, morphological diversification and generic delimitation of *Disepalum* (Annonaceae). *PLOS ONE* 10(12): e0143481.

Li T. J., Lim, W.H. & Cai, Y. [2015]. A new locality of the Singapore freshwater crab, *Johora singaporensis* (Crustacea: Brachyura: Potamidae). *Nature in Singapore* 8: 53–56.

Lim, W. H., Li, T. J., & Cai, Y. [2015]. A new locality in Singapore for the caecilian, *Ichthyophis paucisulcus*. *Nature in Singapore* 8: 73–75.

Lindsay, S. & Middleton, D.J. [2015]. The clarification and synonymisation of two taxa of *Vittaria* from Peninsular Malaysia and a new combination in *Haplopteris* (Pteridaceae subfam. Vittarioideae). *Gardens’ Bulletin, Singapore* 67(1): 39–43.

Low, J.K.Y. [2015]. Black cardinalfish in the Singapore Strait. *Singapore Biodiversity Records* 2015: 161.

Low, J.K.Y. & Koh, K.S. [2016]. Cavite cardinalfish from Pulau Hantu. *Singapore Biodiversity Records* 2016: 54.

Low, J.K.Y. [2015]. Elongate surgeonfish in the Singapore Strait. *Singapore Biodiversity Records* 2015: 156–157.

Low, J.K.Y. [2015]. Globe urchin in the Singapore Strait. *Singapore Biodiversity Records* 2015: 65.

Low, J.K.Y. [2015]. Orangefin wrasse at Pulau Satumu. *Singapore Biodiversity Records* 2015: 64.

Low, J.K.Y. [2015]. Pastel-green wrasse in the Singapore Strait. *Singapore Biodiversity Records* 2015: 114.

Low, J.K.Y. [2015]. Slingjaw wrasse in the Singapore Strait. *Singapore Biodiversity Records* 2015: 58.

Low, J.K.Y. [2015]. Smoky damselfish off Pulau Satumu. *Singapore Biodiversity Records* 2015: 115.

Low, J.K.Y. & Koh, K.S. [2016]. Gold-lined sweetlips in the Singapore Strait. *Singapore Biodiversity Records* 2016: 24–25.

Low, Y.W. [2015]. *Prismatomeris khoonmengiana*, a new name for the Peninsular Malaysian *Coffea malayana* (Rubiaceae). *Plant Ecology and Evolution* 148(1): 134–138.

Low, Y.W., Joffre, A.A. & Muhammad Ariffin, A.K. [2015]. Novitates Bruneienses, 2. A remarkable new species of *Begonia* sect. *Petermannia* (Begoniaceae) from Brunei Darussalam. *Gardens’ Bulletin, Singapore* 67(1): 61–68.

Luu, H.T., Leong-Škorničková, J., Nguyễn, L.X.B., Đō, C.T. & Hoàng, T.T. [2015]. *Newmania sessilanthra* (Zingiberaceae): a new species from Vietnam. *Gardens’ Bulletin, Singapore* 67(1): 351–355.

Maslin, B.R. [2015]. Synoptic overview of *Acacia* sensu lato (Leguminosae: Mimosoideae) in East and Southeast Asia. *Gardens’ Bulletin, Singapore* 67(1): 231–250.

Merckx, V.S.F.T. [& 54 other authors, including Thomas, D.C.] [2015]. Evolution of endemism on a young tropical mountain. *Nature* 524: 347–350.

Middleton, D.J. [2015]. [BOOK REVIEW] Forest Trees of Southern Thailand. *Gardens’ Bulletin, Singapore* 67(2): 409–410.

Middleton, D.J. [2015]. A new species of *Gyrocheilos* (Gesneriaceae) from Vietnam. *Edinburgh Journal of Botany* 72(2): 235–238.

Middleton, D.J., Nishii, K. & Möller, M. [2015]. *Chayamaritia* (Gesneriaceae: Didymocarpoideae), a new genus from Southeast Asia. *Plant Systematics and Evolution* 301(7): 1947–1966.

Middleton, D.J. & Puglisi, C. [2015]. [2405] Proposal to conserve the name *Chirita hamosa* (*Microchirita hamosa*) (Gesneriaceae) with a conserved type. *Taxon* 64: 1328–1329.

Middleton, D.J., Sangvirodjanapat, S. & La-onsri, W. [2015]. A new species of *Petrocodon* (Gesneriaceae) from Thailand. *Thai Forest Bulletin (Botany)* 43: 15–17.

Moonlight, P.W., Richardson, J.E., Tebbitt, M.C., Thomas, D.C., Hollands, R. & Hughes, M. [2015]. Continental-scale diversification patterns in a mega-diverse genus: the biogeography of Neotropical *Begonia*. *Journal of Biogeography* 42(6): 1137–1149.

Ng, D.J.J., McGowan, P.J.K., Raghavan, R., Cai, Y., Cumberlidge, N., Davison, G., Luz, S. & Yeo, D. C. J. [2015]. Conservation Strategy for the Singapore freshwater crab *Johora singaporensis*. Singapore, 19 pp.

Ng, D.J.J., Sivasothi, N., Cai, Y., Davison, G.W.H. & Yeo, C.J. [2015]. A new locality of the Singapore freshwater crab, *Johora singaporensis* (Crustacea: Brachyura: Potamidae). *Nature in Singapore* 8: 31–35.

Ow, L.F., Ghosh, S. & Chin, S.W. [2015]. Performance of three turfgrass species in reinforced cells to water deficit in the urban environment. *Weed & Turfgrass Science* 4(4): 338–347. doi: 10.5660/WTS.2015.4.4.338.

Papworth, S.K., Nghiem, T.P.L., Chimalakonda, D., Posa, M.R.C., Wijedasa, L.S., Bickford, D. & Carrasco, L.R. [2015]. Quantifying the role of online news in linking conservation research to Facebook and Twitter. *Conservation Biology* 29(3): 825–833.

Parnell, J.A.N., Pilla, F. & The Thai Biogeography Group [comprising 48 authors including Merklinger, F. & Middleton, D.J.] [2015]. A re-examination of the life and work of A.F.G. Kerr and of his colleagues and friends. *Thai Forest Bulletin (Botany)* 43: 111–131.

Pei, N.-C., Kress, W.J., Chen, B.-F., Erickson, D.L., Wong, K.M., Zhang, J.-L., Ye, W.-H., Huang, Z.-L. & Zhang, D.X. [2015]. Phylogenetic and climatic constraints drive flowering phenological patterns in a subtropical nature reserve. *Journal of Plant Ecology* 8(2): 187–196.

Puglisi, C., Suddee, S., Triboun, P. & Middleton, D.J. [2015]. A new species of *Paraboea* (Gesneriaceae) from Thailand. *Gardens’ Bulletin, Singapore* 67(1): 101–106.

Rahayu, S., Meve, U. & Rodda, M. [2015]. *Hoya undulata* (Apocynaceae, Asclepiadoideae), a new myrmecophytic species from Borneo, and typification of *H. darwinii*. *Garden’s Bulletin, Singapore* 67(1): 85–94.

Raskoti, B.B. & Kurzweil, H. [2015]. *Odontochilus nandae* (Orchidaceae, Cranichideae-Goodyerinae), a new species from Nepal. *Phytotaxa* 233(3): 293–297.

Rodda, M. [2015]. A new typification of *Hoya zollingeriana* (Apocynaceae, Asclepiadoideae). *Gardens’ Bulletin, Singapore* 67(2): 305–307.

Rodda, M. [2015]. Two new species of *Hoya* R.Br. (Apocynaceae, Asclepiadoideae) from Borneo. *Phytokeys* 53: 83–93.

Rodda, M., Lee, D. & Mishak, S. [2015]. *Dischidia acutifolia* (Apocynaceae, Asclepiadoideae) a new record for the Singapore flora. *Gardens’ Bulletin, Singapore* 67(1): 29–33.

Rodda, M., Simonsson Juhonewe, N. & Lamb, A. [2015]. *Hoya fauziana* (Apocynaceae: Asclepiadoideae), a new species from Sabah, Malaysian Borneo. *Webbia* (epublished) doi:10.1080/00837792.2015.1043764.

Rodda, M., Tran, T.B. & Nguyễn, Q.B. [2015]. *Hoya tamdaoensis* (Apocynaceae, Asclepiadoideae), a new species from Vietnam. *Phytotaxa* 217(3): 288–292.

Smith, S.Y., Collinson, M.E., Benedict, J.C., Leong-Škorničková, J., Marone, F. & Parkinson, D. [2015]. Revision of putative *Alpinia* (Zingiberaceae) fossils from the Paleogene and Neogene of western Europe. *Palaeontographica Abteilung B-Palaophytologie* 293: 101–123.

Tan K. S., Koh K. S. & Goh, L. [2015]. Taking stock of Singapore’s marine life: the Comprehensive Marine Biodiversity Survey Johor Straits International Workshop 2012. *The Raffles Bulletin of Zoology* 2015 31: 1–6.

Tang, C.C., Thomas, D.C., & Saunders, R.M.K. [2015]. Molecular and morphological data supporting phylogenetic reconstruction of the genus *Goniothalamus* (Annonaceae), including a reassessment of previous infrageneric classifications. *Data in Brief* 4: 410–421.

Tang, C.C., Thomas, D.C., & Saunders, R.M.K. [2015]. Molecular phylogenetics of the species-rich angiosperm genus *Goniothalamus* (Annonaceae) inferred from nine chloroplast DNA regions: correlated evolutionary changes in fruit morphology. *Molecular Phylogenetics and Evolution* 92: 124–139.

Tay, S., He, J. & Yam, T.W. [2015]. Photosynthetic Light Utilization Efficiency, Water Relations and Leaf Growth of C3 and CAM Tropical Orchids under Natural Conditions. *American Journal of Plant Sciences* 6(18): 2949–2959.

Thomas, D.C. [2015]. [BOOK REVIEW]. A Guide to Begonias of Borneo. *Gardens’ Bulletin, Singapore* 67(2): 407–408.

Thomas, D.C., Chatrou, L.W., Stull, G.W., Johnson, D.M., Harris, D.J., Thongpairoj, U. & Saunders, R.M.K. [2015]. The historical origins of palaeotropical intercontinental disjunctions in the pantropical flowering plant family Annonaceae. *Perspectives in Plant Ecology, Evolution and Systematics* 17(1): 1–16.

Toh, Y.H. & Koh, K.S. [2015]. New record of ringed pipefish in Singapore. *Singapore Biodiversity Records* 2015: 211.

Triboun, P. & Middleton, D.J. [2015]. Three new species of *Paraboea* (Gesneriaceae) from Thailand. *Thai Forest Bulletin (Botany)* 43: 18–23.

Van der Ent, A., Repin, R., Sugau, J. & Wong, K.M. [2015]. Plant diversity and ecology of ultramafic outcrops in Sabah (Malaysia). *Australian Journal of Botany* 63: 204–215.

Van der Ent, A. & Wong, K.M. [2015]. Range extension of *Christisonia scortechinii* from mainland Southeast Asia into Borneo, and notes on the distinction between *Aeginetia* and *Christisonia* (Orobanchaceae). *Botanical Studies* 56: 28.

Wong, K.M. [2015]. *Schizostachyum kuisiingii*, a new species of bamboo (Poaceae: Bambusoideae) from Peninsular Malaysia. *Gardens’ Bulletin, Singapore* 67(2): 267–274.

Wong, K.M. [2015]. Studies in Southeast Asian *Melastoma* (Melastomataceae), 1. Morphological variation in *Melastoma malabathricum* and notes on rheophytic taxa and interspecific hybridisation in the genus. *Gardens’ Bulletin, Singapore* 67(2): 387–401.

Wong, K.M. & Diep, M.H. [2015]. *Bambusa gurgandii*, a new species of bamboo (Poaceae: Bambusoideae) from Vietnam. *Candollea* 70(2): 211–218.

Wong, K.M. & Low, Y.W. [2015]. Novitates Bruneienses, 3. Eight new woody plants in the Brunei flora, including five new species. *Gardens’ Bulletin, Singapore* 67(1): 69–84.

Wong, K.M., Low, Y.W., Muhammad Ariffin, A.K. & Joffre, A.A. [2015]. Novitates Bruneienses, 4. New records in the Araliaceae, Aracariaceae, Arecaceae, Fagaceae, Musaceae and Thymelaeaceae. *Gardens’ Bulletin, Singapore* 67(2): 275–287.

Wong, K.M. & Razafimandimbison, S. [2015]. A new combination and a new name in Gynochthodes (Rubiaceae). *Reinwardtia* 14(2): 295–296.

Wong, K.M. & Rodda, M. [2015]. [BOOK REVIEW] Flora of Cambodia, Laos and Vietnam: Fasc. 33: Apocynaceae; Fasc. 34: Polygalaceae; Fasc. 35: Solanaceae. *Gardens’ Bulletin, Singapore* 67(2): 411–414.

Wong, K.M., Sugau, J.B. & Low, Y.W. [2015]. *Adonidia dransfieldii*, a threatened new palm from Sabah, Borneo. *Palms* 59(1): 5–14.

Yam, T.W. [2015]. The 17th European Orchid Conference and Show – a Post-Conference Tour. *Malayan Orchid Review* 49: 38–39.

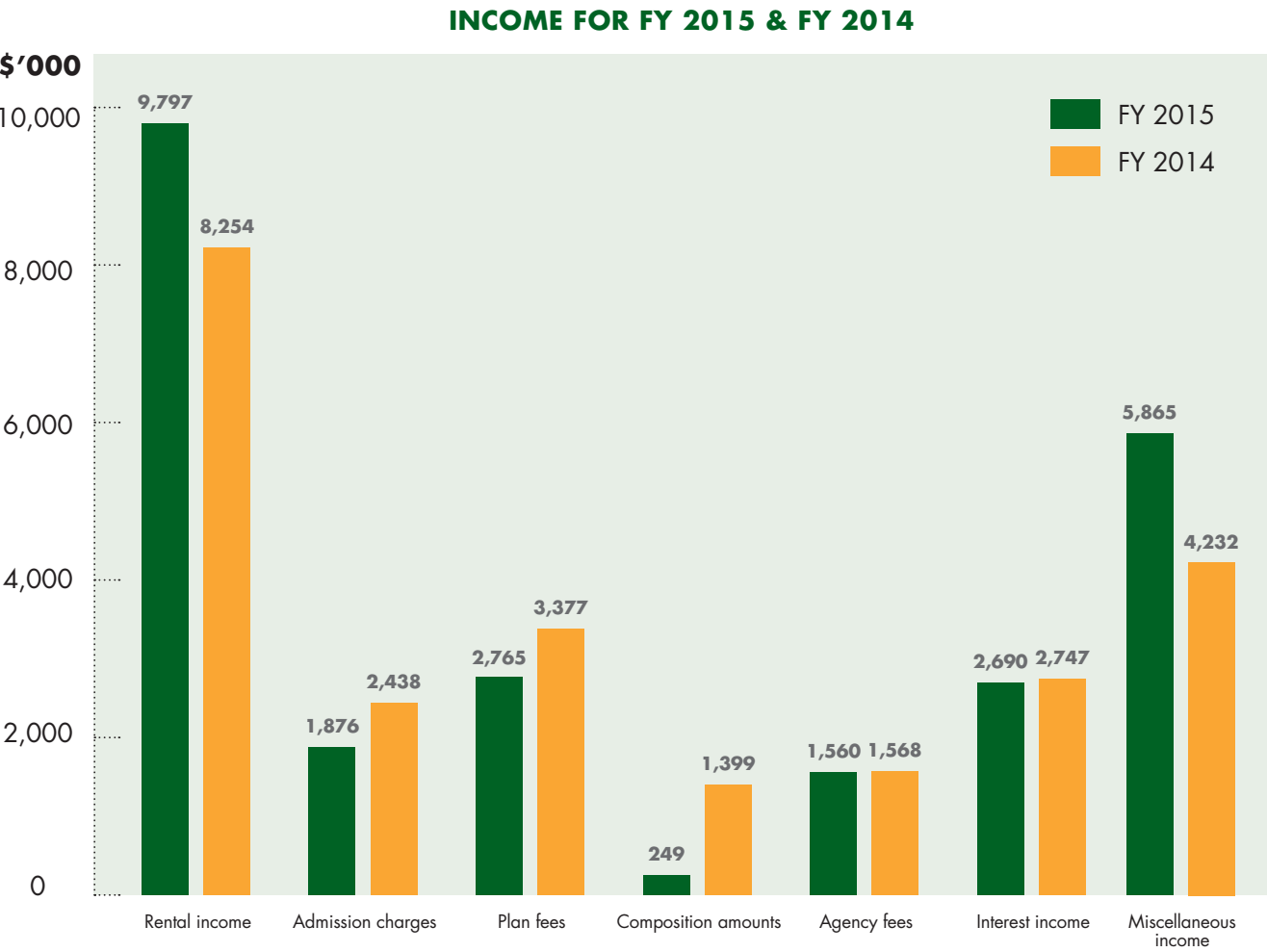
Yam, T.W. [2015]. Conservation and reintroduction of *Cymbidium finlaysonianum* in Singapore. *Malayan Orchid Review* 49: 48–52.

Ye, W., Gradstein, S.R., Shaw, A.J., Shaw, B., Ho, B.C. Schäfer-Verwimp, A., Pócs, T., Heinrichs, J. & Zhu, R.L. [2015]. Phylogeny and classification of Lejeuneaceae subtribe Cheilelejeuneinae (Marchantiophyta) based on nuclear and plastid molecular markers. *Cryptogamie Bryologie* 36(4): 313–333.

FINANCIAL REVIEW

Income

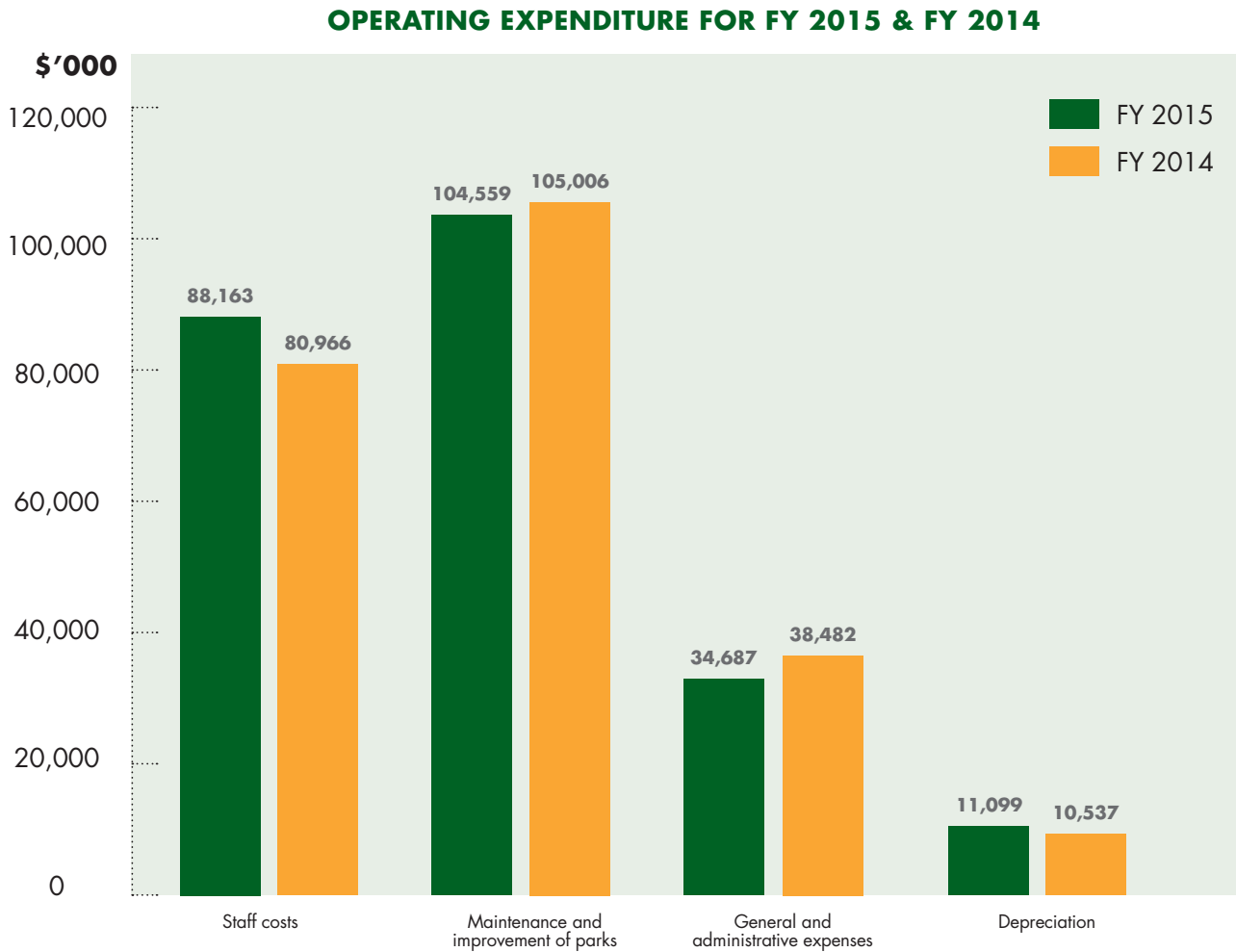
The Group’s income comprised mainly rental income from souvenir kiosks and food & beverage outlets in Singapore Botanic Gardens and Fort Canning Park. The income for the year was \$24.8 million, a marginal increase of 3% from \$24 million in FY 2014.



Income	FY 2015	FY 2014	Increase/(Decrease)	
	\$'000	\$'000	\$'000	% Change
Rental income	9,797	8,254	1,543	19
Admission charges	1,876	2,438	(562)	(23)
Plan fees	2,765	3,377	(612)	(18)
Composition amounts	249	1,399	(1,150)	(82)
Agency fees	1,560	1,568	(8)	(1)
Interest income	2,690	2,747	(57)	(2)
Miscellaneous income	5,865	4,232	1,633	39
	24,802	24,015	787	3

Operating Expenditure

The Group’s expenditure for the year was \$238.5 million. The 1% increase from last year’s expenditure was mainly due to an increase in staff costs offset by a decrease in general and administrative expenses.

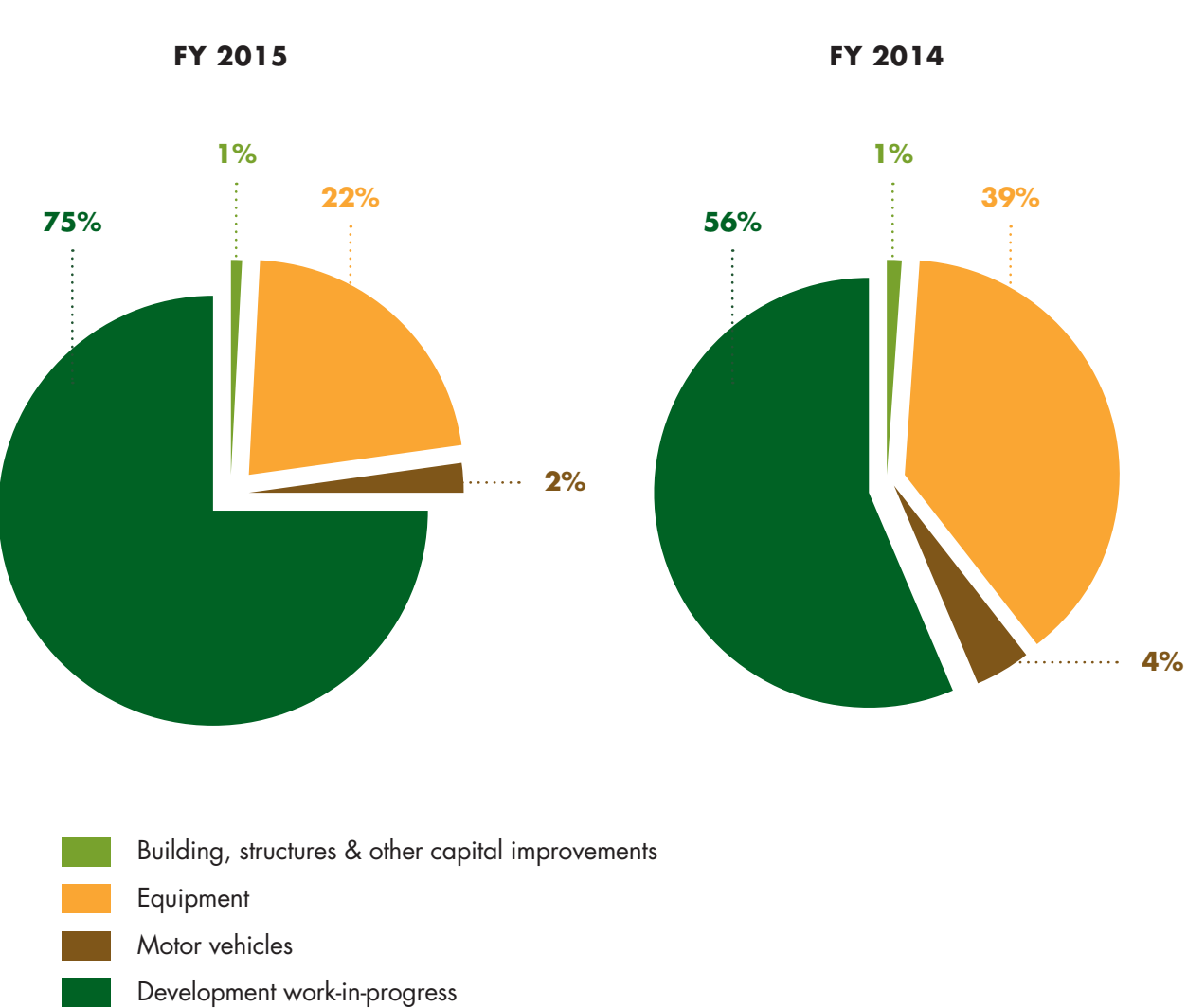


Operating Expenditure	FY 2015	FY 2014	Increase/(Decrease)	
	\$'000	\$'000	\$'000	% Change
Staff costs	88,163	80,966	7,197	9
Maintenance and improvement of parks	104,559	105,006	(447)	(1)
General and administrative expenses	34,687	38,482	(3,795)	(10)
Depreciation	11,099	10,537	562	5
	238,508	234,991	3,517	1

Capital Expenditure

The Group’s capital expenditure for the year was \$10.7 million. The increase in capital expenditure was mainly due to the improvement works carried out in Singapore Botanic Gardens and the enhancement of information technology infrastructure.

CAPITAL EXPENDITURE FOR FY 2015 & FY 2014

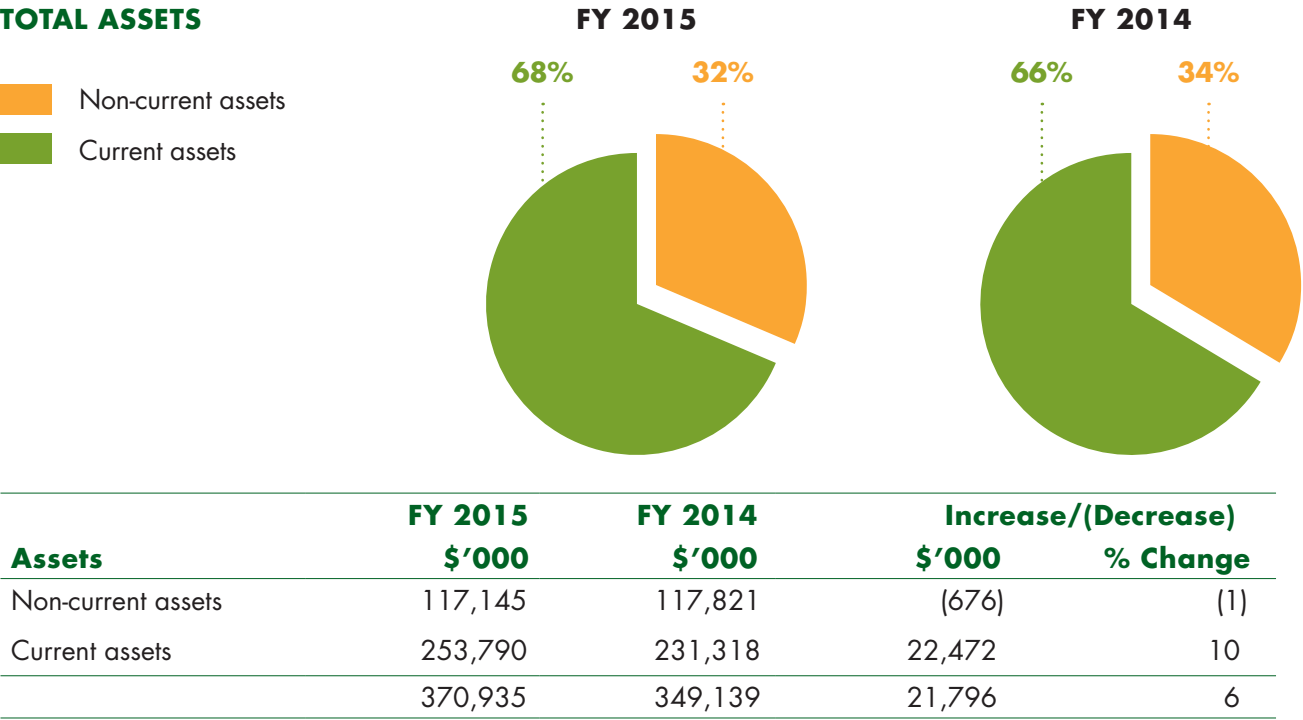


Capital Expenditure	FY 2015 \$'000	FY 2014 \$'000	Increase/(Decrease) \$'000	% Change
Building, structures & other capital improvements	3	11	(8)	(73)
Equipment	2,366	3,075	(709)	(23)
Motor vehicles	232	332	(100)	(30)
Development work-in-progress	8,050	4,511	3,539	78
	10,651	7,929	2,722	34

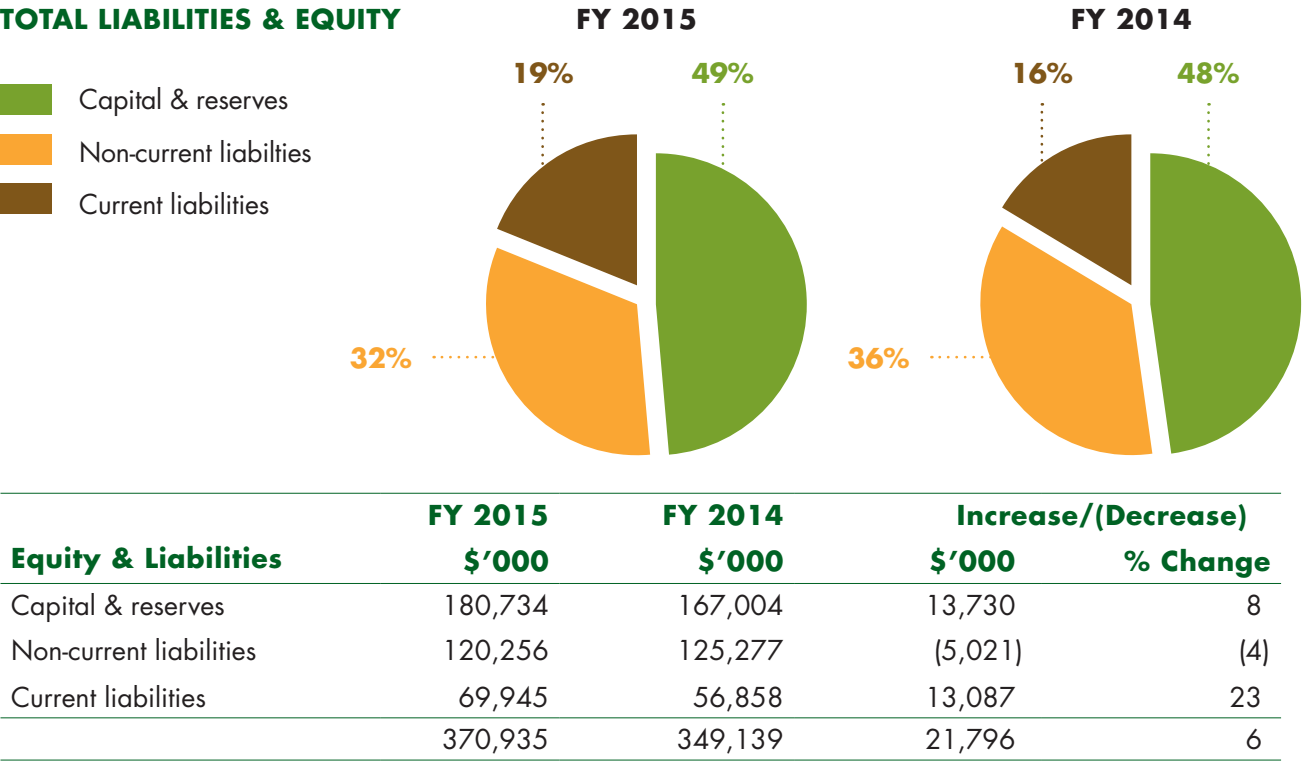
Financial Position

As at 31 March 2016, the Board’s total assets stood at \$370.9 million, an increase of 6% over last year. Non-current assets and current assets represent 32% and 68% of total assets respectively. Non-current assets consisted mainly of leasehold land and buildings and structures at Singapore Botanic Gardens and Fort Canning Park. Capital and reserves stood at \$180.7 million, while current and non-current liabilities stood at \$69.9 million and \$120.3 million respectively.

TOTAL ASSETS



TOTAL LIABILITIES & EQUITY



FINANCIAL STATEMENTS

Contents

Statement by National Parks Board	69
Independent auditor’s report	70
Statements of financial position	72
Statements of comprehensive income	73
Statements of changes in equity	74
Consolidated statement of cash flows	75
Notes to financial statements	76

NATIONAL PARKS BOARD AND ITS SUBSIDIARY
STATEMENT BY NATIONAL PARKS BOARD

- In our opinion,
- (a) the accompanying financial statements of National Parks Board (“NParks”) and its subsidiary (the “Group”), set out on pages 72 to 95 are properly drawn up in accordance with the provisions of the National Parks Board Act, Chapter 198A (the “Act”) and Statutory Board Financial Reporting Standards (“SB-FRS”) so as to present fairly, in all material respects, the financial position of the Group and NParks as at 31 March 2016, and the financial performance, changes in equity of the Group and NParks and cash flows of the Group for the financial year ended on that date;
 - (b) proper accounting and other records have been kept, including records of all assets of NParks whether purchased, donated or otherwise; and
 - (c) the receipt, expenditure, investments of moneys and the acquisition and disposal of assets by NParks during the financial year have been in accordance with the provisions of the Act.

On behalf of the National Parks Board and its subsidiary


Christina Ong
Chairman


Kenneth Er Boon Hwee
Chief Executive Officer

Singapore
20 July 2016

INDEPENDENT AUDITOR’S REPORT TO THE MEMBERS OF THE BOARD OF NATIONAL PARKS BOARD

REPORT ON THE FINANCIAL STATEMENTS

We have audited the accompanying financial statements of National Parks Board (“NParks”) and its subsidiary (the “Group”) which comprise the statements of financial position of the Group and NParks as at 31 March 2016, the statements of comprehensive income and statements of changes in equity of the Group and NParks, and the consolidated statement of cash flows of the Group for the year then ended, and a summary of significant accounting policies and other explanatory information, as set out on pages 72 to 95.

MANAGEMENT’S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the provisions of the National Parks Board Act, Chapter 198A (the “Act”) and Statutory Board Financial Reporting Standards (“SB-FRS”), and for such internal controls as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

AUDITORS’ RESPONSIBILITY

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Singapore Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor’s judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal controls relevant to the entity’s preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

OPINION

In our opinion, the consolidated financial statements of the Group and the statement of financial position, statement of comprehensive income and statement of changes in equity of NParks are properly drawn up in accordance with the provisions of the Act and SB-FRS so as to present fairly, in all material respects, the financial position of the Group and NParks as at 31 March 2016, and the financial performance and changes in equity of the Group and NParks, and cash flows of the Group for the year ended on that date.

INDEPENDENT AUDITOR’S REPORT TO THE MEMBERS OF THE BOARD OF NATIONAL PARKS BOARD

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

MANAGEMENT’S RESPONSIBILITY FOR COMPLIANCE WITH LEGAL AND REGULATORY REQUIREMENTS

Management is responsible for ensuring that the receipts, expenditure, investment of moneys and the acquisition and disposal of assets, are in accordance with the provisions of the Act. This responsibility includes implementing accounting and internal controls as management determines are necessary to enable compliance with the provisions of the Act.

AUDITOR’S RESPONSIBILITY

Our responsibility is to express an opinion on management’s compliance based on our audit of the financial statements. We conducted our audit in accordance with Singapore Standards on Auditing. We planned and performed the compliance audit to obtain reasonable assurance about whether the receipts, expenditure, investment of moneys and the acquisition and disposal of assets, are in accordance with the provisions of the Act.

Our compliance audit includes obtaining an understanding of the internal controls relevant to the receipts, expenditure, investment of moneys and the acquisition and disposal of assets; and assessing the risks of material misstatement of the financial statements from non-compliance, if any, but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal controls. Because of the inherent limitations in any accounting and internal control system, non-compliances may nevertheless occur and not be detected.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on management’s compliance.

OPINION

In our opinion:

- (a) the receipts, expenditure, investment of moneys and the acquisition and disposal of assets by NParks during the year are, in all material respects, in accordance with the provisions of the Act; and
- (b) proper accounting and other records have been kept, including records of all assets of NParks whether purchased, donated or otherwise.



Public Accountants and Chartered Accountants
Singapore

20 July 2016

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

STATEMENT OF FINANCIAL POSITION
AS AT 31 MARCH 2016

	Note	Group		NParks	
		2015/2016	2014/2015	2015/2016	2014/2015
		\$	\$	\$	\$
ASSETS					
Current assets					
Cash and cash equivalents	6	224,983,250	208,447,305	224,841,446	208,309,037
Trade receivables	7	5,656,544	3,878,787	5,611,737	3,878,685
Other receivables	8	23,150,504	18,741,635	23,179,015	18,741,385
Government grants receivable	11	–	249,942	–	249,942
Total current assets		253,790,298	231,317,669	253,632,198	231,179,049
Non-current assets					
Trade receivables	7	1,344,000	1,512,000	1,344,000	1,512,000
Property, plant and equipment	10	115,801,074	116,309,533	115,801,074	116,309,533
Investments in subsidiary	9	–	–	2	2
Total non-current assets		117,145,074	117,821,533	117,145,076	117,821,535
Total assets		370,935,372	349,139,202	370,777,274	349,000,584
LIABILITIES AND EQUITY					
Current liabilities					
Trade and other payables	12	53,648,878	52,079,779	53,637,884	52,074,938
Provision for pension costs	13	2,025,697	90,000	2,025,697	90,000
Government grants received in advance	11	8,525,377	–	8,525,377	–
Deferred revenue	14	2,951,458	2,348,744	2,951,458	2,348,744
Contribution to consolidated fund	15	2,793,718	2,339,014	2,793,718	2,339,014
Total current liabilities		69,945,128	56,857,537	69,934,134	56,852,696
Non-current liabilities					
Deferred capital grants	16	114,035,038	116,309,524	114,035,038	116,309,524
Deferred revenue	14	2,952,512	3,479,745	2,952,512	3,479,745
Provision for pension costs	13	3,268,675	5,488,074	3,268,675	5,488,074
Total non-current liabilities		120,256,225	125,277,343	120,256,225	125,277,343
Capital and other funds					
Capital account	17	4,528,275	4,528,275	4,528,275	4,528,275
Share capital	18	191,000	1,000	191,000	1,000
Accumulated surplus		123,729,704	112,238,816	123,582,600	112,105,039
Sinking fund	19	52,285,040	50,236,231	52,285,040	50,236,231
Total capital and other funds		180,734,019	167,004,322	180,586,915	166,870,545
Total liabilities and equity		370,935,372	349,139,202	370,777,274	349,000,584
Net Assets of Garden City Fund	20	14,438,466	11,819,548	14,438,466	11,819,548
Net (Liabilities) Assets of National Productivity Fund	21	(142,634)	1,934,686	(142,634)	1,934,686

The accompanying notes form an integral part of the financial statements.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

STATEMENT OF COMPREHENSIVE INCOME
YEAR ENDED 31 MARCH 2016

	Note	Group		NParks	
		2015/2016	2014/2015	2015/2016	2014/2015
		\$	\$	\$	\$
Operating income					
Rental income		9,797,345	8,253,999	9,797,345	8,253,999
Admission charges		1,876,407	2,437,997	1,876,407	2,437,997
Plan fees		2,764,502	3,376,500	2,764,502	3,376,500
Composition amounts		248,483	1,399,475	248,483	1,399,475
Agency fees		1,560,338	1,568,254	1,560,338	1,568,254
Interest income		2,689,831	2,746,766	2,689,831	2,746,766
Miscellaneous income	22	5,865,328	4,232,506	5,820,370	4,230,637
		24,802,234	24,015,497	24,757,276	24,013,628
Operating expenditure					
Staff costs	23	(88,162,637)	(80,966,572)	(88,162,637)	(80,966,572)
Maintenance and improvements of parks		(104,559,268)	(105,005,501)	(104,559,268)	(105,005,501)
General and administrative expenses		(34,687,264)	(38,481,912)	(34,655,633)	(38,472,697)
Depreciation of property, plant and equipment	10	(11,098,870)	(10,537,283)	(11,098,870)	(10,537,283)
		(238,508,039)	(234,991,268)	(238,476,408)	(234,982,053)
Deficit from operations	24	(213,705,805)	(210,975,771)	(213,719,132)	(210,968,425)
Government operating grants	11	211,141,338	212,052,245	211,141,338	212,052,245
Other government grants	11	7,885,988	2,029,827	7,885,988	2,029,827
Deferred capital grants amortised	16	11,125,439	10,545,261	11,125,439	10,545,261
		230,152,765	224,627,333	230,152,765	224,627,333
Non-operating income					
Dividend income		–	–	–	100,000
Surplus before contribution to consolidated fund		16,446,960	13,651,562	16,433,633	13,758,908
Contribution to consolidated fund	15	(2,793,718)	(2,339,014)	(2,793,718)	(2,339,014)
Surplus after contribution to consolidated fund		13,653,242	11,312,548	13,639,915	11,419,894
Other comprehensive income					
<i>Items that will not be reclassified subsequently to profit or loss</i>					
Remeasurement of defined benefit obligation	13	340,604	–	340,604	–
Total comprehensive income for the year		13,993,846	11,312,548	13,980,519	11,419,894

The accompanying notes form an integral part of the financial statements.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

STATEMENT OF CHANGES IN EQUITY
YEAR ENDED 31 MARCH 2016

	Capital account \$	Share capital \$	Accumulated surplus \$	Sinking fund \$	Total \$
GROUP					
At 1 April 2014	4,528,275	1,000	103,443,434	47,817,232	155,789,941
Surplus for the year, representing total comprehensive income for the year	–	–	11,312,548	–	11,312,548
Transactions with owners, recognised directly in equity					
Transfer from accumulated surplus to sinking fund (Note 19)	–	–	(2,418,999)	2,418,999	–
Funding for government project (Note 25)	–	–	(98,167)	–	(98,167)
Total	–	–	(2,517,166)	2,418,999	(98,167)
At 31 March 2015	4,528,275	1,000	112,238,816	50,236,231	167,004,322
Total comprehensive income for the year					
Surplus for the year	–	–	13,653,242	–	13,653,242
Other comprehensive income for the year	–	–	340,604	–	340,604
Total	–	–	13,993,846	–	13,993,846
Transactions with owners, recognised directly in equity					
Equity injection (Note 18)	–	190,000	–	–	190,000
Transfer from accumulated surplus to sinking fund (Note 19)	–	–	(2,048,809)	2,048,809	–
Funding for government project (Note 25)	–	–	(454,149)	–	(454,149)
Total	–	190,000	(2,502,958)	2,048,809	(264,149)
At 31 March 2016	4,528,275	191,000	123,729,704	52,285,040	180,734,019
NPARKS					
At 1 April 2014	4,528,275	1,000	103,202,311	47,817,232	155,548,818
Surplus for the year, representing total comprehensive income for the year	–	–	11,419,894	–	11,419,894
Transactions with owners, recognised directly in equity					
Transfer from accumulated surplus to sinking fund (Note 19)	–	–	(2,418,999)	2,418,999	–
Funding for government project (Note 25)	–	–	(98,167)	–	(98,167)
Total	–	–	(2,517,166)	2,418,999	(98,167)
At 31 March 2015	4,528,275	1,000	112,105,039	50,236,231	166,870,545
Total comprehensive income for the year					
Surplus for the year	–	–	13,639,915	–	13,639,915
Other comprehensive income for the year	–	–	340,604	–	340,604
Total	–	–	13,980,519	–	13,980,519
Transactions with owners, recognised directly in equity					
Equity injection (Note 18)	–	190,000	–	–	190,000
Transfer from accumulated surplus to sinking fund (Note 19)	–	–	(2,048,809)	2,048,809	–
Funding for government project (Note 25)	–	–	(454,149)	–	(454,149)
Total	–	190,000	(2,502,958)	2,048,809	(264,149)
At 31 March 2016	4,528,275	191,000	123,582,600	52,285,040	180,586,915

The accompanying notes form an integral part of the financial statements.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

CONSOLIDATED STATEMENT OF CASH FLOWS
YEAR ENDED 31 MARCH 2016

	Note	2015/2016 \$	2014/2015 \$
Operating activities			
Deficit from operations		(213,705,805)	(210,975,771)
Adjustments for:			
Depreciation of property, plant and equipment	10	11,098,870	10,537,283
Loss on disposal of property, plant and equipment	24	29,220	531
Provision for pension costs	13	151,902	165,307
Amortisation of lease premium received in advance		(83,333)	(83,333)
Interest income		(2,689,831)	(2,746,766)
Operating cash flow before movement in working capital		(205,198,977)	(203,102,749)
Inventories		–	5,035
Trade and other receivables		(2,027,664)	311,445
Trade and other payables		1,108,479	12,757,725
Deferred revenue		158,814	1,097,875
Payment for pension costs	13	(95,000)	(582,212)
Amounts due from MND		(2,578,869)	(11,714,615)
Amounts due from Garden City Fund		(105,420)	31,819
Cash used in operating activities		(208,738,637)	(201,195,677)
Contribution to Consolidated Fund paid		(2,339,014)	(4,618,390)
Net cash flows used in operating activities		(211,077,651)	(205,814,067)
Investing activities			
Proceeds from disposal of property, plant and equipment		31,744	7,448
Purchase of property, plant and equipment		(10,651,375)	(7,928,809)
Interest received		1,851,369	2,085,291
Net cash used in investing activities		(8,768,262)	(5,836,070)
Financing activities			
Grants received (less payment on behalf)	11	238,013,519	202,630,677
Grants receivable	11	63,128	8,687,760
Unutilised grants returned	11	(1,430,640)	(473,468)
Equity injection	18	190,000	–
Funding for government projects	25	(454,149)	(98,167)
Net cash from financing activities		236,381,858	210,746,802
Net increase (decrease) in cash and cash equivalents		16,535,945	(903,335)
Cash and cash equivalents at beginning of the year		208,447,305	209,350,640
Cash and cash equivalents at end of the year (Note 6)		224,983,250	208,447,305

The accompanying notes form an integral part of the financial statements.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

1 GENERAL

National Parks Board (“NParks”) is a statutory board under the Ministry of National Development (“MND”) established under the National Parks Board Act (Chapter 198A).

The Board has its registered office at Singapore Botanic Gardens, 1 Cluny Road, Singapore 259569.

The primary activities of NParks are to develop, manage and promote the National Parks and Nature Reserves as valuable reserves for recreation, conservation, research and education and to develop, upgrade, manage and maintain the public parks, open spaces on behalf of the Government.

There has been no significant changes in the nature of these activities during the financial year.

The principal activities of the subsidiary are described in Note 9 to the financial statements.

The financial statements of NParks for the financial year ended 31 March 2016 were authorised for issue by members of the Board on 20 July 2016.

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF ACCOUNTING – The financial statements have been prepared in accordance with the historical cost basis, except as disclosed in the accounting policies below, and are drawn up in accordance with the provisions of the Act, and Statutory Board Financial Reporting Standards (“SB-FRS”), including INT SB-FRS and Guidance Notes.

Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability which market participants would take into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of SB-FRS 102 *Share-based Payment*, leasing transactions that are within the scope of SB-FRS 17 *Leases*, and measurements that have some similarities to fair value but are not fair value, such as net realisable value in SB-FRS 2 *Inventories* or value in use in SB-FRS 36 *Impairment of Assets*.

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs for the asset or liability.

ADOPTION OF NEW AND REVISED STANDARDS – On 1 April 2015, the Group adopted all the new and revised SB-FRSs and Interpretations of SB-FRS (“INT SB-FRS”) and SB-FRS Guidance Notes that are effective from that date and are relevant to its operations. The adoption of these new/ revised SB-FRSs, INT SB-FRSs and SB-FRS Guidance Notes does not result in changes to the Group’s accounting policies and has no material effect on the amounts reported for the current or prior years.

Management has considered and is of the view that the adoption of the SB-FRSs, INT SB-FRSs and Amendments to SB-FRSs that were issued as at the date of authorisation of these financial statements but not effective until future periods will have no material impact on the financial statements of the Group and NParks in the period of their initial adoption.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont’d)

BASIS OF CONSOLIDATION – The consolidated financial statements incorporate the financial statements of NParks and entities (including special purpose entities) controlled by NParks (its subsidiary). Control is achieved when NParks:

- Has power over the investee;
- Is exposed, or has rights, to variable returns from its involvement with the investee; and
- Has the ability to use its power to affect its returns.

NParks reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

Consolidation of a subsidiary begins when NParks obtains control over the subsidiary and ceases when NParks loses control of the subsidiary. Specifically, income and expense of a subsidiary acquired or disposed of during the year are included in the consolidated statement of comprehensive income from the date NParks gains control until the date when NParks ceases to control the subsidiary.

Where necessary, adjustments are made to the financial statements of the subsidiary to bring its accounting policies into line with the Group’s accounting policies.

In NParks’s separate financial statements, investment in subsidiary is carried at cost less any impairment in net recoverable value that has been recognised in income or expenditure.

FINANCIAL INSTRUMENTS – Financial assets and financial liabilities are recognised on the statement of financial position when the Group becomes a party to the contractual provisions of the instrument.

Effective interest method

The effective interest method is a method of calculating the amortised cost of a financial instrument and of allocating interest income of expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts or payments (including all fees paid or received that form an integral part of the effective interest rate, transaction costs and other premium or discounts) through the expected life of the financial instrument, or where appropriate, a shorter period. Income and expenses are recognised on an effective interest basis for debt instruments.

Financial assets

All financial assets are recognised and de-recognised on a trade date basis where the purchase or sale of an investment is under a contract whose terms require delivery of the investment within the timeframe established by the market concerned, and are initially measured at fair value plus transaction costs.

Loans and receivables

Trade and other receivables that have fixed or determinable payments that are not quoted in an active market are classified as “loans and receivables”. Loans and receivables (including trade and other receivables, cash at bank and deposits with AGD) are measured at amortised cost using the effective interest method less impairment. Interest is recognised by applying the effective interest method, except for short-term receivables when the effect of discounting is immaterial.

Impairment of financial assets

Financial assets are assessed for indicators of impairment at the end of each reporting period. Financial assets are impaired where there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the financial assets have been impacted.

For financial assets carried at amortised cost, the amount of the impairment is the difference between the asset’s carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate.

For financial assets that are carried at cost, the amount of the impairment loss is measured as the difference between the asset’s carrying amount and the present value of the estimated future cash flows discounted at the current market rate of return for a similar financial asset. Such impairment loss will not be reversed in subsequent periods.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables where the carrying amount is reduced through the use of an allowance account. When a trade receivable is uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited to the income or expenditure. Changes in the carrying amount of the allowance account are recognised in income or expenditure.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY
NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont'd)

Impairment of financial assets (cont'd)

For financial assets measured at amortised cost, if, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed through income or expenditure to the extent that the carrying amount of the financial asset at the date the impairment is reversed does not exceed what the amortised cost would have been had the impairment not been recognised.

Derecognition of financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognises its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

Financial liabilities and equity instruments

Classification as debt or equity

Financial liabilities and equity instruments issued by the Group are classified according to the substance of the contractual arrangements entered into and the definitions of a financial liability and an equity instrument.

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of the Group after deducting all of its liabilities. Equity instruments are recorded at the proceeds received, net of direct issue costs.

Pursuant to the Finance Circular Minute ("FCM") No. 26/2008 on Capital Management Framework ("CMF"), equity injection from the Government is recorded as share capital.

Financial liabilities

Trade and other payables are initially measured at fair value, net of transaction costs, and are subsequently measured amortised cost, using the effective interest method, with interest expense recognised on an effective yield basis.

Derecognition of financial liabilities

The Group recognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or they expire.

LEASES – Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

The Group as lessor

Rental income from operating leases is recognised on a straight-line basis over the term of the relevant lease unless another systematic basis is more representative of the time pattern in which use benefit derived from the leased asset is diminished. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised as an expense over the lease term on the same basis as the lease income.

The Group as lessee

Rentals payable under operating leases are charged to income or expenditure on a straight-line basis over the term of the relevant lease unless another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed. Contingent rentals arising under operating leases are recognised as an expense in the period in which they are incurred.

In the event that lease incentives are received to enter into operating leases, such incentives are recognised as a liability. The aggregate benefit of incentives is recognised as a reduction of rental expense on a straight-line basis, except where another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY
NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont'd)

PROPERTY, PLANT AND EQUIPMENT – Property, plant and equipment are stated at cost less accumulated depreciation and any accumulated impairment losses.

Depreciation is charged so as to write off the cost of property, plant and equipment over their estimated useful lives, using the straight-line method on the following bases:

Leasehold land	– Over the lease periods of 87 to 93 years
Buildings, structures, capital and other improvements	– 20 years
Office equipment, furniture and fittings	– 5 to 10 years
Laboratory and gardening equipment	– 7 years
Motor vehicles	– 8 to 10 years

Construction-in-progress included in property, plant and equipment is not depreciated as these assets are not available for use. These are carried at cost, less any recognised impairment loss. Depreciation of these assets, on the same basis as other assets, commences when the assets are ready for their intended use.

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimates accounted for on a prospective basis.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. The gain or loss arising on disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amounts of the asset and is recognised in income or expenditure.

IMPAIRMENT OF TANGIBLE ASSETS – At the end of each reporting period, the Group reviews the carrying amounts of its assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessment of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised immediately as an expense.

Where an impairment loss subsequently reversed, the carrying amount of the asset (cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (cash-generating unit) in prior years. A reversal of an impairment loss is recognised immediately as income.

PROVISIONS – Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognised as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY
NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont'd)

GOVERNMENT GRANTS – Government grants are not recognised until there is reasonable assurance that the Group will comply with the conditions attaching to them and the grants will be received. Government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets are recognised as deferred capital grant in the statement of financial position and transferred to income or expenditure on a systematic and rational basis over the useful lives of the related assets. This treatment also applies to assets transferred from other government organisations and other donated assets.

Other government grants are recognised as income over the periods necessary to match them with the costs for which they are intended to compensate, on a systematic basis. Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognised in income or expenditure in the period in which they become receivable.

The value of land at the Singapore Botanic Gardens and the Fort Canning Park that vested in NParks when it was established in June 1990 was taken to the deferred capital grants account. The value of all other assets net of liabilities transferred from the former Parks and Recreation Department of Ministry of National Development (PRD) to NParks in June 1990 and July 1996 amounting to \$4,528,275 was taken to the capital account.

TRUST AND AGENCY FUNDS – Trust and agency funds are set up to account for funds held in trust where NParks is not the owner and beneficiary of the funds received from the Government and other organisations. The receipts and expenditure in respect of agency funds are taken directly to the funds accounts and the net assets relating to the funds are shown as a separate line item in the statement of financial position. Trust and agency funds are accounted for on the accrual basis.

NParks administers the funds on behalf of the holders of these funds. Upon dissolution of these funds, the remaining moneys in these funds shall be returned to the owners of the funds.

REVENUE RECOGNITION – Revenue is recognised to the extent that it is probable that the economic benefits will flow to NParks and the revenue can be reliably measured. Revenue is measured at the fair value of consideration received or receivable.

Rental income

Rental income receivable under operating leases is recognised in surplus or deficit on a straight-line basis over the term of the lease. Lease incentives granted are recognised as an integral part of the total rental income, over the term of the lease.

Admission charges

Admission charges are recognised upon the sale of admission tickets to visitors.

Composition amounts

Composition amounts are recognised on the issuance of the notice of offence to offenders.

Agency fees

Where it is probable that the economic benefits will flow to the Group and the revenue and costs, if applicable, can be reliably measured, agency fees are recognised over the period in which the services are completed.

Plan fees

Plan fees are recognised over the period in which services are completed.

Interest income

Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY
NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont'd)

Dividend income

Dividend income from investments is recognised when the shareholders’ rights to receive payment have been established.

Miscellaneous income

Miscellaneous income comprising income derived from consultancy fees, sale of publications, souvenirs and orchid plantlets, course fees, and park usage and barbeque permit fees are recognised in the period in which they are earned. Liquidated damages are recognised as income when the right to claim such liquidated damages from contractors are established. Compensation collected from contractors whose work resulted in damage to trees and plants are recognised upon issuance of the notice of offence.

RETIREMENT BENEFITS COSTS – Payments to defined contribution retirement benefit plans are charged as an expense when employees have rendered the services entitling them to the contributions. Payments made to state-managed retirement benefit schemes, such as the Singapore Central Provident Fund, are dealt with as payments to defined contribution plans where the Group’s obligations under the plans are equivalent to those arising in a defined contribution retirement benefit plan.

Defined benefit retirement obligations due to pensionable officers are recognised in the statement of financial position in accordance with the Pensions Act (Cap. 225, 2004 Revised Edition). Provision for pension costs for eligible retired employees is estimated by management based on the most recent valuation performed once every three years by professional actuaries. For pension costs, the cost of providing benefits is determined using the projected unit credit method. Remeasurement, comprising actuarial gains and losses is reflected immediately in the statement of financial position with a charge or credit recognised in other comprehensive income in the period in which they occur.

Remeasurement recognised in other comprehensive income is reflected immediately in accumulated surplus and will not be reclassified to income or expenditure. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit liability or asset. Defined benefit costs are categorised as follows:

- Service cost (including current and past service cost);
- Net interest expense or income; and
- Remeasurement.

For all active members of the scheme, the “projected accrual benefit” is based on the scheme’s accrual formula and upon service as of the valuation date, but using the employee’s scheme salary, projected to the age at which the employee is assumed to leave active service. For inactive members, it is the total benefit. The defined benefit obligation/project benefit obligation/plan liability is the discounted present value of the “projected accrued benefits”. The service cost is the corresponding value of benefits earned by active members over the year as a result of one more year of service.

EMPLOYEE LEAVE ENTITLEMENT – Employee entitlements to annual leave are recognised when they accrue to employees. A provision is made for the estimated liability for annual leave as a result of services rendered by employees up to the end of the reporting period.

CONTRIBUTION TO CONSOLIDATED FUND – Under Section 13(1)(e) and the First Schedule of the Singapore Income Tax Act, Chapter 134, the income of the Group is exempt from income tax.

In lieu of income tax, NParks is required to make contribution to the Government Consolidated Fund in accordance with the Statutory Corporations (Contributions to Consolidated Fund) Act, Chapter 319A. The provision is based on the guidelines specified by the Ministry of Finance and is computed based on the net surplus of the Group for each of the financial year at the prevailing corporate tax rate for the Year of Assessment. Contribution to consolidated fund is provided for on an accrual basis.

CASH AND CASH EQUIVALENTS IN THE STATEMENT OF CASH FLOWS – Cash and cash equivalents in the statement of cash flows comprise cash at bank and deposits placed with the Accountant-General’s Department (“AGD”) that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

3 CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Group’s accounting policies, which are described in Note 2, management is required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

The Group did not make any material judgements that have significant effect on the amounts recognised in the financial statements.

Key sources of estimation uncertainty

The key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are discussed below:

Depreciation of and impairment loss on property, plant and equipment

The cost of property, plant and equipment are depreciated on a straight-line basis over their useful lives. The Group estimates the useful lives of these property, plant and equipment to be within 5 to 93 years, based on the estimated useful lives of the assets. The carrying amounts are disclosed in Note 10 of the financial statements. Changes in the expected level of usage, technological developments and economic conditions could impact the economic useful lives and the residual values of these assets, therefore future depreciation charges could be revised.

Impairment losses would be made for property, plant and equipment whenever there is objective evidence that the assets are impaired. The required level of impairment losses to be made is estimated by reference to the estimated value in use or price quotations from independent third parties.

Impairment loss on trade receivables

The Group evaluates whether there is any objective evidence that trade receivables are impaired and determines the amount of impairment loss as a result of the inability of the debtors to make required payments. The Group bases the estimates on the ageing of the trade receivables balance, credit-worthiness of the debtors and historical write-off experience. If the financial conditions of the debtors were to deteriorates, actual write-offs would be higher than estimated.

Valuation of defined benefits obligations

The Group and the Singapore Government jointly finance the payment of gratuity, pension or allowance to pensionable officers at their retirement. The split of pension costs is determined based on the accumulated pensionable emoluments earned by the pensionable employee while in government services as compared with the employee’s service with the Group up to retirement.

The valuation of the defined benefits obligations is determined using the projected unit credit method. The most recent full actuarial valuation of the defined benefits obligations was carried out as at 31 March 2016.

The assumptions which have the most significant effect on the results of the valuation are those relating to discount rate, future salary increase rate, post-retirement mortality and historical average annual salary increase rate. The assumptions used by the actuary are the best estimates chosen from a range of possible actuarial assumptions, which due to the timescale covered, may not necessary borne out in practice. The present value of the liabilities is derived from cash flows projections over long periods and is inherently uncertain.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

4 FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT

(a) CATEGORIES OF FINANCIAL INSTRUMENTS

The following table sets out the financial instruments as at the end of the reporting period:

	Group		NParks	
	2015/2016	2014/2015	2015/2016	2014/2015
	\$	\$	\$	\$
Financial assets				
Loans and receivables (including cash and cash equivalent)	251,340,902	229,939,749	251,184,152	229,801,129
Financial liabilities at amortised cost	61,736,968	59,996,867	61,725,974	59,992,026

(b) FINANCIAL RISK MANAGEMENT POLICIES AND OBJECTIVES

The Group is exposed to financial risk arising from its operations which include interest rate risk, credit risk and liquidity risk. The Group has written policies and guidelines, which set out its general risk management framework as discussed below.

There has been no change to the Group’s exposure to these financial risks or the manner in which it manages and measures the risk.

(i) Interest rate risk management

The Group’s exposure to changes in interest rates relates primarily to fixed deposits and non-current trade receivables. Surplus funds in NParks are placed with Accountant-General’s Department (“AGD”) as disclosed in Note 6. Other than funds placed with AGD and non-current trade receivable with fixed interest rate as disclosed in Note 7, there are no other significant interest-bearing assets or interest-bearing liabilities as at the end of the reporting period.

Interest rate sensitivity analysis has not been presented as management does not expect any reasonable possible changes in interest rates to have a significant impact on the Group’s operations and cash flows.

(ii) Credit risk management

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Group.

Credit risks, or the risk of counterparties defaulting, are controlled by the application of regular monitoring procedures. Except for receivables due from MND and other government agencies, there is no significant concentration of credit risk. The extent of the Group’s credit exposure is represented by the aggregate balance of financial assets at the end of each reporting period.

(iii) Liquidity risk management

Liquidity risk arises in the general funding of the Group’s operating activities. It includes the risks of not being able to fund operating activities in a timely manner. To manage liquidity risk, the Group places majority of its surplus funds with the Accountant-General’s Department which are readily available where required.

(iv) Fair values of financial assets and financial liabilities

The carrying amounts of financial assets and financial liabilities as reported in the financial statements approximate their respective fair values due to the relatively short-term maturity of these financial instruments.

(c) CAPITAL RISK MANAGEMENT POLICIES AND OBJECTIVES

The Group manages its capital to ensure that it will be able to continue as a going concern while fulfilling its objective as a statutory board.

The capital structure of the Group consists of accumulated surplus, capital account, sinking fund and share capital. The overall strategy of the Group remains unchanged from the previous financial year.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS

31 MARCH 2016

5 RELATED PARTY TRANSACTIONS

Some of the Group's transactions and arrangements are with related parties and the effect of these on the basis determined between the parties is reflected in these financial statements. The balances are unsecured, interest-free and repayable on demand unless otherwise stated.

The Group and NParks entered into the following significant transactions with its parent Ministry, MND, and other related parties during the year:

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
MND		
Services and expenses paid	1,694,040	906,100
Revenue collected on behalf	29,390,341	24,375,392
Development expenditure paid on behalf		
– Gardens by the Bay	5,075,680	2,962,542
– Other state projects	85,363,804	50,215,174
Grants received/receivable		
– Operating grant	224,454,238	216,205,716
– Development grant	97,577,955	44,717,220
– Other grant	1,782,701	486,736
Other Ministries and Statutory Boards		
Services and expenses paid to other statutory boards	5,247,289	8,547,039
Transfer of IT computer equipment from other statutory board	–	672,634
Expenses paid on behalf of other statutory boards	14,403,268	12,999,682
Computer and IT related expenses	1,729,783	3,328,251
Minimum lease receipts under operating leases recognised as an income (Note 26)	1,048,000	921,226
Minimum lease payments under operating leases recognised as an expense (Note 26)	1,246,905	1,221,871
Grants received/receivable	4,701,236	3,759,115
Garden City Fund		
Purchase of publications/souvenirs	86,125	88,883
Transfer of donated gallery from Garden City Fund	–	1,000,000
Expenses paid on behalf	383,020	188,148
Gardens by the Bay		
Services and expenses paid	1,090,940	2,235,340
Expenses paid on behalf	264,762	1,603,252

Compensation of key management personnel

The remuneration of key management personnel during the financial year were as follows:

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Short-term employee benefits	1,738,220	1,646,011

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS

31 MARCH 2016

6 CASH AND CASH EQUIVALENTS

	Group		NParks	
	2015/2016	2014/2015	2015/2016	2014/2015
	\$	\$	\$	\$
Cash at bank	145,271	215,846	3,467	77,578
Deposits with AGD ⁽ⁱ⁾	224,837,979	208,231,459	224,837,979	208,231,459
	224,983,250	208,447,305	224,841,446	208,309,037

⁽ⁱ⁾ With effect from financial year 2009/2010, Statutory Boards were to participate in the Centralised Liquidity Management by the Accountant General's Department ("AGD") under AGD Circular 4/2009. Deposits are centrally managed by AGD, available to the statutory board upon request and earns interest at the average rate of 1.26% (2014/2015 : 0.85%) per annum.

7 TRADE RECEIVABLES

	Group		NParks	
	2015/2016	2014/2015	2015/2016	2014/2015
	\$	\$	\$	\$
Not past due and not impaired	5,198,218	3,593,572	5,153,411	3,593,470
Past due but not impaired ⁽ⁱ⁾ :	1,802,326	1,797,215	1,802,326	1,797,215
< 1 months	441,528	175,369	441,528	175,369
1 months to 4 months	16,798	72,707	16,798	72,707
> 4 months	1,344,000	1,549,139	1,344,000	1,549,139
Impaired receivables	1,840,000	2,071,494	1,840,000	2,071,494
Less: Allowance for impairment	(1,840,000)	(2,071,494)	(1,840,000)	(2,071,494)
Total	7,000,544	5,390,787	6,955,737	5,390,685
Represented by:				
Current portion	5,656,544	3,878,787	5,611,737	3,878,685
Non-current portion	1,344,000	1,512,000	1,344,000	1,512,000
Total	7,000,544	5,390,787	6,955,737	5,390,685

The credit period on rendering of services is 30 days (2014/2015 : 30 days). Other than non-current receivables which interest is charged at 2%, no interest is charged on the trade receivables and no collateral is held by the Group over the trade receivables.

⁽ⁱ⁾ No allowance has been made on these receivables as management believes that there has not been significant change in credit quality and the amounts are still considered recoverable.

Majority of the Group's receivables that are neither past due nor impaired are creditworthy counterparties with good track record of credit history. Except for the non-current trade receivables, there are no customers who represent more than 5% of the total balance of trade receivables.

In determining the recoverability of a receivable the Group considers any change in the credit quality of the receivable from the date credit was initially granted up to the reporting date. Credit risk is limited due to management's on-going evaluation of the creditworthiness of the Group's customers and that majority of the Group's trade receivables are within their expected cash collection cycle.

Movement in the allowance for doubtful debts

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Balance at beginning of the year	2,071,494	2,315,135
Decrease in allowance recognised in income or expense	(231,494)	(243,641)
Balance at end of the year	1,840,000	2,071,494

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

8 OTHER RECEIVABLES

	Group		NParks	
	2015/2016	2014/2015	2015/2016	2014/2015
	\$	\$	\$	\$
Other receivables				
– MND ⁽ⁱ⁾	16,452,353	13,438,551	16,452,353	13,438,551
– Garden City Fund ⁽ⁱⁱ⁾	151,939	20,832	151,939	20,832
– Gardens by the Bay ⁽ⁱⁱ⁾	3,637	10,789	3,637	10,789
– Other receivables	532,321	558,171	562,432	558,171
Interest receivable	2,031,028	1,184,975	2,031,028	1,184,975
Prepayments	3,793,396	2,889,920	3,792,046	2,889,920
Deposits	185,830	638,397	185,580	638,147
	23,150,504	18,741,635	23,179,015	18,741,385

Notes

⁽ⁱ⁾ Receivables from Ministry of National Development comprise of mainly direct development and operating grants receivable by NParks. These amounts are unsecured and interest-free, and are repayable on demand.

⁽ⁱⁱ⁾ Non-trade amounts due from Garden City Fund and Gardens by the Bay are unsecured and interest-free, and are repayable on demand.

9 INVESTMENT IN SUBSIDIARY

	2015/2016	2014/2015
	\$	\$
Unquoted equity investment, at cost	2	2

Details of the subsidiary at the end of the reporting period are as follows:

Name of subsidiary	Principal activities	Place of Incorporation and business	Proportion of ownership interest and voting power held	
			2015/2016	2014/2015
			%	%
Singapore Garden City Pte. Ltd. ^(a)	Landscape planning, advisory services and business consulting services	Singapore	100	100

^(a) Audited by RSM Chio Lim LLP.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

10 PROPERTY, PLANT AND EQUIPMENT

	Leasehold land	Building, structures, capital and other improvements	Office equipment, furniture and fittings	Motor vehicles	Laboratory and gardening equipment	Construction- in-progress	Total
	\$	\$	\$	\$	\$	\$	\$

Group and NParks

Cost:							
At 1 April 2014	61,501,429	148,179,656	31,612,210	1,811,623	1,186,672	617,301	244,908,891
Additions	–	1,011,122 ⁽ⁱ⁾	3,592,851 ⁽ⁱⁱ⁾	331,900	154,786	4,510,784	9,601,443
Transfer	–	450,975	3,094,949	–	–	(3,545,924)	–
Disposal	–	–	(814,578)	(399,677)	(121,047)	–	(1,335,302)
At 31 March 2015	61,501,429	149,641,753	37,485,432	1,743,846	1,220,411	1,582,161	253,175,032
Additions	–	3,334	2,272,458	231,765	93,993	8,049,825	10,651,375
Transfer	–	2,769,760	4,326,808	–	–	(7,096,568)	–
Disposal	–	(129,930)	(439,347)	(470,545)	(32,951)	–	(1,072,773)
At 31 March 2016	61,501,429	152,284,917	43,645,351	1,505,066	1,281,453	2,535,418	262,753,634

Accumulated depreciation:							
At 1 April 2014	12,049,198	88,153,831	25,286,219	1,333,020	833,271	–	127,655,539
Depreciation	731,695	7,056,105	2,506,375	157,550	85,558	–	10,537,283
Disposal	–	–	(806,599)	(399,677)	(121,047)	–	(1,327,323)
At 31 March 2015	12,780,893	95,209,936	26,985,995	1,090,893	797,782	–	136,865,499
Depreciation	731,695	6,832,513	3,296,877	139,304	98,481	–	11,098,870
Disposal	–	(110,112)	(412,704)	(457,507)	(31,486)	–	(1,011,809)
At 31 March 2016	13,512,588	101,932,337	29,870,168	772,690	864,777	–	146,952,560

Carrying amount:							
At 31 March 2016	47,988,841	50,352,580	13,775,183	732,376	416,676	2,535,418	115,801,074
At 31 March 2015	48,720,536	54,431,817	10,499,437	652,953	422,629	1,582,161	116,309,533

Notes

⁽ⁱ⁾ Additions to building structures, capital and other improvements includes a gallery amounting to \$1,000,000 (Note 5) transferred from the Garden City Fund.

⁽ⁱⁱ⁾ Additions to office equipment, furniture and fittings includes IT computer equipment amounting to \$672,634 which has been transferred from another government agency.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS

31 MARCH 2016

11 GOVERNMENT GRANTS RECEIVED IN ADVANCE (RECEIVABLE)

	Operating grants ⁽ⁱ⁾	Capital grants	Development grants ⁽ⁱⁱ⁾	Other grants ⁽ⁱⁱⁱ⁾	Total
	\$	\$	\$	\$	\$
Group and NParks					
At 1 April 2014	8,706,805	230,555	3,633,949	(1,677,534)	10,893,775
Grants received during the financial year	208,128,920	266,000	43,888,801	4,197,306	256,481,027
Grants receivable	8,076,796	–	562,419	48,545	8,687,760
Interest income earned	–	2,495	19,700	–	22,195
Transfer to deferred capital grants (Note 16)	(7,594,878)	(255,195)	(12,000)	(739,370)	(8,601,443)
Unutilised grants returned	(473,468)	–	–	–	(473,468)
Payment on behalf	–	–	(53,177,716)	–	(53,177,716)
Transfer to statement of comprehensive income	(212,052,245)	–	–	(2,029,827)	(214,082,072)
At 31 March 2015	4,791,930	243,855	(5,084,847)	(200,880)	(249,942)
Grants received during the financial year	224,454,238	244,000	97,333,955	6,420,809	328,453,002
Grants receivable	–	–	–	63,128	63,128
Interest income (charged) earned	–	(1,406)	8,997	–	7,591
Transfer to deferred capital grants (Note 16)	(8,024,197)	(288,595)	(70,060)	(468,101)	(8,850,953)
Unutilised grants returned	(1,259,634)	(171,006)	–	–	(1,430,640)
Payment on behalf	–	–	(90,439,483)	–	(90,439,483)
Transfer to statement of comprehensive income	(211,141,338)	–	–	(7,885,988)	(219,027,326)
At 31 March 2016	8,820,999	26,848	1,748,562	(2,071,032)	8,525,377

Notes

⁽ⁱ⁾ Total operating grants received/receivable less transferred to deferred capital grants since establishment are \$2,462,899,847 (2014/2015 : \$2,246,469,806).

⁽ⁱⁱ⁾ Development grants received from MND for Gardens by the Bay and other development projects.

⁽ⁱⁱⁱ⁾ Other grants comprise grants received from other government agencies. During the previous financial year, IT computer equipment and the related capital grant of \$672,634 was transferred from another government agency to NParks.

12 TRADE AND OTHER PAYABLES

	Group		NParks	
	2015/2016	2014/2015	2015/2016	2014/2015
	\$	\$	\$	\$
Trade payables	10,057,406	11,705,882	10,047,155	11,701,041
Other payables				
– MND ⁽ⁱ⁾	3,154,578	2,719,645	3,154,578	2,719,645
– Garden City Fund ⁽ⁱⁱ⁾	51,047	25,360	51,047	25,360
– Others	8,616,455	13,343,997	8,615,712	13,343,997
GST payable	2,522,362	1,227,615	2,522,362	1,227,615
Rental and other deposits	7,636,597	7,339,863	7,636,597	7,339,863
Accrual expenses	21,610,433	15,717,417	21,610,433	15,717,417
	53,648,878	52,079,779	53,637,884	52,074,938

⁽ⁱ⁾ Payables to Ministry of National Development comprise primarily state revenue collections received on behalf of the Ministry. The amounts are unsecured and interest-free, and are repayable on demand.

⁽ⁱⁱ⁾ Non-trade amounts due to Garden City Fund were unsecured and interest-free.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS

31 MARCH 2016

13 PROVISION FOR PENSION COSTS

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
At beginning of the year	5,578,074	5,994,979
Provision for the year	151,902	165,307
Payments during the year	(95,000)	(582,212)
Remeasurement on defined benefit obligation:		
Actuarial gain arising from changes in financial assumptions	(339,094)	–
Actuarial gain arising from changes in experience adjustments	(1,510)	–
At end of the year	5,294,372	5,578,074
Represented by:		
Current portion	2,025,697	90,000
Non-current portion	3,268,675	5,488,074
	5,294,372	5,578,074

Amounts recognised in income or expenditure in respect of the defined benefit plan are as follows:

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Interest cost	45,099	47,500
Service cost	106,803	117,807
Total	151,902	165,307

The provision has been estimated by management based on the most recent valuation of the pension scheme performed by an independent firm of professional actuaries.

The principal assumptions used by the professional actuaries in determining the pension costs were as follows:

	2015/2016	2014/2015
Discount rate	2.2%	0.8%
Salary increase rate	3.0%	3.0%

Assumptions regarding future mortality are based on published statistics and mortality tables.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

14 DEFERRED REVENUE

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Lease premium received in advance	1,381,945	1,465,278
Deferred rental income	3,024,000	3,192,000
Plan fees received in advance	1,062,000	1,001,300
Other income received in advance	436,025	169,911
	5,903,970	5,828,489
Represented by:		
Current portion	2,951,458	2,348,744
Non-current portion	2,952,512	3,479,745
	5,903,970	5,828,489

The lease premium received in advance represents the unamortised balances of lease premium received in advance from a tenant.

15 CONTRIBUTION TO CONSOLIDATED FUND

With effect from 1 April 2003, NParks is required to make contribution to the Government Consolidated Fund in accordance with the Statutory Corporations (Contributions to Consolidated Fund) Act, Chapter 319A. The provision is based on the guidelines specified by the Ministry of Finance. It is computed based on the net surplus of NParks for each of the financial year at the prevailing corporate tax rate for the Year of Assessment. Contribution to consolidated fund is provided for on an accrual basis.

16 DEFERRED CAPITAL GRANTS

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Balance at the beginning of the financial year	116,309,524	117,253,342
Amounts transferred from Government grants (Note 11)	8,850,953	8,601,443
Amounts transferred from Garden City Fund (Note 20)	–	1,000,000
	125,160,477	126,854,785
Less: Amortisation of Deferred Capital Grants	(11,125,439)	(10,545,261)
Balance at the end of the financial year	114,035,038	116,309,524
Total capital grants received (excluding grants-in-kind transferred from Garden City Fund) and utilised since establishment	240,074,383	231,223,430

17 CAPITAL ACCOUNT

Capital account represents the value of assets net of liabilities (excluding the leasehold land acquired via Government capital grants) transferred from the former Parks and Recreation Department (“PRD”) of MND when NParks was established in June 1990 and when PRD merged with NParks in July 1996.

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

18 SHARE CAPITAL

	2015/2016	2014/2015	2015/2016	2014/2015
	Number of shares		\$	\$
Issued and fully paid up:				
At the beginning of the year	1,000	1,000	1,000	1,000
Equity injection ⁽ⁱ⁾	190,000	–	190,000	–
At the end of the year	191,000	1,000	191,000	1,000

⁽ⁱ⁾ Injection of capital is part of the Capital Management Framework for Statutory Boards under Finance Circular Minute M26/2008. The shares have been fully paid and are held by the Minister for Finance, a body corporate incorporated by the Minister for Finance (Incorporation) Act (Chapter 183). The holder of these shares, which has no par value, is entitled to receive dividends.

19 SINKING FUND

The sinking fund is designated to fund the replacement and capital improvement of property, plant and equipment.

20 NET ASSETS OF GARDEN CITY FUND

NParks established the Garden City Fund (“GCF”) on 1 July 2002 to enhance the enjoyment of the garden city in areas where there is no government funding. The Garden City Fund is managed, administered and controlled by the Garden City Fund Management Committee (the Committee), although NParks has the authority to remove any members from the Committee, and provide directions and guidelines on the conduct of meetings and other matters relating to the proceedings of the Committee.

The Garden City Fund comprises the Garden City Endowment Fund (GCEF) and the Garden City Non-Endowment Fund (GCNEF). The GCNEF comprises all moneys transferred from the specific funds of NParks upon the formation of the Garden City Fund on 1 July 2002 and all other contributions to the GCNEF.

The GCNEF and the income from the GCEF will be used to further the objectives of the Garden City Fund.

Upon dissolution of the Garden City Fund, the remaining moneys in the fund shall be donated to charitable organisations which have been designated as Institutions of a Public Character under the Income Tax Act (Chapter 134) and registered under the Charities Act (Chapter 37).

The following financial information represents GCNEF. There has been no contribution to the GCEF since establishment.

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Donations received	5,733,217	4,012,512
Sales of publications/souvenirs/merchandise	97,408	105,409
Courses/tours fees	137,423	123,323
Interest income	81,505	34,120
Exchange gain	2,201	–
Other income	14,133	801
	6,065,887	4,276,165

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

20 NET ASSETS OF GARDEN CITY FUND (cont'd)

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Printing and stationery	185,914	43,815
Horticultural works	642,823	88,655
Publicity and outreach activities	1,776,551	2,558,877
Professional fees	217,947	281,424
Depreciation of plant and equipment	50,580	45,800
Loss on disposal of plant and equipment	10,875	–
Rental expenses	23,664	20,370
Enhancements of parks/facilities	355,294	27,375
Library operating expenses	36,843	64,095
Transfer of donated gallery	–	1,000,000
Exchange loss	2,123	2,019
Others	144,355	114,720
	3,446,969	4,247,150
Surplus for the year	2,618,918	29,015
Surplus for the year	2,618,918	29,015
Accumulated fund at beginning of the year	11,819,548	11,790,533
Accumulated fund at end of the year	14,438,466	11,819,548
Represented by:		
Current assets		
Cash and cash equivalents	21,594,895	15,207,566
Other receivables	184,349	86,873
	21,779,244	15,294,439
Non-current asset		
Plant and equipment	264,009	252,382
Current liabilities		
Trade payables	323,513	272,208
Other payables	183,398	78,538
Deferred donations	7,097,876	3,376,527
	7,604,787	3,727,273
Net assets	14,438,466	11,819,548

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

21 NET (LIABILITIES) ASSETS OF NATIONAL PRODUCTIVITY FUND

NParks also administers the following fund on behalf of the Productivity Fund Administration Board.

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Balance as at beginning of the year	1,934,686	3,515,761
Less: Expenditure	(1,388,993)	(1,581,075)
Staff related cost	(223,082)	(192,236)
General administration	(148,411)	(26,739)
Grant disbursement	(1,017,500)	(1,362,100)
Less: Return of funds	(688,327)	–
Balance as at end of the year	(142,634)	1,934,686
Represented by:		
Cash and bank balances	–	2,048,396
Accruals	(142,634)	(113,710)
Net (liabilities) assets	(142,634)	1,934,686

22 MISCELLANEOUS INCOME

	Group		NParks	
	2015/2016	2014/2015	2015/2016	2014/2015
	\$	\$	\$	\$
Liquidated damages	965,289	612,876	965,289	612,876
Course fees	1,970,857	1,597,781	1,970,857	1,597,781
Barbeque permit fees	456,600	428,562	456,600	428,562
Park usage fees	657,295	708,054	657,295	708,054
Consultancy fees	89,824	1,869	15,000	–
Tour fees	58,427	74,395	58,427	74,395
Merchandise	17,070	13,131	17,070	13,131
Publication and plant sales	197,535	267,193	197,535	267,193
Others	1,452,431	528,645	1,482,297	528,645
	5,865,328	4,232,506	5,820,370	4,230,637

23 STAFF COSTS

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Wages and salaries	75,442,696	70,004,612
Contributions to defined contribution plans	11,396,856	9,633,968
Pension costs (Note 13)	151,902	165,307
Other staff benefits	1,171,183	1,162,685
	88,162,637	80,966,572

There are currently 6 (2014/2015 : 6) employees of NParks who are under pension schemes other than the Central Provident Fund (Note 13).

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

24 DEFICIT FROM OPERATIONS

The following items have been included in arriving at deficit from operations:

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Loss on disposal of property, plant and equipment	29,220	531

25 FUNDING FOR GOVERNMENT PROJECT

During the financial year ended 31 March 2016, \$454,149 (2014/2015 : \$98,167) was incurred to fund the Eco-link, Jacob Ballas Children Gardens Extension and Gallop House projects (2014/2015 : Eco-link project). This amount was recorded as a reduction in NParks’ accumulated surplus during the financial year as this was a contribution to the government.

26 OPERATING LEASES ARRANGEMENTS

As lessee

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Minimum lease payments under operating lease included as an expense	2,940,945	1,221,871

The future aggregate minimum lease payments under non-cancellable operating leases contracted for at the reporting date but not recognised as liabilities as at 31 March 2016 with related parties are as follows:

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Within one year	2,116,389	1,204,327
In the second to fifth year inclusive	1,853,208	581,517
	3,969,597	1,785,844

As lessor

The Group rented out its properties under operating leases. Rental income earned during the year was \$9,797,345 (2014/2015 : \$8,253,999).

The future aggregate minimum lease receivables under non-cancellable operating leases contracted for at the reporting date but not recognised as at 31 March 2016 are as follows:

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Within one year	6,554,334	6,526,583
In the second to fifth years inclusive	16,961,102	20,126,211
After five years	33,360,000	36,240,000
	56,875,436	62,892,794

NATIONAL PARKS BOARD AND ITS SUBSIDIARY

NOTES TO FINANCIAL STATEMENTS
31 MARCH 2016

26 OPERATING LEASES ARRANGEMENTS (cont’d)

As lessor (cont’d)

At the end of the reporting period, NParks has outstanding commitments under non-cancellable operating leases with related parties, which fall due as follows:

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Within one year	1,048,000	1,048,000
In the second to fifth year inclusive	4,192,000	4,192,000
After five years	1,965,000	3,013,000
	7,205,000	8,253,000

The above amounts exclude operating lease premium received in advance of \$1,381,944 (2014/2015 : \$1,465,278) (Note 14).

27 CAPITAL COMMITMENTS

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Contracted but not provided for	237,811,709	273,437,522
Less: Development expenditure on behalf of government	(233,806,386)	(273,425,581)
	4,005,323	11,941
Authorised but not contracted for	487,622,586	314,080,632
Less: Development expenditure on behalf of government	(465,724,582)	(297,350,240)
	21,898,004	16,730,392
	25,903,327	16,742,333

NParks is the agent to develop, upgrade, manage and maintain the public parks on behalf of the government. Amount contracted but not provided for comprise mainly work relating to Garden by the Bay and amount authorised but not contracted for comprise mainly work relating to parks development and park connector network.

28 CONTINGENT LIABILITIES

At the reporting date, there were the following contingent liabilities relating to various claims that have been made against the Group and NParks in respect of third parties damages. These claims have been referred to the insurers for their assessments.

	Group and NParks	
	2015/2016	2014/2015
	\$	\$
Claims not provided for	1,684,500	1,665,336

FRONT COVER

Aerial view of the Bandstand at Singapore Botanic Gardens

INTRODUCTION

Page 2

Bougainvilleas at Seletar North Link bridge, which connects to Punggol Barat Island

CHAPTER DIVIDERS

Page 12 – Greenery Flourishes

View of mature Rain Trees (*Samanea saman*) along Arcadia Road

Page 22 – Diversity Counts

A Yellow Bittern (*Ixobrychus sinensis*) at the Symphony Lake in Singapore Botanic Gardens

Page 30 – Partnership Grows

A Maroon Stone Crab (*Menippe rumphii*) spotted at an Intertidal Watch Survey at Coney Island Park

Page 44 – Expertise Leads

Asia Pacific Tree Climbing Championship

WE THANK STAFF AND PARTNERS OF NPARKS WHO CONTRIBUTED PHOTOS TO THIS ANNUAL REPORT:

Chan Chung Leong: page 2

Joseph Goh Meng Huat: page 12

National Council of Social Service: page 16, photo of Muhammad Hirwantor at the Bishan-Ang Mo Kio Park inclusive playground

Bryan Yeo: page 18, photo of streetscape

SCDA Architects Pte Ltd: page 21, photo of SkyTerrace@Dawson

Ng Aik Guan: page 21, photo of Mountbatten MRT station covered linkway

Sebastian Marcin Gil: page 22

Robert Teo: page 27, photo of Blue Glassy Tiger (*Ideopsis vulgaris macrina*)

Lee Tiah Khee: page 27, photo of Purple Swampphen (*Porphyrio porphyrio*)

Dr Yam Tim Wing: page 27, photo of Sheath-Covered Spathe Robiquetia (*Robiquetia spathulata*)

Dr Jana Leong-Škorníčková: page 28, photos of *Hanguana rubinea* and *Hanguana triangulata*

Gwendolyn Chow: page 30

My First Skool @ Blk 528 Hougang: page 32, photo of students using the preschool educational resource materials

Samantha Lai: page 32, photo of students taking part in the Marine Eco-toxicity Biomonitoring Programme

Outward Bound Singapore: page 33, photo of youth taking part in the Project Island-A-Hand initiative; page 34, photo of youths using the SGBioAtlas app

Tham Pui San: page 34, photo of art workshop

Lee Jia Hwa: page 53, photo of Yellow Flame trees (*Peltophorum pterocarpum*) along Sixth Avenue

Visit

www.nparks.gov.sg,
www.facebook.com/nparksbuzz and
www.facebook.com/SingaporeBotanicGardens
to find out more about activities in the parks and gardens.



NATIONAL PARKS BOARD

Singapore Botanic Gardens
1 Cluny Road
Singapore 259569
Tel (65) 6471 7808
Fax (65) 6472 3033
nparks_mailbox@nparks.gov.sg
www.nparks.gov.sg



nparksbuzz

Share your love for nature with us at
#nparksbuzz

